

Boiling Points

The Inextricable Links Between Inequality and Climate Change

Report by
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Executive Summary

The United States is currently facing two ominous threats: climate change and economic and social inequality. The climate movement has made enormous headway in highlighting the connections between the two, but we must go even deeper if we hope to make progress on both fronts.

The objective of this report is to comprehensively map the various linkages between climate change and inequality while identifying key gaps in our research knowledge and our policy debates. By doing so, we aim to better integrate these two siloed issues and support efforts to mobilize a broad, multi-interest coalition that fights for a clean environment and an economy that works for all.

We place this discussion into three categories: the disparate impacts of climate change on marginalized groups, the role that economic and racial inequality play in worsening climate change, and the distributional effects of climate policies. This framework is a useful way of organizing an incredibly broad and entangled topic, allowing us to hone current thinking on how inequality and climate change converge and where the opportunities for progress lie.

THE UNEQUAL IMPACTS OF CLIMATE CHANGE IN THE U.S.

Climate justice is usually talked about as a global issue, but it is also important to recognize the vast climate disparities that are and will be prevalent in the U.S. From the heat islands of U.S. cities to rural farming communities, the poorest groups in America, many of color, will likely experience the worst effects of climate change but have the least ability to cope with and adapt to it.

Research and Policy Gaps

Fortunately, as we devise policy to mitigate and adapt to climate change, we have ample research evidence to show why most vulnerable groups require particular consideration. However, while there are studies focused on women and climate change in developing countries, there is comparatively little research on how climate change could disproportionately impact women in the U.S. There is also a glaring gap in the research on how it will affect the job market, especially for workers of color and the working poor. This research could be crucial for convincing American workers—and their political representatives—to demand action on climate change.

INEQUALITY AS A DRIVER OF CLIMATE CHANGE

The notion that inequality is a driver of climate change is unfamiliar, perhaps even counterintuitive. Nevertheless, research shows a clear and positive relationship between economic and social inequality and environmental harm.

This evidence raises important questions: Is inequality itself the driver of environmental damage, including the higher levels of greenhouse gas emissions that cause global warming? Or are inequality and climate change only correlated, such that societies with high inequality levels are also likely to pollute their environments more? We argue that both statements are true: Drivers of inequality—such as financialization and corporate short-termism—are also drivers of environmental harm, but there are also specific mechanisms by which inequality itself damages our environment.



Research and Policy Gaps

As this paper will discuss, we have long siloed our conversations about improving the economy and the environment, arguably because of the common belief that there is always a tradeoff between them. The finding of a positive relationship between the two debunks that assumption and provides a strong and coherent message for mobilizing a powerful, multi-interest climate justice movement. While more research on this topic would be enormously valuable, this argument is ready for public debate.

THE DISTRIBUTIONAL IMPACTS OF CLIMATE CHANGE POLICIES

The above argument tells us that that we must not ignore the distributional issues of climate policies. Because inequality and climate change are so linked, exacerbating inequality with well-intended climate policies would be counterproductive.

This report's section on climate change policies explains the main mitigation policies being debated and discusses their distribution issues, particularly around carbon pricing, household energy poverty, and the need to transition fossil fuel workers. It also discusses the need, from a justice perspective, for progressives to pay more attention to climate adaptation policies, such that these ideas take into account the needs of particularly vulnerable groups.

Research and Policy Gaps

If we were to fully commit to a WW2-scale mobilization to tackle climate change, expansive investment in clean energy and energy efficiency would create millions of new jobs and fundamentally transform the American economy. The left must make this argument a central and emphatic part of its messaging.

But climate policies will also cost jobs in the fossil fuel industry. There is very little research on the economics of transitioning workers and communities out of fossil-fuel based jobs and economies. Robert Pollin and researchers at the Political Economy Research Institute are just beginning to break ground on this work, studying a host of issues that advance a just transition program in Washington State over the next 20 years.

We need to build on this work with a national study or, at the very least, more state-level studies that examine the employment impacts of reducing our emissions. State-level studies should focus on states that are either more politically likely to adopt just transition policies or states with economies that are highly dependent on fossil fuel industries.

There is also a need for more progressive economists, policy analysts, and think tanks to dive into the debate on how to spend the revenues that would be gained from carbon pricing. For example, conservative austerity narratives and proposals for capital gains tax cuts must be challenged.

In addition, it would be helpful for researchers to analyze the potential tradeoffs of different progressive ideas in terms of how they would or would not alleviate economic inequality. We can be sure that providing dividends to all based on the relative burden of rising carbon prices is more progressive than cutting the capital gains tax, but we need to understand the distributional effects of the entire set of progressive ideas in circulation.

On the issue of energy poverty policy, we need to fight to safeguard measures to help low-income households that the Obama administration put in place, while augmenting energy policy at the state level where possible. These policies should also better incorporate rural communities that have unique energy challenges. We must also elevate the need for



supportive renewable energy policies that foster community and cooperative-owned energy projects, which allow groups to generate clean energy while capturing the cost reductions for themselves, as opposed to corporate shareholders.

Finally, while progressive discussions about mitigation policies elevate important distribution issues, they often overlook the need for adaptation policies to redress disparities in climate vulnerability. We must recognize that vulnerable groups will need substantial help adapting to changing climate conditions, evaluate proposed adaptation policies with a justice lens, and develop new ideas for how adaptation policies can suit the needs of vulnerable groups.



Introduction

It has been over five years since the Occupy movement propelled the crisis of economic inequality into the national debate, and in that time the left has had a robust conversation about inequality's causes and consequences. The role of moneyed interests in creating our vast economic divide has become a pivotal issue that carried Bernie Sanders closer to the 2016 Democratic presidential nomination than almost anyone expected.

Regrettably, our climate conversation has not been so vibrant. It has been more than a decade since Al Gore's documentary *An Inconvenient Truth* heightened our attention to the threat of climate change. But soon after the film's release, we found ourselves sitting in the wreckage of the global financial crisis, with the entire country asking what a mortgage-backed security was. While the crisis and subsequent Great Recession ultimately jolted many of us from our frog-in-boiling-water trance about rising inequality and the diminishing middle class, it also distracted us from our looming climate crisis (for which the boiling-frog analogy is actually much more apt). In fact, climate change has dropped so far off the radar that there were no questions asked about it in the 2016 presidential debates between Secretary Clinton and Donald Trump.¹ Worse, now-President Trump claims climate change is a Chinese-manufactured hoax.

But the relatively low profile of this crisis does not make it any less catastrophic. Americans are producing carbon dioxide and other greenhouse gases at calamitous levels. If we do not significantly reduce our greenhouse gas emissions—the Intergovernmental Panel on Climate Change (IPCC) recommended that the U.S. make a 40 percent reduction from 2005 levels by 2035—then we will face what climate scientists describe as a bleak and dire future (think submerged coastal cities). We are already feeling the effects with average temperatures climbing, sea levels rising, ocean acidification, and profound changes in weather patterns that are wreaking havoc in communities throughout the U.S. (National Wildlife Federation).

Despite the barriers that the Trump administration and a GOP-controlled Congress will create in the effort to curb greenhouse gas emissions, there remain critical opportunities for progress. Climate advocates are designing strategies that will include applying extreme public pressure and criticism—a strategy that protected the Clean Air Act during the last Bush administration—and abandoning federal policy efforts to push for advancement at the state and local level (Leber 2016). To drive these initiatives, they are stepping up their efforts to build a broad, multi-interest coalition, which has never been more vital or more possible.

THE RELATIONSHIPS BETWEEN CLIMATE AND INEQUALITY

One of the ways the climate movement has been growing over the past few years is through increased recognition that climate change is, at its core, an issue of inequality. Pope Francis's (2015) encyclical on climate change made enormous headway in amplifying the climate justice message: that the poor and people of color are disproportionately vulnerable to the escalating effects of climate change and that we must address the challenges of global warming through the lens of racial, social, and economic inequity.

This message can be seen reverberating in powerful actions like the People's Climate March and the heroic mobilization in Standing Rock, North Dakota, and other sites along the Dakota Access pipeline. Arguably because of the economic crisis, Occupy Wall Street, and Bernie Sanders's campaign, and certainly because of the longstanding environmental

¹ The last presidential debate was on October 19, 2016, when New York City reached a high of 85 degrees Fahrenheit.



justice movement, the climate movement is ready to move beyond focusing solely on environmentalism to encompass issues of economic inequality, racism, labor rights, poverty, gender justice, and more. Only with as broad a coalition as possible can the United States make progress toward a just transition to a clean economy.

However, to build an inclusive climate coalition around all of these issues, we must fully comprehend the myriad linkages between climate change and social and economic inequality. In the U.S., progressive conversations on climate change tend to focus on how marginalized groups are and will be affected by global warming, the need to help fossil fuel workers find new jobs, and the regressive nature of a carbon tax. To be sure, these issues are fundamental to moving a progressive climate agenda forward. But there are untapped connections between these traditionally siloed issues that can make our arguments and our coalition much stronger.

For example, there is a spate of new research showing that unequal societies tend to have worse environmental outcomes, which suggests that inequality itself is a driver of environmental damage. Imagine the potential of this cutting-edge line of thinking: Can we think of financial regulation, progressive tax policy, and entitlements as climate change policy? They will not directly pull carbon out of the atmosphere, which we need to do urgently, but these kinds of progressive economic policies may be a necessary foundation for a sustainable society, and that is the kind of unifying message that can build a broad and forceful climate movement that prioritizes economic well-being and social justice.

REPORT OBJECTIVE AND OUTLINE

The objective of this report is to comprehensively map the various linkages between climate change and economic and social inequality while also identifying key gaps in our research knowledge and our policy debates.

Partially based on Harlan et al. (2015), this landscape analysis frames the relationship between climate change and inequality in three categories: the disparate impacts of climate change on marginalized groups, the role that economic and racial inequality play in worsening climate change, and the distributional effects of climate policies. This framework is a useful way of organizing an incredibly broad and entangled topic, allowing us to hone current thinking on the ways in which inequality and climate change converge and where the opportunities lie for making progress on both fronts.

This report proceeds by discussing each of the three intersections in turn; highlighting key arguments, research, and evidence; and identifying existing research and policy gaps. This analysis is not an exhaustive, in-depth literature review but is intended to provide a broad landscape overview of the top issues around climate change and inequality.

The Unequal Impacts of Climate Change in the U.S.

Climate change is a justice issue on a global scale, as the pope reminded us in his 2015 encyclical. As such, climate justice is often described in terms of the biggest contributors to greenhouse gas emissions—industrialized countries in the global North—versus the foremost victims of global warming—less developed countries in the global South. But we tend to forget that climate change is also a justice issue within the United States, one of the most industrialized countries in the world and a top contributor to emissions (Hacker 2016). From the heat islands of U.S. cities to rural farming communities, the poorest groups in America, many of them communities of color, will likely experience the worst effects of climate change but have the least ability to cope with and adapt to it.

Social scientists who study the demographics of climate vulnerability have identified several key patterns in the United States. First, people from specific U.S. regions (e.g. the coasts) and from rural communities whose economies are based



on natural resources are particularly vulnerable to the effects of climate change. Furthermore, both within and beyond those locales, there lies a certain stratification of vulnerability. The poor, people of color, the elderly, people with underlying health conditions or disabilities and who are socially isolated—all will have disproportionately more difficulty anticipating, coping with, recovering from, and adapting to climate change’s effects and events.² In addition, there are cases in which poverty and race can actually increase exposure to climate change by, for example, increasing the likelihood of living within warmer inner cities—urban heat islands—or working in a climate-vulnerable industry. Finally, the climate justice literature also highlights the impact of climate change on indigenous groups, who rely deeply on their natural surroundings for economic and cultural sustenance. (As we will discuss later on, it is important to note that any gender analysis is generally lacking in the U.S. literature on climate vulnerability.)

The following section on the disproportionate impacts of climate change focuses specifically on people of color and the poor and working poor, including rural communities in the U.S. It proceeds by discussing many of the ways the poor and people of color are disproportionately exposed to climate change and ways in which climate change makes their existing social and economic vulnerabilities worse. This includes its effects on public health, housing security, the higher prices people will face relative to their income, and job security, the latter being a profoundly under-researched topic. We highlight the potential impact of job loss in rural communities. We also describe some of the unique ways indigenous groups are suffering and will suffer from climate change.

PUBLIC HEALTH

One of the key ways climate change is already affecting many Americans is through public health, including the spread of mosquito-born diseases, the elevated concentration of allergens, and even fatalities from extreme weather events. However, the poor and people of color often have heightened exposure to climate-related public health issues, and they certainly have fewer financial resources to cope with them. Here we discuss two specific channels that increase the disproportionate exposure to climate change’s public health effects: higher exposure to air pollution and the increased likelihood that groups of color live within urban heat islands.

Air Pollution

Increases in climate temperature degrade the quality of air we breathe by increasing the concentration of pollutants and fine particulates (USGCRP 2016). Ash et al. (2009) find that communities of color and low-income people endure the highest exposure to toxic air. This disparate level of toxicity makes sense when we consider that, in 2004, almost 78 percent of African Americans lived within 30 miles of a coal-fired power plant, as compared to 56 percent of whites (Harlan et al. 2015). According to Quintero-Somaini et al. (2004), 15 percent of Latinos in the U.S. live within 10 miles of a coal-fired power plant, which is “well within the distance affected by the contaminants in the smoke plume.”³

Poor air quality has important ramifications for human health, particularly in terms of asthma cases. Asthma is both more common and more acute among vulnerable groups, including low-income inner-city residents and black and Latino communities. Further, the data show that these groups experience higher-than-average rates of emergency department visits, hospitalizations, and deaths, disproportionate to the actual demographics of asthma patients (National Heart, Lung, and Blood Institute 2012). It is deeply troubling to imagine that these existing health disparities will intensify as global

² For a comprehensive, in-depth literature of the impacts of climate change on vulnerable groups, see the U.S. Department of Agriculture’s “Social Vulnerability and Climate Change: Synthesis of Literature.”

³ There is a debate among scholars about whether this disproportionate exposure has to do with market dynamics or “disproportionate siting.” In other words, do poor people of color choose these locales or do polluters pick these sites because these communities don’t have the political power to resist? See Been (1994).



warming progresses and makes pollutants more potent.

Heat Island Effects

A second theme in the literature on climate justice and health is the pervasiveness of urban heat islands (Oke 1973; Kleerekoper et al. 2012). Cities are hotter than surrounding areas because of a higher concentration of roads and buildings, which absorb more heat than do soil, grass, trees, etc. A reason many poor people of color are at a higher risk for health-related heat events is they are much more likely than whites to live in places with heat island effects. This is no surprise when we consider the ways in which New Deal-era redlining and other racially-biased practices—racial rules, as the Roosevelt Institute calls them—have created segregated neighborhoods (Flynn et al. 2016).

Heat island effects will only get more dangerous as climate change accelerates. Within 25 years, Boston, Massachusetts, for example, is predicted to more than double its number of 90-degree days, from an average of 13 days to over 30 days per year. By 2100, Boston's average temperatures will be similar to Atlanta, Georgia's (Matthias et al. 2007). Low-income communities, many of which are communities of color, will likely be impacted the most.

HOUSING DISPLACEMENT

When a hurricane ravages communities, losing one's home has profound spillover effects. Chief among these is the added difficulty of managing existing health issues and staying employed, often while trying to find a new community in which to settle. This section briefly describes the threat to housing from rising sea levels and storms as well as the demographics of exposure and recovery from storm damage.

According to the Brookings Institute (2014), over the last five years, an average of almost 27 million people globally have been displaced each year by “natural hazard-related disasters.” It is difficult to know which of these disasters is related to climate change, but the IPCC has long recognized that extreme weather events will be more frequent and intense and that this will cause multitudes of people to lose their homes and be displaced from their communities. The International Organization for Migration notes that the most commonly cited international estimate for the number of people who will be displaced by 2050 is 200 million.

In the U.S., according to a frequently cited study, if sea levels rise to predicted levels by 2100, nearly 300 cities would lose at least half their homes, and homes in 36 cities would be completely gone (Rao 2016). In Florida alone, one in eight homes would be underwater, which would account for nearly half of the lost housing value nationwide.

It may or may not be categorically true that the homes of the poor and people of color are more vulnerable to severe weather, but there are clear cases of increased racial and economic vulnerability to storms that wipe out entire neighborhoods and communities. The most notorious example in the U.S. is New Orleans during Hurricane Katrina; the neighborhoods where the most bodies were found were flood-prone neighborhoods with mostly black residents (Walters 2015).

One longstanding ingredient for protecting coastal communities from flooding is building and maintaining seawalls. Describing the decrepit seawalls of working-class Troy, NY, New America's Virginia Eubanks says, “the last time the seawall had any real maintenance was nearly four decades ago, and since then the structure has been significantly undermined. Ice and debris have eaten away at the cement; there are holes big enough to shove both fists in. They whistle as the tidal Hudson ebbs and flows” (Eubanks 2016). In an era of austerity, how likely is it that working-class towns will have the resources to both repair their seawalls and ensure that seawalls protect community members on the margins



along with wealthier groups?

We also know there are vast differences in the capacity to escape storms and to recover from the damage, particularly the ability to afford flood and property insurance premiums that will rise as storms become more frequent and severe. According to Swiss Re (2006), average property insurance losses from 1987 to 2004 were \$23 billion. In 2005, average losses rose to \$83 billion, \$60 billion of which was due to hurricanes Katrina, Rita, and Wilma (Shonkoff et al. 2011). Major property damage costs can be economically debilitating for the majority of households, but even more so for underinsured, low-income families.

We can also expect that as climate change begins to restructure the housing market, low-income people are going to be living in homes that are in flood-prone areas and more vulnerable to damage. In December 2016, *The New York Times* advised that it was time to start thinking about “global warming zones” when buying a home. This will no doubt begin to drive higher-income buyers to less risky areas and create new forms of geographic segregation along economic and racial lines.

JOB LOSSES

Very little research exists that estimates the impacts of climate change on employment, not to mention how those impacts will be felt by particularly vulnerable groups. We can expect that any broad economic downturn caused by climate change will impact people of color the most. For example, Pew reports that while the wealth of white households declined by 16 percent during the Great Recession (between 2005 and 2009), black household wealth dropped by 53 percent and Hispanic households lost 66 percent (Kochhar et al. 2011).

Some researchers also expect that climate change will uproot specific sectors, primarily the tourism industry as well as industries that depend on natural resources, like agriculture, forestry, and the fishing industry. They argue this will disproportionately affect the working poor and, in some settings, people of color. It is also likely to deeply affect many rural communities whose local economies rely primarily on their surrounding natural resources for tourism, agriculture, etc. Below we highlight what researchers expect these sectors and communities to experience.

Tourism

Global warming will likely heavily disrupt the U.S. tourism sector as lower lake and river levels, higher sea levels, worsening snow conditions, shifting species ranges, etc. will shift the availability of outdoor activities such as beach vacations, boating, skiing, and fishing.

While we do not have national-level, peer-reviewed research on the impacts of climate change on the tourism industry, California tourism, for example, is a service-based industry that is a huge employer of low-income people and people of color; these groups comprise approximately 50–75 percent of the workers in the state’s tourism sector and would be profoundly impacted by climate disruptions to the industry (Cordova et al. 2006).

In rural communities, job losses that could come with disruption of the tourism industry will affect not only individuals but entire regional communities. Wall and Marzall (2006) highlight the structural restrictions of rural economies, citing limited human capital and highly specialized skills that minimize rural residents’ ability to move into new types of employment. Widespread job loss would have severe multiplier effects in terms of decreased demand for local goods and services and a diminished tax base, affecting public services (including climate adaptation projects) and local schools.



Agriculture and Fisheries

Agriculture and the fishing industry are a crucially important economic sector; the livestock, crops, and seafood grown and produced in the U.S., along with agriculture-related industries, contributed \$985 billion (5.7 percent of GDP) to the economy in 2014. U.S. agriculture is also a huge contributor to the global food supply (Department of Agriculture 2016).

Experts expect climate change to have profound effects on the agricultural industry. Changes in air temperatures and extremes in precipitation (droughts and flooding) create enormous risk and instability for farmers and farm workers across the U.S. The EPA explains that entire communities that have developed around the production of specific agricultural crops, like corn, wheat, and cotton depend on the current climate to support their livelihoods and way of life. “Climate change will likely cause the ideal climate for these crops to shift northward” (EPA 2016). Specialty agricultural products, like cranberries and maple syrup in the Northeast and grapes for California wine, are expected to decline dramatically.

California agriculture, the largest in the U.S. (USDA 2017), employs predominantly low-income people of color. California farm laborers, who come from some of the most economically disadvantaged groups in the U.S., will be enormously impacted by unemployment from climate-induced productivity loss (USDA 2016). For example, dairy products are one of California’s largest agricultural sectors. According to Pittock (2001), climate change could decrease dairy production by between 7 and 22 percent by 2100.

With these kinds of expected downturns or increased expenses from necessary adaptation measures (e.g. changing crop composition and increasing pesticide use), California and U.S. farm laborers, many with low levels of education and often limited English-language skills, would likely be the first to lose their jobs (Cordova et al. 2006).

Experts also expect climate change to impact fisheries and fishing communities. The EPA warns that warmer waters can cause the habitats of fish and shellfish species to change and disrupt ecosystems on which fishing communities depend. In addition, sea levels could decimate fishing communities, with impacts ranging from job losses to the displacement of entire populations (Scorese 2016). Again, we need economic impact research to understand the full ramifications of climate change on U.S. fisheries and fishing communities.

FOOD AND ENERGY PRICES

All households are going to face higher prices for household basics—e.g., gas, food, and water. But these necessities comprise a larger proportion of low-income budgets. African Americans already spend approximately 30 percent more of their earnings on energy than white households, which will only worsen with higher energy rates and increased volatility in oil prices. Food costs are also going to rise with more and more intense weather events (e.g. droughts, storms, and severe fluctuations in temperatures) that will damage agricultural crops and affect food availability. This will also put more pressure on rural communities, which, as we described, are already likely to see their livelihoods threatened by climate change (Lynn et al. 2011).



NATIVE AMERICAN TRIBES

American Indian and Alaska Native tribes have their own economies, cultures, and rights steeped in the natural resources around them. While the challenges that each of the 562 recognized tribes in the United States will face will vary according to their specific contexts, many scholars suggest that U.S. indigenous groups will be affected by climate change more profoundly than non-native citizens because of its threat to their very way of life (Lynn et al. 2011).

Droughts, extreme storms, flooding from heavy rain and melting sea ice—these are all going to have profound effects on the lands of the nation’s 326 reservations. Climate-induced droughts will weaken forests’ capacity for pest resistance, impair agricultural productivity, and lower water table levels. Water scarcity in the West will further challenge tribes’ already insecure water rights, and extreme storms will damage homes and infrastructure (National Wildlife Federation 2011).

Climate displacement from native lands is also looming, which will undermine tribal rights tethered to the specific land tribes inhabit. In fact, several Alaskan Native communities are at risk of being uprooted by climate change in the very near future. According to the General Accounting Office (2016), 31 native villages face imminent threats from flooding and erosion. In the Yupik village in Newtok, Alaska, for example, the permafrost is melting and the village’s school, which is its tallest building, is projected to be underwater in 2017.

RESEARCH AND POLICY GAPS

While climate change’s unequal impact on native groups, people of color, the working poor, and impoverished groups is only beginning to be part of the public discussion, scholars have produced ample research and evidence to show why these vulnerable groups require particular attention as we devise policy responses.

As discussed, the glaring gap in the research on climate justice pertains to how global warming will affect the job market, and particularly workers of color and the working poor, in both urban and rural areas. There is much more to learn about how climate change will impact different workers, communities, and sectors, and this research could be crucial to convincing Americans—and their political representatives—to demand action on climate change. For example, there are very few studies addressing the disruptive impacts of a sea level rise on the job market and community economies of fisheries. While scholars have imagined the result of impacts on low-wage workers, including people of color, the magnitude of expected impact is largely unknown. Many industries do their own analyses, but we shouldn’t expect them to focus on the perspective of workers and local communities. That will be up to academics, think tanks, and government researchers to tackle.

Furthermore, economists and policy wonks have long debated the role that globalization and technology has played in driving down median wages. There are also widespread conversations about the future of work in the face of further technological changes and the so-called “gig economy.” Many of these conversations ignore the fact that widespread job changes from climate change are looming. Perhaps research on job impacts of climate change could inform this debate and encourage economic policy analysts to raise the spectre of a potential climate-induced structural shift in the labor market.

Another major deficiency in the U.S. climate vulnerability literature is the lack of gender analysis. On a global scale, the gendered impacts of climate change are well anticipated given that women in developing countries perform the majority of agricultural labor (Doss 2011) and are more likely to collect the household water, firewood, and food—all of which will be affected by, for example, climate-induced drought and flood conditions (Engelman 2009).



In the U.S., the gendered burdens of climate change will likely be different from those in developing countries, but there is arguably a gender dimension to any systemic crisis. Thus, there needs to be much more research, analysis, and discussion to identify disproportionate impacts on women in the U.S., particularly women of color.

Among progressives, many of the disproportionate impacts of climate change are familiar. As discussed in the next section, what is much less familiar is the possibility that economic and social inequality is a potential cause of climate change, a relationship that has enormous implications for building progressive arguments around climate change and economic and social inequality.

Inequality as a Driver of Climate Change

The notion that inequality is a driver of climate change is an uncommon one, perhaps even counterintuitive. In fact, many people argue that inequality is good for the environment because they believe it puts a structural constraint on our greenhouse gas emissions.⁴ Nevertheless, there is ample research showing a clear and positive relationship between climate change and economic and social inequality, which has enormous implications for changing our climate conversation and building alliances across two siloed movements and agendas.

After providing some background on how researchers arrived at this result, this section describes the research evidence and asks whether inequality is a cause of environmental damage, including the higher levels of greenhouse gas emissions that cause global warming, or whether inequality is only correlated with environmental degradation, meaning that societies with high inequality levels are also likely to pollute their environments more. We argue that both statements are true: Drivers of inequality—such as financialization and corporate short-termism—also produce environmental harm and there are specific mechanisms by which inequality itself damages our environment. We discuss both of these dynamics and then the messaging potential of these findings.

FROM GROWTH TO INEQUALITY

Since the early 1990s, the academic conversation on the relationship between socio-economic factors and the environment has mainly focused on the effect of economic growth on pollution levels, with the debate pivoting on what economists call the Environmental Kuznets Curve (EKC). The EKC stems from the 1991 paper that economists Gene Grossman and Alan Krueger wrote on the environmental impacts of the North American Free Trade Agreement (NAFTA); it was a cross-country study that they argued demonstrated pollution would initially rise from NAFTA, but that rising incomes would, over time, improve air and water quality.

Economists swiftly picked up the discussion from Grossman and Krueger, developing what Papanyotou (1993) first coined the EKC, an inverted u-shaped curve that illustrates a hypothesized relationship between economic growth and environmental quality. The logic of the EKC is that as the economy grows, environmental pollution increases until it reaches a certain threshold, at which point society can afford measures that change this trajectory, for example environmental regulations or technological innovation. While there was much enthusiasm for the EKC initially, there have been many challenges to its results, particularly that there are missing variables necessary to accurately understand

⁴ As British geographer Danny Dorling explains, one argument (not Dorling's) defends high economic inequality as better for the environment than a more equal society. The logic is that if not everyone has a lot of money, fewer goods will be purchased overall. The 1 percent, despite their extravagant tastes, have a natural limit to how much they can spend in a 24-hour period. If that wealth is distributed to the 99 percent, consumption will dramatically increase, as will greenhouse gases. Thus, high economic inequality is good for controlling climate change (Dorling 2010).



the relationship between income growth and environmental quality (Shafik 1994; Stern 2003).

Recognizing the limitations of the EKC, a group of social scientists have turned to economic and social inequality to explain variations in environmental quality measures like pollution levels, biodiversity, consumption pressure, etc.⁵ The following provides a brief overview of the main available research evidence—presented in chronological order—and then delves into how scholars explain the causality of this relationship.

Economist James Boyce (1994) was the first to theorize that income distribution affects society’s ability to demand environmental quality. His central thesis is that when power and wealth are distributed more unequally, the rich and powerful (who gain more than others from environmentally degrading activities) are more able to impose environmental harm on the poorer and less powerful (who bear disproportionate costs).

Boyce and Torras (1998) tested this hypothesis by conducting a study of international variations in seven indicators of air and water quality, including the same variables used in the original EKC study by Grossman and Krueger, and observed that inequalities in income and the distribution of power, measured by levels of literacy, political rights, and civil liberties, are significantly correlated with worse environmental outcomes. According to the authors, these indicators “are found to have particularly strong effects on environmental quality in low-income countries.” They found that once these inequality variables are included in a multivariate analysis, the apparent EKC relationship between pollution and per capita income largely disappears.

Mikkelsen et al. (2007) conducted the first study that looks at the impacts of inequality on biodiversity loss. They found that among countries and U.S. states, the “number of species that are threatened or declining increases substantially with the Gini ratio of income inequality.” This is after controlling for factors like biophysical conditions, human population size, and per capita GDP. “Our results suggest that economic reforms would go hand in hand with, if not serving as a prerequisite for, effective conservation.” Holland et al. (2009) ran a similar study with similar results. “Our results confirm that socioeconomic inequality is an important factor to consider when predicting rates of anthropogenic biodiversity loss.”

Boyce et al. (1999) looked at environmental quality across the 50 states and asked why it’s better in some states than others. Boyce explains: “Where income equality was greater, where educational equality was greater, and where the fairness of fiscal policy in terms of both the tax system and access to services like Medicaid was greater, you tended to find less environmental degradation.”

UK geographer Danny Dorling (2010) conducted a study that looked at the world’s 25 richest countries, looking at behaviors like consumption of meat, water use, production of waste, flights, and overall effects on ecology. He found that “in all these affluent countries there are inequalities, and in those where inequalities are the greatest it is now becoming evident that people, on average, pollute much more.”

Ash et al. (2010) conducted a study comparing industrial air pollution across U.S. metro areas. The authors looked at the distribution of air pollution impacts across income levels and racial groups and found that in cities where the gaps in pollution exposure between people of color and whites are larger, there tended to be much more pollution in general. Australian researchers Andrich et al. (2010) identify inequality’s impacts on the “stability of major systems including the social, terrestrial, water and mineral industry.” Finally, economist Jungho Baek and his coauthors (2013) find that more equal income distribution in the U.S. results in better environmental quality in both the short and long run.

⁵ This post by Jaqueline Haupt and Carmen Lawrence was enormously helpful in summarizing this literature: <http://www.shapingtomorrowworld.org/hauptInequality.html>.



WHAT MECHANISMS EXPLAIN THIS RELATIONSHIP?

The relationship between economic inequality and environmental quality is a growing field of research, and ideally more studies will be forthcoming. One question that needs to be explored in both academia and the policy sphere is the nature of this linkage. Is inequality actually causing environmental damage, as many of the above researchers suggest? Or is this merely an observed correlation, whereby societies that have high inequality levels are also likely to pollute their environments more?

It is likely to be both. We can be certain that many drivers of inequality are also contributing to environmental damage. And we can imagine a variety of mechanisms—some suggested by the above researchers—by which wider disparities in economic and social inequality would lead to higher levels of environmental degradation.

The following section discusses a few examples of inequality's drivers, which have their own separate consequences for the environment. For example, many economists argue that public companies that only prioritize next-quarter share prices—and pump up those share prices through stock buybacks—drive inequality. Corporate short-termism, by its very definition, is bad for the environment because the same shareholder incentives that skew companies away from investing in workers, innovation, and capital discourage them from investing in, for example, green retrofitting of existing buildings, sustainable production practices, and even compliance with existing environmental regulations.

Similarly, policy analysts have recently been addressing the problem of increasing corporate concentration and power and its effect on inequality (Stoller 2017). We should direct that conversation to the context of energy and utility companies. These companies traditionally are thought of as natural monopolies because of their unavoidable economies of scale, but many researchers and activists are advocating for shifting control of our energy sources away from corporations and toward local, community, and cooperative-based clean energy provision, with enormous potential for generating sustainable energy at affordable rates (Koirala et al. 2016). According to Pollin et al. (2014), without these public-private partnerships (along with corporations and small businesses), there is no way “in which the United States can realistically achieve the 20-year CO emissions-reduction target that is essential for controlling climate change.” In the coming years, we can expect many political battles over corporate versus community control of clean energy provision.

Another driver of inequality, closely linked with corporate short-termism, is financialization. While the “financialization of nature” once referred to the privatization and commodification of the environment, the issue of the oversized financial industry and how it affects the environment is starting to arise out of the academic literature. How does the financial industry assert itself over our natural resources in terms of land, energy, water, and emission trading rights? What are the implications of private equity firms buying up farmland or of the development of a water futures market (Curran 2014)? As progressives fight to hold onto existing financial regulations implemented post-crisis and plan for future regulations, it is worthwhile to consider these questions and incorporate them into suggested policy arguments and reforms.

These are just a few examples. We need a more in-depth analysis identifying drivers of inequality that are also generating environmental harm, which could be useful for building multi-issue coalitions and thinking strategically about political actions—e.g., the way Standing Rock activists have focused attention on Wells Fargo and other banks that have invested in the Dakota Access pipeline.



There are also causal relationships to explore. The following are a few examples of causal mechanisms that scholars have identified: conspicuous consumption, the role of trust in both civic participation and collective management of natural resources, and the role of power in generating environmental harm.

Conspicuous Consumption

Dorling (2010), in his research on inequality and consumption patterns, identifies conspicuous consumption as a central way that inequality exacerbates climate change. The notion of conspicuous consumption—spending money on higher-end goods and services to gain social status—comes from Thorstein Veblen’s 1899 *The Theory of the Leisure Class*. Scholars argue that inequality only enhances this tendency to seek social status through consumption in countries like the United States, where the American Dream ethos tells us social mobility is within our grasp. (Often, this involves putting ourselves into debt: The average U.S. household holds \$16,000 in credit card debt. (Bloomberg 2016))

Economist Jon Wisman (2014) argues that the status competition fostered by inequality impacts consumption by both increasing purchases of luxury goods such as huge homes and powerful automobiles, which have considerable environmental footprints, and by biasing demand in favor of consumption of private goods over public goods such as public parks or quality of the environment more broadly.

Trust, Social Capital, and the Tragedy of the Commons

Another causal linkage between inequality and sustainability that social scientists have identified is the role of trust. Specifically, when a society or a community has high levels of inequality, this fosters less overall trust among people, which affects the environment in two ways. First, as Wilkinson and Pickett (2010) argue, higher levels of trust and social cohesion—social capital—foster public engagement and a civic awareness that is necessary for demanding policy protections for the environment. Second, levels of trust predict the success of sustainable group management and use of natural resources, which is an often-neglected topic in policy discussions.

While the first role of trust—fostering social cohesion and civic awareness—is more intuitive, the second requires some explanation. Garret Hardin’s 1968 “The Tragedy of the Commons” article made the case that groups of self-interested humans, left to their own devices, would inevitably destroy natural resources. Elinor Ostrom, however, won the Nobel Prize in economics in 2009 for her work demonstrating that groups can, in fact, successfully manage common pool resources (e.g. community-managed fisheries, irrigation systems, and even the community-controlled energy utilities mentioned above) through carefully designed and evolving rules and practices. Ostrom (1990) argued that one of the key ingredients for successful common pool resource (CPR) management is the presence of trust within the group.

While Ostrom herself didn’t address economic and power disparities in her work on CPRs (Holmberg 2011), other scholars have added it to her analysis, arguing that inequality degrades trust levels among groups, which undermines CPR efforts and outcomes. For example, Cardenas (2006) writes that groups can find it difficult to cooperate “if, for instance, there are wealth distances in the group that limit the possibility of getting group communication to be effective for building trust, cooperation, and a commonly shared goal.” Justino (2015) also argues that “group level-trust and cooperation” are central mechanisms for understanding how inequality affects collective action.

The Role of Power

Since he first hypothesized the causal influence of inequality on the environment in 1994, Boyce has emphasized the role of political power in this relationship. Specifically, he posits that wealth and income translate into political power that



then allows people to use their influence both to demand more goods that impose pollution on others and to demand more environmental protections for themselves. The result is environmental injustice whereby exposure to pollution and other hazards is concentrated disproportionately in less influential communities.

Boyce also argues that the total magnitude of environmental harm depends on the magnitude of inequality. This is because, in unequal societies, the individuals and companies that benefit from environmental “bads” tend to be more powerful than those who bear the costs. Therefore, the greater the inequality, the greater the incentive and ability for the wealthy and powerful to produce more environmental harm for which others pay the price.

Even seemingly benign environmental regulatory mechanisms can play a role in leveraging wealth and power in environmental outcomes. The Reagan administration long ago mandated that cost-benefit analysis would be the primary tool for EPA regulatory decisions such as an allowable amount of pesticide use or exact levels of resource extraction. The belief was, and still is, that cost-benefit analysis is the most objective, transparent, and efficient method to make policy decisions.

But in addition to the fact that cost-benefit analyses are often criticized for being widely inaccurate and politically biased, benefits are typically measured, via survey, by communities’ “willingness to pay” for environmental improvements, a procedure that diminishes the political voices of marginalized groups. For example, wealthy respondents say they are willing to pay more than the poor for keeping a landfill incinerator out of their communities. Thus, despite the fact that common sense tells us impoverished and disempowered communities would just as much like to live in a clean and safe environment as the more wealthy and powerful, cost-benefit analyses conclude otherwise. The end result is that a cost-benefit survey can recommend a higher level of allowable pollution than if the survey results were based on a more equitable income distribution (Ackerman and Heinzerling 2004).

The world is filled with examples of outsized political and corporate forces creating environmental destruction while its victims have little power to stop or minimize it. The protests at Standing Rock Sioux Reservation remind us how vulnerable native groups, for example, are to exploitation on their own lands. As Winona LaDuke writes in a report for the White House:

The toxic legacy left by fossil fuel and uranium development on tribal lands remains today and will persist for generations, even without additional development. Mines and electrical generation facilities have had devastating health and cultural impacts in Indian country at all stages of the energy cycle – cancer from radioactive mining waste to respiratory illness caused by coal-fired power plant and oil refinery air emissions on and near Native lands. Native communities have been targeted in all proposals for long-term nuclear waste storage.

The protests at Standing Rock also remind us that it takes enormous mobilization and political will to push back against the powers that be and stop them from perpetrating further climate injustice.

THE POTENTIAL OF THESE FINDINGS

It would be incredibly useful to have more studies on this particular intersection—and to explore the causation more specifically, in the way that Boyce and Torras (1998) identified political variables and their relationship to environmental harm.



One specific project that would be very helpful is to replicate Boyce et al.'s 1999 research, which linked relative income inequality with environmental quality across the 50 states. Given the current political landscape in which climate activists are turning to states to develop policy, it would be especially useful to have a sense of how state-level economic conditions and policies are connected to environmental outcomes.

In addition to more academic research, the idea of inequality as a driver of climate change must also be fully integrated into our public debates around both climate change and inequality. We have long siloed these conversations because so many of us buy into the idea that there is a tradeoff between them. Thus the left has been distracted by a misguided debate about whether it is possible to pursue robust economic growth while protecting the environment.⁶ Since the Reagan administration, Republicans have exploited this confusion by arguing that protecting the environment is a job killer, something the press has also parroted over the years.⁷

Our inequality debate has advanced enormously since the first tents were pitched in Zuccotti Park. We have made enormous headway in our understanding of inequality's drivers and, thanks to the Movement for Black Lives, have improved our understanding of the racial dimensions of inequality. We are sorely lacking, however, in incorporating any analysis of climate change and sustainability into that analysis.

Similarly, our climate discussion has lacked a strong, cohesive narrative. The false dichotomy of the economy and the environment has made environmental arguments disjointed, and too focused on countering climate denialism.⁸ Climate justice, while a powerful and absolutely essential message, does not necessarily address that dichotomy.

The evidence that inequality both correlates with and drives environmental harm empowers us to shed our awkwardness in trying to solve these two issues simultaneously. When we discuss the issue of corporate short-termism or financial regulation, we can incorporate into our arguments the fact that tackling these is essential for our environment. More broadly, recognizing that solving inequality is actionable climate policy builds on the foundation of climate justice, providing an incredibly strong narrative for designing good policy and mobilizing a massive, multi-interest climate movement.

This argument also tells us that that we must not ignore the distribution issues of climate policies, which are the subject of the next section. Climate policies that exacerbate inequality ultimately will not solve our climate problems.

Distributional Impacts of Climate Change

Policies to address climate change run the risk of exacerbating existing inequalities, and we must be fully aware of these potential effects on vulnerable groups, including workers in the fossil fuel industries. While progressive discussions about climate change policies are elevating the distribution issues of mitigation policies, they largely ignore the potential for adaptation policies to either exacerbate or redress disparities in climate vulnerability. We must recognize that

⁶ There is a vast literature discussing the problems with using GDP to measure growth and living standards. As Boyce (2013) points out, discussing whether or not growth is bad for the environment is a distraction because we are comparing apples to oranges. "When [many people] think about the national income pie, they think about the good slice, unlike environmentalists who think about the bad slice. Because they're really talking about different things, proponents and opponents of growth often talk right past each other. And when they assume that the good and bad are inseparable, both sides buy into the myth that there is an inexorable tradeoff between economic well-being and environmental quality." What we really should be focusing on is finding alternative ways to measure well-being, beyond GDP.

⁷ Notably, it was the Nixon administration that established the Environmental Protection Agency and had a strong record of environmental protections, including the Clean Air Act, which many economists argue came with far fewer costs and job loss than industry lobbyists predicted (New York Times 2011).

⁸ This is becoming less true in other countries, but the U.S. still leads in percentage of people who deny climate science (IPSOS Global Trends 2014).



marginalized groups will need substantial help adapting to changing climate conditions and evaluate adaptation policies through this lens.

The following section examines the main mitigation policies under debate and their distributional issues, particularly with regard to carbon pricing, household energy poverty, and the need to help transition fossil fuel workers. It then briefly discusses the need for adaptation policies to redress climate disparities. Unlike the previous two sections, this final section threads the research and policy gaps throughout the discussion.

MITIGATION POLICIES

To reduce and ultimately eliminate our fossil fuel dependency, we need climate mitigation policies, which are designed to either increase energy efficiency or increase clean energy production, including solar, wind, geothermal, low-emissions bioenergy, and small-scale hydropower. There are a host of such policy options available: carbon pricing, either through a tax or a cap; public spending for energy efficiency projects and renewable energy production; tax credits for renewable energy investment; worker training for clean energy sectors; and community adjustment assistance (Pollin et al. 2014).⁹

Many of these policies would have enormous economic benefits beyond their emissions reductions, including the vast potential for job creation, the economic advantages of improved air quality, and lower household energy costs (Pollin et al. 2014 and Hacker 2016) and the left must elevate this argument. Yet, while the short- and long-term benefits will outweigh the short-term costs overall,¹⁰ the key to implementing these policies is to avoid overburdening particular groups, specifically energy sector workers and poorer households, many of color.

When we consider the distributional impacts of mitigation policies, two predominant themes arise. The first is the distributional impacts of rising energy costs from mitigation policies, particularly putting a price on carbon. The second theme is the impacts on workers in sectors that will be weakened by a green transition, especially those in the fossil fuel industry.

Carbon Pricing

According to the majority of economists, putting a price on carbon—through a carbon tax or a cap-and-permit system—is essential to meeting our global climate reduction goals (Howard and Sylvan 2015). The problem is that carbon pricing is inherently regressive and will exacerbate economic inequality if we do not allocate its revenues appropriately. The progressive debate on carbon pricing centers on how to best spend these funds to minimize the distribution issues and make carbon pricing as politically acceptable as possible.

The basic economic rationale for carbon pricing—in the form of either carbon permits or a carbon tax—is that it incorporates the externalities of carbon pollution into the market. In other words, the current prices for carbon production do not take into account the profound costs that society incurs as a result of global warming and toxic air. Carbon pricing is designed to reflect that true cost by raising the price of carbon production so that it adequately reflects the social cost. Because of the basic laws of demand and supply, raising the price of carbon means that the quantity of carbon produced and consumed will decrease.

⁹ “Keep it in the Ground” policies such as moratoriums on new coal leases could also be considered mitigation policies because they prevent fossil fuel development and potentially spur energy efficiency and/or clean energy development. The caveat is the possibility that they could simply spur fossil fuel development elsewhere.

¹⁰ Pollin et al. (2014) calculate that the U.S. (both public and private interests) will need to spend around \$200 billion annually for the next 20 years to reach the emissions target set forth by the International Panel on Climate Change. This is equivalent to about 1.2 percent of our current GDP.



The difference between a carbon tax and carbon cap-and-permit system is fairly simple. A carbon tax sets a *fixed price* on carbon emissions, such that companies pay a specific dollar amount for every ton of emissions they produce. A carbon permit program issues a predetermined number of emissions “allowances” (the technical term for permits) every year and thereby sets the *fixed quantity* limit of carbon emissions.¹¹ These allowances can be auctioned to the highest bidder (in which case permit trading is unnecessary), or they can be distributed free-of-charge (based, for example, on historic emissions) and then traded on secondary markets. The latter system is known as “cap-and-trade.”

The common complaint directed at cap-and-trade programs from a justice perspective is that they enable “hot spots.” As we described in the section on climate disparities, a much higher percentage of African Americans and Latinos live within 30 miles of a coal-fired power plant (Quintero et al. 2011). The worry is that polluters in poor neighborhoods will purchase more emissions rights and even increase their greenhouse gas emissions, creating heavier concentrations of toxic emissions that poor people and people of color will have to breathe.

Whether policy at the state, regional, and ultimately national level converges on a carbon tax or a cap-and-permit system, a key point is that either form of carbon pricing is regressive. Consumers would pay the price in proportion to their consumption of fossil fuels. Higher-income households tend to consume more fossil fuels, so they would pay more in absolute terms. However, low-income households would pay a higher percentage of their household earnings, making carbon pricing regressive (Boyce and Riddle 2010; Horowitz 2017). Thus, the debate to watch will be what to do with the revenues, which could amount to billions annually and reach a cumulative total in the trillions over the life of the policy (Boyce and Riddle 2010).

Progressives are debating several different strategies for allocating carbon pricing revenues, such as providing dividends to reverse the regressive nature of the tax, making green investments, and/or helping workers and vulnerable communities in the transition. (Progressives are also making the broader process point that the communities most affected by climate change must be at the bargaining table of these discussions.) (See McGhee and Reich 2016 for an overview of this debate.) However, there are simply not enough progressive economists and economic think tanks engaging in the fight against conservative suggestions for carbon revenues, which include using the funds to reduce tax rates on capital and paying down debt (Paul 2016). Though implementing a federal carbon tax is unlikely during the Trump administration, we must continue to have a vibrant debate on this issue to hone our arguments and be ready for a more amenable national political landscape.

While these debates continue, state-level carbon pricing initiatives are the best place to test these ideas. As of yet, no carbon tax program has been implemented at the state level, but climate activists are ramping up their state strategies with carbon taxes as a focal point. The same debates on what to do with revenue from a federal tax will be repeated at the state level.

In fact, Washington State had this debate in 2016 when it defeated a referendum for a carbon tax. Initiative 732 proposed to use the funds raised by the tax to reduce the state sales tax, eliminate a business tax on manufacturers, and offer tax credits of up to \$1,500 for low-income residents (New York Times 2016). Climate justice opponents argued that the funds should have been directed toward community investments for green jobs, energy efficiency, transit, housing, and renewable energy infrastructure—and that there should have been climate justice stakeholders at the negotiating table.

¹¹ There are already at least two regional cap-and-permit programs in the United States: California's AB32 and the Northeast's Regional Greenhouse Gas Initiative.



We can expect this sort of carbon tax debate to continue in the coming years, and it is essential that more progressive economists and policy analysts weigh in to offer their own ideas as well as challenge the bad ones. One valuable contribution would be further research on the potential tradeoffs of different progressive ideas when it comes to alleviating economic inequality. We can be sure that dividends to all is more progressive than cutting the capital gains tax, but we need to better understand the distributional effects of the different progressive ideas in circulation.

Household Energy Poverty

While there is no shortage of policy ideas for how to boost energy efficiency and clean energy investments, there are enormous barriers for low-income households and households of color to participate in these programs while accessing lower energy costs.

Existing programs like tax credits for renewable energy tend to be biased toward middle- and upper-income groups. Low-income consumers do not have a high enough tax burden to be eligible for national programs like the Solar Investment Tax Credit (Low-Income Solar Policy Guide). Furthermore, limited access to credit is an enormous financial barrier in converting to renewables and reaping cost savings in the long term (Ameli and Kammen 2012).

The Obama administration attempted to redress this disparity with the Clean Energy Incentive Plan (CEIP), part of its Clean Power Plan. The CEIP provides support for low-income communities to undertake projects to install renewable energy and improve energy efficiency. Progressives must fight to safeguard this program under the Trump administration, double down on state-level supports, and also better incorporate rural, lower-income groups who, according to the Institute for Agriculture and Trade Policy (Ritter 2016), are often missing from energy poverty discussions even though they tend to pay a higher share of their income to heat their less energy-efficient homes.

Considering the role that CPRs can play in natural resource management, renewable energy policies should also foster community or cooperative-owned projects, allowing groups to generate clean energy while capturing the cost-reductions for themselves, as opposed to corporate shareholders. According to the Institute for Local Self Reliance (Farrell 2016), this requires, for example, reducing the enormous legal barriers that communities are currently facing in their co-op efforts, including reforming federal securities laws and tax incentives.

A Just Jobs Transition

Expansive investing in clean energy and energy efficiency has the potential to create millions of new jobs. As Pollin et al. show in their 2014 report, the public and private investment needed to stabilize our climate amounts to about \$200 billion annually, which will net our economy 2.7 million new jobs for electricians, roofers, steelworkers, machinists, engineers, truck drivers, research scientists, lawyers, accountants, and administrative assistants (Pollin et al. 2014).

Despite the enormous net job gains, a core challenge with our clean energy transition is understanding and addressing how it will affect fossil fuel workers. These workers—particularly coal miners, oil refinery workers, and power plant workers—will ultimately lose out, as will their communities in the form of a depleted tax base. The recognition that workers and communities who lose their jobs and public revenue from environmental protection need a “just transition”—meaning special assistance and protections to help workers transition out of the fossil fuel economy—was popularized by blue-green leader Tony Mazzocchi in the 1990s (Pollin and Callaci 2016).

Just transition policies would vary by country, but the International Trade Union Confederation proposes a list of principles that governments should follow:



1. Sound investments in low-emission and job-rich sectors and technologies. These investments must be undertaken through due consultation with all those affected, respecting human and labour rights, and Decent Work principles.
2. Social dialogue and democratic consultation of social partners (trade unions and employers) and other stakeholders (i.e. communities).
3. Research and early assessment of the social and employment impacts of climate policies. Training and skills development, which are key to support the deployment of new technologies and foster industrial change.
4. Social protection, along with active labor markets policies.
5. Local economic diversification plans that support decent work and provide community stability in the transition. Communities should not be left on their own to manage the impacts of the transition as this will not lead to a fair distribution of costs and benefits (International Trade Union Confederation 2015).

Spotlighting principle number three, there is very little research on the economics of transitioning workers and communities out of U.S. fossil fuel-based jobs and economies. Robert Pollin and researchers at the Political Economy Research Institute are just beginning to break ground on this work, focusing on Washington State and examining a host of issues that advance a just transition program over the next 20 years (Pollin 2016).

In particular, Pollin et al. are examining the existing emissions reduction programs for the state, and assessing their adequacy to meet the IPCC goals; proposing additional measures to enable Washington to meet the target; and examining the employment impacts of the two main elements of a climate stabilization program for Washington: the expansion of clean energy investments and the contraction of production and consumption of fossil fuels.

But this just scratches the surface. To truly understand the requirements for a just transition, we need a national study asking these same questions—or, at the very least, more studies at the state level, focusing on states that are either more politically likely to adopt just transition policies (arguably the same states that would initiate carbon taxes) or have economies that are highly dependent on fossil fuel industries.

ADAPTATION JUSTICE

Mitigation policies dominate the climate and inequality policy discussion. But just as important as a justice issue is the need for adaptation policies. While everyone will be affected by climate change, social and economic vulnerability is deeply tied to looming climate vulnerability. We need to be discussing adaptation policies through the lens of climate justice.

Potential adaptation policies range from building and repairing structural seawalls, weatherproofing homes and businesses, and reestablishing wetlands to providing tax credits and expanding public insurance. Susanne Moser (forthcoming), an adaptation research specialist, reports that a vast range of adaptation policies have been proposed at various levels of government, but few have actually been implemented. Unfortunately, there are already examples of adaptation policies that are, in fact, failing to address existing climate disparities.

As New America fellow Virginia Eubanks (2016) describes, Troy, NY recently passed a \$2.25 million bond measure to use with the \$6.75 million from FEMA to repair the city's seawall. But as Eubanks writes, "the seawall only protects the city center, home to the gentrifying downtown arts district and waterfront redevelopment," leaving many poor and working-class family homes unprotected from encroaching waters.



Henry Grabar of Slate (2016) describes the bias in the Army Corps of Engineers' methods for deciding which towns and cities will receive flood defenses like walls, levees, and dunes. Their cost-benefit analyses categorize many communities as ineligible for these projects because they are based on the market value of existing structures.

We must urgently address the potential for adaptation policies to exacerbate climate justice issues. For example, FEMA is publishing new coastal and inland 100-year flood zones for communities in the National Flood Insurance Program. As researchers Montgomery and Chakraborty (2015) argue, “we need to assess the social vulnerability of residents that may be faced with greater flood risks and flood insurance premiums.” And we need to adjust federal flood insurance protection accordingly.

The disparity of adaptation needs and policies is a profound gap in the research evidence and in policy debates. There needs to be much more research and attention paid in climate policy discussions to how adaptation policies protect and benefit vulnerable communities. We need political leaders, policy and justice advocates, researchers, and the press to be diligent as adaptation policies are implemented, ensuring that these measures include necessary resources, safeguards that prevent discriminatory impacts, and adaptation strategies that are tailored for vulnerable communities (Kaswan 2016).

Conclusion

The relationship between climate change and economic and social inequality is beginning to gain attention from the climate movement and progressives more broadly. This is essential as we track the ways climate change wreaks havoc on vulnerable communities and as we implement climate change policies to reduce the presence of greenhouse gases in our atmosphere. While mapping the intersections of climate change and inequality, this report has also highlighted the ways in which inequality is bad for the environment, including how it contributes to greenhouse gas emissions.

All three categories of intersection that we have discussed in this report demonstrate the urgent need to address these two 21st century challenges concurrently. There is much work to be done. We hope this report, by elevating the most urgent research and policy gaps, can bolster the work of activists, policy advocates, journalists, academics, politicians, and everyday citizens who are fighting for a more just and sustainable present and future for themselves and their children.



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