

# JIPP

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# Perspectives in Climate Change

American Culture and the  
Climate Change Controversy

*Talia Wilcox*

Climate Change, Data, and Art:  
the Story of Artist Jill Pelto

*Jill Pelto and Maanas Sharma*

And more...



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# Perspectives in Criminal Justice

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# ESSAY

## American Culture and the Climate Change Controversy

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*The international relations (IR) theory of Social Constructivism provides valuable understandings of climate change by exploring how personal and social factors condition and shape people's beliefs. To implement effective policy to curb climate change, we must foster discussion and compromise with people who deny climate change or its urgency. Though seemingly difficult, we can use IR theory to understand the driving forces behind the politics of climate change deniers<sup>1</sup> — namely, economic, political, and social factors — to do so. More specifically, the Green New Deal, a congressional resolution that addresses both the rise of greenhouse gases as well as issues relating to poverty and environmental justice, can serve as a guide to combating climate change in the realm of public policy, assist us in beginning a productive dialogue between climate change activists and deniers, and galvanize necessary action in response to climate change.*

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<sup>1</sup> Though no term is entirely unproblematic, the Journal of Interdisciplinary Public Policy, following the lead of a majority of scholarly and journalistic sources, uses "denial" to describe explicit and implicit unwarranted doubt towards climate change and environmental science policies (National Center for Science Education). The term is not used pejoratively; rather, we embrace the term for sake of brevity, consistency among the larger community, and to follow in the footsteps of a number of the most prominent deniers. Lastly, the article's focus on cultural denial makes the term more accurate than "skeptic" or "contrarian."

## **Introduction**

As a society, we consider many topics socially taboo, including sex, religion, political affiliation, and climate change. However, the issue of climate change is unique among these. The response to climate change should (in theory) be a scientific phenomenon. However, the climate change issue has evolved from scientific to cultural, characterized by immobilizing partisanship in the legislature and supranational organizations (Wallach; Scott). Likewise, the issue has divided the populace, with climate change being denied by many while sweeping changes to address it are fiercely advocated for by many more. To understand opposition to climate change policy, we must first understand the socio-cultural factors that drive people's beliefs.

In the 1970s and 1980s, scientists began to discuss evidence of ocean warming and the atmospheric temperature rising, information the public initially considered irrelevant to daily life (Maslin). However, environmental activists and scientists warned these changes would transform life on earth as we know it and require all nations to respond (Maslin). Once this scientific problem became politicized in individual nations, climate change policy became driven less by data and more by social and cultural perspectives. By analyzing and linking such factors to the newly introduced Green New Deal, we propose a way to introduce conversation between climate change deniers and activists. For progressives to move from stalemate toward immediate action, they must recognize deep cultural factors that enable climate change deniers. This essay explores economic, political, and social factors that foster denial of scientific conclusions and uses the lens of social constructivism to better understand these in relation to policy.

## **I. Economics**

Climate change will inevitably bring immense change to the world economy. Globally climate change will bring drought, fires, and extreme temperatures. In turn, these conditions will adversely affect agriculture by changing the crop yields and mixtures, directly affecting farmer's livelihoods and world food supply ("Climate Impacts on Agriculture and Food Supply"). Additionally, climate change will affect productivity and jobs, and inflict physical damage. However, whether people prioritize these risks over the opportunity costs of measures to avoid them is a very individual question. Many oppose climate change action based on potential economic consequences. Claiming "the cure is worse than the disease," deniers

support the status quo to protect against financial losses from replacing fossil fuel plants, for example. On the other hand, climate change will most affect low-wage workers, who must decide between putting food on the table and solving climate change. Thus, many of these people must continue environmentally detrimental practices simply to make ends meet (Irwin).

Overall, economics provides an indispensable lens to view how humans weigh the potential dangers of climate change. Some behaviors follow conventional economic logic. For instance, oil companies do not support climate policy, fearing such a policy will limit business for the company (Holden). The economic theory of cost-benefit analysis describes companies' phenomena of first and foremost optimizing current profits, rewarding short-term thinking that often penalizes future generations. This school of thinking disincentivizes any policies to curb climate change that result in a net loss in the short term.

Culture also has a profound effect on how economics is used in this decision-making process. Due to confirmation bias, we seek evidence that endorses our personal beliefs. Countries often have difficulty quantifying climate change in monetary terms, especially those favorable toward climate change policy (Hulme). As such, people cling to previously held beliefs and focus on present-day concerns over seemingly remote future sustainability concerns. While many extreme climate policy supporters accuse detractors of being ignorant, uninformed, or stupid, it is precisely their human intelligence that allows climate change deniers to employ confirmation bias to avoid criticism of their beliefs.

## **II. Politics**

Politics is deeply embedded in the culture of a society, especially in the United States, where the two-party system has fueled intense animosity and partisanship. Worldwide, key stakeholders in climate change politics include national governments, public employees, political parties, citizens of different economic and demographic strata, and fossil fuel or renewable energy businesses. Each of these macro-level political actors is motivated by unique factors. For example, economics drives lobbying for businesses based upon non-renewable energy sources (Holden).

However, especially in the United States, politicians and their ability to enact policy are dependent upon changing public opinion, which is often more informed by ungrounded theories and emotion rather than science or complex understanding. For example, former

President Obama embraced the Paris Agreement in 2016 to limit global warming (Hoffman; Somanader). However, President Trump chose to withdraw from the Paris Climate Accords, claiming “the Paris accord will undermine [the U.S.] economy... [and] puts [the U.S.] at a permanent disadvantage” (“Statement by President Trump on the Paris Climate Accord”). According to the Pew Research Center, only 24% of conservative Republicans believe the U.S. government should do more to combat climate change (Funk and Hefferon). This position largely reflects economic loyalties; conservatives believe climate change policies will hurt the economy and businesses’ profits. Likewise, Republicans who think combating climate change has a net positive or neutral effect on the economy are more likely to support increased government action on climate change (Funk and Hefferon). In contrast, 90% of liberal Democrats consider combating climate change a governmental priority (Funk and Hefferon). Internationally, 54% consider climate change a serious issue (Stokes et al.). Importantly, in other developed countries, as in the U.S., the split between right-wing and left-wing parties’ support for government action regarding climate change is significant (Stokes et al.).

International political actions reflect these national changes. By withdrawing from the Paris Climate Accords, the U.S. set an international precedent validating climate change inaction, severing ties with allies — a move likely to have severe consequences. In the past, the U.S. served as an international model and leader after World War II (Lander). Many countries now focus domestically versus participating in the international community, leaving countries most affected by climate change in grave danger and limiting global action (Dobson). Isolationist action cannot solve this crisis, as environmental issues do not know international borders; they are by definition global. The COVID-19 pandemic, in particular, has caused a domino effect of isolationism and go-it-alone nationalist thinking.

### **III. Culture**

The climate change debate also has strong cultural underpinnings, driven mainly by social alignment with political parties. Although environmentalists drive climate activism, politicians who act based on voters’ opinions determine real change—a senator from a coal mining town may oppose environmentally favorable actions to maintain economically minded constituents’ support. Young people are also mobilizing worldwide, as highlighted by Greta Thunberg’s Global Climate Strike movement, which had 7.6 million participants (“7.6 Million People...”). Their activism has grown from the need to raise awareness and voice anger against

problems caused by previous generations, an effect seen prominently in recent data collected by the Pew Research Center. Regardless of party affiliation, younger people are more likely to support more government action on climate change. More than half of Millennial Republicans and 46% of Republican women support increased government action. The Republican party finds itself in a deciding moment—mostly dependent on social factors. Conservative Republicans, in the majority, are strongly influenced by misinformation spread by utility companies marshaling against renewable energy. Thus, they are currently evenly split on the issue of prioritizing renewable energy or fossil fuels (Funk and Hefferon). This split is emblematic of the potential for change, should we understand factors at play behind this decision making (Republican Leaders).

Some aspects of climate change touch on human rights. For example, there remains ongoing international debate about the scope of migration fueled by climate refugees, a term which many countries reject, denying the physical, cultural, and economic effects of climate change (“Human Rights, Climate Change and Migration”). The United Nations, in Resolution 35/20, reported that research and preparation are underway to address “human rights protection gaps in the context of migration and displacement of persons across international borders resulting from the sudden-onset and slow-onset adverse effects of climate change” (“Human Rights, Climate Change and Migration”). Despite this recognition, peoples of developed countries have not yet felt fully the devastating physical and cultural impact of climate change and due to confirmation bias, often do not recognize the effect on the welfare of global peoples (Hoffman). For example, people in Latin America and Africa are more than twice as likely to think that climate change will affect them personally as people in the U.S. or Europe (Stokes et al.).

## **Conclusion**

Climate change refers to atmospheric warming of the earth’s temperature, a scientific concept. However, the international relations theory of social constructivism provides insight into political, economic, and social pressures that inform climate change as a cultural issue characterized by partisan viewpoints. Social constructivism focuses on culture, social norms, and societal ideas rather than the acquisition of power or individual actions (McGlinchey). It considers how knowledge of rules, concepts, and categories shapes individual world views. Ergo, on a personal level, this theory aligns with the idea of confirmation bias.



Applied to climate change, its polarization and partisanship across the globe can be explained by cultural identities and personal priorities. For example, coal miners in the United States prioritize security and jobs over reversing climate change, and their Senators represent those values in Congress. Additionally, social constructivism provides a useful way to examine behaviors around climate change action by explaining *motivated reasoning*—the idea that people will arrive at conclusions at which they want to arrive and construct outwardly rational evidence to reach these conclusions (“Motivated Reasoning”). Social constructivism can be confirmed in climate change policy through the fact that social factors, including political party, religion, geography, and views on controversial issues such as abortion, almost always reveal a person’s views on climate change (Hoffman). Therefore, climate change has become a cultural issue distinguished by opinion and personal identity through deliberate manipulation of facts and avoidance of truth (Mooney).

Therefore, we must treat it as such. To effectively pass popular, enduring climate change policies, we must hold an understanding of opposition as being socially constructed as a starting point for dialogue. People’s views on climate change stem directly from their communities, culture, and experiences. To change deniers’ mindset, first, we must understand economic, social, and political factors leading to political inaction. Then we must craft policy that is equitable and supports each of those identities. Continuing to neglect social factors that create deniers and ignoring motivating reasoning will doom climate change policies to failure.

The Green New Deal, proposed by Representative Alexandria Ocasio-Cortez (D-NY) and Senator Edward Markey (D-MA), argues for immediate greenhouse gas reduction to save money and combat social issues, including poverty, and racial and economic inequality (Friedman). While this policy potentially benefits both parties, its Democratic introduction led to widespread Republican backlash. Despite this conflict, from a policy perspective, the Green New Deal provides a robust framework for dialogue. Addressing both scientific consequences such as the rise of greenhouse gases and social issues like economic inequality, this policy is key to reaching deniers and combating climate change (Friedman). In particular, the Green New Deal promises “millions of good, high wage jobs” (Ocasio-Cortez). *Scientific American* estimates that between 2030 and 2050, 4.2 million new jobs in clean energy will be created resulting from the Green New Deal policies (Brown). The climate change debate cannot be solved, understood, nor resolved without understanding the vast cultural implications that determine public opinion and therefore, governmental policy.

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# National Security and the Dangers of Climate Change

## Enya Gu

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*Climate change will have serious consequences for not only the livelihoods of citizens around the world but for the security interests of states as well. In particular, the United States should have a vested interest in mitigating the effects of climate change, as there are a number of dangers climate change poses towards national security. Although the military has recognized climate change as a threat, the United States still has much ground to cover in ensuring the continued protection of the nation from the widespread impacts of the climate crisis.*

## Introduction

Rising waters, melting glaciers, drier seasons — the dangers of climate change have been perpetually preached to the public, but are yet to see any real sense of urgency in politics or our day-to-day lives. Perhaps this is due to how gradual climate change is or because people cannot feel its effects to the point where they are concerned. In the words of climate scientist Dr. Shahir Masri, “if you are only following things in your own neighborhood, you might only be noticing one observation that is different from what it was 10 years ago. It is really when you are looking at the global picture ... that you start to really have a clear and compelling picture of what is going on.”

It is undeniable that climate change is real and will start negatively affecting everything from food supply to land availability. Prime among climate change’s varied impacts is one oft-overlooked: its effect on national security. At a first glance, the two may seem distantly

related; but, the cascading effects of climate change pose a looming threat to the country's protection.

## **National Security and Climate Change**

One of the most obvious examples of how national security would be at risk lies in the location of our military bases. The United States has bases around the world, of which many are located near the coast ("The Climate Crisis..."). Needless to say, once above-ground land starts receding as sea levels rise, it spells trouble for those locations ("The US Military..."). On top of that, increasingly extreme weather can cause major destruction to military equipment ("The Climate Crisis..."). The aftermath of Hurricane Michael in 2018 left fighter jets unable to regain their regular operating schedule for nearly a month (Silliman), and wildfires in California forced thousands to evacuate a base just last December (AP (b)). According to a report issued by the Department of Defense in 2019, 67% of bases surveyed had issues with recurrent flooding, while 76% reported that this could create vulnerabilities in the next 20 years (Silliman). Weather disasters in and of themselves are extremely costly as well – Hurricane Michael alone caused \$5 billion in damage to two small Air Force bases, while a large base could require much more in repairs (Silliman).

The destabilizing effects of climate change are not just on military installations; rather, it poses substantial security risks internationally as well, for example, due to the melting Arctic. The Arctic Circle has been melting twice as fast as the rest of the world, thawing its permafrost, icebergs, and glaciers ("Climate Change in the Arctic"). Precious resources lie underneath the surface of the Arctic, fueling competition for control of the region, which has already begun – Russia has already deployed cruise ships and opened factories in the region (Lamothe), while China has plans for a so-called 'Polar Silk Road' and has invested heavily in arctic-adjacent countries like Iceland (Conley). Meanwhile, the United States lags behind in economic control: significant infrastructure in the Arctic does not exist to stimulate economic development in the region, with the closest port being over 800 miles from the Bering Strait (Conley). Before leaving office, the Trump administration loosened restrictions on drilling in the American Arctic territory for economic development; however, the Biden administration is set to issue a moratorium on such activities (AP (a)). America is unlikely to pursue activities directly harmful to the environment under the new administration, so resource extraction and economic development in the Arctic will likely be stalled for the foreseeable future (AP (a)).

This leaves the United States with a growing security dilemma it must keep in check: Russia and China's expansion of influence in the region. Arctic military exercises have already begun, with Russia conducting one in 2017 and NATO holding one in response the following year (Conley). Russia has invested heavily in bases and weaponry in the area, while China has plans for a nuclear-powered icebreaker (DHS). A great power competition is not unlikely in the future, especially when the United States is suspicious of their motivations and projects, but has no policies in place to counteract their influence (Conley). On that front, a recent report by the Department of Homeland Security published under the Biden administration has recognized the threats and has proposed actions such as procuring icebreakers, bolstering infrastructure, and engaging in cooperation with allies to secure the region (DHS). Nonetheless, what policies the Biden administration will put in place, if any, and thus the future of American involvement in the brewing conflict in the Arctic remains to be seen.

### **Domestic Security Concerns**

Heightened tensions may not be the only political threat the United States faces in the future from the effects of climate change. Rather, instability looms from within our own borders. There are many factors that contribute to political instability, but climate change is, perhaps surprisingly, a huge contributor (Worland). A change in temperature of one standard deviation has correlated with a 2.3% rise in interpersonal conflict rates and a 13.5% increase in intergroup conflict rates, according to a study published in *Science* (Hsiang et al.). Climate change has the ability to dramatically exacerbate existing problems such as economic and structural inequalities (Hsiang et al.). It is not hard to imagine why — environmental disasters, destruction of coastal housing, and food shortages would all affect the poor and marginalized much more than those who can afford to move or buy more expensive things on the market. Climate change also increases psychological stress, resulting in an increase in the likelihood of crime, as well as the use of extreme force by police, which would undoubtedly fuel the already-tense relations between police and the communities they serve (Worland). Increased polarization and internal division have been proven to have devastating implications for national security; international agreements fall apart (Schultz 19), allies become disillusioned and distrustful of U.S. support (Schultz 19-20), and America's ability to bargain with adversaries is undermined (Schultz 20). An even more divided America would make protecting the homeland all the more difficult, especially when confronting the rise of opposing powers such as Russia and China.

Another significant domestic concern for America is the possibility of a resource shortage. The beginning of the COVID-19 crisis showed how the public might panic and stockpile goods when faced with a (perceived) shortage. Toilet paper, groceries, and disinfectants all vanished from supermarket aisles as people rushed to hoard them (Picchi). Resource shortages caused by climate change could include decimating food supply, which would not only cause chaos in America but around the globe (Flavelle). The economy would likely suffer, as was the case during the oil shortage of the 1970s (Ryssdal), which increases the possibility of polarization and strife (Wolf). Hence, averting a resource shortage should be one of America's top interests when dealing with the climate change crisis.

Finally, with resource shortages, receding land, and more extreme weather comes the displacement of marginalized populations. According to a study published in 2017 in *Land Use Policy*, a staggering 1.4 billion people could be considered "climate refugees," people displaced by climate change-related events, by 2060 (Geisler and Currens 324). Changing weather patterns will make some places uninhabitable, while others would be forced to leave due to overpopulation and resource shortages (Tetrick 4). This mass migration of people would cause problems for countries across the globe, including the United States, especially when no climate refugee protections or policies have been put in place (Tetrick 4). Countries will have to decide how to deal with those waiting at their borders, who no longer have a home to return to, which may cause a litany of different problems. Conflict between opposing ethnic and religious groups has already risen in places affected by the early onset of climate-induced migration, such as in Nigeria ("The Climate Crisis..."). Fear of refugees and immigrants overall is not an uncommon sentiment in some areas in Europe and the United States (White 26), and politicians have benefitted from proposing policies against irregular migration such as refugees (White 39). Consequently, the risk of a security dilemma is high, for the rejection of climate refugees in one country will have profound implications for its neighbors and allies (White 39). The United States needs to recognize this as a true threat to national security, and implement policies to mitigate its effects, such as recognizing climate refugees as legitimate migrants and establishing amicable immigration policies regarding such refugees (Tetrick 26). Importantly, the action in this sphere must be diplomatic and humanitarian as opposed to aggressive and militarizing (Busby).



## Conclusion

All in all, climate change poses considerable security risks to the nation, both inside or outside of the borders of the United States. The threat is real, and it is coming. The military has known about the dangers of climate change since at least 2010 and has been taking preventative measures such as reducing reliance on fossil fuels and using more renewable energy (Klare and Ward). President Biden has recently signed several executive orders restoring policies the Trump administration repealed (such as rejoining the Paris Climate Change Accords), but more comprehensive policies could face opposition by members of Congress in the future (Newburger). The United States has much ground to cover — the results of the upcoming COP26 climate summit will be integral to how nations will address climate change in the near future (Busby and Sharma). Global cooperation will be key to addressing the foundations of climate change, and the United States can lead the world once again in doing so. Policies aimed at addressing some of the potential security dilemmas isolated would be a great start in getting not only America but the rest of the world on track to mitigating the global phenomenon of climate change.

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# COMMENTARY

## The Paris Agreement: An International Foundation for Green Policy

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### Introduction

In December 2015, representatives from 196 countries gathered in Paris to sign the most comprehensive plan on climate change in history, the Paris Agreement. On November 4, 2016, the legally binding document officially entered into force. The Paris Agreement primarily aims to limit the global temperature increase from global pre-industrial levels to 2 °C, but preferably 1.5 °C. The difference of 0.5 °C is huge. The Intergovernmental Panel on Climate Change — established by the United Nations Environment Programme and the World Meteorological Organization to independently assess the risks of climate change — projects that this difference might cause “up to several hundred million more people to become exposed to climate-related risks and poverty.”

Admittedly, though, coordinating individual countries’ reductions of carbon emissions is a monumental task. To that end, the agreement aims to provide a framework that assures transparency, accountability, the achievement of targets, and financial support for developing countries in climate mitigation and adaptation. The crux of this are nationally determined contributions (NDCs), plans that parties submit every five years outlining how they are combating the climate crisis. Furthermore, to encourage transparency, two non-profit organizations created the Climate Action Tracker (CAT), an independent scientific analysis system that follows the actions of governments and compares them with pledges. Currently, the CAT tracks 36 countries and the European Union, who are collectively responsible for 80% of

global emissions. In addition to the CAT, though each party's NDC is not legally binding, Article 13 of the agreement obliges the parties to have their progress assessed by experts every two years. Being the most crucial part of the tracking process, Article 13 contributes incredibly to accountability. Finally, the Paris Agreement established financial and institutional support for developing countries, which are often more reliant on fossil fuels and less prepared to rapidly curtail their use. In the agreement, developed countries pledged to allocate \$100 billion per year to help developing countries by 2020. And, the agreement also covers so-called "capacity-building actions," the process of obtaining resources needed to fight climate change. Allocated to the least developed countries and those most vulnerable to climate change, capacity-building actions include technology development and deployment, climate financing, and education, training, and public awareness efforts.

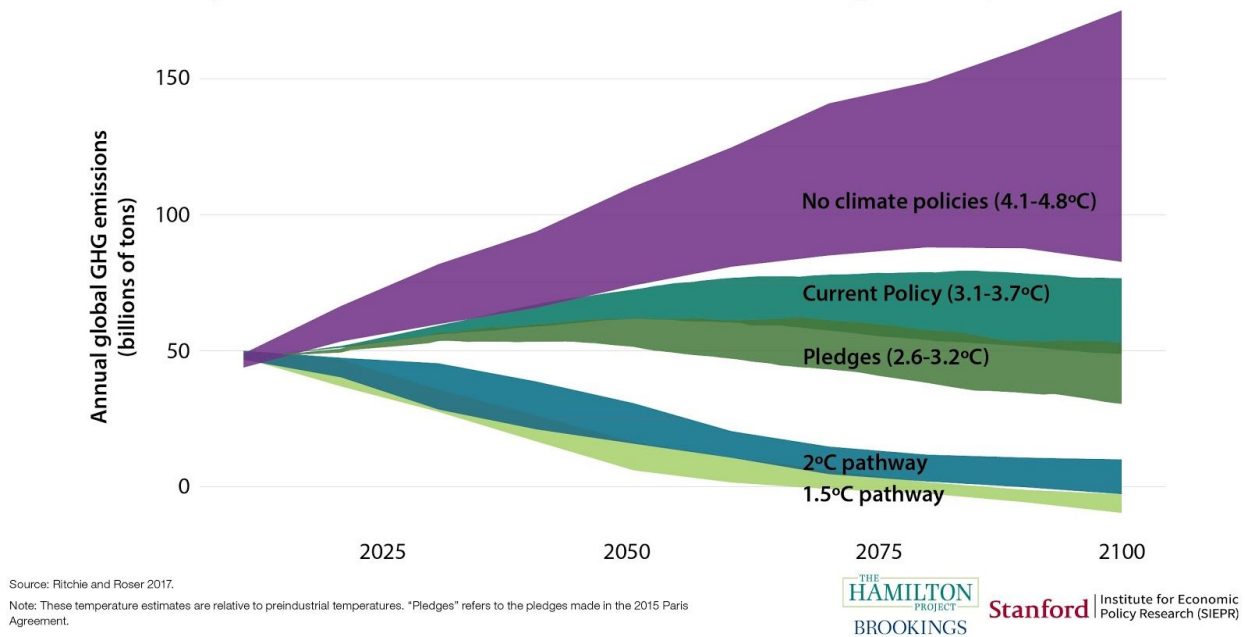
### **Limitations and Criticisms of the Paris Agreement**

Despite the initial broad support of the agreement, some political groups have mobilized against the treaty. Much to the ire of activists, a number of signatories to the agreement have yet to ratify it, including Turkey, Iran, and Iraq. In the United States, Republicans, under the leadership of former President Trump, even withdrew from the agreement, although current President Biden recommitted the country to the agreement. For example, the most ardent opponents of the treaty have criticized the cost of transitioning to a green economy. While it is true that green policy requires significant upfront costs, the investment is worth it in the long term as it will create jobs and avoid climate-related externalities. Furthermore, "the creation of millions of jobs will generate the income and tax revenues needed to repay any borrowing." wrote Ann Pettifor, world-renowned political economist and author of *The Case for the Green New Deal*.

More relevant, however, are debates about the efficacy of the Paris Agreement. For instance, developed countries have fallen short of the \$100 billion a year goal for supporting developed countries. More, the Independent Expert Group on Climate Finance has said that developed countries should be expanding their efforts well above the \$100 billion goal. And, domestic and international gridlock has made rapid decarbonization efforts limited in effect in many places, despite the efforts of climate activists.

Furthermore, the lack of enforcement mechanisms in the agreement is worrisome. Many countries are lagging behind their pledges of carbon-neutrality and ill-prepared, politically and economically, to implement sweeping climate reforms. According to many researchers, even if countries were able to fully actualize their current pledges, it would not be enough. Current pledges would still lead to a 2.7-degree temperature rise by 2100, according to the CAT. Such an increase would still have catastrophic impacts on the planet, including the melt of Antarctic and Greenland ice sheets, and greatly exceed the goal of 1.5 °C and bottom-line of 2 °C.

Historical and Projected Annual Global GHG Emissions under Selected Policy Scenarios, 2010–2100



Finally, the agreement also fails to prepare us for the secondary effects of the climate crisis. Climate change fuels forced migration and can exacerbate social and geopolitical tensions. According to Michael B. Gerrard, founder and Director of the Sabin Center for Climate Change Law at Columbia Law School, “persistent drought forced as many as 1.5 million Syrian farmers to move to overcrowded cities, contributing to social turmoil and ultimately a civil war that drove hundreds of thousands of people to attempt to cross the Mediterranean into Europe. Drought also worsened refugee crises in the Sahel, the Horn of Africa, and other parts of the continent.” To avoid the militarization of the climate crisis in the future, diplomatic solutions, like the Paris Agreement must be sought sooner rather than later.

## **Achievements of the Treaty**

Although there remains much room for improvement in the international fight against climate change, the Paris Agreement has had significant impacts in the five years since its adoption.

### *I. Normalization of Net-Zero Targets*

Since the proposal of the Paris Agreement, net-zero targets have spread around the world. The Paris Agreement created this trend, as many signatories set carbon neutrality goals. Begun by the European Union and the United Kingdom, carbon neutrality goals spread to China, Japan, South Korea, and Australia. Under the Biden administration, the US is expected to join the movement by both declaring the climate crisis a national emergency and promising carbon neutrality by 2030. All in all, over 100 countries have joined an alliance calling for net-zero emissions by 2050. Since, according to the Intergovernmental Panel on Climate Change, “to have a 50% chance of keeping global warming in check, global emissions need to reach net-zero by 2050,” these pledges are an important consequence of the Paris Agreement.

### *II. Popularization of Clean Energy*

More, the Paris Agreement was a clear proclamation in favor of replacing fossil fuel with clean energy. In 2020, many landmark actions were taken in this regard. Coal generation in the United States dramatically fell in the first half of the year; in Europe, coal plant retirements overtook the creation of new jobs; and, COVID-19 led to the decline of global coal consumption. Besides, renewable energy has become increasingly affordable and lithium-ion batteries have served to electrify previously dirty industries. For instance, these have fueled President Biden’s plans for a carbon-free power sector by 2035.

### *III. New Action Mechanisms*

Although the agreement has no central enforcement policy, alternate actors are embracing the Paris vision. Financial regulators; the world’s largest banks such as JPMorgan, HSBC, and Morgan Stanley; city authorities; and state governments are among the institutions

creating new green policies. In December 2019, a day after climate activist Greta Thunberg called for investors to “follow the science”, dozens of new companies joined the “Business Ambition for 1.5°C” campaign. New signatories included 177 companies representing 5.8 million employees. As of 2019, the 177 companies “have a combined market capitalization of over US\$2.8 trillion, and represent annual direct emissions equivalent to the annual total CO2 emissions of France.”

Furthermore, the Paris Agreement drew attention to the seriousness of climate change and started a new era of activism: climate activism. Led by youth activists such as Greta Thunberg, the movement flourished in 2019. Millions of teenagers from all around the world coordinated global school strikes for the climate. On September 21, 2019, at the UN Climate Action Summit, Greta Thunberg expressed the anger and disappointment of the youth:

*I shouldn't be up here. I should be back in school on the other side of the ocean. Yet you all come to us young people for hope. How dare you! ...You have stolen my dreams and my childhood with your empty words. And yet I'm one of the lucky ones. People are suffering. People are dying. Entire ecosystems are collapsing. We are at the beginning of mass extinction, and all you can talk about is money and fairy tales of eternal economic growth. How dare you!*

## **Conclusion**

All in all, the Paris Agreement codified the urgency of climate change. With its pearls and pitfalls, it aims to save the planet. It acknowledges that denial is not a policy, unlike the politicians all over the world. Some may disagree, but the agreement and the new era of activism it created raised awareness about the issue. It might be the first step toward a greener future, and it is an international foundation for green policy. As humanity failed to protect its only home, embracing the Paris vision is the least we can do to fight for our future.



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# In Conversation: The Geopolitics of Climate Change

**Joshua Busby**, conducted by Maanas Sharma and Joan Chang

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**Much of your work framed climate change as a security issue long before John Kerry was appointed as climate envoy in a national security capacity. What key concerns and lessons learned can you share with the new administration?**

Climate change will have security consequences from its impacts — these include direct impacts on countries and indirect impacts on their overseas interests. For example, climate change impact can destabilize other countries around the world and those effects may constitute security concerns for others, given risks of spillover consequences from migration or conflict contagion. The rising salience of climate change as a top tier issue in geopolitics may make climate change a source of friction in great power politics, elevating the issue as part of the security discussion in its own right. How countries tackle climate change, from efforts to acquire land overseas to shore up access to foodstuffs or securing critical minerals for battery technology, can be as conflictual as the physical impacts of climate change. Most of the responses to diminish the security consequences of climate change do not involve military instruments but require diplomacy and development resources. Securitizing climate change shouldn't reinforce the idea that this is primarily a military problem — because that it is not.

## **How effective is the Paris Agreement as one of these diplomatic responses?**

The Paris Agreement was a down payment on what was needed to address global climate change, but the commitments to reduce emissions are not enough to avoid dangerous climate change even if fully implemented. This was known at the time. The hope was that countries would gain some positive experience reducing emissions and ratchet up their ambition over time. Indeed, the mechanism of the Paris Agreement has countries revisit their earlier targets (so-called Nationally Determined Contributions, or NDCs) and increase them every five years.

The first such occasion to increase them was this year, but the negotiations were delayed because of the coronavirus outbreak. So, the 26th UN Climate Change Conference at the end of this year will really be the time when we expect to see enhanced ambitions from states to reduce their emissions and align with the Paris Agreement's goals of keeping global temperatures from rising more than 2 degrees Centigrade above pre-industrial levels. Given that global temperatures are already more than 1°C above pre-industrial levels, it may be difficult to meet that the 2-degree target, especially since countries have largely not been on track even to meet the modest goals of the Paris Agreement. The coronavirus has temporarily contributed to a large decrease in emissions, perhaps as much as 7.5% in 2020, but at great cost to human welfare. The world will need to see such large decreases in emissions every year for a number of years but without the dislocation and suffering engendered by the COVID outbreak.

## **How could the U.S. government encourage such follow-on in foreign countries?**

The administration will have to think carefully about what will induce laggard countries like Brazil and Australia to participate more fully in efforts to address climate change. When governments are hostile to climate action, subnational action by cities and private actors can partially compensate for the lack of national momentum, but national action and commitments are crucial. A country like Brazil has a strong regard for its sovereignty so efforts to pressure the country to play a more constructive role in climate change may be challenging, particularly under the current leadership of Jair Bolsonaro. Some measures like trade sanctions may be effective but could reinforce nationalist sentiment in a country like Brazil. The U.S. will have to figure out tailored strategies for key countries based on consultation with local actors who understand those countries well.

**Climate Change has long been framed as a “threat multiplier” in the way that it compounds pre-existing tensions to make conflict more likely. What insight does your forthcoming book *States and Nature: The Effects of Climate Change on Security* offer on this relationship?**

I argue that the worst security consequences of climate change are most likely in countries that have weak state capacity, exclusive political institutions that leave some groups unrepresented in government, and where foreign aid is lacking or delivered in a one-sided manner to some groups and not others.

In such countries, a government lacks the capacity to prepare for or respond to climate challenges, that any responses that are carried out will benefit the regime’s key supporters and not others. Foreign assistance can sometimes compensate for the lack of state capacity but if aid is not forthcoming or delivered to some groups and not others, then some segments of society are likely to suffer and ultimately will blame the state for lack of attention to their needs.

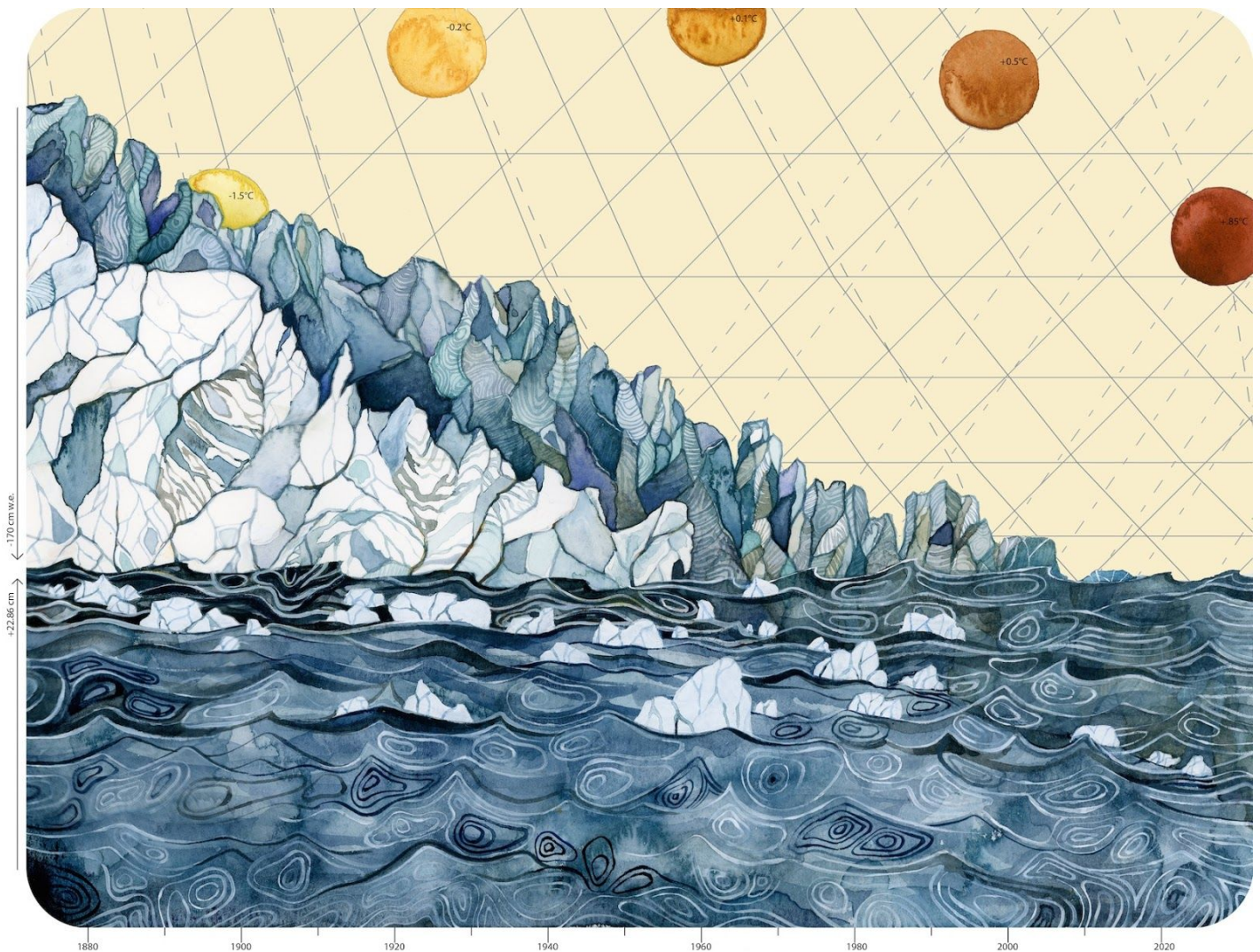
Governments should strive to build up their capacity to address major challenges, bring in all major groups into government to ensure inclusive representation, and leverage foreign assistance for both of those purposes. External actors need to appreciate the challenges and the limitations of externally sponsored efforts to build capacity and inclusive governance.

## ART + POETRY

### Climate Change Data: Watercolor on Paper

**Jill Pelto**

*Jill Pelto (www.jillpelto.com) is a young artist and scientist based outside of Portland, Maine. She holds a M.S. studying the Antarctic Ice Sheet and climate change in 2018 and B.A. degrees in Studio Art and Earth Science from the University of Maine. Pelto's artwork has been featured in Smithsonian, PBS NewsHour, National Geographic, and on the cover of TIME Magazine.*



## **What do you want viewers to know about this work to effectively understand it?**

*Climate Change Data* uses multiple quantities: the annual decrease in global glacier mass balance, global sea level rise, and global temperature increase. I wanted to convey in an image how all of this data must be compared and linked together to figure out the fluctuations in Earth's natural history. One of the reasons scientists study what happened in the past is to understand what may happen now as a result of human-induced climate change. I represented this by illustrating that glaciers are melting and calving, sea levels are rising, and temperatures are increasing. The numbers on the left  $y$ -axis depict quantities of glacial melt and sea level rise, and the suns across the horizon contain numbers that represent the global increase in temperature, coinciding with the timeline on the lower  $x$ -axis.

## **Many are discouraged by the data portrayed in your works – what do you say to these people?**

It has been a tumultuous year, but underlying currents of positive action are surfacing rapidly. It depicts a critical grouping of global climate data dictating our present and future action. The reality of this data may be frightening, but there are messages for hope within.

This year, the impact of the novel coronavirus will lead to a reduction in global CO<sub>2</sub> emissions, and renewable energy consumption will continue to increase. It is critical we leverage these trajectories as a sign of our collective potential to support local environmental action for global change today. This includes addressing the disproportionate effects of climate change on marginalized peoples.

## **Why are works like yours important in the sciences?**

A scientist's primary objective is to do the research and publish the research. A lot of scientists do use communication skills as part of their work, but some don't. Research is a scientist's full-time job, but at the same time, there is a lot of pressure for them to be good at public speaking, social media, and so on. Not everyone has all of those skills. I think there should be more outside communicators in science. Art and communication have always been important passions for me, even stronger than my love of scientific research. I was

happy to complete my studies and become a scientist, but most important for me is to have the time to do the work of communication. That can mean not continuing as a full-time scientist—at least, that’s what it meant for me.

Using striking visuals to create an emotional connection really clicks with some people. While scientific data depicts what’s there, too, it’s hard to connect with it emotionally or know what it means for your life. By making art about a topic, it becomes a part of our culture. Art has always been used as a tool for communicating the things that matter to us and define our lives.

### **What do you want people to do after viewing your work?**

I hope it’s something that gets people thinking, whether about what they see depicted, or whatever topics are most important in their lives. Right now, with the pandemic, we’re all living through a stressful situation that is bringing out a lot of different things in different people. Some people have been able to use this situation to reflect and tune in in a different way. Activism is taking off because people cannot wait for the slow pace of change any longer, and activism helps you learn better how your impact matters. I really hope that a lot of people are awakening to the power of their individual actions—which is the only thing that leads to larger collective action. Individual action may feel limited, but when amassed together, it forces change. I hope that my work has enough of an emotional connection to help set that chain of events going, and inspire others to take action.

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Interview Courtesy of Jill Pelto. Some excerpts previously published at [JillPelto.com](http://JillPelto.com), [TIME.com](http://TIME.com), and [blogs.ei.columbia.edu](http://blogs.ei.columbia.edu).

# A Tipping Point: Man and Nature

**Emily Wang**

*Emily Wang is a junior at Cary Academy, where she co-captains the Lincoln-Douglas debate team. She is passionate about art as a means of personal reflection and reflection of the state of the world. Her work has received numerous accolades in the Scholastic Art and Writing Competition. Additionally, she is a Marketing Specialist at the Journal of Interdisciplinary Public Policy and has a passion for mathematics and chemistry.*



We, humans, carved out the hearts of forests to build sprawling suburbs. We, humans, drained swamps to lay down belts of asphalt that we call roads. We, humans, dug holes and filled them with water to create lakes where they do not belong. Whether it is destruction, conservation, or preservation, humans are constantly playing limbo with nature. Here we might bulldoze a forest to build our neighborhoods, yet over there we might lay down some fresh sod — build a park — to compensate. Nevertheless, a couple patches of freshly farmed grass do not ameliorate our destruction. In fact, they may make it worse through pounds of fertilizer, polluted runoff, and self-satisfaction from thinking that we have atoned for our destruction.

In this painting, I explore these sentiments through a surrealistic depiction of the natural and man-made. I felt this style, which juxtaposes seemingly disparate imagery in a dream-like manner, best captures the interaction between man's artificial systems — like railroads — and Mother Nature's natural systems — like fruit and the desert.

When humans encounter nature, one of our first instincts is destruction, for we are fueled by a vision of how we might make the land more suitable for our flourishing. Instead of laying down a path around a tree, we simply get rid of it, carving out the straightest path forward without regard for how that may damage the natural surroundings. I illustrate this interaction through the geometric cutouts in the pears that create a convenient throughway for the railroad track. These cutouts are precisely in the region of the pears where their seeds would be, demonstrating humankind's disruption of nature's natural reproduction—our decisions to destroy nature for our own flourishing undermine that of nature's posterity.

Additionally, we are quick to slap labels of ownership onto any land that we stumble upon. Most, if not all, land has some kind of label — private land, public land, my land, your land. I capture this sentiment with the produce label on the nearest pear. Nature does not belong to us, yet we relentlessly commodify it: we draw lines to demarcate private property; we fight bloody wars over land ownership; we slap price tags onto everything in sight.

The nearest pear is the most damaged, with the peel near the stem pulled back, revealing oxidized and rotting flesh. This decomposing flesh symbolizes the corrupting influence that man has on nature: somehow, when we humans arrive on new land, we tend to destroy it. Each pear is tilted precariously with the last pear completely fallen on its side. This positioning signals the uncertain future that we are creating for ourselves. Though snow-capped mountains still exist and many beaches are still wide enough for us to enjoy, every destructive action we commit and avert our eyes from creates a more uncertain tomorrow.

Finally, pears were my fruit of choice because I feel that to the average person, pears are an unexciting, often overlooked fruit. They frequent the grocery store shelves and perhaps our kitchen counters, yet we pay little attention to them. In a way, we take them for granted. Similarly, we do not think twice about the blue sky over our heads or the tree outside the window. However, when the sky is orange from wildfire smoke or the tree snaps in ferocious hurricane winds, we will care about the blue skies and trees. Then, though, it may be too late.

In capturing this destructive human attitude toward nature, I want to focus on former President Trump's leadership's destructive impact on the environment. Throughout his presidency, Trump employed damaging rhetoric — such as labelling climate change a “hoax” — and spread misinformation to the overall detriment of efforts for a greener future (Worland). Unfortunately, the Trump Administration did not stop at words. In June 2017, Trump withdrew the United States from the Paris Climate Agreement (Gibbens). This withdrawal demonstrates an incredible lack of foresight on the president's part since not only does this decision set up a more precarious future, but it also neglects the impact on the international stage. The United States, as a world power and international model, withdrawing from a concerted effort to combat climate change will deeply undermine that effort.

On the domestic front, during his presidency, Trump opened up millions of acres of protected lands in Utah for energy exploration, including nearly a million acres that were a part of Bears Ears, a Utah monument and sacred land to the native Zuni, Hopi, Navajo, Ute, and Paiute tribes (Davenport; Nordhaus). Unfortunately, these tribes' pleas with politicians on Capitol Hill to spare the lands of their ancestors were to no avail. In his final full day as president, Trump issued oil drilling leases in the Arctic National Wildlife Refuge (ANWR) with tracts covering a total of 440,000 acres (DeMarban). Actions like this one are precisely what my painting addresses: greedy, short-sighted policymakers who carve out sacred, protected lands for a quick and easy path to profit. Trump and oil companies are drilling through the heart of the pear in their hunger for unsustainable profits from unsustainable fuel that is creating an unsustainable future. When Trump left office in January, he left behind a dying environment. His environmental legacy includes climate denial rhetoric, misinformation on climate change, withdrawal from the Paris Climate Agreement, and newly opened lands for drilling. Metaphorically, Trump built a railroad track that plunges through gaping holes in the hearts of nature's fruit. Fortunately, on his first day as president, President Joe Biden signed executive orders for the US to rejoin the Paris Climate Agreement and for a moratorium on the oil drilling leases in ANWR Trump issued, and Biden laid out plans to reverse Trump's policies on

shrinking national monuments for oil drilling (Kavi). All of these actions together offer hope for a brighter future for our earth.

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