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Winter 2018

# Global Politics of Climate Change

Rodger A Payne, *University of Louisville*



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## Political Will



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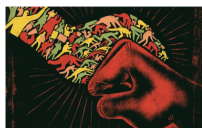
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### Political Will:

Environmental activist protesting outside the White House in Washington, D.C.  
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## The Global Politics of Climate Change

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Political leaders and analysts have frequently asserted that meaningful international action to prevent potentially catastrophic climate change is precluded by a lack of sufficient political will. For typical examples, consider the concerns often expressed in December 2007, when 10,000 delegates from 187 nations met in Bali, Indonesia, to continue international negotiations on the United Nations Framework Convention on Climate Change. Delegates were greeted by executive secretary Yvo de Boer (UNFCCC 2007) who declared that “a large part of the solution is available to us today, what we need is political will.” His views were echoed by UN Secretary General Ban Ki-Moon (UNFCCC 2007), who said at a press briefing in Bali that the science was “quite clear; all that was lacking was political will.” The conclusion of the summit, however, demonstrated that political will remained deficient. The meeting ended with participants agreeing merely to a “roadmap” outlining the significant progress needed prior to the next climate summit. Likewise, that follow-up meeting in 2009 in Copenhagen, Denmark, ended without a legally binding agreement to address climate change. Many media outlets reported that the conference was an outright failure (BBC 2009). Bolivian president Evo Morales (quoted in Vidal 2009) agreed, asserting bluntly that “The meeting has failed. It’s unfortunate for the planet. The fault is with the lack of political will by a small group of countries led by the US [United States].”

More recently, upon the eve of the Paris climate summit in late 2015, the environment minister of Peru identified an important apparent turning point in global politics. Manuel Pulgar-Vidal (quoted in Collins 2015) declared that “There’s never been such political will as we have today.” He continued by noting that “Developed countries and emerging economies are in agreement and are driving the agenda forward.” Indeed, years of frustration were seemingly set aside in November 2015 at the Paris climate summit when 195 nation-states adopted a universal, legally binding climate agreement. The parties agreed in Article 2 (Paris Agreement 2015) to hold “the increase in the global average temperature to well below 2° C above pre-industrial levels” and to pursue “efforts to limit the temperature increase to 1.5° C above pre-industrial levels.” These temperature thresholds are explicitly connected to the consensus view of scientists and aim to avoid disastrous climate changes. Every party to the Paris Agreement is obliged in Article 3 to create an “ambitious” effort

to reduce greenhouse gas emissions (ghg) and in Article 4 to “undertake rapid reductions thereafter in accordance with the best available science.” The accord went into force on November 4, 2016, a month after at least 55 Parties to the Convention accounting for at least 55% of total global greenhouse gas emissions deposited an instrument of ratification, acceptance, approval, or accession. To-date, 153 nations have ratified the Paris Agreement. Most of the states that have not ratified are relatively small developing nations in Latin America or Africa, or are fossil fuel-exporting states such as Iran, Iraq, Kuwait, Libya, and the Russian Federation.

Barack Obama committed the U.S. to the Paris accord in fall 2016. Unsurprisingly, however, given his campaign promises and prior statements on the topic, President Donald J. Trump announced on June 1, 2017, that the United States would withdraw from the Paris Agreement. Trump (2017) justified his decision by arguing that the agreement “disadvantages the United States to the exclusive benefit of other countries, leaving American workers...and taxpayers to absorb the cost in terms of lost jobs, lower wages, shuttered factories, and vastly diminished economic production.” In addition to his claims about unemployment and reduced GNP in manufacturing and natural resource sectors, Trump also asserted that the deal would have a minimal positive influence on global temperatures by 2100 and would allow U.S. economic competitors like China and India to continue building more coal-fired power plants. Trump additionally expressed a willingness to improve the climate agreement so that the U.S. could “get back into the deal” – both by working with domestic supporters of the Paris accord and by renegotiating with the remaining parties.

American withdrawal from the Paris Agreement is a significant development. After all, the United States is responsible for about 17% of the world’s energy consumed annually and produces about 16% of all yearly greenhouse gas emissions (BP 2017: 8, 47). Thus, despite Trump’s offer to renegotiate the terms of the Paris accord, long-time American allies and major trading partners almost immediately signaled their disapproval of the U.S. decision. In July 2017, German Chancellor Angela Merkel (quoted in Slawson 2017), who was hosting the annual G20 summit, said at a final press conference that she “deplored”



the American decision to withdraw from the Paris Agreement. British Prime Minister Theresa May, who like Merkel and Trump heads a conservative government, similarly said she was “dismayed” at the U.S. withdrawal and she urged Trump to reconsider. Likewise, newly elected French President Emmanuel Macron said that it was his duty to try to get Trump to change his decision. However, Trump did not alter U.S. policy at the G20 meeting. In turn, the 19 other members of the group (G20 Leaders’ Declaration 2017) took “note of” the U.S. unilateral decision to withdraw from the accord, but declared that “the Paris Agreement is irreversible.” Moreover, the 19 national leaders affirmed their plans to increase investments in sustainable, clean, and renewable energy technologies and infrastructure as well as in energy efficiency projects.

Despite the U.S. policy reversal, other leading nations are signaling that they continue to have sufficient political will to address climate change. Such commitments to stay the course are important because the world remains largely addicted to fossil fuels, which are the primary source of the greenhouse gases that are primarily responsible for ongoing climate change. Moreover, the need for action is more urgent than ever. Even as countries negotiated the Paris Agreement, greenhouse gas emissions grew by an average of 2.5% annually during the prior decade. The world is therefore emitting more than 50% more carbon today than it did in 1990 when nation-states started negotiating about climate change in earnest (Boden et al 2017). The economic, scientific, and political tasks ahead remain enormous. Indeed, the Intergovernmental Panel on Climate Change (2014: 20), the global organization responsible for identifying the temperature thresholds embraced in the Paris accord, estimated that by 2050, the world will need to reduce greenhouse gases 40 to 70% compared to 2010 levels. By 2100, ghg emissions will need to be eliminated. Can the international community really sustain the political will needed to transform world energy systems to make a dramatically different future possible? What are the implications of American intransigence?

## A Brief History

Scientists have long known that human extraction and burning of fossil fuels adds startling amounts of carbon dioxide to the earth’s atmosphere and could disastrously alter the planet’s climate. Indeed, even in the mid-1950s, renowned oceanographer Roger Revelle (quoted in Weart 2007) noted – albeit with “more curiosity than apprehension” -- that “human beings are now carrying out a large scale geophysical experiment” on the planet. By 1977, the results of that experiment were already becoming apparent and the National Academy of Sciences published an important seminal work with a bland title, *Energy and Climate: Studies in Geophysics*. The scientists from the Assembly of Mathematical and Physical Sciences (1977) who authored the volume warned against the potentially catastrophic consequences of manmade climate change and called for the “organization of a comprehensive worldwide research program.”

They also recommended the development of “new institutional arrangements” at the national level that could coordinate research and action plans because of the likely need for “adjustments in national policy or the formulation of new legislation.” Of course, climate change is a global environmental problem; thus, scientists and policymakers from around the world needed to be involved in the research and action planning processes. Not long after the NAS report appeared, the influential journal *Foreign Affairs*, produced by the Council on Foreign Relations in New York, published an article explaining some of the international scientific and political issues inherent to the debate about climate change. The author, ecologist Charles Cooper (1978) noted the “formidable interdisciplinary and international research task” ahead, but optimistically referenced “heartening indications of a growing international consensus on the need for cooperation to provide solutions.”

In fact, the international community soon initiated impressive scientific and political processes aimed at understanding and then addressing the problem. The first World Climate Conference (1979) presaged the founding in 1988 of the Intergovernmental Panel on Climate Change (IPCC), which assesses the science of human-induced climate change, its potential risks and impact, and options for adaptation and mitigation. The United Nations General Assembly began negotiating the Framework Convention on Climate Change in 1990. The newly achieved UNFCCC was opened for ratification at the Rio de Janeiro Earth Summit in June 1992 and entered into force in 1994. Just three years later, nation-states agreed to a Kyoto Protocol to this treaty, marking the first time that countries had decided together to reduce greenhouse gas emissions. Industrialized countries promised to reduce ghg emissions about 5% below 1990 baseline levels.

A contemporaneous international effort to save the atmospheric ozone layer provided observers with good reasons to believe that these efforts to address climate change could be successful. Scientists had in the mid-1970s found that manmade chlorofluorocarbons (CFCs) – used as an aerosol propellant, a refrigerant, a solvent, and a blowing agent for Styrofoam – were altering the chemical composition of the earth’s atmosphere and were likely undermining the stratosphere’s ozone layer, which protects life on the planet from deadly ultraviolet radiation. The National Academy of Sciences published a report in 1976 confirming the linkage between CFCs and ozone depletion – just one year prior to the publication of the climate change report. Then, during a remarkably brief period, the science was widely accepted by policy makers and the international community negotiated CFC production limits that would be strengthened over time. Notably, the United States took a leading role in the negotiations that created the Montreal Protocol, during the political administration of conservative Republican President Ronald Reagan. The treaty went into force in January 1989, less than 15 years after scientists had first raised the alarm about CFCs and the ozone layer.



Unfortunately, the two decades since Kyoto have been filled mostly with a series of disappointments, demonstrating that neither the productive early climate negotiations nor the Montreal Protocol were strong signals that the world would address climate change in a timely fashion. The legacy of failure lead to the kinds of statements about the lack of political will quoted in the introduction. Bali and Copenhagen were certainly not the only climate summits to conclude without making meaningful progress. To make matters worse politically, American obstruction of global efforts did not begin with the Trump administration. The United States Senate never ratified the Kyoto Protocol and President George W. Bush withdrew the American signature from this agreement at the start of his first term in 2001. American inaction and opposition made it very difficult for the other parties to meet the terms of the treaty and the 1997 Kyoto Protocol did not go into force until 2005. The agreement expired in 2012 and an initial follow-up commitment – the Doha Amendment – has been ratified by only 66 nation-states of the 144 required. Canada withdrew from Kyoto altogether and Japan, New Zealand, and Russia are among the nations that have not agreed to new commitments to reduce emissions under this treaty. Meanwhile, the planet remained addicted to fossil fuels, which continued to emit worrisome amounts of greenhouse gases. While the members of the European Union have significantly decreased their emissions, increased discharges from China and other nation-states have dwarfed those reductions. The world is emitting more than 50% more carbon today than it did in 1990 (Boden et al 2017).

### From Inaction to Action

The slow pace of global progress prior to the Paris Agreement is all too easily explained. In fact, barriers to progress were readily identified 40 years ago. In his seminal *Foreign Affairs* piece, Cooper (1978: 516) noted that “Short-term economic and social consequences are almost sure to rule out the required unanimous international consent. Fossil fuels are so convenient for so many purposes, and so easily extracted, that they are almost certain to be used to the limit of their availability.” Cooper (1978: 520) also referenced experts who viewed climatic change as “a virtual prototype of a problem poorly matched to existing human institutions.” The time horizon is quite lengthy and the enormous potential consequences conceivably dwarf normal man-made technical and social changes. “This kind of problem presents an almost insurmountable challenge to institutions,” Cooper (1978: 520) wrote. Moreover, the sources of carbon dioxide may be localized, but atmospheric concentrations will be dispersed throughout the earth’s atmosphere and the consequences of climate change will be distributed globally. Cooper speculated that climate change might even “appreciably benefit some nations and regions while harming others.”

The concerns Cooper identified decades ago persist. Petroleum (about 33%), coal (28%), and natural gas (25%) today supply over 85% of the world’s energy, while renewable sources account for only about 3.2% (BP 2017: 11). This energy

allocation will not change quickly as the world continues to invest over \$1 trillion annually on new fossil fuel infrastructure (International Energy Agency, 2014), with only about 15% of new energy investments made in renewable fuels. Virtually all nations contribute greenhouse gases to the atmosphere, but the volumes vary dramatically and have changed over time. The United States and other western industrial states are largely responsible for the historic accumulation of gases, but China is now the leading contemporary emitter and India is also a significant rising source. The benefits of the status quo mainly accrue to the richest and most powerful countries. They consume most of the fossil fuels that are largely responsible for global warming and their citizens achieve a higher standard of living as a result. Political leaders in some of these nations – especially the United States and China, the two largest polluters – have argued at various times that their countries ought not to be forced to make dramatic changes in their lifestyle or reduce their standard of living. While many experts argue that the adverse consequences of global warming are already becoming apparent, the richest and most powerful countries obviously have the greatest abilities to endure those consequences and adapt to them. For example, named hurricanes Katrina and Sandy were quite costly to the United States, together responsible for over \$150 billion in damages. However, America’s GDP is nearly \$18 Trillion annually and the costs were ultimately absorbed. Tragically, the nations that are most vulnerable to climate change appear to be among the poorest and least powerful countries. Some small island nations may disappear altogether because of rising sea levels.

Conceivably, the Paris accord has reversed the negative trend. Along with various other international and national agreements on climate change, the Paris Agreement establishes significant goals for reducing greenhouse gas emissions and promoting non-fossil fuel energy sources. Some indicators suggest that important changes in energy policy are already underway. In 2016, wind energy production (BP 2017: 6-7) grew by over 15% worldwide and solar power grew by nearly 30%. BP’s annual *Statistical Review of World Energy* (BP 2017) noted that carbon emissions did not increase significantly in 2016 – for the third consecutive year. With the U.S. unwilling to take a leading role on this topic, two other powerful nations – Germany and China -- will likely play pivotal roles in determining the planet’s fate.

Chancellor Angela Merkel, who has led Germany’s conservative Christian Democratic Union government since 2005, was trained as a scientist and previously served as Germany’s environmental minister. Under her leadership, Germany has taken a central role promoting international climate negotiations and helped spur the development of ambitious emissions reductions goals in the European Union. These efforts have been impressive. In 2009, EU members promised to reduce their emissions by 20% by 2020 (from 1990 levels). Later, the EU countries committed to reduce carbon emissions by 40% by 2030 and by 80 to 95% by 2050. To meet these goals, EU members will have to transition away from fossil fuels. For its part, Germany’s national energy





policy (*Energiewende*) has featured a rapid transition to renewable sources of electricity. Between 1990 and 2014, Germany reduced its greenhouse gas emissions by 27%. Almost 14% of Germany's energy comes from renewable energy sources, including over 27% of electricity. Going forward, the official German policy embraces the ambitious EU goals, which means the economy would be almost totally reliant upon renewable energy sources by mid-century. In contrast to President Trump, Chancellor Merkel argues that Germany's commitment to renewable energy will provide it with more jobs, new technologies, and increased export income as the world transitions to a greener economy.

At the summer 2017 G20 summit, Merkel praised China for its steadfastness on climate change and called Beijing a "strategic partner." These comments might seem strange as China's carbon emissions have increased dramatically for decades and coal still provides two-thirds of its energy. China burns more coal annually than the rest of the world combined and emits about twice as much carbon as the United States, which lost its position as the world's top producer of greenhouse gas emissions a decade ago. China has long argued that its large impoverished population and economic underdevelopment justified its status as the world's top emitter of greenhouse gases. Chinese negotiators point out that the United States remains the country most responsible for the historic cumulative volume of greenhouse gases in the atmosphere and even today the average resident of the U.S. produces four times as much greenhouse gas as does a resident of China. Despite its relatively low per capita emissions, China's total emissions may have already peaked in 2014 as the country cancelled over 100 coal-fired power plants in the last two years. Green energy technologies in China now employ 3.5 million people and its \$78 billion investment in renewable energy in 2016 exceeded similar investments by European countries (\$60 billion) and the U.S. (\$46 billion) (Economy 2017). China is responsible for over 40% of global growth in this sector and is now the world's largest producer of renewable energy. Remarkably, that total may increase fourfold by 2020! A handful of the world's largest solar manufacturing firms are in China, which will also soon host the world's largest farms for solar and wind energy. China is also the world's largest market for Electric Vehicles. Thus, while the volume of China's emissions are certainly worrisome, its apparent economic commitment to green technologies could well transform world energy markets and help prevent climate change. Like Germany, China seems vested in a future green economy.

### **Conclusion: What about the United States?**

The United States has not always been a climate scofflaw. After all, the Kyoto Protocol likely would not have been negotiated without the creative input of Bill Clinton's Vice President, Al Gore. Moreover, during the presidency of Barack Obama, the United States participated actively in international negotiations on climate change and played an important role in fashioning the Paris Agreement. The U.S. also struck a key bilateral deal on climate change with China in 2014. Both

countries made significant promises -- the U.S. would cut net greenhouse gas emission 26 to 28% below 2005 levels by 2025. In turn, China would peak its emissions in 2030 and increase its share of non-fossil fuel energy to 20% by that date. Domestically, the economic stimulus legislation from President Obama's first term promoted green technologies and auto fuel efficiency standards were also increased during the time when the federal government was bailing out the automobile industry. Perhaps most significantly, the Environmental Protection Agency created the Clean Power Plan -- new regulations for power plants identifying carbon dioxide as a pollutant. Between this plan and the increase in "fracking," the U.S. reduced its reliance on coal-fired power plants significantly and increasingly turned to natural gas as a fuel for its power plants. Gas has long been identified as a "bridge" climate fuel because it produces fewer emissions per unit of energy. In all, U.S. greenhouse gas emissions fell about 9% during Obama's presidency (Lehmann and Chemnick 2017) and are down about 14% since 2005. Prior to the Obama presidency, emissions had declined during the Great Recession of 2007-2008 because of slowed economic activity.

There are many reasons to believe that the U.S. could well be a leader on climate change again once Donald Trump is no longer President (or changes his mind about the Paris Agreement). To begin, public opinion polls (Meyer 2017) reveal that almost 70% of Americans want the U.S. to remain in the Paris climate accord and to continue the EPA's Clean Power Plan. Even more impressively, more than 80% of Americans support building additional wind and solar power plants. Strong partisan divisions persist concerning the science of climate change, unfortunately, but political analysts suggest that this is largely a reflection of party politics and does not reflect deeply held beliefs about the world. If the national Republican party stopped contesting the science of climate change, their voters would likely follow along. In fact, this may occur over time as a matter of demographic change. A majority of 18 to 30-year old Republicans already believe that human activity is changing the earth's climate.

In addition to past and potential national action on climate change, California and other states, as well as numerous cities and universities, have made dramatic pledges to reduce their greenhouse gas emissions. Many promising and effective policies are already in place, including regional "cap and trade" policies in the northeastern United States and in California. Indeed, California -- which has an economy larger than all but five nations -- has passed legislation (Plumer 2017) calling for 40% reductions in greenhouse gas emissions by 2030. While a quarter of California's electricity comes from renewable sources today, the newest state laws ambitiously require that figure to increase to half by 2030. Additionally, nine northeastern states participate in the Regional Greenhouse Gas Initiative that has reduced emissions significantly (Murray and Maniloff 2015) and is said to increase economic activity and jobs. The leaders of 125 U.S. cities and 9 states representing 120 million Americans signed the "We Are Still In" pledge on the Paris Agreement after President



Trump announced that the U.S. would withdraw. Over 20 Fortune 500 Companies also signed the pledge, including Apple, Google, Microsoft, and Nike. Hundreds of college and universities also pledge to meet the goals established in the Paris deal. Clearly, climate action planning is occurring nationwide in the U.S. on many levels.

Institutions at every level – from universities to cities to nations -- will have to make herculean efforts to dramatically reduce dependence upon fossil fuels to meet the aspirations of the Paris Agreement. Nonetheless, it is now apparent that key political, academic, and business leaders have demonstrated the requisite political will to begin addressing climate change. The fate of the planet beyond the twenty-first century likely depends upon their success.

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