

Climate Action in the Age of Great Power Rivalry: What Geopolitics Means for the Climate

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Introduction

Solving global climate change is usually considered an exercise in international cooperation, and rightly so. Sadly, however, recent and projected developments in international relations point toward greater conflict between countries rather than cooperation. What do these growing tensions, especially between many of the world's major powers and emitters, mean for global climate action?

There is little research today that aims to answer this question. This policy digest, accordingly, explores the implications of a world in which climate action depends as much on geopolitics as it does on energy or economics. While great power rivalry generally complicates international responses to climate change, it also presents limited opportunities to enhance climate action.

Climate change is conventionally understood as a classic international collective action problem. The logic goes that stabilization of Earth's climate can be achieved only when several coordination problems—chief among them controlling emissions—are solved. In an international order in which only nation-states hold the power to solve these problems, such control can be achieved only by joint action between these states (Keohane and Victor 2011).

Such agreement is, however, unlikely: reducing emissions is costly, difficult, and politically unappealing, so individual states have a strong incentive to avoid making clear, credible, and enforceable commitments to reduce emissions. This dynamic largely characterizes international climate policy, which has not produced binding emissions reduction targets for all or even most states, even as the world's climate crisis intensifies (Keohane and Oppenheimer 2016, IPCC 2022).

This already daunting challenge to international collective action on climate change would be complicated further by a resurgence in rivalry and competition between the world's great powers. A fundamental feature of international climate politics is that the world's two largest national emitters, the United States and China, are also its two largest economies and field its two largest and most capable military forces, making climate cooperation between them a matter of geopolitics as well as energy, economics, and ecology.

Moreover, despite ongoing diplomatic cooperation on climate change, relations between the two countries continue to deteriorate, calling into question future cooperation (Moore 2023a). Meanwhile, Russia's invasion of Ukraine produced a rapid shift in Europe's energy mix and a rupture in diplomatic relations with the West (Goldthau and Youngs 2023). These developments underscore the extent to which geopolitics has become a critical influence on international climate policy and climate action at national, regional, and multilateral levels.

With this importance in mind, this policy digest lays out some of the implications of growing geopolitical rivalry and tension for international climate and energy policy. It proceeds in three sections. First, this digest

explains how geopolitics complicates international climate action. The second section, in contrast, lays out a case for how and why greater geopolitical tension and rivalry may be helpful in driving certain aspects of the climate policy agenda, particularly at regional and national levels. The third and final section poses specific policy implications and recommendations, focusing on the need for political leadership and the risks of protectionist climate policies.

Understanding Geopolitics and Climate Change

International relations have always been marked by a degree of rivalry, tension, and often conflict between states. Following the end of the Cold War, however, international politics entered a “unipolar” period in which other states proved unwilling or unable to challenge the economic, diplomatic, and military pre-eminence of the United States. Consensus has emerged that this period has now ended. A turning point was the publication of the 2017 U.S. National Security Strategy, which formally proclaimed that the world had entered a period of “great power competition” (National Security Strategy 2017).

Against this backdrop, many scholars have begun to use the term “geopolitics” to describe international climate policy and climate action (Moore 2020; Bickel and Mia 2023, Sovacool, Baum and Low 2023). There is no agreed scholarly definition for geopolitics, but generally, it refers to an international order made up principally of territorially-based nation-states whose most basic concerns are maximizing national security, economic gains, and other resources, or what Simon Dalby has called “the great game of state rivalry” (Dalby 2014, 3). Crucially, this game appears to be fundamentally at odds with addressing transboundary ecological challenges like climate change (Dalby 2013).

Understood in this way, the rise of geopolitics presents significant challenges for the conventional understanding of tackling climate change. Solving climate change means stabilizing the Earth’s climate, a global public good that accrues to all countries and

their citizens, but which cannot be denied to any of them. Such global public goods are highly likely to be under-provided because each state’s rational response, operating in the absence of a higher authority, is to free-ride, assuming others will bear the burdens of reducing emissions while declining to do so itself.

Most practical solutions to this problem involve extensive, or “deep,” cooperation between major emitting countries to reduce emissions to a level consistent with stabilizing the Earth’s climate (Keohane and Victor 2016). However, it is not clear how such cooperation can take place if the world’s largest emitters and great powers are engaged in wide-ranging geopolitical rivalry and competition.

The U.S. and China present the most obvious example of this growing dilemma for international climate action. Both sides have long viewed climate change as an important area for bilateral cooperation, even as tensions rose in other arenas. This cooperation proved crucial to formulating the Paris Agreement, the primary extant international climate agreement, and demonstrated comparable importance in driving subsequent negotiations (Moore 2023a).

In August 2022, however, Beijing unilaterally suspended formal dialogue with the U.S. on climate change for more than a year in response to a visit to Taiwan by a prominent American politician, an act that China viewed as an affront to its claim to sovereignty over the island. The suspension of climate dialogue signaled definitively that cooperation on climate change could not be entirely insulated from broader geopolitical tensions (Moore 2023a).

Perhaps even more significant, however, is the extent to which clean technology has become a focus of Sino–American economic competition. In the 2010s, Beijing, encouraged in part by foreign interlocutors and non-governmental organizations, became convinced that investments in clean technology, especially renewable energy, and electric vehicles, could create critical first-mover advantages that would help to drive future economic growth as the world moved toward decarbonization. Aided by favorable government policy, preferential loans, and other support, China’s clean

technology industries grew rapidly, displacing foreign incumbents in most market segments.

As a result, clean technology became a focal point for trade tensions with the European Union, U.S., Japan, and other nations, which alleged that Chinese firms had gained market share thanks to unfair trade practices, intellectual property theft, and other predatory measures. Increasingly, these allegations have been reciprocated and threaten to grow into a wider trade war. Following the imposition of high tariffs on Chinese clean technology imports and the promulgation of extensive subsidies for domestic firms in the Inflation Reduction Act in March 2024, Beijing filed a complaint with the World Trade Organization (Duehren 2024).

The example of Sino–American climate diplomacy illustrates the potential for geopolitics to complicate, disrupt, and delay international collective action on climate change. To be sure, in the case of U.S.–China relations, the effect was short-lived, and it did not prevent significant outcomes on climate finance from being reached at the two subsequent climate talks in Sharm El Sheikh and Dubai (Moore 2023b).

However, the prospect of international climate policy being disrupted by geopolitics is not taken seriously by the existing literature on climate politics. Indeed, much recent work in international climate politics emphasizes the role of domestic actors and political

bargaining in shaping the prospects for international collective action rather than geopolitical rivalry between major emitters (Aklin and Mildemberger 2020, Colgan, Green and Hale 2021).

Bringing geopolitics into the equation suggests a different focus. It emphasizes the extent to which states, especially major emitters and diplomatic powers, are likely to play an outsized role in international climate agreements, locked in geopolitical rivalry, and may be less willing or able to engage in deep cooperation. As Simon Dalby writes, “The key point now is not what climate change will do for geopolitics, but what geopolitics does to climate change” in terms of how it affects the prospects for climate action (Dalby 2014, 7).

It is also important to emphasize that the question of how geopolitics affects climate action inverts the focus of most existing research and discourse on climate security, which is concerned with how climate change shapes the likelihood of conflict, violence, and instability (Dalby 2014). Climate geopolitics, in contrast, is concerned with how geopolitics affects the likelihood or level of ambition of climate action (see Figures 1 and 2). This distinction carries practical and conceptual significance: climate geopolitics suggests at least a few pathways by which geopolitical tension and rivalry may enhance rather than impede climate action.

Figure 1: Simplified Relationship Between Climate Change, Conflict, Violence and Instability



Figure 2: Simplified Relationship Between Geopolitics and Climate Action

The (Partial) Value of Competition

In contrast to the case of U.S.–China climate cooperation, the case of how Russia’s invasion of Ukraine altered Europe’s climate and energy policy suggests that under some circumstances, geopolitical tension and rivalry may accelerate the adoption of pro-climate policies. Before the invasion of Ukraine in early 2022, Russian natural gas was a key input into Europe’s energy mix, accounting for 40% of natural gas imports (Schreurs 2023). Following the onset of the conflict and imposition of economic sanctions, however, European direct imports of Russian natural gas plummeted to almost zero.

The most immediate impact of this energy transition was a dramatic increase in imported liquefied natural gas. However, the EU’s response also included an enhanced renewable energy target of 42.5% by 2030, coupled with an investment of 210 billion euros and additional policy support for advanced clean energy technology. European member states also introduced enhanced renewable targets, notably including Germany’s goal of reaching 80% renewables penetration by 2030 (Golthau and Youngs 2023).

These measures appear to have been successful in speeding up the adoption of carbon-free energy alternatives. In combination, Europe’s policy responses to the Ukraine invasion may have accelerated its energy transition by as much as a decade (Goldthau and Youngs 2023). Installed solar capacity increased by nearly half from 2021 to 2022, and EU-wide emissions may have dropped as much as 2.5% over the same period.

In Germany, a set of emergency measures proposed immediately after the invasion helped produce a 14%

reduction in natural gas consumption. However, it also led to a temporary increase in coal consumption (Schreurs 2023). As Miranda Schreurs observes, “The tragedy of war has forced European decision-makers to alter policies in the energy sector that go well beyond the already quite substantial changes they had made in recent years in response to the climate crisis... to enhance European energy security while reducing Europe’s climate footprint” (Schreurs 2023, 92).

Certainly, it would be neither wise nor desirable to count on war to motivate climate action. However, the case of Europe’s post-Ukraine energy transition highlights the possibility that geopolitical tension and rivalry might help stimulate investment in clean energy or policies that aim to accelerate its adoption in place of imported fossil fuels. Another example of this relationship comes from the U.S., whose principal investment in clean technology development and deployment, the Inflation Reduction Act (IRA), was justified by President Biden largely to compete more effectively with China (Moore 2023). To the extent that geopolitics enhances political will for similar investments, it may create a virtuous cycle of greater investment in clean technology. The EU, for example, responded to the IRA with its own Green New Deal Industrial Plan (Schreurs 2023).

There is at least one example to suggest that geopolitics may increase support for mitigation and climate adaptation by expanding climate finance for the least developed countries. The surprise agreement by the U.S. and EU to support a loss-and-damage fund to help the least developed countries adapt to climate change stemmed partly from a desire to isolate China diplomatically and pressure it to contribute to multilateral climate finance (Moore 2023b).

Yet, while geopolitics may help motivate climate action under certain circumstances, it also creates risks for others. A particular concern relates to protectionist policies on clean energy technology. If economic competition drives countries to establish tariff barriers and other protectionist measures to advantage domestic firms, they are likely to slow the diffusion of clean technology by making it more expensive and impeding innovation.

A second risk is the formation of competing geopolitical blocs that polarize climate action. One worrying consequence of Europe's rapid post-Ukraine energy transition is that Russia has developed a closer energy relationship with China and other illiberal states, selling them oil and natural gas at prices below international market rates (Schreuers 2023). This creates the prospect that illiberal states may view fossil fuels as a critical component of their ability to counter the Western-led liberal international order. With these risks and opportunities in mind, the following section details the policy implications.

Figure 3: Geopolitical Risks to Climate Action

Risk 1: U.S.–China conflict over Taiwan, South China Sea, etc. causes one or both sides to suspend climate cooperation indefinitely, hamstringing international negotiations.

Risk 2: U.S.–China economic competition ignites a global trade war that impedes diffusion and deployment of clean energy technology and disrupts negotiations on climate finance and technology transfer.

Risk 3: Russia's continued isolation leads it to form a pro-carbon coalition of authoritarian petrostates committed to the continued use of fossil fuels, opposing multilateral decarbonization, and selling cheap petrocarbons to like-minded autocratic states.

Policy Implications

A focus on geopolitics carries significant implications for climate policy. While historically, policymakers have been fixated on the prospect that climate change may increase the likelihood of conflict, they must now focus on the prospect that geopolitical rivalry may reduce the likelihood of deep interstate cooperation on climate change.

Specifically, the previous analysis suggests three risks that geopolitics poses to deep cooperation on climate change (see Figure 3). First, political–military conflict between the U.S. and China over Taiwan or another flashpoint may precipitate another, more sustained collapse in U.S.–China climate cooperation, hamstringing any further international negotiation on emissions reductions.

Second, continued U.S.–China economic competition may lead to export control restrictions and high tariffs on clean technologies in the U.S. and China, provoking a broader trade war and reciprocal actions by the EU and other major economies, in turn impeding decarbonization around the world and deadlocking international negotiations on technology transfer and other crucial clean technology-related issues.

Third, continued isolation of autocratic petrostates, led by Russia, may lead it to form a “pro-carbon coalition” with Venezuela, Iran, and other authoritarian oil producers that attempts to create a competing, carbon-based economy at odds with international decarbonization policy. Such a coalition may aim to undermine multilateral decarbonization efforts, both diplomatically and economically, by selling oil and natural gas at low prices to willing buyers, especially in other autocracies.

Policymakers must take these significant risks to climate action seriously and prepare for them. Yet the previous analysis also suggests opportunities for geopolitics to drive enhanced climate action in the form of increased investment in clean technology, an accelerated energy transition, and, more speculatively, increased political support for investments in climate finance. Policymakers should take three key

steps to minimize these risks and maximize these opportunities.

The first is to seize windows of opportunity. No one would wish for a repeat of the Ukraine conflict. Still, European leaders acted quickly and decisively during the crisis to adopt ambitious dual-goal policies to enhance energy security and reduce emissions. Just weeks after the onset of conflict, EU leaders issued the Versailles Declaration, which included a high-level commitment to improve energy security in part by displacing fossil fuels. This clear, authoritative strategy helped to motivate rapid policy implementation (Schreuers 2023).

The second lesson is to avoid protectionist clean technology policies. Such policies may help gain political support for clean technology investment, but policymakers should avoid measures that threaten to slow the adoption of such technology. An important case concerns border carbon adjustment measures, including the EU's Carbon Border Adjustment Mechanism (CBAM), which imposes a tariff, fee, or other economic sanction on imports proportional to their carbon content.

Such policies promise to incentivize decarbonization in exporting countries while potentially raising revenue for climate mitigation and adaptation efforts in importing countries. However, they must be carefully designed to not impede clean technology deployment, including by provoking broader trade wars that may implicate clean technology.

Finally, policymakers should be aware of the potential for pro-carbon, anti-Western blocs to form. Should these begin to emerge, policymakers must be willing to deter them through economic sanctions to prevent below-market trading of fossil fuels and apply concerted diplomatic pressure.

Geopolitics and climate change will likely converge in the twenty-first century, for better and worse. Policymakers must prepare to minimize resulting risks and maximize related opportunities.

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