

THE USE OF FORCE TO ACHIEVE CLIMATE CHANGE GOALS

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ABSTRACT

As the consequences of climate change for national development and individual rights become more severe, and as global cooperative approaches continue to fail, there is an emergent discussion about preventive measures in international politics. The use of force to address the causes of climate change is a topic addressed here from both legal and empirical perspectives. We conclude that international law could accommodate a more coercive approach to curbing greenhouse gas emissions, but that any use of force would tend towards the low end of the conflict spectrum. Moreover, political leadership would likely be exerted by major powers within the EU such as Germany and Britain and will be opposed by Russia and China as well as most small developing countries. The U.S. could emerge, along with middle powers, as the key swing actor.

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The use of force in international politics is a common means for states to pursue national interests, enforce international law, and ensure abidance by global norms. If a stronger consensus emerges on the grave consequences of climate change, states may increasingly engage in various forms of persuasion and coercion in order to compel other states to reduce their climate-damaging activities. While potential international conflict arising from the *consequences* of climate change has been widely studied, international conflict over the *causes* of climate change remains largely unstudied. If cooperative mechanisms fail to achieve climate change goals, the possibility of a shift to a more conflictual international relations arises.

This paper considers the legal, normative, and empirical dimensions of conflict over the causes of climate change. We begin by asking what under what conditions if any the use of force to achieve climate change goals could be legally and normatively justified. From there, we switch to an empirical analysis of how this “global warring over global warming” might occur and what the results might be.

We find that both the legal and normative as well as empirical basis on which states might pursue coercion against other states to curtail their climate-damaging activities is weak. At present, it is unlikely that a significant portion of the international community would view the use of military or other highly coercive means as acceptable

for this purpose. But political sentiment is likely to shift if the climate situation worsens, and even existing international law could accommodate a substantially more belligerent international policy toward states unwilling or unable to contain threats to global climate emanating from their territories. In particular, while stronger forms of coercion such as military strikes on new coal-fired power plants are unlikely, lower coercion approaches such as special import tariffs, support for pro-environmental opposition groups, and censorious “shame and blame” rhetoric is more likely. This will usher in a new global politics of what we call “preventive climate change conflict.”

CLIMATE CHANGE AS SECURITY THREAT

Virtually all of the work linking climate change to international conflict relates to the *consequences* such as resource disputes, food scarcity, poverty, disease, refugees, and Arctic sea passage.¹ The National Research Council’s Committee on Assessing the Impacts of Climate Change on Social and Political Stresses argues that climate change, whether natural or man-made, poses a major threat to global security. The committee concluded that the military and intelligence agencies are not prepared to anticipate

¹ James R. Lee, *Climate Change and Armed Conflict: Hot and Cold Wars* (London: Routledge, 2009); Dan Smith and Janani Vivekananda, *A Climate of Conflict: The Links between Climate Change, Peace and War* (London: International Alert, 2007); Judi Wangalwa Wakhungu and Elvin Nyukuri, *Climate Change and Conflict in East and the Horn of Africa* (Nairobi: African Centre for Technology Studies, 2009); Jeffrey Mazo, *Climate Conflict: How Global Warming Threatens Security and What to Do About It* (Abingdon, UK: Routledge, 2010); Diethard Mager, “Climate Change, Conflicts and Cooperation in the Arctic: Easier Access to Hydrocarbons and Mineral Resources?,” *International Journal of Marine & Coastal Law* 24 (2009): 347-354; Nils Petter Gleditsch, “Whither the Weather? Climate Change and Conflict,” *Journal of Peace Research* 49 (2012): 3-9.

climate-related disasters, which will increase in frequency and intensity. Extreme climate activity will place stresses on water and food supplies, as well as public health at a scale large enough to threaten human well-being worldwide.

A study of 42-countries sponsored by the U.S. government similarly concluded that climate change would become a pressing national security issue for most countries. Different regions and countries will confront a variety of political, social, economic, and military challenges, but all will impact national security in one way or another.²

If the consequences of climate change are likely to be dire for nations, then it follows that they will take a growing interest in international action to mitigate its causes. Climate change could represent a severe threat to human security, national security, and international order, no less a threat to international peace and security than nuclear weapons proliferation or severe human rights abuse. Campbell describes climate change as “perhaps the single greatest risk to our national security, even greater than terrorism, rogue states, the rise of China, or the proliferation of weapons of mass destruction.”³ Matthew notes that the shift towards describing climate change as a national security issue “is loaded with expectations and preferences that some analysts find worrisome.”⁴

² Daniel Moran ed., *Climate Change and National Security: A Country-Level Analysis* (Washington, D.C.: Georgetown University Press, 2012).

³ Kurt M. Campbell, *Climatic Cataclysm: The Foreign Policy and National Security Implications of Climate Change* (Washington, D.C.: Brookings Institution Press, 2008).

⁴ Richard A. Matthew, “Is Climate Change a National Security Issue?,” *Issues in Science & Technology* 27 (2011): 49-60.

In terms of lives lost and put at risk, climate change has probably already far eclipsed traditional military threats as a threat to human security. Concerns about human extinction from reputable scientists are now mainstream. Helm writes: “Anything like the 1000 GW of new coal plant planned for China and India through 2030 spells disaster for the climate.”⁵ Art and Waltz argue that “If global warming threatens discontinuous climate change, then averting it becomes a vital, not a desirable, interest for the United States.”⁶

To the extent that policy-makers take human security at least as seriously as state security (or come to believe that human insecurity is the greatest threat to state security), this could drastically alter international politics. Helm uses the metaphor of “war” to describe the changes that are needed in global politics in order to achieve rapid decarbonization.⁷ If climate change is increasingly seen as a serious national security threat, then the questions about the use of force to bring out a reduction in climate change (a “war on climate change”) may not be far off. It requires analysts to think, as Elliot puts it, about “activities within one country that affect environmental quality in another to the extent that conflict or violence is possible.”⁸

⁵ Dieter Helm, *The Carbon Crunch: How We’re Getting Climate Change Wrong--and How to Fix It* (New Haven: Yale University Press, 2012), 195.

⁶ Robert J. Art and Kenneth N. Waltz, *The Use of Force: Military Power and International Politics* (Lanham, Md.: Rowman & Littlefield Publishers, 2009), 341.

⁷ Helm, *The Carbon Crunch*, 237.

⁸ L. Elliott, “Environmental Security in East Asia: Defining a Common Agenda,” in Paul Harris, ed., *International Environmental Cooperation: Politics and Diplomacy in Pacific Asia* (Boulder: University Press of Colorado, 2002), 34.

COOPERATIVE SOLUTIONS?

States generally seek to resolve conflicts with other states in a cooperative manner. In the case of climate change, the international cooperation regime is almost solely the product of the Kyoto Protocol, the 1997 supplemental agreement to the 1992 UN Framework Convention on Climate Change. The industrialized state parties to the Protocol, listed in its Annex I, pledged to reduce, by 2012, their greenhouse gas (GHG) emissions to a level below those emissions in 1990. Other parties to the treaty expressed their support for measures designed to mitigate climate change and adopted various aspirational pledges but made no firm commitments. Several ratifying Annex I states had not met their GHG emission targets, although some have, or intend to, purchase emission credits in order to meet their treaty obligations.⁹

The Kyoto Protocol created a Compliance Committee, and its Enforcement Branch, consisting of ten experts elected by the state parties, charged with determining whether parties have complied with their obligations.¹⁰ If a state exceeds its emission allowance for the first round to 2012, even after accounting for its carbon sinks and emission credits, its excess emissions, plus an additional 30 percent penalty, are to be

⁹ United Nations Framework Convention on Climate Change, "Compilation and Synthesis of Fifth National Communications: Executive Summary," 20 May 2011, available at <unfccc.int/resource/docs/2011/sbi/eng/inf01.pdf>; Jos G. J. Olivier, Greet Janssens-Maenhout, Jeroen A. H. W. Peters, and Julian Wilson, *Long-term Trend in Global CO₂ Emissions: 2011 Report* (The Hague: PBL Netherlands Environmental Assessment Agency, 2011).

¹⁰ Jutta Brunnée, "Climate Change and Compliance and Enforcement Processes," in Rosemary Rayfuse and Shirley V. Scott, eds., *International Law in an Era of Climate Change* (Cheltenham: Edward Elgar, 2012).

added to its CHG reduction obligations for the second round. At the time the Protocol was signed, the second commitment period and emission targets remained to be determined, but the 2012 Doha agreement amended the Protocol to establish 2013-2020 as the second round and a collective emission reduction target of about 18 percent. In addition to the United States, countries like Canada (which withdrew from the Protocol in 2012), Russia, Japan, and New Zealand made no second-round reduction commitments. With these states opting out of the regime, and non-Annex I states (including China and India) not opting in, the emissions of states accounting for just 15 percent of the global total are now subject to regulation by treaty.

Beyond Kyoto, the only significant multilateral scheme to reduce GHGs is the Emissions Trading System of the European Union. In 2008, the EU adopted the “20-20-20” targets—20 percent reduction in GHG emissions, 20 percent reduction in energy use, and 20 percent of energy consumption in the form of renewables—to be achieved by 2020. Although some companies may benefit from free quota allocations, the scheme envisions that companies will, over time, become responsible for the purchase of their GHG emission allowances. Beyond the EU, bilateral and multilateral schemes to reduce GHGs are almost wholly ineffective. The U.S. and China, for instance, as well as ASEAN and the African Union, conduct regular consultations and exchanges on climate change. But no supranational scheme has delivered specific, binding commitments to

reduce GHGs. In short, effective and broad-based international cooperation to address climate change has failed.

THE LEGALITY OF FORCE: UN ENFORCEMENT

The failure of cooperative mechanisms means that coercive mechanisms may loom larger as time passes. Conflictual behavior covers a wide range of tools in international relations, ranging from public disapprovals and denunciations at the low end of the conflict scale to economic sanctions, military displays, or the use of armed force at the high end. Minimally coercive actions by states are generally not subject to constraints established by international law; the use of economic and military force are.

Law is essentially backward-looking and norm-following, so we should not expect any legal basis for the use of force to address climate change at present. Rather, the question is whether legal doctrine and its evolution provide reasons for believing that law could accommodate coercive international action on climate change emissions in future. Gray asks: “If a state pursues or allows very damaging activities that harm its own population or the international community as a whole through climate change, would it be legal to use force to stop those activities in the name of humanitarian intervention or the Responsibility to Protect?”¹¹

¹¹ Christine Gray, “Climate Change and the Law on the Use of Force,” in Rayfuse and Scott, *International Law in the Era of Climate Change*, 219-240, 238.

The use of force to achieve climate change goals is perhaps most easily accommodated by the UN Charter—that is, Chapter VII pertaining to the role of the Security Council in maintaining international peace and security. According to Depledge and Feaken, “The UN Security Council already possesses sufficient authority to compel states to address the underlying causes and consequences of climate change in order to maintain international security.”¹² Article 39 of the Charter empowers the Security Council to determine the existence of threats to the peace and breaches of the peace and to decide what to do about them. Article 41 permits the imposition of economic and other nonmilitary sanctions to give effect to its decisions and Article 42 allows the Council to resort to the use of military force.

There is a presumption of legality attached to Security Council declarations under Article 39. Nothing in the Charter stipulates who or what the Council may consider a threat to international peace and security; if the Council says the threat exists, then it exists, legally speaking. This is not to say that the legitimacy of Security Council decisions are beyond dispute. Indeed, Security Council Resolutions have sometimes strained the credulity of what counts as a threat to *international* peace—like the refusal of the military junta to cede power in Haiti in 1994, or the Qaddafi government’s repression of domestic opponents in Libya in 2011—but its declarations are not subject

¹² Duncan Depledge and Tobias Feakin, “Climate Change and International Institutions: Implications for Security,” *Climate Policy*, supplement (2012): S73-S84, at S77-S78.

to review by any other authority, inside or outside the UN, and member states are bound by them.

The Security Council has expressed, in Resolution 1625, its intention to move beyond its traditionally reactive approach to conflict resolution to strengthen its role in conflict prevention, including by taking action to address the root causes of armed conflict. Earlier decisions on global terrorism (Resolution 1373) and weapons of mass destruction (Resolution 1540) identified these as global threats without linking them to particular states or armed conflicts, and required member states to implement legislative and other measures to combat them. The Council has discussed the potential of the HIV/AIDS pandemic to threaten international peace and security in Africa and has also debated the link between climate change and international peace and security (in 2007 and 2011). The Responsibility to Protect norm affirmed by UN member states in 2005 accepts the legality of UN-sanctioned intervention in states that are unable or unwilling to protect their populations from large-scale human violence. Even when this violence is fully contained within a state's borders, R2P seems to open the door to UN Security Council action.

The report by the UN's High-level Panel on Threats, Challenges and Change highlighted the seriousness of climate change in several sections and then noted that the Security Council should be willing to authorize the use of force when a threatened harm to state or human security "is...of a kind, and sufficiently clear and serious" to justify

such actions.¹³ Through the work of the United Nations Framework Convention on Climate Change and the UN-sponsored Intergovernmental Panel on Climate Change, a series of treaties, agreements, and resolutions have repeatedly stressed the dangers of climate change and the imperatives of reducing climate-damaging activities. We may be approaching the moment when member states could conclude that the enforcement of these international agreements is legally justified.

A large body of social scientific and policy literature points to the various linkages between climate change, social stresses, and violence within and between states.¹⁴ It is certainly within the Security Council's purview to declare climate change a threat to international peace and security and to call on member states to take action, as it has in regard to global terrorism and weapons of mass destruction.¹⁵ Quasi-legislative action is not among the nonmilitary measures mentioned in Article 41, but the Council's resolutions on terrorism and weapons of mass destruction suggest the possibility that states could be called on to implement GHG emission targets separately from any treaty commitments they have made, or not made. And, of course, it is legally feasible that the Security Council could invoke its authority under Article 42 and use military force

¹³ High-level Panel on Threats, Challenges and Change, "A More Secure World: Our Shared Responsibility," 2004, available at <www.un.org/secureworld/>.

¹⁴ John D. Steinbruner, Paul C. Stern, and Jo L. Husbands, eds., *Climate and Social Stress: Implications for Security Analysis* (Washington, D.C.: National Academies Press, 2012).

¹⁵ Christopher K. Penny, "Greening the Security Council: Climate Change as an Emerging "Threat to International Peace and Security," *International Environmental Agreements* 7 (2007), 35-71; Scott, Shirley V. Scott, "Climate Change and Peak Oil as Threats to International Peace and Security: Is It Time for the Security Council to Legislate?" *Melbourne Journal of International Law* 9 (2008), 495-514; Francesco Sindico, "Climate Change: A Security (Council) Issue?" *Carbon and Climate Law Review* 1 (2007), 29-34.

against states it deems to be threats to international peace and security by virtue of their unwillingness or inability to curb destructive activities emanating from their territories.

The UN could also appeal to the Environmental Modification Convention. Adopted in 1976, the treaty prohibits states from engaging in “military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects.” As possible outcomes of environmental modification, it lists “earthquakes; tsunamis; an upset in the ecological balance of a region; changes in weather patterns (clouds, precipitation, cyclones of various types and tornadic storms); changes in climate patterns; changes in ocean currents; changes in the state of the ozone layer; and changes in the state of the ionosphere.”¹⁶ Climate change activities are generally not intentional modifications of the environment, let alone undertaken with hostile intent. But given increased information and formal commitments to abatement, some scholars believe that continued GHG emissions by states could be construed as the sort of environmental modification prohibited by this treaty and subject to enforcement should the UN decide to take the necessary additional steps.¹⁷

¹⁶ See article I and understanding relating to article II, Convention on the Prohibition of Military or Any Hostile Use of Environmental Modification, 1976; available at <www.icrc.org/ihl.nsf/FULL/460?OpenDocument>.

¹⁷ Elizabeth L. Chalecki, *Environmental Security: A Guide to the Issues* (Santa Barbara, Cal.: Praeger, 2013).

THE LEGALITY OF FORCE: SELF-HELP

Given that the enforcement mechanisms available under the current UN climate change regime and other treaties are of limited utility for achieving climate change goals, one alternative is self-help. When Canada withdrew from the Kyoto climate change treaty in 2011, the lead negotiator from Tuvalu called it “an act of sabotage on our future.”¹⁸ This sort of language suggest the ways that climate change could be invoked as a matter of self-defense.

There is little doubt that states have the legal right to use force to protect themselves against imminent and grave environmental threats from other states. This principle was recognized in the case of the *Torrey Canyon*, an American-owned oil tanker chartered to British Petroleum and registered in Liberia that hit a reef off the Cornish coast of England in 1967 with a full cargo of nearly 120,000 tons of Kuwaiti crude oil. Although the accident took place on the high seas, the threat of oil pollution to UK, French, and Spanish territorial waters and coastline was grave. The Royal Air Force and the Fleet Air Arm of the Royal Navy bombed the vessel to ignite and burn off the spill. The UK’s actions were uncontroversial on the question of the violation of Liberian sovereignty. Neither the ship-owner nor the Liberian government protested the destruction of the *Torrey Canyon* or the use of military force to do it. The International Law Commission concluded that “the action taken by the British

¹⁸ Reuters News Agency, “China, Japan Say Canada's Kyoto Withdrawal 'Regrettable',” 13 December 2011.

Government would have had to be recognized as internationally lawful because of a state of necessity.”¹⁹

State Responsibility

The legitimacy of self-help, whether in the form of military or nonmilitary force, will depend in part on establishing state responsibility for ongoing harm to the climate.

During the Torrey Canyon incident, the source of environmental damage was obvious, and the state with legal jurisdiction over that source, Liberia, was obviously unable to do anything to prevent or mitigate the injury to the UK and other states impacted by the spill. Furthermore, the pollutants emanating from the source, as well as their ongoing and potential future damage to the environment, were clearly identifiable and serious. Thus, the legitimacy of the attack can be grounded on the UK’s status as an injured party, the responsibility of the targeted entity, and the proportionality of the act itself. In the case of analogous action in the climate change context, establishing any of these elements, let alone all three, will be problematic.

In the *Trail Smelter* Arbitration, the governments of the United States and Canada presented the claims of private parties in their respective jurisdictions of Washington State and British Columbia. Landowners in Washington alleged that the transborder

¹⁹ International Law Commission, United Nations, *Draft Articles on State Responsibility*, part 1, articles 1-35. Compiled, edited, and introduced by Shabtai Rosenne (Dordrecht, The Netherlands: Kluwer Academic, 1991), 356.

smoke pollution from the Trail ore smelter in British Columbia caused harm to their agricultural and forest resources. The tribunal created in 1935 by the two governments to arbitrate the dispute decided that it was ultimately Canada's responsibility to prevent individuals and groups within its jurisdiction from causing environmental harm to those within the jurisdiction of the United States.²⁰

GHG emissions are different from oil spills or smoke pollution in fundamental ways. GHGs generally do not cause immediate harm to people and resources within the territory of other states, but contribute to a stock of pollutants in the atmosphere affecting global warming, and thus indirectly to rising sea levels, violent weather patterns, desertification, and other changes that harm or threaten the environments, economies, and, in the case of some small Pacific Island nations, the existence of states. But responsibility for these injurious consequences—some readily visible, many not—is shared among a large number of states, both industrialized and developing. Simply pointing out that certain countries have contributed, or are contributing, disproportionately to the problem is not of much assistance in affixing state responsibility in the international legal sense.²¹

²⁰ Mark A. Drumbl, "Trail Smelter and the International Law Commission's Work on State Responsibility for Internationally Wrongful Acts and State Liability," in Rebecca M. Bratspies and Russell A. Miller, eds., *Transboundary Harm in International Law: Lessons from the Trail Smelter Arbitration* (New York: Cambridge University Press, 2006).

²¹ Eric A. Posner and David Weisbach, *Climate Change Justice* (Princeton, N.J.: Princeton University Press, 2010).

The difficulties associated with establishing responsibility for the adverse effects of climate change do not necessarily mean that states have no obligation to take action to mitigate it. States that are not parties to the Kyoto Protocol, and state parties without binding commitments, still have a customary law obligation to prevent transborder damage to other states. Because the causal connection between GHG emissions, which cannot be contained within a state's airspace, and global warming is well established and widely accepted within the scientific and policy communities, states can be expected to exercise due diligence within their jurisdictions.²² Although this obligation may not imply action with respect to specific GHG-emitting facilities or carbon sinks, since precise sources of climate-induced harms are not readily identifiable, it nevertheless may be apparent in the policies that a state adopts that it is neglecting its duties to other states.

Nonmilitary Force

Economic sanctions are the primary nonmilitary means of self-help and would have legitimacy if construed as a countermeasure: behavior normally considered unlawful, but justified as a response to a prior unlawful behavior by another state. Essentially, countermeasures are a form of law enforcement when established (i.e., multilateral, treaty-based) enforcement mechanisms are absent or ineffective.

²² René Lefeber, "Climate Change and State Responsibility," in Rayfuse and Scott, *International Law in an Era of Climate Change*.

The trade rules implemented by the World Trade Organization, of which most states are members, do not permit trade or financial measures in retaliation for a state's failure to uphold its climate-change obligations.²³ But such actions could be legally justified as countermeasures if they were proportional to that state's unlawful behavior and the harm attributable to it. Establishing proportionality in this context does not sidestep any of the difficulties associated with establishing state responsibility, but the fact that anthropogenic GHG emissions are largely the result of economic activities gives the proportionality claim some *prima facie* plausibility. Furthermore, GATT Article 20 does allow states to adopt trade measures intended and necessary to protect the environment, while Article 21 allows trade measures to protect a country's "essential security interests" or to enforce UN resolutions on international peace and security.²⁴

Low-lying Pacific Islands nations like the Marshall Islands, Nauru, and Tuvalu have argued before various international forums that the rising sea levels accompanying global warming threaten them like no others. As injured parties, they are in a strong position to justify the use of trade or financial sanctions as countermeasures, as are other developing countries that will experience the harmful effects of climate change soonest and most acutely. Yet forceful action by these states will have little

²³ Markus W. Gehring, Marie-Claire Cordonier Segger, and Jarrod Hepburn, "Climate Change and International Trade and Investment Law," in Rayfuse and Scott, *International Law in an Era of Climate Change*.

²⁴ Felicity Deane, "The WTO, the National Security Exception and Climate Change," *Carbon & Climate Law Review* 2012 (2012): 149-158.

coercive power over major CHG-emitters alleged to be skirting their customary law obligations.

Still, the systematic failure to curb excessive CHG emissions, especially as climate change approaches a tipping point and becomes a significant threat to the survival of some states, is likely to violate a peremptory norm of international law. In that case, individual states could have an obligation to the entire international community to arrest and reverse the effects of climate change not only by curbing their own emissions but by forcing other states to do so as well. Here, coordinated economic, financial, and other nonmilitary sanctions, even by noninjured parties, would be obligations “towards all” (*erga omnes*) and therefore legally justified.

Military Force

Any legitimate use of military force outside the UN would have to be regarded as an act of individual or collective self-defense. Utton, for example, commenting on the *Torrey Canyon* incident, suggests that the British attack could be considered lawful act of self-defense meeting the *Caroline* standard set forth by U.S. Secretary of State Daniel Webster in 1841: there was a “necessity of self defense, instant, overwhelming, leaving no choice of means, and no moment for deliberation,” while the act itself was not “unreasonable or excessive,” but rather “limited by that necessity and kept clearly

within it".²⁵ The Caroline standard translates into the contemporary *jus ad bellum* requirements of necessity (or last resort) and proportionality.

But it is difficult to imagine that attacking another state's GHG-emitting facilities would ever meet the necessity requirement of self-defense. Unless the global climate was at a tipping point, and the attacking state or coalition knew it, the imminence of the threat implied by necessity would be absent.

As a legitimate act of anticipatory self-defense, such an attack may be more plausible, but only to the extent that the international community embraces the precautionary principle. At this time, the precautionary principle features prominently in international environmental law but is viewed with considerable skepticism when invoked to justify preventive military action.²⁶ The principle states that the uncertainty attached to an event or development that would be catastrophic to the public welfare should not preclude present action to mitigate the risk even if there are uncertainties about when and how it would arise. (This was the justification used by the Bush administration for its invasion of Iraq in 2003: uncertainty about Saddam Hussein's nuclear, chemical, and biological weapons programs and links to terrorist organizations was no bar to defensive military action.) As applied to climate change, the precautionary principle implies that the anticipated catastrophe of unchecked global

²⁵ Daniel Webster, "Letter to Henry Stephen Fox," in K. E. Shewmaker, ed., *The Papers of Daniel Webster: Diplomatic Papers*, vol. 1, 1841-1843 (Hanover, N.H.: Dartmouth College Press, 1983), 62.

²⁶ Cass R. Sunstein, *Worst-Case Scenarios* (Cambridge, Mass.: Harvard University Press, 2007); Kerry H. Whiteside, *Precautionary Politics: Principle and Practice in Confronting Environmental Risk* (Cambridge, Mass.: MIT Press, 2006).

warming may be sufficient to justify preventive measures even if we are uncertain about our scientific models and predictions.

To our knowledge, no one advocating a precautionary approach to climate change has also advocated the use of preventive military action to defend against it. There is instead a general rejection of the use of force in international relations because of its serious moral implications. Gray is hardly alone in arguing that “it is preferable to reaffirm the wide prohibition of the use of force rather than to seek loopholes by which to promote military solutions better addressed by other means.”²⁷

At the same time, there is an emergent literature on the claims to justice that states and peoples have against other states in peoples in matters relating to environmental degradation.²⁸ At some point, the pursuit of justice internationally may require forceful action in the same way that it often does domestically. It would be odd, for instance, if states took the view that the violent imposition of a climate saving framework domestically did not also justify, when feasible and unavoidable, the same abroad.

As with all “just war” approaches to the ethics of force, such actions would need to be a last resort, to be proportionate to the injustice, and to have a probability of success. Proportionality is ethically tricky in this case not because climate change is not serious threat but because of the difficulties of attaching responsibility to any particular

²⁷ Gray, “Climate Change and the Law on the Use of Force,” 240.

²⁸ Duncan French, *Global Justice and Sustainable Development* (Boston: Martinus Nijhoff Publishers, 2011).

state. Yet as the climate reaches a tipping point, the construction of a massive new coal-fired power plant or the destruction of large rain forests will be easier to identify as acts that justify a proportionate response. Moreover, countries that have large and growing absolute levels of GHG, or which through their displaced economic activity contribute to this elsewhere, and which have rejected curbs on GHG, could plausibly be identified as “aggressors” against the climate.

PROBABILITY OF SUCCESS?

A greater obstacle may be the probability of success. This is a practical policy issue, not just an ethical issue. Who could and would take action? What sort of actions might work? These are empirical questions that will open up a whole new field of international conflict studies.

For a start, the potential number of “aggressors” against whom action may be warranted is large. It would certainly include all the major industrialized nations that have not adopted radical measures to curtail their GHG emissions, in particular China, Russia, India, and the United States. But it may also include lesser nations that, while having less impact on climate change, are more obviously culpable in their behavior—countries like Canada, Australia, or Brazil.

UN Secretary General Ban Ki-Moon has been explicit in warning that “climate change [...] not only exacerbates threats to international peace and security; it is a threat

to international peace and security.”²⁹ But in part because three of the five permanent members of the UN Security Council (and probably an even larger proportion of any expanded permanent membership) is composed of major contributors to climate change, the UN is an unlikely venue for action.³⁰ Such members would almost certainly veto any Council resolutions calling for the use of military or nonmilitary force against a state, not least itself, for threatening the climate and *ipso facto* the peace.

Moreover, developing country members have opposed the use of the UN Security Council as a forum for debating collective responses to climate change, arguing that it would encroach on the role of other UN bodies such as the Economic and Social Council and the UNFCCC.³¹ By and large, the Council is likely to be confined to dealing with only the consequences for international peace and security, rather than the causes, of climate change.

Most empirical research thus far centers on the use of trade actions. A recent example is the EU’s application of its Emissions Trading System to GHG emissions from incoming flights from foreign carriers. Helm argues that stiff carbon taxes on imports, coupled with similarly stiff carbon taxes on domestic production, will be needed to achieve emissions reductions consistent with the avoidance of catastrophic

²⁹ “Security Council, In Statement, Says ‘Contextual Information’ on Possible Security Implications of Climate Change Important When Climate Impacts Drive Conflict,” United Nations Security Council, 2011, available at <www.un.org/News/Press/docs/2011/sc10332.doc.htm>.

³⁰ Shirley Scott and Roberta Andrade, “The Global Response to Climate Change: Can the Security Council Assume a Lead Role?,” *Brown Journal of World Affairs* 18 (2012): 215-226.

³¹ Gray, “Climate Change and the Law on the Use of Force,” 231.

climate change.³² Yet the effectiveness of trade sanctions is highly doubtful. Tian and Whalley have highlighted the special challenge presented by the rapidly growing economies of Brazil, Russia, India, and China (the BRICs). They find that in order to induce a 50 percent reduction in emissions from all countries, all non-BRIC countries would have to impose a common 383 percent tariff on all BRIC imports. If used only by the United States, the EU, and Japan, a tariff of 1150 percent would be needed.³³

Rather, what is likely to emerge—and to be effective if only in proportion to the coercion employed—is a range of bilateral and multilateral actions in which one country or set of countries seeks to compel other countries to improve their GHG records. In particular, while stronger forms of coercion such as military strikes on new coal-fired power plants are unlikely, coercive approaches at the lower end of the conflict spectrum, such as special import tariffs, support for pro-environmental opposition groups, and censorious “name and shame” rhetoric is more likely. This will usher in a new global politics of what we call “preventive climate change conflict.”

It is the great powers of the EU, in particular the UK and Germany, who would be most likely, given political realities, to initiate a more forceful international response to the causes of climate change. In 2008, Javier Solana, then High Representative for Common Foreign and Security Policy of the EU, stated that “Climate change represents

³² Helm, *The Carbon Crunch*.

³³ Huiyang Tian and John Whalley, “Trade Sanctions, Financial Transfers and BRIC Participation in Global Climate Change Negotiations,” *Journal of Policy Modeling* 32 (2010): 47-63.

a fundamental challenge, and should be in the mainstream of EU foreign and security policies and institutions.”³⁴ In light of the EU’s commitment and capacity, Depledge and Feakin see climate change diplomacy as “an opportunity to expand its security mandate.”³⁵

The UN Security Council has met three times to address climate change—in 2007, 2011, and again in 2013. The 2011 session was convened by Germany, then occupying the position of Security Council president. The third session, in early 2013, was convened by Council President Pakistan (reversing its earlier opposition to the Council’s climate-change agenda) and was supported by Britain. The UK’s climate envoy, Rear Admiral Neil Morisetti, pushed for climate change to be framed as a global security concern.

During all three sessions, the main resistance has come from China and Russia, backed by many developing countries who fear that any UN mandate on climate change that does not assume differentiated responsibilities by rich countries would leave them vulnerable to unfair coercion. In this context, developing middle powers like Pakistan, but also other activist states like Turkey, Indonesia, and South Korea, could emerge as key swing actors in building an international “coalition of the willing” led by EU powers to address GHG emissions. The most obvious targets of bilateral or

³⁴ Javier Solana, “Climate Change and Security: Recommendations,” 18 December 2008, available at <www.eu-un.europa.eu/articles/fr/article_8382_fr.htm>.

³⁵ Depledge and Feakin, “Climate Change and International Institutions: Implications for Security,” S79.

multilateral action would be major emitters like the U.S., Russia, and China. Developed countries like Canada and Australia might also be singled out, not so much for their aggregate emissions, but because of their large per capita emissions, especially if they are perceived as not making efforts to protect the climate commensurate with their wealth and technological capabilities.

The U.S. could find itself in the awkward position of siding with countries that are not normally its allies in UN debates. By the same token, this ambivalent position may motivate the U.S. to take the lead in finding a cooperative solution to global climate change that averts a transition to a more conflictual politics. A combination of active U.S. diplomacy backed by a credible threat of an EU-led coalition for action might conspire to produce the sort of global GHG agreement that purely cooperative diplomacy has so far failed to achieve.

Addressing both the legal and practical issues relating to climate change and international security will however require new frameworks of analysis given the limited traction provided by at least orthodox forms of realism in this domain.³⁶ What is clear is that any movement toward the use of force for the purposes of averting climate change will reshuffle traditional alliances and ways of thinking about international politics.

³⁶ Urs Luterbacher and Detlef F. Sprinz, *International Relations and Global Climate Change* (Cambridge, Mass.: MIT Press, 2001); Mark J. Lacy, *Security and Climate Change: International Relations and the Limits of Realism* (New York: Routledge, 2005).