

© The International Institute for Strategic Studies

This content may be used for research and private study purposes. All rights reserved. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

Full terms and conditions of use: <http://www.iiss.org/terms-and-conditions>

SCROLL DOWN FOR DOWNLOADED CONTENT

Coercing Climate Action

Bruce Gilley and David Kinsella

At UN-sponsored climate talks in 2013, the Group of 77 (G77) developing countries, joined by China, walked out briefly in protest against the failure of rich countries to provide a ‘loss-and-damage mechanism’ that would compensate poor countries for the detrimental effects of climate change. At the same conference, Japan’s announcement that it would not meet its emissions goals brought widespread condemnation. These events reflected an intensification of the most persistent deadlock in climate negotiations since the UN Framework Convention on Climate Change (UNFCCC) was agreed in 1992. Even an emissions-reduction deal reached between the United States and China in November 2014, with specific goals and targets, does not significantly alter the trajectories that each country had already been following – whatever the deal’s diplomatic value. As the deadlock continues, it is appropriate to consider whether, if states cannot cooperate to take action against climate change, they might begin to coerce one another to do so.

By ‘coercion’, we mean one party’s actual or threatened infliction of harm as a means of influencing another party to change its behaviour.¹ While pressure and persuasion are normal parts of cooperative processes of conflict resolution, coercion is characterised by the imposition, or threat, of non-trivial harm. States commonly resort to coercive action in international politics for the purposes of pursuing national interests, enforcing international law and ensuring conformity with global norms. The purpose of this

Bruce Gilley is Associate Professor of Political Science and Director of the doctoral programme in Public Affairs and Policy in the Mark O. Hatfield School of Government at Portland State University. **David Kinsella** is Professor and Chair of Political Science in the Mark O. Hatfield School of Government at Portland State University.

essay is to identify those factors – legal, political, economic, administrative and technical – that will affect the likelihood of the use of coercion to slow the pace of human-induced climate change, mainly involving reductions in greenhouse-gas emissions.

Since coercion is usually met with some form of resistance, a greater use of coercive policies will presumably lead to a rise in international conflict (possibly, but not necessarily, armed or violent).² While conflict arising from the *consequences* of climate change has been widely researched and debated, the likelihood of international conflict over its *causes* remains understudied.³

Climate securitisation

Resource scarcity, poverty, disease, refugee movements and other effects of climate change create hardships for populations, and can prompt governments to pursue policies that lead them into direct conflict with one another. Changes in the globe's physical features may also encourage potentially dangerous opportunism by states – resulting in clashes over Arctic sea passage, for example.⁴

If climate change is likely to represent a serious threat to national and human security, then it follows that states will take a growing interest in international action to prevent it. Kurt Campbell has described climate change as 'perhaps the single greatest risk to our national security,'⁵ and US President Barack Obama, in his 2015 State of the Union address, observed that 'the Pentagon says that climate change poses immediate risks to our national security. We should act like it.'⁶ Concerns about existential threats and civilisational collapse from reputable social scientists are now mainstream.⁷ Robert Art and Kenneth Waltz, for example, have argued that, 'if global warming threatens discontinuous climate change, then averting it becomes a vital, not a desirable, interest for the United States.'⁸

This so-called 'securitisation' of climate change worries some analysts, because of its potentially negative impact on the search for cooperative solutions.⁹ Writing at the end of the Cold War, Daniel Deudney argued that analysts were unnecessarily diluting the concept of national security by including within its purview threats to the environment, not least because 'interstate violence is not likely to result from environmental degradation'.¹⁰

The redefinition of national security has nevertheless continued, because policymakers are increasingly focusing on non-traditional threats, and because environmental advocates recognise that security-relevant arguments carry greater weight in public-policy discussions. The risk, for Deudney, was that the national-security mindset – characterised by nationalism, zero-sum assessment and the pursuit of quick solutions – undermines the ‘globalist sensibility’ needed to tackle environmental degradation. The securitisation of climate change, he warned, could ‘trigger various types of interventions, a new imperialism of the strong against the weak’.¹¹ A quarter century later, the potential for the international politics of climate change to become infused with various forms of coercion is real.

Resort to coercion

States have generally sought, so far, to address the problem of global warming cooperatively. At the centre of the international regime on climate change is a set of political, technical and economic agreements that have arisen within the UNFCCC, including the authoritative reports created by the separate Intergovernmental Panel on Climate Change (IPCC). Alongside these, virtually every major multilateral institution (such as the World Bank and the G20) has developed programmes on climate-change mitigation, and there has been a proliferation of bilateral and regional initiatives. This ‘regime complex’, as Robert Keohane and David Victor describe it, operates on the basis of cooperative persuasion, negotiation, compromise and competition.¹² But, with the lone exception of the EU’s Emissions Trading System, effective and broad-based international cooperation to reduce greenhouse gases has failed, even if progress has been made by some nations. Developing-country emissions are soaring, while in developed countries per capita emissions remain unsustainably high.

The seriousness of the threat from climate change, and the elusiveness of cooperative solutions, predictably raises questions about the use of force to prevent it. International environmental politics has not been immune to the broader post-Cold War shift towards intervention to deal with domestic governance failures. The notion of ‘green militarisation’ has been raised in the context of a variety of environmental challenges, especially

conservation.¹³ The use of military surveillance technologies, such as drones and remote-sensing equipment, to identify environmental threats has led naturally to thinking in terms of militarised responses.¹⁴ Some analysts argue that coercion is likely to be used mainly for short-term adaptation rather than long-term mitigation, and thus it is better to focus on cooperative approaches centred on risk, rather than coercive approaches centred on security.¹⁵ But coercion could be a viable mitigation measure as well, an effective tool to reduce emissions by raising the short-term costs.

Scholars have given some attention to the ethics of the use of coercion to arrest climate change. Robyn Eckersley, for instance, argues that the protection of the environment is a matter of common concern that should trump states' rights in extreme cases.¹⁶ However, this would be limited to non-military intervention, in the form of trade sanctions, 'green conditionality' attached to loans, or 'ecological peacekeeping' forces requested by host nations.¹⁷ Deudney's early work on this issue also identified two scenarios in which states might ethically pursue coercion. One, in which there was a clear victim and aggressor, and no other mitigating relationships between the two sides, would mean 'intense cleavages of environmental harm would match interstate borders and at the same time not be compensated or complicated by other military, economic, or cultural interactions', a situation he judged unlikely.¹⁸ In the second, where he specifically cited attempts to reduce greenhouse-gas emissions, some states might choose to free-ride on the efforts of others, possibly prompting the other states to use military coercion to impel compliance – also unlikely, because 'any state sufficiently industrialized to be a major contributor to the carbon dioxide problem will also present a very poor target for military coercion'.¹⁹ Ethics aside, however, there has not yet been a sustained analysis of the probability of climate coercion happening, nor of the various forms which such coercion might plausibly take.

Would coercion be legal?

As justification for either multilateral or unilateral action, greenhouse-gas emissions present particular questions not amenable to the sorts of answers provided by previous decisions in environmental law, such as *Trail Smelter*

(which established the ‘polluter pays’ principle in transboundary environmental disputes).²⁰ Greenhouse gases generally do not cause immediate and identifiable 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 industrialised and developing. The most that can be achieved in terms of affixing state responsibility in the international legal sense is to show that certain countries have contributed or are contributing disproportionately to the problem.

The difficulties associated with establishing responsibility for the adverse effects of climate change do not necessarily mean that states have no legal obligation to take action to mitigate it. States that are not party to the Kyoto Protocol, and parties without binding commitments, still have an obligation under customary international law to prevent transborder damage to others. Because the causal connection between greenhouse-gas 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. As an International Law Commission report on transboundary environmental harm puts it:

Due diligence is manifested in reasonable efforts by a State to inform itself of factual and legal components that relate foreseeably to a contemplated procedure and to take appropriate measures, in timely fashion, to address them ... Such measures include, first, formulating policies designed to prevent significant transboundary harm or to minimize the risk thereof and, secondly, implementing those policies.²¹

Although this obligation may not imply action with respect to specific facilities or carbon sinks (since precise sources of climate-induced harms cannot be pinpointed), it could still be apparent that a state was neglecting

its duties to other states in terms of policy. As applied to climate change, the precautionary principle implies that the anticipated catastrophe of unchecked global warming may be sufficient to justify preventive measures despite uncertainty about climate models and predictions.²²

Thus, from a legal standpoint, the systematic failure by states to curb excessive emissions – especially as climate change approaches a tipping point and becomes a significant threat to some states' survival – 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 non-military sanctions, even by non-injured parties, would be obligations *erga omnes* (towards all) and therefore legally justified.

UN Security Council: responsibility impeded

Since 1992, when the United Nations first acknowledged that environmental degradation represents a threat to international peace and security, there has been widespread agreement that the UN has a range of legal tools at its disposal to compel action to prevent it.²³ Article 39 of the UN Charter empowers the Security Council to determine the existence of threats to and breaches of the peace, and to decide what to do about them. Article 41 permits the imposition of economic and other non-military 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. Member states are bound by the council's resolutions.

In Resolution 1625 of 2005, the Security Council expressed its intention to move beyond a reactive approach to conflict resolution, to strengthen its role in conflict prevention, including by taking action to address the root causes of conflict. Earlier decisions on global terrorism (Resolution 1373 of 2001) and weapons of mass destruction (Resolution 1540 of 2004) 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 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 authorise the use of force when threatened harm to state or human security is 'of a kind, and sufficiently clear and serious' to justify such actions.²⁴ On this view, the accumulation of both formal and customary law has already passed the point where member states could conclude that the enforcement of international agreements on climate change through some form of coercion is legally justified. Indeed, Duncan Depledge and Tobias Feakin have argued that the UN Security Council presently 'possesses sufficient authority to compel states to address the underlying causes and consequences of climate change in order to maintain international security'.²⁵

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. Quasi-legislative action is not among the non-military measures mentioned in Article 41 of the UN Charter, but the council's resolutions on terrorism and weapons of mass destruction suggest that states could be called on to implement greenhouse-gas emissions targets separate from any treaty commitments they have, or have not, made.²⁶ And it is at least legally feasible that the Security Council could invoke its authority under Article 42, and use military force against states it deemed threats to international peace and security by virtue of their unwillingness or inability to curb destructive activities emanating from their territories.

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'.²⁷ The UN Security Council has met three times to address climate change – in 2007, 2011 and 2013 – suggesting some increased demand for it to play a role in enforcing solutions.²⁸

However, as a practical matter, the council is not likely to authorise the use of force for these purposes, not least because three of the five permanent members are a major part of the problem.²⁹ During these Security Council

sessions, the main resistance came from China and Russia, and these two would almost certainly veto any council resolutions calling for the use of coercive measures to address threats to the climate, and ipso facto to international peace. Some believe that growing concern within the national-security establishments in China and Russia, as well as in other countries, about the effects of climate change will lead to a change in their policies. But Michael Brzoska argues that uncertainties about how climate change will affect their core security interests, and the need for their diplomats to stay ‘on message’ when it comes to the topic of climate change, will continue to mute their voices in global forums.³⁰ Bilateral meetings offer more opportunities for quid pro quo, and may yield somewhat more progress. Indeed, in its November 2014 agreement with the US, China for the first time specified a target date (2030) for its peak greenhouse-gas emissions. That date reflected mid-point estimates of China’s existing trajectory, which is certainly better than nothing. But Beijing said only that it ‘intends’ to reach that target and that it would ‘make best efforts’ to peak earlier.³¹

Most developing-country members have opposed the use of the UN Security Council as a forum for debating collective responses to climate change, arguing that this encroaches on the role of other UN bodies, namely the Economic and Social Council and its subordinate agencies, as well as the UNFCCC. The G77, for instance, opposed the Security Council debate on climate change in 2011. While developing countries have the most to gain from UN actions against major greenhouse-gas emitters – they are disproportionately impacted by climate change and are, with the exceptions of China, Brazil and India, less likely to face sanctions themselves – they have, paradoxically, been the least supportive of this approach to the problem.³²

Individual and collective initiative

Outside of UN Security Council authorisation, the resort to military coercion may be lawful as an act of individual or collective self-defence. When Canada withdrew from the Kyoto Protocol in 2011 rather than accept the 30% penalty added to its second-round reduction target, the lead negotiator from Tuvalu called it ‘an act of sabotage on our future’.³³ The lead climate-change negotiator for the Philippines was even more blunt, tweeting:

'I really don't get Westphalian notion of sovereignty, when it means killing each other and innocent people.'³⁴ This sort of language suggests a willingness to pin responsibility for the injurious effects of climate change on particular state policies and, by implication, the possibility of appealing to the principle of self-defence to justify coercive countermeasures. An emerging field of 'green criminology' examines the legal bases upon which individuals and states might pursue remedies against the 'perpetrators' of climate change.³⁵ As the tribunal that awarded damages to the United States for pollution caused by a smelter in the Canadian town of Trail put it in 1941: 'No State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the property or persons therein, when the case is of serious consequences and the injury is established by clear and convincing evidence.'³⁶ While that dispute was resolved through arbitration, the judgment suggests that states are justified in protecting themselves, unilaterally, against imminent and grave environmental threats from other states.

A possible legal precedent for the use of military force against environmental threats from other states is the incident involving the *Torrey Canyon*, an American-owned oil tanker chartered to British Petroleum that hit a reef off the Cornish coast of England with a full cargo of nearly 120,000 tons of Kuwaiti crude oil in 1967. Although the accident took place on the high seas, the threat of oil pollution to British, 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. Although the vessel was Liberian-flagged, the UK's actions were not deemed controversial as a violation of Liberian sovereignty. Neither the ship's 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 Government would have had to be recognized as internationally lawful because of a state of necessity'.³⁷

As for non-military forms of coercion, emerging norms surrounding tools such as 'border tax adjustments' (BTAs) indicate the conditions under which such unilateral actions are likely to be seen as consistent with international law. These and other countermeasures can be viewed as unilateral

law enforcement when established multilateral enforcement mechanisms are absent or ineffective. The rules developed and implemented by the World Trade Organisation (WTO), 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.³⁸ However, such actions could be legally justified as countermeasures if they are proportional to a state's offending behaviour. Establishing proportionality in this context does not sidestep any of the difficulties associated with establishing state responsibility, but the fact that anthropogenic greenhouse-gas emissions are largely the result of economic activities gives the proportionality claim some *prima facie* plausibility.

Article 20 of the General Agreement on Tariffs and Trade (GATT) allows 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.³⁹ Increasingly, such measures are considered a way to ensure that a country's *own* companies do not evade environmental regulations by relocating to other countries. In a joint report issued in 2009, the WTO and the United Nations Environment Programme (UNEP) identified the conditions under which a properly designed BTA could pass WTO tests.⁴⁰ These included a clear link between the adjustments and climate-change policy and non-discriminatory application so that the adjustments would not constitute a disguised trade barrier.

Thus, both within and outside the UN framework, there is a well-established basis in international law for states to undertake coercive action against other states in order to enforce environmental agreements, or to protect themselves and the international community. This growing consensus among legal analysts is important, because it makes it more likely that such actions will be taken in the future.

High coercion: military force

If legal arguments can support the use of coercion, then what additional political, economic, administrative and technical factors will affect the probability that states will resort to it? Here it is useful to distinguish between

different degrees and levels of coercion. Coercion covers a wide range of tools in international relations, ranging from statements of public disapproval and denunciations at the low end of the scale, to economic sanctions, military displays or the use of armed force at the high end.⁴¹ Minimally coercive actions by states, such as diplomatic sanctions, are generally not subject to constraints established by international law; the use of economic and military force are. Coercion can be also be conceptualised as undertaken unilaterally by individual states or coalitions of states, or as undertaken multilaterally through processes employed by international institutions with reasonably inclusive regional or global memberships. This suggests four general types of coercive behaviour: unilateral and highly coercive (for example, military 'eco-intervention'); multilateral and highly coercive (UN Security Council sanctions); unilateral and moderately or minimally coercive (border tax adjustments); and multilateral and moderately or minimally coercive (UNFCCC penalties).

While it is possible to imagine coalitions of the willing saving the planet by bombing CO₂-spewing facilities in 'climate aggressor' states, such actions are infeasible from multiple standpoints: military eco-interventions would not likely be an effective remedy because of the dispersion of greenhouse-gas sources within most states; identifying climate aggressors whose proportional contribution to the problem was outsized would reduce the list to major states like the US and China, against whom military action would be unlikely to succeed; and given the time lag between emissions and climate effects, establishing the necessity of any particular military action as a last resort would be difficult at best.

That said, the use of military power could plausibly take other forms, involving acts of deterrence or coercion aimed to encourage conformity with climate-change rules or norms. The idea of 'coercive diplomacy' involves the use of limited military action or the threat of military escalation to compel compliant behaviour by the target state. The seizure of critical forests threatened with destruction by a state or by ungoverned actors, say, or the punitive destruction of a coal-fired power plant located in a country that refused to implement clean-coal technology, would constitute limited military actions that could, if carefully managed, avoid

the dangers of larger-scale military interventions. Their aim would be to nudge countries into more effective action by conducting punitive acts against climate-damaging activities.

For instance, since 2012 Brazil has deployed security forces in the Amazon under a new environmental-security force aimed at combating illegal deforestation, among other things. Many of the harmful activities are carried out from neighbouring states such as Venezuela, Suriname, French Guiana, Colombia and Guyana, and the military has sought their cooperation.⁴² But it is plausible that Brazil, which has cited climate change as a major reason for deploying the force, could conduct military raids against airstrips, logging centres and camps in the countries implicated in deforestation. This could be construed as an act of 'eco-self-defence' brought on by threats related to climate change. Of course, any such action would need to be carefully considered; there would undoubtedly be risks of escalation, given that other Amazonian states, such as Peru, have built military settlements along their border areas.⁴³

There are also scenarios in which broader coalitions, or even the UN, could employ military force to prevent particularly harmful acts by individual states. For instance, the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, founded in 2012 by middle powers Bangladesh, Canada, Ghana, Mexico and Sweden, and then joined by the US and UNEP, has quickly generated a broad consensus on the need to reduce the emission of pollutants including black carbon and methane. The onset in a country like Indonesia of massive forest, bush or peat fires, or agricultural open-burning, for instance, which generate the equivalent of about one-fifth of anthropogenic CO₂ emissions,⁴⁴ could bring together a coalition of global actors as well as regional ones, all under the leadership of the Association of Southeast Asian Nations (ASEAN), which initiated an Agreement on Transboundary Haze Pollution in 2002. Indonesia might assent to a regional intervention in its ungoverned spaces under the looming threat of international sanctions.

This discussion is meant to be illustrative rather than predictive. At present, the resort to highly coercive approaches, and specifically military action, remains unlikely. But plausible scenarios can easily be created, in which case they become feasible options.

Moderate coercion: border tax adjustments

The use of economic sanctions to coerce climate action, in the form of border tax adjustments on imported products, could be consistent with international trade law.⁴⁵ Practically speaking, economic sanctions of various forms have the merit of being targetable, in a non-discriminatory fashion, against both foreign and domestic economic activities based upon their contribution to greenhouse-gas emissions. When coupled with domestic taxes, BTAs could be used to ensure that foreign producers face the same emissions premiums as domestic ones. BTAs are inherently coercive, because they impose harm on the economic competitiveness of countries exporting emissions-intensive goods. Moreover, if those countries pursued greenhouse-gas emissions reductions domestically without being given an exemption from BTAs, that production would in effect be carbon-taxed twice.

It is probably true, as Jagdish Bhagwati and Petros Mavroidis have argued, that discriminatory trade sanctions would be ineffective (as well as illegal) because of the political backlash they would cause.⁴⁶ When the EU's High Level Group on Competitiveness, Energy and the Environment suggested in 2006 that BTAs be imposed on products from countries that did not participate in UNFCCC emissions targets, the proposal elicited widespread derision. In any case, BTAs would need to be surreally high if they were targeted only at major emitters: Huifang Tian and John Whalley have found that, in order to induce a 50% reduction in global emissions, states would have to impose a common 383% tariff on all imports from Brazil, Russia, India and China. If used only by the United States, the EU and Japan, a tariff of 1,150% would be needed.⁴⁷

Non-discriminatory sanctions, however, especially when imposed by large or leading markets seeking to harmonise greenhouse-gas taxes on imports and domestic products, are more likely to work. In addition to the merit of legality, they would appear to signal a norm shift portending future regulatory conditions, rather than a political vendetta intended to force rapid decarbonisation on select states.

Not surprisingly, leading Chinese government researchers have done extensive work on the potential impact of BTAs, since the effects on China would be greater than elsewhere.⁴⁸ Aijun Li and colleagues conclude that,

while domestic carbon taxes would be preferable, carbon-based BTAs imposed by other states would be an effective strategy:

Our simulation results show that CBTA would cause more damages to China's economy than carbon tax. And hence, China would prefer adopting carbon tax to reduce its emissions rather than facing the challenge of CBTA. In this way, CBTA could function as an effective coercion strategy, since it could force China to accept emissions reduction targets.⁴⁹

Game theorists have also found that BTAs could represent a 'credible threat' to force other countries to limit their emissions through domestic means.⁵⁰

An early sign of the increased likelihood of border taxes was the EU's application, in 2012, of its Emissions Trading System to greenhouse-gas emissions from incoming and outgoing flights operated by foreign carriers. The EU effort is an example of 'front-running unilateralism' designed to coerce other states' participation in a global aviation emissions scheme. Although the application to foreign carriers was subsequently suspended for the years 2013–16, in 2014 Germany became the first country to issue fines to 44 foreign carriers for failing to buy emissions-trading permits for their inbound and outbound flight emissions during 2012. Such developments are indicative of the coercive responses that may follow if international negotiations fail to create an alternative scheme by 2017.⁵¹

Low coercion: climate conditionality

At the low end of the coercion scale are a range of minimally coercive actions that can be described collectively as 'climate conditionality'.⁵² They entail threats to withhold benefits (financial, diplomatic, technical and so on) enjoyed by another state in order to force it to adopt actions that mitigate climate change. Depending on how such policies are designed, climate conditionality can include not only coercive action, but also cooperation; it may begin by offering benefits for both sides. Still, promised benefits of cooperative action must be backed by the threat of non-trivial harm in the case of non-compliance.⁵³ Conditionality is also a form of coercion that can be exercised by a climate aggressor. In 2007, for instance, Ecuador threatened

to begin oil exploration in the Yasuni National Park, an ecologically valuable section of the Amazon rainforest, unless the ‘international community’ paid it \$3.6 billion by 2019. By 2014, with little more than \$13 million collected by the UN for this purpose, the Ecuadorean government began leasing sections for development, eliciting strong international condemnation for alleged ‘extortion’ and ‘brinkmanship’.⁵⁴ Quito later blocked a group of German legislators from visiting the reserve, which led to a rupture in their cooperative project to minimise the damage from the oil production.

Conditionality of this sort can also be made non-discriminatory through the application of preset criteria, such as those characterising the EU’s enlargement process. Countries whose greenhouse-gas emissions (net of removals) did not slow at some fixed rate, for instance, would face additional conditions relating to mitigation, such as the withholding of benefits or the levying of penalties if they failed to reduce emissions.⁵⁵ Sovereign wealth funds, perhaps in alliance with ‘green’ private funds, could impose lower investment ratings on countries with worse mitigation records, a step already taken by Norway.

Climate conditionality, because it inhabits the low end of the coercive spectrum, is also the area where innovative coalitions of states are likely to emerge. Powerful EU states, in particular the UK, France and Germany, are the most likely to initiate more forceful international responses. In 2008, Javier Solana, then EU high representative for common foreign and security policy, stated that ‘climate change represents a fundamental challenge, and should be in the mainstream of EU foreign and security policies and institutions.’⁵⁶ In light of the EU’s commitment and capacity, Depledge and Feakin see climate-change diplomacy as ‘an opportunity to expand its security mandate’.⁵⁷

Acting in concert with these EU powers could be prominent middle powers from the developing world that have been more active in the realm of preventive climate-change diplomacy – countries like Pakistan, Turkey, South Africa, Mexico and Indonesia – as well as other diplomatically active middle powers, such as South Korea and Malaysia, that may yet take up the mantle. The G20, which bridges great powers and middle powers, could also embrace the cause of climate-change prevention, but as in other multilateral

forums there is likely to be a strong preference for cooperative over coercive measures. As with justifications for extra-legal humanitarian interventions, such ‘climate change coalitions’ may be acting unlawfully in the absence of UN Security Council sanction, but could do so while claiming exculpatory circumstances to address the gap between law and ethics.

Such emerging coalitions will transcend the North–South divide, pitting developed and developing climate ‘progressives’ (such as Germany and Costa Rica) against ‘reactionaries’ (such as Canada and India). New climate powers from both North and South seem to be well positioned as norm entrepreneurs and leading voices on climate-change solutions. The possibility that this leadership may be exerted in an increasingly coercive manner, as cooperative approaches fail, should not be dismissed.

* * *

Cutting greenhouse-gas emissions to zero might not be enough to stem massive and perhaps catastrophic climate change, and humanity will need all the cooperative spirit it can muster to confront the consequences. There is therefore some question about whether it is worth aggravating existing international relations at all. Provoking late-stage antagonisms over marginal additions to the stock of greenhouse gases might be foolish. The mere discussion of coercive measures could backfire, as states react to perceived threats to their sovereignty (as Ecuador did in blocking the visit by German legislators). At the same time, however, uncertainty about the absorptive capacity of the climate means that there is a chance that significant alterations to the present trajectory could be achieved with a race to reduce emissions within the next few decades. If so, then the precautionary principle will loom in the minds of many as a reason to pursue that goal – through force, if necessary – even at the risk of undermining the ability to cooperate in adapting to the changes.

Addressing both the legal and practical issues relating to climate change and international security will require new frameworks of analysis, given the limited relevance of orthodox schools of political thought in this domain.⁵⁸ What is clear, though, is that any movement towards the use of coercion for

the purpose of averting climate change will reshuffle traditional alliances and ways of thinking about international politics. The time for thinking through the implications of such coercion is now.

Notes

- ¹ See Tom Beauchamp, 'Coercion', in Ted Honderich (ed.), *Oxford Companion to Philosophy*, 2nd edition (Oxford: Oxford University Press, 2009).
- ² See Lewis Coser, 'Conflict', *Blackwell Dictionary of Modern Social Thought* (Oxford: Blackwell, 2002).
- ³ Introducing a special issue of the *Journal of Peace Research*, Nils Petter Gleditsch observed that most research has focused on 'how climate variability and specifically changes in precipitation may affect conflict'. Nils Petter Gleditsch, 'Whither the Weather? Climate Change and Conflict', *Journal of Peace Research*, vol. 49, no. 1, 2012, pp. 3–9.
- ⁴ See 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', *Earth and Environmental Science*, vol. 6, no. 3, 2006, pp. 271–87; Jeffrey Mazo, *Climate Conflict: How Global Warming Threatens Security and What to Do About It* (New York: Routledge, 2010); Ole Magnus Theisen, Nils Petter Gleditsch and Halvard Buhaug, 'Is Climate Change a Driver of Armed Conflict?', *Climatic Change*, vol. 117, no. 3, 2013, pp. 613–25; 'Whither the Weather? Climate Change and Conflict', pp. 3–9.
- ⁵ Kurt M. Campbell, *Climatic Cataclysm: The Foreign Policy and National Security Implications of Climate Change* (Washington DC: Brookings Institution Press, 2008), p. 20.
- ⁶ Barack Obama, 'Remarks by the President in the State of the Union Address', Washington DC, 20 January 2015, <http://www.whitehouse.gov/the-press-office/2015/01/20/remarks-president-state-union-address-january-20-2015>.
- ⁷ See, for example, Naomi Oreskes and Eric Conway, *The Collapse of Western Civilization: A View from the Future* (New York: Columbia University Press, 2014).
- ⁸ Robert J. Art and Kenneth N. Waltz, *The Use of Force: Military Power and International Politics*, 7th edition (Lanham, MD: Rowman and Littlefield, 2009), p. 341.
- ⁹ Richard A. Matthew, 'Is Climate Change a National Security Issue?', *Issues in Science and Technology*, vol. 27, no. 3, 2011, pp. 49–60; Nicole Detraz and Michele M. Betsill, 'Climate Change and Environmental Security: For Whom the Discourse Shifts', *International Studies Perspectives*, vol. 10, no. 3, 2009, pp. 303–20.
- ¹⁰ Daniel Deudney, 'The Case Against Linking Environmental Degradation and National Security', *Millennium: Journal of International Studies*, vol. 19, no. 3, 1 December 1990, p. 470.
- ¹¹ *Ibid.*, p. 468.
- ¹² Robert O. Keohane and David Victor,

- 'The Regime Complex for Climate Change', *Perspectives on Politics*, vol. 9, no. 1, 2011, pp. 7–23.
- ¹³ Elizabeth Lunstrum, 'Green Militarization: Anti-Poaching Efforts and the Spatial Contours of Kruger National Park', *Annals of the Association of American Geographers*, vol. 104, no. 4, 2014, pp. 816–32.
- ¹⁴ Rosaleen Duffy, 'Waging a War to Save Biodiversity: The Rise of Militarized Conservation', *International Affairs*, vol. 90, no. 4, 2014, pp. 819–34.
- ¹⁵ See, for example, Franziskus von Lucke, Zehra Wellmann and Thomas Diez, 'What's at Stake in Securitising Climate Change? Towards a Differentiated Approach', *Geopolitics*, vol. 19, no. 4, 2014, pp. 857–84.
- ¹⁶ Robyn Eckersley, 'Ecological Intervention: Prospects and Limits', *Ethics & International Affairs*, vol. 21, no. 3, 2007, p. 295.
- ¹⁷ *Ibid.*, p. 312. See also Lorraine Elliott, 'Environmental Security in East Asia: Defining a Common Agenda', in Paul Harris (ed.), *International Environmental Cooperation: Politics and Diplomacy in Pacific Asia* (Boulder, CO: University Press of Colorado, 2002); and Dieter Helm, *The Carbon Crunch: How We're Getting Climate Change Wrong – and How to Fix It* (New Haven, CT: Yale University Press, 2012).
- ¹⁸ Deudney, 'The Case Against Linking Environmental Degradation and National Security', p. 473.
- ¹⁹ *Ibid.*, p. 474.
- ²⁰ On the limited applicability of *Trail Smelter* in particular, see Alfred P. Rubin, 'Pollution by Analogy: The *Trail Smelter* Arbitration', *Oregon Law Review*, no. 50, 1971, pp. 259–82; and Jaye Ellis, 'Has International Law Outgrown *Trail Smelter*?', 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 International Law Commission, 'Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities, with Commentaries', in *Yearbook of the International Law Commission*, Vol. II, Part Two (New York: United Nations, 2001), p. 154. See also René Lefeber, 'Climate Change and State Responsibility', in Rosemary Gail Rayfuse and Shirley V. Scott (eds), *International Law in the Era of Climate Change* (Cheltenham: Edward Elgar, 2012).
- ²² See Cass R. Sunstein, *Worst-Case Scenarios* (Cambridge, MA: Harvard University Press, 2007); and Kerry H. Whiteside, *Precautionary Politics: Principle and Practice in Confronting Environmental Risk* (Cambridge, MA: The MIT Press, 2006).
- ²³ Lorraine Elliott, 'Imaginative Adaptations: A Possible Environmental Role for the UN Security Council', *Contemporary Security Policy*, vol. 24, no. 2, April 2003, pp. 47–68.
- ²⁴ High-level Panel on Threats, Challenges and Change, *A More Secure World: Our Shared Responsibility* (New York: United Nations, 2004), p. 67.
- ²⁵ Duncan Depledge and Tobias Feakin, 'Climate Change and International Institutions: Implications for Security', *Climate Policy*, vol. 12, no. sup01,

- 2012, pp. 877–878. See also Darragh Conway, ‘The United Nations Security Council and Climate Change: Challenges and Opportunities’, *Climate Law*, vol. 1, no. 3, 2010, pp. 375–407; Stephanie Cousins, ‘UN Security Council: Playing a Role in the International Climate Change Regime?’, *Global Change, Peace & Security*, vol. 25, no. 2, 2013, pp. 191–210; Elliott, ‘Imaginative Adaptations: A Possible Environmental Role for the UN Security Council’; Christopher K. Penny, ‘Greening the Security Council: Climate Change as an Emerging “Threat to International Peace and Security”’, *International Environmental Agreements: Politics, Law and Economics*, vol. 7, no. 1, 2007, pp. 35–71; Francesco Sindico, ‘Climate Change: A Security (Council) Issue’, *Carbon & Climate Law Review*, vol. 1, 2007, pp. 29–34; Christina Voigt, ‘Security in a “Warming World”: Competences of the UN Security Council for Preventing Dangerous Climate Change’, in Cecilia M. Bailliet (ed.), *Security: A Multidisciplinary Normative Approach* (Leiden: Martinus Nijhof, 2009).
- ²⁶ 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*, vol. 9, no. 2, 2008, pp. 495–514.
- ²⁷ UN Security Council Department of Public Information, ‘Security Council, in Statement, Says “Contextual Information” on Possible Security Implications of Climate Change Important When Climate Impacts Drive Conflict’, Media Release, 2011, <http://www.un.org/News/Press/docs/2011/sc10332.doc.htm>, emphasis added.
- ²⁸ Cousins, ‘UN Security Council: Playing a Role in the International Climate Change Regime?’, p. 202. See also Detraz and Betsill, ‘Climate Change and Environmental Security: For Whom the Discourse Shifts’.
- ²⁹ Shirley V. Scott and Roberta Andrade, ‘The Global Response to Climate Change: Can the Security Council Assume a Lead Role?’, *Brown Journal of World Affairs*, vol. 18, no. 2, 2012, pp. 215–26.
- ³⁰ Michael Brzoska, ‘Climate Change and the Military in China, Russia, the United Kingdom, and the United States’, *Bulletin of the Atomic Scientists*, vol. 68, no. 2, 5 March 2012, pp. 43–54.
- ³¹ White House, ‘U.S.–China Joint Announcement on Climate Change’, 11 November 2014, <http://www.whitehouse.gov/the-press-office/2014/11/11/us-china-joint-announcement-climate-change>.
- ³² Christine Gray, ‘Climate Change and the Law on the Use of Force’, in Rosemary Gail Rayfuse and Shirley V. Scott (eds), *International Law in the Era of Climate Change* (Cheltenham: Edward Elgar, 2012), p. 238.
- ³³ ‘China, Japan Say Canada’s Kyoto Withdrawal “Regrettable”’, Reuters, 13 December 2011.
- ³⁴ Yeb Sano, tweet dated 17 July 2014, <https://twitter.com/YebSano>.
- ³⁵ See, for example, Rob White (ed.), *Climate Change from a Criminological Perspective* (New York: Springer, 2012); William C.G. Burns and Hari M. Osofsky, *Adjudicating Climate Change: State, National, and International Approaches* (Cambridge:

- Cambridge University Press, 2011); Tawhida Ahmed, Stephen Farrall and Duncan French, *Criminological and Legal Consequences of Climate Change* (Oxford: Hart, 2012).
- ³⁶ 'Trail Smelter Arbitral Decision', *American Journal of International Law*, no. 35, 1941. See also Mark Drumbl, 'Trail Smelter and the International Law Commission's Work on State Responsibility for Internationally Wrongful Acts and State Liability', in Rebecca Bratspies and Russell A. Miller (eds), *Transboundary Harm in International Law: Lessons from the Trail Smelter Arbitration* (New York: Cambridge University Press, 2006).
- ³⁷ International Law Commission, Shabtai Rosenne (ed.), *The International Law Commission's Draft Articles on State Responsibility, Part 1, Articles 1–35* (Dordrecht: Kluwer Academic, 1991), p. 356.
- ³⁸ Markus W. Gehring, Marie-Claire Cordonier Segger and Jarrod Hepburn, 'Climate Change and International Trade and Investment Law', in Rayfuse and Scott (eds), *International Law in the Era of Climate Change*.
- ³⁹ Felicity J. Deane, 'The WTO, the National Security Exception and Climate Change', *Carbon and Climate Law Review*, no. 2, 2012, pp. 149–58.
- ⁴⁰ Ludvine Tamiotti, *Trade and Climate Change: A Report by the United Nations Environment Programme and the World Trade Organization* (Geneva: United Nations, 2009).
- ⁴¹ Joshua S. Goldstein, 'A Conflict–Cooperation Scale for WEIS Events Data', *Journal of Conflict Resolution*, vol. 36, no. 2, 1992, pp. 369–85.
- ⁴² Simon Romero, 'Brazil Increasing Military Presence Along Amazon Borders', *New York Times*, 4 May 2012, <http://www.nytimes.com/2012/05/04/world/americas/brazil-sending-more-troops-to-guard-amazon-borders.html>.
- ⁴³ David S. Salisbury et al., 'Fronteras Vivas or Dead Ends? The Impact of Military Settlement Projects in the Amazon Borderlands', *Journal of Latin American Geography*, vol. 9, no. 2, 2010, pp. 49–71.
- ⁴⁴ Mark Z. Jacobson, 'Effects of Biomass Burning on Climate, Accounting for Heat and Moisture Effects, Black and Brown Carbon, and Cloud Absorption Effects', *Journal of Geophysical Research: Atmospheres*, vol. 119, 2014, pp. 8,980–9,002.
- ⁴⁵ Ottavio Quirico, 'EU Border Tax Adjustments and Climate Change: Reaching Consensus within the International Legal Context', *European Energy and Environmental Law Review*, vol. 19, no. 5, 2010, pp. 230–8.
- ⁴⁶ Jagdish Bhagwati and Petros Mavroidis, 'Is Action against US Exports for Failure to Sign Kyoto Protocol WTO-Legal?', *World Trade Review*, vol. 6, no. 2, 2007, pp. 299–310.
- ⁴⁷ Huifang Tian and John Whalley, 'Trade Sanctions, Financial Transfers and BRIC Participation in Global Climate Change Negotiations', *Journal of Policy Modeling*, vol. 32, no. 1, 2010, pp. 47–63.
- ⁴⁸ Aijun Li et al., 'How Large Are the Impacts of Carbon-Motivated Border Tax Adjustments on China and How to Mitigate Them?', *Energy Policy*, no. 63, 2013, pp. 927–34.
- ⁴⁹ Aijun Li and Aizhen Zhang, 'Will Carbon-Motivated Border Tax

- Adjustments Function as a Threat?', *Energy Policy*, no. 47, 2012, pp. 81–90.
- ⁵⁰ Terry Eyland and Georges Zaccour, 'Carbon Tariffs and Cooperative Outcomes', *Energy Policy*, no. 65, 2014, pp. 718–28.
- ⁵¹ 'Germany Fines Airlines for CO₂ Emissions Breach', Reuters, 1 May 2014.
- ⁵² On the concept of climate conditionality, see, for example, Kevin E. Davis and Sarah Dadush, 'Getting Climate-Related Conditionality Right', in Richard B. Stewart, Benedict Kingsbury and Bryce Rudyk (eds), *Climate Finance: Regulatory and Funding Strategies for Climate Change and Global Development* (New York: New York University Press, 2009), pp. 197–205.
- ⁵³ Maike Sippel and Karsten Neuhoff, 'A History of Conditionality: Lessons for International Cooperation on Climate Policy', *Climate Policy*, vol. 9, no. 5, 2009, pp. 481–94.
- ⁵⁴ Lily Hindy, 'Ecuador's Development Dilemma: Will Oil Win Out?', *Christian Science Monitor*, 22 February 2014, <http://www.csmonitor.com/World/Americas/2014/0222/Ecuador-s-development-dilemma-Will-oil-win-out>.
- ⁵⁵ Charlotte Streck, 'Ensuring New Finance and Real Emission Reduction: A Critical Review of the Additionality Concept', *Carbon & Climate Law Review*, vol. 5, no. 2, 2010, pp. 158–68.
- ⁵⁶ Javier Solana, 'Climate Change and Security: Recommendations', 2008, www.eu-un.europa.eu/articles/fr/article_8382_fr.htm.
- ⁵⁷ Depledge and Feakin, 'Climate Change and International Institutions: Implications for Security', p. s79.
- ⁵⁸ See Urs Luterbacher and Detlef F. Sprinz, *International Relations and Global Climate Change* (Cambridge, MA: The MIT Press, 2001).

