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All Hands on Deck! Mobilizing Climate Change Action beyond the UNFCCC

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While taking notable incremental steps forward, Parties to the United Nations Framework Convention on Climate Change (UNFCCC) have so far, in aggregate, been unable to scale up their ambition to mitigate climate change so as to hold a rise in global average temperature below 2° Celsius above pre-industrial levels. In this introduction to the special issue, it is posited that the UNFCCC has played and should continue to play an essential role in instigating and coordinating a global response to climate change. However, in the face of continuing difficulty in stabilizing the global climate at safe levels, it is argued here that the UNFCCC is by no means alone in addressing this challenge and that wider international cooperation is possible in a way that complements the international climate negotiations. This article shows how a variety of international institutions outside of the *UNFCCC* have sought – albeit with modest results to date - to address climate change, and indicates how these institutions could be enhanced to deliver greater climate change mitigation benefits. It then illustrates how these institutions may interact with the UNFCCC process, and examines the role of the UNFCCC in ensuring that the various institutions work in a complementary fashion.

INTRODUCTION

The adoption of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 embodied the international community's determination to address the global climate change problem. Since then, the international climate negotiations have achieved notable advances. In particular, they have created a body of international institutions and norms that constitute the only universal mechanism for addressing climate change in a comprehensive manner. The UNFCCC has played a crucial role by catalyzing climate action at various levels of governance, building an institutional infrastructure, facilitating learning and enhancing trust among parties, and generally keeping climate change on the international policy agenda.

Furthermore, since the creation of the Durban Platform for Enhanced Action in 2011,3 the prospects for heightened cooperation seem somewhat brighter. However, more than 20 years after the adoption of the Convention, it has become clear that to avoid climate impacts that would be perceived as dangerous by many countries and individuals, a drastic cut in greenhouse gas emissions beyond the current level of effort is not only necessary, but also needs to happen urgently.4 Despite incremental progress, a lack of political will means that the global emission reductions achieved so far are inadequate to meet the UNFCCC's objectives of 'prevent[ing] dangerous anthropogenic interference with the climate system's and 'reducing global greenhouse gas emissions so as to hold the increase in global average temperature below 2°C above pre- industrial levels'.6

Although the situation may thus seem dire, this special issue of *RECIEL* draws attention to the fact that the UNFCCC could be complemented by other international institutions in its efforts to tackle climate change. Over the years, a wide variety of institutions has started, directly or indirectly, and with varying levels of success, to address certain aspects of the climate problem outside of the UNFCCC. In this special issue, we

Politics of Climate Change (Oxford University Press, 2009), 433, at 439–443; A. Vihma and H. van Asselt, *Great Expectations: Understanding Why the UN Climate Negotiations Seem to Fail*, FIIA Briefing Paper 109 (Finnish Institute of International Affairs, 2012), at 6–7.

¹ United Nations Framework Convention on Climate Change (New York, 9 May 1992; in force 21 March 1994) ('UNFCCC').

² J. Depledge and F. Yamin, 'The Global Climate-Change Regime: A Defence', in: D. Helm and C. Hepburn (eds.), *The Economics and*

³ Decision 1/CP.17, Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action (UN Doc. FCCC/CP/2011/ 9/Add.1, 15 March 2012).

⁴ K. Anderson and A. Bows, 'Beyond "Dangerous" Climate Change: Emission Scenarios for a New World', 369 *Philosophical Transactions of the Royal Society* A (2011), 20, at 41; J. Rogelj *et al.*, 'Emission Pathways Consistent with a 2°C Global Temperature Limit', 1:8 *Nature Climate Change* (2011), 413, at 413.

⁵ UNFCCC, n. 1 above, Article 2.

⁶ Decision 1/CP.16, The Cancún Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (UN Doc. FCCC/CP/2010/7/Add.1, 15 March 2011), at paragraph 4. For analyses of the emission reduction pledges made in the climate negotiations against the benchmark of limiting global average temperature increases to 2°C see, e.g., J. Rogelj *et al.*, 'Copenhagen Pledges are Paltry' 464:7292 *Nature* (2010), 1126; United Nations Environment Programme (UNEP), *The Emissions Gap Report: Are the Copenhagen Accord Pledges Sufficient to Limit Global Warming to 2°C or 1.5°C? A Preliminary Assessment* (UNEP, 2010); UNEP, *Bridging the Emissions Gap* (UNEP, 2011).

examine how to bolster this broader regime complex for climate change. Our focus on international institutions outside of the UNFCCC is not meant to suggest that climate negotiations have failed or should be forsaken. Rather, we argue that there is no single solution in the international legal response to climate change, and that an all-hands-on-deck approach is likely to be necessary. While the UNFCCC thus has an important role to play in any effective international framework, we believe it is also necessary to examine in greater detail to which extent and how institutions beyond the UNFCCC could complement the activities of the climate regime and further scale up mitigation ambition.

The focus of this special issue is, first, on multilateral institutions, which include the regimes established by several multilateral environmental agreements, the United Nations (UN) human rights system and the world trading system; and, second, on 'minilateral' institutions,⁹ which include various initiatives undertaken by a limited number of countries to tackle specific aspects of climate change.¹⁰ We acknowledge that some of these institutions are not operating completely independently from the UNFCCC. Several provisions in the Convention explicitly authorize more or less formal cooperation among the UNFCCC, its parties and other international institutions.¹¹ Moreover, several decisions adopted by climate negotiators have sought to reach out

⁷ The term 'regime complex' was coined by Raustiala and Victor, who define it as 'an array of partially overlapping and non-hierarchical institutions governing a particular issue area'. K. Raustiala and D. Victor, 'The Regime Complex for Plant Genetic Resources', 58:2 *International Organization* (2004), 277, at 279. See also R.O. Keohane and D.G. Victor, 'The Regime Complex for Climate Change', 9:1 *Perspective on Politics* (2011), 7.

⁸ See also C. Bausch and M. Mehling, *Addressing the Challenge of Global Climate Mitigation: An Assessment of Existing Venues and Institutions* (Friedrich Ebert Stiftung, 2011), at 48; D. Bodansky, *Multilateral Climate Efforts beyond the UNFCCC* (Center for Climate and Energy Solutions, 2011), at 16.

⁹ On 'minilateralism' generally, see M. Naím, 'Minilateralism: The Magic Number to Get Real International Action', *Foreign Policy* (July/ August 2009), 5. On minilateralism in international climate policy, see J.S. McGee, 'Exclusive Minilateralism: An Emerging Discourse within International Climate Change Governance?', 8:3 *Portal – Journal of Multidisciplinary International Studies* (2011), 1; R. Eckersley, 'Moving Forward in the Climate Negotiations: Multilateralism or Minilateralism?', 12:2 *Global Environmental Politics* (2012), 24.

¹⁰ This special issue does not specifically examine private initiatives outside of the UNFCCC. For good recent discussions, see, e.g., P. Pattberg and J. Stripple, 'Beyond the Public and Private Divide: Remapping Transnational Climate Governance in the 21st Century', 8:4 International Environmental Agreements: Politics, Law and Economics (2008), 367; M.J. Hoffmann, Climate Governance at the Crossroads: Experimenting with a Global Response after Kyoto (Oxford University Press, 2011); K.W. Abbott, 'The Transnational Regime Complex for Climate Change', 30:4 Environment and Planning C: Government and Policy (2012), 571.

¹¹ See, e.g., UNFCCC, n. 1 above, Article 3.3 ('[e]fforts to address climate change may be carried out cooperatively by interested Parties'); and various clauses under Article 4.1. Furthermore, the Convention specifies that climate finance can be provided 'through bilateral, regional and other multilateral channels'. Ibid., Article 11.5.

to other international institutions. ¹² However, the international institutions examined in this special issue each have their own decision-making processes independent of the UNFCCC. So while these institutions may be influenced by the climate regime, they are also beyond the control of UNFCCC decision makers. Furthermore, where cooperation already exists between the UNFCCC and other international institutions, we examine ways in which it could be strengthened.

Against this background, the aims of this special issue are twofold. First, it seeks to show how international institutions outside of the UNFCCC have sought to address climate change, and how they could be enhanced to deliver greater climate change benefits as a complement to the UNFCCC.¹³ Second, it aims to reflect on the role of these initiatives *vis-à-vis* the UNFCCC in order to ensure that the various institutions work together in a complementary fashion with a view to increasing ambition within the broader regime complex for climate change. In addition to meeting ambitious objectives, a fully functioning regime complex will need to be fair and equitable, including by respecting the UNFCCC's principle of common but differentiated responsibilities and respective capabilities (CBDRRC).¹⁴

The special issue builds on an emerging body of literature on the relationship between the UNFCCC and other institutions. Various studies have pointed out how other institutions have started to tackle climate-change-related issues, ¹⁵ and have provided insights into how other forums interact with the UN climate regime. ¹⁶ This

¹² See, e.g., Decision 13/CP.8, *Cooperation with Other Conventions* (UN Doc. FCCC/CP/2002/7/Add.1, 28 March 2003).

¹³ Although they also have an important role to play, bilateral institutions are outside the scope of this special issue.

¹⁴ UNFCCC, n. 1 above, Article 3.1.

¹⁵ See, e.g., H. van Asselt, J. Gupta and F. Biermann, 'Advancing the Climate Agenda: Exploiting Material and Institutional Linkages to Develop a Menu of Policy Options', 14:3 Review of European Community and International Environmental Law, 255; K. Michonski and M.A. Levi, Harnessing International Institutions to Address Climate Change (Council on Foreign Relations, 2010); C. Bausch and M. Mehling, n. 8 above; D. Bodansky, n. 8 above; R. Rayfuse and S.V. Scott (eds.), International Law in the Era of Climate Change (Edward Floar, 2012).

¹⁶ See, e.g., S. Oberthür, 'The Climate Change Regime: Interactions with ICAO, IMO and the EU Burden-sharing Agreement', in: S. Oberthür and T. Gehring (eds.), Institutional Interaction in Global Environmental Governance. Synergy and Conflict among International and EU Policies (MIT Press, 2006), 53; H. van Asselt, F. Sindico and M.A. Mehling, 'Global Climate Change and the Fragmentation of International Law', 30:4 Law and Policy (2008), 423; F. Biermann, P. Pattberg, H. van Asselt, and F. Zelli, 'The Fragmentation of Global Governance Architectures: A Framework for Analysis', 9:4 Global Environmental Politics (2009), 14; F. Biermann, 'Beyond the Intergovernmental Regime: Recent Trends in Global Carbon Governance', 2:4 Current Opinion in Environmental Sustainability, 284; M.J. Hoffmann, n. 10 above; R.O. Keohane and D.G. Victor, n. 7 above; M.A Young, 'Climate Change Law and Regime Interaction', 4:2 Carbon and Climate Law Review (2011), 147; F. Zelli, 'The Fragmentation of the Global Climate Governance Architecture', 2:2 WIREs Climate Change (2011), 255; K.W. Abbott, n. 10 above.

special issue seeks to add value by not only examining the contribution of other institutions to climate policy goals, but also discussing the conditions under which these institutions could come to an appropriate division of labour with the UNFCCC that makes use of their respective strengths, and by examining how new initiatives outside the UNFCCC could increase the overall mitigation ambition of the international community.

The remainder of this introductory article is structured as follows. First, we briefly discuss the current state and future of international climate law and policy, showing that although modest progress has been made at recent Conferences of the Parties (COPs), some of the crunch issues remain to be addressed. We then move on to provide an overview of the (potential) contributions by a variety of institutions outside the UNFCCC, drawing on the articles in this special issue. Next, we examine how these institutions interact with the UNFCCC, and reflect on the role for the UNFCCC in the emerging regime complex. In our concluding remarks, we summarize our main findings and provide suggestions for the way forward, including recommendations for further inquiry.

THE (UNCERTAIN) FUTURE OF INTERNATIONAL CLIMATE LAW AND POLICY

Despite the significant uncertainty that surrounds international climate law and policy today, the contours of tomorrow's international climate policy architecture can be sketched based on recent developments. One of the biggest uncertainties in the climate regime has been what type of framework will govern the cooperation of countries after the end of the first commitment period of the Kyoto Protocol in 2012.17 The inability of UNFCCC parties to come to an agreement in Copenhagen in 2009 cast doubt over the viability of a comprehensive legally binding agreement to regulate global greenhouse gas emissions. A year later, at COP-16 in Cancún, parties seemed to vindicate the approach adopted by political leaders in the Danish capital by formally acknowledging countries' voluntary mitigation and finance pledges, and by establishing mechanisms under the UNFCCC to review and fund these pledges.¹⁸ At the same time, parties also agreed to continue negotiations on the Kyoto Protocol.

In December 2011, parties in Durban charted a path that offered some level of clarity on both the future of the Kyoto Protocol and on cooperation of countries under the Convention. On the Kyoto Protocol side, parties agreed to a second commitment period, although without specifying precise mitigation targets or the length of the period. 19 Under the Convention, Parties launched a process to 'raise the level of ambition' under the Durban Platform for Enhanced Action.20 Parties decided to launch a work plan to identify and explore 'a range of actions that can close the ambition gap with a view to ensuring the highest possible mitigation efforts by all Parties', which could include additional steps beyond countries' current pledges before 2020.21 From 2020 onwards, a new international agreement, to be adopted by 2015, should enter into force and be 'applicable to all Parties',22 either as substitute or a complement to the Kyoto Protocol. Here again, many details remain to be filled in - in particular, the contents of the commitments for all parties involved and the type of legal instrument that will be used.23

Some of the outstanding issues surrounding the future of the climate regime may be clarified at COP-18 in Doha in 2012. Still, UNFCCC parties have yet to demonstrate their ability, in aggregate, to adopt and implegreenhouse gas reduction commitments commensurate with the scale and urgency of the climate problem. There are various possible reasons for this. Some scholars have argued that this lack of ambition derives from inherent institutional inefficiencies in particular, the requirement that all decisions be adopted by consensus by 195 countries.24 Others have argued that the problem of climate change is one that is simply too vast and complex to be resolved through a single instrument or multilateral forum, but rather requires a 'bottom-up' approach.²⁵ Yet other scholars point to 'dysfunctional North-South politics' as one of

¹⁷ The Kyoto Protocol sets targets for its developed country parties for the period 2008–2012. Kyoto Protocol to the United Nations Framework Convention on Climate Change (Kyoto, 11 December 1997; in force 16 February 2005) ('Kyoto Protocol'), Article 3.1.

¹⁸ Decision 1/CP.16, n. 6 above. See also L. Rajamani, 'The Cancun Climate Change Agreements: Reading the Text, Subtext and Tealeaves', 60:2 *International and Comparative Law Quarterly* (2011), 499.

¹⁹ Decision 1/CMP.7, Outcome of the Work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol at Its Sixteenth Session (UN Doc. FCCC/KP/CMP/2011/10/Add.1, 15 March 2012), at paragraph 1.

²⁰ Decision 1/CP.17, n. 3 above, at paragraph 6.

²¹ Ibid., at paragraphs 7–8.

²² Decision 1/CP.17 calls for 'a protocol, another legal instrument or an agreed outcome with legal force under the [UNFCCC] applicable to all Parties'. Ibid., at paragraph 2.

²³ R. Moncel, 'Unconstructive Ambiguity in the Durban Climate Deal of COP 17/CMP 7', 12:2 Sustainable Development Law and Policy (2012), 6; L. Rajamani, 'The Durban Platform on Enhanced Action and the Future of the Climate Regime', 61:2 International and Comparative Law Quarterly (2012), 501.

²⁴ See, e.g., G. Prins and S. Rayner, 'Time to Ditch Kyoto', 449:25 *Nature* (2007), 973, at 974; D.G. Victor, *Global Warming Gridlock: Creating More Effective Strategies for Protecting the Planet* (Cambridge University Press, 2011), at 210–215.

²⁵ See, e.g., G. Prins and S. Rayner, n. 24 above, at 974; M. Hulme, Why We Disagree about Climate Change (Cambridge University Press, 2009), at 311–315; S. Rayner, 'How to Eat an Elephant: A Bottom-up Approach to Climate Policy', 10:6 Climate Policy (2010), 615. While authors tend to contrast 'bottom-up' with 'top-down' approaches, these approaches do not have to exclude each other. See, e.g., N.K. Dubash and L. Rajamani, 'Beyond Copenhagen: Next Steps', 10:6 Climate Policy (2010), 593, at 594–596; H. van Asselt

the climate regime's weaknesses.²⁶ They argue that the distinction between those countries listed in the annexes to the Convention and the Kvoto Protocol (developed countries) and those not included in them (developing countries) serves to perpetuate ideological and political divides. But perhaps one of the most important reasons is that the international climate negotiations, like many other debates in world politics, reflect rather than drive national politics, and mobilizing national constituencies is necessary to drive a global transition to a low-carbon economy.²⁷ In particular, the ambition level of the UNFCCC and the goodwill of its parties are constrained if the world's largest emitters, and in particular the United States, are unwilling to enhance their ambition domestically. Conversely, true leadership on the part of the world's largest absolute and historical emitters, including through the full implementation of the commitments under the Kyoto Protocol, would go a long way towards unlocking some of the distrust that currently characterizes the UNFCCC process.28

In any case, looking beyond the UNFCCC may be beneficial. While we argue that the UNFCCC still has a crucial part to play, the climate stands to benefit from the increased mobilization of other international institutions as a complement to the UNFCCC. This could be, first of all, because other institutions are smaller, involve like-minded 'climate-friendly' countries in the form of coalitions, or have a useful track record at reaching decisions involving a large number of countries. Second, multiple specialized venues could each address a small piece of a puzzle that the UNFCCC could not tackle as a whole. Third, other institutions may be better able to mobilize national governments and constituencies that have remained silent or resistant - for example, by framing climate impacts and policies in terms of human rights or national security. Ultimately, the ability of these other institutions to make a decisive difference in the collective fight against climate change depends on whether they are able to help overcome the underlying barriers that have weakened international cooperation within the UNFCCC itself or whether they might instead be the wrong tools to address these roadblocks.

and F. Zelli, 'Connect the Dots: Managing the Fragmentation of Global Climate Governance', *Environmental Economics and Policy Studies* (2012, forthcoming).

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CLIMATE ACTION OUTSIDE THE UNFCCC

This section sketches how various institutions outside of the UNFCCC have contributed or could contribute to mobilizing climate action. We do not review the full suite of international institutions that may have a role to play in addressing climate change. Rather than providing a comprehensive survey, we identify a sub-set of international institutions that we find to be particularly illustrative of the potential to enhance international cooperation on climate change.

ENVIRONMENTAL INSTITUTIONS

Climate change is physically linked to many other environmental problems, and could therefore be tackled through channels focused primarily addressing these other environmental challenges. First, climate change is closely related to ozone depletion in various ways. Because certain ozone-depleting substances are also potent greenhouse gases,29 the reduction of ozone depleting substances, as promoted through the 1985 Vienna Convention³⁰ and its 1987 Montreal Protocol,31 can also result in significant climate benefits. Indeed, the Montreal Protocol is said to have contributed more to climate protection than the first commitment period of the Kyoto Protocol.32 In their contribution, Zaelke, Andersen and Borgford-Parnell underline the success of the Montreal Protocol in terms of climate mitigation, demonstrating how it has addressed a smaller and more manageable piece of the larger climate problem by tackling ozone depleting substances. However, the effects of the Montreal Protocol's contribution were in part negated by the fact that two of the substitutes it promoted - hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs) - also contribute to climate change. Parties to the Montreal Protocol have addressed this issue by adopting a decision in 2007 significantly accelerating the phasing out of the consumption and production of HCFCs,³³ while a similar proposal for HFCs is still

²⁶ See J. Depledge and F. Yamin, n. 2 above, at 443.

²⁷ See, e.g., D. Sprinz and M. Weiß, 'Domestic Politics and Global Climate Policy', in: U. Luterbacher and D. Sprinz (eds.), *International Relations and Global Climate Change* (MIT Press, 2001), 67, at 67–68.

²⁸ A full analysis of the causes of, and remedies for, the relatively slow pace of progress in the UNFCCC negotiations is beyond the scope of this article. We introduce some of the main arguments here for background purposes and to highlight the relevance and limits of the various approaches presented by the articles in this special issue.

²⁹ See, e.g., S. Oberthür, 'Linkages between the Montreal and Kyoto Protocols: Enhancing Synergies between Protecting the Ozone Layer and the Global Climate', 1:3 *International Environmental Agreements: Politics, Law and Economics*, 357; UNEP Assessment Panel on the Environmental Effects of Stratospheric Ozone Depletion, *Environmental Effects of Ozone Depletion and Its Interactions with Climate Change: 2002 Assessment* (UNEP, 2002).

³⁰ Convention on the Protection of the Ozone Layer (Vienna, 22 March 1985; in force 22 September 1988).

³¹ Protocol on Substances that Deplete the Ozone Layer (Montreal, 16 September 1987; in force 1 January 1989).

³² G. Velders *et al.*, 'The Importance of the Montreal Protocol in Protecting Climate', 104:12 *Proceedings of the National Academy of Sciences* (2007), 4814, at 4814.

³³ Decision XIX/6, Adjustments to the Montreal Protocol with Regard to Annex C, Group I, Substances (Hydrochlorofluorocarbons) (UN Doc. UNEP/OzL.Pro.19/7, 21 September 2007).

under consideration.³⁴ Zaelke *et al.* discuss this proposal, emphasizing the mitigation benefits it entails and arguing that phasing out HFCs through the Montreal Protocol would be the fastest and most cost-effective solution.

Second, reducing local and regional air pollutants may also result in climate change mitigation. 'Traditional' air pollutants, such as nitrogen oxide and sulphur dioxide, and greenhouse gases often stem from the same sources, such as transport, agriculture, power production and industry. In addition, reducing shortlived climate forcers such as black carbon and tropospheric ozone can reduce regional climate impacts.³⁵ The disaggregated 'start and strengthen' approach suggested by Zaelke and colleagues to addressing small pieces of the climate puzzle used to phase out fluorinated greenhouse gases could possibly be replicated by other international, regional and national institutions. This draws attention to the potential, for instance, of the Convention on Long-range Transboundary Air Pollution,36 under whose umbrella a variety of protocols has been adopted, most of which target specific air pollutants. In May 2012, Parties to the 1999 Gothenburg Protocol to the Convention³⁷ agreed on a set of amendments, one of which now includes black carbon within the remit of the Protocol.³⁸ Another venue where shortlived climate forcers are discussed is the International Maritime Organization (IMO), which is currently considering how to address black carbon emissions from shipping that have an impact on warming in the Arctic region.³⁹ In addition to these traditional intergovernmental approaches, a new public-private partnership has been established with a view to reducing short-lived climate forcers - the Climate and Clean Air Coalition to Reduce Short-lived Climate Pollutants⁴⁰ – although it is still too early to tell whether it will have a significant

impact on climate change mitigation. These targeted approaches combined thus could result in significant international and regional climate and development benefits.

Third, tackling climate change and reducing biodiversity loss are fundamentally related.41 Climate change may have negative impacts on biodiversity, but the conservation of biodiversity may also support humans in their efforts to mitigate and adapt to climate change. This means that various biodiversity-related regimes, including the Convention on Biological Diversity⁴² and the Ramsar Wetlands Convention,43 have a potential role to play in addressing climate change. For instance, given the fact that certain ecosystems (e.g., forests and wetlands) have an important function as carbon sinks,44 measures to protect such ecosystems under biodiversity treaties will have a knock-on effect for climate protection.⁴⁵ In addition, from a cognitive viewpoint, international biodiversity law can offer important lessons on how to deal with the social and environmental impacts of climate-related policies and measures.46 In this regard it is notable that parties to the Convention on Biological Diversity agreed to issue a moratorium on geo-engineering in 2010.47

 ³⁴ S. Oberthür, C. Dupont and Y. Matsumoto, 'Managing Policy Contradictions between the Montreal and Kyoto Protocols: The Case of Fluorinated Greenhouse Gases', in: S. Oberthür and O.S. Stokke (eds.), *Managing Institutional Complexity: Regime Interplay and Global Environmental Change* (MIT Press, 2011), 115, at 128–129.
³⁵ E. Rosenthal and R. Watson 'Multilateral Efforts to Reduce Black Carbon Emissions: A Lifeline for the Warming Arctic?', 20:1 *Review of European Community and International Environmental Law* (2011), 3.
³⁶ Convention on Long-range Transboundary Air Pollution (Geneva, 13 November 1979; in force 16 March 1983).

³⁷ Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg, 30 November 1999; in force 17 May 2005).

³⁸ See United Nations Economic Commission for Europe (UNECE), 'Parties to UNECE Air Pollution Convention Approve New Emission Reduction Commitments for Main Air Pollutants by 2020' (4 May 2012), found at: http://www.unece.org/index.php?id=29858>.

³⁹ L. Boone, 'Reducing Air Pollution from Marine Vessels to Mitigate Arctic Warming: Is it Time to Target Black Carbon?', 6:1 *Carbon and Climate Law Review* (2012), 13. See also E. Rosenthal and R. Watson, n. 35 above, at 8–9.

⁴¹ See, e.g., Secretariat of the Convention on Biological Diversity (CBD), Interlinkages Between Biological Diversity and Climate Change: Advice on the Integration of Biodiversity Considerations into the Implementation of the United Nations Framework Convention on Climate Change and its Kyoto Protocol, CBD Technical Series 10 (Secretariat of the CBD, 2003); Secretariat of the CBD, Connecting Biodiversity and Climate Change Mitigation and Adaptation: Report of the Second Ad Hoc Technical Expert Group on Biodiversity and Climate Change, CBD Technical Series 41 (Secretariat of the CBD, 2009)

 $^{^{\}rm 42}$ Convention on Biological Diversity (Rio de Janeiro, 5 June 1992; in force 29 December 1992).

⁴³ Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar, 2 February 1971; in force 21 December 1975)

⁴⁴ Estimates indicate that tropical deforestation and forest degradation accounts for about 12–20% of global carbon dioxide emissions. G. van der Werf et al., 'CO₂ Emissions from Forest Loss', 2:11 Nature Geoscience (2009), 737, at 737.

⁴⁵ See further H. van Asselt, 'Integrating Biodiversity in the Climate Regime's Forest Rules: Options and Tradeoffs in Greening REDD Design', 20:2 Review of European Community and International Environmental Law, 139; E. Morgera, 'Far Away, So Close: A Legal Analysis of the Increasing Interactions between the Convention on Biological Diversity and Climate Change Law', 2:1 Climate Law, 85; J. Pittock, 'A Pale Reflection of Political Reality: Integration of Global Climate, Wetland and Biodiversity Agreements', 1:3 Climate Law (2011), 343.

⁴⁶ E. Morgera, 'No Need to Reinvent the Wheel for a Human Rights-based Approach to Tackling Climate Change: The Contribution of International Biodiversity Law', in: E.J. Hollo, K. Kulovesi and M. Mehling (eds.), *Climate Change and the Law* (Springer, 2012, forthcoming).

⁴⁷ Decision X/33, *Biodiversity and Climate Change* (UN Doc. UNEP/CBD/COP/10/27, 20 January 2011), at paragraph 8(w). See also E. Morgera, n. 45 above, at 95–98.

NATIONAL AND HUMAN SECURITY INSTITUTIONS

Another realm of action explored in this special issue relates to the nexus between climate change and national and human security. It has been well documented that climate change and actions to curtail it have deep effects on people, their governments, the ecosystems on which they rely and the economies that sustain their lives. We ask here whether institutions charged with security can also, within their mandate, help address climate change – particularly in the context of growing awareness of increased stresses on human ecological and economic environments caused by climate change. We also ask whether such awareness can mobilize people and institutions to address climate change on the grounds that it threatens human rights.

In her contribution, Scott examines the relationship between climate change and national security – threats to a State as a whole, and threats to people or their vital resources such as food, water and land. She argues that we are witnessing continued momentum towards the full 'securitization' of climate change. 'Securitization' refers to 'the process by which an issue comes to be represented as not only a political problem but as an existential threat to a valued referent object'. Scott analyzes the political prospects, merits and legal basis for the 'full securitization' of climate change - a scenario in which the UN Security Council would assume lead responsibility for international climate policy, either working in tandem with the UNFCCC process or even supplanting the current approach. She notes the prominence that the linkage between climate change and security has gained at the UN Security Council over the years, including in the Council's 2011 Presidential statement acknowledging the possible long-term negative effects of climate change on peace and security.⁴⁹ However, she also observes that - with the exception of small island developing States - developing countries have been largely opposed to discussing climate change in the Security Council. Scott invites us to think provocatively and creatively about the role that the Council could play to support people's efforts to mitigate and adapt to climate change. She notes, for example, that notwithstanding likely political opposition to this idea, there are technically no legal obstacles to the UN Security Council 'identify[ing] climate change as a threat to peace and impos[ing] legally binding obligations on any or all States in order to meet that threat'.

The contribution by Cameron and Limon reflects on the intersection of climate change and human rights. Drawing on the experience of small island developing States, as well as recent decisions, reports and procedures of the UNFCCC and the Human Rights Council, they note how climate change could jeopardize several internationally protected human rights and that the international recognition of the linkages between climate change and human rights is growing. Cameron and Limon identify various tools provided by the international human rights framework that could support the fight against climate change. These include the power, through a human rights narrative, to mobilize people and countries in favour of more ambitious action. Human Rights Council mechanisms, including Special Procedures and the Universal Periodic Review, could also apply greater pressure on the world's major greenhouse gas emitters. The authors also explore the near-term opportunity of a new Special Procedure - the recent creation of an Independent Expert on the issue of human rights obligations related to the enjoyment of a safe, clean, healthy and sustainable environment. Despite these opportunities, they note that greater legal clarity would expand the toolbox further – in particular, on the human-rights-related duties and obligations of States and the extraterritorial dimensions of human rights. Finally, Cameron and Limon note important potential synergies between the human rights regime and the UNFCCC. Among other elements, they discuss the potential for the UNFCCC to learn from the Universal Periodic Review as climate experts and governments refine and implement measurement, reporting and verification procedures for greenhouse gas emissions and climate actions.

ECONOMIC AND TRADE INSTITUTIONS

International economic institutions and the incentives and capital flows they generate are of major importance in tackling climate change for various reasons. The transition to a low-carbon economy will require major investments in key sectors through the mobilization of a range of sources and financial institutions. In Cancún, developed nations pledged to mobilize US\$100 billion annually by 2020 and established the Green Climate Fund, which will channel a portion of these resources.⁵⁰ While this can be seen as an important step forward on the part of the UNFCCC, the majority of climate-related financial flows is expected to stem from institutions outside the direct control of the UNFCCC - for instance, multilateral development banks, bilateral agencies, export crediting agencies, foreign direct investment and domestic expenditures.⁵¹ Estimates of the annual mitigation financing needs of

⁴⁸ See, e.g., Intergovernmental Panel on Climate Change (IPCC), Climate Change 2007: Synthesis Report. A Contribution of Working Groups I, II, and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (Cambridge University Press, 2007); World Bank, World Development Report 2010: Development and Climate Change (World Bank, 2010).

⁴⁹ United Nations Security Council, Statement by the President of the Security Council (UN Doc. S/PRST/2011/15, 20 July 2011).

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⁵⁰ Decision 1/CP.16, n. 6 above, at paragraph 98.

⁵¹ See, e.g., World Bank, n. 48 above, at Chapter 6.

developing countries range from over US\$200 billion to US\$500 billion annually by the year 2030, suggesting that the UNFCCC's Green Climate Fund will provide an important, but only partial, contribution to the needs of developing countries.⁵² Part of the focus should therefore be on integrating climate change considerations into the activities of bilateral and multilateral development banks as well as on incentivizing private sector investment in low-carbon technologies and infrastructure. This concerns not only dedicated climate funds such as the Climate Investment Funds administered by the World Bank, but also the integration of climate considerations into 'core' activities and development funds, which multilateral development banks have not done consistently in the past.⁵³ Furthermore, the effective allocation of climate finance raises important considerations around the governance of the various climate-related funds, including the decision-making power of contributors and recipients and a framework for prioritizing the allocation of limited resources among competing priorities.⁵⁴

Second, international economic law can both constrain and enable climate action. In this regard, the main focus (of both the policy-making and academic communities) has been on the role of the World Trade Organization (WTO).⁵⁵ There has been much discussion about the ways in which the WTO exerts a negative influence on climate law and policy. This includes its potential 'chilling' effect on the climate treaties, referring to the fact that parties to the climate regime have refrained from adopting multilateral trade measures – for instance, against non-compliers or non-parties.⁵⁶ In addition, there have been concerns about the compatibility of a host of domestic trade measures with various provisions of WTO law. In recent years, this discussion has largely centred on the use of border

carbon adjustments, following proposals tabled in both the European Union and the United States.⁵⁷ Although the legality of such measures under WTO law remains disputed, and will depend on their eventual design, it is notable that countries have sought to ensure that measures are WTO-compatible.⁵⁸ In addition, clean energy subsidies have increasingly been challenged under the WTO, with potential consequences for investments in more sustainable energy infrastructure.⁵⁹ While WTO law may thus seem to constrain climate ambitions, attention has increasingly shifted to ways that the organization might contribute to climate change mitigation. One of these options is pursuing the reduction of fossil fuel subsidies, 60 as called for by the G20 in 2010. 61 Another avenue is the liberalization of trade in climate-friendly goods and services. 62 While progress on these issues has been slow and achieving consensus will likely remain challenging, they nevertheless show the potential for the WTO and other economic institutions to contribute to climate change mitigation.

MINILATERAL INSTITUTIONS

In addition to mobilizing existing multilateral institutions, States have become increasingly engaged in creating and using minilateral institutions in the fight against climate change. A key idea behind minilateral institutions is that it is easier to get to agreement among a smaller number of like-minded countries than through

⁵² Ibid., at Table 6.2

⁵³ S. Nakhooda and A. Ballesteros, *Investing in Sustainable Energy Futures* (World Resources Institute, 2010).

⁵⁴ See, e.g., A. Ballesteros, S. Nakhooda, J. Werksman and K. Hurlburt, 'Power, Responsibility and Accountability: Rethinking the Legitimacy of Institutions for Climate Finance', 1:2 *Climate Law* (2010), 261; A. Ghosh, *Harnessing the Power Shift: Governance Options for International Climate Financing* (Oxfam, 2010).

⁵⁵ See, e.g., M. Doelle, 'Climate Change and the WTO: Opportunities to Motivate State Action on Climate Change through the World Trade Organization', 13:1 Review of European Community and International Environmental Law (2004), 85; G.C. Hufbauer, S. Charnovitz and J. Kim, Global Warming and the World Trading System (Peterson Institute for International Economics, 2009); L. Tamiotti et al., Trade and Climate Change: A Report by the United Nations Environment Programme and the World Trade Organization (WTO Secretariat, 2009); T. Epps and A. Green, Reconciling Trade and Climate: How the WTO can Help Address Climate Change (Edward Elgar, 2010); F. Zelli and H. van Asselt, 'The Overlap Between the UN Climate Regime and the World Trade Organization: Lessons for Post-2012 Climate Governance', in: F. Biermann, P. Pattberg and F. Zelli (eds.), Global Climate Governance Beyond 2012: Architecture, Agency and Adaptation (Cambridge University Press, 2010), 79.

⁵⁶ Cf. R. Eckersley, 'The Big Chill: The WTO and Multilateral Environmental Agreements', 4:2 *Global Environmental Politics* (2004), 24.

⁵⁷ See, e.g., F. Biermann and R. Brohm, 'Implementing the Kyoto Protocol without the United States: The Strategic Role of Energy Tax Adjustments at the Border', 4:3 Climate Policy (2005), 289; J. de Cendra de Larragán, 'Can Emissions Trading Schemes be Coupled with Border Tax Adjustments?: An Analysis vis-à-vis WTO Law', 15:2 Review of European Community and International Environmental Law (2006), 131; R. Ismer and K. Neuhoff, 'Border Tax Adjustment: A Feasible Way to Support Stringent Emission Trading', 24:2 European Journal of Law and Economics (2007), 137; J. Pauwelyn, US Federal Climate Policy and Competitiveness Concerns: The Limits and Options of International Trade Law (Nicholas Institute for Environmental Policy, 2007); L. Tamiotti, 'The Legal Interface between Carbon Border Measures and Trade Rules', 11:5 Climate Policy (2011), 1202. For a discussion of the measures proposed in the EU and the United States, see H. van Asselt and T.L. Brewer, 'Addressing Competitiveness and Leakage Concerns in Climate Policy: An Analysis of Border Adjustment Measures in the US and the EU', 38:1 Energy Policy (2010), 42.

⁵⁸ See, e.g., H. van Asselt and T.L. Brewer, n. 57 above, at 45.

⁵⁹ A. Ghosh and H. Gangania, *Governing Clean Energy Subsidies: What, Why and How Legal?* (International Centre for Trade and Sustainable Development (ICTSD), 2012).

⁶⁰ A. Green, 'Trade Rules and Climate Change Subsidies', 5:3 World Trade Review (2006), 377, at 381; S.Z. Bigdeli, 'Will the "Friends of Climate" Emerge in the WTO? The Prospects of Applying the "Fisheries Subsidies" Model to Energy Subsidies', 2:1 Carbon and Climate Law Review (2008), 78.

⁶¹ Pittsburgh Summit Declaration, found at: http://www.g20.org/images/stories/docs/eng/pittsburgh.pdf, at paragraph 24.

⁶² These take place under the Doha Round of trade negotiations. See Doha Ministerial Declaration (WTO Doc. WT/MIN(01)/DEC/1, 20 November 2001), at paragraph 31(iii).

a multilateral negotiation process.⁶³ Kulovesi's contribution to this special issue contrasts minilateral approaches with unilateral and multilateral ones, focusing on greenhouse gas emissions from two sectors: aviation and shipping. Emissions from these areas are in principle covered by two international organizations – the International Civil Aviation Organization (ICAO) and the IMO, respectively.⁶⁴ However, as Kulovesi notes in her contribution, only limited progress has been made in these forums, and discussions about the possible use of market-based measures in these sectors have been mired in controversy. The lack of progress in ICAO has led to further action outside the UNFCCC aimed at reducing aviation emissions: the inclusion of these emissions in the EU's emissions trading system.⁶⁵ The move by the EU has been heavily criticized by other governments (including those of China, India and the United States) and airlines in those countries as being an unjustified unilateral, extraterritorial measure that allegedly violates both international trade law and international climate law. 66 However, Kulovesi argues that the debate should not get stuck in arguments about whether the EU measure is extraterritorial, but that attention should shift towards the conditions under which such minilateral initiatives could help to contribute to avoiding dangerous climate change while respecting the rules, principles and procedures agreed under the climate regime. This recommendation is premised on the belief that the integration of these widely held principles would lead to greater acceptance and perhaps replication of minilateral initiatives like the EU's and ultimately trigger greater collective ambition. Of course, it is unclear whether even this step would be sufficient to overcome the principled opposition by some countries to the *de facto* outsourcing of certain policies to a sub-set of countries in the face of a multilateral roadblock. Nonetheless, Kulovesi's recommended approach can be seen as a constructive attempt to move beyond a currently boisterous debate while aiming for greater emission reductions.

The contribution by Weischer, Morgan and Patel focuses on a different group of minilateral institutions, and reflects on the power of trade and finance as incentives for countries to pursue more ambitious climate policies. They identify opportunities for 'transformational clubs' that could be established outside of the auspices of the climate and trade regimes. Their

argument builds on a recent body of literature that has sought to identify the potential of minilateral 'clubs'.⁶⁷ Various clubs have emerged in the past few years, and Weischer and colleagues identify and compare 17 of them. They note how some clubs are focused on fostering dialogue (e.g., the Major Economies Forum), whereas others are rather implementation-oriented (e.g., the Renewable Energy and Energy Efficiency Partnership). However, they argue that 'the current configuration of these clubs is not focused on significantly increased ambition'. They further contend that while climate clubs to date have created incremental change, they have not catalyzed the speed and scale required to solve the problem. Building on other proposals that consider how smaller groupings could enable greater ambition, such as a Sustainable Energy Trade Agreement⁶⁸ and a feed-in-tariff club,⁶⁹ the authors move on to argue that a climate club could be formed that would be 'transformational' if: its members reaped significant benefits; its membership were linked to a degree of climate ambition; benefits were distributed evenly across all members; and the benefits would be generated in a way that would respect existing international law. Trade-related incentives for joining such a club could help make participation in a transformational club attractive, and Weischer et al. provide a novel list of possible elements of a 'low-carbon union' that countries could pursue.

DYNAMICS OF THE EMERGING REGIME COMPLEX

The previous section shows that international institutions in various policy fields have made or could make a significant contribution to mobilizing climate action. Beyond this important acknowledgement, questions arise about how these institutions relate to the UNFCCC, what role the UNFCCC has to play in this emerging regime complex, and how the institutions could come to an appropriate division of labour that makes use of their respective strengths. This section explores these questions.

⁶³ See, e.g., M. Naím, n. 9 above.

⁶⁴ Kyoto Protocol, n. 17 above, Article 2.2.

⁶⁵ Directive 2008/101 of the European Parliament and of the European Council Amending Directive 2003/87 so as to Include Aviation Activities in the Scheme for Greenhouse Gas Emission Allowance Trading within the Community, [2009] OJ L8/3.

⁶⁶ See, e.g., L. Bartels, 'The WTO Legality of the Application of the EU's Emission Trading System to Aviation', 23:2 *European Journal of International Law* (2012), 429; J. Scott and L. Rajamani, 'EU Climate Change Unilateralism', 23:2 *European Journal of International Law* (2012), 469.

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⁶⁷ On climate 'clubs', see, e.g., D.G. Victor, 'Plan B for Copenhagen', 461:7262 *Nature* (2009), 342; D.G. Victor, n. 24 above, at 242–243. Existing club proposals have been criticized by, e.g., J.S. McGee, n. 9 above, and R. Eckersley, n. 9 above. For a discussion of how the trade negotiations model of minilateralism could work in international climate policy, see A. Ghosh, *Making Climate Look Like Trade? Questions on Incentives, Flexibility and Credibility* (Centre for Policy Research, 2010), at 3–4.

⁶⁸ ICTSD, Fostering Low Carbon Growth: The Case for a Sustainable Energy Trade Agreement (ICTSD, November 2011).

⁶⁹ Germany Advisory Council on Global Change (WBGU), World in Transition: A Social Contract for Sustainability (WBGU, 2011).

THE RELATIONSHIP WITH THE UNFCCC

The relationship between the UNFCCC and other international institutions is difficult to classify as either conflicting or synergistic.⁷⁰ As the previous section showed, there is ample room for other institutions to contribute to climate change goals. However, the emergence of new fora to discuss climate change policy in the mid-2000s equally showed that non-UNFCCC institutions may also by design or de facto challenge the UNFCCC process by creating a 'strategic inconsistency'71. For instance, two of the clubs discussed by Weischer and colleagues - the (now-defunct) Asia-Pacific Partnership on Clean Development and Climate and the Major Economies Forum - have been described as attempts by the former US Administration under President George W. Bush to change the course of international climate policy established by the Kyoto Protocol.⁷² This sceptical view is increasingly supplemented by the idea that other institutions are not only able to contribute to the UNFCCC's objective, but are also necessary to achieve this objective.73

New coalitions of developed and developing countries are emerging that believe that pursuing options outside the UNFCCC need not be done to the detriment of the climate regime. For example, Scott discusses how in recent years several countries have gradually become more supportive of a role for the Security Council on climate change issues. In July 2011, the EU, the United States and small island developing States voiced support for an active role by the Council on climate change, even if India, Venezuela and other members of the G77 remained reluctant. Similarly, driven in no small part by the small island developing States, a coalition of countries within the human rights system advocated for the recognition of the linkages between human rights and climate change, although they faced resistance from countries that believed that climate change should be dealt with exclusively under the UNFCCC. Since 2008, several resolutions and reports related to climate change have been adopted and commissioned unanimously under the auspices of the Human Rights Council and the Office of the High Commissioner for Human Rights. As another example, the recently formed Climate and Clean Air Coalition brings together developed and developing country governments, as well as various non-State actors.⁷⁴

While it is noteworthy that more and more countries are open to the involvement of other international institutions in the fight against climate change, some countries remain generally reluctant to outsource certain decisions about how to address climate change to institutions other than the UNFCCC. This reluctance can derive from legitimate concerns that should be acknowledged and discussed, and could possibly be addressed without restricting climate action to the confines of the UNFCCC. Referring to the inclusion of aviation emissions in the EU emissions trading scheme, Kulovesi's article shows that countries remain suspicious of minilateral initiatives outside of the multilateral framework of the UNFCCC. Importantly, she notes a possible condition that could make such initiatives more acceptable: compatibility with 'relevant international legal rules and principles'. But what makes international rules and principles 'relevant'? Arguably, the aviation dispute points to the importance of respecting the principle of common but differentiated responsibilities and respective capabilities.75 The importance of this principle is also underlined by Zaelke et al., who note its role in the Montreal Protocol. However, the precise contents of this principle remain contested and are the subject of continued discussions within the UNFCCC itself.76 Kulovesi also underlines the importance of fostering dialogue among countries on measures, like the one adopted by the EU, that are the subject of discord – for example, under the auspices of the forum on the impact of the implementation of response measures of the UNFCCC.77

Meanwhile, Scott uncovers concerns specific to the realm of international security. In particular, she notes that some countries fear inappropriate military

⁷⁰ See S. Oberthür, n. 16 above, at 73.

⁷¹ See K. Raustiala and D. Victor, n. 7 above, at 298.

⁷² See, e.g., H. van Asselt, 'From UN-ity to Diversity? The UNFCCC, the Asia-Pacific Partnership and the Future of International Law on Climate Change', 1:1 *Carbon and Climate Law Review* (2007), 17; J. McGee and R. Taplin, 'The Role of the Asia-Pacific Partnership in Discursive Contestation of the International Climate Regime', 9:3 *International Environmental Agreements: Politics, Law and Economics* (2009), 213; A. Vihma, 'Friendly Neighbor or Trojan Horse? Assessing the Interaction of Soft Law Initiatives and the UN Climate Regime', 9:3 *International Environmental Agreements: Politics, Law and Economics* (2009), 239.

⁷³ See n. 8 above.

⁷⁴ See Climate and Clean Air Coalition, Country Partners, found at: http://www.unep.org/ccac/Actors/CountryPartners.aspx>.

⁷⁵ See J. Scott and L. Rajamani, n. 66 above. Similar arguments have been made with respect to the use of border carbon adjustments. See M. Hertel, 'Climate-change-related Trade Measures and Article XX: Defining Discrimination in Light of the Principle of Common but Differentiated Responsibilities', 45:3 *Journal of World Trade* (2011), 653; S. Davidson Ladly, 'Border Carbon Adjustments, WTO-law and the Principle of Common but Differentiated Responsibilities', 12:1 *International Environmental Agreements: Politics, Law and Economics* (2012), 63.

⁷⁶ For example, parties in Durban called for the organization of a workshop on 'equitable access to sustainable development'. See Decision 2/CP.17, Outcome of the Work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention (UN Doc. FCCC/CP/2011/9/Add.1, 15 March 2012), paragraph 4. Some observers believe that the principle is evolving slowly towards a greater level of symmetry between developed and developing countries. For recent discussions, see, e.g., L. Rajamani, n. 18 above; and L. Rajamani, n. 23 above.

⁷⁷ See Decision 8/CP/17, Forum and Work Programme on the Impact of the Implementation of Response Measures (UN Doc. FCCC/CP/ 2011/9/Add.2, 15 March 2012), at paragraph 3.

responses to climate change. She also gathers that there may be relatively greater openness among States to assigning a role to the Security Council with respect to the impacts of climate change rather than greenhouse gas emission reductions. The solutions to these concerns are as vet unclear but they should hardly be grounds for categorically dismissing any involvement on the part of the Security Council. Rather, the unease expressed by countries could be addressed, for example, by articulating a limited and well-defined role for the Council. Opposition has also been raised in the clubs contexts, based on the belief that the limited membership of smaller for mmake them less legitimate than the UNFCCC.78 Furthermore, in most of the cases reviewed in the special issue, concerns have been relayed that giving a greater role to another institution would disempower and marginalize the UNFCCC. Such concerns might be allayed by an affirmation by all actors involved in these other institutions that the UNFCCC should continue to play a central role. For example, the UN Security Council could emphasize in future declarations and decisions that it does not seek to replace the UNFCCC and that it intends to defer to it, particularly with regard to decisions where the participation of all countries is necessary to achieve greater buy-in and legitimacy.

Last but not least, several developing countries fear that developed countries are turning to other fora to shirk their responsibilities for reducing emissions under the UNFCCC as an instance of forum-shopping.⁷⁹ However, this concern might dissipate if developed countries demonstrate how these other for can lead to greater mitigation on their part, and if they demonstrate real leadership under the UNFCCC itself. Standardized procedures for tracking and quantifying the estimated mitigation benefits of initiatives outside the UNFCCC might also lead to a greater degree of confidence that these ancillary efforts are truly supplemental to the existing pledges under the UNFCCC rather than a mere duplicative distraction. As Weischer et al. note with respect to club formation outside of the UNFCCC, countries establishing a transformational club may be able to bring ambition back in to the UNFCCC. Whether such conditions will be sufficient to make actions outside the UNFCCC acceptable to all countries remains to be seen, but we would argue that these basic conditions are likely to be necessary.

THE ROLE OF THE UNFCCC

We believe that the UNFCCC should remain a central actor in the regime complex for climate change and that

negotiators need to play their part and step up for several reasons. The first reason is related to procedural equity: under the UNFCCC, all parties - in principle have a chance to help shape international climate policy. Of course, the absence of voting rules can be used by one country or a small minority to block the adoption of ambitious decisions that enjoy support from an overwhelming majority of parties.80 The consensus requirement can thus, in some cases, lead to the adoption of texts in line with the lowest common denominator.81 However, the same requirement also guarantees that vulnerable communities that otherwise do not participate in smaller fora, such as the G20, are represented and that the final outcome reflects their concerns. This dynamic was at play in the Copenhagen and Cancún COPs, where the reference to a mitigation goal of 1.5°C average warming was preserved at the insistence of the small island developing States.

Second, the principles of the UNFCCC are cherished by many that seek to ensure that any response to climate change is substantively equitable and consistent with the principle of common but differentiated responsibilities and respective capabilities. Because the principle of CBDRRC sometimes seems to be the cause for gridlock in the UNFCCC negotiations, it can be tempting to obviate it by negotiating through another institution. However, it may be possible to embrace a dynamic interpretation of this principle that guarantees ambition while respecting countries' legitimate equity concerns.⁸²

Third, from this procedural and substantive equity flows legitimacy, which ensures wide buy-in into the decisions of the UNFCCC.⁸³

Fourth, the UNFCCC's wide membership and mandate make it arguably best placed to fulfil certain key functions in the regime complex.⁸⁴ In particular, we believe it should continue to play an important role in articulating a shared vision of the overall goals of international climate policy. The UNFCCC need not be the only

⁷⁸ See R. Eckersley, n. 9 above.

⁷⁹ On this concern, see generally E. Benvenisti and G.W. Downs, 'The Empire's New Clothes: Political Economy and the Fragmentation of International Law', 60:2 *Stanford Law Review* (2007), 595; D.W. Drezner, 'The Power and Peril of International Regime Complexity', 7:1 *Perspectives on Politics* (2009), 65.

⁸⁰ See D.G. Victor, n. 24 above, at 211-212.

⁸¹ See J. Depledge and F. Yamin, n. 2 above, at 447. Some countries and observers have proposed solutions to this problem. See Letter dated 26 May 2011 from Papua New Guinea and Mexico Addressed to the Executive Secretary of the United Nations Framework Convention on Climate Change (26 May 2011), found at: http://unfccc.int/files/parties_and_observers/notifications/application/pdf/

nv_parties_20110603.pdf>; A. Vihma and K. Kulovesi, *Strengthening Global Climate Change Negotiations: Improving the Efficiency of the UNFCCC Process* (Nordic Council of Ministers, 2012).

⁸² A variety of approaches have been advanced for rethinking the concept of CBDRRC, for instance by focusing on differentiation with respect to the implementation and review of commitments and financial and technological assistance. See, e.g., S. Jinnah and D. Bushey, 'Evolving Responsibility: The Principle of Common but Differentiated Responsibility in the UNFCCC', 6 Berkeley Journal of International Law Publicist (2010), 1.

⁸³ See also R. Eckersley, n. 9 above, at 33-34.

⁸⁴ See A. Vihma and H. van Asselt, n. 2 above, at 6–7.

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institution working to implement this vision, but it can be a catalyst for other international institutions. The UNFCCC also has a vital role to play in tracking progress against global and national goals. A centralized and standardized set of measurement, reporting and verification procedures is essential to guarantee that greenhouse gas emissions, as well as individual and global performance are tracked comprehensively and uniformly.

Finally, one may point to the institutional knowledge and capacity of the UNFCCC to argue that forsaking and rebuilding its legal rules, operational procedures and technical expertise elsewhere would take more time than the climate can afford and would be a non-starter for many countries. In terms of rules and procedures, a key example is the extensive modalities and procedures developed for the Kyoto Protocol's market-based mechanisms.⁸⁵ In terms of technical expertise, the UNFCCC Secretariat operates on a budget of approximately €25 million/year⁸⁶ and employs over 500 expert staff.87 The UNFCCC also enjoys a broad legal mandate through the Convention, the Kyoto Protocol and associated COP decisions to adopt a very wide range of measures to coordinate and impose specific and legally binding measures on individual countries to address climate change, as well as to set and track global goals. In many ways, the limits to the UNFCCC's power to effect change to date have been political rather than legal. Yet this legal basis is a sine qua non for a fully functioning regime complex for climate change and it is unlikely to be replicated in another institution within a meaningful timeframe. Therefore, we would argue that it is essential that the UNFCCC continue to play a central role in the regime complex, including by delivering on the Durban Platform for closing the ambition gap in the near term.

NAVIGATING REGIME COMPLEXITY THROUGH COORDINATION

Although the various institutions discussed in this special issue could play a positive role in the fight against climate change, we have also reviewed arguments for keeping the UNFCCC at the centre of a constellation of international institutions. Such co-existence requires us to think about how best to

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ensure effective coordination between the UNFCCC and these other international institutions.88 The arguments in favour of coordination are related to efficiency, competence, legal authority and legitimacy. Efficiency requires that institutions with authority over a similar issue coordinate their actions in order to avoid duplication and maximize policy coherence.89 For instance, several of the implementation-oriented clubs discussed by Weischer and colleagues undertake activities aimed at promoting the development and transfer of climatefriendly technologies that partially overlap. Creating within each of these clubs separate rules and guidance for achieving this goal may lead to inefficiencies and contradictions. Competence suggests that a division of labour should be set based on the technical expertise and institutional capacity of the institutions in question. Zaelke and colleagues illustrate this argument by describing the extensive experience of the Montreal Protocol with respect to reducing HFC emissions. Different institutions often also have legal authority to act on different aspects of a given matter and need to work together to achieve a greater collective result. Cameron and Limon explain this when they argue that the UNFCCC should take over where the Human Rights Council left off. As they put it: '[T]he Human Rights Council played a key role in introducing [human rights] principles into the UNFCCC process but is not able, for institutional reasons, to play a significant role in operationalizing them.' From a legitimacy standpoint, greater coordination can help build trust and acceptance of decisions and outputs produced both by the UNFCCC and other institutions with which Parties wish to work.90 For example, within a span of two years, at least four reports were written by regional or international institutions on the potential of innovative sources of finance to support mitigation and adaptation in developing countries.91 While this may be partly

⁸⁵ For instance, a Clean Development Mechanism rulebook was developed to assist interested parties in navigating the extensive and detailed rules of the mechanism. See http://www.cdmrulebook.org/>.

⁸⁶ Decision 18/CP.17, Programme Budget for the Biennium 2012–2013 (UN Doc. FCCC/CP/2011/9/Add.2, 15 March 2012).

⁸⁷ Fact Sheet: UNFCCC Secretariat (February 2011), found at: http://unfccc.int/files/press/backgrounders/application/pdf/unfccc_secretariat.pdf>. See also C. Bausch and M. Mehling, n. 8 above, at 20.

⁸⁸ See H. van Asselt and F. Zelli, n. 25 above.

⁸⁹ Cf. E. Brown Weiss, 'International Environmental Law: Contemporary Issues and the Emergence of a New Order'. 81:3 *Georgetown Law Journal* (1993), 675, at 697.

⁹⁰ For a similar argument related to the legitimacy of the WTO, see K. Kulovesi, The WTO Dispute Settlement System: Challenges of the Environment, Legitimacy and Fragmentation (Kluwer Law International, 2011). A counter-argument is that a plurality of institutions could actually further the legitimacy of each institution, for instance, because institutions act as each other's safety net, or because they appeal to and involve different groups of stakeholders. In the context of natural resource management at the national level, this argument of 'redundancy' has been made by B. Low, E. Ostrom, C. Simon and J. Wilson, 'Redundancy and Diversity: Do They Influence Optimal Management?', in: F. Berkes, J. Colding and C. Folke (eds.), Navigating Social-ecological Systems: Building Resilience for Complexity and Change (Cambridge University Press, 2003), 83. For a similar argument in the context of international environmental governance, see P. Haas, 'Addressing the Global Governance Deficit', 4:4 Global Environmental Politics (2004), 1, at 3.

⁹¹ M. Zenawi et al., Report of the Secretary-General's High-level Advisory Group on Climate Change Financing (United Nations, 2010); European Commission, Scaling up International Climate Finance after 2012 (European Commission, 2011); UNEP, Innovative Climate Finance: Examples from the UNEP Bilateral Finance Institutions

explained by an attempt to gain a diversity of perspective and expertise, lack of coordination and a belief that certain bodies did not have the necessary legitimacy were likely contributing factors to this proliferation.

On a practical level, there are various ways in which the UNFCCC and other institutions can work together.92 For instance, Memoranda of Understanding or Memoranda of Cooperation, used regularly by other international environmental institutions,93 and also by the UNFCCC with respect to the Global Environment Facility,94 could be employed to regulate the relationship with other multilateral institutions.95 Another option would be to promote active mutual observership. While observership is the rule rather than the exception in most international institutions, there are still some obstacles. In this regard, Cameron and Limon discuss the difficulty faced based by the Office of the High Commissioner on Human Rights in past attempts to meaningfully participate in UNFCCC COP meetings. Conversely, there is still some resistance to observership of the UNFCCC Secretariat - as well as other multilateral environmental agreements - at the Special Sessions of the WTO's Committee on Trade and Environment, in which trade negotiations of immediate relevance for the environment are conducted.96 Related to observership is the exchange of information. So far, information exchange between the UNFCCC and other institutions takes place largely on an ad hoc basis or relies on the submissions of individual parties rather than through regular reporting on the part of the institution's administrative bodies. More frequent and comprehensive reporting – for instance, by implementation clubs - could enhance transparency and predictability by showing how – and possibly how much – the actions of other institutions contribute to the UNFCCC's objective. 97 While it may be difficult to quantify precisely how many emission reductions these other initiatives will yield, it may be possible to quantify some of the information (e.g., HFC emission reductions under the Montreal Protocol). Finally, there is room for enhanced inter-institutional learning. 98 The UNFCCC and other international institutions sometimes conduct activities that are similar in nature. Consequently, they have the potential to learn from each other on a procedural level. Cameron and Limon give us the example of review procedures within the UNFCCC and the Universal Periodic Review, but others could be explored. 99

Clearly, achieving greater coordination in the regime complex for climate change is not without challenges. One key question that is likely to emerge is where the authority lies to allocate responsibility for action to one institution over another. Once principles for coordination and a division of labour have been laid out, such as the ones discussed above, who will be the arbiter? There is no straightforward answer to these questions, and solutions will likely lie in the eye of the beholder. Moreover, in some cases, coordination would be challenging because parties intentionally sought to take climaterelated issues elsewhere. A clear instance is the creation of several clubs by the United States in the 2000s (following its departure from Kyoto). In other words, the feasibility of coordination is undermined if countries pursue forum-shopping – or forum-creating – strategies. Finally, institutions with similar, partially overlapping mandates may sometimes be more inclined to compete for authority, recognition and financial resources than to delegate power in the broader pursuit of overarching goals. Although widespread coordination may thus face obstacles and take time, one can begin with the 'low-hanging fruit', such as active observership and regular information exchange, and gradually aspire to build a more elaborate and comprehensive network.

Climate Change Working Group (UNEP, 2011); World Bank Group, Mobilizing Climate Finance: A Paper Prepared at the Request of G20 Finance Ministers (World Bank, 2011).

CONCLUSIONS AND WAYS FORWARD

With this introduction to the special issue, we have sought to make the case that action beyond the UNFCCC is likely to be necessary to enhance mitigation ambition. In addition, we have drawn attention to, and reflected upon, the role of the UNFCCC in the regime complex for climate change. From the various

they provide so as to achieve more comprehensive and harmonized reporting of the support provided to developing countries.

 ⁹² Cf. H. van Asselt, 'Legal and Political Approaches in Interplay Management: Dealing with the Fragmentation of Global Climate Governance', in S. Oberthür and O.S. Stokke, n. 34 above, 59, at 75–77.
⁹³ W.B. Chambers, *Interlinkages and the Effectiveness of Multilateral Environmental Agreements* (United Nations University Press, 2008), at 66–67; K.N. Scott, 'International Environmental Governance: Managing Fragmentation through Institutional Connection', 12:1 *Melbourne Journal of International Law* (2011), 177, at 192–200.

⁹⁴ Decision 12/CP.2, Memorandum of Understanding between the Conference of the Parties and the Council of the Global Environment Facility (UN Doc. FCCC/CP/1996/15/Add.1, 29 October 1996).

⁹⁵ See, e.g., H. van Asselt, J. *Gupta and F. Biermann*, n. 15 above, at 264.

⁹⁶ S. Jinnah, 'Overlap Management in the World Trade Organization: Secretariat Influence on Trade-environment Politics', 10:2 *Global Environmental Politics* (2010), 64, at 67–68.

⁹⁷ Cf. H. van Asselt, n. 72 above, at 26. See also D. Tirpak, A. Ronquillo-Ballesteros, K. Stasio and H. McGray, *Guidelines for Reporting Information on Climate Finance* (World Resources Institute, 2010), in which the authors argue that multilateral development banks could be asked to report to the UNFCCC on the climate finance

⁹⁸ See, e.g., O.S. Stokke, *The Interplay of International Regimes: Putting Effectiveness Theory to Work?*, FNI Report 10/2001 (Fridtjof Nansen Institute, 2001), at 20–23; W.B. Chambers, n. 93 above, at 146

⁹⁹ See, e.g., R. Greenspan Bell and M.S. Ziegler (eds.), *Building International Climate Cooperation: Lessons from the Weapons and Trade Regime for Achieving International Climate Goals* (World Resources Institute, 2012).

contributions to this special issue, as well as the wider literature, some overarching findings emerge.

First, we have shown that international institutions outside of the UNFCCC - both existing and new can play an important part in complementing the UNFCCC's efforts to achieve greater ambition. Although most existing international institutions outside the UNFCCC have contributed only modestly to climate goals to date, we have seen that several institutions could be enhanced to reach their full potential. Certain institutions are smaller, involve like-minded 'climate-friendly' countries in the form of coalitions, or have a useful track record at reaching decisions involving a large number of countries. In addition, multiple specialized venues can each address a small piece of a puzzle that the UNFCCC could not tackle as a whole. Other institutions may also be better able to mobilize national governments and constituencies that have remained silent or resistant - for example, by framing climate impacts and policies in terms of human rights or national security. The special issue notes in particular the potential to draw upon international environmental, human rights, security and economic institutions, as well as the potential of 'minilateral' venues such as transformational clubs.

Second, although new country coalitions are pursuing options outside the UNFCCC, it should be acknowledged that there is still reluctance among some countries to cede authority on climate-related issues to other institutions. This reluctance may stem from legitimate concerns and fears related to a lack of respect of the UNFCCC's core principles, decision making by a select few countries that does not take into account the interests of other countries, or forum-shopping behaviour. However, these concerns could be addressed if the activities of other international institutions were discussed more publicly, and if the work of other institutions were clearly linked to that of the UNFCCC.

Third, although other institutions can make an important contribution to climate change mitigation, we find that the UNFCCC should continue to play a central role. The reasons for this are both principled and practical. In terms of principles, the UNFCCC enjoys a high level of legitimacy, as the consensus requirement ensures that smaller countries still have a voice in the process, and because its principles (including notably CBDRRC) are aimed at steering parties towards a substantively equitable outcome. In terms of practice, the UNFCCC carries out important functions, such as creating a shared vision, tracking progress through measuring, reporting and verification, and sharing knowledge and experiences. Furthermore, over the last two decades the UN climate regime has painstakingly built significant financial and technical capacity and developed detailed rules and procedures with respect to various aspects of climate policy. Similarly, the UNFCCC's legal authority

and broad mandate to develop and oversee legally binding national climate actions is unparalleled and likely difficult to replicate in a timely manner.

Fourth, we have shown that it is important to conceive of ways for the UNFCCC and other institutions to collaborate. The discourse, research and practice are increasingly shifting from a fear that action outside the UNFCCC will undermine the climate negotiations to one where all relevant institutions and actors can work together in a mutually supportive manner. The UNFCCC could be at the centre of this broad constellation and act as a catalyst for action by other institutions and actors.100 Coordination between the UNFCCC and other international institutions could improve the efficiency of the respective institutions and reduce unnecessary overlap; ensure that the institutions perform those functions they are best placed to carry out given their expertise and capacity; ensure that the institutions act within their jurisdictions in complementary ways; and enhance the legitimacy of the various institutions by building support for decision making beyond a single institution. The article shows that various practical means of enhancing coordination exist, ranging from mutual and active observership and information exchange to more formalized approaches, such as Memoranda of Understanding.

Ouestions remain, however, on how to improve cooperation and coordination between the UNFCCC and other institutions. For instance, to which extent should enhanced cooperation between the UNFCCC and other multilateral institutions be formalized? While the idea of a clearer division of labour may sound appealing, it needs to be clarified how and on what basis responsibilities could and should be divided (or, in some cases, shared). This includes, for instance, identifying the governance functions that the various international institutions are best placed to carry out.101 Furthermore, it remains unclear how key climate-related international legal rules and principles (such as CBDRRC) can be integrated across international institutions with a view to ensuring that climate policies from a range of actors and in different for a are perceived as more legitimate and work in tandem more effectively.

¹⁰⁰ Cf. the 'facilitative model' of international law described by D. Bodansky, *The Durban Platform Negotiations: Goals and Options* (Harvard Project on Climate Agreements Viewpoints, July 2012), at 11. In this way, the UNFCCC could possibly act as an 'orchestrator' of international climate policy. Cf. K.W. Abbott and D. Snidal, 'International Regulation without International Government: Improving IO Performance through Orchestration', 5:3 *Review of International Organizations* (2010), 315; K.W. Abbott, P. Genschel, D. Snidal and B. Zangl, *Orchestration: Global Governance through Intermediaries* (6 August 2012), found at: ">http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2125452&download=yes>.

¹⁰¹ For an overview of such governance functions, ranging from agenda setting and research to implementation and monitoring and reporting, see P. Haas, n. 90 above, at 8–9.

In conclusion, parties to the UNFCCC should not only deliver on the ambitious and imperative roadmap set under the Durban Platform, but also take steps to be the catalyst at the centre of a wide constellation of institutions with relevant expertise and capacity. Put another way, weathering the storm that is climate change requires all relevant international institutions to do their part on the ship of international climate governance.

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