Introduction: The role of compliance in an evolving climate regime

LAVANYA RAJAMANI, JUTTA BRUNNÉE, AND MEINHARD DOELLE

1. The climate regime: contested and limited?

Few environmental issues in living memory have attracted the political capital, media attention, and popular imagination that climate change has in recent years. Climate change has emerged over the last few decades as the ‘defining human development challenge of the 21st century’.²

In this time, the scientific community has offered ever clearer and more rigorously defended proof that the warming of the climate system is unequivocal and accelerating.³ The global average temperature has increased by 0.74 °Celsius in the last century, the largest and fastest warming trend in the history of the Earth.⁴ Climate change will, among other impacts, increase the severity of droughts, land degradation and desertification, the intensity of floods and tropical cyclones, the incidence of malaria and heat-related mortality, and decrease crop yield and food security.⁵ It is also increasingly clear that, as the climate system warms, poorer nations, and the poorest within them, will be the worst affected.⁶ Climate change is ‘a massive threat to human development’.⁷

Notwithstanding the magnitude of the problem, an effective and universal solution to address it has thus far eluded the international

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¹ This section draws on L. Rajamani, ‘From Berlin to Bali and Beyond: Killing Kyoto Softly’, International and Comparative Law Quarterly, 57 (2008), 909.
⁴ Ibid. ⁵ Ibid. ⁶ Ibid.
community. There are significant hurdles facing nations seeking to craft a common platform for addressing climate change. There are vast differences between countries in terms of contributions to the stock of carbon in the atmosphere, industrial advancement and wealth, nature of emissions use, and climate vulnerabilities. There is a worsening of poverty in some parts of the world, a reluctance to modify existing lifestyles or development pathways and there are differing levels of faith in technological solutions. Operating within the constraints posed by these hurdles, states have over the past two decades created a legal regime, albeit a contested one, to address climate change and its impacts.

The legal texts that comprise the climate regime – the United Nations Framework Convention on Climate Change (FCCC) and its Kyoto Protocol – are in force, have concrete content, and are binding. Resources are in place to facilitate the negotiation process, incentivize emissions reductions, as well as supervise and enforce compliance with the obligations imposed by these treaties. There are, however, both fundamental disagreements, as well as inadequacies, at the heart of the climate regime. These factors have created a political drag in the implementation of current commitments, and the negotiation of further commitments.

The FCCC and its Kyoto Protocol are structured around two fundamental premises. The first is that a prescriptive, quantitative, time-bound approach to addressing environmental problems is a superior and preferred approach. The FCCC and Kyoto Protocol contain quantitative

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10 There are 193 parties to the Kyoto Protocol and 195 parties to the FCCC: see www.unfccc.int.
11 The FCCC and the Kyoto Protocol are serviced by a secretariat based in Bonn, staffed by several hundred international civil servants: see http://unfccc.int/secretariat/items/1629.php.
12 Through Joint Implementation, the Clean Development Mechanism, and Emissions Trading, Kyoto Protocol, above note 9, at Articles 6, 12, and 17.
greenhouse gas (GHG) mitigation commitments set to timetables and backed by a compliance system.  

The second is that leadership from developed countries, and its corollary differential treatment in favour of developing countries, is the equitable and therefore appropriate basis on which the international response to climate change must be structured. This is captured in the principle of common but differentiated responsibility, a fundamental part of the conceptual apparatus of the climate regime. The FCCC and Kyoto Protocol require developed countries, given their enhanced historical and current contributions to the carbon stock as well as their greater wealth and technological capacity, to take the lead in assuming and meeting ambitious GHG mitigation commitments.

Elements of prescription (for developed countries), leadership (of developed countries), and differentiation (in favour of developing countries) are evident in the tone, intent, and design of the FCCC and the Kyoto Protocol. Differential treatment in favour of developing countries, although integral to many multilateral environmental agreements, has assumed a unique form in the climate regime. The FCCC and Kyoto Protocol are the only multilateral environmental agreements that differentiate between countries with respect to central obligations, such that some have commitments while others do not. FCCC Article 4(2) containing ‘specific commitments’ is limited to industrial countries. The Kyoto Protocol requires certain developed country parties listed in Annex I to the FCCC to reduce their overall emissions of a basket of GHGs by at least 5 per cent below 1990 levels in the commitment period of 2008–12. The Kyoto Protocol’s targets and timetables, like the ‘specific commitments’ in the FCCC, apply exclusively to industrial countries. Developing countries (non-Annex I) are required to implement qualitative GHG mitigation policies and measures.

Both these fundamental premises of the climate regime, as well as this unique form of differential treatment, have remained highly contentious through the years. The United States’ rejection of the Kyoto Protocol in 2001 can, in large part, be traced to a resistance to these premises, and this form of differential treatment. While there is a shared understanding among states that a global climate regime is necessary, and that they

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14 Kyoto Protocol, above note 9 at Article 3; FCCC, above note 8 at Article 4.2(b), also contained a target and a time frame, albeit not a country-specific one as in the Kyoto Protocol, above note 9 at Article 18.  
15 FCCC, above note 8 at Article 3.  
16 Ibid.  
17 Text of letter from the President to Senators Hagel, Helms, Craig, and Roberts, The White House, Office of the Press Secretary (13 March 2001).
have 'common but differentiated responsibilities' in addressing climate change, there is little agreement on the principles and formulas for differentiating between states in doing so.\textsuperscript{18}

In any case, the GHG mitigation commitments made thus far are inadequate and inadequately implemented. Current commitments, even if faithfully implemented and met, will not limit temperature increase to acceptable limits.\textsuperscript{19} Decreases thus far in evidence are linked to countries' economic fortunes rather than rigorous GHG mitigation policies and measures. From 1990 to 2008, although total aggregate GHG emissions for Annex I countries decreased by 10.4 per cent, such decrease is due primarily to economic restructuring in Annex I countries with economies in transition, where GHG emissions decreased by 48.5 per cent.\textsuperscript{20} Emissions in these countries are likely to take an upward swing as their economies recover. Meanwhile, for Annex I parties that are not economies in transition, GHG emissions increased by 8.3 per cent.\textsuperscript{21} In addition, the quantitative GHG mitigation commitments contained in the Kyoto Protocol apply to a limited subset of parties. First, they apply only to Annex I countries, thereby excluding from their purview large non-Annex I countries such as Brazil, China, and India that rank among the top ten contributors – in cumulative terms – to global emissions. This application gap is a reflection of the unique form of differentiation in evidence in the climate regime. Second, they apply, as treaties do, only to parties, thereby excluding from their purview the United States, which is responsible for a fifth of global emissions.\textsuperscript{22} This has led countries such as Japan to argue that the

\textsuperscript{18} J. Brunnée and S. J. Toope, Legitimacy and Legality in International Law: An Interactional Account (Cambridge University Press, 2010), 141–66.

\textsuperscript{19} To have a reasonable chance of limiting temperature increase to 2°C, the IPCC has indicated GHG mitigation of 25–40% below 1990 levels by 2020 for industrialized countries: see T. Barker et al., Climate Change 2007: Mitigation of Climate Change. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (Cambridge University Press, 2007), Box 13.7 at 776. Two IPCC authors later suggested that this implied a 15–30% below baseline target for developing countries by 2020: see M. den Elzen, Emission Reduction Trade-Offs for Meeting Concentration Targets (Bonn Climate Change Talks, Presentation at the IPCC in-session workshop, UNFCCC SBSTA 28, 6 June 2008), at www.ipcc.ch/graphics/pr-ar4–2008–06-briefing-bonn.htm.

\textsuperscript{20} All figures include emissions from land use, land-use change, and forestry: see National greenhouse gas inventory data for the period 1990–2008, FCCC/SBI/2010/18 (4 November 2010).

\textsuperscript{21} Ibid.

\textsuperscript{22} See UNDP, 'Carbon Dioxide Emissions and Stocks', Human Development Report (2007/8), Table 24 at 310.
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Kyoto Protocol is ineffective as it covers only ‘27% of global energy-related CO2 emissions’.\(^{23}\) It is also worth noting that the Kyoto quantitative commitments only apply to the first commitment period that comes to an end in 2012.\(^{24}\)

2. The climate regime in evolution: emerging trends\(^{25}\)

The ongoing climate negotiations are attempting, however ponderously, to resolve these contested issues and address these perceived inadequacies at the heart of the regime. Negotiations are structured along two tracks – the FCCC track that is comprehensive in its coverage, including in particular the United States and large developing countries, and the Kyoto Protocol track that the United States has chosen to distance itself from.

The Kyoto Protocol came into force on 16 February 2005, and at the first Meeting of the Parties to the Kyoto Protocol and the eleventh Conference of the parties to the FCCC, in December 2005, discussions commenced on how the climate change regime might be structured after 2012. Two separate processes were initiated: an Ad Hoc open-ended Working Group to consider further commitments for developed countries beyond 2012 under the Kyoto Protocol (AWG-KP)\(^{26}\) and a ‘[D]ialogue on long-term cooperative action’ under the FCCC.\(^{27}\) The Dialogue, which stressed development and poverty eradication, covered actions by all parties, but was neither binding nor authorized to open negotiations leading to new commitments.\(^{28}\) The Dialogue nevertheless led to the Bali Action Plan, adopted on 15 December 2007, which in turn launched a process to advance the climate change regime by reaching an ‘agreed outcome’ by the fifteenth Conference of the Parties (COP-15) in December 2009 at Copenhagen.\(^{29}\) At Bali, the AWG-KP also adopted a timetable that set

\(^{23}\) Statement by Ryu Matsumoto, Minister of Environment of Japan, Cancun (9 December 2010).

\(^{24}\) Kyoto Protocol, above note 9 at Article 3.

\(^{25}\) This section draws on L. Rajamani, ‘The Cancun Climate Agreements: Reading the Text, Subtext and Tea Leaves’, International and Comparative Law Quarterly, 60.2 (2011), 499.

\(^{26}\) Decision 1/CMP.1, ‘Consideration of Commitments for Subsequent Periods for Parties Included in Annex I to the Convention under Article 3.9 of the Kyoto Protocol’, FCCC/KP/CMP/2005/8/Add.1 (30 March 2006).


\(^{28}\) Ibid.

COP-15 as the deadline for its consideration of the scale and allocation of mitigation efforts for future commitment periods.\textsuperscript{30} Parties could not deliver on these deadlines. Instead, COP-15 resulted in decisions to continue negotiations under the FCCC\textsuperscript{31} and Kyoto Protocol,\textsuperscript{32} as well as the controversial Copenhagen Accord.\textsuperscript{33} The latter was reached at the heads of state level among a subset of the parties to the FCCC and Kyoto Protocol. The Copenhagen Accord, rejected by the Bolivarian Alliance,\textsuperscript{34} Sudan, and Tuvalu, was taken note of rather than adopted by the parties, and as such has no ‘formal legal standing’\textsuperscript{35} in the FCCC process. Nevertheless, the negotiation of the accord marks a significant milestone in the evolution of the climate regime.

The Copenhagen Accord is a pithy statement of objectives and promise of institutions in relation to the identified elements of a response to climate change. The accord, however, does not prescribe aggregate or individual GHG mitigation commitments, either mid-term or long term. Rather, it requires developed countries, Annex I parties, to commit to targets, and developing countries, non-Annex I parties, to undertake mitigation actions. The accord requires these targets or actions to be inscribed in its Appendices I and II, respectively, as well as compiled in information documents.\textsuperscript{36} In doing so, the accord endorses a fundamentally different approach to mitigation than the one embodied in the Kyoto Protocol. The accord’s approach is based on self-selection of nationally determined goals rather than imposition of internationally negotiated targets and actions. The accord identifies qualitative rather than quantitative mitigation goals, and focuses on strengthening the quality and quantity of relevant information in the international domain, rather than on


\textsuperscript{34} The Bolivarian Alliance consists of Bolivia, Cuba, Ecuador, Nicaragua, and Venezuela.

\textsuperscript{35} FCCC Secretariat, Notification to Parties, Clarification relating to the Notification of 18 January 2010 (25 January 2010).

\textsuperscript{36} Copenhagen Accord, above note 33.
developing mechanisms for facilitating and enforcing compliance. A total of 141 states have ‘associated’ themselves with the accord and many have inscribed their mitigation targets and actions in its appendices.\footnote{For a list of countries that have associated with the Copenhagen Accord and are inscribed in its appendices, see http://unfccc.int/home/items/5262.php.}

The Cancun Agreements,\footnote{Decision 1/CP.16, ‘The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention’ (Cancun Agreements (LCA)) FCCC/CP/2010/7/Add.1 (15 March 2011); and Decision 1/CMP.6, ‘The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol at its fifteenth session’ (Cancun Agreements (KP)) FCCC/KP/CMP/2010/12/Add.1 (15 March 2011).} arrived at by states at the sixteenth Conference of the Parties (COP-16) integrate many of the elements of the Copenhagen Accord into the FCCC process. In so doing they co-opt and mainstream the approach taken in the Copenhagen Accord into the FCCC process. The Cancun Agreements take note of the mitigation targets and actions communicated by states, and provide for transparency in their implementation. The agreements also establish an Adaptation Framework, a Technology Mechanism and a Green Climate Fund, and create a framework for addressing deforestation in developing countries, thereby fulfilling the institutional promise of the Copenhagen Accord.

From Montreal to Cancun, two distinct trends are discernible in the successive decisions taken by parties. First, as discussed above, there is a shift from a prescriptive, quantitative, time-bound, compliance-backed approach to one that rests on self-selection of targets and actions, and a robust reporting system. This shift is accompanied by an intense battle over the future (or lack thereof) of the Kyoto Protocol.

Most developed countries favour the adoption of a new instrument that replaces the Kyoto Protocol. This approach would, in their view, ensure greater participation and therefore effectiveness of the climate regime. More importantly, the adoption of a new instrument would go a long way toward ensuring the participation of the United States. However, several developing countries, in particular China and India, are opposed to such an instrument. In their view, this instrument is likely, given political realities, to erode the distinctions between developed and developing countries, and to cherry-pick from the Kyoto Protocol. In the process, many key elements of the Kyoto Protocol – in particular, the compliance system – would be lost and others would be diluted. Such an instrument is also likely to create more onerous obligations for developing countries than have existed thus far in the climate regime, and these may constrain
their development prospects. This issue is yet to be resolved and has proven time and again to have the potential to bring negotiations to a grinding halt.

The Cancun Agreements record agreement that AWG-KP will continue its work with a view to having its results adopted ‘as early as possible and in time to ensure that there is no gap between the first and second commitment periods’.\(^{39}\) At this juncture, however, a gap between commitment periods, for political and procedural reasons, may well be unavoidable.\(^{40}\) If Annex I countries do not assume commitments for the second commitment period, very little of the Kyoto Protocol, after the compliance assessment cycle is complete in 2015/2016, will survive. The Cancun Agreements seek therefore to create a lifeboat for those parts of the Kyoto Protocol that are politically palatable, namely, the reporting and review provisions\(^{41}\) and the protocol mechanisms.\(^{42}\) The less politically palatable elements of the Kyoto Protocol, like GHG mitigation commitments set to timetables, as well as the compliance system, may well fall by the wayside. It is worth noting in this context that although several countries referred to the need for a robust compliance system in their submissions,\(^{43}\) neither the Copenhagen Accord nor the Cancun Agreements mention the Kyoto compliance system, envisage a role for a compliance system, or indeed even use the term compliance.

A second important trend is that the international community has moved towards increasing parallelism between developed and developing countries. There is increasing parallelism in the mitigation commitments and actions taken by developed and (some) developing countries. Since the political conditions for strengthening the overall mitigation effort

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\(^{39}\) Cancun Agreements (KP), above note 38.

\(^{40}\) Even the FCCC Executive Secretary, Christiana Figueres, has admitted that such a gap is unavoidable: F. Macdonald, ‘Gap between expiry of Kyoto and new treaty, UN admits’, *The Irish Times* (5 April 2011).

\(^{41}\) Compare, for instance, Kyoto Protocol, above note 9 at Article 5.1 and Cancun Agreements (LCA), above note 38 at para. 43.

\(^{42}\) Cancun Agreements (KP), above note 38 at para. 6(b); and Cancun Agreements (LCA), above note 38 at para. 83.

are missing, such symmetry has been achieved at the cost of ambition, and by levelling down the mitigation efforts required of developed countries. The international community has also moved towards increasing parallelism in the informational demands – measurement, reporting, and verification – placed on developed and developing countries. There is an increase in the frequency, rigour, and review of national communications for developing countries, and an extension of the requirements placed on protocol parties to non-parties. The Cancun Agreements also establish similar processes to consider the information – international assessment for developed countries, and international consultation and analysis for developing countries. The increasing parallelism in this area has been achieved by levelling up the demands placed on developing countries.

The future climate regime, therefore, is likely to represent a significant departure from the Kyoto Protocol model. It is likely to be a non-prescriptive regime based on self-selected nationally determined targets and actions, applicable in a broadly symmetrical fashion across countries, and backed not by a treaty-based compliance system, but by a robust reporting and (possibly) review system.

3. Compliance in the evolving climate regime: a research agenda

This book examines an intriguing juncture in the climate negotiations. Climate negotiators and scholars are caught between the experience, investment, and intuitive pull of the Kyoto wisdom, and the seeming inevitability and political palatability of the Copenhagen/Cancun logic. A relatively strong compliance system is a central element of the current climate regime, but it may not remain so in the future. Indeed, if the evolution of the climate regime follows predicted lines, there may be a limited role for such an international treaty-based compliance system. The focus may instead shift to domestic compliance control, albeit subject to international assessments. The book explores, against this backdrop, compliance questions that arise in the context of the current framework, as well as the future directions indicated in the climate regime.

The chapters in Part I seek to situate climate compliance questions within the broader analytical context of general international law and compliance theory, relating them to insights drawn from the experience with other multilateral environmental agreements. These chapters address a range of questions relating to this broader analytical context: To what extent is general international law suited to addressing compliance issues that arise in multilateral environmental agreements? What are the
main theoretical streams that inform compliance writing, and how have these theoretical insights manifested themselves in the design of compliance systems in multilateral environmental agreements? What are the main elements of the compliance systems, procedures, and mechanisms in multilateral environmental agreements? To what extent is the design of these compliance systems, procedures, and mechanisms linked to substantive obligations? What principal operational challenges do these systems face? What are the distinctive features of the climate problem that raise unique compliance challenges? How have the FCCC and its Kyoto Protocol sought to address these compliance challenges? It is evident from the analysis undertaken by authors in these chapters that the Kyoto compliance system is the most sophisticated, as well as distinctive, of the compliance systems in multilateral environmental agreements. Multilateral environmental agreements use a range of approaches, tools, and techniques to incentivize, facilitate, and enforce compliance with obligations. These approaches typically encompass progressive norm-building, sustained justificatory processes, concerted management of non-compliance causes, and a range of enforcement-oriented elements. The Kyoto compliance system blends these approaches, combining facilitative, justificatory, and enforcement elements. It also responds to the unique features of the protocol, including its emissions trading system, and, unlike many other compliance systems, it has an explicitly sanction-oriented dimension.

The chapters in Part II delve into the conceptual moorings, procedural elements, and operational experience of the Kyoto compliance system, assessing its strengths and weaknesses, distilling lessons from its five years in operation, and exploring the potential of the current compliance system to take on some or all of the emerging compliance challenges. These chapters outline the main features of the Kyoto compliance system, including its rules and practices, and address a range of questions relating to the effective functioning of this system. Some of these are broader conceptual questions. How effective is the Kyoto compliance system in providing international review of state action to implement the protocol? To what extent does the compliance system form an integral part of the governance system of the protocol? How effective is the compliance system likely to be in securing compliance with the protocol’s emission commitments? How, if at all, will Canada’s potential non-compliance be addressed? How and to what extent does the compliance system ensure accurate measurement, reporting, and verification of greenhouse gas emissions under the protocol? To what extent is the strength of the measurement, reporting, verification, and review system derived from its link