

EDITORIAL

Transnational Climate Law

1. INTRODUCTION

Climate change has been a prime arena for the development of transnational environmental law. Because climate change involves global systems with complex local linkages, the governance regime mixes the local and the global. National governments have taken action unilaterally and have been joined by non-state actors, which include subnational governments, corporations, and non-governmental organizations (NGOs).¹ Subnational governments have also entered into cooperation agreements with each other and with foreign nations.² Thus, climate change law has broken through the traditional boundaries of international law, requiring a shift to the new paradigm of transnational law.

Moreover, because of the ubiquitous impacts of climate change, climate law intersects with many other legal regimes. Climate change is caused by the emission of greenhouse gases (GHGs), primarily from manufacturing and the energy sector, which are also two major causes of air and water pollution. Methods of addressing climate change are almost guaranteed to address air pollution issues by reducing reliance on combustion processes and the use of oil refineries, prime sources of pollution. Extraction, processing, and transportation of fossil fuels are implicated in a host of environmental problems from land disturbance to water pollution, all subject to regulation of various kinds. Other carbon emissions result from land-use change, particularly deforestation, and implicate that branch of environmental law. All of these activities are subject to their own legal regimes. Adaptation to climate change will involve yet further legal regimes. Thus, the climate issue involves an enormous range of human activities, most of which are subject to their own, often fragmented and complex legal regimes. Scholars are only beginning to map this evolving and complex landscape.

In the light of the distinctive qualities of climate change and its relation to law, it is not surprising that this journal has been a particularly welcoming venue for new ideas surrounding climate change law.³ As the Introduction to the first issue of *Transnational Environmental Law* (TEL) explained, one of TEL's main goals is to study precisely

¹ E.g., in a number of countries, including the United States (US), subnational governments have begun to address climate change and to link with each other: see, e.g., K.H. Engel, 'Climate Change Federalism', in D.A. Farber & M. Peeters (eds), *Climate Change Law* (Edward Elgar, 2016), pp. 337–47.

² D.A. Farber & C.P. Carlarne, *Climate Change Law* (Foundation Press, 2017), pp. 186–7.

³ Two articles in TEL's inaugural issue dealt explicitly with climate change: N. Gunningham, 'Confronting the Challenge of Energy Governance' (2012) 1(1) *Transnational Environmental Law*, pp. 119–35; and C. Streck, 'Innovativeness and Paralysis in International Climate Policy' (2012) 1(1) *Transnational Environmental Law*, pp. 137–52.

such complex governance linkages and regime interactions.⁴ The articles in this latest issue certainly contribute to *TEL*'s key research missions. They cover, among other topics, the fragmented international legal regimes applying to short-term GHGs, the tension between climate law and investment treaties, incentives by international organizations for the preservation of tropical forests, and early efforts at climate adaptation in key countries. To provide an overview of this variegated set of contributions, this Editorial is organized on a thematic basis. Part 2 deals with climate change mitigation – that is, efforts to limit increases in the level of GHGs. These efforts can involve reductions in emissions from industrial activities and the energy system, limitations on land-use changes such as deforestation, and the strengthening of carbon sinks such as soils. Part 3 focuses on adaptation to climate change, which is largely a national and subnational effort, but with an increasing international component. Part 4 offers some concluding thoughts on the contributions to this issue, and we round up with some brief editorial news.

2. CLIMATE CHANGE MITIGATION

Preventing or at least limiting increases in GHG levels will be necessary to avert acceleration in climate change. That effort is the subject of five articles in this issue. The first three relate to emissions reductions in the energy system; the fourth and fifth focus on land-use changes and carbon sinks.

Yulia Yamineva and Kati Kulovesi examine the governance landscape for reducing short-lived climate pollutants (SLCPs) in the Arctic region.⁵ As they point out, reducing emissions of SLCPs – in particular, black carbon and methane – would slow global and regional warming in the short term while reducing local air pollution. This mitigation opportunity seems to be particularly relevant in the Arctic context, because of the region's sensitivity to climate change and because of the effect of black carbon on snow and ice.⁶ In recognition of this fact, the Arctic Council's members took an important step by agreeing in 2015 to establish black carbon inventories and information exchanges on black carbon and methane, with the aim of a later agreement on a collective goal for reducing black carbon.⁷

⁴ V. Heyvaert & T.F.M. Etty, 'Introducing Transnational Environmental Law' (2012) 1(1) *Transnational Environmental Law*, pp. 1–11.

⁵ Y. Yamineva & K. Kulovesi, 'Keeping the Arctic White: The Legal and Governance Landscape for Reducing Short-Lived Climate Pollutants in the Arctic Region' (2018) 7(2) *Transnational Environmental Law*, pp. 201–27.

⁶ In an earlier issue of *TEL*, Sabaa Khan provided a different perspective on these issues: S.A. Khan, 'The Global Commons Through a Regional Lens: The Arctic Council on Short-Lived Climate Pollutants' (2017) 6(1) *Transnational Environmental Law*, pp. 131–52. Further discussion of the problems posed by these pollutants can be found in H. van Asselt, 'Interlinkages Between Climate Change, Ozone Depletion, and Air Pollution: The International Legal Framework', in Farber & Peeters, n. 1 above, pp. 286–97. For a discussion of the advantages and disadvantages of relying on multiple legal regimes, see C. Carlarne, 'International Treaty Fragmentation and Climate Change', in Farber & Peeters, n. 1 above, pp. 261–72.

⁷ Arctic Council, 'Framework for Action on Enhanced Black Carbon and Methane Emission Reductions', Annex 4, Iqaluit [NU (Canada)] 2015 SAO Report to Ministers (Arctic Council, 2015) (Framework), available at: <https://oaarchive.arctic-council.org/handle/11374/610>.

Yamineva and Kulovesi assess the state of international law and governance relevant to the reduction of SLCP emissions in the Arctic. They demonstrate that the current legal and governance regime is complex and fragmented; this includes the Arctic Council as well as many other institutions and legal regimes. Indeed, their article identifies 15 different international organizations and agreements that cover various aspects of the problem. Fragmentation can pose a threat to the effectiveness of legal regimes. Yamineva and Kulovesi, however, view fragmentation in this policy domain to be cooperative and synergistic. Consequently, they call for greater harmonization of legal instruments and enhanced cooperation rather than for the creation of a comprehensive legal framework. They also suggest options for strengthening international law and governance on SLCPs. Although the focus of the article is regional, many of its conclusions are relevant for the global regulation of SLCPs.

International law can promote efforts to reduce emissions, but it can also sometimes prove to be a barrier, as discussed by Kyla Tienhaara.⁸ She analyzes how investment agreements might negatively impact on efforts to reduce GHGs. Over 3,000 investment treaties and many regional trade agreements contain investor-state dispute settlement (ISDS) provisions. Those provisions have been criticized for interfering with the ability of states to regulate the activities of foreign-owned firms in order to protect public interests such as health and the environment. Tienhaara argues that while much of the public debate has focused on cases involving the tobacco industry, the fossil fuel industry may also use ISDS to stall action on climate change. Like the tobacco industry, she contends, fossil fuel companies may use ISDS as a delaying tactic or to chill regulatory efforts. Given the costs and risks of ISDS disputes, especially for smaller governments, companies do not have to win ISDS cases for this strategy to be effective; they only have to be willing to launch them. As Tienhaara points out, '[t]he fact that investors brandish ISDS as a threat is indisputable; law firms actively advertise ISDS as a useful tool "to assist lobbying efforts to prevent wrongful regulatory change".⁹

One of Tienhaara's examples of how chilling effects operate is particularly interesting from the perspective of transnational environmental law. She points out that besides direct threats by tobacco companies, 'a broader implicit threat has also been created by Philip Morris actually launching ISDS cases in Uruguay and Australia'.¹⁰ According to Tienhaara, '[d]efenders of ISDS have continued to misunderstand how regulatory chill operates in this context and cite the recent victories of Uruguay and Australia as proof that a chilling effect does not exist'.¹¹ However, in her view, this argument overlooks the difficulties and cost of defending ISDS actions, even if a country is ultimately successful. Indeed, the Uruguayan government 'has acknowledged that it would not have been able to defend itself in

⁸ K. Tienhaara, 'Regulatory Chill in a Warming World: The Threat to Climate Policy Posed by Investor-State Dispute Settlement' (2018) 7(2) *Transnational Environmental Law*, pp. 229–50.

⁹ *Ibid.*, p. 235.

¹⁰ *Ibid.*, p. 237.

¹¹ *Ibid.*

ISDS without the financial support of a foundation set up by Michael Bloomberg'.¹² Other governments may feel reluctant to rely on the possibility of such future financial support, leaving them at risk of litigation costs or unable to defend a meritorious case.

Besides illustrating the operation of the chilling effect, this incident is particularly interesting because it links national regulation in multiple jurisdictions (Uruguay and Australia, with spillover effects elsewhere), the activity of a multinational corporation (Philip Morris), a public international law instrument (the ISDS agreement), and the pivotal role of an NGO (Bloomberg's foundation). This incident exemplifies the inadequacy of comparative law or public international law standing alone in understanding global developments. Tienhaara presents three possible reforms, which include the exclusion of ISDS provisions, a carve-out for claims by fossil fuel companies, or an exemption for implementation of international undertakings, such as the Paris Agreement.¹³

Turning to the core of international climate law, Benoit Mayer argues how international law obligations in relation to nationally determined contributions (NDCs) under the Paris Agreement arise from two separate sources.¹⁴ Although the Paris Agreement is regularly portrayed as a purely political understanding, Mayer contends that it is legally binding and constitutes a treaty. The binding effect of NDCs depends on the interpretation of the second sentence of Article 4.2, which states that 'Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions'. In Mayer's view, the term 'shall' creates a binding duty under Article 4.2 of a specific type. He argues that the 'wording of the second sentence of Article 4.2 means that it cannot be characterized as an obligation of result'; rather, 'parties are not obliged to achieve a particular outcome' so that 'a party would not breach its obligation based only on evidence that the mitigation objective of its NDC has not been realized'.¹⁵ Instead, he asserts, 'the wording of this provision indicates an obligation of conduct: the parties to the Paris Agreement must "pursue measures" which, they have reasonable grounds to believe, will achieve its object'.¹⁶ Thus, in Mayer's view, specific treaty obligations arise under the Paris Agreement: parties must take adequate measures towards the realization of the mitigation targets contained in their NDCs.

In addition to their status as treaty obligations, Mayer contends, NDCs constitute unilateral declarations that create legal obligations under a different legal theory. He points to decisions of the International Court of Justice (ICJ) holding that the principle of good faith entitles other states to rely on a unilateral declaration, even if the declaration is not addressed to any specific state. Consequently, Mayer argues, as

¹² Ibid.

¹³ Paris (France), 12 Dec. 2015, in force 4 Nov. 2016, available at: http://unfccc.int/paris_agreement/items/9485.php.

¹⁴ B. Mayer, 'International Law Obligations Arising in relation to Nationally Determined Contributions' (2018) 7(2) *Transnational Environmental Law*, pp. 251–75.

¹⁵ Ibid., p. 259.

¹⁶ Ibid.

unilateral declarations the NDCs impose obligations of various types, which may extend beyond specified levels of emissions reduction. For example, they may specify measures of implementation or demand the achievement of a particular result. He argues that the binding effect of NDCs should be a central consideration in interpreting international law obligations regarding climate change. In particular, he argues that as unilateral undertakings the NDCs are subject to restrictions on their revocation, in as much as courts ‘have generally required notice of withdrawal within “a reasonable time”’.¹⁷ Furthermore, he contends, ‘in the context of general international law – in particular, the no-harm principle and the emerging notion of non-regression – the time-bound mitigation commitments that the party presented as its “fair” share of global efforts should arguably be construed as excluding revocation on any ground short of a fundamental change of circumstances’.¹⁸ This argument obviously has relevance for the announced intention of the Trump administration not to honour the NDC of the United States (US) and to withdraw from the Paris Agreement.

Mayer’s position is likely to be controversial. Disputes over the binding character of the Paris Agreement and how to conceptualize NDCs stem from the unconventional structure of the Agreement, which blends aspects of top-down and bottom-up governance. The dual nature of the Agreement inevitably causes difficulties in determining how it fits into a legal regime that contemplates a stark dichotomy between international obligations and discretionary domestic policies.

Turning from industrial emissions generally to those involving specifically land use, María Eugenia Recio examines this aspect of transnational climate policy in her article on transnational REDD+ rule making.¹⁹ Control of deforestation is a necessary component of climate change mitigation strategies. However, because tropical forests are also biodiversity hotspots, efforts to control deforestation must also be part of biodiversity preservation strategies. Hence, climate law will necessarily overlap with biodiversity law, whether in relatively mature domestic biodiversity laws or in the still developing international biodiversity regime.

As Recio explains, REDD+ is an incentive mechanism to reduce deforestation and associated GHG emissions in developing countries. This mechanism was developed under the United Nations Framework Convention on Climate Change (UNFCCC)²⁰ and subsequently included in the Paris Agreement. Financing incentives for the preservation of forests are central to REDD+, and certain intergovernmental initiatives have played a central role to date, including the World Bank’s Forest Carbon Partnership Facility (FCPF) and Forest Investment Programme (FIP), and UN-REDD, a collaborative programme involving three United Nations agencies. As

¹⁷ Ibid., p. 274.

¹⁸ Ibid.

¹⁹ M.E. Recio, ‘Transnational REDD+ Rule Making: The Regulatory Landscape for REDD+ Implementation in Latin America’ (2018) 7(2) *Transnational Environmental Law*, pp. 277–99.

²⁰ New York (US), 9 May 1992 in force 21 Mar. 1994: available at: http://unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf.

Recio reports, ‘the UN-REDD programme and the World Bank’s FCPF Readiness Fund have provided support to at least 15 of the 19 Latin American countries, while the FIP supports activities in six countries’.²¹ Using case studies drawn from Honduras, Panama and Peru involving the participation of indigenous peoples in REDD+ initiatives, Recio seeks to qualify the international rule making involved in these funding initiatives and illustrate their relevant legal and practical effects at the national level.²²

Recio documents how, by setting conditions for REDD+ financing, international organizations such as the World Bank have actively influenced REDD+ rule making. In particular, Recio says, ‘their rule-making activities generate more prescriptive rules than those agreed on a consensus basis under the UNFCCC’, which ‘ultimately subjects REDD+ host countries to a higher standard’.²³ Based on her Latin American case studies, she concludes that informal lawmaking has been more relevant than formal international law in shaping REDD+ implementation. One consequence is another modality of transnational governance, as ‘these initiatives have swiftly adapted to incorporate stakeholders – including tribal and indigenous peoples – as a means to strengthen their accountability and legitimacy’.²⁴ Thus, the effect is to empower non-state actors. However, Recio warns, informality can also tilt power relations between donor and recipient countries, which could jeopardize the legitimacy of transnational rule making.

Tropical forests store vast amounts of carbon, but so do soils in all regions of the globe. Jonathan Verschuuren assesses whether the European Union (EU) has done enough to promote soil carbon sequestration as a form of ‘climate-smart agriculture’.²⁵ He examines current and proposed EU climate and environmental law, as well as the legal instruments associated with the Common Agricultural Policy (CAP), and shows that current and proposed policies and instruments are inadequate to stimulate large-scale adoption of soil carbon projects across Europe.

Under the CAP, according to Verschuuren, ‘[a] total of around 25% of European agricultural subsidies for the period 2014–20 are earmarked for climate measures in agriculture’ and ‘[a]bout a quarter of this focuses specifically on the development of climate-friendly agricultural practices and techniques’.²⁶ Unfortunately, these measures seem to have been ineffective in changing farming practices with regard to soil carbon. Moreover, the EU climate regime fails to provide additional stimulus for soil carbon sequestration so as to backstop the CAP. Agriculture is a gap in the EU climate regime. Because ‘[s]oil carbon sequestration efforts ... currently do not help Member States to achieve their EU climate targets’, ‘most Member States do not have binding rules in place’.²⁷ ‘At best’, according to Verschuuren, ‘some states invite

²¹ Recio, n. 19 above, p. 279.

²² *Ibid.*, p. 279–80.

²³ *Ibid.*, p. 287.

²⁴ *Ibid.*, pp. 298–9.

²⁵ J. Verschuuren, ‘Towards an EU Regulatory Framework for Climate-Smart Agriculture: The Example of Soil Carbon Sequestration’ (2018) 7(2) *Transnational Environmental Law*, pp. 301–22.

²⁶ *Ibid.*, p. 309.

²⁷ *Ibid.*, p. 307.

farmers to introduce climate-smart farming methods through the use of soft law instruments aimed at providing information to those interested'.²⁸

To address these flaws in existing policy, Verschuuren advocates an alternative approach. The first element of his proposal is to include agriculture in the EU Emissions Trading System (ETS) by allowing regulated industries to purchase offsets from the agricultural sector,²⁹ following the examples set by Australia and others. The second is aimed at the CAP, which needs to be far more focused on climate change mitigation and adaptation. Yet, the CAP will never have sufficient funds for the deep and full transition of Europe's agriculture sector that is needed, thus strengthening the need to explore new income streams for farmers from offsets under the ETS.

The activities that cause climate change – such as burning fuels, agriculture, and forestry – are fundamental to modern human society. For that reason, efforts to control GHG emissions not only pose technological and economic challenges but also engage on many dimensions with governance institutions. It may take decades to fully adjust those institutions to deal effectively with this new challenge. In the meantime, the adjustment efforts will be an important focus of transnational environmental law.

3. CLIMATE CHANGE ADAPTATION

Climate change is deeply connected with other areas of environmental concern in terms of its causes as well as its effects. These effects are dramatically illustrated in a report by the World Bank on the impacts of the 4°C average warming, which we might expect to see without effective emissions reductions. The report provides a dire list of consequences: 'the inundation of coastal cities; increasing risks for food production potentially leading to higher malnutrition rates; many dry regions becoming drier, wet regions wetter; unprecedented heat waves in many regions, especially in the tropics; substantially exacerbated water scarcity in many regions; increased frequency of high-intensity tropical cyclones; and irreversible loss of biodiversity, including coral reef systems'.³⁰ Clearly, adapting to these changes to the extent possible will stress systems that govern land use, water law, public health, and biodiversity, among others.

Climate change will not only add to the existing global threat to biodiversity, but it will also necessitate rethinking important aspects of biodiversity law. The climate change threat to biodiversity cannot be considered terribly surprising, since wild plants and animals are generally no more immune to heat waves, droughts, cyclones, and flooding than are humans, crops, and domesticated animals. Moreover, because of the rapid pace of climate change, [m]any species will be unable to disperse rapidly enough to track the changing climate and remain within their "climate envelope" of

²⁸ Ibid.

²⁹ For background on offset markets, see C. Arup & H. Zhang, 'Lessons from Regulating Carbon Offset Markets' (2015) 4(1) *Transnational Environmental Law*, pp. 69–100.

³⁰ World Bank, 'Turn Down the Heat: Why a 4°C Warmer World Must Be Avoided', 2012, p. v, available at: <http://www.worldbank.org/en/topic/climatechange/publication/turn-down-the-heat-climate-extremes-regional-impacts-resilience>.

temperature and precipitation'.³¹ This will require innovative legal strategies in order to preserve as much biodiversity as possible. Simply leaving species alone will not be sufficient when their current habitats are no longer viable.

In her article, Phillipa McCormack argues that legal frameworks for conservation are poorly equipped to regulate adaptation strategies for biodiversity under climate change that demand high levels of human intervention.³² She investigates law and policy for conservation introductions, which involve relocating species outside their historical habitat. These introductions can take two forms. One is assisted colonization, which 'involves introducing species into new habitats when current or future climate change will make their conventional habitats unsuitable'.³³ The second strategy is called 'ecological replacement', which involves introducing a new species to fill a crucial ecological niche previously filled by a now extinct species, in the hope that 'introducing a species – or a suite of species – that is ecologically similar to extinct native species may help to restore lost ecological functions'.³⁴ Notably, both assisted colonization and ecological replacement involve active intervention into natural ecosystems, rather than simply attempting to protect them from human activities. They are thus a radical departure from traditional concepts of conservation.

McCormack takes as a case study Australian law on conservation introductions, demonstrating theoretical and practical legal hurdles to these strategies at international, national and subnational levels. Although some initial efforts at formulating national policies for species introduction exist, she argues that they are inadequate. In particular, she says, '[t]here is no legal or policy guidance at the federal level in Australia for international conservation introductions', or for 'introductions across subnational borders'.³⁵ Among Australian states, only Tasmania has a policy that directly addresses climate change, and that policy covers assisted introduction but not ecological replacement. McCormack argues that existing legal mechanisms may be repurposed in some cases to fill these gaps. She argues, however, that new legal mechanisms are also needed, and soon, to effectively conserve species and ecosystems in a period of unprecedented ecological change.

Of course, threats to biodiversity will be only one of the impacts of climate change. Although climate change mitigation has received the bulk of attention, nations have begun to pay increasing attention to adaptation issues. Xiangbai He presents a comparative analysis of adaptation efforts in Australia, China, and the US.³⁶ These

³¹ R. Primack, *Essentials of Conservation Biology*, 5th edn (Oxford University Press, 2010), p. 208.

For further discussion of effects on biodiversity, see A.E. Camacho, 'Managing Ecosystem Effects in an Era of Rapid Climate Change', in Farber & Peeters, n. 1 above, pp. 555–66.

³² P.C. McCormack, 'Conservation Introductions for Biodiversity Adaptation under Climate Change' (2018) 7(2) *Transnational Environmental Law*, pp. 323–45.

³³ *Ibid.*, p. 326.

³⁴ *Ibid.*

³⁵ *Ibid.*, p. 331.

³⁶ X. He, 'Legal and Policy Pathways of Climate Change Adaptation: Comparative Analysis of the Adaptation Practices in the United States, Australia and China' (2018) 7(2) *Transnational Environmental Law*, pp. 347–73.

countries have all made adaptation attempts through legislative, executive, and judicial action. However, because the systems of law and governance of the three countries differ, adaptation issues are also managed differently. State and local adaptation planning have been the primary adaptation pathways in the US, whereas in Australia judicial intervention is more influential than executive action. Thus, the pattern of adaptation policy making has diverged in these two countries.

In contrast to Australia and the US, China relies primarily on national policy pronouncements to manage adaptation issues. As He explains, the National Plan to Address Climate Change (2014–20), released in 2014, sets ‘clear targets for improving adaptive capacity’ and ‘marks significant progress in responding to climate change because it applies target responsibility and accountability mechanisms to evaluate cadre performance’.³⁷ However, ‘as a result of prioritizing political incentives in relation to economic growth and social stability, most lower-level governments have failed to recognize the importance of undertaking proactive adaptation measures to respond to climate change risks’.³⁸

He argues that the differences between these three countries are shaped by a complex combination of factors, including climate politics, awareness of adaptation pathways, the legal status of environmental principles, and the role of the judiciary. He’s analysis illuminates the opportunities and barriers associated with different adaptation solutions and also contributes to cross-jurisdictional learning. From the perspective of transnational environmental law, one intriguing adaptation issue involves the interactions between national governments, subnational governments, and international instruments such as the Paris Agreement.

As these articles illustrate, we are only beginning to see how the legal regime at all levels will adjust to deal with climate change impacts. Although we already experience some early effects of climate change, these impacts are bound to accelerate and with them the need for legal adaptation. Consequently, this aspect of transnational environmental law is likely to receive a growing share of attention in the pages of this journal.

4. TRANSNATIONAL LAW FOR CLIMATE GOVERNANCE

The inescapability of transnational governance is especially clear in the context of climate change. On the one hand, climate change is a global phenomenon with globally distributed causes, thus requiring a global response. On the other hand, emissions always take place in specific locations within particular jurisdictions, and climate change impacts will vary from place to place, requiring diverse adaptation measures. Thus, it is inherent in the nature of climate change that responses will be multi-scalar and multi-jurisdictional, raising profound issues of governance.

The articles in this issue illustrate the range of institutions and legal regimes involved. At the level of public international law they cover global cooperative efforts such as the Paris Agreement, regional efforts such as the Arctic Council, and the

³⁷ *Ibid.*, p. 359.

³⁸ *Ibid.*

efforts of international organizations under REDD+. In terms of national and subnational efforts, the issue covers climate adaptation in several countries and adaptation efforts in US and Australian states. Many illustrate the ways in which transnational environmental law bumps up against other legal regimes such as international investment treaties, national and state conservation laws, and EU agricultural policy.

Climate law is still in flux. It has been less than 30 years since the UNFCCC inaugurated the era of climate law at the global level. Until we have transitioned into a zero-carbon energy system, we will need to actively regulate emissions from energy production. Even after we attain zero emissions, climate change adaptation and maintenance of carbon stores (including soils and forests) will remain necessities. Eventually, the required governance system may evolve into a clear, organized structure. In the meantime, transnational climate governance will continue to involve complex relationships between different governance institutions. Legal scholars will find much to occupy them for decades ahead as they attempt to rationalize and critique this evolving transnational system.

5. *TEL* EDITORIAL BOARD DEVELOPMENTS

After two years as *TEL* Assistant Editor, Andreas Kotsakis will be moving on to new opportunities and challenges. His contributions will be deeply missed and the full *TEL* team wishes him the very best in his future endeavours. At the same time, we are delighted to welcome Geetanjali Ganguly as a new member of *TEL*'s expanding family. Geetanjali is currently conducting PhD research at the London School of Economics on the role of climate science in the courts, and she will join Leslie-Anne Duvic-Paoli, Anna Huggins, Alexia Staker and Aaron Wu on the *TEL* Assistant Editorial team.

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