

CHAPTER - 12

GOVERNING CLIMATE DISRUPTION THROUGH ARBITRAL DECISIONS

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I INTRODUCTION

While some holdouts still dispute the point,¹ we live today on a planet undergoing disruptive climate change.² Farmers in the Northern Hemisphere are experiencing measurably longer growing seasons.³ Climate disruption brings more extreme events – droughts and floods – at more frequent intervals.⁴ Climate disruption also will change the timing and nature of precipitation throughout much of the planet.⁵ Unfortunately, precise prediction of how these changes will play out remains impossible and might not become clear for decades.⁶ We can predict that over the

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- 1 See eg, Clare Foran "Donald Trump and the Triumph of Climate-Change Denialism" (The Atlantic, 25 December 2016) <www.theatlantic.com/politics/archive/2016/12/donald-trump-climate-change-skeptic-denial/510359/>.
- 2 IPCC (Intergovernmental Panel on Climate Change) "Climate Change 2014: The Physical Science Basis. Geneva: IPCC Fifth Assessment Report" (2013) <http://ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_ALL_FINAL.pdf>; IPCC (Intergovernmental Panel on Climate Change) "Climate Change 2014: Impacts, Adaptation, and Vulnerability. Geneva: IPCC Fifth Assessment Report" (2014) <http://ipcc.ch/pdf/assessment-report/ar5/wg2/WGIIAR5-Chap3_FINAL.pdf>; Naomi Klein *This Changes Everything: Capitalism Vs The Climate* (Simon and Schuster, 2014).
- 3 Pam Belluck "Warm Winters Upset Rhythms of Maple Sugar" NY Times (3 March 2007) A1; William Stevens "March May Soon Be Coming in Like a Lamb" NY Times (2 March 1999) F3.
- 4 See Joseph Romm *Climate Change: What Everyone Needs to Know* (Oxford University Press, 2016) 13, 85.
- 5 See eg, Behzad Asadieh and Nir Y Krakauer "Impacts of Changes in Precipitation Amount and Distribution on Water Resources Studied Using a Model Rainwater Harvesting System" (2016) 52 J Am Water Resources Ass'n 1450; Mohammad Safeeq and Carolyn T Hunsaker "Characterizing Runoff and Water Yield for Headwater Catchments in the Southern Sierra Nevada" (2016) 52 J Am Water Resources Ass'n 1327.
- 6 See J Eli Asarian and Jeffrey D Walker "Long-Term Trends in Streamflow and Precipitation in Northwest California & Southwest Oregon 1952-2012" (2016) 52 J Am Water Resources Ass'n 241; Morey Burnham et al "Water Management Decision Making in the Face of Multiple Forms of

coming century, hotter temperatures and drier air will cause higher rates of evapotranspiration and drier soils less supportive of plant life without irrigation.⁷ Arid regions will become wider⁸ and the melting of glaciers and the mountain snowpack will reduce or destroy the storage capacity of these immense reservoirs of fresh water that sustain rivers during the dry months of the year.⁹ Climate disruption will also lead to a rise in sea levels, which in some parts of the world will lead to salt water intrusion into fresh waters that today are widely consumed for human uses.¹⁰ Temperatures, the amount of precipitation, and the depth of snowpack will vary, up and down, from year-to-year, yet the long-term trends are clear: In many areas with large populations, water availability will decrease substantially even as growing seasons lengthen.¹¹ The human-built infrastructure for managing water and other essential aspects of the economy will become obsolete and economies themselves will suffer significant to severe dislocation.¹² These changes in turn will have drastic effects on innumerable aspects the lives of humans¹³ and other living things.¹⁴

Uncertainty and Risk" (2016) 52 J Am Water Resources Ass'n 1366; Dongmei Feng et al "Spatial and Temporal Variations in Eastern US Hydrology: Responses to Global Climate Variability" (2016) 52 J Am Water Resources Ass'n 1089; see also Daniel A Farber "Coping with Uncertainty: Cost-Benefit Analysis, the Precautionary Principle, and Climate Change" (2015) 90 Wash L Rev 1659.

- 7 See *Leghari v Federation of Pakistan* [2015] Lahore High Ct Green Bench WP no 255001/2015, [2015] Order no 1, at 6; see generally Romm (n 4) 6, 14; Gary W Marek et al "Estimating Evapotranspiration for Dryland Cropping Systems in the Semiarid Texas High Plains Using SWAT" (2016) 52 J Am Water Resources Ass'n 298.
- 8 See eg, Arab Water Council "Vulnerability of Arid and Semi-Arid Regions to Climate Change – Impacts and Adaptive Strategies" (2009) <www.preventionweb.net/publications/view/12914>.
- 9 See eg, Jiří Kadlec et al "Extracting Snow Cover Time Series Data from Open Access Web Mapping Tile Services" (2016) 52 J Am Water Resources Ass'n 916; Shehadri Rajagopal and Adiran A Harpold "Testing and Improving Temperature Thresholds for Snow and Rain Prediction in the Western United States" (2016) 52 J Am Water Resources Ass'n 1142.
- 10 See eg, Michael B Girard and Gregory E Wannier (eds) *Threatened Island Nations: Legal Implications of Rising Seas and a Changing Climate* (Cambridge University Press, 2013).
- 11 See eg, Heejun Chang and Matthew Ryan Bonnette "Climate Change and Water-Related Ecosystem Services: Impacts of Drought in California, USA" (2016) 2 Ecosystem Health and Sustainability e01254.
- 12 See Nicholas Stern "The Economics of Climate Change" (2008) 98 Am Econ Rev 5.
- 13 See eg, Laura Westra *Environmental Justice and the Rights of Ecological Refugees* (Routledge, 2009); Jay Williams "The Impact of Climate Change on Indigenous Peoples – The Implications for the Cultural, Spiritual, Economic and Legal Rights of Indigenous Peoples" (2012) 14 Int'l J Hum Rts 648.
- 14 See eg, David Wilcove *No Way Home: The Decline of the World's Great Animal Migrations* (Springer, 2007) (discussing how overharvesting, habitat destruction, and climate change have cumulatively impacted on migratory animals).

Complicating global responses to global climate disruption is the reality that climate is a global public good.¹⁵ "Public goods," as distinguished from private goods, share two qualities: indivisibility and publicness.¹⁶ Indivisibility, or non-excludability in economists' terms, means that the good cannot be divided up among its consuming public in a way that excludes other consumers from the resource. Publicness, or open access in economists' terms, means that the resource is shared freely (if not equally) among the group – one cannot keep others from accessing and enjoying the good so long as it is accessible and enjoyable by anyone. In other words, a public good is one that all within the relevant public must enjoy more or less equally, or none will enjoy the good at all. Public goods generally must be free goods because consumers cannot realistically be excluded from enjoying the good.¹⁷ A clear example of a public good is the blue sky over one's head. How much can one charge others for viewing the blue sky directly above your head? This question suggests an important problem: If you invest in improving the blueness of the sky, others who invest or pay nothing will enjoy the benefits of your investment.¹⁸ You cannot exclude them from enjoying the good. The result will be "free riders" – those who enjoy the fruits of investment in public goods without sharing the costs. Free riders can seriously inhibit investment unless the government (or some other institution) is able to ensure that all (or nearly all) pay for the benefits they receive.¹⁹ As Nobel Prize-winning economist Ronald Coase demonstrated in *The Problem of Social Cost*,²⁰ a private-property market system is a most efficient mechanism for allocating resources to particular uses when it works, but the system fails if there are significant barriers to the functioning of a market. And climate, like the blue sky, is

15 See generally Inge Kaul, Isabelle Grunberg and Marc Stern (eds) *Global Public Goods: International Cooperation in the 21st Century* (Oxford University Press, 1999); Severine Demeulin and Nicholas Townsend "Public Goods, Global Public Goods, and the Common Good" (2007) 34 *Int'l J Soc Econ* 19; Valentina Vadi "Beyond Known Worlds: Climate Change Governance by Arbitral Tribunals?" (2015) 48 *Vand J Transnat'l L* 1285, 1291-96.

16 John Rawls *A Theory of Justice* (Harvard University Press, 1971) 265-74.

17 See generally Tyler Cowen (ed) *Public Goods and Market Failures: A Critical Examination* (Routledge, 1992).

18 Cf Ronald Coase "The Lighthouse in Economics" (1974) 17 *J L & Econ* 357 (using lighthouses to illustrate the problem with public goods – ships that do not contribute the construction or upkeep of a lighthouse can still benefit from its signals).

19 See Mehmet Bac "Incomplete Information and Incentives to Free Ride on International Environmental Resources" (1996) 30 *J Envtl Econ & Mngt* 301.

20 Ronald H Coase "The Problem of Social Cost" (1960) 3 *J Law & Econ* 1.

a public good; in fact, one can characterize global climate disruption as "the biggest market failure the world has ever seen."²¹

How can we recover the cost of maintaining or enhancing the global climate when every person on the planet, and every government, have access to it without direct charge for the use they make? This leads directly into the "tragedy of the commons"²² unless there is effective global regulation. Climate and climate disruption, in short, are a common concern of all humankind.²³ Efforts to develop a global regulatory system began fairly quickly after the reality of climate disruption was widely recognized. Since 1992, the international community has been developing a set of international climate governance institutions,²⁴ including most centrally: the *UN Framework Convention on Climate Change* (1992);²⁵ the *Kyoto Protocol* (1997);²⁶ and now the *Paris Climate Accord* (2015).²⁷ These institutions have not yet developed to the point of effectively controlling climate disruption²⁸ and many people are searching for additional tools that might get ahead of the disruption. One interesting avenue is the argument individual or collective human rights will provide a legal handle for forcing governments and other actors to take effective steps to curtail or ameliorate the effects of climate disruption.²⁹

21 Michèle B Bättig and Thomas Bernauer "National Institutions and Global Public Goods: Are Democracies More Cooperative in Climate Change Policy?" (2009) 63 *Int'l Org* 281, 281.

22 Tower Brode "Warming to Crisis: The Climate Change Law of Unintended Opportunity" (2013) 44 *Netherlands YB Int'l L* 111, 116-17; see generally Garrett Hardin "The Tragedy of the Commons" (1968) 162 *Science* 1243.

23 See Vadi (n 15) 1296-1300.

24 See generally Daniel Bodansky, Jutta Brunnée, and Lavanya Rajamani (eds) *International Climate Change Law* (Oxford University Press, 2014).

25 UN Framework Convention on Climate Change 1992, 1771 UNTS 107.

26 Kyoto Protocol to the United Nations Framework Convention on Climate Change 1998, 2302 UNTS 148.

27 UN Framework Convention on Climate Change, Conference of the Parties, 21st session, 30 November – 11 December 2015, Adoption of the Paris Agreement (12 December 2015) UN Doc FCCC/CP/2015/L.9/Rev 1.

28 See eg, Fiona Harvey "World on Track for 3C of Warming under Current Global Climate Pledges Warns UN" *The Guardian* (3 November 2016) <www.theguardian.com/environment/2016/nov/03/world-on-track-for-3c-of-warming-under-current-global-climate-pledges-warns-un>.

29 See eg, Mariya Gromilova "Revisiting Planned Relocation as a Climate Change Adaptation Strategy: The Added Value of a Human Rights-Based Approach" (2014) 10 *Utrecht L Rev* 76; Margaux J Hall and David C Weiss "Avoiding Adaptation Apartheid: Climate Change Adaptation & Human Rights Law" (2012) 39 *Yale J Int'l L* 309; Ole W Pedersen "The Janus-Head of Human Rights and Climate Change: Adaptation and Mitigation" (2011) 80 *Nordic J Int'l L* 403, 408-09.

The relevance of human rights theory to global climate disruption is clear given that climate disruption can impede the realization of other human rights.³⁰ The possible roles of the international law of human rights range from procedural (participatory) rights that could cause better responses to climate disruption³¹ to a claim that climate justice is generalizable as a substantive right.³² Further complicating the search for effective regulation is that climate disruption is a prime example of legal pluralism, exhibiting: (1) multilevel governance;³³ (2) multipolar governance;³⁴ and (3) multiscalar governance.³⁵ This chapter explores how that complexity arises in large part through the interplay of climate disruption and international investment, and how international arbitration (particularly international commercial arbitration) has emerged as a primary, perhaps the primary, governance tool for these complex problems.

II CLIMATE DISRUPTION AND INTERNATIONAL INVESTMENT

States around the world are seeking to respond to the resulting economic and social disruptions in a number of ways, including by investing in, or promoting investment in, infrastructure.³⁶ Governments, lacking both infinite funds and infinite wisdom, rely heavily on private investment to develop new or renewed infrastructure. Recourse to private investment has become ever more attractive in a world where the public has become increasingly resistant to paying taxes.³⁷ Often

30 See Simon Caney "Climate Change, Human Rights and Moral Thresholds" in Stephen Humphreys (ed) *Human Rights and Climate Change* (Cambridge University Press, 2010) 69; Vadi (n 15) 1300-04.

31 See Vadi (n 15) 1303.

32 See Westra (n 13); see also Williams (n13).

33 See eg, Joanne Scott "The Multi-Level Governance of Climate Change" [2011] *Carbon & Climate L Rev* 25; Vadi (n 15) 1311-12.

34 See eg, Hari M Osofsky "Is Climate Change 'International'? Litigation's Diagonal Regulatory Role" (2009) 49 *Va J Intl L* 585, 587; Vadi (n 15) 1312-13.

35 See eg, Kal Raustiala and David Victor "The Regime Complex for Plant Genetic Resources" (2004) 58 *Intl Org* 277.

36 See Vadi (n 15) 1309-10.

37 See eg, Peter H Gleick et al *The New Economy of Water: The Risks and Benefits of Globalization and Privatization of Freshwater* (Pacific Institute 2002) 23-24; James Winpenny "World Panel on Financing Water Infrastructure: Financing Water for All" (World Water Council, 2003) <www.gwpforum.org/gwp/library/ExecSum030703.pdf>; see also Terry L Anderson, Brandon Scarborough and Lawrence R Watson *Tapping Water Markets* (Routledge, 2012); Karen Bakker *Privatizing Water: Governance Failure and the World's Water Crisis* (Cornell University Press, 2011); Keith H Hirokawa "Three Stories about Nature: Property, the Environment, and Ecosystem Services" (2011) 62 *Mercer L Rev* 541; Jerneja Penca "Marketing the Market: The Ideology of Market Mechanisms for Biodiversity Conservation" (2013) 2 *Transnat'l EIntl L* 235.

the sought-after investment will be international direct investment; international direct investment, however, can either contribute to further climate disruption or mitigate the effects of that disruption depending on the nature and management of the investment.³⁸

Multinational corporations are prime generators of greenhouse gases,³⁹ but also leaders in the greening of the economy.⁴⁰ Such corporations are subject to a complex body of law that includes about 3,000 bilateral investment treaties (often using standard terms),⁴¹ as well as certain sectoral (such as the *Energy Charter Treaty*⁴²) or regional treaties (such as the *European Union [EU]*⁴³ or the *North American Free Trade Agreement [NAFTA]*⁴⁴). International commercial arbitration plays a growing role in promoting and protecting international direct investment because a growing number of treaties allow compulsory arbitration at the request of the investor.⁴⁵ As a result, a growing number of arbitrations relating to international direct investments challenge governmental responses to climate disruption.⁴⁶ This raises the central

38 See Bradley Condon and Tapen Sinha *The Role of Climate Change in Global Economic Governance* (Oxford University Press, 2013); Vadi (n 15) 1288-89.

39 See eg, J Von Doussa, A Corkery and R Chartres "Human Rights and Climate Change" (2007) 14 *Austral Int'l LJ* 161, 170.

40 See eg, Peter Newell and Matthew Paterson *Climate Capitalism – Global Warming and the Transformation of the Global Economy* (Cambridge University Press, 2010); Edna Sussman "The Energy Charter Treaty's Investor Protection Provisions: Potential to Foster Solutions to Global Warming and Promote Sustainable Development" (2008) 14 *ILSA J Int'l & Comp L* 391 .

41 Cory Adkins and David Singh Grewal "Democracy and Legitimacy in Investor State Arbitration" (2016) 126 *Yale LJ* F 65, 66 n 7; Vadi (n 15) 1289, 1314; see generally Christina L Beharry and Melinda E Kuritzky "Going Green: Managing the Environment through International Investment Arbitration" (2015) 30 *Am U Int'l L Rev* 383.

42 *Energy Charter Treaty* (opened for signature 17 December 1994) reprinted in (1995) 34 *Int'l Legal Mat.* 360; Vadi (n 15) 1324-25 (discussing the provisions of the *Energy Charter Treaty*).

43 See *Treaty of Maastricht* (signed 7 February 1992) OJ C224/1 (1992), as amended OC C/325/5 (2002); Vadi (n 15) 1337-42.

44 See *The North American Free Trade Agreement* (signed 8 December 1992) reprinted in (1993) 32 *Int'l Legal Mat'l's* 289; See eg, Notice of Intent to Submit a Claim to Arbitration Under Chapter 11 of the *North American Free Trade Agreement*, *Transcanada Corp v United States* (6 January 2016), <www.keystone-xl.com/wp-content/uploads/2016/01/TransCanada-Notice-of-Intent-January-6-2016.pdf>; Notice of Intent to Submit a Claim to Arbitration, *Mesa Power Grp LLC v Canada* (6 July 2011), <www.italaw.com/sites/default/files/case-documents/italaw1168.pdf>; see generally Adkins and Grewal, *supra* note (n 41).

45 See eg, José E Alvarez *The Public International Law Regime Governing International Investment* (Brill, 2011).

46 See Vadi (n 15) 1315-52.

question: Does international investment law aid or impede responses to climate disruption?⁴⁷

III INTERNATIONAL ARBITRAL TRIBUNALS AND THE GOVERNANCE OF CLIMATE DISRUPTION

Enforcement is a central problem in attempting to devise a global governance regime to address climate disruption.⁴⁸ Effective governance of the process or, or mitigation of, climate disruption requires, among other matters, and effective enforcement. How are states who dispute whether one or the other state has not fulfilled its obligations under a treaty relating to climate disruption? How is person who alleges that she has been injured by climate disruption caused by a particular state's policies or by another private actor to obtain redress? And how does an investor in a country resolve a dispute that arises when a state imposes new regulations in an effort to mitigate or adapt to climate disruption, regulations that significantly reduce the value of the investment.

The fundamental legal instruments that provide the architecture of global governance for climate disruption – the UN Framework Convention on Climate Change and its corollary documents of the *Kyoto Protocol* and the *Paris Accord* – do not provide any enforcement mechanism except for the possibility of resolving disputes between states party to the convention through litigation before the International Court of Justice, interstate arbitration, or a conciliation commission, as authorized by article 14 of the Framework Convention.⁴⁹ Even these interstate procedures require an expression of consent to the proceedings apart from simply ratifying the Framework Convention. And there is simply no provision for resolving disputes between a state party to the Framework Convention and a private party or between two or more private parties.⁵⁰

47 See Akhlaq Choudhury and Khaled Moyeed "Spotlight on International Arbitration as a Means of Settling Disputes Arising from Climate Change" (Kluwer Arb Blog, 26 January 2016) <<http://kluwerarbitrationblog.com/2016/01/26/spotlight-on-international-arbitration-as-a-means-of-settling-disputes-arising-from-climate-change/>>; David W Rivkin and Roger Martella "COP21: Climate Change Related Disputes: A Role for International Arbitration and ADR" (7 December 2015) Int'l B Ass'n 1-14 <www.ibanet.org/Document/Default.aspx?DocumentUId=4c321f4e-315b-40be-a553-5b55da513ede>; Vadi (n 15).

48 Enforcement is a problem generally for international law. See Anu Bradford and Omri Ben-Shahar "Efficient Enforcement in International Law" (2012) 12 Chi J Int'l L 375.

49 UN Framework Convention on Climate Change, art 14.

50 See Catherine Redgwell "Non-Compliance Procedures and the Climate Change Convention" in W Bradnee Chambers (ed) *Inter-Linkages: The Kyoto Protocol and the International Trade and Investment Regimes* (United Nations University Press, 2001) 43, 43-58.

There are a small but growing number of law suits in national courts, where a private party alleges injury from climate disruption and attempting to obtain private redress through a court.⁵¹ In a somewhat similar vein, several states of the United States successfully sued the US Environmental Protection Agency to compel it to regulate greenhouse gases as pollutants.⁵² The extent to which these suits will actually achieve improvements in mitigation or adaptation to climate disruption remains to be seen. The remainder of this chapter will focus on disputes between investors and the states in which they have invested prompted by the imposition of new regulations because of climate disruption. Through this process, arbitral tribunals have emerged as the most effective governance institution for regulating state action relative to climate disruption, making as well as enforcing the controlling law – for good or ill.⁵³

3.1 *The Role of Arbitration in International Investment Disputes Generally*

A corporation or an individual investing in a foreign country has to be wary of the "political risk" connected to the investment. The political risk is the risk that the host state (the nation where the investment is made) expropriates the investment or enacts regulations that deprives the investor of much or all of the value of the investment (an indirect expropriation) or otherwise treats the investor unfairly.⁵⁴ There is a fear – whether justified or not – that the foreign investor will not receive justice from a court in the host nation, while the traditional recourse to a diplomatic claim by the investor's home state can take years and often will yield only a limited recovery.⁵⁵ Host states as well as the investors find it to be in their interest to agree

51 See eg, *Native Village of Kivalina v ExxonMobil Corp* 696 F3d 849 (9th Cir) cert denied, 133 S Ct 2390 (2013); *Coalition for Responsible Regulation Inc v US Eenvtl Prot Agency* 684 F3d 102 (DC Cir 2012); The Hague Dist Ct, The Hague, 24 June 2015, 7196 mnt (Urgenda/Staat) (Neth); *Leghari v Federation of Pakistan* WP no 255001/2015 (Lahore High Ct Green Bench, 2015); see generally Maria L Banda and Scott Fulton "Litigating Climate Change in National Courts: Recent Trends and Developments in Global Climate Law" (2017) 47 *Envtl L Rptr* 10121; Peter Manus "Kivalina at the Supreme Court: A lost Opportunity for Federal Common Law" (2014) 8 *Pitt J Envt & Health L* 223; Hari M Osofsky "The Continuing Importance of Climate Change Litigation" (2010) 1 *Climate L* 3; Jacqueline Peele "Climate Change Litigation" (2011) 5 *Carbon & Climate L Rev* 15; Suryapratim Roy and Edwin Woerdman "Situating Urgenda v the Netherlands within Comparative Climate Change Litigation" (2016) 34 *J Energy and Nat Resources L* 165.

52 See *Massachusetts v US Eenvtl Prot Agency* [2007] 549 US 497.

53 See generally Ingo Venzke *How Interpretation Makes International Law: On Semantic Change and Normative Twists* (Oxford University Press, 2012).

54 See Azernoosh Bazrafkan and Alexia Herwig "Reinterpreting the Fair and Equitable Treatment Provision in International Investment Agreements as a New and More Legitimate Way to Manage Risks" (2016) 7 *Eur J Risk Reg* 439.

55 *Ibid.*

to compulsory arbitration of investor claims.⁵⁶ This provides a neutral forum, one's whose decision will generally be enforced by national courts around the world, particularly if the decision comes under the purview of the *New York Arbitration Convention*.⁵⁷ Sometimes the agreement to arbitrate such disputes comes under a bilateral trade and investment treaty, of which there are today more than 3,000.⁵⁸ Other disputes are made arbitral under regional trade and investment agreements, such as *NAFTA* chapter 11.⁵⁹

Arbitration by itself won't fully protect a foreign investor if the arbitral tribunal must apply the national law of the host state. Often it is the national law itself that is the problem. To address this problem, the international treaty or the investment contract might provide not only for arbitration, but also the arbitral tribunal will decide the investment dispute under international law.⁶⁰ This opens the door for the application of UNCITRAL rules, including the UNICTRAL rules of arbitration.⁶¹ Sometimes, as in *NAFTA* chapter 11, the international agreement itself will spell out the rules of international law to be applied.⁶² The agreement to apply international law allows arbitral tribunals sometimes to apply soft law instruments.⁶³ It also opens the door to arbitrators relying on precedents set by other arbitral tribunals in their decisions rather than on actual policy choices by the interested governments.⁶⁴ All of these possibilities can prove highly relevant in the arbitration of investments disputes relating to state reaction to climate disruption.

56 See eg, Julian Arato "The Logic of Contract in the World of Investment Treaties" (2016) 58 *Wm & Mary L Rev* 351.

57 Convention on the Recognition and Enforcement of Foreign Arbitral Awards (opened for signature 10 June 1958) 21 UST 2517, 330 UNTS 3, codified at 9 USCA §§ 201-208.

58 See Vadi (n 15) 1289, 1314.

59 *NAFTA* (n 44) ch 11.

60 See Veijo Heiskanen "Forbidding Dépeçage: Law Governing Investment Treaty Arbitration" (2009) 32 *Suffolk Transnat'l L Rev* 367; Yannick Radi "Realizing Human Rights in Investment Treaty Arbitration: A Perspective from within the International Investment Law Toolbox" (2012) 37 *NC J Int'l L and COn Reg* 1107.

61 Arbitration Rules of the United Nations Commission on International Trade Law, UN GAOR, 31st Sess, Supp no 17, UN Doc A/31/17 (1976), <www.uncitral.org/uncitral/en/uncitral_texts/arbitration.htm>

62 See *NAFTA* (n 45) ch 11.

63 See *Texaco v Libya* [1978] 17 *Int'l L Mat'ls* 1, 81 (*Int'l Arb Trib* 1978); see also Vadi (n 15) 1306-09; see generally Jean Galbraith and David Zaring "Soft Law as Foreign Relations Law" (2014) 99 *Cornell L Rev* 735.

64 See Adrian M Johnston and Michael J Trebilcock "Fragmentation in International Trade Law: Insights from the Global Investment Regime" (2013) 12 *World Trade Rev* 621, 629; Vadi (n 15) 1318.

3.2 *Arbitral Tribunals Provide Global Governance for Climate Disruption*

While there are a myriad of situations in which a state might claim that its changes in laws or regulations are meant to cope with the exigencies of climate disruption or on efforts to balance strained budgets by backing out on commitments to subsidize investments meant to cope with climate disruption.⁶⁵ Direct regulations that have been challenged in arbitration proceedings have included moratoria on greenhouse-gas generating activities such as fracking.⁶⁶ Another group of arbitrations arise out of newly imposed requirements for the installation of expensive equipment to prevent or control the emission of greenhouse gases.⁶⁷ On the other hand, many states have agreed to subsidize renewable energy, such as "feed-in" tariffs or direct subsidies.⁶⁸ At least until recently, the necessary capital-intensive investments often simply were not competitive without subsidies.⁶⁹ With falling revenues after the 2008 economic crisis (often shortly after the subsidy was agreed upon, many states found that they could not afford to keep these commitments, so they cut the guaranteed feed-in tariffs or other subsidies.⁷⁰ "Stabilization" or "umbrella" clauses (promises not to change certain laws during the life of an investment) will further complicate matters.⁷¹

65 Vadi (n 15) 1319-26. On the general problem of states seeking to limit or repudiate investment agreements because of the financial crisis, see Anne Van Aaken and Jürgen Kurtz "Emergency Measures and International Investment Law: How far can States Go?" (2010) YB Int'l Inv L & Pol'y 505.

66 See eg, Notice of Intent to Submit a Claim to Arbitration, *Lone Pine Resources Inc v Canada* UNCITRAL (8 November 2012).

67 See eg, *Vattenfall v Germany* [2009] ICSID Case No ARB/09/6, Request for Arbitration (30 March 2009) <www.italaw.com/sites/default/files/case-documents/ita0889.pdf>.

68 See James Prest "The Future of Feed-in Tariffs: Capacity Caps, Scheme Closures and Looming Grid Parity" (2012) Renewable Energy L and Pol'y Rev 25; Joseph Tirado and Jerry R Bloom "Renewable Energy Reforms in Europe: Growing Threats to International Investors" (9 June 2014) Lexology 1.

69 See eg, Nigel Banks et al "International Trade and Investment Law and Carbon Management Technologies" (2013) 53 Nat Resources J 285, 290-91, 297-302; Gerard Marata et al "Renewable Energy Incentives in the United States and Spain: Different Paths – Same Destination?" (2010) 28 J Energy and Nat Resources L 481.

70 See Jarrod Hepburn "Bulgaria May Face BIT and Human Rights Claims over Renewable Energy Measures" (4 June 2014) Inv Arb Rep; Kyriaki Karadelis "Spain Faces More Claims from Renewables Investors" (29 November 2013) Global Arb Rev; Prest (n 68) 26; Sherzod Shadikhodjaev "First WTO Judicial Review of Climate Change Subsidy Issues" (2013) 107 Am J Int'l L 864; Tirado and Bloom (n 68) 1.

71 See generally Banks et al (n 69) 318-20; Anatole Boute "Combating Climate Change through Investment Arbitration" (2012) 35 Fordham Int'l LJ 613, 643-47; Antony Crockett "Stabilisation Clauses and Sustainable Development: Drafting for the Future" in Chester Brown and Kate Miles

These various steps are open to challenge on several grounds. The subsidies could be challenged as discrimination against carbon-intensive businesses.⁷² On the other hand, cutting subsidies can be challenged on at least three grounds: 1) an unlawful direct or indirect expropriation;⁷³ unlawful discrimination;⁷⁴ or a denial of fair and equitable treatment.⁷⁵ In deciding these challenges, arbitrators will have to decide whether compliance with international climate disruption agreements (particularly the *Kyoto Protocol*⁷⁶ or the *Paris Accord*,⁷⁷ justifies recognizing distinctions between carbon-saving and carbon using industries.⁷⁸ Precisely what these and other

(eds) *Evolution in Investment Treaty Law and Arbitration* (Cambridge University Press, 2011) 516; Vadi (n 15) 1330-31.

- 72 See Vadi (n 15) 1329-30; Notice of Intent To Submit a Claim to Arbitration Under Chapter 11 of the North American Free Trade Agreement, *TransCanada Corp v United States* (6 January 2016) <www.keystone-xl.com/wp-content/uploads/2016/01/TransCanada-Notice-of-Intent-January-6-2016.pdf> (alleging unfair treatment in denial of a permit to build that Keystone XL pipeline across the United States).
- 73 See eg, Notice of Intent to Submit a Claim to Arbitration, *Lone Pine Resources Inc v Canada* UNCITRAL (8 November 2012); see generally Banks (n 69) 296-97, 317-18; Bazrafkan and Herwig (n 54) 440-41; Boute (n 71) 625-35; Luke Eric Peterson "Following PCA Decision, Czech Republic Thwarts Move by Solar Investors to Sue in Single Arbitral Proceeding; Meanwhile Spain Sees New Solar Claim at ICSID" (Investment Arbitration Reporter, 1 January 2014) <www.iareporter.com/articles/following-pca-decision-czech-republic-thwarts-move-by-solar-investors-to-sue-in-single-arbitral-proceeding-meanwhile-spain-sees-new-solar-claim-at-icsid/> (discussing an arbitration claim against Czechia); Vadi (n 15) 1327-29. Cf Philip Morris Asia Ltd v Austl, UNCITRAL, PCA Case No 2012-12, Award on Jurisdiction and Admissibility, 94-98 (17 December 2015) <<https://pcacases.com/web/sendAttach/1711>> (challenging a claim challenging changes in mandatory warnings on cigarettes); *Philip Morris Brands Sàrl et al v Oriental Republic of Uruguay* [2013] ICSID Case No ARB/10/7, Decision on Jurisdiction, 4-8 (2 July 2013) <https://icsid.worldbank.org/ICSID/FrontServlet?requestType=CasesRH&actionVal=showDoc&docId=DC3592_En&caseId=C1000 (same)>; *Vattenfall AB and Others v Federal Republic of Germany* (II), UN Conf. on Trade & Dev [2012] <<http://investmentpolicyhub.unctad.org/ISDS/Details/467>> (challenging the decision to phase out nuclear power in Germany by 2020).
- 74 See generally Banks et al (n 69) 303-16, 318-19; Boute (n 71) 642-43; Vadi (n 15) 1329-30.
- 75 See eg, *Nykomb Synergetics Tech Holding AB v Latvia* (16 December 2003) Arb SCC, Award 34 <www.italaw.com/sites/default/files/case-documents/ita0570.pdf>; *Saluka Inv BV v Czech Republic* (17 March 2006) UNCITRAL, Partial Award 306 <www.italaw.com/sites/default/files/case-documents/ita0740.pdf>; see also Notice of Intent To Submit a Claim to Arbitration Under Chapter 11 of the North American Free Trade Agreement, *TransCanada Corp v United States* (6 January 2016) <www.keystone-xl.com/wp-content/uploads/2016/01/TransCanada-Notice-of-Intent-January-6-2016.pdf>; see generally Banks et al (n 69) 296; Bazrafkan and Herwig (n 54) 441-44; Boute (n 71) 635-42; Peterson (n 73) (discussing an arbitration claim against Czechia); see generally Vadi (n 15) 1331-32.
- 76 See *Kyoto Protocol* (n 26).
- 77 See Adoption of the Paris Accord (n 27).
- 78 *Parkerings Compagniet AS v Lithuania*, Award [2007] ICSID Case No ARB/05/8 (11 September 2007) <www.italaw.com/sites/default/files/case-documents/ita0619.pdf> (considering the effect of the World Heritage Convention on an investment claim); see generally Vadi (n 15) 1329-30.

international agreements actually require could present difficult interpretive questions.⁷⁹ The very complexity of such issues can make them difficult to decide, or can compel host states to introduce changes only gradually.⁸⁰ What is clear is that simply preferring home producers over foreign investors is not allowed.⁸¹ The net effect of these various concerns could well be a sort of regulatory chill.⁸²

3.3 *Challenges and Opportunities*

There are numerous questions regarding the arbitration of climate disruption-related investment claims. At the center is the question of whether there is, or should be, an exception for a state exercising its "police powers" – the power to regulate to protect the public interest.⁸³ Some would limit the ability to protect the public interest to situations that in the common law would be classified as public nuisances.⁸⁴ Thus far, arbitrators have no general authority to approve state actions designed to protect against climate threats as such or simply to balance the public and private interests to devise the most appropriate overall result.⁸⁵ And, once again, arbitrators are not authorized to approve such actions if they are merely covert interferences with trade or investment.⁸⁶

Another problem to be addressed is the frequent lack of transparency in international commercial arbitration.⁸⁷ The *Energy Charter Treaty* doesn't even require notice of a claim to the Secretariat of the organization.⁸⁸ Most other arbitral

79 See generally Vadi (n 15) 1343-50.

80 See Case T-16/04, *Arcelor SA v European Parliament* [2004] ECR; see generally Vadi (n 15) 1329-30.

81 See eg, *Nykomb Synergetics Tech Holding AB v Latvia* (n 75).

82 See Banks et al (n 69) 295-97.

83 See eg, *Saluka Inv BV v Czech Republic* (n 75) 262 ("In the opinion of the Tribunal, the principle that a State does not commit an expropriation and is thus not liable to pay compensation to a dispossessed alien investor when it adopts general regulations that are 'commonly accepted as within the police power of the States' forms part of customary international law today."); see generally Boute (n 71) 647-51; Vadi (n 15) 1327-28, 1335-37.

84 See eg, *Chemtura Corp v Canada* UNCITRAL [2010] Award (2 August 2010) <www.italaw.com/sites/default/files/case-documents/ita0149_0.pdf>; see generally Vadi (n 15) 1328.

85 See Vadi (n 15) 1317-18, 1345-51.

86 See eg, *Nykomb Synergetics Tech Holding AB v Latvia* (n 75).

87 See generally Nikolaos Theodorakis *Transparency in Investor-State Dispute Settlement: Law, Practice, and Emerging Tools against Institutional Corruption* (ebook, 2015) 24-26.

88 See Energy Charter Treaty (n 42) art 21; while cases are not required to be reported to the Secretariat, the Secretariat does keep a list of the cases it is informed of, often from informal

systems also allow a great deal of confidentiality.⁸⁹ A related problem arises from the large number of options for selecting an arbitral tribunal. The very multiplicity of options nations virtually guarantees that investors with similar or even identical claims will be brought before different arbitral tribunals, virtually ensuring that nations and investor will encounter inconsistent arbitral awards.⁹⁰ The problems posed by multiple related arbitrations is exacerbated by the confidentiality requirements. This problem could be overcome if the parties to the arbitration (not the arbitrators) will agree to multiparty arbitrations. This provides procedural efficiency, consistency in results, and access to justice for smaller claimants who might not be able to afford to arbitrate entirely on their own.⁹¹ A host state might not agree, however, for it loses the opportunity to hone its defences through a series of arbitrations⁹² as well as the opportunity to seek the vacating of an awards based upon inconsistent awards in parallel proceedings.⁹³

Finally, the climate disruption increasingly is being characterized as a challenge to national security.⁹⁴ The question has already arisen whether a "national security clause" in an investment concession or other controlling agreement can be stretched

sources, Energy Charter "Investor-State Dispute Settlement Cases" <www.energycharter.org/what-we-do/dispute-settlement/investment-dispute-settlement-cases/>.

89 See, eg, ICSID <<https://icsid.worldbank.org/apps/ICSIDWEB/cases/Pages/AdvancedSearch.aspx>>.

90 See generally Vadi (n 15) 1333-34.

91 See eg, *Ambiente Ufficio SPA v Argentine Republic* [2013] ICSID Case No ARB/08/9, Decision on Jurisdiction and Admissibility (8 February 2013) 119-22 <www.italaw.com/sites/default/files/case-documents/italaw1276.pdf>; *Alemanni v Argentine Republic* [2014] ICSID Case No ARB/07/8, Decision on Jurisdiction and Admissibility, (17 November 2014) 261-67 <www.italaw.com/sites/default/files/case-documents/italaw4061.pdf>; see generally Vadi (n15) 1334-35.

92 See Vadi (n 15) 1334.

93 Ibid.

94 See The White House "The National Security Implications of a Changing Climate" (2015) <https://m.whitehouse.gov/sites/default/files/docs/National_Security_Implications_of_Changing_Climate_Final_051915.pdf>; Statement by the President of the Security Council, UN Doc S/PRST/2011/15 (20 July 2011) <www.un.org/en/ga/search/view_doc.asp?symbol=S/PRST/2011/15>; Lauren Nishimura, "Climate Change Migrants': Impediments to a Protection Framework And the Need to Incorporate Migration Into Climate Change Adaptation Strategies" (2015) 27 Int'l J Refugee L 107.

to include climate security.⁹⁵ While the long-term threat is clear, that threat probably lacks the immediacy that such a clause perhaps presupposes.⁹⁶

IV CONCLUSION: A ROLE FOR UNCITRAL?

Arbitration serves to fill a governance gap in climate policy.⁹⁷ The outcome of these arbitrations will provide a *de facto* climate policy governing regulatory policies, either protecting or chilling national climate policies.⁹⁸ One thing that most likely will result from increasing arbitration of climate disruption-related claims is that the process itself will promote the transnational dialogue on climate policy.⁹⁹ States could reduce or even resolve the current uncertainties in arbitration and the resulting pattern of global governance through:¹⁰⁰ revision of the preambles of various bilateral and multilateral treaties that govern international trade and investment; the inclusion of specific provisions in new or existing trade and investment agreements to address climate disruption issues; the addition of a "general exclusion" in new or existing trade and investment agreements; or by supplementing new or existing agreements through multilateral declarations or binding interpretations. UNCITRAL could take the lead in these efforts through the drafting of model clauses for any or all of these revisions.

95 Cf *LG and E Energy Corp et al v Argentine Republic* [2007] ICSID Case No ARB/02/1, Award, 3 (25 July 2007) <www.italaw.com/sites/default/files/case-documents/ita0462.pdf> (recognizing that an economic crisis can be a security threat).

96 See Vadi (n 15) 1346-47.

97 See eg, Jacqueline Peel "Issues in Climate Change Litigation" (2011) 5 *Carbon & Climate L Rev* 15; Vadi (n 15) 1317.

98 See eg, Adrian M Johnson and Michael J Teblicock "Fragmentation in International Trade Law: Insights from the Global Investment Regime" (2013) 12 *World Trade Rev* 621, 629; Peel (n 97) 24; Vadi (n 15) 1318.

99 See eg, Peel (n 97) 24; Vadi (n 15) 1318.

100 See eg, Vadi (n 15) 1343-44.