
Introduction

A. Focus and Contributions of the Book

At the broadest level, this book considers how international tribunals might perform their functions given the limitations of their roles and the demands they are being confronted with across several areas of international law. More specifically, the book uses the focus of environmental disputes to reflect upon three cross-cutting challenges confronting international tribunals across four key sites of contemporary international adjudication. The book analyses how tribunals across the World Trade Organization (WTO), United Nations Convention on the Law of the Sea (UNCLOS), International Court of Justice (ICJ), and investment treaty contexts manage the problems of change in relevant legal norms or facts, review of State conduct for compliance with international obligations, and dispute resolution, and why their practices differ.¹

A WTO panel or the Appellate Body decides a dispute concerning an environmental measure that restricts international trade.² A dispute concerning marine environmental harm is brought before the International Tribunal for the Law of the Sea (ITLOS) or an arbitral tribunal under

¹ For a conceptualisation of the notion of 'international judicial practices', drawing on earlier applications of practice theory to international relations, see Jeffrey L Dunoff and Mark A Pollack, 'International Judicial Practices: Opening the "Black Box" of International Courts' (2018) 40 Mich. J. Int'l L. 47, esp. 55–56, 62. See also Tommaso Soave, 'The Social Field of International Adjudication: Structures and Practices of a Conflictive Professional Universe' (2023) 36 LJIL 565, 586–90.

² Eg Appellate Body Report, *United States – Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products*, WT/DS381/AB/R, adopted 13 June 2012; Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, adopted 6 November 1998; Appellate Body Report, *United States – Standards for Reformulated and Conventional Gasoline*, WT/DS2/AB/R, adopted 20 May 1996; *European Union – Certain Measures Concerning Palm Oil and Oil Palm Crop-Based Biofuels*, WT/DS593/9, Request for the Establishment of a Panel by Indonesia, 24 March 2020.

UNCLOS.³ A dispute concerning environmental harm is brought before the ICJ.⁴ A State's refusal on environmental grounds of a permit required for an investment to operate is challenged by a foreign investor before an arbitral tribunal under an investment treaty.⁵ In each case, the international tribunal is faced with adjudicating the international obligations of a State (or States) in a dispute involving an environmental component. While all the tribunals operate within distinct institutional contexts, they are likely to face, to a greater or lesser degree, several common challenges confronting international tribunals today. How do changes in international law, or changes in relevant facts, affect the tribunal's task of interpreting and applying obligations under an applicable treaty? How much deference, if any, should the international tribunal afford to determinations made by domestic authorities who may have greater familiarity with local conditions, have applied specialist forms of non-legal expertise, or enjoy greater legitimacy? How should adjudicators scrutinise measures that further one legally protected interest under the relevant regime but undermine another? Should adjudicators apply a test for reasonableness, necessity or least restrictive means, or engage in proportionality balancing *stricto sensu*? Finally, should adjudicators aim to dispose completely of the parties' dispute, or should they clarify con-

³ *Eg South China Sea Arbitration (Philippines v China)*, Award (2016) 170 ILR 180; *Case Concerning Land Reclamation by Singapore in and around the Straits of Johor (Malaysia v Singapore)* (Provisional Measures, Order of 8 October 2003) ITLOS Reports 2003, p. 10; *MOX Plant (Ireland v United Kingdom)* (Provisional Measures, Order of 3 December 2001) ITLOS Reports 2001, p. 95; *Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law*, Request for Advisory Opinion, 12 December 2022.

⁴ *Eg Dispute over the Status and Use of the Waters of the Silala (Chile v Bolivia)*, Judgment, ICJ Rep [2022] 614; *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v Costa Rica)*, Judgment, ICJ Rep [2015] 665; *Pulp Mills on the River Uruguay (Argentina v Uruguay)*, Judgment, ICJ Rep [2010] 14; *Gabčíkovo-Nagymaros (Hungary/Slovakia)*, Judgment, ICJ Rep [1997] 7; *Obligations of States in respect of Climate Change*, Request for Advisory Opinion, 12 April 2023.

⁵ *Eg William Ralph Clayton, William Richard Clayton, Douglas Clayton, Daniel Clayton and Bilcon of Delaware, Inc v Canada*, PCA Case No 2009–04, Award on Jurisdiction and Liability (17 March 2015); *Crystallex International Corporation v Venezuela*, ICSID Case No ARB[AF]/11/2, Award (4 April 2016); *Lone Pine Resources Inc. v Canada*, ICSID Case No UNCT/15/2, Award (21 November 2022); *Ruby River Capital LLC v Canada*, ICSID Case No ARB/23/5, Request for Arbitration (17 February 2023).

tested issues of law and fact and hand parts of the dispute back to the parties for further negotiation or cooperation?⁶

The overall argument this book develops is that international tribunals perform several crucial roles or functions in the contemporary international legal order by incrementally adapting international norms, scrutinising State conduct for compliance with international obligations, and contributing to broader processes of dispute resolution. However, international tribunals are subject to significant constraints. These include constraints imposed by States as system designers and controllers, constraints imposed by adjudicators themselves, and other practical limitations.⁷ For example, international tribunals may lack the legitimacy or specialist knowledge needed to engage in significant law-making, weigh competing values, or resolve a dispute in its entirety.

Addressing how international tribunals might discharge their functions is important because international adjudication is at a crossroads. International adjudication has become increasingly central to some areas of international law and international relations over the past

⁶ A note on terminology: this book uses the terms ‘adjudicators’ and ‘tribunals’ interchangeably, unless otherwise specified. Partly this is to avoid the repetition of referring only to ‘tribunals’. It also reflects that adjudicators are in the driving seat in the key activity of composing the decisions of a tribunal, with the bench typically deciding collectively on the tribunal’s decisions (by majority vote if needed). Using the term ‘adjudicators’ tends to emphasise the agency of the individuals who serve as judges and arbitrators. However, I acknowledge that for some purposes a meaningful distinction may be drawn between ‘adjudicators’ and the ‘tribunals’ to which they belong. For example, in some tribunals the registry or secretariat also plays a major role in the practices of the tribunal (including the drafting of judgments). Additionally, individual adjudicators are shaped and constrained by the institutional practices of a tribunal to which they belong. On these wider theoretical issues see generally Salvatore Caserta and Mikael Rask Madsen, ‘The Situated and Bounded Rationality of International Courts: A Structuralist Approach to International Adjudicative Practices’ (2022) 35 LJIL 931, esp. 932, 939–40; Dunoff and Pollack (n 1) esp. 62–64, 83–85. See also Cesare PR Romano, Karen J Alter and Yuval Shany, ‘Mapping International Adjudicative Bodies, the Issues, and Players’ in Cesare PR Romano, Karen J Alter and Yuval Shany (eds), *The Oxford Handbook of International Adjudication* (OUP 2013) 4–5, 24–25.

⁷ On the constraints or control mechanisms that international tribunals are subject to see e.g. Laurence R Helfer and Anne-Marie Slaughter, ‘Why States Create International Tribunals: A Response to Professors Posner and Yoo’ (2005) 93 Calif LR 899, 942–55; Jacob Katz Cogan, ‘Competition and Control in International Adjudication’ (2008) 48 Virginia JIL 411, 420–37; Tom Ginsburg, ‘Bounded Discretion in International Judicial Lawmaking’ (2005) 45 Va. J. Int’l L. 631, 657–71. See also from a different theoretical perspective Caserta and Madsen (n 6) 932–33, 939–40; Soave (n 1) 589–90.

25–30 years.⁸ International tribunals are frequently asked to determine how States' treaty obligations are affected by changes in international law or relevant facts, or to determine the legality of domestic regulatory measures that are based on specialised forms of expertise and/or strike a contestable balance between competing values. However, substantial concerns have arisen about the desirability of 'court-based governance of international relations'⁹ in light of its operation in recent decades. Many have raised concerns over the legitimacy of the significant power exercised by international tribunals through their development of legal principles that affect the rights and obligations of actors far beyond the disputing parties.¹⁰ For example, a tribunal's decision may restrict the policy space of States who were not parties to a case.¹¹ Another common concern is that tribunals embedded within particular regimes – as most contemporary international tribunals are – may promote values specific to their own regime, at the cost of other concerns.¹² Others have posed the question of whether more flexible modes of dispute resolution, such as negotiation, mediation or conciliation, would be better suited

⁸ Yuval Shany, 'No Longer a Weak Department of Power? Reflections on the Emergence of a New International Judiciary' (2009) 20 EJIL 73, 73, 75–76, 83–84; Benedict Kingsbury, 'International Courts: Uneven Judicialisation in Global Order' in James Crawford and Martti Koskeniemi (eds), *The Cambridge Companion to International Law* (CUP 2012) 210–12; Karen J Alter, *The New Terrain of International Law: Courts, Politics, Rights* (Princeton UP 2014) 3–4.

⁹ Yuval Shany, *Assessing the Effectiveness of International Courts* (OUP 2014) 3.

¹⁰ See e.g. Nienke Grossman, 'The Normative Legitimacy of International Courts' (2013) 86 Temple Law Review 61, 68–73; Armin von Bogdandy and Ingo Venzke, *In Whose Name? A Public Law Theory of International Adjudication* (OUP 2014) 106–08, 112–19; Caroline E Foster, *Global Regulatory Standards in Environmental and Health Disputes: Regulatory Coherence, Due Regard, and Due Diligence* (OUP 2021) 287.

¹¹ Benedict Kingsbury and Stephan Schill, 'Investor-State Arbitration as Governance: Fair and Equitable Treatment, Proportionality and the Emerging Global Administrative Law' in Albert Jan van den Berg (ed), *50 Years of the New York Convention* (Kluwer Law International 2009) 5–6, 23–26; Foster (n 10) *ibid*.

¹² See e.g. von Bogdandy and Venzke (n 10) 134–35; Andreas Paulus, 'International Adjudication' in Samantha Besson and John Tasioulas (eds), *The Philosophy of International Law* (OUP 2010) 214–15; Tim Stephens, *International Courts and Environmental Protection* (CUP 2009) 309–10, 355–56. Where this study uses the term 'regime' I understand this to mean 'sets of norms, decision-making procedures and organisations coalescing around functional issue-areas and dominated by particular modes of behaviour, assumptions and biases': see Margaret A Young, 'Introduction: The Productive Friction between Regimes' in Margaret A Young (ed), *Regime Interaction in International Law: Facing Fragmentation* (CUP 2012) 4–11.

to resolving some of the disputes coming before international tribunals.¹³ Far from being issues only of academic interest, these issues are central to ongoing policy debates over reform of existing adjudicatory mechanisms, particularly in relation to investor–State dispute settlement (ISDS) and WTO dispute settlement.¹⁴

International tribunals continue to be presented with a large number of disputes across a variety of institutional contexts. Contemporary adjudicators are, on the whole, acutely sensitive to the broader concerns surrounding their work and often seek to address such concerns in their decisions.¹⁵ Thus, a crucial challenge facing international adjudication is to develop legal doctrines and techniques that respond to the demands facing the contemporary legal order, including by addressing concerns and potential shortcomings that have arisen from the increased adjudicatory activity of recent decades.¹⁶

In addressing these wider issues, this book makes three more specific contributions to our understanding of the functions of contemporary international adjudication. First, this book contributes to debates concerning the role played by international tribunals in incrementally adapting treaty obligations over time, given changes in international law or relevant facts, and, in so doing, balancing the competing interests of stability and change. I explain why this is a key challenge for tribunals in the context of international law's limited processes for law adjustment

¹³ Vaughan Lowe, 'The Function of Litigation in International Society' (2012) 61 ICLQ 209, 220–22; Anna Spain, 'Integration Matters: Rethinking the Architecture of International Dispute Resolution' (2010) 32 Univ. of Pennsylvania JIL 1; Daniel Bethlehem, 'The Greening of International Dispute Settlement? Stepping Back a Little' (2020) 114 ASIL Proceedings 225, 231–32; Shany (n 8) 88–89.

¹⁴ As outlined in Chapter 5, since 2017 Working Group III of the United Nations Commission on International Trade Law has been working on a mandate for reform of ISDS, which operates alongside other efforts to reform ISDS: see Chapter 5, text at nn 12–14. As outlined in Chapter 2, due to the United States blocking all appointments to the WTO Appellate Body from 2017 onwards – leading to the AB's demise in 2019 – numerous proposals for reform of WTO dispute settlement have been developed and some WTO members have developed an alternative system for appellate arbitration: see Chapter 2(A)(2)(b).

¹⁵ Similarly: Andrew Lang, 'Twenty Years of the WTO Appellate Body's "Fragmentation Jurisprudence"' (2015) 14 Journal of International Trade Law and Policy 116, 120–21; Sivan Shlomo-Agon, 'Clearing the Smoke: The Legitimation of Judicial Power at the WTO' (2015) 49 JWT 539, 582–87; Christina Voigt, 'International Courts and the Environment: The Quest for Legitimacy' in Christina Voigt (ed), *International Judicial Practice on the Environment* (Cambridge University Press 2019) 20.

¹⁶ Shany (n 8) 91.

and why it plays out differently across the four contexts studied. Second, in relation to the interrelated problems of the appropriate standard and method of review, which arise when adjudicators scrutinise State conduct for compliance with applicable international obligations,¹⁷ this book adds to existing debates that largely focus on WTO dispute settlement and investment treaty arbitration by connecting them to more recent debates over these issues in the ICJ and UNCLOS contexts. This part of the analysis reveals significant opportunities for comparatively informed learning. For example, I will demonstrate that a small number of functionally similar balancing techniques are used across the four contexts studied in scrutinising State measures for compliance with international obligations and suggest that certain lessons emerge regarding how such techniques might be employed. Third, the book adds to understandings of how adjudicators might, through their decisions, contribute to broader processes of dispute resolution. It builds on literature that suggests that international tribunals may in some circumstances play a partly facilitative role by clarifying key questions of law and fact and providing the parties a framework for resolving their dispute and rebuilding their relationship.¹⁸ These three challenges have been selected because they are issues of significance in their own right but also provide a useful proxy for developing a broader comparative assessment of the functions of international adjudication.

A broader, overall contribution made by this book is to analyse how international tribunals might discharge their functions given the varied contexts and constraints within which they operate. Contemporary international tribunals have markedly different design features, reflecting strategic choices made by the States who created them.¹⁹ For example, the control mechanisms that States can exercise, such as deciding upon (re)appointments to a tribunal or agreeing upon authoritative

¹⁷ The concepts of the standard and method of review are explained below: text at nn 74–76 and 86–89.

¹⁸ See literature cited below nn 101–106.

¹⁹ See e.g. Andrew T Guzman, 'International Tribunals: A Rational Choice Analysis' (2008) 157 *Univ. of Pennsylvania LR* 171, 203; Jeffrey L Dunoff and Mark A Pollack, 'The Judicial Trilemma' (2017) 111 *AJIL* 225, 229–31 (overview of rational design literature relevant to international tribunals); Barbara Koremenos, Charles Lipson and Duncan Snidal, 'The Rational Design of International Institutions' (2001) 55 *International Organization* 761, 761–62, 766–67.

interpretations of a treaty, differ significantly across contexts.²⁰ Our understanding of the functions of international tribunals must be sensitive to the marked variations that characterise contemporary international adjudication. In the chapters that follow, I will develop conclusions regarding how the particular context in which each of the tribunals operates shapes how the three selected challenges manifest themselves and are responded to by adjudicators. The analysis also identifies elements that are common across the contexts studied and provide broader insights into the functions performed by international adjudication.²¹

For several reasons, the category of environmental cases provides an ideal lens for the comparative study just described. Environmental disputes lack a dedicated international tribunal and are adjudicated across a variety of 'borrowed' fora with diverse design features and functional orientations.²² A substantial number of environmental cases have been litigated in each of the adjudication settings considered and no one institution or professional community has dominated such cases.²³ Accordingly, this category of cases is representative of the sectorial and decentralised nature of contemporary international adjudication,²⁴ and the familiarity with multiple subsystems of international law that this demands of international lawyers.²⁵ Environmental cases highlight the problem of how to respond to change because they often require adjudicators to interpret legal rules agreed at an earlier point – when

²⁰ See e.g. Helfer and Slaughter (n 7) 946–53; Katz Cogan (n 7) 420–25; Ginsburg (n 7) 657–68.

²¹ Cf Ruti Teitel and Robert Howse, 'Cross-Judging: Tribunalization in a Fragmented but Interconnected Global Order' (2009) 41 NYUJILP 959, 966 (on the possibility of identifying elements that are 'common and distinctive in the legalist's way of seeing international problems').

²² Pierre-Marie Dupuy and Jorge E Viñuales, *International Environmental Law* (2nd ed., CUP 2018) 300, 303.

²³ Alan Boyle, 'The Environmental Jurisprudence of the International Tribunal for the Law of the Sea' (2007) 22 IJMCL 369, 372; James Harrison, 'Reflections on the Role of International Courts and Tribunals in the Settlement of Environmental Disputes and the Development of International Environmental Law' (2013) 25 *Journal of Environmental Law* 501, 502–03.

²⁴ Ellen Hey, *Reflections on an International Environmental Court* (Kluwer Law International 2000) 24.

²⁵ Suzannah Linton and Firew Kebede Tiba, 'The International Judge in an Age of Multiple International Courts and Tribunals' (2008) 9 *Chicago JIL* 407, 464 (international lawyers need 'to be as versatile as Swiss Army knives in terms of their knowledge of the various subsystems of international law'); Martti Koskeniemi, 'The Case for Comparative International Law' (2011) 20 *Finnish YBIL* 1, 6–7 (suggesting contemporary international lawyers need expertise in multiple regimes).

environmental norms were less well developed – in new ways,²⁶ and because the application of such norms often depends on facts that are prone to change, such as scientific knowledge or technical capacity.²⁷ Additionally, because environmental norms are often vague or ‘standard-like’, environmental cases force adjudicators, in concretising the content of such principles, to walk ‘a tight-rope between application and development of the law’.²⁸ Environmental disputes also pose acutely the question of how intensely international adjudicators should scrutinise domestic-level determinations based on the application of specialised forms of non-legal expertise, an assessment of local circumstances, or the exercise of discretion. Thus, this category of cases foregrounds the problem of the appropriate standard or intensity of review. As environmental disputes typically involve competing economic and ecological interests,²⁹ they also raise the question of which legal techniques international tribunals might use to balance partially competing interests and whether adjudicators should ever themselves weigh the relative importance of competing regulatory aims. Finally, environmental cases have repeatedly raised the question of whether it is appropriate for international tribunals to decide disputes with a partly prospective focus, and, for example, order the parties to cooperate in conducting further environmental monitoring or negotiations.³⁰

Existing international law literature concerning international environmental adjudication largely focuses on the conditions under which international adjudication might act as an effective mechanism for protecting

²⁶ Anna Spain, ‘Beyond Adjudication: Resolving International Resource Disputes in an Era of Climate Change’ (2011) 30 *Stanford Environmental LJ* 343, 362.

²⁷ See e.g. Bradley J Condon, *Environmental Sovereignty and the WTO: Trade Sanctions and International Law* (Transnational Publishers 2006) 38–40; Markus Vordermayer, ‘“Gardening the Great Transformation”: The Anthropocene Concept’s Impact on International Environmental Law Doctrine’ (2014) 25 *Ybk IEL* 79 (on the challenge of adapting existing treaties given evolving scientific understandings of the environment).

²⁸ Voigt (n 15) 8. Similarly: Natalie Klein and Danielle Kroon, ‘Settlement of International Environmental Law Disputes’ in Malgosia Fitzmaurice, Marcel Brus and Panos Merkouris (eds), *Research Handbook on International Environmental Law* (2nd ed., Edward Elgar 2021) 244–45; Philippe Sands, ‘Litigating Environmental Disputes: Courts, Tribunals and the Progressive Development of International Environmental Law’ in Tafsir Malick Ndiaye, Rüdiger Wolfrum and Chie Kojima (eds), *Law of the Sea, Environmental Law, and Settlement of Disputes: Liber Amicorum Judge Thomas A. Mensah* (Martinus Nijhoff 2007) 314–15.

²⁹ Klein and Kroon (n 28) 232; Richard Bilder, ‘The Settlement of Disputes in the Field of the International Law of the Environment’ (1975) 144 *RdC* 140, 154–55.

³⁰ Klein and Kroon (n 28) 248–49.

environmental interests.³¹ This book has a different focus as it uses environmental cases as a lens for reflecting back on the functions performed by international adjudication, and how those functions might be discharged, given the varied contexts in which the selected tribunals operate. In short, environmental disputes are used here as a useful terrain for studying the role of adjudication in international law; strictly this is not a book about environmental law.

The remainder of this chapter explains how the book achieves these aims. Section B situates this book in relation to existing debates concerning the functions of international adjudication and expands further on the three challenges facing tribunals that are traced throughout the book. Section C explains how this study has defined what counts as an environmental case and why the four adjudication settings focused upon have been selected. Section D explains certain basic insights the book has incorporated from methodological debates in comparative law. Section E provides an overview of the chapters to come.

B. The Varied Functions of Contemporary International Adjudication

By analysing how adjudicators address the three selected challenges across the four contexts studied, this book investigates the functions that these international tribunals perform. By ‘functions’ I mean the roles played by international tribunals in deciding cases, or what they are doing,³² and how their decisions serve particular ends or purposes,³³ as one part of the broader international legal order.³⁴ Thinking in terms of

³¹ Cesare PR Romano, *The Peaceful Settlement of International Environmental Disputes: A Pragmatic Approach* (Kluwer Law International 2000) xlv, 30; Stephens (n 12) 2, 365; Yasuhiro Shigeta, *International Judicial Control of Environmental Protection: Standard Setting, Compliance Control, and the Development of International Environmental Law by the International Judiciary* (Kluwer Law International 2010) 4, 8, 351; Justine Bendel, *Litigating the Environment: Process and Procedure before International Courts and Tribunals* (Edward Elgar 2023) 1, 7–8, 12–13, 249.

³² Lowe (n 13) 211.

³³ Stephan Wittich, ‘The Judicial Functions of the International Court of Justice’ in Isabelle Buffard and others (eds), *International Law between Universalism and Fragmentation: Festschrift in Honour of Gerhard Hafner* (Martinus Nijhoff 2008) 985–86.

³⁴ von Bogdandy and Venzke (n 10) 5, 7; Theresa Squatrito and others, ‘A Framework for Evaluating the Performance of International Courts and Tribunals’ in Theresa Squatrito and others (eds), *The Performance of International Courts and Tribunals* (CUP 2018) 10. Typically the ends served by adjudicatory decisions will be more specific than, and make an incremental contribution to, the ultimately aims of a legal order: Lowe (n 13) 211.

the functions of international adjudication is useful because international tribunals are designed with different purposes that must be analysed in an institution-specific manner,³⁵ and a tribunal's specific functions, established by relevant constitutive instruments, are an important influence on how adjudicators perform their roles.³⁶ Furthermore, the decisions of international tribunals are typically multifunctional in that a single decision often has 'a series of legal and social consequences that one can regard as functions',³⁷ which are distinct yet overlapping and frequently in tension with each other.³⁸

A primary function of international tribunals is to settle the disputes presented to them in accordance with the applicable law.³⁹ For example, the function of dispute settlement has an explicit basis in both the Statute of the ICJ and the WTO Dispute Settlement Understanding, and both the ICJ and WTO panels and the AB have affirmed this task in their case law.⁴⁰ A traditional view sees the dispute settlement function as limited

On the functions of international law generally, see e.g. Dana Burchardt, 'The Functions of Law and Their Challenges: The Differentiated Functionality of International Law' (2019) 20 *German LJ* 409. In limited respects Section B of this chapter draws on ideas and material from Joshua Paine, 'International Adjudication as a Global Public Good?' (2018) 29 *EJIL* 1223.

³⁵ Shany (n 9) 48; Wittich (n 33) 988; Dinah Shelton, 'Form, Function, and the Powers of International Courts' (2008) 9 *Chicago JIL* 537, 571.

³⁶ Wittich (n 33) 987; José E Alvarez, *The Impact of International Organizations on International Law* (Brill Nijhoff 2017) 341–42. However, note that it is well recognised that an international tribunal may perform functions that are not expressly assigned to it: see e.g. Hersch Lauterpacht, *The Development of International Law by the International Court* (rev ed., Stevens & Sons 1958) 5; von Bogdandy and Venzke (n 10) 7–8. Note also that the literature recognises that there are certain core or generic functions that most international tribunals perform: Shany (n 9) 37–38; Yaël Ronen, 'Functions and Access' in William A Schabas and Shannonbrooke Murphy (eds), *Research Handbook on International Courts and Tribunals* (Edward Elgar 2017) 463.

³⁷ von Bogdandy and Venzke (n 10) 5, 7.

³⁸ Wittich (n 33) 989, 1000. But see Shelton (n 35) 539–40 (arguing there is always a dominant function at a given time).

³⁹ Manley O Hudson, *International Tribunals: Past and Future* (Carnegie Endowment for International Peace 1944) 236.

⁴⁰ Statute of the International Court of Justice (1945) 33 UNTS 993, art 38(1) ('ICJ Statute'); Understanding on Rules and Procedures Governing the Settlement of Disputes, Marrakesh Agreement Establishing the World Trade Organisation, Annex 2 (1994) 1869 UNTS 401, arts 3.3, 3.4, 3.7 ('DSU' and 'WTO Agreement'). See e.g. *LaGrand (Germany v United States of America)*, Judgment, ICJ Rep [2001] 466, [52]; *Nuclear Tests (New Zealand v France)*, Judgment, ICJ Rep [1974] 457, [58], [60]; *Northern Cameroons (Cameroon v United Kingdom)*, Preliminary Objections, Judgment, ICJ Rep [1963] 15, 33–34; Panel Report, *European Communities – Regime for the Importation, Sale and Distribution of Bananas, Complaint by Ecuador*, WT/DS27/R/ECU, adopted

and private, whereby the task of tribunals 'is "to do justice" between the litigant States, and to render a judgment or award which takes account of all relevant facts, which is limited to the *petitum* of the dispute, and which is made with final and binding force'.⁴¹ However, in the course of deciding disputes, tribunals typically perform, even if only indirectly, a variety of other more public functions.⁴² To begin with, even the dispute settlement function is not solely of a private and bilateral nature. The peaceful settlement of disputes arguably serves a broader community interest beyond the disputing parties by preventing disputes festering and escalating into broader international tensions or even violent conflict.⁴³ In some circumstances, tribunals' decisions might also enable future dispute settlement or 'bargaining in the shadow' of such decisions, including by parties who were not involved in the original case.⁴⁴

A second key function served by international tribunals is that they act as 'agents' in the development of international law.⁴⁵ There are important differences between other types of law-making, such as concluding treaties or agreeing on treaty amendments or authoritative interpretations, and the far more constrained law-making in which international tribunals have an opportunity to engage.⁴⁶ In particular, international tribunals are constrained by the cases that are brought before them and how those cases are argued by the disputing parties, and there is a strong expectation that tribunals' decisions will be related to existing legal

25 September 1997, [7.32]; Appellate Body Report, *United States – Measure Affecting Imports of Woven Wool Shirts and Blouses from India*, WT/DS33/AB/R, adopted 23 May 1997, 18–19.

⁴¹ Chester Brown, *A Common Law of International Adjudication* (OUP 2007) 72.

⁴² Ibid 72–78; A Neil Craik, 'Recalcitrant Reality and Chosen Ideals: The Public Function of Dispute Settlement in International Environmental Law' (1997) 10 *Georgetown Int'l Env'tl. L. Rev.* 551, 562ff. Caron suggested distinguishing between the singular judicial task of adjudicators, namely 'resolving disputes according to preexisting legal norms', and the various social functions that are furthered indirectly as a result of adjudicators' activity: David D Caron, 'The Multiple Functions of International Courts and the Singular Task of the Adjudicator' (2017) 111 *ASIL Proceedings* 231, 233–34.

⁴³ Wittich (n 33) 990; Shany (n 9) 41–42; Hudson (n 39) 237–39.

⁴⁴ See e.g. Andrea K Schneider, 'Bargaining in the Shadow of (International) Law: What the Normalization of Adjudication in International Governance Regimes Means for Dispute Resolution' (2008) 41 *NYUJILP* 789, 817–19; Sara McLaughlin Mitchell and Andrew P Owsiak, 'Judicialization of the Sea: Bargaining in the Shadow of UNCLOS' (2021) 115 *AJIL* 579, 598–99.

⁴⁵ See e.g. Philippa Webb, *International Judicial Integration and Fragmentation* (OUP 2013) 206; Christian J Tams and Antonios Tzanakopoulos, 'Barcelona Traction at 40: The ICJ as an Agent of Legal Development' (2010) 23 *LJIL* 781, 785.

⁴⁶ von Bogdandy and Venzke (n 10) 109.

materials and make use of recognised methods of legal reasoning.⁴⁷ The influence of their decisions also depends, to a greater degree than other forms of law-making, on how they are received in subsequent legal practice.⁴⁸ International courts and tribunals also ‘lack the legitimacy, deliberative character’ and representative nature of some other law-making processes (e.g. multilateral diplomatic fora).⁴⁹ Yet, despite these qualifications, international tribunals are bodies with immense ‘semantic authority’, or ability to shape legal meanings and establish their communications as ‘authoritative reference points in legal discourse’.⁵⁰ By deciding cases, international tribunals contribute, at least incrementally, to the clarification and development of principles that prospectively shape the rights and obligations of actors well beyond the disputing parties.⁵¹ This aspect of contemporary international adjudication has given rise to major legitimacy concerns. Unlike domestic courts, whose decisions can typically be overridden by legislation, international tribunals are largely not under equivalent forms of direct political control because treaties cannot be authoritatively interpreted in the absence of consensus amongst the treaty parties, and treaty amendment procedures typically either require consensus or a specified majority.⁵²

⁴⁷ Ibid 109–11; Foster (n 10) 288–93; Christian J Tams, ‘The ICJ as a “Law-Formative Agency”: Summary and Synthesis’ in Christian J Tams and James Sloan (eds), *The Development of International Law by the International Court of Justice* (OUP 2013) 392; James Harrison, ‘Judicial Law-Making and the Developing Order of the Oceans’ (2007) 22 IJMCL 283, 284–85; Alan Boyle, ‘Progressive Development of International Environmental Law: Legislate or Litigate?’ (2019) 62 German Ybk. Int’l L. 305, 322–24; Oliver J Lissitzyn, *The International Court of Justice: Its Role in the Maintenance of International Peace and Security* (Carnegie Endowment for International Peace 1951) 16–17.

⁴⁸ Webb (n 45) 206; Tams (n 47) 380; José E Alvarez, *International Organizations as Law-Makers* (OUP 2006) 550–51.

⁴⁹ Boyle (n 47) 322; Foster (n 10) 287–90.

⁵⁰ Ingo Venzke, *How Interpretation Makes International Law: On Semantic Change and Normative Twists* (OUP 2012) 63.

⁵¹ See e.g. Grossman (n 10) 68; Lowe (n 13) 212–14; von Bogdandy and Venzke (n 10) 106, 207; Boyle (n 47) 322; Geert De Baere, Anna-Luise Chane and Jan Wouters, ‘International Courts as Keepers of the Rule of Law: Achievements, Challenges, and Opportunities’ (2016) 48 NYUJILP 715, 780–86; Alvarez (n 36) 286. Note in this regard that the reasoning employed by an international tribunal arguably ‘has a broad conditioning effect on the way states themselves engage in legal reasoning’: Sean D Murphy, ‘International Judicial Bodies for Resolving Disputes between States’ in *The Oxford Handbook of International Adjudication* (n 6) 198–99.

⁵² von Bogdandy and Venzke (n 10) 124–25. On the point that subsequent agreement and subsequent practice under Articles 31(3)(a) and (b) of the Vienna Convention on the Law of Treaties require the agreement of all treaty parties see International Law Commission

This aspect of the adjudicatory function is broadly where the first cross-cutting challenge traced by this book arises. I argue that adjudicators, in interpreting and applying applicable legal norms, face a challenge of ensuring ‘legal certainty through predictable interpretation of the law and at the same time to make allowance for legal change, without which law cannot live’.⁵³ The challenge of responding to demands for change while providing a sufficient degree of legal certainty and stability has been recognised as one of the key problems facing international adjudication by various commentators who have reflected on the functions of international adjudication over the last century.⁵⁴ Similarly to

(ILC), Draft Conclusions on Subsequent Agreements and Subsequent Practice in relation to the Interpretation of Treaties with Commentaries, [2018] II(2) ILC Ybk 25, 63–67, Conclusion 10 and commentary; Article IX:2 of the WTO Agreement empowers the Ministerial Conference and General Council to adopt interpretations of WTO covered agreements by a three-fourths majority of members. However, this power has never been used, including as in practice these bodies operate via consensus: see e.g. Claus-Dieter Ehlermann and Lothar Ehring, ‘The Authoritative Interpretation under Article IX:2 of the Agreement Establishing the World Trade Organization: Current Law, Practice and Possible Improvements’ (2005) 8 JIEL 803, 813–18. Multilateral treaty amendment procedures that permit some form of majority voting may also provide that amendments only enter into force for parties that ratify the amendment: e.g. UNCLOS arts 312(2), 316 (1); WTO Agreement art X(1), (3).

⁵³ Ilmar Tammelo, *Treaty Interpretation and Practical Reason: Towards a General Theory of Legal Interpretation* (Law Book Company 1967) 53–54. See also Gleider I Hernández, *The International Court of Justice and the Judicial Function* (OUP 2014) 157–59, 187–91 (discussing how the practice of relying on precedent ensures stability and legal certainty but also has a forward-looking aspect, whereby judges consider how their reasoning will affect similar cases that may arise in future); Letizia Lo Giacco, *Judicial Decisions in International Law Argumentation: Between Entrapment and Creativity* (Hart 2022) 6, 33, 61–62 (discussing international criminal tribunals’ recurrent emphasis on ensuring legal certainty and predictability as a reason for preferring certain interpretations); Klara Polackova Van der Ploeg, ‘International Law through Time: On Change and Facticity of International Law’ in Luca Pasquet, León Castellanos-Jankiewicz and Klara Polackova Van der Ploeg (eds), *International Law and Time: Narratives and Techniques* (Springer 2022) 325–26 (noting that equating stability with legal certainty may not always be correct as ‘[s]o long as law provides clear mechanisms for its modification, change can remain predictable’ and change in international law may be needed ‘to facilitate stability in the international domain’).

⁵⁴ Important discussions include Hersch Lauterpacht, *The Function of Law in the International Community* (OUP 1933) 254–57 and generally Pt IV (‘Stability and Change in International Law’); C Wilfred Jenks, ‘Orthodoxy and Innovation in the Law of Nations’ (1971) 57 Proceedings of the British Academy 215, 222–33; RP Anand, *Studies in International Adjudication* (Vikas Publications 1969) 168–71, 178–90. More recently, see e.g. Peter Van den Bossche, ‘Is There Evolution in the Evolutionary Interpretation of WTO Law?’ in Georges Abi-Saab and others (eds), *Evolutionary Interpretation and International Law* (Hart 2019) 221–22. See also Gregory Messenger,

these earlier perspectives, this book argues that balancing the competing interests of stability and legal certainty on the one hand, and change and responsiveness to new demands on the other, is a pressing problem for international adjudication. In addition to contemporary international law being expected to be responsive to an increasing range of social demands,⁵⁵ in many areas of international law there is little new treaty law being agreed,⁵⁶ compared to the large number of disputes being adjudicated,⁵⁷ meaning the burden of responding to demands for change is frequently placed on adjudicators.⁵⁸ Through their decisions, international tribunals clarify the content of abstract norms and adapt them to changed circumstances.⁵⁹ As Lowe has suggested, international litigation often operates ‘as an alternative to, or substitute for, law reform and treaty-making’.⁶⁰ For example, we will see in Chapter 2 that despite the

‘The Development of International Law, Perception, and the Problem of Time’ in *International Law and Time* (n 53) 340–41, 349, 352 (highlighting the fundamental nature of the ‘functional tension’ between stability and change for international law and that it places certain ‘demands on interpreters’, particularly judicial bodies); Van der Ploeg (n 53) 316, 325–27 (unpacking the distinct aspects of change and stability in international law).

⁵⁵ Campbell McLachlan, ‘The Evolution of Treaty Obligations in International Law’ in Georg Nolte (ed), *Treaties and Subsequent Practice* (OUP 2013) 72; Christian Djeflal, *Static and Evolutive Treaty Interpretation: A Functional Reconstruction* (CUP 2015) 210–11; Irina Buga, *Modification of Treaties by Subsequent Practice* (OUP 2018) 2–3.

⁵⁶ See Joost Pauwelyn, Ramses A Wessel and Jan Wouters, ‘When Structures Become Shackles: Stagnation and Dynamics in International Lawmaking’ (2014) 25 EJIL 733, esp. 734–37; McLachlan, *ibid* 70–72; Andreas Motzfeldt Kravik, ‘An Analysis of Stagnation in Multilateral Law-Making – and Why the Law of the Sea Has Transcended the Stagnation Trend’ (2021) 34 LJIL 935.

⁵⁷ See Alter (n 8) 105 (charting binding rulings issued by permanent international courts by year up until 2011, excluding the exceptionally active European Court of Human Rights and European Court of Justice. This shows that more rulings were issued in each year from 2003 than had been issued between 1945 and 1989. Notably, Alter’s data excludes investor–State arbitration, which has been an exceptionally active site of international adjudication in the last twenty-five years).

⁵⁸ Caron (n 42) 236.

⁵⁹ Shany (n 9) 38–39; Shelton (n 35) 553; Robert Kolb, *The International Court of Justice* (Alan Perry tr, Hart 2013) 1141–43; Christopher G Weeramantry, ‘The Function of the International Court of Justice in the Development of International Law’ (1997) 10 LJIL 309, 313–19 (judge as ‘the instrument of change through which the process of adaptation takes place to the needs of the time’).

⁶⁰ Lowe (n 13) 214. See also Paul F Diehl and Charlotte Ku, *The Dynamics of International Law* (CUP 2010) 64–70, 147–50 (noting this role of international tribunals within a theory of international legal change whereby major changes occur infrequently, for example through the adoption of multilateral treaties, and stability in the international legal system is the norm); Alvarez (n 48) 533–34; Nico Krisch, ‘The Dynamics of

negotiating processes within the WTO having been largely stalled since the conclusion of the Uruguay Round agreements, WTO law has continued to develop, including through adjudicators interpreting WTO agreements.⁶¹ While judges in any legal system try to avoid being seen to make law, this pressure is ‘particularly heavy’ for international adjudicators,⁶² including because their institutional position ultimately relies upon State consent.⁶³

In analysing the challenge that adjudicators face in balancing the competing interests of stability and change it is useful to distinguish between the questions of changes in legal norms themselves and changes in facts that affect the application of such norms. Where the meaning of a legal norm changes – for example if the meaning of a treaty term is tied to another legal concept that may change – we are dealing with change or evolution in the law.⁶⁴ In contrast, the broad meaning of a legal norm may remain constant but the norm may be applied to changing factual circumstances that will affect what the norm requires at any particular time.⁶⁵ As we will see, environmental cases have frequently raised both

International Law Redux’ (2021) 74 *Current Legal Problems* 269 (general account of change in international law that views ‘the judicial path’ as being one of several different pathways through which international law changes).

⁶¹ See e.g. Gregory Messenger, *The Development of World Trade Organization Law: Examining Change in International Law* (OUP 2016) 61–67, 193.

⁶² Tammelo (n 53) 53.

⁶³ Lauterpacht (n 36) 75–76; Boyle (n 47) 324; Alvarez (n 48) 564–65.

⁶⁴ Panos Merkouris, ‘(Inter)Temporal Considerations in the Interpretative Process of the VCLT: Do Treaties Endure, Perdure or Exdure?’ (2014) 45 *Netherlands YBIL* 121, 132–33.

⁶⁵ Sondre Torp Helmersen, ‘Evolutive Treaty Interpretation: Legality, Semantics and Distinctions’ (2013) 6 *EJLS* 161, 162; Graham Cook, ‘The Illusion of “Evolutionary Interpretation” in WTO Dispute Settlement’ in *Evolutionary Interpretation and International Law* (n 54) 182–84. The distinction between changes in law and changes in relevant facts is not always clear-cut; see Robert Kolb, ‘Evolutionary Interpretation in International Law: Some Short and Less than Trail-Blazing Reflections’ in *Evolutionary Interpretation and International Law* (n 54) 16–18. Further distinctions are possible. For a useful taxonomy of the variety of types of change that fall within the broad category of evolutionary interpretation, see Gabrielle Marceau, ‘Evolutive Interpretation by the WTO Adjudicator’ (2018) 21 *JIEL* 791, 803–13. Within debates on treaty interpretation a distinction is recognised between the interrelated processes of interpretation, which involves ‘determining the meaning of a rule’, and application, which involves ‘determining the consequences which the rule attaches to the occurrence of a given fact’: *Case Concerning the Factory at Chorzów (Germany v Poland)*, Claim for Indemnity – Jurisdiction, PCIJ Rep Series A No 9 [1927], Diss. Op. Ehrlich 39. For discussion, see e.g. Anastasios Gourgourinis, ‘The Distinction between Interpretation and Application of Norms in International Adjudication’ (2011) 2 *JIDS* 31, 43–48.

the question of potential changes in legal norms and that of changes in facts that affect the application of legal norms.

Another key function of international tribunals is scrutinising the conduct of State authorities for compliance with international law.⁶⁶ The particular manifestation of this function that has attracted substantial attention in recent years is the scenario where a State enjoys a degree of discretion under applicable international legal norms (often a treaty) and an international tribunal must determine whether the State has acted within the limits imposed on its discretion.⁶⁷ Some authors suggest that this ‘compliance monitoring’ role is more present in some contexts, such as WTO adjudication or regional human rights courts, than others, such as the ICJ and ITLOS, which are characterised as primarily concerned with dispute settlement.⁶⁸ This book demonstrates, however, that in the UNCLOS and ICJ contexts adjudicators also frequently grapple with issues that are central to the compliance-monitoring function, such as how to calibrate the appropriate standard or intensity of review and which methods of review to employ.

It is important to emphasise that while throughout this book I refer to a ‘review’ function or similar, whereby international tribunals scrutinise State conduct for compliance with international norms, I do not assume that this can be equated with judicial review as occurs in certain domestic

⁶⁶ von Bogdandy and Venzke (n 10) 14–15; Armin von Bogdandy and Ingo Venzke, ‘On the Functions of International Courts: An Appraisal in Light of Their Burgeoning Public Authority’ (2013) 26 LJIL 49, 57–58; Ronen (n 36) 469–70; Shany (n 9) 469–70; De Baere, Chane and Wouters (n 51) 775.

⁶⁷ Robert Kolb, ‘Short Reflections on the ICJ’s Whaling Case and the Review by International Courts and Tribunals of “Discretionary Powers”’ (2014) 32 AYBIL 135, 135–36; Erietta Scalieri, ‘Discretionary Power of Coastal States and the Control of Its Compliance with International Law by International Tribunals’ in Angela Del Vecchio and Roberto Virzo (eds), *Interpretations of the United Nations Convention on the Law of the Sea by International Courts and Tribunals* (Springer 2019) 349–62; Vladyslav Lanovoy, ‘Standards of Review in the Practice of International Courts and Tribunals’ in Gábor Kajtár, Basak Çali and Marko Milanovic (eds), *Secondary Rules of Primary Importance in International Law* (OUP 2022) 42; Deborah Russo, ‘The Use of Proportionality in the Recent Case-Law of the ICJ’ (2015), University of Oslo Faculty of Law Legal Studies Research Paper Series No 2015-15 <http://ssrn.com/abstract=2614316>. Neil Craik, ‘The Duty to Cooperate in International Environmental Law: Constraining State Discretion through Due Respect’ (2019) 30 Ybk IEL 22, esp. 29–30, 34–35, 44.

⁶⁸ Yuval Shany, ‘One Law to Rule Them All: Should International Courts Be Viewed as Guardians of Procedural Order and Legal Uniformity?’ in Ole Kristian Fauchald and André Nollkaemper (eds), *The Practice of International and National Courts and the (De-)Fragmentation of International Law* (Hart 2012) 19–20; Shelton (n 35) 564–66.

systems of public law. Rather, while an analogy with domestic judicial review has animated much of the international law literature concerning the standard or intensity of review, this analogy does not necessarily hold in all respects.⁶⁹ As Shirlow and Foster have both observed, the analogy with domestic judicial review relies upon a conferred or delegated powers model of sovereignty, whereby a State's powers are limited rather than plenary, and a tribunal's task is to determine whether the terms of the delegation have been respected.⁷⁰ Whether this view of sovereignty can be transposed to the international plane is debatable. Relatedly, Fahner has developed an important claim that due to the limited purposes of international courts and tribunals, and their limited powers to directly affect domestic legal systems (e.g. by annulling domestic legal acts), international adjudication, with the exception of regional human rights courts, is not comparable to judicial review in the domestic context.⁷¹ In Fahner's account, whereas judicial review in domestic systems serves the purpose of 'legitimising the exercise of public power in a constitutional sense by providing checks on political institutions', most international courts and tribunals serve the limited purpose of settling disputes in accordance with the norms established by particular sectorial regimes.⁷²

The function of international tribunals of scrutinising State conduct for compliance with applicable international norms is where the second problem traced by this book arises, which is twofold. Specifically, across the four contexts considered I analyse tribunals' approaches to the interrelated issues of the standard or intensity of review and the methods of review employed.⁷³ The standard of review refers to the intensity of

⁶⁹ Esmé Shirlow, *Judging at the Interface: Deference to State Decision-Making Authority in International Adjudication* (CUP 2021) 222–24. See also Shai Dothan, *International Judicial Review: When Should International Courts Intervene?* (CUP 2020) 8, 138.

⁷⁰ Shirlow (n 69) 225–27. Foster links this view of sovereignty as conferred power to the implicit use by international tribunals, in adjudicating States' regulatory powers, of one aspect the abuse of rights doctrine, focusing on misuse of powers (ie use of a right for a purpose other than the purpose for which it was created): Foster (n 10) 8–9, 30–32, 294–96, 307–09.

⁷¹ Johannes Hendrik Fahner, *Judicial Deference in International Adjudication: A Comparative Analysis* (Hart 2020) 190–212.

⁷² Ibid 205–09; Johannes Hendrik Fahner, 'The Limited Utility of Deference in International Dispute Settlement' (2022) 21 *LPICT* 467, 475–77. For a similar argument see Başak Çalı, 'International Judicial Review' in Anthony Lang and Antje Wiener (eds), *Handbook on Global Constitutionalism* (Edward Elgar 2017) esp. 291–97.

⁷³ The point that these issues are interrelated, meaning one cannot be analysed without considering the other, is well recognised: e.g. Valentina Vadi, *Proportionality, Reasonableness and Standards of Review in International Investment Law and*

the scrutiny applied by international adjudicators to prior determinations made by another decision-maker, typically an organ of the State whose conduct is being scrutinised for compliance with international obligations.⁷⁴ The standard or intensity of review applied can fall on a variety of points ‘on a continuum bounded by total deference to justifications provided or analysis performed by a primary decision-maker at one end, and substitutionary (*de novo*) review of the relevant measure and its justification at the other’.⁷⁵ In this book I use the term standard of review, however there are other concepts that are largely synonymous, which also arise in some of the case law analysed, most obviously the ‘margin of appreciation’ doctrine as developed in the jurisprudence of the European Court of Human Rights. These terms are manifestations of the broader concept of ‘deference’, which, as Shirlow puts it, encompasses a wide range of ‘techniques used by international adjudicators to recognise a domestic actor’s superior “authority” to decide issues relevant to the settlement of the dispute brought before the international adjudicator’.⁷⁶

The question of the standard or intensity of review is of central importance for the role played by international adjudication because it directly affects the division of decision-making power between the international and national levels.⁷⁷ Furthermore, the applicable standard or intensity of review

Arbitration (Edward Elgar 2018) 253; Caroline Henckels, *Proportionality and Deference in Investor-State Arbitration: Balancing Investment Protection and Regulatory Autonomy* (CUP 2015) 31; Julian Rivers, ‘Proportionality and Discretion in International and European Law’ in Nicholas Tsagourias (ed), *Transnational Constitutionalism: International and European Perspectives* (CUP 2007) 108–09.

⁷⁴ Wouter Werner and Lukasz Gruszczynski, ‘Introduction’ in Lukasz Gruszczynski and Wouter Werner (eds), *Deference in International Courts and Tribunals: Standard of Review and Margin of Appreciation* (OUP 2014) 1–2; Henckels (n 73) 29–30.

⁷⁵ Caroline Henckels, ‘Balancing Investment Protection and the Public Interest: The Role of the Standard of Review and the Importance of Deference in Investor-State Arbitration’ (2013) 4 *JIDS* 197, 201; Werner and Gruszczynski (n 74) 1–2. Note that even those who argue that the development of refined standards of review adds little to the normal exercise of interpreting and applying applicable international legal norms nevertheless recognise that deference may be appropriate in some cases, for example based on the greater expertise or accountability of other decision-makers, and will involve something short of *de novo* review: Fahner (n 72) 479.

⁷⁶ Shirlow (n 69) 16. See also Stephan W Schill, ‘Deference in Investment Treaty Arbitration: Re-conceptualizing the Standard of Review’ (2012) 3 *JIDS* 577, 582; Fahner (n 71) 5–7, 148.

⁷⁷ See e.g. Michael Ioannidis, ‘Beyond the Standard of Review: Deference Criteria in WTO Law and the Case for a Procedural Approach’ in Gruszczynski and Werner (eds), *Deference in International Courts and Tribunals* (n 74) 92–93; Henckels (n 73) 30; Shirlow (n 69) 270–71, 273; Werner and Gruszczynski (n 74) 2.

is at most partly resolved by applicable treaties and is to a significant degree determined by international adjudicators themselves.⁷⁸ As we will see, the prospect of international tribunals scrutinising, and potentially second-guessing, sensitive domestic determinations, such as determinations concerning environmental risks and how to respond to such risks, raises acute concerns regarding the relative expertise and legitimacy of adjudicators.

The problem of the applicable standard or intensity of review is persistent in the context of the adjudication of a complex and 'inward-looking' international law of cooperation, where international law increasingly regulates issues that are the subject of domestic decision-making processes.⁷⁹ Determining whether States have complied with their international obligations frequently requires tribunals to consider contested questions based on specialised forms of expertise, often of a scientific or technical character, which adjudicators are not well placed to answer themselves.⁸⁰ Other actors, including national-level decision-makers who are not courts, and thus not constrained by the inherent limitations of an adjudicatory process, may possess greater subject-specific expertise for answering such questions.⁸¹ Compared to international tribunals, domestic decision-makers also enjoy proximity to local conditions, which can be relevant to applying international norms, particularly in the context of open-ended or standard-type norms the application of which is inherently context specific.⁸² Finally, it is widely recognised that compared to international adjudicators, domestic decision-makers may enjoy greater legitimacy to make certain kinds of determinations, for example discretionary, value-laden determinations such as determining what is in the domestic public interest.⁸³

⁷⁸ Werner and Gruszczynski (n 74) 1; Yuval Shany, 'Toward a General Margin of Appreciation Doctrine in International Law?' (2005) 16 *EJIL* 907, 911.

⁷⁹ See e.g. Shirlow (n 69) 253–54 (on how the subject matter regulated by international law affects deference); Fahner (n 71) 1; Shany (n 78) 920–21 (on the connection between 'inward-looking' international norms and deference); Lanovoy (n 67) 42, 63.

⁸⁰ Makane Moïse Mbengue and Rukmini Das, 'The ICJ's Engagement with Science: To Interpret or Not to Interpret?' (2015) 6 *JIDS* 568, 568–69, 576; Joel P Trachtman, 'International Legal Control of Domestic Administrative Action' (2014) 17 *JIEL* 753, 754–55, 784.

⁸¹ See e.g. Shirlow (n 69) 20–24; Shany (n 78) 918; Henckels (n 73) 39–41.

⁸² Shirlow (n 69) 24; Shany (n 78) 913–15. Note, however, that the independence of international adjudicators from national processes can also be an important argument against deference to national processes: e.g. Henckels (n 73) 38.

⁸³ Schill (n 76) 599–601; Henckels (n 73) 37–38; Andreas von Staden, 'The Democratic Legitimacy of Judicial Review beyond the State: Normative Subsidiarity and Judicial Standards of Review' (2012) 10 *ICON* 1023, 1026–27, 1037–38.

The issue of the standard of review is already the subject of a substantial literature, particularly in the trade and investment contexts.⁸⁴ The essential move made by this book is to demonstrate that the same basic dilemmas concerning the division of decision-making power between international tribunals and States, and the relative knowledge and legitimacy of international adjudicators, also arise in 'fact-intensive' environmental disputes in the UNCLOS and ICJ contexts.⁸⁵ This aspect of the book explains how contextual differences across the four settings studied shape how the problem of the standard of review arises in each context and reveals significant opportunities for comparatively informed learning.

In analysing how adjudicators scrutinise State conduct for compliance with international norms across the four contexts studied, I also trace the related issue of the methods of review, or legal tests, employed by tribunals when faced with balancing two competing legally protected interests.⁸⁶ To varying degrees, across all the adjudication settings studied, there are debates, fuelled by developments in case law, concerning the appropriateness of a limited number of methods of review or legal tests that can be used by adjudicators to strike a balance between two (or more) competing interests both protected by a legal regime. Typically, such tests only have a limited basis in any applicable treaty and are 'read into the law' by tribunals.⁸⁷ For example, Foster speaks of 'regulatory standards' that are elaborated by international tribunals in successive disputes to give greater determinacy to open-ended international obligations and to provide a formula 'establishing how competing legal rights and interests are to be balanced under the applicable international legal provisions and rules'.⁸⁸ Examples of such methods of review developed by international tribunals include reasonableness-based tests, requirements for a rational relationship between a measure and a permissible

⁸⁴ See e.g. the literature cited above nn 73–83.

⁸⁵ Similarly: Jacqueline Peel, 'Of Apples and Oranges (and Hormones in Beef): Science and the Standard of Review in WTO Disputes under the SPS Agreement' (2012) 61 ICLQ 427, 457–58.

⁸⁶ My terminology draws particularly on Henckels (n 73) 6, 31 (method of review as 'a technique used by adjudicators (such as proportionality analysis) to determine the permissibility of interference with a right or interest'). For similar use of this term, including the distinction with the standard or intensity of review, see Vadi (n 73) xvi–xvii, 253; Aileen Kavanagh, *Constitutional Review under the UK Human Rights Act* (CUP 2009) 237–38; Mads Andenas and Stefan Zleptnig, 'Proportionality: WTO Law in Comparative Perspective' (2007) 42 Texas ILJ 371, 392–93.

⁸⁷ Foster (n 10) 33–34.

⁸⁸ See *ibid* 20–21, 34–36, 347, 349.

aim, necessity or least restrictive means testing, and proportionality balancing *stricto sensu*.⁸⁹ What is common to these methods of review is that they require a State's measures to bear a particular relationship to a permissible policy objective.⁹⁰ Additionally, as Foster suggests, such methods of review (or in her terminology 'regulatory standards') may be understood as requiring States to engage in 'internal balancing processes' and to give some degree of consideration to 'the legal rights and interests of other States and their populations'.⁹¹ While the latter point is particularly clear in relation to requirements of 'due regard', a concept that has been developed by some of the UNCLOS jurisprudence considered in Chapter 3, other methods of review, such as proportionality analysis or reasonableness tests, also implicitly require a State to balance its own interests with other legally protected rights and interests.⁹²

The basic reason why the problem of the appropriate method of review arises across the legal regimes studied is that all the regimes protect a variety of competing interests, often expressed through treaty provisions drafted at a high level of generality and which use inherently context-specific terms such as 'reasonable' or 'necessary'.⁹³ The effect of such design features is that for those disputes where they have jurisdiction, tribunals determine where the precise balance between the competing interests protected by the relevant provisions lies.⁹⁴ The degree of discretion conferred upon adjudicators by some of these methods of review is highly controversial.⁹⁵ For example, what is widely known as proportionality balancing *stricto sensu* is the last stage of a structured three (or four)-stage proportionality analysis and asks whether the costs imposed

⁸⁹ See generally *ibid* 23–30.

⁹⁰ *Ibid* 22.

⁹¹ *Ibid* 22, 327–28, 347.

⁹² *Ibid* 23, 327–35 (arguing that a due regard obligation can achieve '[m]uch of what is sought from proportionality-based reasoning'); Russo (n 67) 4, 8–9, 16; Vadi (n 73) 135–36 (regarding reasonableness).

⁹³ See e.g. Olivier Corten, 'The Notion of "Reasonable" in International Law: Legal Discourse, Reason and Contradictions' (1999) 48 ICLQ 613, 614–16 (discussing the "adaptability function" of the notion of reasonableness').

⁹⁴ For this point in relation to the law of the sea, see e.g. James Harrison, 'Safeguards against Excessive Enforcement Measures in the Exclusive Economic Zone – Law and Practice' in Henrik Ringbom (ed), *Jurisdiction over Ships: Post-UNCLOS Developments in the Law of the Sea* (Brill Nijhoff 2015) 218. The broader theoretical point is that such design features are an example of incomplete contracting and substantial delegation to adjudicators: see e.g. Joel P Trachtman, 'The Domain of WTO Dispute Resolution' (1999) 40 HILJ 333, 344ff.

⁹⁵ See e.g. José E Alvarez, 'Is Investor-State Arbitration "Public"?' (2016) 7 JIDS 534, 551–52.

by a measure are disproportionate to its benefits, having regard to the relative importance of the legally protected interest that the measure restricts and the permissible aim that is furthered by the measure.⁹⁶ The prospect of international tribunals engaging in proportionality balancing *stricto sensu* is highly controversial as it effectively involves them second-guessing the regulating State's choice of how to prioritise the competing values.⁹⁷

In relation to the methods of review used by tribunals, this book suggests that there are underappreciated possibilities for comparative learning between the trade and investment contexts, where this debate is well established, and UNCLOS and ICJ adjudication, where this issue has only received scholarly attention more recently,⁹⁸ despite comparable problems and adjudicatory responses repeatedly arising in recent case law. Again, however, it will be demonstrated that differences in context remain important and shape how the issue of the method of review arises in different settings. Analysing this issue in wider comparative perspective is important because, across diverse settings, international tribunals are increasingly faced with balancing partially competing interests⁹⁹ and there is a need for legal techniques that can meet this challenge.¹⁰⁰

The third challenge facing contemporary international tribunals analysed by this book concerns whether adjudicators, through their decisions, seek to contribute to broader processes of dispute resolution. Specifically, this part of the analysis considers whether adjudication is largely retrospective and seeks to dispose of a dispute, or whether adjudication also has a partly prospective focus and aims to provide the disputing parties guidance for their future interactions. This aspect of

⁹⁶ See e.g. Aharon Barak, *Proportionality: Constitutional Rights and Their Limitations* (CUP 2012) 340–44, 349–62; Joel P Trachtman, 'Trade and ... Problems, Cost-Benefit Analysis and Subsidiarity' (1998) 9 EJIL 32, 74; Henckels (n 73) 25–26.

⁹⁷ See e.g. Vadi (n 73) 65–67; Foster (n 10) 26–27, 324–25. The penultimate stage of proportionality analysis, known as necessity or least restrictive means testing, has sometimes been criticised for overly empowering adjudicators and restricting States' regulatory autonomy: e.g. Vadi (n 73) 66. However, it is typically tempered by requiring that any alternative measure must make an equivalent contribution to the State's regulatory aim and be reasonably available in terms of cost and technical feasibility.

⁹⁸ See e.g. Russo (n 67); James Harrison, 'Patrolling the Boundaries of Coastal State Enforcement Powers: The Interpretation and Application of UNCLOS Safeguards Relating to the Arrest of Foreign-Flagged Ships' (2017) 42 *L'Observateur des Nations Unies* 117; Pasquale De Sena and Lorenzo Acconciamezza, 'Balancing Test' in Hélène Ruiz-Fabri (ed), *Max Planck Encyclopedia of International Procedural Law* (OUP 2021).

⁹⁹ Shelton (n 35) 553.

¹⁰⁰ Henckels (n 75) 6.

the book builds on various strands of existing literature. As others have highlighted, in some circumstances international adjudication may be most effective in terms of dispute resolution where it clarifies key contested issues of law and fact and provides a framework in which the parties can resolve their dispute, for example through subsequent negotiation.¹⁰¹ This aspect of the analysis is relevant to the role of tribunals in scrutinising State conduct for compliance with international norms, with many suggesting that adjudicators are, given their legal training, better equipped to judge the decision-making procedure a State has followed, such as which interests it has taken into account, rather than second-guessing the merits of an underlying decision.¹⁰² Facilitative approaches to adjudication that involve a tribunal referring certain issues back to the parties are obviously more deferential than an approach in which the tribunal would itself decide the relevant issues.¹⁰³ Scholars focusing on particular regimes have also praised facilitative and procedurally focused forms of adjudicatory scrutiny in existing jurisprudence. For example, many have argued that certain early WTO Appellate Body decisions offer a desirable example of international adjudication imposing procedural guidelines on the disputing parties' interactions, such as requiring regulating States to consider affected foreign interests, but leaving the parties scope to resolve the underlying dispute themselves.¹⁰⁴ Law of the sea commentators have also praised the 'predominantly facilitative'¹⁰⁵ or 'conflict management role'¹⁰⁶ sometimes performed by ITLOS, whereby

¹⁰¹ Anna Spain, 'Examining the International Judicial Function: International Courts as Dispute Resolvers' (2011) 34 *Loy LA Int'l & Comp LR* 5, 8–10, 28–31; Spain (n 26) 366, 377–78, 384–85; Lowe (n 13) 220–22; Vaughan Lowe, 'The Interplay between Negotiation and Litigation in International Dispute Settlement' in *Law of the Sea, Environmental Law, and Settlement of Disputes* (n 28) 244–47. See also Tom Ginsburg and Richard H McAdams, 'Adjudicating in Anarchy: An Expressive Theory of International Dispute Resolution' (2004) 45 *William and Mary Law Review* 1229.

¹⁰² See e.g. Trachtman (n 80) 755–56, 784; Ioannidis (n 77) 109–11.

¹⁰³ See somewhat similarly Shirlow (n 69) 130–31, 138–39 (proposing the category of 'deference as deferral', which includes situations where an international adjudicator refers certain issues for determination by domestic authorities).

¹⁰⁴ See e.g. von Bogdandy and Venzke (n 10) 206; Sungjoon Cho, 'Of the World Trade Court's Burden' (2009) 20 *EJIL* 675, 717–20. Further literature cited in Chapter 2, n 301.

¹⁰⁵ Natalie Klein, *Dispute Settlement in the UN Convention on the Law of the Sea* (CUP 2005) 83–84.

¹⁰⁶ Robin Churchill, 'Some Reflections on the Operation of the Dispute Settlement System of the UN Convention on the Law of the Sea during Its First Decade' in David Freestone, Richard Barnes and David Ong (eds), *The Law of the Sea: Progress and Prospects* (OUP 2006) 411–12; Vaughan Lowe, 'The "Complementary Role" of ITLOS in the

the Tribunal has clarified the relevant legal framework and ordered the disputing parties to engage in further cooperation or environmental monitoring.

However, facilitative forms of adjudication have also been subject to significant criticisms. As we will see, an entirely substance-neutral form of adjudicatory scrutiny is an illusion, and even under more procedural forms of review adjudicators must make important normative choices, such as how far States must go in considering foreign interests or pursuing cooperative solutions.¹⁰⁷ The tendency of some tribunals to proceduralise disputes has also been criticised as undermining the aims of the substantive obligations in question, and thus, for example, not producing any improvement in environmental outcomes.¹⁰⁸

The contribution of international tribunals as ‘dispute resolvers’¹⁰⁹ is heavily influenced by their institutional architecture. For example, the prospective nature of WTO remedies, and the fact that findings of non-compliance by WTO adjudicators are typically followed by a process of diplomatic bargaining, means it makes particular sense to view adjudication in that regime as contributing to a broader process of dispute resolution. In contrast, we rarely see investment treaty arbitrators attempting to contribute to a broader process of dispute resolution, as opposed to tribunals aiming to dispose of the parties’ dispute. This is due to several factors including that compensation is the dominant remedy used in investment treaty arbitration, and tribunals are constituted ad hoc and are not well placed to supervise post-adjudication cooperation between the parties. The commercial rather than diplomatic backgrounds of many participants in investment treaty arbitration, and the fact that in many instances the disputing parties will no longer have an ongoing

Development of Ocean Law’ in Harry N Scheiber and Jin-Hyun Paik (eds), *Regions, Institutions, and Law of the Sea: Studies in Ocean Governance* (Martinus Nijhoff 2013) 30–34.

¹⁰⁷ Andrew Lang, *World Trade Law after Neoliberalism: Reimagining the Global Economic Order* (OUP 2011) 345–47. See also Bradley J Condon, ‘Does International Economic Law Impose a Duty to Negotiate?’ (2018) 17 Chinese JIL 73, 102 (arguing that imposing an obligation to negotiate ‘is an intrusive approach to dispute settlement’).

¹⁰⁸ Stephens (n 12) 100–02. See also the critique of proceduralising disputes in Martti Koskenniemi, ‘Peaceful Settlement of Environmental Disputes’ (1991) 60 Nordic JIL 73. Some have also questioned more fundamentally the utility of distinguishing between substance and procedure: see Benoit Mayer, ‘The Pitfalls of Ineffective Conceptualization: The Case of the Distinction between Procedure and Substance’ (2022) 33 EJIL 1307.

¹⁰⁹ Spain (n 101).

relationship by the time of an award, further explain why we generally do not see investment treaty tribunals performing a partly facilitative, forward-looking role.

C. Issues of Case Selection

1. *What Constitutes an Environmental Case?*

This book uses the focus of environmental disputes to reflect on the functions of international adjudication and an important question is therefore how to define an environmental case. This book builds on the approach of existing international law contributions that have suggested it is preferable to focus on those disputes that have ‘an environmental or natural resources component’,¹¹⁰ rather than focusing on the apparently environmental characteristics of the applicable law or institutional context.¹¹¹ As we will see throughout this book, disputes with an environmental component routinely arise under treaties and in institutions that might not be characterised as environmental and require one to understand a wide range of other international legal issues.¹¹² Specifically, this book focuses on cases involving adjudication of the obligations of States in disputes that include an environmental component, that is, cases where at least one of the issues at stake is a question of environmental protection or management.¹¹³

This, of course, still raises the question of what counts as an environmental issue or component within a case and generally international lawyers have not spent much time debating definitions of the environment.¹¹⁴ At one level, the question might be answered intuitively based

¹¹⁰ Sands (n 28) 315, 319.

¹¹¹ Alan Boyle and James Harrison, ‘Judicial Settlement of International Environmental Disputes: Current Problems’ (2013) 4 *JIDS* 245, 250; Hey (n 24) 4–5.

¹¹² Boyle and Harrison (n 111) 249; Hey (n 24) 6–9.

¹¹³ This draws on the approach of Stephens (n 12) 346. See also Daniel Behn and Malcolm Langford, ‘Trumping the Environment? An Empirical Perspective on the Legitimacy of Investment Treaty Arbitration’ (2017) 18 *JWIT* 14, 17–19 (suggesting in an investor–State context to focus on disputes where a domestic environmental measure is challenged or the host State argues its measure is justified for environmental reasons).

¹¹⁴ See e.g. the treatment of this issue in Philippe Sands and Jacqueline Peel, *Principles of International Environmental Law* (4th ed., CUP 2018) 14–15; Dupuy and Viñuales (n 22) 28–31; Alan Boyle and Catherine Redgwell, *Birnie, Boyle, and Redgwell’s International Law and the Environment* (4th ed., CUP 2021) 5–7; Daniel Bodansky, *The Art and Craft of International Environmental Law* (Harvard UP 2010) 9–11. A more detailed treatment is provided by Romano (n 31) 15–24.

on experience in this area of law. For example, the *Iron Rhine* Tribunal noted that across international environmental law “environment” is broadly referred to as including air, water, land, flora and fauna, natural ecosystems and sites, human health and safety, and climate’.¹¹⁵ Similarly, Boyle and Harrison note that: ‘Most of what we generally regard as “environmental” concerns pollution of air, freshwater and oceans; climate change; unsustainable use of natural resources; loss of biodiversity, ecosystems and habitat; and conservation of endangered species and natural heritage.’¹¹⁶

Understandings of the environment have ‘expanded rapidly over the past several decades’, shifting from compartmentalised to holistic approaches and increasingly incorporating social, cultural and economic factors.¹¹⁷ Contemporary ecology suggests that the historically influential ‘distinction between “nature” and “human” is untenable’ because ‘[h]uman systems, such as economies, cultures, and polities, are subsystems nested within larger ecological and biogeochemical systems’.¹¹⁸ Above all, the concept of the Anthropocene, developed in the natural sciences and employed in recent years in law and many other disciplines, suggests that the Earth has entered a new geological epoch ‘in which humanity has become the dominant force of global environmental change’ and ‘human and natural forces are intermixed and inseparable’.¹¹⁹ In this

¹¹⁵ *In the Arbitration Regarding the Iron Rhine (“Ijzeren Rijn”) Railway (Belgium v Netherlands)*, Award (24 May 2005), 140 ILR 130, [58].

¹¹⁶ Boyle and Harrison (n 111) 250. Similarly: Dupuy and Viñuales (n 22) 31.

¹¹⁷ Lee Godden and Jacqueline Peel, *Environmental Law: Scientific, Policy and Regulatory Dimensions* (OUP 2010) 15–27.

¹¹⁸ Jonathan Baert Wiener, ‘Law and the New Ecology: Evolution, Categories, and Consequences’ (1995) 22 *Ecology LQ* 325, 349; Daniel B Botkin, *The Moon in the Nautilus Shell: Discordant Harmonies Reconsidered from Climate Change to Species Extinction, How Life Persists in an Ever-Changing World* (OUP 2012) 324–25. Noting the significance of this development: Romano (n 31) 17–20; Tuomas Kuokkanen, *International Law and the Environment: Variations on a Theme* (Brill 2002) 260–61.

¹¹⁹ Tim Stephens, ‘What Is the Point of International Environmental Law Scholarship in the Anthropocene?’ in Ole W Pedersen (ed), *Perspectives on Environmental Law Scholarship: Essays on Purpose, Shape and Direction* (CUP 2018) 121–24; Louis J Kotzé, *Global Environmental Constitutionalism in the Anthropocene* (Hart 2016) 33–37; Sandrine Maljean-Dubois and others, ‘Anthropocene’, *International Law Association White Paper* 02, 2022, 11–12 www.ilaparis2023.org/wp-content/uploads/2022/08/ADI-ILA-anthropocene-EN-PLANCHES.pdf. See generally Jorge E Viñuales, ‘The Organisation of the Anthropocene’ (2018) 1 *Brill Research Perspectives in International Legal Theory and Practice* 1.

perspective, the ultimate unit of analysis is ‘the planet as an interdependent integrated social-ecological system’.¹²⁰

This expansion in understandings of the environment means that more cases will potentially qualify as having an environmental component, and it is appropriate to reject certain definitions that have previously been advanced. For example, writing in 1975, Bilder defined international environmental disputes as disagreements ‘relating to the alteration, through human intervention, of natural environmental systems’, seeking to focus on the natural rather than social environment.¹²¹ Today it is far less certain that the sharp distinction between humans and nature within this definition can hold, given the developments just outlined.

Writing twenty-five years after Bilder, Romano defined an international environmental dispute as ‘[a] conflict of views or of interest between two or more States . . . relating to an anthropogenic alteration of an ecosystem, having detrimental effect on human society and leading to environmental scarcity of natural resources.’¹²² Part of Romano’s definition, specifically the focus on potential or realised detrimental effects of human-induced alterations of ecosystems, captures much of what is at stake in international disputes with an environmental component. Yet today the inter-State limitation is not appropriate, for example given the massive number of investor–state arbitrations in recent years with an environmental or natural resources component,¹²³ and the substantial jurisprudence developed by regional human rights courts concerning the environment.¹²⁴ Romano’s other restrictions – that the dispute concerns environmental scarcity as opposed to other types of scarcity, for example

¹²⁰ Frank Biermann, *Earth System Governance: World Politics in the Anthropocene* (MIT Press 2014) 16, 20; Louis J Kotzé and others, ‘Earth System Law: Exploring New Frontiers in Legal Science’ (2022) 11 *Earth System Governance* 100126; Maljean-Dubois and others (n 119) 12.

¹²¹ Bilder (n 29) 153. Bilder included further limitations that are problematic, such as only focusing on inter-State disputes and excluding disputes concerning the management of natural resources: *ibid.* For a similar definition see Catherine A Cooper, ‘The Management of International Environmental Disputes in the Context of Canada-United States Relations: A Survey and Evaluation of Techniques and Mechanisms’ (1986) 24 *Can YB Int’l L* 247, 249.

¹²² Romano (n 31) 29.

¹²³ For example, a recent UNCTAD study counted (up to the end of 2021) some 175 treaty-based investor–State cases that involved measures related to environmental protection: UNCTAD, ‘Treaty-Based Investor–State Dispute Settlement Cases and Climate Action’, IIA Issues Note No 4 (2022) 2.

¹²⁴ See n 134.

physical or socio-economic scarcity,¹²⁵ and that renewable, rather than non-renewable, resources are involved¹²⁶ – are also questionable. For example, a large number of investment treaty arbitrations in recent years have concerned non-renewable resources and questions around the host State's right to allocate the right to exploit such resources and liability for resulting environmental damage.¹²⁷

In selecting the case law to be covered, this book has sought to avoid overly restrictive definitions. This reflects that environmental cases were selected as a focus precisely because they are representative of the highly varied nature of contemporary international adjudication and the professional versatility this demands of international lawyers. Nevertheless, certain restrictions have been imposed. For example, in recent years numerous disputes have arisen in WTO dispute settlement and investment treaty arbitration concerning State measures to incentivise renewable energy sources.¹²⁸ In the WTO context, such disputes have focused on the legality of subsidies and domestic content requirements.¹²⁹ In the investment treaty context, such disputes have focused on State liability for altering the incentives that apply to investments in the renewable energy sector, that is, obligations of regulatory stability and respecting the

¹²⁵ Romano (n 31) 28.

¹²⁶ Ibid 27–29. Romano acknowledges that non-renewable resources may lead to the degradation of renewable resources, which is his focus: *ibid* 27.

¹²⁷ See e.g. *Adel A Hamadi Al Tamimi v Oman*, ICSID Case No ARB/11/33, Award (3 November 2015); *Perenco Ecuador Ltd v Ecuador*, ICSID Case No ARB/08/6, Interim Decision on the Environmental Counterclaim (11 August 2015); *Burlington Resources Inc v Ecuador*, ICSID Case No ARB/08/5, Decision on Counterclaims (7 February 2017); *Occidental Petroleum Corporation & Ors v Ecuador*, ICSID Case No ARB/06/11, Award (5 October 2012); *Crystallex v Venezuela* (n 5); *Quiborax SA v Bolivia*, ICSID Case No ARB/06/2, Award (16 September 2015).

¹²⁸ See e.g. Daniel Behn and Ole Kristian Fauchald, 'Governments under Cross-Fire? Renewable Energy and International Economic Tribunals' (2015) 12 *Manchester JIEL* 117 (also highlighting relevant EU law issues); Henok Asmelash, 'The First Ten Years of WTO Jurisprudence on Renewable Energy Support Measures: Has the Dust Settled Yet?' (2022) 21 *WTR* 455; Alessandro Monti, *Promoting Renewable Energy: The Mutual Supportiveness of Climate and Trade Law* (Edward Elgar 2023) chs 5–6; Rahmi Kopar, *Stability and Legitimate Expectations in International Energy Investments* (Hart 2021).

¹²⁹ See e.g. Appellate Body Reports, *Canada – Certain Measures Affecting the Renewable Energy Generation Sector*; *Canada – Measures Relating to the Feed-in Tariff Program*, WT/DS412/AB/R, WT/DS426/AB/R, adopted 24 May 2013; Appellate Body Report, *India – Certain Measures Relating to Solar Cells and Solar Modules*, WT/DS456/AB/R and Add.1, adopted 14 October 2016; Panel Report, *United States – Certain Measures Relating to the Renewable Energy Sector*, WT/DS510/R and Add.1, circulated 27 June 2019.

legitimate expectations of investors under the fair and equitable treatment standard.¹³⁰ Overall, such renewable energy disputes, as they have arisen to date, have only incidentally raised environmental considerations, which, for example, have explained the rationale behind measures to incentivise particular types of energy supply.¹³¹ This book does not place a primary focus on disputes concerning renewable energy incentives; however, such cases are discussed where they are particularly relevant to the themes analysed.

2. *The Adjudicatory Bodies Covered*

The adjudication settings covered by this book – adjudication in the WTO and under UNCLOS, ICJ litigation, and investment treaty arbitration – were selected because they are the key fora of global reach where environmental cases have been repeatedly litigated.¹³² Compared to existing studies of international environmental adjudication, a key contribution of this book is to provide a state of the art treatment of treaty-based investor–State arbitration, which is analysed in a comparative manner alongside the key sites of inter-State adjudication that regularly hear environmental disputes.¹³³ A question that runs throughout this

¹³⁰ See cases discussed in Chapter 5, text at nn 140–156.

¹³¹ See e.g. *India – Solar Cells* (n 129) [5.123]–[5.151] (consideration of India’s argument that its domestic content requirements were necessary to secure compliance with domestic or international environmental laws); *Canada – Renewable Energy* (n 129) [5.186]–[5.190]; Behn and Langford (n 113) 18–19 (excluding renewable energy disputes from their definition of an environmental case); Boyle and Harrison (n 111) 249 fn 22 (arguing ‘the simple fact that a trade or investment dispute relates to an environmental industry does not make it an environmental dispute if there are no questions of environmental law or policy’ at issue). Contrast Jorge E Viñuales, ‘Foreign Investment and the Environment in International Law: The Current State of Play’ in Kate Miles (ed), *Research Handbook on Environment and Investment Law* (Edward Elgar 2019) 20 (including in his definition of investment disputes with an environmental component disputes concerning ‘environmental markets’ and highlighting the growth in disputes arising from ‘energy transition policies’).

¹³² In future it is possible the International Criminal Court (ICC) may hear environmental cases. See generally Matthew Gillett, *Prosecuting Environmental Harm before the International Criminal Court* (CUP 2022). See also ICC Office of the Prosecutor (OTP), ‘Policy Paper on Case Selection and Prioritisation’ (15 September 2016) [41] (ICC OTP indicated that it would give particular consideration to prosecuting crimes within the Court’s jurisdiction involving ‘the destruction of the environment, the illegal exploitation of natural resources or the illegal dispossession of land’).

¹³³ Due to its comparative focus, this book differs from the burgeoning literature that focuses specifically on the intersection of investment law and environmental issues:

book is the extent to which treaty-based investor–State arbitration is comparable to the three inter-State adjudication settings studied.

The key international tribunals that regularly hear environmental cases and are not considered by this book are regional human rights courts¹³⁴ and regional courts of economic integration.¹³⁵ This approach was adopted because such bodies are heavily tied to the specific regional human rights or regional integration contexts in which they operate and accordingly raise difficulties for comparative analysis that seeks to draw more general conclusions regarding the functions of international adjudication.¹³⁶ Where a tribunal is embedded within a strong regional integration or regional human rights project, this can provide a basis for adjudicators engaging in certain tasks, such as invalidating national-level measures, or weighing the importance of competing regulatory aims, which are much more controversial in regimes of global reach that do not enjoy any strong value-based consensus.¹³⁷

e.g. Kate Miles (ed), *Research Handbook on Environment and Investment Law* (Edward Elgar 2019); Flavia Marisi, *Environmental Interests in Investment Arbitration: Challenges and Directions* (Kluwer Law International 2020); Jorge E Viñuales, *Foreign Investment and the Environment in International Law* (CUP 2012); Saverio Di Benedetto, *International Investment Law and the Environment* (Edward Elgar 2013).

¹³⁴ For discussion of the case law of the various bodies, see e.g. Marie-Catherine Petersmann, *When Environmental Protection and Human Rights Collide: The Politics of Conflict Management by Regional Courts* (CUP 2022) 57–70; Shigeta (n 31) 68–115; Alan Boyle, ‘Human Rights and the Environment: Where Next?’ (2012) 23 EJIL 613; Sands and Peel (n 114) 819–27; Monica Fera-Tinta and Simon C Milnes, ‘The Rise of Environmental Law in International Dispute Resolution: The Inter-American Court of Human Rights Issues a Landmark Advisory Opinion on the Environment and Human Rights’ (2016) 27 Ybk IEL 64.

¹³⁵ Regarding relevant European Court of Justice (ECJ) case law, see e.g. Ludwig Krämer, ‘The Environment before the European Court of Justice’ in Christina Voigt (ed), *International Judicial Practice on the Environment* (CUP 2019); Marie-Catherine Petersmann, ‘When Environmental Protection and Human Rights Collide: Four Heuristics of Conflict Resolution’ in Christina Voigt (ed), *International Judicial Practice on the Environment* (CUP 2019); Petersmann (n 134) 70–73; Shigeta (n 31) 137–84; Sands and Peel (n 114) 187–89, 883–87.

¹³⁶ Similarly, Alter has argued that the ECJ and the European Court of Human Rights must be understood in light of unique contextual factors and thus present difficulties for comparative analysis: Alter (n 8) 106, 109. As Alter highlights, in some regions, such as Asia and the Pacific and the Middle East, there is little adjudication that occurs within regional human rights or regional integration frameworks: 87, 97–98, 110.

¹³⁷ See e.g. *ibid.* 282–328 (analysing an ‘international constitutional review’ role whereby courts invalidate national measures and suggesting this function is explicitly given to some courts of regional integration, and in practice has also been exercised by certain regional human rights courts and international criminal courts).

This book also does not cover quasi-adjudicatory bodies that hear disputes with an environmental component. For example, it does not cover the large number of conferences of the parties and their non-compliance mechanisms developed under multilateral environmental agreements,¹³⁸ human rights treaty bodies and their individual complaint mechanisms,¹³⁹ or the inspection procedures established within multilateral development banks to enable review of projects.¹⁴⁰ As these bodies do not issue binding decisions, they do not meet a key criterion for being included within any definition of international tribunals and the related concept of international adjudication.¹⁴¹ Furthermore, these bodies are sometimes designed to operate in a manner that is markedly different from adjudication, as in the context of many environmental non-compliance mechanisms.¹⁴²

D. Methodological Insights from Comparative Law

This book seeks to *identify* and *explain* similarities and differences in how the three selected challenges are managed by adjudicators across the four contexts studied. These are, in short, the traditional aims of comparative law,¹⁴³ and it is instructive to consider methodological debates in comparative law insofar as they may offer insights into the challenges

¹³⁸ See e.g. Meinhard Doelle, 'Non-compliance Procedures' in Lavanya Rajamani and Jacqueline Peel (eds), *The Oxford Handbook of International Environmental Law* (2nd ed., OUP 2021); Tullio Treves and others (eds), *Non-Compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements* (TMC Asser Press 2008); Stephens (n 12) 81–89; Shigeta (n 31) 117–37.

¹³⁹ For discussion of relevant contributions, see e.g. Petersmann (n 134) 73–75; Shigeta (n 31) 69–72.

¹⁴⁰ See for overview and further references Sands and Peel (n 114) 176–77.

¹⁴¹ Cesare PR Romano, 'A Taxonomy of International Rule of Law Institutions' (2011) 2 *JIDS* 241, 253–61; Romano, Alter and Shany (n 6) 6, 8–9.

¹⁴² See e.g. Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (1998) 2161 UNTS 447, art 15 (compliance mechanism intended to be 'non-confrontational, non-judicial and consultative'). Noting this is generally true of non-compliance mechanisms in environmental treaties: Cesare Pitea and Attila Tanzi, 'Non-compliance Mechanisms: Lessons Learned and the Way Forward' in Tullio Treves and others (ed), *Non-compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements* (TMC Asser Press 2008) 569–70.

¹⁴³ Jaakko Husa, 'Research Designs of Comparative Law – Methodology or Heuristics?' in Maurice Adams and Dirk Heirbaut (eds), *The Method and Culture of Comparative Law: Essays in Honour of Mark Van Hoecke* (Hart 2014) 53–54; Jaakko Husa, *Introduction to Comparative Law* (2nd ed., Hart 2023) 153.

of comparing different sites of international adjudication.¹⁴⁴ Historically, the dominant approach to comparative law has been functionalism, which focuses on functionally equivalent problems and legal solutions developed across different contexts.¹⁴⁵ According to functionalist approaches, the legal doctrines and institutions of different societies can be compared where they fulfil similar functions, and every legal system ‘faces essentially the same problems, and solves these problems by quite different means though very often with similar results’.¹⁴⁶ Functionalism is the subject of substantial debate within comparative law scholarship, and key criticisms include that it ‘exaggerates the extent to which different societies face similar problems’, underemphasises the ‘cultural, economic, political and social context within which legal rules exist’, and cannot provide a basis for evaluating different legal solutions.¹⁴⁷ The major alternative to functionalism that exists in

¹⁴⁴ Note that this inquiry differs from the emerging field of ‘comparative international law’, which focuses on how international law is understood within different national and regional legal systems rather than on variations between different subfields of international law: see Anthea Roberts and others, ‘Comparative International Law: Framing the Field’ (2015) 109 *AJIL* 467, 469. Others have highlighted the relevance of comparative law for comparing different international legal regimes: e.g. Valentina Vadi, *Analogies in International Investment Law and Arbitration* (CUP 2015); Claire Buggenhoudt, *Common Interests in International Litigation: A Case Study on Natural Resource Exploitation Disputes* (Intersentia 2017) 28–29; Mads Andenas and Duncan Fairgrieve, ‘Courts and Comparative Law: In Search of a Common Language for Open Legal Systems’ in Mads Andenas and Duncan Fairgrieve (eds), *Courts and Comparative Law* (OUP 2015) 4–5, 9–11. Some comparative lawyers have also emphasised the need to broaden their field beyond national legal systems to include the study of transnational regimes: e.g. Mathias Reimann, ‘Beyond National Systems: A Comparative Law for the International Age’ (2001) 75 *Tulane LR* 1103, 1115–19; Annelise Riles, ‘Wigmore’s Treasure Box: Comparative Law in the Era of Information’ (1999) 40 *HILJ* 221, 276–77.

¹⁴⁵ Ralf Michaels, ‘The Functional Method of Comparative Law’ in Mathias Reimann and Reinhard Zimmermann (eds), *The Oxford Handbook of Comparative Law* (2nd ed., OUP 2019) 347–48, 386–87; Christopher A Whytock, ‘Legal Origins, Functionalism, and the Future of Comparative Law’ [2009] *Brigham Young ULR* 1879, 1879; Konrad Zweigert and Hein Kötz, *Introduction to Comparative Law* (Tony Weir tr, OUP 1998) 34.

¹⁴⁶ Zweigert and Kötz (n 145) 34. Consider also: Michaels (n 145) 347–48, 374–76; Shirlow (n 69) 52–53; Catherine Valcke and Matthew Grellette, ‘Three Functions of Function in Comparative Legal Studies’ in *The Method and Culture of Comparative Law* (n 143) 101–11; A Esin Örcüci, ‘Methodology of Comparative Law’ in Jan M Smits (ed), *Elgar Encyclopedia of Comparative Law* (2nd ed., Edward Elgar 2012) 561–63; Husa, *Introduction* (n 143) 122–24.

¹⁴⁷ Whytock (n 145) 1886–87, 1897–98; Michaels (n 145) 380–81, 385. Seminally: Günter Frankenberg, ‘Critical Comparisons: Re-thinking Comparative Law’ (1985) 26 *HILJ* 411, 412–40.

comparative law literature is cultural approaches, which emphasise that legal rules are heavily intertwined with their broader social, economic, and cultural context, and at their strongest suggest that different legal systems are not comparable.¹⁴⁸

The perspective of this book is towards the functionalist end of the methodological spectrum,¹⁴⁹ as the common yardsticks that structure my comparison are three challenges facing international tribunals, namely managing change in applicable legal norms or relevant facts, scrutinising State conduct for compliance with international obligations, and contributing to broader processes of dispute resolution.¹⁵⁰ Much of my analysis focuses on the extent to which the problems faced, legal techniques used in response, and functions performed by tribunals are comparable across the contexts studied.¹⁵¹ This book shares the implicitly functionalist view that comparative inquiry can make one aware of comparable challenges faced, and potentially useful legal techniques developed, in other contexts.¹⁵² However, it is crucial to remember that even where international tribunals appear to face similar problems or develop similar solutions, differences persist reflecting the varied contexts in which tribunals operate and the numerous interrelated factors which shape their work. The challenge is partly one of managing 'scale change'¹⁵³ and differentiating

¹⁴⁸ Vadi (n 144) 31–33; Mathias Reimann, 'The Progress and Failure of Comparative Law in the Second Half of the Twentieth Century' (2002) 50 *Am. J. Comp. L.* 671, 680–82; Riles (n 144) 240–49. Examples of cultural approaches include: Frankenberg (n 147) 441–55; Pierre Legrand, 'The Impossibility of Legal Transplants' (1997) 4 *Maastricht J. Eur. & Comp. L.* 111, 120–24. The risk of incommensurability due to contextual differences has also been highlighted by those who have compared different international legal regimes: e.g. Martins Paporinskas, 'Substantive Standards of Investment Protection under EU Law and International Investment Law' in Emmanuel Gaillard and Hélène Ruiz-Fabri (eds), *EU Law and International Investment Arbitration* (Juris 2018) 231–32.

¹⁴⁹ Vadi (n 144) 30 (noting all approaches fit somewhere on a sliding scale from the wholly functionalist to the purely cultural).

¹⁵⁰ In comparative law terms, such a common yardstick is referred to as a *tertium comparationis*: see e.g. Husa, *Introduction* (n 143) 154–58. For a sophisticated discussion of the potential for functional comparison of the problems facing international courts and tribunals, see Shirlow (n 69) 52–58.

¹⁵¹ See generally Michaels (n 145) 347–48, 371, 386–87.

¹⁵² For similar claims in an international law context, see e.g. William W Park and Thomas W Walsh, 'Review Essay: The Uses of Comparative Arbitration Law' (2008) 24 *Arbitration International* 615, 615; Vadi (n 144) 230.

¹⁵³ Riles (n 144) 225, 253–53 (on the appropriate scale for analysis, and managing scale change, as a fundamental problem in comparativism).

between levels of analysis because legal regimes often appear similar at one level of analysis and different at another level of analysis.¹⁵⁴

In order to address potential shortcomings of a functional approach, this book analyses in significant detail contextual factors relevant to understanding each of the adjudication settings studied.¹⁵⁵ Each chapter begins with an analysis of such factors, which include whether adjudication occurs within a wider regime with particular goals, the activity of other law-making processes within the regime, whether compulsory jurisdiction exists and which actors can access adjudication, the appointment arrangements for adjudicators, and the types of remedies typically utilised.¹⁵⁶ Attention to such contextual factors is in fact required by a functional approach as the functions of a court or tribunal may be unstated and implicit¹⁵⁷ and become clear through analysis of considerations such as the structure and procedure of a tribunal.¹⁵⁸ I attempt to explain my findings of similarity or difference regarding the case law analysed in light of such contextual considerations.

Clearly, focusing on other aspects of international adjudication may have produced different findings.¹⁵⁹ However, as justified above, the three challenges focused on in this book were selected because they capture key contemporary challenges facing international tribunals, and also serve as a useful proxy for developing a broader, comparative

¹⁵⁴ Michaels (n 145) 374.

¹⁵⁵ See Vicki C Jackson, 'Comparative Constitutional Law: Methodologies' in Michel Rosenfeld and András Sajó (eds), *The Oxford Handbook of Comparative Constitutional Law* (OUP 2012) 72 (suggesting a 'contextualized functionalism' is possible and 'requires a willingness to question whether functions, concepts, or doctrines that appear similar may in fact be quite different' and to pay attention to how, within each legal system compared, 'seemingly separate institutions or legal practices are connected to, and influenced by, others').

¹⁵⁶ Also highlighting the importance of such factors: Webb (n 45) 147–201; Jürgen Kurtz, 'The Merits and Limits of Comparativism: National Treatment in International Investment Law and the WTO' in Stephan W Schill (ed), *International Investment Law and Comparative Public Law* (OUP 2010) 252–55; Steven R Ratner, 'Regulatory Takings in Institutional Context: Beyond the Fear of Fragmented International Law' (2008) 102 AJIL 475, 485–87, 520–21.

¹⁵⁷ Michaels (n 145) 369–70. See also Jaakko Husa, 'Methodology of Comparative Law Today: From Paradoxes to Flexibility?' (2006) 58 *Revue Internationale De Droit Comparé* 1095, 1102–04 (emphasising that functional approaches require understanding the wider socio-legal context of rules and institutions).

¹⁵⁸ Yuval Shany, 'Effectiveness of International Adjudication: Assessing Functions and Performance' (2014) 108 *ASIL Proceedings* 113, 114; David D Caron, 'Towards a Political Theory of International Courts and Tribunals' (2006) 24 *Berkeley JIL* 401, 410.

¹⁵⁹ See Michaels (n 145) 377.

assessment of the functions of international adjudication. Functionalism is a constructive approach to law in that it involves developing hypotheses about the problems faced by legal systems and how they are responded to by legal institutions and doctrines. Accordingly, functional approaches, such as this study, should be judged according to their contribution to our understanding of the legal systems compared.¹⁶⁰

E. An Overview of the Chapters to Come

Chapter 2 analyses the three selected challenges confronting international tribunals – change, review of State conduct, and dispute resolution – in WTO dispute settlement. It demonstrates that within the WTO’s environmental case law, adjudicators have grappled with the question of potential change in applicable international legal norms, and, even more frequently, changes in relevant facts that affect what an applicable legal norm requires at a particular point in time. In the context of disputes under the Agreement on the Application of Sanitary and Phytosanitary Measures, WTO adjudicators have developed a highly structured approach to the issue of the standard of review that may foreseeably be drawn upon by adjudicators in other contexts also faced with ‘fact-intensive environmental disputes’.¹⁶¹ While this approach avoids WTO adjudicators themselves deciding on the correctness of contested scientific claims that are often raised by environmental disputes, it requires adjudicators to determine what counts as an adequate risk assessment process. The chapter analyses the elaborate form of necessity testing that has been developed by WTO adjudicators as a method of review, or balancing test, when scrutinising measures that pursue a permissible regulatory aim but also restrict a competing treaty-protected interest in trade liberalisation.¹⁶² It argues that the WTO’s necessity jurisprudence contains important lessons for other international tribunals. Finally, the chapter considers the contribution of certain early trade and environment disputes to the so-called ‘chapeau jurisprudence’ concerning the general exceptions contained in WTO covered agreements. As noted above, this case law has been interpreted

¹⁶⁰ Ibid 368–72, 386–87.

¹⁶¹ Peel (n 85) 457–58.

¹⁶² My wording here draws on Foster (n 10) 147, 152 (discussing the WTO ‘necessity formula’ as an ‘elaborate’ standard developed by adjudicators for judging the legality of States’ regulatory measures).

by many commentators as a desirable example of a procedurally focused form of international adjudicatory scrutiny that pushes States to consider affected foreign interests.¹⁶³ In short, although the chapeau jurisprudence does not impose a free-standing obligation to cooperate, these cases highlight that WTO adjudication often contributes to a broader process of dispute settlement, including because of the system's prospectively focused system of remedies and strong diplomatic ethos.

Chapter 3 analyses the three selected challenges in UNCLOS adjudication, undertaken by ITLOS and arbitral tribunals. The chapter analyses significant examples of UNCLOS adjudicators incrementally adapting the Convention, given changes in wider international law, reflecting, *inter alia*, that the Convention includes various generic terms, obligations to protect the marine environment framed in general terms, and instructs adjudicators to apply other relevant international law. The standard of review is shown to be a key problem in the context of ITLOS' prompt release jurisdiction, which raises questions also seen in the other adjudication contexts studied, for example given the greater proximity of domestic authorities to local conditions. The chapter also demonstrates that UNCLOS adjudicators have increasingly employed balancing tests, such as necessity testing, that raise equivalent questions to such methods of review as seen in the other contexts considered, with some UNCLOS adjudicators even noting the parallel to WTO necessity testing. Finally, UNCLOS environmental adjudication provides repeated examples of tribunals attempting to contribute to broader processes of dispute resolution, for example by ordering the disputing parties to engage in further cooperation.

Chapter 4 turns to environmental litigation before the ICJ. The ICJ's responses to the three selected challenges are shaped by the Court's general and consent-dependent jurisdiction, which means that it adjudicates across highly varied legal contexts and is particularly sensitive to consent-based concerns. There are repeated examples of the ICJ incrementally updating aging treaties in light of wider developments in international law. In its environmental case law, the ICJ has often faced the question of how to balance two partially competing interests, both protected by the relevant legal regime, and how intensely to scrutinise domestic-level determinations that may have involved the application of specialist forms of non-legal expertise or an assessment of local circumstances. While the

¹⁶³ See n 104.

Court's approach to such questions is shaped by the particular context in which it adjudicates, the legal techniques used in scrutinising State conduct for compliance with international law display important functional similarities with those seen in the other contexts studied. The ICJ has often adjudicated with a partly prospective focus, seeking to facilitate future cooperation between the disputing parties.

Chapter 5 addresses investment treaty arbitration. Investment treaty tribunals, like the other international tribunals considered in this book, are often faced with determining whether applicable international legal norms have evolved. However, differently from the other contexts studied, investment treaty tribunals, by applying investment treaty norms in particular disputes, also play a crucial role in determining the permissible degree of change in host State regulation. In scrutinising State conduct for compliance with investment treaty obligations, arbitrators have endorsed many of the reasons for a limited degree of deference to domestic authorities also seen in the other contexts studied. Investment treaty tribunals have also employed methods of review encountered in the other contexts studied, with a growing number of tribunals engaging in the controversial step of proportionality balancing *stricto sensu*. In contrast to the other adjudication settings studied in this book, there are few examples of investment treaty tribunals performing a forward-looking, facilitative role and contributing to broader processes of dispute resolution. This reflects *inter alia* that in this context the disputing parties frequently do not have an ongoing relationship by the time of a final award and adjudication is widely understood as a retrospectively focused compensation mechanism, in contrast to the more diplomatic ethos of the inter-State adjudication mechanisms studied.

Chapter 6, which concludes the study, draws together and extends the insights gained from the comparative analysis undertaken. It analyses convergences and divergences in how the three selected challenges are managed across the four adjudication contexts studied and advances explanations for the trends identified. The chapter also reflects on the wider implications emerging from this book for our understanding of the functions of international adjudication in contemporary international law.