1 Introduction

cInternational environmental law has evolved rapidly in recent decades and is now a highly sophisticated and distinctive sub-discipline of public international law that regulates a broad array of human activities affecting natural and built environments.[1] Yet despite the marked increase in the scope and content of this legal field the scale and pace of environmental destruction has also grown. It is estimated that over 60 per cent of all ecosystem services that support life on earth have been degraded or are being used unsustainably, including freshwater resources and natural systems for air and water purification.[2] This is leading to continuing loss of biodiversity and is also preventing effective action against poverty, hunger, and health crises in many parts of the globe.[3]

With the notable exception of climate change, where there is an urgent need to develop and implement an effective regime that builds upon the achievements to date,[4] the main challenge for international environmental law in the twenty-first century is implementing an impressive body of law already in existence.[5] This is a challenge of

[1] For concise histories see Philippe Sands, *Principles of International Environmental Law* (2nd edn 2003) ch. 2; Ben Boer, Ross Ramsay, and Donald R. Rothwell, *International Environmental Law in the Asia Pacific* (1998); Denise K. DeGarno, *International Environmental Treaties and State Behavior: Factors Influencing Cooperation* (2005) ch. 3; Lynton Keith Caldwell, *International Environmental Policy: From the Twentieth to the Twenty-First Century* (3rd edn 1996) chs. 2–8.

[2] Millennium Ecosystem Assessment, *Ecosystems and Human Well-Being: Synthesis* (2005) 1.

[3] *Ibid.* 2.

[4] 1992 United Nations Framework Convention on Climate Change and the 1997 Kyoto Protocol to that convention.

[5] Martti Koskenniemi, 'Breach of Treaty or Non-Compliance? Reflections on the Enforcement of the Montreal Protocol' (1992) 3 *YIEL* 123, 123; Donald R. Rothwell,

environmental governance, requiring the design and operation of institutions that can promote the full and faithful observance by states of their environmental commitments. International adjudication, comprising both arbitration and judicial settlement by international courts and tribunals, is one type of institution gaining increasing prominence in this context. Factors behind this include increasing awareness of international disputation over shared natural resources, and the growth of environmental and other relevant treaties containing dispute settlement mechanisms.[6]

However, there has been considerable ambivalence in state practice and in scholarly commentary concerning the role of international environmental litigation. While some publicists have advocated much greater reliance upon international courts to protect the environment,[7] others have been highly sceptical of the benefits that adjudication can bring to problems of environmental management where cooperation rather than confrontation seems essential.[8] Against the background of such debates, this book seeks to offer a systematic and comprehensive examination of the historical and contemporary role of international courts and tribunals in resolving environmental disputes, promoting compliance with environmental commitments, and developing substantive rules and principles of environmental law. The overarching objective is to assess the extent to which the judicialisation of international environmental policy and practice has contributed to greater levels of global environmental protection and well-being.

1.1 Development of international environmental law

The genesis of international environmental law can be traced to general rules of public international law adapted and applied to address

'Reassessing International Environmental Dispute Resolution' (2001) 6 *APJEL* 201, 214.

[6] Cesare P. R. Romano, 'International Dispute Settlement' in Daniel Bodansky, Jutta Brunnée, and Ellen Hey (eds.), *The Oxford Handbook of International Environmental Law* (2007) 1036, 1037.

[7] See e.g. Amedeo Postiglione, *The Global Environmental Crisis: The Need for an International Court of the Environment* (1996); Alfred Rest, 'The Indispensability of an International Environmental Court' (1998) 7 *RECIEL* 63.

[8] See e.g. Abram Chayes, Antonia Handler Chayes, and Ronald B. Mitchell, 'Managing Compliance: A Comparative Perspective' in Edith Brown Weiss and Harold K. Jacobson (eds.), *Engaging Countries: Strengthening Compliance with International Environmental Accords* (1998) 39.

environmental problems,[9] and to early treaties and conventions dealing with select resource and wildlife issues.[10] However, most aspects of the discipline are of far more recent origin. From the 1960s onwards a range of regional and sectoral regimes were developed to deal with specific environmental issues such as riverine[11] and marine[12] pollution. These regimes frequently emerged in response to major pollution accidents that dramatically raised the global profile of environmental concerns,[13] and as a consequence these initiatives were often piecemeal and ad hoc. It was only in 1972, with the United Nations Conference on the Human Environment at Stockholm, that it became possible to speak of the emergence of a truly distinctive, and increasingly coherent, 'international environmental law'.[14]

The Stockholm Conference adopted the 1972 Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration), a landmark instrument articulating twenty-six fundamental principles to guide the consolidation and evolution of international environmental law.[15] The declaration dealt with several basic issues, such as the responsibility of states for transboundary environmental harm, upon which international consensus had already begun to emerge.[16] However, it went further, emphasising the need for states to protect the environment for its own sake and for the benefit of

[9] Such as the obligation upon states not knowingly to permit their territory to be used in such a way as to result in damage to the territory of other states: *Trail Smelter* case (*Canada/United States of America*) (1938 and 1941) 3 *RIAA* 1911.

[10] See e.g. 1933 Convention Relative to the Preservation of Fauna and Flora in their Natural State.

[11] See e.g. 1963 Agreement Concerning the International Commission for the Protection of the Rhine Against Pollution.

[12] See e.g. 1969 Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil and Other Harmful Substances.

[13] Such as the 1967 *Torrey Canyon* tanker disaster: E. D. Brown, 'The Lessons of the Torrey-Canyon: International Law Aspects' (1968) 21 *Current Legal Problems* 113.

[14] There has been much debate concerning whether 'international environmental law' is in fact a distinctive body of law, or whether it is merely a convenient label for describing the collection of norms that have some relevance to environmental questions: Patricia W. Birnie and Alan E. Boyle, *International Law and the Environment* (2nd edn 2002); Daniel Bodansky, Jutta Brunnée, and Ellen Hey, 'International Environmental Law: Mapping the Field' in Daniel Bodansky, Jutta Brunnée, and Ellen Hey (eds.), *The Oxford Handbook of International Environmental Law* (2007) 1, 5.

[15] See generally Louis B. Sohn, 'The Stockholm Declaration on the Human Environment' (1973) 14 *HarvILJ* 423.

[16] Stockholm Declaration, principle 21.

future generations,[17] and encouraged states to adopt an integrated and coordinated approach to environmental management.[18] In doing so it proved an important catalyst for further efforts to expand the reach of environmental law. This developmental process intensified and accelerated as a raft of new conventions were concluded,[19] soft-law instruments were endorsed,[20] and the World Commission on Environment and Development (WCED) completed its work.[21]

It became evident that despite the importance of these legal and policy initiatives a more comprehensive approach was required to advance global environmental protection. Global environmental challenges, such as climate change, stratospheric ozone depletion, and wide-scale loss of biodiversity, were not addressed within the framework of the Stockholm Declaration, which recognised a fairly limited collection of environmental problems. Awareness of this led to the 1992 United Nations Conference on Environment and Development (UNCED) in Rio. Commemorating the twentieth anniversary of the Stockholm Conference, UNCED ushered in the modern era of international environmental law. It led to the adoption of the 1992 United Nations Declaration on Environment and Development (Rio Declaration) and keystone conventions on biological diversity[22] and climate change.[23] The conference also endorsed Agenda 21, which set out an extensive programme of action to address global environmental challenges in the 1990s and into the twenty-first century.[24]

Since UNCED, international environmental law has developed further apace. This has been achieved principally through an assortment

[17] *Ibid*. principles 2 and 4.
[18] *Ibid*. principles 24 and 25.
[19] See especially 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the 1979 Convention on the Conservation of Migratory Species of Wild Animals.
[20] See especially United Nations Environment Programme Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilisation of Natural Resources Shared by Two or More States (1978) 17 ILM 1097; World Charter for Nature, GA Res. 37/7, UN Doc. A/37/51 (1982); Hague Declaration on the Environment, (1989) 28 ILM 1308.
[21] World Commission on Environment and Development, *Our Common Future* (1987).
[22] 1992 Convention on Biological Diversity (Biodiversity Convention).
[23] The 1992 United Nations Framework Convention on Climate Change was opened for signature prior to UNCED, but its terms were negotiated in the UNCED preparatory process.
[24] UN Doc. A/CONF.151/26/Rev.1 (1992). See Marlene Jahnke, 'UNCED: Rio Conference on Environment and Development' (1992) 22 *EPL* 204, 208.

of multilateral environmental agreements which are characterised by increasing sophistication, both in terms of the standards that are prescribed and the institutional structures established for monitoring implementation and promoting compliance.[25] None the less, the soft- and hard-law instruments concluded at UNCED have continued to provide the main legal and policy direction for international environmental law. They supply the 'practical contours' of mainstream conceptions of sustainable development.[26] Hence, the United Nations Millennium Declaration, which articulated the millennium development goals, spoke of the need to support the principles of sustainable development set out in Agenda 21.[27] The World Summit on Sustainable Development held in Johannesburg in 2002 similarly marked a renewed commitment to achieving the goals set at Rio, albeit with a greater emphasis than UNCED on poverty alleviation.[28] The 2005 World Summit Outcome also referred prominently to the 'Rio principles' in setting out agreed objectives for managing and protecting the global environment.[29]

What emerges from this brief history is that international environmental law has coalesced around a collection of fundamental guiding principles. It is possible to identify at least seven such principles that attract broad acceptance:[30] (1) the principle that states possess permanent sovereignty over their natural resources but also have a responsibility to ensure that they do not cause transboundary damage; (2) the principle of preventive action; (3) the precautionary principle/approach; (4) the principle of cooperation; (5) the principle of sustainable development; (6) the polluter pays principle; and (7) the principle of common but differentiated responsibility.

[25] See especially the Kyoto Protocol.

[26] W. M. Adams, *Green Development: Environment and Sustainability in the Third World* (2nd edn 2001) 99.

[27] UN Doc. A/RES/55/2 (2000).

[28] Johannesburg Declaration on Sustainable Development and Plan of Implementation of the World Summit on Sustainable Development, UN Doc. A/CONF.199/20 (2002).

[29] See e.g. 2005 World Summit Outcome, [48] UN Doc. A/60/L.1 (2005). See generally Joy Hyvarinen, 'The 2005 World Summit: UN Reform, Security, Environment and Development' (2006) 15 *RECIEL* 1.

[30] Sands, above n. 1, 231. See also the nine principles recited in IUCN – World Conservation Union, *Draft International Covenant on Environment and Development* (3rd edn 2004): (1) respect for all life forms (art. 2); (2) common concern for humanity (art. 3); (3) interdependent values (art. 4); (4) intergenerational equity (art. 5); (5) prevention (art. 6); (6) precaution (art. 7); (7) right to development (art. 8); (8) eradication of poverty (art. 9); (9) common but differentiated responsibilities (art. 10).

Environmental principles are an important legacy of the soft-law origins of the discipline.[31] Determining appropriate limits to the exploitation of natural resources, or imposing limitations upon development to preserve species or ecosystems, often involves highly contentious political choices. In this context the notion that states might agree to a non-binding or imprecise standard has obvious attractions as it permits agreement on the goals of environmental protection without appearing to impose absolute fetters on state autonomy.[32] Environmental principles therefore involve some degree of normativity, but do not necessarily bear all the hallmarks of legal rules[33] (although they can acquire such status).[34] Yet regardless of their legal character these principles provide international environmental law with an ethical outlook, a conceptual structure, and a distinctive vocabulary.[35] Among other things they seek to explain why and how the natural environment should be valued, how the objectives of resource conservation and ecosystem protection should be achieved, and how environmental values should be balanced against other objectives pursued by the international community. In all of these respects there remains considerable debate as to precisely what the content of environmental principles are. They remain central sites for contestation in translating broad environmental goals into concrete policies, as seen most clearly

[31] See, generally, Nicolas de Sadeleer, *Environmental Principles: From Political Slogans to Legal Rules* (Susan Leubusher trans. 2002); Geoffrey Palmer, 'New Ways to Make International Environmental Law' (1996) 86 *AJIL* 259; Ranee Khooshie Lal Panjabi, 'From Stockholm to Rio: A Comparison of the Declaratory Principles of International Environmental Law' (1993) 21 *DenJILP* 215.

[32] Patricia W. Birnie, 'International Environmental Law: Its Adequacy for Present and Future Needs' in Andrew Hurrell and Benedict Kingsbury (eds.), *The International Politics of the Environment: Actors, Interests, and Institutions* (1991) 51, 54.

[33] For a discussion of the distinction between 'rules' and 'principles' see Ronald Dworkin, *Taking Rights Seriously* (3rd edn 1981) 26: 'All that is meant, when we say that a particular principle is a principle of law, is that the principle is one which officials must take into account, if it is relevant, as a consideration inclining one way or another.'

[34] The clearest example of this is principle 21 of the Stockholm Declaration (and principle 2 of the Rio Declaration) concerning the responsibility of states to ensure that activities within their jurisdiction and/or control do not lead to damage to other states or to areas beyond national jurisdiction. See *Legality of the Threat or Use of Nuclear Weapons* [1996] ICJ Rep 226, [29] and the *Gabčíkovo-Nagymaros Project* case (*Hungary/Slovakia*) (merits) [1997] ICJ Rep 7, [53].

[35] Duncan French, *International Law and Policy on Sustainable Development* (2005) 52.

in the compendious literature on the precautionary principle.[36] As a growing volume of environmental disputes is brought before international courts and tribunals these institutions are gaining an increasingly prominent role in mediating and influencing this process of conceptual development.

1.2 International environmental governance through courts and tribunals

In parallel with the growth in the substantive content of international environmental law has emerged an awareness of the need for institutions that can promote compliance with international environmental standards.[37] While the question of enforcement has always vexed scholars of international law and international relations,[38] environmental management appears to present a range of particular challenges, especially given the need to manage complex and interconnected ecosystems that are indifferent to territorial and jurisdictional boundaries, and which require high levels of coordination and cooperation between a number of state and non-state actors.

International environmental governance may be described as the way in which rules of environmental law are developed, applied, and enforced.[39] It is an ongoing process in which norms and structures are transformed over time in response to the changing needs of international society.[40] International courts and tribunals constitute one part of this overall governance picture. As with any interna-

[36] Jaye Ellis, 'Overexploitation of a Valuable Resource? New Literature on the Precautionary Principle' (2006) 17 *EJIL* 445. One of the best overviews of the principle in operation is Jacqueline Peel, *The Precautionary Principle in Practice: Environmental Decision-Making and Scientific Uncertainty* (2005).

[37] Philippe Roch and Franz Xaver Perrez, 'International Environmental Governance: The Strive Towards a Comprehensive, Coherent, Effective and Efficient International Environmental Regime' (2005) 16 *ColoJIELP* 1, 6.

[38] See Benedict Kingsbury, 'The Concept of Compliance as a Function of Competing Conceptions of International Law' (1997–8) 19 *MichJIL* 345.

[39] See generally Wayne Sandholtz and Alec Stone Sweet, 'Law, Politics and International Governance' in Christian Reus-Smit (ed.), *The Politics of International Law* (2004) 238, 245; Daniel Bodansky, 'The Legitimacy of International Governance: A Coming Challenge for International Environmental Law?' (1999) 93 *AJIL* 596, 597; Sands, above n. 1, ch. 3.

[40] Sandholtz and Stone Sweet, above n. 39, 245. See also Oran R. Young, *International Governance: Protecting the Environment in a Stateless Society* (1994) 15–16.

tional institution, international courts possess distinctive functional attributes. They are inherently less flexible than other international institutions. The adjudication process is essentially confrontational, adversarial, and will often result in a dichotomous result. It also involves a limited number of parties, and can only deal with a narrow range of issues.[41] However, adjudication also has strengths in being able to resolve environmental disputes in a manner that is to some extent insulated from political processes. International courts involve a third party in the settlement process, are composed of judges who must adhere to high standards of independence and impartiality, must adjudicate claims advanced on the basis of reasoned arguments,[42] and above all are required to render decisions according to accepted legal rules. International adjudication is therefore an inherently rational procedure that can give effect to the wishes of the parties in an amicable settlement while also upholding the environmental or other public values embodied in legal norms applicable to the case at hand.[43] It is also a process productive of decisions that influence the development of environmental norms. All of these attributes make courts unique among other international institutions for giving independent and authoritative recognition to concerns of a community character. Similar benefits have long been recognised in relation to domestic courts with jurisdiction over environmental matters.[44]

Despite these apparent benefits it must be observed that the function performed by each individual court varies considerably, depending upon its place within individual international regimes. Unsurprisingly, the purpose that has been most pronounced has been that of dispute resolution. The obligation upon states to resolve their disputes solely by peaceful means, in such a way that international peace and security and justice are not threatened, is the foundation stone of modern international law.[45] As a consequence, adjudication has often been regarded as simply one among a number of methods for

[41] See generally Lon L. Fuller, 'The Forms and Limits of Adjudication' (1978) 92 *HarvLR* 353.

[42] *Ibid*. 369: 'Adjudication is a process of decision that grants to the affected party a form of participation that consists in the opportunity to present proofs and reasoned arguments.'

[43] Philippe Sands, '"Unilateralism", Values and International Law' (2000) 11 *EJIL* 291, 300–1; A. Neil Craik, 'Recalcitrant Reality and Chosen Ideals: The Public Function of Dispute Settlement in International Environmental Law' (1998) 10 *GeoIELR* 551, 563.

[44] Gerry Bates, *Environmental Law in Australia* (6th edn 2006) 14.

[45] UN Charter, arts. 2 and 33.

alleviating international tensions that might otherwise spill over into armed conflict.[46] However, since the late twentieth century there has been a dramatic proliferation and diversification of international judicial bodies, and international adjudication has been given new functions.[47] Through this judicialisation[48] of some areas of international law the concept of adjudication has shifted from being a device exclusively designed for promoting inter-state peace, to being a means for responding to new governance challenges such as the protection of human rights, the imposition of individual international criminal responsibility, and the resolution of complex commercial disputes.

International environmental law has not been insulated from these developments. There has been a substantial increase in international litigation on environmental questions in courts of general jurisdiction, in courts and tribunals having a specialisation in non-environmental issue areas, and in environment-focused bodies.[49] At the same time, international environmental law has developed a complex bureaucracy in the form of treaty-based institutions such as non-compliance procedures (NCPs) designed to facilitate greater levels of cooperation and coordination among states in responding to environmental problems. These developments appear to be pulling the institutional fabric of international environmental governance in two, quite different, directions. Whereas the reliance on courts and tribunals in some regimes signals a preference for a more confrontational, enforcement-oriented, method

[46] The tradition of thinking about international adjudication in this way can be traced to antiquity and has recurred ever since. See M. N. Tod, *International Arbitration Amongst the Greeks* (1913) 6; David D. Caron, 'War and International Adjudication: Reflections on the 1899 Peace Conference' (2000) 94 *AJIL* 4.

[47] Chester Brown, 'The Proliferation of International Courts and Tribunals: Finding Your Way Through the Maze' (2002) 3 *MJIL* 453; Cesare P. R. Romano, 'The Proliferation of International Judicial Bodies: The Pieces of the Puzzle' (1999) 31 *NYUJILP* 709.

[48] 'Judicialisation' may be described as 'the process through which a [triadic dispute resolution] mechanism appears, stabilizes and develops authority over the normative structure governing exchange in a given community. The judicialization of politics is the process by which triadic lawmaking progressively shapes the strategic behaviour of politics actors engaged in interactions with one another': Alec Stone Sweet, 'Judicialization and the Construction of Governance' (1999) 32 *CompPolStud* 147, 164. Hence while the term 'proliferation' is used to describe the quantitative increase in the number and type of international courts, 'judicialisation' captures the idea that there has been a qualitative expansion in the role of international courts in some areas of international relations and law.

[49] Sands, above n. 1, 65.

of compliance control, the use of NCPs and other treaty bodies indicates a more cooperative and supervisory approach. This raises questions as to whether these trends may be reconciled, and in what particular circumstances courts and tribunals are likely to be most effective in securing tangible improvements in environmental protection.

1.3 Role and relevance of international courts

The three chapters in part I of the book address these questions. Chapter 2 maps the landscape of international environmental adjudication. What becomes evident from this survey is that a wide variety of adjudicative institutions operate in the environmental field. A range of environmental instruments provide for the adjudication of environmental disputes, predominantly in ad hoc arbitral tribunals. Permanent courts and tribunals, most notably the International Tribunal for the Law of the Sea (ITLOS), are also occupying an increasingly important role in some environmental regimes. There has been an effort to improve the capacity of existing institutions to respond to environmental disputes, as is seen in the adoption of specialised environmental procedures by the Permanent Court of Arbitration[50] (PCA) and the establishment in 1993 of a permanent Chamber for Environmental Matters within the International Court of Justice (ICJ). Although these are important developments, some of the most influential forums for environmental dispute settlement are judicial bodies without an environmental specialisation such as the dispute settlement system of the World Trade Organization (WTO). Chapter 2 also offers a critical appraisal of recurring proposals for the establishment of an international court for the environment.

It is evident that the growing patchwork of jurisdictions examined in chapter 2 represents the judicialisation of international environmental law, at least in certain discrete areas such as the law of the sea. However, by comparison with some fields of public international law, particularly those applicable to international trade and foreign investment, international environmental law is not generally reliant upon arbitration and judicial settlement. Indeed it is seen in chapter 3 that the development of environmental governance structures has taken a different path. A key feature of the growing maturity

[50] 2001 Optional Rules for the Arbitration of Disputes Relating to Natural Resources and/or the Environment.