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The Environment and International Society: Issues, Concepts and Definitions

CHAPTER OUTLINE

This chapter discusses the key introductory questions of:

1. how 'the environment' is conceived in a global context;
2. the basis for decisions about international environmental legal issues;
3. how the international legal order is structured and functions;
4. international legal definitions of 'the environment'; and
5. the principal challenges facing international environmental law.

The final section of the chapter outlines resources for learning more about, and conducting research, in this field.

Given that the land – and the sea – and the air-spaces of planet Earth are shared, and are not naturally distributed among the states of the world, and given that world transforming activities, especially economic activities, can have effects directly or cumulatively, on large parts of the world environment, how can international law reconcile the inherent and fundamental interdependence of the world environment? How could legal control of activities adversely affecting the world environment be instituted, given that such activities may be fundamental to the economies of particular states?¹

INTRODUCTION: THE ENVIRONMENTAL CHALLENGE

It is widely recognised that the planet faces serious environmental challenges that can only be addressed through international cooperation. Climate change and ozone depletion, loss of biodiversity, toxic and hazardous pollution of air and sea, pollution of rivers and depletion of freshwater resources are among the issues that international law is called upon to address. Since the mid 1980s, the subject of international environmental law has emerged as a discrete field of public international law, although one that is closely related to many other areas. The conditions that have contributed to the emergence of international environmental law are easily identified:

¹ P. Allott, *Eunomia: A New Order for a New World* (Oxford: Oxford University Press, 1990), para. 17.52.

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environmental threats are accompanied by a recognition that ecological interdependence does not respect national boundaries and that issues once considered to be matters of national concern have international implications – at the bilateral, subregional, regional or global levels – that can often only be addressed by international cooperation, including by law and regulation.

The growing number of international environmental issues is evidenced by the large body of principles and rules of international environmental law that apply bilaterally, regionally and globally, and reflects international interdependence in a ‘globalised’ world.² Progress in developing international legal control of activities has been gradual and piecemeal, and too reactive to particular incidents or the availability of new scientific evidence (such as the Chernobyl accident or the discovery of the ‘hole’ in the ozone layer). It was not until the late nineteenth century that communities and states began to recognise the transboundary consequences of activities affecting shared rivers or leading to the destruction of wildlife, such as fur seals, in areas beyond national jurisdiction. In the 1930s, the transboundary consequences of air pollution were acknowledged in the litigation leading to the award of the arbitral tribunal in the *Trail Smelter* case. In the 1950s, the international community legislated on international oil pollution of the oceans. By the 1970s, the regional consequences of pollution and the destruction of flora and fauna were obvious, and by the late 1980s global environmental threats had become a part of the international community’s agenda as scientific evidence identified the potential consequences of ozone depletion, climate change and loss of biodiversity. Local issues were seen to have transboundary, then regional, and ultimately global, consequences. In 1996, the International Court of Justice (ICJ) recognised, for the first time, that there existed rules of general international environmental law. The Court declared that a ‘general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment’.³ Since then, specific treaty rules have become more complex and technical, and environmental issues have been increasingly integrated into other subject areas (including trade, investment, intellectual property, human rights and the law governing armed conflict). In addition, international environmental litigation has developed and the case law of international courts and tribunals has expanded, increasingly effecting real changes, as occurred recently in the judgment of the ICJ in the *Whaling Case* brought by Australia against Japan.

The first major global environmental conference – the 1992 UN Conference on Environment and Development (UNCED) – provided an opportunity for the international community to prioritise environmental issues and consolidate a vast and unwieldy patchwork of international legal commitments. The treaties and other international acts adopted before, at and since UNCED reflect the range of economic activities that concern the international community and are subject to international legal regulation for environmental purposes. UNCED agreed environmental priorities that were essentially divided into two categories: those relating to the protection of various environmental media, and those relating to the regulation of particular activities or products. The first category identified the following priorities for the protection and conservation of particular environmental media:

² P. Sands, ‘Turtles and Torturers: The Transformation of International Law’, 33 *New York University Journal of International Law and Politics* 527–58 (2001).

³ (1996) ICJ Reports 226 at 242.

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- protection of the atmosphere, in particular by combating climate change, ozone depletion and ground-level and transboundary air pollution;
- protection of land resources;
- halting deforestation;
- conservation of biological diversity;
- protection of freshwater resources; and
- protection of oceans and seas (including coastal areas) and marine living resources.

The second category of major issues identified the products and by-products of human technological and industrial innovation which are considered to be particularly harmful to the environment, and which therefore require international regulation. These include:

- biotechnology;
- toxic chemicals, including their international trade;
- agricultural practices;
- hazardous wastes, including their international trade;
- wastes and sewage-related issues; and
- radioactive wastes.

For both categories, which continue to have currency today, the international legal issues are complex, and cannot be considered or addressed properly without taking account of political, cultural, economic and scientific concerns. What level of environmental protection should standards seek to establish? Should the standards be set on a uniform basis or should they be differentiated to take account of political, economic and ecological circumstances? What regulatory and other techniques exist to apply those standards? How are the standards to be enforced domestically and internationally? What happens if a dispute arises over non-compliance?

In addressing these questions, it is clear that the environment represents a complex system of interconnections. In order to understand the evolution and character of a particular environment it is necessary to consider a broad range of apparently unrelated factors, which interact with each other in a number of ways that do not permit them to be treated as discrete.⁴ The interdependence of environmental issues poses legal challenges: how to develop and apply a comprehensive and effective set of legal requirements aimed at preventing environmental damage by addressing the sources without taking measures that will cause harm elsewhere? Current efforts to develop environmentally sound energy policies, for example, reflect the full extent of this challenge and demonstrate how developments in the law depend upon political will, economic factors and technological capacity.

This book maps the field of international environmental law and its relationship with other related international fields such as trade and investment, international humanitarian law and human rights. The foundations of the book are ‘principles’ of international environmental law, many of which were articulated in the 1992 Rio Declaration on Environment and Development issued by states at UNCED.⁵ These principles have provided the architecture for the development of detailed legal arrangements dealing with different environmental issues. The various sectoral regimes that make up the broader field of international environmental law are discussed in

⁴ A. Goudie, *The Nature of the Environment* (Chichester: Wiley, 2001, 4th edn), 503–4.

⁵ See further, Chapter 6, pp. 200–1.

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Part II of the book. The principles of international environmental law also underpin a range of techniques and regulatory tools of international environmental law – information sharing, technology transfer, liability mechanisms and environmental impact assessment – described in Part III of the book. Finally, the principles of international environmental law urge its integration and shape its interlinkages with other areas of international law and governance, an evolution addressed in Part IV of the book.

In this Part, we address those features of the international legal and institutional context that are essential to understand how international environmental rules are made, implemented and enforced, and the actors involved in those processes. The remainder of the chapter introduces key concepts, including: the factors that shape international environmental law and decision-making processes; the basic functions and structure of the international legal order; notions of the ‘environment’ that underpin legal arrangements; and the most important challenges that face international legal efforts to address environmental issues.

THE BASIS FOR DECISION-MAKING: SCIENCE, ECONOMICS AND OTHER VALUES

Like other areas of law, international environmental law is influenced by many non-legal factors. The likelihood of achieving progress on the law is influenced by: the extent of scientific consensus about a problem; the level of public concern; political perceptions as to the allocation of responsibilities; the economic consequences of action or inaction; and the existence of existing multilateral precedents.⁶ Factors that lessen the likelihood of reaching agreement include the economic costs of environmental controls and the number of states negotiating a treaty. Other considerations include the choice of forum for the negotiation of the agreement and the nature of arrangements for dealing with non-compliance. Of all these factors, two are particularly influential: the impact of science, and perceived economic impacts.

Science

The strong concern of states to ensure that their economic interests are taken into account in the development and application of international environmental law has been matched by an equally firm view that environmental regulations should only be adopted where there is compelling scientific evidence that action is required to prevent environmental damage. This brings diplomats and international lawyers together with the scientific community. The ease with which an international lawyer is able to present a cogent case for international legislation often turns on the ability to show that the lack of action by the international community is likely to result in significant adverse effects. Within the past two decades this task has been made substantially less onerous by growing acceptance of a precautionary approach, requiring action in the face of significant scientific uncertainty. The 1985 Vienna Convention (and its 1987 Montreal Protocol), the 1992 Climate Change Convention (and its 1997 Kyoto Protocol), the 1995 Fish Stocks Agreement and the 2000 Cartagena Protocol on Biosafety are examples of treaties establishing obligations in the face of scientific uncertainty and in the absence of an

⁶ R. Hahn and K. Richards, ‘The Internationalisation of Environmental Regulation’, 30 *Harvard International Law Journal* 421 at 433–40 (1989).

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international consensus on the existence of environmental harm.⁷ To these may be added a series of international judicial decisions informed by ‘prudence and caution’.⁸ The persistence of sceptical views about the science of climate change, however, indicates the brake that uncertainty (or at least the perception of scientific discord) may have on legal developments.⁹

Since the first edition of this book, the place of science in international environmental decision-making has been the subject of vigorous debate, largely focusing around competing claims concerning the lawfulness of restrictions on the use of, and international trade in, modified crops and foodstuffs, including genetically modified organisms.¹⁰ Disputes under various World Trade Organization (WTO) agreements (relating to beef hormones¹¹ and GMOs)¹² and efforts to negotiate new rules on climate change¹³ have provided opportunities for an airing of states’ views as to the degree of scientific evidence and certainty that is required to justify restrictions.¹⁴ As to science, in large part the issues have been driven by differences of perspective between the United States and the European Union, with the former strongly in favour of decision-making based on ‘hard science’. As the US State Department puts it:

[T]he increasing efforts from within the EU . . . could weaken the scientific basis for regulatory decisions that affect trade. This trend poses a challenge not only to US interests but also to the rules-based, global trading system that we have spent the past 50 years building.¹⁵

The contrary position – often adopted by the European Union – would allow decision-makers a greater ‘margin of appreciation’ in the face of scientific uncertainty.¹⁶ The tension continues, notwithstanding efforts at regulatory convergence through new trade partnerships.¹⁷ For international adjudicators these differences pose some acute difficulties. The approaches of the ICJ (in the *Pulp Mills* case, *Costa Rica v. Nicaragua* case and the *Whaling* decision), the International Tribunal for the Law of the Sea (in Advisory Opinions on *Responsibilities and Obligations in the Area* and *Sub-regional Fisheries Commission*) and the WTO Dispute Settlement Body (in the *GMO* case) merit attention and comparison, indicating a range of views on the need for

⁷ See Chapter 6, pp. 229–40, on the precautionary principle.

⁸ ITLOS decisions in *Southern Bluefin Tuna*, *Land Reclamation* and *MOX Provisional Measures* cases. See Chapter 6, pp. 236–7.

⁹ Kevin Trenberth, ‘More Knowledge, Less Certainty’, 4 *Nature Reports Climate Change* 20 (2010), available at www.nature.com/climate/2010/1002/pdf/climate.2010.06.pdf; D. Henderson, ‘The Climate Change Debate Today: COP15, the CRU Affair, and the Basis for Policy’, 21(3) *Energy and Environment* 279 (2010); S. B. Capstick and N. F. Pidgeon, ‘What Is Climate Change Scepticism? Examination of the Concept Using a Mixed Methods Study of the UK Public’ 24 *Global Environmental Change* 389 (2014).

¹⁰ J. Peel, *Science and Risk Regulation in International Law* (Cambridge: Cambridge University Press, 2010).

¹¹ See Chapter 18, pp. 873–9. ¹² See *ibid.*, pp. 879–81. ¹³ See Chapter 8, pp. 318ff.

¹⁴ For an excellent overview, see T. Christoforou, ‘Science, Law and Precaution in Dispute Resolution on Health and Environmental Protection: What Role for Scientific Experts?’, in J. Bourrinet and S. Maljean-Dubois (eds.), *Le Commerce international des organismes génétiquement modifiés* (Paris: La documentation française, 2002).

¹⁵ Quoted in M. Geistfeld, ‘Reconciling Cost–Benefit Analysis with the Principle That Safety Matters More than Money’, 76 *New York University Law Review* 114 at 176 (2001). The same article quotes an editorial in the *Wall Street Journal* (on 10 February 2000): ‘The precautionary “principle” is an environmentalist neologism, invoked to trump scientific evidence and move directly to banning things they don’t like – biotech, wireless technology, hydrocarbon emissions.’

¹⁶ Chapter 6, pp. 234–8.

¹⁷ L. Bergkamp and L. Kogan, ‘Trade, the Precautionary Principle, and Post-Modern Regulatory Process’ 4 *European Journal of Risk Regulation* 493 (2013).

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precautionary measures.¹⁸ In parallel with such judicial developments has been the recognition of a greater role for early 'risk assessment', beyond traditional use of environmental impact assessment.¹⁹

Economics

The progress of international environmental law reflects a close relationship between environmental protection and economic development. Over the short term, laws adopted to protect the environment can impose potentially significant economic costs. Moreover, certain technologically developed countries may be better placed to benefit from the adoption of stringent environmental standards, while others will be concerned about the threat to their economic competitiveness resulting from the failure of other countries to adopt similarly stringent standards and may want to relax (or at least not strengthen) their environmental standards.²⁰

In the early generation of environmental treaties, it was rare to provide for financial resources to be made available to compensate for the additional costs of protective measures. The Convention on the International Trade in Endangered Species (CITES), for example, did not provide compensation to African states for the loss of revenue resulting from the 1989 ban on international trade in ivory. This may have limited the desire of many developing countries to support similar measures subsequently. There is also concern that moves towards harmonisation will lead to a lowering of environmental standards to ensure that economic costs can be borne, as reflected in efforts to introduce a principle of 'cost-effectiveness' to guide decision-making under some environmental agreements.²¹ Accordingly, some treaties, such as the EU Treaty (as amended since 1992), require certain EU secondary legislation to include a safeguard clause that allows member states to adopt provisional measures for 'non-economic environmental reasons'.

It is hardly surprising, therefore, that environmental concerns are now closely connected with economic considerations. Aside from the question of the potential use of economic instruments to achieve environmental objectives,²² two issues are particularly acute. Developing countries have sought to make acceptance of certain environmental obligations dependent upon the provision of financial assistance; relatedly, other countries have sought to ensure that environmental treaties establish effective mechanisms to verify compliance, to prevent the competitive economic advantages which might flow from non-compliance.

These two features have caused environmental treaties to break new ground in the development of international legal techniques. Treaties such as the 1987 Montreal Protocol, the 1992 Climate Change Convention, the 1992 Biodiversity Convention and the 2001 POPs Convention provide for 'compensatory' finance to be made available to developing countries to

¹⁸ Respectively, at Chapter 9, pp. 351–5; Chapter 10, pp. 421–2; Chapter 11, pp. 498–9 and 536–8 and Chapter 18, pp. 879–81.

¹⁹ See e.g. 2000 Biosafety Protocol, Chapter 10, pp. 397–403; 1998 Chemicals Convention, Chapter 12, pp. 587–9; 2001 POPs Convention, Chapter 12, 581–3.

²⁰ See D. Esty, 'Revitalizing Environmental Federalism', 95 *Michigan Law Review* 570 (1996). For a compelling alternative view, see R. Revesz, 'Rehabilitating Interstate Competition: Rethinking the "Race to the Bottom" Rationale for Federal Environmental Regulation', 67 *New York University Environmental Law Review* 1210 (1992); and R. Revesz, 'The Race to the Bottom and Federal Environmental Regulation: A Response to Critics', 82 *Minnesota Law Review* 535 (1997). In the context of the NAFTA rules on direct foreign investment, and the failed OECD negotiation for a Multilateral Agreement on Investment, see Chapter 18, pp. 900–1.

²¹ 1992 Climate Change Convention, Art. 3. ²² Chapter 4, pp. 132–7.

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enable them to meet certain 'incremental costs' of implementing their obligations, and provide for subsidiary bodies to verify compliance and implementation. This linkage has in turn led to the creation of specialised funding arrangements within existing institutions, in particular the World Bank and the regional development banks, such as the Global Environment Facility (GEF).

The integration of environmental protection and economic development has added authority to international environmental law, drawing it out of the margins of international law. Mainstreaming, however, has come at a price. The development of new norms has slowed down and concerns arise that these arrangements may merely serve to subsume environmental considerations and perpetuate an approach to international economic practices and arrangements that compounds environmental problems. This concern refers to the integration of environment and development that underpins the concept of sustainable development. This concept finds reflection in many international instruments,²³ as well as decisions of international courts.²⁴

Other Social Objectives

Science and economics are not the only factors to influence international environmental decision-making, or the settlement of environmental disputes. In recent years, there has been increasing recognition of a place for social and other values as legitimate factors influencing environmental decision-making. The 2000 Biosafety Protocol, for example, allows parties, in reaching decisions under the Protocol, to

take into account, consistent with their international obligations, socio-economic considerations arising from the impact of living modified organisms on the conservation and sustainable use of biological diversity, especially with regard to the value of biological diversity to indigenous and local communities.²⁵

In a similar vein, the Appellate Body has recently found that the 'public morals' exception in the General Agreement on Tariffs and Trade (GATT) provided justification for an EU ban on seal products.²⁶ Despite such developments, provisions in international environmental treaties requiring public participation in decision-making remain limited.

Sustainable Development

The concept of sustainable development is found in many environmental treaties and other instruments, including several concluded in the period prior to the publication of the Brundtland Report in 1987.²⁷ Nevertheless, the Brundtland Report is commonly viewed as the point at which sustainable development became a broad global policy objective and set the international community on the path that led to 'international law in the field of sustainable development'.²⁸

²³ Chapter 6, pp. 217–29.

²⁴ e.g. the ICJ in the *Case Concerning the Gabčíkovo–Nagymaros Project* (1997) ICJ Reports 7, at para. 140 (Chapter 9, pp. 345–51); the WTO Appellate Body, in the *Shrimp/Turtle* case, Chapter 18, pp. 859–65.

²⁵ Art. 26(1); see R. H. Khawa, 'Socio-Economic Considerations', in C. Bail, R. Falkner and H. Marquard (eds.), *The Cartagena Protocol on Biosafety* (London: Earthscan, 2002), 361.

²⁶ Chapter 18, p. 870. ²⁷ Chapter 6, pp. 217–29.

²⁸ Rio Declaration, Principle 27; Agenda 21, Chapter 39, para. 39.1.

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Is there any difference between international law in the field of sustainable development and international environmental law?

The Brundtland Report defined sustainable development as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’. It contains two key concepts: the concept of needs, in particular the essential needs of the present generation, and the idea of limits imposed by the state of technology and social organisation on the environment’s ability to meet present and future needs.²⁹ The Brundtland Report identified critical objectives for environment and development policies reflected in the concept of sustainable development:

- reviving growth and changing its quality;
- meeting essential needs for jobs, food, energy, water and sanitation;
- ensuring a sustainable level of population;
- conserving and enhancing the resource base;
- reorienting technology and managing risk; and
- merging environment and economics in decision-making.³⁰

Subsequent developments have fleshed out these principles, although many ambiguities remain. Sustainable development was recognised as an international legal term by the ICJ in the *Gabčíkovo–Nagymaros* case, and as having practical legal consequences by the WTO Appellate Body in the *Shrimp/Turtle* case.³¹ Since then, other cases have sought to give effect to the concept, including the *Iron Rhine* arbitration and the ICJ decision in *Pulp Mills*.³² The international law of sustainable development encompasses but is not limited to international environmental law; it also includes the social and economic dimensions of development, the participatory role of major groups, and financial and other means of implementation.³³ As will be seen in subsequent chapters, the integration of environmental considerations with other social objectives has led to development of a human rights/environment jurisprudence,³⁴ and the integration of environment into matters such as international trade and investment, peace and security matters, and criminal law (reflected, in a limited way, in the Statute of the International Criminal Court).³⁵

THE INTERNATIONAL LEGAL ORDER

Environmental issues pose significant challenges for the traditional international legal order, in at least three ways. They pose challenges, first, for the legislative, administrative and adjudicative functions of international law; second, for the manner in which international legal arrangements are organised (i.e. along territorial lines); and, third, for the various actors who are considered to be members of the international community and participants in the various

²⁹ Report of the World Commission on Environment and Development, *Our Common Future* (1987), 43 (the Brundtland Report).

³⁰ *Ibid.*, 49–65.

³¹ Chapter 6, pp. 217–29. See generally P. Sands, ‘International Courts and the Application of the Concept of “Sustainable Development”’, 3 *Max Planck Yearbook of United Nations Law* 389–407 (1999).

³² Chapter 6, pp. 217–229. ³³ Sections I, III and IV of Agenda 21. ³⁴ Chapter 17, pp. 819–27.

³⁵ *Ibid.*, p. 834 and Chapter 18, pp. 843–99.

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processes and practices of the international legal order.³⁶ The ability of the international legal order to address these three aspects, in the context of environmental issues, determines whether international law can truly be marshalled to promote effective environmental protection, or whether it becomes merely ‘the faithful friend of a family overtaken by time’.³⁷ It remains to be seen whether a diminishing conception of sovereignty in the face of an emerging international judiciary, together with a more inclusive, accessible and diverse international legal order, leads to any greater protection of the environment.³⁸

The Functions of International Law

International law and institutions serve as the principal framework for international cooperation and collaboration between members of the international community in their efforts to protect the local, regional and global environment. At each level, the task becomes progressively more complex as new actors and interests are drawn into the legal process: whereas just two states negotiated the nineteenth-century fishery conservation conventions, more than 150 states negotiated the 1992 Biodiversity Convention and the 2000 Biosafety Protocol. Treaties of ‘universal participation’ such as the Montreal Ozone Protocol now require consensus decisions to be reached by the 197 states parties.

In all cases, however, the principles and rules of international law serve similar functions, in contributing to the development of consciousness about the need for action: to provide a framework within which the various members of the international community may cooperate, establish norms of behaviour and resolve their differences. The proper functions of international law are legislative, administrative and adjudicative functions. The legislative function, which is considered in Chapter 4, provides for the creation of legal principles and rules that impose binding obligations requiring states and other members of the international community to conform to certain norms of behaviour. These obligations place limits upon the activities that may be conducted or permitted because of their actual or potential impact upon the environment. The impact might be felt within the borders of a state, or across the boundaries of two or more states, or in areas beyond the jurisdiction and control of any state.

The administrative function of international law allocates tasks to various actors to ensure that the standards imposed by the principles and rules of international environmental law are applied.³⁹ The adjudicative function of international law aims to provide mechanisms or fora to prevent and peacefully settle differences or disputes which arise between members of the international community involving the use of natural resources or the conduct of activities which will impact upon the environment. Since the mid 1990s, the adjudicative function has assumed increasing importance in interpreting, applying and even developing rules of international law in the field of the environment.

³⁶ For a more complete exploration of these issues, see P. Sands, *Vers une Transformation du Droit International? Institutionnaliser le Doute* (Paris: Editions A. Pedone, 2000).

³⁷ Allott, *Eunomia*, para. 16.3. ³⁸ Sands, ‘Turtles and Torturers’, 558.

³⁹ According to some scholars, the growth of international rules in this area has led to the development of Global Administrative Law. See B. Kingsbury, N. Krisch and R. Stewart, ‘The Emergence of Global Administrative Law’ 68 *Law and Contemporary Problems* 15 (2005).

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Sovereignty and Territory

The international legal order regulates the activities of an international community comprising states, international organisations and non-state actors. States have the primary role in the international legal order, as both international lawmakers and holders of international rights and obligations. Under international law, states are sovereign and have equal rights and duties as members of the international community, notwithstanding differences of an economic, social, political or other nature.⁴⁰ The doctrine of the sovereignty and equality of states has three principal corollaries, namely that states have:

- (1) a jurisdiction, *prima facie* exclusive, over a territory and a permanent population living there;
- (2) a duty of non-intervention in the area of exclusive jurisdiction of other states; and
- (3) the dependence of obligations arising from customary law and treaties on the consent of the obligor.⁴¹

The sovereignty and exclusive jurisdiction of the 200 or so states over their territory means, in principle, that they alone have the competence to develop policies and laws in respect of the natural resources and the environment of their territory, which comprises:

- (1) the land within its boundaries, including the subsoil;
- (2) internal waters, such as lakes, rivers and canals;⁴²
- (3) the territorial sea, which is adjacent to the coast, including its seabed, subsoil and the resources thereof;⁴³ and
- (4) the airspace above its land, internal waters and territorial sea,⁴⁴ up to the point at which the legal regime of outer space begins.⁴⁵

Additionally, states have limited sovereign rights and jurisdiction over other areas, including: a contiguous zone adjacent to the territorial seas;⁴⁶ the resources of the continental shelf, its seabed and subsoil;⁴⁷ certain fishing zones;⁴⁸ and the 'exclusive economic zone'.⁴⁹ It follows that certain areas fall outside the territory of any state, and in respect of these no state has exclusive jurisdiction. These areas, which are sometimes referred to as the 'global commons', include the high seas and its seabed and subsoil, outer space and, according to a majority of states, the Antarctic. The atmosphere is also sometimes considered to be a part of the global commons. This apparently straightforward international legal order worked satisfactorily as an organising structure until technological developments permeated national boundaries. This structure does not, however, coexist comfortably with an environmental order that consists of a biosphere of interdependent ecosystems, which do not respect artificial national territorial boundaries. Many natural resources and their environmental components are ecologically shared. The use by one state of natural resources within its territory will invariably have consequences for the use of

⁴⁰ Declaration on Principles of International Law Concerning Friendly Relations and Co-operation Among States in Accordance with the Charter of the United Nations, UNGA Res. 2625 (XXV) (1970).

⁴¹ I. Brownlie, *Principles of Public International Law* (Oxford: Clarendon Press, 1990, 4th edn), 287.

⁴² 1982 UNCLOS, Art. 8. ⁴³ *Ibid.*, Art. 2. On archipelagic waters as national territory, see *ibid.*, Art. 48.

⁴⁴ R. Jennings and A. Watts (eds.), *Oppenheim's International Law* (Harlow: Longman, 1992, 9th edn), vol. 1, 650–61.

⁴⁵ *Ibid.*, 826–45. ⁴⁶ 1982 UNCLOS, Art. 33. ⁴⁷ *Ibid.*, Arts. 76 and 77.

⁴⁸ *Fisheries Jurisdiction* cases (1974) ICJ Reports 3, at para. 52.

⁴⁹ 1982 UNCLOS, Arts. 55 and 56; Chapter 5, pp. 150–1; and Chapter 11, pp. 514–16.