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Governance: states, international organisations and non-state actors

K. Dahlberg, A. Feraru and M. Soroos (eds.), *Environment and the Global Arena: Actors, Values, Policies, Futures* (1983); P. Sands, 'The Environment, Community and International Law', 30 *Harvard International Law Journal* 393 (1989); P. Sand, *Lessons Learned in Global Environmental Governance* (1990); J. Tuchman-Mathews (ed.), *Preserving the Global Environment: The Challenge of Shared Leadership* (1990); A. Hurrell and B. Kingsbury (eds.), *The International Politics of the Environment: Actors, Interests and Institutions* (1992); Commission on Global Governance, *Our Global Neighborhood* (1995); K. Ginther, E. Denters and P. De Waart (eds.), *Sustainable Development and Good Governance* (1995); D. Bodansky, 'The Legitimacy of International Governance: A Coming Challenge for International Environmental Law?', 93 AJIL 596 (1999).

Introduction

A wide range of actors participate in those aspects of the international legal order which address environmental issues, including the negotiation, implementation and enforcement of international environmental agreements. Apart from state delegations, which play the central role, a visitor to ozone or climate change negotiations would find international organisations and non-state actors actively involved. International environmental law is characterised by this phenomenon which, with the possible exception of the human rights field, renders it unique. Various reasons explain this state of affairs. States are involved because they are still the pre-eminent international legal persons. International organisations participate because they have been created by states to address particular environmental issues. Of the various non-state participants, the scientific community is involved because, to a great extent, international environmental law is driven by scientific considerations; business is involved because of the significant implications which decisions taken at the global level can now have even for individual companies; and environmental non-governmental organisations (NGOs) are involved because their membership increasingly drives them into the international arena as the distinction between local, national and global issues disintegrates. The participation of non-state actors in international

environmental law has an established history, and is now widely encouraged and accepted.

The various actors have different roles and functions, both as subjects and objects of international environmental law, including: participating in the law-making process; monitoring implementation, including reporting; and ensuring implementation and enforcement of obligations. The role of each actor turns upon its international legal personality and upon the rights and obligations granted to it by general international law and the rules established by particular treaties and other rules. The Rio Declaration and Agenda 21, as well as an increasing number of international environmental agreements, support an expanded role for international organisations and non-state actors in virtually all aspects of the international legal process.[1]

States

OECD, *Transfrontier Pollution and the Role of States* (1981); T. M. Franck, *The Power of Legitimacy Among Nations* (1990); R. Jennings and A. Watts, *Oppenheim's International Law* (1992, 9th edn), chapter 2 (especially pp. 110–26); B. Simma, 'From Bilateralism to Community Interest in International Law', 250 RdC 217 (1994); U. Beyerlin, 'State Community Interests and Institution Building in International Environmental Law', 56 ZaöRV 602 (1996); P. Daillier and A. Pellet, *Droit International Public* (2002, 7th edn), 407–514.

States are the primary subjects of international law. This remains the case in spite of the incursions made by international organisations into previously sovereign spheres of activity and the expanded role of non-state actors. It is still states which create, adopt and implement international legal principles and rules, establish international organisations, and permit the participation of other actors in the international legal process. There are currently 191 member states of the UN, another five states which are not members and numerous entities which do not possess the full characteristics of statehood, including dependent territories and non-self-governing territories.[2] The role played by the 191 UN member states in the development and application of international law depends on the subject being addressed and on the relationship of their vital interests to that subject, and on a complex blend of economic, political, cultural, geographical and ecological considerations. Broadly speaking, states are divided by international, legal and institutional arrangements into developed countries, developing countries, and economies in transition. Developed

[1] See pp. 112–20 below.

[2] The four characteristics which must traditionally obtain before an entity can exist as a state are: (a) a permanent population; (b) a defined territory; (c) a government; and (d) a capacity to enter into relations with other states: see 1933 Montevideo Convention on the Rights and Duties of States, Art. 1, 165 LNTS 19; see also Oppenheim, vol. 1, 120–3.

countries include the thirty member states of the OECD. The twenty-seven states which previously formed part of the 'Soviet bloc' are generally referred to as 'economies in transition'.[3]

The rest of the world, comprising some 134 states, are the developing states which form the Group of 77.[4] The Group of 77 often works as a single negotiating bloc within the framework of the UN, although in relation to environmental matters their perspectives vary widely. Within the UN system, states are also arranged into regional groupings, usually for the purpose of elections to UN bodies. The five groupings are: the Latin American and Caribbean Group; the African Group; the Asian Group; the Western European and Others Group; and the Central and Eastern European Group (although this grouping is increasingly less tenable with the prospect of EC membership for seven states in 2004). Frequently in environmental negotiations these distinctions tend to break down as states pursue what they perceive to be their vital national interests, including their strategic alliances, which may be unrelated to environmental matters. The UNCED negotiations – and more recently those relating to the 2000 Biosafety Protocol – have illustrated the extent of the differences which existed between and among developed states and developing states on particularly contentious issues: atmospheric emissions, production and trade in living modified organisms, conservation of marine mammals, protection of forests, institutional arrangements and financial resources.[5]

International organisations

National Academy of Sciences, *Institutional Arrangements for International Environmental Co-operation* (1972); J. Hargrove (ed.), *Law, Institutions and the Global Environment* (1972) (especially A. Chayes, 'International Institutions for the Environment'); J. Schneider, *World Public Order of the Environment: Towards an International Ecological Law and Organisation* (1979); R. Boardman, *International Organisation and the Conservation of Nature* (1981); E. Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (1990); 'Institutional Arrangements', in 'Developments – International Environmental Law', 104 *Harvard Law Review* 1484 at 1580 (1991); P. Thacher, 'Multilateral Co-operation

[3] For an indicative list of developed countries and 'economies in transition', see Appendix 1 to the 1992 Climate Change Convention, and Appendix 2 for a list of OECD members; see chapter 8, p. 275 below. Poland, Hungary, the Czech Republic and Slovakia, all formerly part of the 'Soviet bloc', have now joined the OECD and can now be considered developed countries. For a list of countries currently considered by the UN to be 'economies in transition', see the report of the Secretary General, 'Integration of the Economies in Transition into the World Economy', 9 September 2002, A/57/288.

[4] The G77, as it is known, does not include all developing countries; China is not a member of the Group, although it frequently participates in its activities.

[5] See C. Bail *et al.*, *The Cartagena Protocol on Biosafety* (2002), Part II.

and Global Change', 44 *Journal of International Affairs* 433 (1991); UNCED, *International Institutions and Legal Instruments* (Research Paper No. 10, 1991); A. Boyle, 'Saving the World: Implementation and Enforcement of International Environmental Law Through International Institutions', 3 *Journal of Environmental Law* 229 (1991); L. A. Kimball, *Forging International Agreement: Strengthening Inter-Governmental Institutions for Environment and Development* (1992); L. A. Kimball, 'Towards Global Environmental Management: The Institutional Setting', 3 *Yearbook of International Environmental Law* 18 (1992); H. French, *After the Earth Summit: The Future of Global Environmental Governance* (1992); P. Haas, R. Keohane and M. Levy (eds.), *Institutions for the Earth: Sources of Effective Environmental Protection* (1993); J. Werksman (ed.), *Greening International Institutions* (1996); N. Desai, 'Revitalizing International Environmental Institutions: The UN Task Force Report and Beyond', 40 *Indian Journal of International Law* 455 (2000); P. Sands and P. Klein, *Bowett's Law of International Institutions* (2001, 5th edn).

Introduction

International organisations involved in environmental law are established at the global, regional, sub-regional and bilateral levels. Almost all international organisations today have some competence or responsibility for the development, application or enforcement of international environmental obligations, including functions related to standard-setting. The decentralised nature of international organisations in the environmental field makes it difficult to assess their role by reference to any functional, sectoral or geographic criteria. They can be divided into three general categories: global organisations associated with the UN and its specialised agencies; regional organisations outside the UN system; and organisations established by environmental and other treaties. Within these categories, there are of course overlaps, since many of the organisations established in the third category were created by acts of the UN or its specialised agencies.[6]

History of international organisational arrangements

The role of international organisations has developed in a somewhat *ad hoc* manner. Early environmental agreements did not generally establish standing bodies to administer, or ensure implementation of, their provisions. Since 1945, the number of international environmental organisations has flourished, and they have usually been established at the sub-regional, regional or global level either to deal with specific environmental issues or, as is more often the case, by formally or informally adapting existing organisations to endow them

[6] See e.g. the Conference of the Parties to the 1987 Montreal Protocol (UNEP); the 1989 Basic Convention (UNEP); the 1992 Climate Change Convention (UNGA); the 1992 Biodiversity Convention (UNEP); and the Intergovernmental Panel on Climate Change (WMO/UNEP).

with competence in the area of environmental issues. The Stockholm Conference and UNCED provided opportunities to establish more orderly and coherent arrangements for international organisations in addressing environmental matters. The Stockholm Declaration recognised that the growing global and regional environmental problems required 'extensive co-operation among nations and action by international organisations in the common interest'.[7] Its Principle 25 called on states to 'ensure that international organisations play a co-ordinated, efficient and dynamic role for the protection and improvement of the environment'. Following the Stockholm Conference, the UN General Assembly established the United Nations Environment Programme (UNEP), an environment secretariat and fund, and an Environment Co-ordination Board to co-ordinate UN environment activities.[8]

Between Stockholm and UNCED, the environmental activities of global and regional organisations proliferated, and many new organisations were created by environmental treaties and acts. The proliferation did not occur in the context of a coherent strategy, and there was little effort to ensure effective co-operation or co-ordination between them. Moreover, significant gaps existed, and many activities considered to be particularly harmful to the environment remained outside the scope of formal international institutional authority. Activities relating to the energy, mining and transport (other than air transport) sectors are examples of areas for which no single UN body yet has overall responsibility. The Brundtland Report recognised the gaps and in 1989 a group of twenty-four developed and developing states adopted the Hague Declaration calling for the development of a new institutional authority, within the framework of the UN, with responsibility for preserving the earth's atmosphere.[9] The Hague Declaration even called for decisions of the new institutional authority to be subject to control by the International Court of Justice. UNCED reflected the unwillingness of states to institute such far-reaching changes.

UNCED

The UN General Assembly recognised the gaps, overlapping activities and lack of co-ordination in international environmental arrangements. In 1990, UNCED was called upon to review and examine the role of the UN system in dealing with the environment, to promote the development of regional and global organisations, and to promote international co-operation within the UN system in monitoring, assessing and anticipating environmental threats.[10]

[7] Preambular para. 7. [8] See pp. 83–5 below.

[9] Declaration of the Hague, 11 March 1989, 28 ILM 1308 (1989). See also J. Ayling, 'Serving Many Voices: Progressing Calls for an International Environmental Organization', 9 JEL 243 (1997).

[10] UNGA Res. 44/228, para. 15(q), (r) and (t) (1990).

During the UNCED negotiations, many proposals were put forward by states, international organisations and non-governmental actors. Three main issues needing international attention were identified: the role of institutions for environment and development within the UN system; institutional follow-up arrangements after UNCED, especially regarding Agenda 21; and the relationship of the UN system to other institutions in the field of environment and development.[11] During the UNCED negotiations, specific institutional proposals related to five functions and responsibilities: functions related to technical and operational matters; responsibilities for policy-making; co-ordinating functions; responsibilities for financial matters; and functions relating to the administration and implementation of international law.[12] Proposals on technical and operational functions focused on UNEP, the development of regional institutions in the UN system, and new technical functions, particularly environmental assessment, early warning and emergency response, and energy management.[13]

Chapter 38 of Agenda 21 proposed the framework for institutional arrangements. The underlying principles and tasks to guide such arrangements were identified in chapter 2 above. With regard to specific institutions, UNCED proposed the establishment of a UN Commission on Sustainable Development and the further development of UNEP and the United Nations Development Programme (UNDP). It affirmed the central role of the UN General Assembly and the Economic and Social Council (ECOSOC), and provided limited guidance on co-operative mechanisms between UN bodies, and between UN bodies and regional organisations and international financial organisations. Overall, it appears that UNCED missed the opportunity to set in motion a wholesale and effective review of activities and operations. UN General Assembly Resolution 47/191 (1992) endorsed the Agenda 21 recommendations on international institutional arrangements to follow up on UNCED and took the following decisions:

- requested ECOSOC to set up a high-level Commission on Sustainable Development;
- requested all UN specialised agencies and related organisations of the UN system to strengthen and adjust their activities, programmes and plans in line with Agenda 21;
- invited the World Bank and other international, regional and sub-regional financial and development institutions, including the Global Environment Facility, to submit regularly to the Commission on Sustainable Development reports on their activities and plans to implement Agenda 21;

[11] 'Institutional Proposals: Report by the Secretary General of the Conference' A/CONF.151/PC/102 (1991).

[12] *Ibid.*, 5–54. [13] *Ibid.*, 21–6.

- requested UNEP, UNDP, the United Nations Conference on Trade and Development (UNCTAD), the UN Sudano-Sahelian Office and the regional economic commissions to submit reports of their plans to implement Agenda 21 to the Commission on Sustainable Development; and
- endorsed the view of the UN Secretary General concerning the establishment of a High Level Advisory Board.

UNCED received its first major review at the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002. The main outcomes relating to the institutional framework to support sustainable development were recommendations to:

- adopt new measures to strengthen institutional arrangements for sustainable development at international, regional and national levels;
- facilitate and promote the integration of the environmental, social and economic dimensions of sustainable development into the work programmes of UN regional commissions;
- establish an effective, transparent and regular inter-agency co-ordination mechanism on ocean and coastal issues within the UN system;
- enhance the role of the Commission on Sustainable Development, including through reviewing and monitoring progress in the implementation of Agenda 21 and fostering coherence of implementation, initiatives and partnerships; and
- take immediate steps to make progress in the formulation and elaboration of national strategies for sustainable development and begin their implementation by 2005.[14]

The function and role of international organisations

International organisations perform a range of different functions and roles in the development and management of international legal responses to environmental issues which are of a judicial, legislative or administrative nature. The function of each organisation depends upon the powers granted to it by its constituent instrument as subsequently interpreted and applied by the practice of the organisation and the parties to it. Apart from very specific functions required of some particular organisations, international organisations perform five main functions.

First, they provide a forum for co-operation and co-ordination between states on matters of international environmental management. The participation of states in the activities of international organisations is the principal means for consultation and the informal sharing of ideas and information which contribute towards building an international consensus for regional and global action. Thus, the formal negotiation of the 1992 Climate Change Convention

[14] WSSD Plan of Implementation, paras. 120–40.

followed extensive 'consciousness-raising' activities by a number of international organisations, including the UN General Assembly, the World Health Organization (WHO), the World Meteorological Organization (WMO) and the Intergovernmental Panel on Climate Change (IPCC), as well as the less formal settings of the World Climate Conferences held in 1979 and 1990.[15] International organisations thus contribute to developing the international agenda on environmental matters, broadening the participation of interested states, and encouraging technical research and development. Such organisations also play an important role in liaising with non-state actors.

The second function of international organisations is more formal, and relates to the provision of information. International organisations receive and disseminate information, facilitate information exchange, and provide for formal and informal consultation between states, and between states and the organisation. They also act as a conduit for notification of emergencies and other urgent matters.[16] In the case of certain highly developed organisations such as the EC Commission and various international human rights bodies, the information function may include a formal fact-finding role.[17]

A third function of international organisations is to contribute to the development of international legal obligations, including 'soft law'. This function may take place informally, where the organisation acts as a catalyst for the development of legal and other obligations outside the organisation itself. Alternatively, it may take place formally and within the organisation, where the organisation adopts acts and decisions which can create legal obligations or which may contribute to the subsequent development of legal obligations.[18] International organisations develop policy initiatives and standards, may adopt rules which establish binding obligations or reflect customary law, and can establish new and subsidiary institutional arrangements.[19]

Once environmental and other standards and obligations have been established, institutions increasingly play a role in ensuring implementation of and compliance with these standards and obligations. Assisting in implementation takes a number of forms. It may be limited to receiving information from parties or other persons on an informal and *ad hoc* basis, or it may entail the regular receipt and consideration of reports or periodic communications from parties to international environmental treaties as a means of reviewing progress in implementation.[20] Assisting in implementation also takes place

[15] See chapter 8, pp. 357–61 below.

[16] See chapter 17, pp. 841–7 below.

[17] See chapter 5, pp. 180–2 and 203–5 below.

[18] See chapter 4, pp. 140–3 below, for a discussion of the legal effects of acts of international institutions.

[19] Such as the creation of UNEP and the Commission on Sustainable Development by the UN General Assembly, the Marine Environment Protection Committee by the IMO Assembly, and the European Environment Agency by the EC.

[20] See chapter 5, pp. 180–2 below.

through the provision of advice on technical, legal and administrative or institutional matters. Under the 1987 Montreal Protocol, the parties seek to ensure implementation through the work of a non-compliance procedure including an Implementation Committee;[21] and the 1992 Climate Change Convention provides for the establishment of a Subsidiary Body for Implementation to assist the conference of the parties in the assessment and review of the implementation of the Convention.[22] There are now a growing number of such institutional arrangements, as described in chapter 5 below.

A fifth function of international institutions is to provide an independent forum, or mechanism, for the settlement of disputes, usually disputes between states. This may occur through the work of bodies with general competence, such as a conference or meeting of the parties to an environment agreement, adopting an authoritative interpretation of a provision,[23] or by the reference of an issue to a body created specifically to assist in dispute settlement through a judicial or quasi-judicial function, such as the International Court of Justice, the International Tribunal for the Law of the Sea, the European Court of Justice, human rights courts, or WTO Dispute Settlement Panels.[24] Finally, some organisations are granted enforcement or compliance functions. To date, the only institution which has been granted extensive powers and international legal personality to engage in enforcement activities is the EC Commission, which has brought more than two hundred cases to the European Court of Justice against member states alleging non-compliance with their environmental obligations.[25]

Global organisations

United Nations (www.un.org)

The UN, its specialised agencies, and subsidiary bodies, organs and programmes are the focal point for international law and institutions in the field of the environment. The UN Charter does not expressly provide the UN with competence over environmental matters. The relevant purposes of the UN include the maintenance of international peace and security, the adoption of measures to strengthen universal peace, and the achievement of co-operation in solving international economic, social, cultural or humanitarian problems.[26] Since the

[21] See chapter 5, pp. 205–7 below; and chapter 8, pp. 345–7 below. The approach has been taken up by other conventions.

[22] Art. 10. The first meeting of the Subsidiary Body for Implementation was held in Geneva on 31 August 1995.

[23] See e.g. CITES conference of the parties Res. 5.11 on the meaning of the words 'pre-Convention' specimen; see chapter 10, pp. 507–15 below.

[24] See chapter 5, pp. 214–25 below; and pp. 94–101 below (WTO) (ICJ, ECJ etc).

[25] See chapter 5, pp. 193–5 below.

[26] Charter of the United Nations, Art. 1(1), (2) and (3).

late 1960s, however, the practice of the organisation through its principal organs, in particular the General Assembly and the Economic and Social Council (ECOSOC), has been to interpret and apply these broad purposes as including the protection of the environment and the promotion of sustainable development. The UN is the principal forum for global environmental law-making and has played a central role in the development of international environmental law, its universal character making it the only 'appropriate forum for concerted political action on global environmental problems'.[27] Apart from the Secretariat, the UN has five principal organs: the General Assembly, the Security Council, ECOSOC, the Trusteeship Council and the International Court of Justice.[28] Each organ has, to differing degrees, addressed international environmental issues.

Co-ordination From 1977 until recently, co-ordination between the various UN organs and bodies at the Secretariat level took place under the Administrative Committee on Co-ordination (ACC) (co-ordination at the political level is a responsibility of ECOSOC), which was established in 1946 to supervise the implementation of the agreements between the UN and the specialised agencies and to ensure that the activities of the various bodies are co-ordinated.[29] The ACC comprised the heads of the specialised agencies and related bodies and organs who met several times a year under the chairmanship of the Secretary General. Together with an inter-agency board of Designated Officials on Environmental Matters, the ACC deliberated and adopted recommendations on the co-ordination of all environment-related programmes which are carried on by the participating agencies and bodies, and prepared an annual report to the UNEP Governing Council.

In October 1992, an Inter-Agency Committee on Sustainable Development (IACSD) was established to make recommendations to the ACC and to improve co-operation and co-ordination between the various UN bodies and organs on issues related to sustainable development, including environmental matters. The IACSD, attended by the senior officials of UN bodies most closely involved in the issues,[30] was established to rationalise subsidiary mechanisms for co-ordination, allocate and share responsibilities for implementing Agenda 21, monitor financial matters, and assess reporting requirements. In December 1992, the UN Secretary General established a new Department for Policy Co-ordination and Sustainable Development (DPCSD) in the

[27] UNGA Res. 44/224 (1990); G. Smith, 'The United Nations and the Environment: Sometimes a Great Notion?', 19 *Texas International Law Journal* 335 (1984).

[28] The role of the ICJ is discussed in chapter 5, pp. 215–18 below.

[29] ECOSOC Res. 13 (111) (1946).

[30] Senior officials from the following bodies participated: FAO, UNESCO, WMO, WHO, ILO, World Bank, IAEA, UNEP and UNDP; any other ACC member could also take part in discussions on relevant topics.

Department of Economic and Social Development which provided support to ECOSOC and to the Commission on Sustainable Development. This was later consolidated with other departments to form the Department of Economic and Social Affairs which continues to act as the central co-ordinating mechanism for policy and programme development on sustainable development issues, including co-operative relationships with international organisations, NGOs, the academic community and the corporate sector. Agenda 21 recognised the important role of the Secretary General, and the need for the further development of the co-ordination mechanism under the ACC.[31]

The operation of the ACC has recently been reformed as part of the Secretary General's wider reform efforts. The ACC has been renamed the UN System Chief Executives Board for Co-ordination (CEB), a title which is intended to emphasise the high-level nature of the body and the shift to a more collegial body whose participants share a collective responsibility over an integrated system. The reforms have also involved a transformation of the subsidiary structures. The previous multi-layered and rigid arrangements of inter-agency committees have been transformed and streamlined into two high-level committees, the High Level Committee on Programmes and the High-Level Committee on Management, complemented by flexible 'networks' of specialists in different areas of common concern, along with time-bound task-oriented inter-agency arrangements.[32] These changes have involved the abolition of the previous subsidiary bodies, including the IACSD, and its subcommittees. The exact shape of future inter-agency co-ordination in the area of sustainable development has been caught up in the recommendations of the WSSD and their implementation by the General Assembly, but it is interesting to note that, in one area at least, the shift from standing committees has been resisted: the WSSD recommended the establishment of an effective, transparent and regular inter-agency co-ordination mechanism on ocean and coastal issues within the United Nations system,[33] presumably to replace the abolished ACC Sub-Committee on Oceans and Coastal Areas.

UN General Assembly

The UN General Assembly, which is the principal policy-making organ on UNCED follow-up, has the power to discuss any questions or matters within the scope of the UN Charter, to make recommendations to the member states or to the Security Council on any such questions or matters, and to promote international co-operation in the political, economic, social, cultural, educational

[31] Agenda 21, paras. 38.16 and 38.17.
[32] Annual Overview Report of the United Nations System Chief Executives Board for Co-ordination for 2001: E/200/5/55.
[33] WSSD Plan of Implementation, para. 29(c).

and health fields and the progressive development of international law and its codification.[34] Although it does not have a specific environmental mandate, its role over the past two decades has led to its being identified by Agenda 21 as 'the principal policy-making and appraisal organ' on UNCED follow-up, having a regular review function with the possibility of convening an overall review and appraisal of Agenda 21 no later than 1997.[35] This review was conducted by a Special Session of the General Assembly convened in June 1997 (UNGASS-19), which produced a Programme for the Further Implementation of Agenda 21.[36] The Programme of Implementation adopted by the WSSD affirmed the need for the General Assembly to adopt sustainable development as a key element of the overarching framework for United Nations activities and its role in giving overall political direction to the implementation of Agenda 21 and its review.[37]

Although its resolutions are not formally binding, the General Assembly has taken decisions which have created new bodies, convened conferences, endorsed principles and substantive rules, and recommended actions. Its contribution to the development of international environmental law is not to be underestimated. The General Assembly has long been involved in natural resource issues: the 1962 resolution on permanent sovereignty over natural resources was a landmark instrument in the development of international law, and has continued to influence debate and practice on the nature and extent of limitations imposed on states for environmental reasons.[38] It was only in the late 1960s, however, that the General Assembly began to address the protection of the environment and the conservation of natural resources, and since 1968 it has adopted a large number of resolutions contributing directly or indirectly to the development of substantive legal obligations and new institutional arrangements.

The General Assembly's early interest in environmental matters related to the protection of the marine environment,[39] the relationship between

[34] UN Charter, Arts. 10 and 13(1). [35] Agenda 21, para. 38.9.

[36] A/RES/S-19/2. This included a five-year work plan for the Commission on Sustainable Development. The General Assembly also acknowledged the need for greater coherence and better policy co-ordination at the intergovernmental level, particularly given the increasing number of decision-making bodies and international conventions concerned. UNEP was identified as the appropriate organisation to take the lead on this. The Programme also recommended the strengthening of the Inter-Agency Committee on Sustainable Development of the Administrative Committee on Co-ordination to enhance system-wide intersectoral co-operation. These issues were further considered at the World Summit on Sustainable Development held in Johannesburg, South Africa, in August 2002.

[37] WSSD Plan of Implementation, para. 125.

[38] UNGA Res. 1803/62; see chapter 6, p. 236 below.

[39] UNGA Res. 2467B (XXIII) (1968); UNGA Res. 2566 (XXIV) (1969); and UNGA Res. 3133 (XXVIII) (1973).

environment and development,[40] and co-operation on shared natural resources.[41] The General Assembly convened the 1972 UN Conference on the Human Environment,[42] and created UNEP later that year.[43] Other bodies created by the General Assembly include the United Nations Development Programme (UNDP), the International Law Commission, UNCED and the Commission on Sustainable Development. Other relevant bodies established by the UN, which are conspicuous by their more limited actions, include the Committee on the Development and Utilisation of New and Renewable Sources of Energy.[44] More recently, and at a more informal level, the General Assembly has also created the Open-Ended Informal Consultative Process on Oceans and the Law of the Sea established on the recommendation of the Commission on Sustainable Development to facilitate the General Assembly's annual review of ocean affairs.[45]

Amongst the General Assembly resolutions on broad principles are those: declaring the historical responsibility of states for the preservation of nature;[46] noting the 1978 UNEP draft Code of Conduct;[47] adopting the 1982 World Charter for Nature;[48] requesting the UN Secretary General to prepare and regularly update a consolidated list of products whose consumption or sale has been banned, withdrawn, severely restricted or not approved by governments;[49] endorsing the Brundtland Report;[50] and seeking to improve co-operation in the monitoring and assessment of environmental threats.[51] The General Assembly has also convened UNCED,[52] the negotiations of the framework Convention on Climate Change,[53] the Convention on Drought and Desertification,[54] the negotiations leading to the 1995 Straddling Stocks Agreement,[55] and, more recently, the WSSD.[56] In 1997, it adopted the Watercourses Convention.[57] The General Assembly has only on a few occasions adopted resolutions on substantive matters, examples being the recommendation that moratoria should be imposed on all large-scale pelagic driftnet fishing on the high seas by the end of 1993,[58] and support for the precautionary approach to the conservation, management and exploitation of straddling fish stocks and highly migratory fish stocks.[59] The General Assembly's 1994 request for an advisory opinion on the legality of the use of nuclear weapons resulted in the ICJ affirming the existence

[40] UNGA Res. 2849 (XXVI) (1971).
[41] UNGA Res. 3129 (XXIX) (1974). [42] UNGA Res. 2398 (XXII) (1968).
[43] UNGA Res. 2997 (XXVII) (1972). [44] UNGA Res. 37/250 (1982).
[45] UNGA Res. 54/33 (1999) and 57/33 (2002). [46] UNGA Res. 35/8 (1980).
[47] UNGA Res. 34/188 (1979). [48] UNGA Res. 37/7 (1982).
[49] UNGA Res. 37/137 (1982). [50] UNGA Res. 42/187 (1987).
[51] UNGA Res. 44/224 (1989). [52] UNGA Res. 44/228 (1989).
[53] UNGA Res. 45/212 (1990). [54] UNGA Res. 47/188 (1992).
[55] UNGA Res. 48/194 (1993); and UNGA Res. 50/24 (1995).
[56] UNGA Res. 55/199 (2000). [57] UNGA Res. 52/229 (1997).
[58] UNGA Res. 44/225 (1989). [59] UNGA Res. 56/13 (2001).

of a general obligation of states not to cause transboundary environmental harm.[60]

UN Environment Programme (www.unep.org)

UNEP was established in 1972 by General Assembly Resolution 2997 following the Stockholm Conference, and it has played a significant catalytic role in the development of treaties and soft law rules. It is based in Nairobi and comprises a Governing Council of fifty-eight members elected by the General Assembly (which meets bi-annually at the headquarters in Nairobi and reports to the General Assembly through ECOSOC) and an Environment Secretariat headed by the UNEP Executive Director. Following UNCED and WSSD, it remains the only UN body exclusively dedicated to international environmental matters. Its constituent instrument commits it to promote international environmental co-operation; to provide policy guidance for the direction and co-ordination of environmental programmes within the UN system; to receive and review reports from UNEP's Executive Director on the implementation of the UN's environment programmes; to review the world environment situation; to promote scientific knowledge and information and contribute to technical aspects of environmental programmes; and to maintain under review the impact of national and international environmental policies on developing countries.[61]

Despite its limited status as a UN programme (rather than a specialised agency or body) and its limited financial resources, few observers would dispute that UNEP has made an important contribution to the development and application of international environmental law. UNEP promoted the Regional Seas Programme, which now includes more than thirty environmental treaties and numerous regional Action Plans,[62] including the Zambezi Agreement and Action Plan, and has been responsible for the development of several global environmental treaties, including the 1985 Vienna Convention and 1987 Montreal Protocol (Ozone), the 1989 Basel Convention (Hazardous Waste), the 1992 Biodiversity Convention, the 2000 Biosafety Protocol, and the 2001 POPs Convention. UNEP provides secretariat functions to these treaties and performs a supportive role in relation to several others including the 1998 Chemicals Convention (with FAO). UNEP has also been responsible for sponsoring numerous soft law instruments, including the 1978 draft Principles on

[60] Chapter 6, p. 241 below.

[61] UNGA Res. 2997 (XXVII) (1972), section I, para. 2. See generally C. A. Petsonk, 'The Role of the United Nations Environment Programme in the Development of International Environmental Law', 5 *American University Journal of International Law and Policy* 351 (1990).

[62] The Programme is administered by the UNEP Ocean and Coastal Areas Programme Activity Centre (OCA/PAC); see chapter 9, p. 399 below.

shared natural resources, offshore mining and drilling;[63] and instruments on land-based marine pollution;[64] the management of hazardous wastes;[65] environmental impact assessment;[66] and the international trade in chemicals.[67] UNEP has focused attention on the inadequacy of existing international legal instruments in the field of the environment and has sought to further develop international environmental law in a variety of ways. Among its most important initiatives has been the regular convening of the experts group which led to the Programme for the Development and Periodic Review of Environmental Law (Montevideo Programme).[68] This formed the basis for many of its activities in the field of environmental law over the following decade.

Resolutions of the UNEP Governing Council guide the development of UNEP's contribution to international law. UNEP Governing Council resolutions are supplemented by the activities of the Environmental Law Branch of the Division of Policy Development, which publishes the *Register of International Treaties and Other Agreements in the Field of the Environment*.[69] The Division of Environmental Policy Implementation is responsible for issues relating to compliance and enforcement. UNEP also participates in the Global Environmental Monitoring System (GEMS) and collaborates in the operation of INFOTERRA.[70] UNEP has also established, on an experimental basis, the UN Centre for Urgent Environmental Assistance, focusing on assessment of and responses to man-made environmental emergencies.[71]

Although UNEP was not significantly strengthened by UNCED, its increasingly focused and enhanced role is reflected in the decision granting it co-management responsibilities, with UNDP and the World Bank, of the Global Environment Facility.[72] The need to enhance and strengthen the policy and co-ordination role of UNEP was recognised by UNCED in Chapter 38 of Agenda 21.

[63] 1982 Guidelines Concerning the Environment Related to Offshore Mining and Drilling Within the Limits of National Jurisdiction, UNEP GC Dec. 10/14/(VI) (1982).

[64] 1985 Montreal Guidelines for the Protection of the Marine Environment Against Pollution from Land-Based Sources, adopted by UNEP GC Dec. 13/18(II) (1985); see chapter 9, p. 000 below.

[65] 1987 Cairo Guidelines for the Environmentally Sound Management of Hazardous Wastes, UNEP GC Dec. 14/30 (1987); see chapter 13, p. 676 below.

[66] 1987 Goals and Principles of Environmental Impact Assessment, adopted by UNEP GC Dec. 14/25 (1987); see chapter 16, p. 802 below.

[67] 1987 London Guidelines for the Exchange of Information on Chemicals in International Trade, adopted by UNEP GC Dec. 14/27 (1987) and amended by UNEP GC Dec. 15/30 (1989); see chapter 12, p. 633 below.

[68] First adopted by UNEP GC Dec. 10/21 (1982), and most recently UNEP GC 21/23 (2001); see chapter 2, pp. 67–9 above.

[69] Initiated by UNEP GC Dec. 24/3 (1975). An updated version of this register is due to be published in 2003 and should be available on the UNEP website, www.unep.org.

[70] Chapter 17, p. 848 below. [71] UNEP GC Dec. 16/9 (1991).

[72] Chapter 20, pp. 1032–4 below.

The priority areas for UNEP set out in Agenda 21 include: strengthening its 'catalytic role', through the development of techniques such as natural resource accounting and environmental economics; promoting environmental monitoring and assessment; co-ordinating scientific research; disseminating information and raising general awareness; further developing international environmental law, including promoting implementation and co-ordinating functions; further developing environmental impact assessment; and providing technical, legal and institutional advice.[73] UNEP's present priorities include: environmental information, assessment and research, including environmental emergency response capacity and strengthening of early warning and assessment functions; enhanced the co-ordination of environmental conventions and development of policy instruments; fresh water; technology transfer and industry; and support to African states.

UN Development Programme (www.undp.org)

The UN General Assembly established the UN Development Programme (UNDP) in 1965.[74] It is the principal channel for multilateral technical and investment assistance to developing countries. It is active in all economic and social sectors and has addressed environmental issues since the early 1970s. UNDP receives voluntary contributions from participating states, as well as donor co-financing, and additional finance from the business sector, foundations and NGOs, and in 2002 had a total budget of approximately US$2.58 billion. The role of UNDP in environmental programmes has been strengthened by its participation in the management of important programmes and institutions, such as the Tropical Forestry Action Plan and the Global Environment Facility. In 2001, UNDP adopted major reforms which realigned its global network around six thematic practice areas, including energy and environment, the focus of which is on building developing country capacity to protect natural resources wisely, acquire them affordably and use them sustainably. UNDP's role is to help developing countries strengthen their capacity to deal with these challenges at global, national and community levels, seeking out and sharing best practices, providing policy advice and linking partners through practical pilot projects on the ground. UNDP's work in this area is supported by two trust funds: the Energy for Sustainable Development Trustfund and the Environment Trustfund.[75] UNDP also administers several special-purpose funds which are relevant to environmental matters,[76] and is particularly active in translating international efforts into grass-roots programmes and activities.

[73] Agenda 21, paras. 38.21 and 38.22.
[74] UNGA Res. 2029 (XX) (1965). [75] UNDP Annual Report 2002.
[76] Including the UN Resolving Fund for Natural Resources Exploration, the UNDP Energy Account, and the UN Trust Fund for Sudano-Sahelian Activities.

International Law Commission (www.un.org/law/ilc/)

The International Law Commission (ILC) was established by the General Assembly in 1947 to promote the 'progressive development of international law and its codification'.[77] Since 1981, it has had thirty-four members, who are persons of recognised competence in the field of international law elected by the UN General Assembly (the original membership of fifteen was raised to twenty-one in 1956 and to twenty-two in 1961). Since 1949, the ILC has worked on more than thirty topics. Apart from its important contribution to the development of general aspects of international law, including the law of treaties, state responsibility, and treaties between states and international organisations and between two or more international organisations, the ILC has also addressed environmental issues and contributed significantly to the development of international environmental law.[78] Its draft articles on the legal regime of the high seas and territorial waters led to the development of the 1958 Geneva Conventions, which include provisions which have influenced the development of environmental law. The ILC's draft articles on the Law of the Non-Navigational Uses of International Watercourses, completed in 1994, led to the adoption of the 1997 Watercourses Convention. In 2001, the ILC adopted Draft Articles on the Responsibility of States for Internationally Wrongful Acts and Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities.[79] In 2002, the ILC decided to resume work on the liability aspects of the long-standing topic of International Liability for Injurious Consequences Arising out of Acts Not Prohibited by International Law, and established a new project on Shared Natural Resources.[80]

UN Commission on Sustainable Development (www.un.org/esa/sustdev/csd.htm)

In 1992, pursuant to its mandate in Agenda 21, the General Assembly and ECOSOC established the UN Commission on Sustainable Development (CSD).[81] The CSD comprises representatives of fifty-three states elected by ECOSOC with due regard to equitable geographical distribution, and on the basis of representation at a high level including ministerial participation.[82]

[77] UNGA Res. 174 (II) (1947), as subsequently amended, at Art. 1. In this context, the 'progressive development of international law' means the 'preparation of draft conventions on subjects which have not yet been regulated by international law or in regard to which the law has not yet been sufficiently developed in the practice of States', and 'codification' means 'the more precise formulation and systematisation of rules of international law in fields where there already has been extensive state practice, precedent and doctrine': Art. 15.

[78] See generally G. Hafner and H. Pearson, 'Environmental Issues in the Work of the ILC', 11 *Yearbook of International Environmental Law* 3 (2000).

[79] Chapter 18, pp. 873–5 below; chapter 6, p. 234 below; and chapter 17, p. 828 below.

[80] Chapter 18, p. 902 below. [81] UNGA Res. 47/191 (1992). [82] Para. 6.

Other member states of the UN and its specialised agencies and other observers of the UN are able to participate as observers, and international organisations (including the EC) participate to assist and advise the Commission in the performance of its functions; non-governmental organisations are also entitled to 'participate effectively' in the Commission's work and contribute to its deliberations.[83] The CSD is assisted by a secretariat based in New York and meets annually in New York.[84] The Commission makes recommendations to ECOSOC and, through it, to the General Assembly. The Commission's objectives are to

> ensure the effective follow-up of [UNCED], as well as to enhance international co-operation and rationalise the intergovernmental decision-making capacity for the integration of environment and development issues and to examine the progress of the implementation of Agenda 21 at the national, regional and international levels, fully guided by the principles of the Rio Declaration on Environment and Development and all other aspects of the Conference, in order to achieve sustainable development.[85]

The CSD is the UN body primarily responsible for sustainable development issues and has ten enumerated environmental functions. From an international legal perspective, the most significant are those requiring it to monitor progress in the implementation of Agenda 21 and the integration of environmental and developmental goals; to consider information provided by governments, including periodic communications or reports; to consider information regarding the progress made in the implementation of environmental conventions, which is provided by relevant conferences of the parties; and to make recommendations to the General Assembly on the implementation of Agenda 21.[86]

The Commission can 'receive and analyse relevant input from competent non-governmental organisations', a function representing a compromise between those states which sought to deny NGOs any role in the activities of the Commission, and those states which envisaged NGOs providing regular information, and even complaints, along the lines of the procedures established by the UN Human Rights Committee.[87] In practice, the involvement of non-state actors is organised around the categories of 'major groups' recognised in Section III of Agenda 21.[88] The Commission is recognised as being open, transparent and accessible to non-state actors. The Commission's other functions include: reviewing progress towards the UN target of 0.7 per cent

[83] Paras. 7 and 8.

[84] UNGA Res. 47/191 provided for the possibility of future sessions being held in Geneva, but to date all substantive sessions have been held in New York.

[85] Para. 2.

[86] Para. 3(a), (b), (h) and (i).

[87] Para. 3(f). On human rights generally, see chapter 7, pp. 291–316 below.

[88] The 'major groups' recognised in Agenda 21 are: women; children and youth; indigenous people; non-governmental organisations; local authorities; workers and trade unions; business and industry; scientific and technological communities; and farmers.

of the gross national product of developed countries for official development assistance; reviewing the adequacy of funding and mechanisms; enhancing dialogue with NGOs and other entities outside the UN system; and considering the results of reviews by the Secretary General of all the recommendations of UNCED.[89]

The CSD divided its work programme into three areas: the first addresses financial resources and mechanisms, transfer of technology and other cross-sectoral issues; the second reviews the implementation of Agenda 21, taking into account progress in the implementation of relevant environmental conventions; and the third is a high-level meeting to consider the implementation of Agenda 21 on an integrated basis, to consider emerging policy issues, and to provide the necessary political impetus to implement the decisions and commitments of UNCED.[90] Since its first session, in June 1993, the Commission has organised its work around thematic clusters of topics and a multi-year thematic programme of work.[91] The thematic clusters are based upon the various chapters of Agenda 21, and address the following themes:

- critical elements of sustainability;[92]
- financial resources and mechanisms;[93]
- education, science, transfer of environmentally sound technologies, co-operation and capacity-building;[94]
- decision-making structures;[95]
- the roles of major groups;[96]
- health, human settlement and freshwater;[97]
- land, desertification, forests and biodiversity;[98]
- atmosphere, oceans and all kinds of seas;[99] and
- toxic chemicals and hazardous wastes.[100]

Under the multi-year thematic programme of work, the CSD has annually reviewed various aspects of these clusters, on the basis of information submitted by governments in the form of periodic communications or national reports. These reports are used by the secretariat to prepare analytical reports comprising an annual overview report on the progress made in the implementation of Agenda 21, and thematic reports corresponding to the Agenda 21 sectoral

[89] Para. 3(c), (d), (e), (g) and (j). The resolution also recommends the Commission to promote the incorporation of the Rio Declaration and the Forest Principles, to monitor progress in technology transfer and to consider issues related to the provision of financial resources: paras. 4 and 5.

[90] Para. 14.

[91] Report of the Commission on Sustainable Development on its First Session, E/CN.17/1993/3/Add.1, 30 June 1993.

[92] Agenda 21, Chapters 2, 3, 4 and 5. [93] Chapter 33. [94] Chapters 16 and 34–7.

[95] Chapters 8 and 38–40. [96] Chapters 23–32. [97] Chapters 6, 7, 18 and 21.

[98] Chapters 10–15. [99] Chapters 9 and 17. [100] Chapters 19–22.

clusters in accordance with the multi-year programme of work. The information provided by governments includes the following:

- policies and measures adopted to meet the objectives of Agenda 21;
- institutional mechanisms to address sustainable development issues;
- assessments of progress to date;
- measures taken and progress achieved to reach sustainable production and consumption patterns and lifestyles, to combat poverty and to limit population growth;
- the impact of environmental measures on the national economy;
- experience gained and progress in strategies to improve social conditions and environmental sustainability;
- specific problems and constraints encountered;
- the adverse impact on sustainable development of trade-restrictive and distortive policies, and measures and progress in making trade and environment mutually supportive;
- assessments of capacity;
- assessments of needs and priorities for external assistance;
- implementation of Agenda 21 commitments related to finance;
- assessments of the effectiveness of activities and projects of international organisations; and
- other relevant environment and development activities.

WSSD reviewed the functioning of the Commission and concluded that, although its original mandate remained valid, the Commission needed to be strengthened and more emphasis needed to be placed on reviewing and monitoring the implementation of Agenda 21 and on fostering the coherence of implementation, initiatives and partnerships. To this end, WSSD recommended that the Commission should limit the number of issues addressed in each session and limit negotiations to every two years.

Other subsidiary bodies established by the General Assembly

The General Assembly has established numerous other bodies with less direct responsibility for environmental issues. The UN Conference on Trade and Development (UNCTAD) was established by the General Assembly in 1964 as one of its organs.[101] UNCTAD's functions include promoting international trade with a view to accelerating the economic growth of developing countries, and formulating and implementing principles and policies on international trade and the related problems of economic development. The eighth session of UNCTAD, held in 1992, adopted 'A New Partnership for Development: The Cartagena Commitment', which commits UNCTAD to a programme of ensuring that growth and development, poverty alleviation, rural development and

[101] UNGA Res. 1995 (XIX) (1964); www.unctad.org.

the protection of the environment are 'mutually reinforcing'.[102] UNCTAD has convened international commodity conferences which have led to the negotiation and adoption of international agreements on individual commodities, under the Integrated Programme for Commodities.[103] The Bangkok Declaration and Programme of Action, adopted in February 2000 at the tenth session of UNCTAD,[104] provide the main thrust for the current work of UNCTAD, as the focal point for the integrated treatment of development and the interrelated issues of trade, finance, investment, technology and sustainable development. The Bangkok Programme of Action made a number of specific recommendations on the focus of UNCTAD's work on trade and the environment.[105] Other bodies created by the General Assembly which play a role in international environmental issues include: the United Nations Institute on Training and Research (UNITAR), whose role is to carry out training programmes and initiate research programmes;[106] the UN Population Fund, which promotes awareness of the social, economic and environmental implications of national and international population problems;[107] the Committee on Peaceful Uses of Outer Space (COPUOS) to review international co-operation in peaceful uses of outer space and study associated legal problems;[108] the Scientific Committee on Effects of Atomic Radiation (UNSCEAR) to consider the effects of radiation levels and radiation on humans and their environment;[109] and the United Nations Human Settlements Programme, known as UN-Habitat, which has a mandate to promote sustainable human settlements development in all countries with due regard for the carrying capacity of the environment in accordance with the Habitat Agenda adopted at the Habitat II Conference held in Istanbul in 1996.[110] Additionally, several human rights treaties have established

[102] TD (VIII)/MISC.4 (1992), para. 63. See also paras. 118–23 (environment and development finance, and resource allocation and sustainable development); paras. 151–5 (environment and trade); and para. 208 (commodities and sustainable development).

[103] Commodity agreements have been established for bauxite, cocoa, coffee, cotton, jute, olive oil, rice, rubber, silk, sugar, tin and wheat.

[104] Bangkok Declaration (TD/387) and Bangkok Programme of Action (TD/386), both adopted 18 February 2000.

[105] TD/386, para 147.

[106] UNGA Res. 1934 (XVIII) (1963); www.unitar.org.

[107] UNGA Res. 2211 (XXI) (1966); ECOSOC Res. 1763 (LIV) (1966); renamed by UNGA Res. 42/430 (1987); www.unfpa.org.

[108] UNGA Res. 1472 (XIV) (1959); the Committee's work has led to the negotiation and adoption of, *inter alia*, the 1967 Outer Space Treaty, the 1972 Space Liability Convention, the 1979 Moon Treaty and the 1992 Outer Space Principles: see chapter 7, pp. 000–0 below; www.oosa.unvienna.org/COPUOS/copuos.html.

[109] UNGA Res. 913 (X) (1955); www.unscear.org.

[110] See now UNGA Res. 56/206 (2002) transforming former Commission on Human Settlements and its secretariat, the United Nations Centre for Human Settlements (Habitat), including the United Nations Habitat and Human Settlements Foundation into the United Nations Human Settlements Programme, to be known as UN-Habitat; www.unhabitat.org.

committees to monitor implementation which report on their activities to parties and to the General Assembly. Of particular relevance to environmental matters are the Human Rights Committee (established under the 1966 International Covenant on Civil and Political Rights) and the Committee on Economic, Social and Cultural Rights (established under the 1966 International Covenant on Economic, Social and Cultural Rights).[111] In November 2002, the Committee on Economic, Social and Cultural Rights issued a 'General Comment recognising access to safe drinking water and sanitation as a human right, which stresses that water is a limited natural resource and a public commodity fundamental to life and health'.[112]

Economic and Social Council (ECOSOC)

The Economic and Social Council (ECOSOC), which has fifty-four members serving three-year terms, has competence over international economic, social, cultural, educational and health issues, and related matters. Although it does not have an express mandate over environmental issues, it has addressed a broad range of topics which are directly related to the environment. ECOSOC makes recommendations with respect to the General Assembly, to the UN members and to specialised agencies, and it can also prepare draft conventions.[113] ECOSOC has responsibility for co-ordinating the activities of specialised agencies, including UNEP and the CSD, and obtaining regular reports from them.[114] This co-ordinating function was underlined by UNCED which called for ECOSOC to assist the General Assembly by 'overseeing system-wide co-ordination, overview on the implementation of Agenda 21 and making recommendations'.[115]

ECOSOC has contributed to the development of international environmental law. In 1946, it convened the 1949 UN Scientific Conference on the Conservation and Utilisation of Resources (UNCCUR), the predecessor to the Stockholm and Rio Conferences.[116] It receives the reports of the UNEP Governing Council and the CSD, which are passed on to the General Assembly. Since it does not have any committees which focus exclusively on the environment, it has not itself served as a forum for important decisions on these matters. It has, however, established subsidiary bodies relevant to the environment.

The five Regional Economic Commissions, established under Article 68 of the UN Charter, have contributed significantly to the development of international environmental law.[117] Under the auspices of the UN Economic

[111] Chapter 7, pp. 294–7 below.
[112] United Nations Commitee on Economic, Social and Cultural Rights, General Comment No. 15, adopted 26 November 2002.
[113] UN Charter, Art. 62(1) and (3). [114] *Ibid.*, Arts. 63(2) and 64(1).
[115] Agenda 21, para. 38.10.
[116] *UN Yearbook 1946–47* (1947), 491; see chapter 2, pp. 31–5 above.
[117] See UNGA Res. 46/235 (1991).

Commission for Europe (UNECE),[118] regional treaties have been adopted on: transboundary air pollution;[119] environmental impact assessment;[120] industrial accidents;[121] protection of watercourses;[122] and public access and participation in environmental decision making.[123] The UNECE Group of Senior Advisers to UNECE Governments on Environmental and Water Problems has also adopted numerous recommendations on water issues and biodiversity conservation, as well as a draft UNECE Charter on Environmental Rights and Obligations.[124] In 1995, the UNECE ministers adopted the Environmental Programme for Europe, the first attempt to set long-term environmental priorities at the pan-European level and to make Agenda 21 more operational in the European context. It covers a broad range of issues and contains some 100 recommendations.[125]

The other UN Regional Economic Commissions are responsible for Asia and the Pacific (ESCAP),[126] Africa (ECA),[127] Latin America and the Caribbean (ECLAC)[128] and West Asia.[129] Although the Regional Economic Commissions have not yet promoted the negotiation of international environmental agreements, they play some role in developing 'soft' instruments and the regional preparatory arrangements for international conferences and meetings.

ECOSOC recently established the UN Forum on Forests with a mandate to promote the management, conservation and sustainable development of all types of forests and to strengthen long-term political commitment to this end.[130] Over the first five years of its operation, in addition to its more generalised activities, the Forum is to work on a mandate for developing a legal framework for all types of forests.

[118] ECOSOC Res. 36 (IV) (1947). Its members are the European members of the UN, the US, Canada, Switzerland and Israel; www.unece.org.

[119] 1979 LRTAP Convention and Protocols; see chapter 8, pp. 324–6 below.

[120] 1991 Espoo Convention; see chapter 16, pp. 814–17 below.

[121] See 1992 Industrial Accidents Convention; see chapter 12, pp. 623–5 below.

[122] 1992 Watercourses Convention; see chapter 10, pp. 482–5 below.

[123] 1998 Aarhus Convention; see chapter 5, p. 209 below; and chapter 17, pp. 858–9 below.

[124] Chapter 10, p. 482 below.

[125] Environmental Programme for Europe, adopted at the 1995 Sofia Ministerial Conference on Environment for Europe.

[126] ECOSOC Res. 37 (IV) (1947), as the Economic Commission for Asia and the Far East; the name was changed to ESCAP by ECOSOC Res. 1895 (LVII) (1974); www.unescap.org.

[127] ECOSOC Res. 671 (XXV) (1958) to develop 'concerted action for the economic development of Africa, including its social aspects, with a view to raising the level of economic activity and levels of living in Africa'; www.un.org/depts/eca/.

[128] ECOSOC Res. 106 (VI) (1948); www.eclac.cl.

[129] ECOSOC Res. 1818 (LV) (1973) as the Economic Commission for West Asia; ECOSOC Res. 1985/69 to ESCWA; www.escwa.org.lb.

[130] ECOSOC Res. 2000/35.

Other relevant ECOSOC subsidiary bodies include: the newly established Permanent Forum on Indigenous Issues, an expert advisory body with a mandate to consider indigenous issues relating to economic and social development, culture, the environment, education, health and human rights;[131] the Commission on Population and Development;[132] the Commission on Social Development;[133] the Commission on Human Rights;[134] the Committee on Energy and Natural Resources for Development;[135] and the Standing Committee for Development Policy.[136] The now-disbanded Commission on Transnational Corporations carried out useful work examining the relationship between transnational corporations and international environmental obligations.[137]

Security Council

The Security Council, which has primary responsibility in the UN system for the maintenance of international peace and security,[138] has only recently addressed international environmental issues. Its five permanent members and ten members elected for a period of two years can adopt legally binding resolutions which give it the potential to develop a significant role.[139]

The Security Council's first foray into environmental affairs was in 1991, when it adopted a resolution holding Iraq liable for, *inter alia*, damage to the environment resulting from the invasion of Kuwait.[140] In the following years it met for the first time at the level of heads of government or state, and adopted a declaration which affirmed that 'non-military sources of instability in the economic, social, humanitarian and ecological fields have become threats to peace and security'.[141] In recognising the link between environment and security, the Security Council has opened the door to further consideration of significant environmental matters, and over time it is increasingly likely

[131] ECOSOC Res. 2000/22.
[132] ECOSOC Res. 150 (VII) (1948), Res. 87 (LVII) (1975) and Res. 1995/55.
[133] ECOSOC Res. 10 (II) (1946), Res. 1139 (XLI) (1966) and Res. 1996/7.
[134] ECOSOC Res. 5 (I) (1946) (as well as the Sub-Commission on Prevention of Discrimination and Protection of Minorities and the Working Group on the Right to Development); see chapter 7, p. 298 below.
[135] ECOSOC Res. 1998/46; which merged the previous Committee on New and Renewable Sources of Energy for Development and the Committee on Natural Resources; www.un.org/esa/sustdev/enrcom.htm.
[136] ECOSOC Res. 1998/46 which renamed the former Committee on Development Planning originally established by ECOSOC Res. 1079 (XXXIX) (1965); www.un.org/esa/analysis/devplan/.
[137] ECOSOC Res. 1913 (LVII) (1974); see p. 116 below; and chapter 17, pp. 863–5 below.
[138] Charter, Art. 24(1). [139] Art. 25. [140] Security Council Res. 687/1991 (1991).
[141] Note by the President of the Security Council on 'The Responsibility of the Security Council in the Maintenance of International Peace and Security', UN Doc. S/23500, 31 January 1992, 2.

that the Council will address issues relating to environmental emergencies and their consequences. More recently, the Security Council has addressed the link between the illegal exploitation of natural resources and armed conflict in Africa.[142]

Trusteeship Council

The Trusteeship Council assists the Security Council and the General Assembly in performing the UN's functions under the International Trusteeship System of Chapter XII of the UN Charter. The Trusteeship Council has one administering power (US) and four non-administering powers (China, France, Russia and the United Kingdom). Its basic objectives include the promotion of political, economic, social and educational advancement of the inhabitants of trust territories, without specifying environmental objectives.[143] Although the Trusteeship Council has not played a direct role in the development of international environmental law, its obligation to respect these basic objectives provides a role in natural resource issues, including conservation. The role of the Trusteeship Council was therefore indirectly at issue in the case concerning *Certain Phosphate Lands in Nauru*, where Nauru asked the ICJ to declare Australia's responsibility for breaches of international law relating to phosphate mining activities, including, *inter alia*, breaches of Article 76 of the UN Charter and the Trusteeship Agreement between Australia, New Zealand and the United Kingdom.[144]

As the number of international trusteeships has steadily declined, alternative functions for the Trusteeship Council have been proposed. One idea, put forward by President Gorbachev of the Soviet Union in 1990, was to expand the trusteeship function to include responsibility for environmental protection in areas beyond national jurisdiction, the global commons. Although the suggestion received widespread attention, it was rejected at UNCED, and has not since been revived.

International Court of Justice (www.icj-cij.org)

The environmentally-related activities of the International Court of Justice (ICJ) are considered in more detail in chapter 5 below. Through its judgments and advisory opinions, the ICJ has contributed to the development of international environmental law through general principles and rules elaborated in non-environmental cases and in cases concerned directly with environmental issues. Recent cases raising significant environmental issues include those relating to *Certain Phosphate Lands in Nauru*, the *Gabcikovo-Nagymaros Project*

[142] Report of the Panel of Experts on the Illegal Exploitation of Natural Resources and Other Forms of Wealth of the Democratic Republic of the Congo: S/2001/357 and Security Council Resolutions S/RES/1355 (2001) and S/RES/1376 (2001).

[143] See UN Charter, Art. 76. [144] Chapter 12, pp. 666–9 below.

(Hungary/Slovakia), the *Advisory Opinion on the Legality of the Use or Threat of Nuclear Weapons* and the *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v. France)*. In July 1993, the ICJ established a seven-member Chamber for Environmental Matters, in view of the developments in the field of environmental law and protection which had taken place in the past few years.

United Nations specialised agencies and related organisations

The UN specialised agencies and related international organisations were established before environmental matters became an issue for the international community. It is therefore not surprising that none was designed to deal with, or given express competence over, environmental matters, and that consequently the environment has tended to play a somewhat peripheral role in their affairs. Since the specialised agencies were designed to deal with issues of concern to the international community in the post-war period, there are numerous significant gaps in their competence, including in particular energy, mining and transport matters.

Food and Agriculture Organization (www.fao.org)

The Food and Agriculture Organization (FAO), which is based in Rome, was established in 1945 to collect, analyse, interpret and disseminate information on nutrition, food and agriculture (including fisheries, marine products, forestry and primary forest products), to promote national and international action, and to provide technical and other assistance.[145] The FAO is the only specialised agency with an environmental mandate in its constitution, namely, to promote the 'conservation of natural resources and the adoption of improved methods of agricultural production'.[146] The FAO Conference and Council may initiate and approve conventions and agreements on food and agriculture,[147] and the FAO has developed soft law, including the operation with WHO of the World Food Programme,[148] the operation of a Global System on Plant Genetic Resources,[149] and the adoption and operation of the 1985 International Code of Conduct on the Distribution and Use of Pesticides.[150] The FAO also established (with WHO) the *Codex Alimentarius* Commission (discussed below). Additionally, the FAO has sponsored numerous international treaties[151] and created a number of international organisations in, for example, the fields of

[145] Constitution, Art. I. [146] Art. I(2)(c). [147] Art. XIV.

[148] FAO Conference Resolution 1/16 of 24 November 1961; and UNGA Res. 1714 (XVI) (1961).

[149] Chapter 11, pp. 551–4 below. [150] Chapter 12 below.

[151] Most recently, the 1998 Chemicals Convention (see chapter 12, p. 631 below), and the 2001 Plant Genetic Resources Treaty (see chapter 11, p. 553 below).

fisheries,[152] plant protection,[153] forest research[154] and locust control.[155] It has addressed forest issues, and in 1985 established the Tropical Forestry Action Plan.[156] The FAO convenes international conferences which have led to the adoption and development of international action plans and strategies, some of which have subsequently led to binding international obligations. Examples include the 1981 World Soil Charter,[157] the 1984 World Soil Policy and Plan of Action,[158] the 1991 Strategy and Agenda for Action for Sustainable Agriculture and Rural Development,[159] and the 1995 World Food Summit. Recent international plans of action of importance to the environment are the 1999 Plans of Action on seabirds, sharks and fishing capacity and the 2001 Plan of Action on illegal unreported and unregulated fishing.[160]

United Nations Education and Scientific Organization (www.unesco.org)

The United Nations Education and Scientific Organization (UNESCO), which is based in Paris, was established in 1945 to contribute to peace and security by promoting international collaboration through education, science and culture, including the conservation and protection of historic and scientific monuments and recommending necessary international conventions.[161] UNESCO played a role in convening and hosting the 1948 UNCCUR and has established institutions and programmes such as the Intergovernmental Oceanographic Commission in 1960, and the Man and the Biosphere Programme (under which the 1985 Action Plan for Biosphere Reserves was adopted).[162]

[152] 1949 Agreement for the Establishment of a General Fisheries Council for the Mediterranean; 1969 Convention on the Conservation of the Living Resources of the Southeast Atlantic.

[153] 1951 Convention for the Establishment of the European and Mediterranean Plant Protection Organization; 1951 International Plant Protection Convention; 1956 Plant Protection Agreement for the South East Asia and Pacific Region.

[154] 1959 Agreement for the Establishment on a Permanent Basis of a Latin American Forest Research and Training Institute.

[155] 1963 Agreement for the Establishment of a Commission for Controlling the Desert Locust in the Eastern Region of its Distribution Area in South-West Asia; 1965 Agreement for the Establishment of a Commission for Controlling the Desert Locust in the Near East; and 1970 Agreement for the Establishment of a Commission for Controlling the Desert Locust in Northwest Africa.

[156] Chapter 11, p. 548 below. [157] Chapter 11, p. 555 below.

[158] *Ibid.*, and chapter 12, p. 669 below. [159] Chapter 12, p. 669 below.

[160] The International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries International Plan of Action for the Conservation and Management of Sharks; the International Plan of Action for the Management of Fishing Capacity; and the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.

[161] Constitution, Art. I(2)(c).

[162] See generally B. Von Droste, 'UNESCO's Man and the Biosphere Programme: Two Decades of Sustainable Development', 2 *Colorado Journal of International Environmental Law*

UNESCO was responsible for the adoption of, and performs secretariat functions for, the 1971 Ramsar Convention, the 1972 World Heritage Convention[163] and the 2001 Convention on the Protection of Underwater Cultural Heritage.[164]

International Maritime Organization (www.imo.org)

The International Maritime Organization (IMO, formerly known as the Intergovernmental Maritime Consultative Organisation) is based in London and was established in 1948. Its objectives, which originally did not refer to marine pollution, include: the provision of machinery for co-operation among governments on regulation and practice relating to technical matters of all kinds affecting shipping engaged in international trade; encouraging the general adoption of the highest practical standards in matters concerning maritime safety; and ensuring the efficiency of navigation and the prevention and control of marine pollution from ships.[165] IMO activities relating to marine pollution are mainly carried out through the Legal Committee and the Marine Environment Protection Committee (MEPC), established by the IMO Assembly in 1975.[166] The MEPC has broad powers to consider any matter to do with the prevention and control of marine pollution from ships, including the power to propose regulations and develop recommendations and guidelines.[167] The IMO has supported the negotiation and conclusion of a number of important environmental treaties, for which it provides secretariat functions. These relate to oil pollution,[168] pollution from ships,[169] civil liability and compensation for oil pollution damage,[170] and emergency preparedness.[171] The IMO also acts as Secretariat to the 1972 London Convention and has contributed to soft law

and Policy 295 (1991); see also chapter 11, p. 505, n. 23 below; and chapter 2, p. 35 above.

[163] Chapter 11, pp. 543–5 and 611–15 below.

[164] Chapter 11, p. 678 below.

[165] Constitution, Art. 1(a), as amended.

[166] Assembly Resolution A.358 (1975); L. de la Fayette, 'The Marine Environment Protection Committee: Conjunction of the Law of the Sea and International Environmental Law', 16 IJMCL 163 (2001).

[167] Constitution, Part IX, Arts. 38–42.

[168] 1954 International Convention for the Prevention of Pollution of the Sea by Oil; 1969 High Seas Intervention Convention (and a 1973 Protocol); see chapter 9, pp. 440 and 449 below.

[169] MARPOL 73/78; see chapter 9, pp. 440–5 below; 2001 International Convention on the Control of Harmful Anti-Fouling Systems on Ships.

[170] 1992 CLC (chapter 18, pp. 913–15 below); 1992 Fund Convention (chapter 18, pp. 915–18 below); 1996 HNS Convention (chapter 18 below); and the 2001 Bunker Liability Convention (chapter 18, p. 922 below).

[171] 1990 Oil Pollution Preparedness Convention; see chapter 9, pp. 451–2 below; 2000 Protocol on Preparedness, Response and Co-operation to Pollution Incidents by Hazardous and Noxious Substances.

by adopting non-binding guidelines, standards and codes relating to maritime safety and the protection of the marine environment.[172]

International Labor Organization (www.ilo.org)

The purposes of the International Labor Organization (ILO), which is based in Geneva and was originally established in 1919, include the protection of workers against sickness, disease and injury arising out of employment, and the adoption of humane conditions of labour.[173] To this end, the ILO has adopted a number of conventions which set international standards for environmental conditions in the workplace, including occupational safety and health[174] as well as numerous non-binding recommendations and guidelines.[175]

World Meteorological Organization (www.wmo.ch)

The World Meteorological Organization (WMO) was established in 1947 and is based in Geneva. Its purposes are: to facilitate worldwide co-operation in meteorological observation and hydrological and other geophysical observations related to meteorology; to promote the establishment and maintenance of meteorological centres and the rapid exchange of meteorological information; to promote the standardisation and uniform publication of observations and statistics; and to encourage research and training.[176] The WMO operates the World Weather Watch,[177] the World Climate Programme[178] and the Atmospheric Research and Environment Programme. The World Climate Programme supports the Global Climate Observing System (GCOS) which is sponsored jointly by the WMO, UNESCO's International Oceanographic

[172] See e.g. the 1997 Guidelines to Assist Flag States in the Implementation of IMO Instruments, Assembly Res. A.847(20); and the 2002 Revised GESAMP Hazard Evaluation Procedure for Chemical Substances Carried by Ships (adopted by IMO/FAO/UNESCO-IOC/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection, GESAMP Reports and Studies No. 64).

[173] Constitution, Preamble.

[174] 1960 Ionising Radiations Convention; 1971 Benzene Convention; 1977 Occupational Hazards Convention; 1981 Occupational Safety Convention; 1985 Occupational Health Services Convention; 1986 Asbestos Convention; 1990 Chemicals Convention (see chapter 12, p. 626 below); 1993 Prevention of Major Industrial Accidents Convention; and 2001 Safety and Health in Agriculture Convention.

[175] 1991 Code of Practice on the Prevention of Major Industrial Accidents; *International Encyclopedia of Occupational Health and Safety* (2000, 4th edn); and 1995 Safety and Health in Mines Recommendation.

[176] Constitution, Art. 2.

[177] The World Weather Watch provides up-to-the-minute worldwide weather information through member-operated observation systems and telecommunications links.

[178] The objectives of the World Climate Programme are: to use existing climate information to improve economic and social planning; to improve the understanding of climate processes through research; and to detect and warn governments of impending climate variations or changes which may significantly affect human activities.

Commission, UNEP and the ICSU. In 1988, the WMO, with UNEP, established the Intergovernmental Panel on Climate Change (IPCC), an intergovernmental body providing scientific, technical and socio-economic advice on climate change issues, and has contributed to the establishment of the legal regimes for ozone depletion, climate change and transboundary atmospheric pollution. The Atmospheric Research and Environment Programme incorporates the Global Atmosphere Watch (GAW) and is the vehicle for the WMO's involvement in the GCOS.

International Civil Aviation Organization (www.icao.int)

The International Civil Aviation Organization (ICAO), based in Montreal, was established in 1947. Its objectives include the promotion of safe, efficient and economical air transport and generally the development of all aspects of international civil aeronautics.[179] To that end, it has adopted several relevant instruments, including international standards and recommended practices on aircraft engine emissions and on noise pollution.[180]

World Health Organization (www.who.int)

The World Health Organization (WHO) was established in 1946 to ensure 'the attainment by all peoples of the highest possible level of health'.[181] It is based in Geneva. The WHO Assembly can adopt conventions or agreements for any matters within the competence of the organisation,[182] as well as regulations on sanitary and quarantine requirements, and on the standards, advertising and labelling of biological, pharmaceutical and similar products placed on international markets.[183] It may also make recommendations,[184] and non-binding standards have been adopted for drinking water and air quality.[185] In 1990, the WHO established the WHO Commission on Health and Environment which played a key role in ensuring that environmental health considerations were incorporated in Agenda 21. In 1993, the WHO Assembly requested an Advisory Opinion from the International Court of Justice on the legality of nuclear weapons use, in the context of its work on the effects of nuclear weapons on health and the environment.[186]

The WHO administers the Food Standard Programme with the FAO, which is administered by the *Codex Alimentarius* Commission.[187] The *Codex Alimentarius* Commission was established in 1963 with the purposes of making proposals to the FAO and the WHO on all matters relating to the

[179] Constitution, Art. 44(d) and (i). [180] Arts. 37 and 38; see chapter 8, p. 341 below.
[181] Constitution, Art. 1. [182] Art. 19.
[183] Art. 21; 1969 International Health Regulations. [184] Art. 23.
[185] 1993 Guidelines for Drinking Water Quality and 1999 Air Quality Guidelines.
[186] Chapter 5, p. 218 below (the Court's opinion was that the request fell outside the competence of the organisation).
[187] www.codexalimentarius.net; chapter 12, p. 627 below.

implementation of the Joint FAO/WHO Food Standards Programme, the purpose of which are: to protect the health of consumers and to ensure fair practices in the food trade; to promote the co-ordination of all food standards work undertaken by international governmental and non-governmental organisations; to guide the preparation of and finalise standards and, after acceptance by governments, to publish them in a *Codex Alimentarius* either as regional or worldwide standards; and to amend published standards in the light of developments.[188] Over 160 states are members of the Commission, which has adopted commodity standards and general standards for a very large number of foodstuffs, including in relation to additives, pesticide residues and labelling. In varying degrees, the *Codex* standards are recognised and applied in international trade regimes, including by the WTO, NAFTA, the EC, APEC and MERCOSUR.

International Atomic Energy Agency (www.iaea.org)

The International Atomic Energy Agency (IAEA), which is based in Vienna, was established in 1956 to develop the peaceful uses of atomic energy.[189] The IAEA is autonomous and not formally a specialised agency of the United Nations, but sends reports to the General Assembly and other UN organs. It is the only member of the UN 'family' dedicated to the energy sector, although its dual promotional and regulatory function appears anomalous. Under the 1963 Treaty on the Non-Proliferation of Nuclear Weapons, the IAEA has responsibilities for safeguarding nuclear materials in non-nuclear weapon states parties to it. The IAEA has also sponsored, and provides secretariat functions for, international conventions relating to liability,[190] the protection of nuclear material,[191] nuclear accidents,[192] and the safety of nuclear installations.[193] The IAEA has also adopted numerous non-binding standards and recommendations on basic safety standards relating to, *inter alia*, radioactive discharges into the environment[194] and the disposal and transboundary movement of radioactive wastes.[195]

[188] Statute, Art. I. [189] Constitution, Art. II.

[190] 1963 IAEA Civil Liability Convention, Protocol and Supplementary Convention; chapter 18, pp. 909–10 below.

[191] 1980 Convention on the Physical Protection of Nuclear Material; chapter 12, p. 645 below.

[192] 1986 Convention on Early Notification of a Nuclear Accident, and the 1986 Convention on Assistance in the Event of Nuclear Accident or Radiological Emergency; chapter 12, p. 647 below.

[193] 1994 Convention on Nuclear Safety; chapter 12, pp. 643–4 below.

[194] Regulatory Control of Radioactive Discharges to the Environment (2000), Safety Guide No. WS-2-G.3.

[195] Near Surface Disposal of Radioactive Waste (1999), Requirements, WS-R-1; 1990 Code of Practice on International Transboundary Movement of Radioactive Wastes and Regulations for the Safe Transport of Radioactive Material (1996 revised edition), Requirements, TS-R-1, chapter 13, pp. 697–9 below.

World Bank, International Monetary Fund, and World Trade Organization

The World Bank (comprising the International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA) and the International Finance Corporation (IFC)), the IMF and the WTO are central players in international environmental law. They and their activities are considered in chapters 19 and 20 below.

Co-operative arrangements

Apart from the subsidiary bodies of the specialised agencies which are referred to above, two others bodies merit special mention on account of their contribution to the negotiation and adoption of international legal instruments: the Joint Group of Experts on Scientific Aspects of Marine Pollution (GESAMP)[196] and the Intergovernmental Panel on Climate Change (IPCC).[197] GESAMP (which is jointly run by the UN, UNEP, FAO, UNESCO, WHO, WMO, IMO and IAEA) has a mandate to conduct research and carry out assessments on the state of the marine environment, and to make appropriate recommendations, and has produced numerous reports since 1982.[198] The IPCC was established to assess the available scientific information on climate change, to assess the environmental and socio-economic impacts of climate change, and to formulate response strategies. Its efforts are organised under three working groups (Science, Impact and Adaptation, and Mitigation) and a task force (on National Greenhouse Gas Inventories). It has produced three Assessment Reports on Climate Change (1990, 1995 and 2001), contributing to the ongoing intergovernmental negotiations around the 1992 Climate Change Convention and its 1997 Kyoto Protocol, and a number of special reports on particular aspects, such as aviation and land-use.

Other global institutions

Beyond the activities of the UN and specialised agencies, in law of the sea matters, the 1982 UN Convention on the Law of the Sea (UNCLOS) established two new international institutions which address environmental aspects of the law of the sea. These are the International Tribunal for the Law of the Sea (ITLOS), which has already made a significant contribution to maritime environmental law,[199] and the International Seabed Authority, which has recently promulgated regulations which establish environmental conditions for deep sea-bed prospecting.[200]

[196] www.gesamp.imo.org. [197] www.ipcc.ch.

[198] Most recently, 'Protecting the Oceans from Land-Based Activities', GESAMP Reports and Studies No. 71 (2001); and 'A Sea of Troubles', GESAMP Reports and Studies No. 70 (2001). See chapter 9, pp. 392–3 below.

[199] Chapter 5, pp. 218–20 below. [200] Chapter 9, pp. 445–7 below.

Regional and sub-regional organisations

Regional organisations outside the UN system also play a growing role in the development of international environmental law. In application of the principle that different environmental standards could be applied to different geopolitical regions, the role of regional organisations is likely to increase significantly. They are frequently able to provide the flexibility needed to accommodate special regional concerns, as was recognised by the Brundtland Report's call for regional organisations to do more to integrate environmental concerns into their activities.[201] As the regional rules of international environmental law and institutional arrangements are particularly well developed in the Antarctic and in the European Communities, organisations related to those developments are considered in more detail in chapters 14 and 15 below.

Some international organisations are not regional, in a strict geographic sense, and are not UN agencies, bodies or programmes. These include the Commonwealth Secretariat, the Organization of the Islamic Conference, the League of Arab States whose members are in Africa and Asia, and the Organization of Petroleum Exporting Countries. Although each maintains an interest in environmental matters, none has adopted rules of international environmental law or ensured their enforcement, although they provide assistance to states on environmental matters.

Europe and the OECD

In the European context, apart from the EU, three organisations play an important role in the development of regional rules: the Council of Europe, the Organization for Economic Co-operation and Development (OECD) and the Conference on Security and Co-operation in Europe (CSCE). More recently, the European Bank for Reconstruction and Development (EBRD) has emerged as an innovative contributor to European environmental law and policy; it is noteworthy, in a broader global context, as the first multilateral development bank to have a constituent instrument which expressly requires it to fulfil environmental protection and sustainable development objectives.[202]

OECD (www.oecd.org)

The OECD (formerly the Organization for European Economic Co-operation, OEEC) was established in 1960 to promote policies designed to achieve in its member countries the highest sustainable economic growth, sound economic expansion in the process of economic development, and the expansion of world trade.[203] Seven of its thirty members are not European states. In 1974, the members of the OECD established an International Energy Agency,[204] the Nuclear

[201] Chapter 15, pp. 732–54 below.
[202] Chapter 20, pp. 1028–9 below. [203] Convention on the OECD, Art. 1.
[204] 1974 Agreement on an International Energy Programme Including Establishment of the International Energy Agency, Paris, 18 November 1974, 27 UST 1685 at Chapter IX.

Energy Agency having been established in 1957.[205] The OECD Convention does not specify environmental protection among its functions, but the organisation began to address environmental issues in 1970 following the decision to create an Environment Committee as a subsidiary body to the Executive Committee, which is itself subordinate to the OECD Council. The OECD became involved in environmental issues for three reasons. First, certain environmental issues were recognised to be intrinsically international; secondly, differences among member countries' environmental standards were considered to have implications for trade and economic and political relations; and, thirdly, it was felt that some member countries might be insufficiently prepared to address certain environmental problems.

The OECD Council may adopt two types of act: decisions, which are binding on its members; and recommendations, which are non-binding. Both acts are usually adopted with the support of all members.[206] Since 1972, the OECD Council has adopted a large number of environmental measures, and has promulgated a treaty on liability for nuclear damage.[207] These environmental acts have influenced the development of national environmental legislation in the member countries, and have often provided a basis for international environmental standards and regulatory techniques in other regions and at the global level. The OECD Council has frequently been at the forefront of developments in international environmental policy, focusing on the relationship between economic and environmental policies;[208] defining and endorsing the 'polluter-pays' principle;[209] providing early support for the development and use of environmental assessment techniques;[210] promoting economic instruments;[211] endorsing the use of integrated pollution prevention and control;[212]

205 EEC Decision of 20 December 1957, subsequently approved by OECD Decision of 30 September 1961.

206 Arts. 5(a) and (b) and 6(1).

207 1960 Convention on Third Party Liability in the Field of Nuclear Energy; see chapter 18, pp. 906–8 below.

208 1972 Guiding Principles Concerning International Economic Aspects of Environmental Policies, Recommendation, C(72)128; see chapter 6, p. 281 below.

209 1974 Recommendation on the Implementation of the Polluter-Pays Principle, C(74)223; 1989 Recommendation on the Application of the Polluter-Pays Principle to Accidental Pollutions, C(89)88(Final), 28 ILM 1320 (1989); see chapter 6, pp. 279–85 below.

210 1974 Recommendation on the Analysis of the Environmental Consequences of Significant Public and Private Projects, C(74)216; 1979 Recommendation on the Assessment of Projects with Significant Impacts on the Environment, C(79)116; 1985 Recommendation on Environmental Assessment of Development Assistance Projects and Programmes, C(85)104; 1985 and 1986 Joint Recommendations on the Environmental Assessment of Development Assistance Projects and Programmes, see chapter 16, pp. 801–2 below.

211 1991 Recommendation on Use of Economic Instruments in Environmental Policy, C(90)177; see chapter 4, p. 160 below.

212 1990 Recommendation on Integrated Pollution Prevention and Control, C(90)164; see chapter 4, pp. 167–9 below.

using pollutant release and transfer registers;[213] and 'greening' public procurement.[214] The OECD Council has also supported the broad use of techniques for ensuring the availability of environmental information,[215] and for developing co-operation on transfrontier pollution.[216] Substantive issues have also been addressed, and the OECD Council has developed a broad range of decisions or recommendations on many sectors of environmental protection, including air quality,[217] water quality,[218] energy,[219] waste,[220] chemicals,[221] noise,[222] tourism[223] and multinational enterprises.[224]

[213] 1996 Recommendation, C(96)41. [214] 2002 Recommendation, C(2002)3.

[215] 1979 Recommendation on Reporting on the State of the Environment, C(79)114; 1991 Recommendation on Environmental Indicators and Information, C(90)165; 1998 Recommendation on Environmental Information, C(98)67.

[216] 1974 Recommendation on Principles Concerning Transfrontier Pollution, C(74)224; 1976 Recommendation on Equal Right of Access in Relation to Transfrontier Pollution, C(76)55 (Final); 1977 Recommendation on Implementation of a Regime of Equal Right of Access and Non-Discrimination in Relation to Transfrontier Pollution, C(77)28 (Final); 1978 Recommendation on Strengthening International Co-operation on Environmental Protection in Transfrontier Regions, C(78)77 (Final).

[217] 1974 Recommendation on Guidelines for Action to Reduce Emissions of Sulphur Oxides and Particulate Matter from Fuel Combustion in Stationary Sources, C(74)16 (Final); 1974 Recommendation on Measures Required for Further Air Pollution Control, C(74)219; 1985 Recommendation on Control of Air Pollution from Fossil Fuel Combustion, C(85)101.

[218] 1971 Recommendation on the Determination of the Biodegradability of Anionic Synthetic Surface Active Agents, C(71)83 (Final); 1974 Recommendation on the Control of Eutrophication of Waters, C(74)220; 1974 Recommendation on Strategies for Specific Water Pollutants Control, C(74)221; 1978 Recommendation on Water Management Policies and Instruments, C(78)4 (Final).

[219] 1974 Recommendation on Energy and the Environment, C(74)222; 1976 Recommendation on Reduction of Environmental Impacts from Energy Production and Use, C(76)162 (Final); 1977 Recommendation on the Reduction of Environmental Impacts from Energy Use in the Household and Commercial Sectors, C(77)109 (Final); 1979 Recommendation on Coal and the Environment, C(79)117; 1985 Recommendation on Environmentally Favourable Energy Options and their Implementation, C(85)102.

[220] 1976 Recommendation on a Comprehensive Waste Management Policy, C(76)155 (Final); 1977 Recommendation on Multilateral Consultation and Surveillance Mechanisms for Sea Dumping of Radioactive Waste, C(77)115 (Final); 1978 Recommendation on the Re-Use and Recycling of Beverage Containers, C(78)8 (Final); 1980 Recommendation on Waste Paper Recovery, C(79)218 (Final); 1984 Decision and Recommendation on Transfrontier Movements of Hazardous Waste, C(83)180 (Final); 1985 Resolution on International Co-operation Concerning Transfrontier Movements of Hazardous Waste, C(85)100; 1986 Decision/Recommendation on Exports of Hazardous Wastes from the OECD Area, C(86)64 (Final); 1991 Decision/Recommendation on Reduction of Transfrontier Movements of Waste, C(90)178; 1992 Decision on the Control of Transfrontier Movements of Wastes Destined for Recovery Operations, C(92)39 (Final) (amended by C(2001)107).

[221] 1971 Resolution on Procedures for Notification and Consultation on Measures for Control of Substances Affecting Man and His Environment, C(71)73 (Final); 1973 and 1987 Decisions on Protection of the Environment by Control of Polychlorinated Biphenyls,

Council of Europe (www.coe.int)

The Council of Europe was established in 1949 to achieve greater unity between members 'for safeguarding and realising their ideals and principles which are their common heritage and facilitating their economic and social progress'.[225] The Council of Europe now has forty-one members across the whole of Europe. Without an explicit environmental mandate, the Council of Europe has adopted a number of acts and policies relating to environmental protection through its organs, the Committee of Ministers and the Consultative Assembly. The Parliamentary Assembly has adopted many non-binding recommendations on environmental issues.[226] The Council of Europe's contributions include several treaties: apart from an early environmental treaty restricting the use of detergents,[227] the Council of Europe has adopted treaties on: the protection of animals;[228] the protection of archaeological heritage;[229] the conservation

C(73)1 (Final); 1973 Recommendation on Measures to Reduce All Man-Made Emissions of Mercury to the Environment, C(73)172 (Final); 1974 Recommendation on the Assessment of the Potential Environmental Effects of Chemicals, C(74)215; 1979 Recommendation on Guidelines in Respect of Procedures and Requirements for Anticipating the Effects of Chemicals on Man and in the Environment, C(77)97 (Final); 1981 Decision on the Mutual Acceptance of Data in the Assessment of Chemicals, C(81)30 (Final); 1982 Decision on the Minimum Pre-Marketing Set of Data in the Assessment of Chemicals, C(82)196 (Final); 1983 Recommendation on the Mutual Recognition of Compliance with Good Laboratory Practice, C(83)95 (Final); 1983 Recommendation on the Protection of Proprietary Rights to Data Submitted in Notifications of New Chemicals, C(83)96 (Final); 1983 Recommendation on the Exchange of Confidential Data on Chemicals, C(83)97 (Final); 1983 Recommendation on the OECD List of Non-Confidential Data on Chemicals, C(83)98 (Final); 1984 Recommendation on Information Exchange Related to Export of Banned or Severely Restricted Chemicals, C(84)37 (Final); 1988 Decisions on the Exchange of Information Concerning Accidents Capable of Causing Transfrontier Damage, C(88)84 (Final); 1991 Decision on the Co-operative Investigation and Risk Reduction of Existing Chemicals, C(90)163.

222 1974 Recommendation on Noise Prevention and Abatement, C(74)217; 1978 Recommendation on Noise Abatement Policies, C(78)73 (Final); 1985 Recommendation on Strengthening Noise Abatement Policies, C(85)103.

223 1979 Recommendation on Environment and Tourism, C(79)115.

224 Updated most recently in 2000; see p. 116 below.

225 Statute of the Council of Europe, as amended, Art. 1(a).

226 These relate to general environmental policy (see Recommendations 888 (1980), 910 (1981), 937 (1982), 958 (1983), 998 (1984), 1078 (1988), 1130 (1990), 1131 (1991)); marine pollution (Recommendations 585 (1970), 946 (1982), 997 (1984), 1003 (1985), 1015 (1985), 1079 (1988)); fisheries (Recommendations 913 (1981), 825 (1984), 842 (1985)); biodiversity (Recommendations 966 (1983), 978 (1984), 1033 (1986), 1048 (1987)); freshwater resources (Recommendations 1052 (1987), 1128 (1990)); and air pollution (Recommendations 977 (1984), 1006 (1985), 926 (1989)).

227 1968 European Agreement on the Restriction of the Use of Certain Detergents in Washing and Cleaning Products, Strasbourg, 16 September 1968.

228 1968 European Convention for the Protection of Animals During International Transport; 1976 European Convention for the Protection of Animals Kept for Farming Purposes.

229 1969 European Convention on the Protection of the Archaeological Heritage.

of wildlife;[230] transfrontier co-operation;[231] civil liability for environmental damage;[232] the protection of the environment through criminal law;[233] and landscape.[234] The European Convention on Human Rights and the European Social Charter, both of which have contributed to environmental jurisprudence and policy, were also adopted under the auspices of the Council of Europe.[235]

Organization for Security and Co-operation in Europe (www.osce.org)

The Final Act of the 1975 Conference on Security and Co-operation in Europe (CSCE) encompassed co-operation on the protection and improvement of the environment, and the institutions established thereunder may accordingly address matters relating to the environment.[236] The 1990 Charter of Paris for a New Europe affirmed the close relationship between economic liberty, social justice and environmental responsibility.[237] In 1994, the CSCE was renamed the OSCE, and its institutions now comprise a Ministerial Council, a Senior Council, a Permanent Council, and a Conflict Prevention Centre.[238] So far, these institutions do not appear to have been apprised of a security issue arising out of an environmental conflict, although there was some suggestion that the dispute between Hungary and Slovakia over the Gabcikovo-Nagymaros Project might be referred to CSCE procedures.

Africa

The principal African organisation which addresses environmental matters is the African Union (formerly the Organization of African Unity (OAU)), which was established in 1963 to promote the unity and solidarity of African states and to co-ordinate co-operation to achieve a better life for the peoples of Africa.[239] To that end, the OAU has supported the adoption of a treaty on the conservation of nature and natural resources,[240] and a treaty on the trade in and management of hazardous waste.[241] The OAU also sponsored the 1981 African

[230] 1979 Berne Convention; see chapter 11, p. 532 below.
[231] 1980 European Outline Convention on Transfrontier Co-operation Between Territorial Communities or Authorities; and Protocols (1995 and 1998).
[232] 1993 Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment; see chapter 18, pp. 933–7 below.
[233] 1998 Convention on the Protection of the Environment Through Criminal Law; see chapter 18, p. 896 below.
[234] 2000 European Landscape Convention; see chapter 9 below.
[235] Chapter 7, p. 294 below.
[236] 14 ILM 1292 (1975). The ICJ has held that support for the Helsinki Final Act constitutes an expression of *opinio juris*: see *Military and Paramilitary Activities Case In and Against Nicaragua* (1986) ICJ Reports 3 at 100 and 107.
[237] 30 ILM 190 (1991). [238] Chapter 5, p. 174, n. 15 below.
[239] Charter of the OAU, Art. II(1); www.africa-union.org.
[240] 1968 African Nature Convention; see chapter 11, pp. 524–6 below.
[241] 1991 Bamako Convention; see chapter 13, p. 680 below.

Charter on Human Right and Peoples' Rights[242] and the 1991 African Economic Community,[243] both of which have environmental provisions. Apart from the UN Economic Commission for Africa, other organisations having environmental responsibilities and activities include the African Development Bank, the Arab Bank for Economic Development in Africa,[244] the Economic Community of Central African States,[245] the Economic Community of West African States,[246] and the Intergovernmental Authority on Drought and Development. The Southern African Development Community was established in 1992 and has adopted protocols on shared watercourses, wildlife conservation and law enforcement.[247] Regional bodies have also been established to manage shared natural resources.

Americas and the Caribbean

The Organization of American States (OAS), whose purposes include promoting the economic, social and cultural development of its members,[248] has played a limited role in international environmental law. As the successor organisation to the Pan American Union, the OAS has responsibility for the dormant 1940 Western Hemisphere Convention,[249] and has been responsible for the adoption of just one convention, with passing relevance for environmental protection.[250] Other organisations with a higher environmental profile include the Inter-American Development Bank, the Caribbean Development Bank,[251] the Central American Commission on Environment and Development,[252] and the American Convention on Human Rights, which is the only such instrument to state expressly that people have a right to a clean and healthy environment.[253] Neither the Caribbean Community nor the Organization of Eastern Caribbean States has played a particularly active role, save in the field of fisheries. Regional free trade agreements have played a catalytic role in developing regional rules of environmental protection, particularly the Canada–United States Free Trade Agreement and the North American Free Trade Agreement.[254] At the bilateral level, the Canada–United States International Joint Commission, established in 1909, is significant,[255] and important bilateral arrangements also exist between Mexico and the United States.[256]

[242] Chapter 7, p. 294 below.
[243] Chapter 19, pp. 1007–8 below. [244] Chapter 20 below.
[245] Chapter 19 below. [246] Chapter 19 below.
[247] 32 ILM 116 (1993); chapter 10, pp. 490–1 below; chapter 11, p. 527 below.
[248] Charter of the OAS, Art. 2(e); www.oas.org. [249] Chapter 11, pp. 527–9 below.
[250] 1976 Convention on the Protection of the Archaeological, Historical and Artistic Heritage of the American Nations; see chapter 11 below.
[251] Chapter 20, p. 1028 below.
[252] 1 *Yearbook of International Environmental Law* 229 (1990).
[253] Chapter 7, p. 294 below. [254] Chapter 19, pp. 999–1007 below.
[255] Chapter 10 below. [256] See e.g. chapter 10 below.

Asia

Asia has taken only limited measures towards establishing regional environmental organisations.[257] Given the rapid industrialisation which is occurring in many countries in the region, the important role of Japan, and the size and significance of China and India, shared environmental problems and the need to conserve natural resources will inevitably lead to the creation of such organisations. In the short term, developments are likely to focus on giving existing organisations greater environmental competence, and on the relationship between economic commitments (free trade and investment) and environmental standards.

One of the few regional organisations to have already made a significant contribution is the Association of South East Asian Nations (ASEAN), under whose auspices the 1985 ASEAN Convention was adopted.[258] The Asian Development Bank integrates environmental considerations into its decision-making process,[259] and the South Asian Association for Regional Co-operation (SAARC)[260] may ultimately be granted a role in the development of regional rules.

Regional organisations in Oceania are more active, including in the negotiation of multilateral environmental agreements.[261] The South Pacific Commission has promulgated at least two treaties for the protection of natural resources.[262] At the annual meetings of the South Pacific Forum, regional and global environmental issues are high on the agenda, and the Forum has taken decisions which led to the negotiation and adoption of a nuclear free zone treaty[263] and the prohibition of driftnet fishing.[264] The South Pacific Regional Environment Programme (SPREP) became an independent and autonomous regional organisation in 1991, and has recently adopted an Action Strategy for Nature Conservation in the Pacific Islands Region.[265]

Organisations established by environmental treaties

The third type of organisation is that established by environmental treaty, most of which establish institutional arrangements for their implementation, development and review. The institutional arrangements have a variety of names and forms, and have not attracted a great deal of scholarly or practical

[257] See generally B. Boer, R. Ramsay and D. Rothwell, *International Environmental Law in the Asia Pacific* (1998).

[258] Chapter 11, pp. 540–2 below.

[259] Chapter 20, p. 1028 below.

[260] Charter of SAARC, Dhaka, 8 December 1985.

[261] Pacific island states, together with Caribbean states, are active in the the Alliance of Small Island States, in the climate change negotiations.

[262] 1976 Apia Convention, see chapter 11, p. 685 below; and 1986 Noumea Convention, see chapter 11, p. 531 below; www.forumsec.org.fj.

[263] 1985 Rarotonga Treaty; see chapter 12, p. 650 below.

[264] 1989 Driftnet Convention; see chapter 11, pp. 588–9 below.

[265] www.sprep.org.ws.

attention.[266] They range from the standing Commission established by the 1992 OSPAR Convention (replacing the Commissions established by the 1972 Oslo Convention and the 1974 Paris Convention), to the *ad hoc* conferences or meetings of the parties to a wide range of agreements. Each treaty organisation will also have a secretariat. These institutional arrangements are, in effect, international organisations. They have international legal status, rules of procedure and membership, and have enumerated powers relating to decision-making and dispute settlement and, occasionally, enforcement powers. A large number of treaty organisations are highly active and have made significant contributions to the development of international environmental law, much of which is not collectively well documented and assessed. The reporting arrangements established under the Commission on Sustainable Development should have provided an opportunity for improved co-ordination of the activities of these organisations and the consequential rationalisation.

A detailed list of these organisations is beyond the scope of this section: where appropriate, they are identified in relevant sections of the book. As will be seen, they may, through their acts, impose obligations on states which range from the legally binding to recommendations with no legal consequences. Certain treaty organisations at the regional and global level are, or are likely to become, noteworthy in respect of particular environmental issues, and these are listed below.

Atmosphere

Transboundary air pollution

- 1979 LRTAP Convention (and Protocols), Executive Body (meets annually)

Ozone

- 1985 Vienna Convention, conference of the parties (as necessary)
- 1987 Montreal Protocol, meetings of the parties (at regular intervals)

Climate change

- 1992 Climate Change Convention and 1997 Kyoto Protocol, Conference of the Parties (every year unless decided otherwise)

Oceans and seas

General

- UNEP Regional Seas Conventions, various
- 1974 Baltic Convention, Helsinki Commission (at least annually)

[266] See now R. Churchill and G. Ulfstein, 'Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A Little Noticed Phenomenon in International Law', 94 AJIL 623 (2000).

- 1982 UNCLOS, Assembly of the International Sea-Bed Authority (annually)
- 1992 OSPAR Convention, OSPAR Commission (at regular intervals)

Dumping

- 1972 London Convention, consultative meetings (annually)

Pollution from ships

- MARPOL 1973/78, IMO Assembly (annually)

Compensation and liability

- 1992 Oil Pollution Fund Convention, Assembly and Executive Committee (annually/at least every two years)

Freshwaters

- 1963 Rhine Convention, International Commission
- 1992 Watercourses Convention, meeting of the parties (at least every three years)

Biological diversity

General

- 1979 Berne Convention, Standing Committee
- 1992 Biodiversity Convention and 2000 Biosafety Protocol, conference of the parties (at regular intervals)

Trade in endangered species

- 1973 CITES, conference of the parties (at least once every three years, in practice every two years)

Wetlands

- 1971 Ramsar Convention, conferences (as necessary)

Whales

- 1946 International Whaling Convention, Commission (meets annually)

Migratory species

- 1979 Bonn Convention, conference of the parties (at least every three years)

Fisheries

- 1949 Tropical Tuna Convention, Commission
- 1952 North Pacific Fisheries Convention, Commission (annually)
- 1966 Atlantic Tuna Convention, Commission (every two years)
- 1969 South East Atlantic Convention, Commission (at least every two years)
- 1973 Baltic Fishing Convention, Commission (every two years unless decided otherwise)
- 1978 Northwest Atlantic Fisheries Convention, General Council of the Northwest Atlantic Fisheries Organisation (annually)
- 1979 South Pacific Forum Fisheries Agency, Committee (annually)
- 1980 North-East Atlantic Fisheries Convention, Commission (annually unless decided otherwise)
- 1980 Convention for the Conservation of Antarctic Marine Living Resources, Commission (annually)
- 1982 North Atlantic Salmon Conservation Organization, Council (annually)

World heritage

- 1972 World Heritage Convention, World Heritage Committee

Waste

- 1989 Basel Convention, conference of the parties (at regular intervals)
- 1991 Bamako Convention, conference of the parties (at regular intervals)

Chemicals

- 1998 Chemicals Convention, conference of the parties (at regular intervals)
- 2001 POPs Convention, conference of the parties (at regular intervals)

Environmental impact assessment, accidents

- 1991 Espoo Convention, meeting of the parties (as necessary)
- 1992 Industrial Accidents Convention, conference of the parties (annually)

Public participation

- 1998 Aarhus Convention, meeting of the parties (at least once every two years)

War and environment

- 1977 ENMOD Convention, conference of the parties (usually every five years)

Non-state actors

P. Lowe and J. Goyder, *Environmental Groups in Politics* (1983); M. Bettati and P. Dupuy (eds.), *Les ONG et le droit international* (1986); R. Branes Ballesteros, *Aspectos institucionales y juridicos del medio ambiente, includia la participacion de las organizaciones no gubernamentales en la gestion ambiental* (Inter-American Development Bank, 1991); M. Garner, 'Transnational Alignment of Non-Governmental Organisations for Global Environmental Action', 24 *Vanderbilt Journal of Transnational Law* 653 (1991); S. Charnovitz, 'Two Centuries of Participation: NGOs and International Governance', 18 *Michigan Journal of International Law* 183 (1997); P. Sands, 'International Law, the Practitioner and Non-State Actors', in C. Wickremasinghe (ed.), *The International Lawyer as Practitioner* (2000).

Non-state actors have played a central role in developing international environmental law. They remain highly influential. Since the latter half of the nineteenth century, the scientific community and environmental groups have mobilised the forces of public opinion, and have sought to contribute to the progressive development of international law. The corporate sector has also fought to ensure that its voice is heard, especially as international rules expand and touch directly upon industrial and other economic activities. At the international level, non-state actors play a formal role in several ways. They identify issues requiring international legal action; they participate as observers in international organisations, and in treaty negotiations; and they participate, formally and informally, in the national and international implementation of principles and rules adopted at the regional and global levels.

Over the past two decades, six categories of non-state actors have emerged as important actors: the scientific community; non-profit-making environmental groups and associations (NGOs); private companies and business concerns; legal organisations; the academic community; and individuals.[267] The Rio Declaration and Agenda 21 affirm the important partnership role of non-governmental organisations and call for their 'expanded role'.[268] Agenda 21 declared that:

> [t]he organisations of the United Nations system and other intergovernmental organisations and forums, bilateral programmes and the private sector as appropriate, will need to provide increased financial and administrative support for non-governmental organisations and their self-organised networks, in particular those based in developing countries, contributing to the monitoring and evaluation of Agenda 21 programmes, and provide training for non-governmental organisations . . . to enhance their partnership role in programme design and implementation.[269]

[267] Agenda 21, Section III, entitled 'Strengthening the Role of Major Groups', identifies the following 'major groups': women, children and youth, indigenous people, non-governmental organisations, local authorities, workers and trade unions, business and industry, the scientific and technological community, and farmers.

[268] Agenda 21, paras. 38.42–38.44. [269] *Ibid.*, para. 27.12.

Agenda 21 also calls on the UN system, including international finance and development agencies and all intergovernmental organisations, to take measures to enhance the contribution of non-governmental organisations to 'policy design, decision-making, implementation and evaluation at the individual agency level, in inter-agency discussions and in United Nations conferences'.[270] This objective is to be achieved by, *inter alia*: augmenting their role as partners in project and programme implementation; ensuring their participation in the processes to review and evaluate the implementation of Agenda 21; providing them with access to accurate and timely data and information; and providing them with increased administrative and financial support.[271] Agenda 21 urges governments to take similar measures at the national level and to take:

> any legislative measures necessary to enable the establishment by non-governmental organisations of consultative groups, and to ensure the right of non-governmental organisations to protect the public interest through legal action.[272]

Non-state actors have for many years been able to participate as observers in the activities of international organisations, such rights being granted expressly in the treaty establishing the organisation, or by its rules of procedures, or by practice. The 1992 OSPAR Convention included, for the first time, a treaty provision for observers which does not distinguish between states, international governmental organisations and non-governmental organisations with respect to the conditions of the granting of observer status, save that the non-governmental organisations must carry out activities which are related to the Convention.[273] Moreover, once observer status has been granted, each observer appears to have identical rights, namely, to present to the Commission any information or reports relevant to the objectives of the Convention but not the right to vote.[274] Even more far-reaching is the 1998 Aarhus Convention which, no doubt because of its subject matter, entitles non-governmental organisations to participate in the meeting of the parties and – uniquely – to nominate candidates for election to the Convention's implementation committee.[275]

Scientific community[276]

Often, the driving force behind international environmental law is science, a feature which distinguishes this from other areas of public international law where developments are frequently initiated by political, economic or commercial imperatives. The important place for science introduces an objective

[270] *Ibid.*, para. 27.9(a). [271] *Ibid.*, paras. 27.9(b) to (g) and 27.12.
[272] *Ibid.*, paras. 27.10 and 27.13. [273] Art. 11(1).
[274] Art. 11(2). Under Art. 11(3), conditions for admission and participation are to be set in the Rules of Procedure.
[275] 1998 Convention, Art. 10(5); Meeting of the Parties, Decision I/7, Annex, para. 4 (2002).
[276] Agenda 21, Chapter 31; see chapter 1, p. 6 above.

element over which governments have less control. As one commentator has noted, this has two effects: the 'environmental movement has been powerfully affected by the consequences of science misused to the detriment of the living world, but even more importantly by what advancing science has revealed about the structure and process of nature'.[277] Non-state actors rely upon scientific evidence generated from different sources, including that which emerges from international processes such as the IPCC and GESAMP, from government departments, and from non-state sources. The last-mentioned have long played a role in the development of international environmental law. Early efforts leading to international legal developments include the work of individual members of the scientific community in the eighteenth century and the scientific congresses of the late nineteenth century.[278] Today the principal co-ordinating force for the non-governmental activities of individual researchers and academics, and university and commercial research centres and institutes is the International Council of Scientific Unions (ICSU), a co-ordinating federation of twenty or so constituent unions. ICSU committees address particular issues, of which the following are among the more influential: the Scientific Committees on Oceanic Resources (SCOR, 1957), on Space Research (COSPAR, 1958) on Antarctic Research (SCAR, 1958) and on Problems of the Environment (SCOPE, 1969).[279] SCOPE serves as a non-governmental, interdisciplinary and international council of scientists, and provides advice for governments and non-governmental bodies on environmental problems. It is often through the activities of environmental organisations that this scientific work is brought to the attention of governments and international organisations, supporting calls for further international action and providing the basis for political lobbying in intergovernmental negotiating fora.

Environmental and developmental organisations[280]

Internationally, a number of environmental and developmental organisations have played a particularly important role in developing international environmental law. The International Union for the Conservation of Nature (IUCN), established in 1948, has developed policy initiatives and has prepared texts of draft instruments which have served as the basis for the negotiation of the 1971 Ramsar Convention, the 1973 CITES and the 1992 Biodiversity Convention. Together with UNEP and WWF, IUCN was also instrumental in drawing up the 1980 World Conservation Strategy and the 1990 World Conservation Strategy II. WWF, Greenpeace and Friends of the Earth are other international non-governmental organisations which have played an active role in developing treaty language and other international standards, and in acting as watchdogs in the implementation of treaty commitments, together with groups such as

[277] L. K. Caldwell, *International Environmental Policy* (1990, 2nd edn), 9.
[278] *Ibid.*, 32. [279] *Ibid.*, 114. [280] See Agenda 21, Chapter 27.

Oxfam and Action Aid.[281] This extends to the filing of international cases, where rules permit,[282] or intervening as *amicus curiae*.[283] Grassroots environmental and consumer organisations have also influenced the development of international environmental law, including through domestic litigation. Often, they participate in global networks which focus on specific issues, such as the Climate Action Network and the Pesticides Action Network; similar global networks have been established to address environmental issues relating to matters such as the GATT Uruguay Round and NAFTA, as well as policies and projects funded by the multilateral development banks. At UNCED, a large group of non-governmental organisations prepared their own draft treaties on a range of international legal issues relating to sustainable development.

Legal groups

Private groups and associations of lawyers have long played a role in the progressive development of international environmental law. Since the Institut de Droit International adopted its 1911 Resolution on International Regulations Regarding the Role of International Watercourses for Purposes Other Than Navigation,[284] it and the International Law Association have developed model international rules on a range of environmental issues, including transboundary water resources and atmospheric pollution. The IUCN Environmental Law Centre and the IUCN Commission on Environmental Law have prepared important draft treaties which have formed the basis of formal negotiations. Other private organisations contributing significantly to the field include environmental law groups based in the United States, such as the Natural Resources Defense Council (NRDC), Earthjustice and the Environmental Defense Fund (EDF), which play an advocacy role in the development of international environmental law. The International Council on Environmental Law and university-based organisations, such as the Foundation for International Environmental Law and Development (FIELD) at University College London, and the Center for International Environmental Law (CIEL) in Washington DC, have provided international legal assistance to developing countries and non-governmental organisations. Many national academic institutions have also contributed to the domestic implementation of international environmental obligations.

Corporate sector[285]

In the private sector, associations such as the International Chamber of Commerce and the Business Council for Sustainable Development have sought to

[281] Chapter 5, p. 199 below.
[282] Chapter 5, p. 199 below.
[283] Chapter 5, p. 199 below.
[284] See chapter 2, p. 29 above.
[285] See Agenda 21, Chapter 30

ensure that the interests of the business community are taken into account. To that end, they, and others, have developed proposals for the development of international environmental law, such as the Business Charter on Sustainable Development, the Declaration of the World Industry Conference on Environmental Management (WICEM II) and the Valdez Principles (in the United States).[286] In 2000, the UN established a Global Compact as a 'voluntary corporate citizenship initiative' intended to provide 'a contextual framework to encourage innovation, creative solutions, and good practices among participants'.[287] The Global Compact commits its corporate participants to adhere to nine principles, of which three relate to the environment and commit businesses to:

- support a precautionary approach to environmental challenges;
- undertake initiatives to promote greater environmental responsibility; and
- encourage the development and diffusion of environmentally friendly technologies.

The WSSD Plan of Implementation commits states to 'enhance corporate environmental and social responsibility and accountability' including actions at all levels to encourage industry:

> [t]o improve social and environmental performance through voluntary initiatives, including environmental management systems, codes of conduct, certification and public reporting on environmental and social issues, taking into account such initiatives as the International Organization for Standardization (ISO) standards and Global Reporting Initiative guidelines on sustainability reporting, bearing in mind Principle 11 of the Rio Declaration.[288]

The corporate sector also participates as observers in international legal negotiations where it is perceived that issues affecting their interests are likely to be legislated on. At negotiations relating to the 1987 Montreal Protocol, the 1992 Climate Change Convention and the 2000 Biosafety Protocol, among others, individual companies, trade associations and other industry groups have been particularly active. Their participation reflects the growing relevance of public international law to the business community. Transnational corporations have also been the subject of international regulatory efforts in relation to activities which may entail harmful consequences. The OECD Guidelines for multinational enterprises were introduced in 1976 as the first internationally agreed

[286] Business Charter on Sustainable Development, adopted by the 64th session of the board of the International Chamber of Commerce; Official Report of the Second World Industry Conference on Environmental Management, Rotterdam, 10–12 April 1991; L. M. Thomas, 'The Business Charter for Sustainable Development: Action Beyond UNCED', 1 RECIEL 325 (1992).

[287] www.unglobalcompact.org/Portal/.

[288] Para. 17(a). On the Global Reporting Initiative see www.globalreporting.org.

framework for co-operation in the field of international direct investment and multinational enterprises,[289] and updated most recently in 2000.[290] Part V of the 2000 Guidelines (on the environment) provides that:

> Enterprises should, within the framework of laws, regulations and administrative practices in the countries in which they operate, and in consideration of relevant international agreements, principles, objectives, and standards, take due account of the need to protect the environment, public health and safety, and generally to conduct their activities in a manner contributing to the wider goal of sustainable development.[291]

Individuals and indigenous communities

Individual citizens have traditionally expressed their involvement in the development and application of international environmental law through the activities of environmental organisations. However, the growing relationship between human rights and environmental discourse at the international level has led to individuals having recourse to international human rights norms and procedures including, where available, the right to complain to international bodies.[292] International law also increasingly recognises the special interests and rights of indigenous communities, for example in relation to land rights and traditional knowledge associated with the conservation of biodiversity.[293] As citizens of nation-states, individuals are responsible for the implementation

[289] Annexed to the Declaration of 21 June 1976 by governments of OECD member countries in international investment and multinational enterprises, as amended in 1979, 1982 and 1984: 15 ILM 969 (1976), 31 ILM 494 (1992).

[290] DAFFE/IME(2000)20, Annex. The Guidelines propose that enterprises should, in the countries in which they operate, contribute to 'economic, social and environmental progress with a view to achieving sustainable development' ('General', para. 1).

[291] The Guidelines indicate, *inter alia*, the following minimum requirements for enterprises: to establish and maintain a system of environmental management appropriate to the enterprise; to provide adequate and timely information on the potential environment, health and safety impacts of the activities of the enterprise; to assess and address the foreseeable environmental, health and safety-related impacts associated with the processes, goods and services of the enterprise over their full lifecycle (preparing appropriate environmental impact assessment); not to use the lack of full scientific certainty as a reason for postponing cost-effective measures to prevent or minimise such damage; to maintain contingency plans for preventing, mitigating and controlling serious environmental and health damage from their operations; and to seek continually to improve corporate environmental performance.

[292] Chapter 7, pp. 300–5 below.

[293] D. Shelton, 'Fair Play, Fair Pay: Preserving Traditional Knowledge and Biological Resources', 5 *Yearbook of International Environmental Law* 77 (1994); R. Gupta, 'Indigenous Peoples and the International Environmental Community: Accommodating Claims Through a Co-operative Legal Process', 74 *New York University Law Review* 1741 (1999); chapter 11, p. 557 below; chapter 20, p. 1052 below.

of international obligations; their role will be enhanced if they are able to report violations by governments of international legal obligations to environmental organisations, to national public authorities and, in the case of the EC and international human rights organisations, to international organisations. It is in regard to the latter that individuals have acquired rights under international law: the increased availability of complaint procedures – such as the Inspection Panel of the World Bank and the non-compliance mechanism established under the 1998 Aarhus Convention[294] – provides formal mechanisms.

Potentially important developments took place at UNCED, as reflected in the Rio Declaration, which recognises the rights of individual citizens to participate in decision-making processes, to have access to information, and to have access to judicial and administrative remedies. Principle 10 of the Rio Declaration provides that:

> [e]nvironmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.

Although Principle 10 is not binding *per se*, it has provided an international benchmark against which the compatibility of national standards can be compared. Building on the human rights model, these developments foresee the creation of a new range of procedural rights which may be granted to individuals by international law, and which would be exercisable at the national and, possibly, international levels.[295] Principle 10 has inspired the adoption of the first international convention – the 1998 Aarhus Convention – to require parties to guarantee the rights of access to information, public participation in decision-making and access to justice in environmental matters, and to promote the Convention's principles in international environmental decision-making and within international organisations.[296] Article 6 of the Convention requires parties to inform the public concerned – early

[294] Chapter 5, p. 177 below.

[295] On access to information, see chapter 17, pp. 852–9 below; on participation in environmental impact assessments, see chapter 16, pp. 810 and 815 below; on access to national remedies, see chapter 5, pp. 195–8 below.

[296] Aarhus, 25 June 1998, in force 30 October 2001, Arts. 1 and 3(7). The rights established by the Convention are to be applied without discrimination as to citizenship, nationality or domicile or place of registration/effective centre of activities: Art. 3(9). On access to and dissemination of information under Arts. 4 and 5, see chapter 17, pp. 858–9 below.

in the decision-making process – of proposed activities listed in Annex I to the Convention and other activities which may have a significant effect on the environment, and to ensure early public participation in decision-making.[297] The right to participate includes access to information relevant to decision-making (subject to certain exceptions), the right to submit comments, information, analyses or opinions considered relevant, the requirement that account is taken of the outcome of the public participation, and the requirement to inform the public of the decision.[298] These rights are to apply equally in respect of the reconsideration or updating of operating conditions.[299] Article 7 obliges parties to enable the public to participate in the preparation of plans and programmes relating to the environment within a 'transparent and fair framework'. Article 8 requires parties to 'strive to promote' public participation during the preparation of executive regulations and other generally applicable, legally binding rules that may have a significant effect on the environment.

Article 9 governs access to justice. In respect of the right to environmental information, parties must provide access to remedies before a court or other independent and impartial body established by law.[300] In respect of decisions, acts or omissions subject to Article 6, parties must ensure that a member of the public having a sufficient interest or maintaining impairment of a right has access to a review procedure or a court of law or other independent and impartial body established by law to challenge its substantive and procedural legality.[301] The Convention provides that 'sufficient interest' and 'impairment of a right' are to be determined in accordance with national law and are to be consistent with the objective of giving the public concerned wide access to justice, and that non-governmental organisations meeting certain requirements will be deemed to have a sufficient interest.[302] In respect of decisions, acts or omissions subject to other relevant provisions of the Convention (i.e. Articles 7 and 8) the matter is governed by national law.[303] Further, in accordance with criteria (if any) laid down in national law, members of the public are to have access to administrative or judicial procedures to challenge acts or omissions by private persons and public authorities which contravene national law relating to the environment.[304] All of the procedures are to provide adequate and

[297] Art. 6(1)–(4). [298] Art. 6(5)–(9). [299] Art. 6(10).

[300] Art. 9(1). Where a party provides for review by a court, it must also ensure that a person has access to 'an expeditious procedure established by law that is free of charge or inexpensive for reconsideration by a public authority or an independent and impartial body other than a court': *ibid.*

[301] Art. 9(2).

[302] *Ibid.* (the rule is without prejudice to any 'preliminary review procedure' which may exist under national law). Art. 2(5) defines the requirements to be met by NGOs: to promote environmental protection and meet any requirements under national law.

[303] *Ibid.* [304] Art. 9(3).

effective remedies, including injunctive relief (as appropriate), and must be fair, equitable, timely and not prohibitively expensive.[305]

The media

Whilst the contribution of the media to international environmental law should not be overstated, there is little doubt that it plays an important informal role in various aspects of international environmental law. The media is able to place a spotlight on particular international legal issues which excite public interest and which can serve to change the public (or private) position of states. The media also provides an opportunity for governments to make statements which may have legal consequences. In the *Nuclear Tests* cases, the International Court of Justice held that it did not have to decide on the Australian and New Zealand claims, after the French Prime Minister made a statement at a press conference that France no longer intended to conduct atmospheric nuclear tests after 1974.[306]

Conclusions

The discussion in this chapter confirms that 'relationships among global, regional, national and local organisations – governmental and non-governmental – are an expanding web of international governance that will grow increasingly interconnected in the future'.[307] The discussion indicates that the range of actors involved in the development and application of international environmental law is broad and that the involvement of non-state actors is recognised as legitimate, and is increasingly being encouraged, at both national and international levels. International law has three interrelated challenges: first, to ensure that all states are able to participate in the response of the international community to the growing range of environmental challenges which require an international legal response; Secondly, to strengthen the role of international organisations, and their effectiveness, by rationalising their activities and endowing them with increased functions; and, thirdly, to ensure that the role of non-state actors is properly harnessed, by providing them with sufficient international status to participate effectively in the international legal process and to make the link that governments and international organisations seem to find so difficult: translating global obligations into domestic action and implementation.

[305] Art. 9(4). Parties must also consider the establishment of appropriate assistance mechanisms to remove or reduce financial and other barriers to access to justice: Art. 9(5).

[306] (1974) ICJ Reports 253, para. 37. Other statements were made by the Minister of Defence on French television and at press conferences, and by the Minister of Foreign Affairs at the UN; on the legal effect of unilateral acts of this type, see chapter 4, pp. 144–5 below.

[307] L. Kimball, *Forging International Agreement: Strengthening Intergovernmental Institutions for Environment and Development* (WRI, 1992), 2.

These three challenges are closely interconnected, and each will require the further elaboration of rules of participation and procedure; the amendment of the constitutions of most international organisations; and a rethink about the limits of sovereignty. Beginning with the participation of states, it has become ever clearer that most developing states are not able to participate as fully and effectively in the law-making process as they should, because they frequently have insufficient financial and human resources. This is not a comment on their lack of insight, ability, inspiration or commitment; it simply reflects the explosion in the number of centres of international environmental legislation which has occurred in the past twenty years. Without effective participation in the law-making process, there can be little expectation that countries, particularly developing countries, will be able to translate their international commitments into domestic action. International law is increasingly complex and technical, both to negotiate and to apply, and significant effort needs to be made to develop the human capacities, including developing international legal knowledge. The UNCED process made an important start by ensuring that the funds were available to allow most developing countries at least to attend the negotiations, and it is a testament to their skills that they achieved as much as they did without the resources available to other, more affluent countries.

The process of rationalisation of the activities of international organisations is closely linked to the effective participation of states. The proliferation of organisations, including treaty-based environmental organisations, has brought with it a proliferation of secretariats, most of which would be able to function far more efficiently if they could share experiences and expertise. Rationalisation would allow the functions of the organisations and the secretariats to be more efficiently undertaken, and might then provide them with a stronger basis to engage in the sorts of activities which are clearly needed, for which they are well equipped, and which they should be undertaking: preparing documentation, synthesising national implementation reports, encouraging compliance, conducting verification and sponsoring new agreements.[308]

Many international organisations already rely heavily on the efforts and activities of non-state actors, either informally or formally. These actors need to be given a strengthened role, and as implementation and enforcement becomes increasingly important their participation in the process as observers could be supplemented by allowing them to provide information of a general nature or, more specifically, on non-compliance by states with their international obligations. This has now happened under the non-compliance procedure of the 1998 Aarhus Convention. The model provided by the human rights field is a useful one which could be further extended into the environmental field;

[308] See House of Commons (UK), Select Committee on Environment, Transport and Regional Affairs, Sixteenth Report, 'Multilateral Environmental Agreements' (1999), paras. 67–8.

this is perhaps the direction which UNEP or the Commission on Sustainable Development should be encouraged to take, if they are provided with sufficient authority and resources. UNEP, in particular, has been given a broad mandate to ensure the progressive development of international environmental law, and it should be encouraged to develop that mandate in an expansive manner.

4

International law-making and regulation

Introduction

R. Hahn and K. Richards, 'The Internationalisation of Environmental Regulation', 30 *Harvard International Law Journal* 421 (1989); O. Schachter, 'The Emergence of International Environmental Law', 44 *Journal of International Affairs* 457 (1991); W. Lang, 'Diplomacy and International Environmental Law-Making: Some Observations', 3 *Yearbook of International Environmental Law* 108 (1992); U. Beyerlin and T. Marauhn, 'Law Making and Law-Enforcement in International Environmental Law after the 1992 Rio Conference' (Berichte 4/1997); P. Sands, 'The New Architecture of International Environmental Law', 30 RBDI 512 (1997); A. Ahmad, *Cosmopolitan Orientation of the Process of International Environmental Lawmaking: An Islamic Law Genre* (2001).

This chapter identifies the sources of international legal obligation in the field of the environment, and the regulatory techniques used to give effect to these obligations. International law is traditionally stated to comprise 'the body of rules which are legally binding on states in their intercourse with each other'.[1] These rules derive their authority, in accordance with Article 38(1) of the Statute of the International Court of Justice (ICJ), from four sources: treaties, international custom, general principles of law, and subsidiary sources (decisions of courts and tribunals and the writings of jurists and groups of jurists). It is to these sources that the ICJ would look in determining whether a particular legally binding principle or rule of international environmental law existed. The list of sources identified in Article 38(1) does not wholly reflect the sources of obligation, broadly understood, which have arisen in international environmental law. A list of sources of international environmental law is more properly reflected in the list proposed by the International Law Commission (ILC) in 1989, which included those identified in Article 38(1) as well as binding decisions of international organisations, and judgments of international courts or tribunals.[2]

[1] Oppenheim, vol. 1, 4.

[2] International Law Commission, Draft Articles on State Responsibility, Part 2, Art. 5(1), 'Report of the ILC to the United Nations General Assembly', UN Doc. A/44/10, 218 (1989).

Beyond these sources of 'hard law', which establish legally binding obligations, there are also so-called rules of 'soft law', which are not binding *per se* but which in the field of international environmental law have played an important role; they point to the likely future direction of formally binding obligations, by informally establishing acceptable norms of behaviour, and by 'codifying' or possibly reflecting rules of customary law.[3] It is also worth recalling that, although the rules of public international law primarily govern relations between states, it is now widely accepted that states are no longer the only subjects of international law, and that the rules of international law can, and do, impose obligations upon other members of the international community, in particular international organisations and, to a more limited extent, non-state actors, including individuals and corporations.

The traditional sources of international law, together with acts of international organisations and taking account of hard and soft law, have given rise to a large body of international legal obligations which relate, directly or indirectly, to the protection of the environment. These have arisen without a central legislative authority: the international law-making function is decentralised and fragmented. Accordingly, the rules and principles of international environmental law which have developed at the global, regional and bilateral levels comprise a complex network of bilateral and multilateral legal relations. With the exception of some of the general rules and principles identified in chapter 6 below, and the particular rules established by each individual treaty, there exists no 'level playing field' which subjects all states and other members of the international community to identical standards. As treaties increasingly apply differentiated standards, the precise rules applicable to any state will depend on the treaties to which it is a party, and the acts of international organisations and the customary and other rules which are binding upon it. Disparities exist between countries and groups of countries, regions and sub-regions, and within regions and sub-regions.

UNCED attempted to propose a rationalisation of the law-making process by allocating particular functions to the regional and global levels, and by seeking to specify the roles of regional and global international organisations. The effort was not successful, having failed to address the root causes of legal and institutional fragmentation,[4] although it did focus attention on the limitations

[3] See C. M. Chinkin, 'The Challenge of Soft Law: Development and Change in International Law', 38 *International and Comparative Law Quarterly* 850 (1989); A. Nollkaemper, 'The Distinction Between Non-Legal Norms and Legal Norms in International Affairs: An Analysis with Reference to the North Sea', 13 IJMCL 355 (1998); A. Boyle, 'Some Reflections on the Relationship of Soft Law and Treaties', 48 *International and Comparative Law Quarterly* 901 (1999).

[4] The causes are complex, but include a lack of political will on the part of states to establish more effective and efficient arrangements, as well as a degree of bureaucratic resistance within some treaty secretariats.

of the existing international law-making process in the field of environment and development.

Three limitations of an institutional or procedural nature dominate:

- the need to improve the mechanisms for identifying critical issues and legislative priorities;
- the need to ensure that all relevant actors participate in the law-making process (in particular, developing countries), including the negotiation, implementation, review and governance of international environmental. agreements; and
- rationalising the law-making process by improving co-ordination between international organisations, including those established by environmental agreements.[5]

These limitations are reflected in most activities relating to treaty-making and acts of international organisations, although they may also be relevant to developing rules of customary law which can be subjected to 'consciously directed adjustment' even if they are not as 'easily and unambiguously manufactured'.[6]

Treaties

The main collections of treaties are the *Consolidated Treaty Series* (C. Parry (ed.), 1648–1918); the *League of Nations Treaty Series* (205 volumes, 1920–46); and the *United Nations Treaty Series* (since 1946). Relevant national collections include the *United Kingdom Treaty Series* (since 1892), the *European Communities Treaty Series* (since 1974) and the United States' *Treaties and Other International Agreements Series* (13 volumes, 1776–1949 and annually thereafter). Apart from the collections of international environmental treaties cited in the 'Further reading' section in chapter 1 (especially those edited by Burhenne and by Rüster and Simma), important environmental treaties are regularly reproduced in *International Legal Materials*.

A. D. McNair, *The Law of Treaties* (1961, revised edn); S. Rosenne, *The Law of Treaties* (1970); E. D. Brown, 'The Conventional Law of the Environment', 13 *Natural Resources Journal* 203 (1973); T. O. Elias, *The Modern Law of Treaties* (1974);

[5] See House of Commons Select Committee Report on Multilateral Environmental Agreements, 21 July 1999, www.parliament.the-stationery-office.co.uk/pa/cm199899/cmselect/cmenvtra/307r/30702.htm.

[6] P. Szasz, 'International Norm-Making', in E. Brown Weiss (ed.), *Environmental Change and International Law: New Challenges and Dimensions* (1992), 41 at 43. On the negotiation of international environmental agreements, see B. I. Spector (ed.), *International Environmental Negotiation: Insights for Practice* (1992); and V. A. Kremenyuk and W. Lang, 'The Political, Diplomatic and Legal Background', in G. Sjöstedt (ed.), *International Environmental Negotiation* (1993), 3–16.

I. M. Sinclair, *The Vienna Convention on the Law of Treaties* (1984, 2nd edn); P. Reuter, *Introduction to the Law of Treaties* (English trans., 1989); T. Gehring, 'International Environmental Regimes: Dynamic Sectoral Legal Systems', 1 *Yearbook of International Environmental Law* 35 (1990); D. Caron, 'Protection of the Stratospheric Ozone Layer and the Structure of International Environmental Lawmaking', 14 *Hastings. International and Comparative Law Review* 755 (1991); A. Flournay, 'Legislative Inaction: Asking the Wrong Questions in Protective Environmental Decisionmaking', 15 *Harvard Environmental Law Review* 327 (1991); A. Aust, *Modern Treaty Law and Practice* (2000).

Treaties (also referred to as conventions, accords, agreements and protocols) are the primary source of international legal rights and obligations in relation to environmental protection. A treaty can be adopted bilaterally, regionally or globally, and is defined by the 1969 Vienna Convention on the Law of Treaties (1969 Vienna Convention)[7] as 'an international agreement concluded between states in written form and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation'.[8] At the heart of this definition is the idea that the instrument is intended to create international legal rights and obligations between the parties. Whether an instrument is intended to create such binding obligations will usually be clear from its characteristics and the circumstances in which it was adopted. The 1972 Stockholm Declaration, the 1978 UNEP Draft Principles of Conduct, the 1982 World Charter for Nature, the 1992 Rio Declaration and the 2002 WSSD Plan of Implementation were not intended to create legal rights and obligations; the fact that they are not treaties, however, does not preclude the possibility that they may reflect rules of international law or contribute to the development of such rules, other than by operation of treaty law.[9]

Numerous attempts have been made to classify treaties in one form or another, such as whether they are bilateral or multilateral, or of general or universal effect. These efforts frequently have not shed a great deal of light on the practical consequences of a particular treaty. Certain treaties nevertheless have greater authority than others, and may assume the quality of 'law-making treaties' in the sense that they have been concluded for the purpose of laying down general rules of conduct among a large number of states. Factors which are relevant

[7] Vienna, 23 May 1969, in force 27 January 1980, 8 ILM 679 (1969).

[8] Art. 2(1)(a). Treaties may also be adopted by international organisations: see the 1986 Convention on the Law of Treaties Between States and International Organisations, 25 ILM 543 (1986).

[9] See pp. 147–8 below. On occasion they are referred to by international courts and tribunals to confirm the existence of a rule or finding: see e.g. *The Legality of the Threat or Use of Nuclear Weapons* (1996) ICJ Reports 226 at 242, para. 30, referring to Principle 24 of the Rio Declaration.

existing protocol; in such cases, the appropriate forum will be the conference of the parties or equivalent institution established by the framework agreement. If the international legislation can appropriately be dealt with by an international act other than a treaty, it may be addressed simply by a binding decision, or resolution, or other act of an international organisation or the conference of the parties of an environmental treaty. If a new treaty is required, the states involved will need to determine which organisation shall conduct the negotiation of the treaty. This decision can be controversial. Thus, although the 1992 Biodiversity Convention was negotiated under the auspices of UNEP, developing countries insisted that the UN General Assembly, rather than UNEP, be responsible for the Climate Change Convention. This was due to the view that developing countries were better represented in the UN General Assembly than at UNEP and better able to participate in negotiations. Similar considerations lay behind the failure of the UN General Assembly in December 1992 to agree whether the UN Commission on Sustainable Development should meet in Geneva (where many developing countries are not represented) or New York (where all developing countries are represented), or in both places.[17]

Once the forum for negotiations is agreed, that body will establish a negotiating process. This could be anything from an informal *ad hoc* group of governmental experts (such as was established by the UNEP Governing Council for what became the 1985 Vienna Ozone Convention), to a formal institutional structure (such as the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC/FCCC), established by UN General Assembly Resolution 44/212). Similar arrangements apply in the negotiation of protocols under framework agreements. An alternative approach is for an international organisation to establish a subsidiary body to 'prepare' a text for consideration and adoption by an Intergovernmental Diplomatic Conference (such as the establishment by the Governing Body of the IAEA of a Standing Committee on Nuclear Liability to prepare draft amendments to the 1963 Vienna Convention).

Negotiations may be open-ended in time or established for a limited period. Examples of the former include the negotiations of the 1985 Vienna Convention (which took place over five years) and the 1982 UN Convention on the Law of the Sea (UNCLOS) (which took nearly twenty years). On the other hand, formal negotiations of the 1992 Climate Change Convention and the 1992 Biodiversity Convention were concluded in just fifteen months, the negotiators having been asked to prepare a text in time for signature at UNCED. Once the draft text has

[17] UNGA Res. 47/189 (1992) recommended that the first substantive session would be held in New York 'without prejudice to the venue of its future session': para. 9. The secretariat to the Commission on Sustainable Development is based in New York, and the normal practice is for a meeting of an institution to be held in the place in which its secretariat is based.

been negotiated, it will be adopted and opened for signature. It will then enter into force in accordance with its provisions on entry into force.[18]

The 1969 Vienna Convention and legal issues relating to treaties

The international law of treaties is governed by customary law, the 1969 Vienna Convention and the 1986 Vienna Convention. The 1969 Vienna Convention, large parts of which reflect rules of customary international law, provides the basis for considering many of the legal issues which arise in relation to treaties. With respect to 'environmental' treaties, certain legal issues merit particular attention: these include: the effect of treaties on third parties; the proper approach to interpreting the terms of a treaty; the consequences of conflict between two or more treaties; the legal effect of reservations and interpretative declarations; and the legal effect, if any, of unratified treaties. Each of these issues raises complex legal points, the resolution of which will always turn on the particular facts of a matter. Accordingly, the discussion which follows should be considered as introductory.

Interpretation

The techniques used to interpret treaties and other international acts can have important practical consequences. A restrictive approach to interpretation will limit the scope and effect of a rule, whereas a broad approach may identify an obligation where none was thought to exist. Most environmental treaties include definitions of some of the key words or phrases used in the treaty, but invariably there will be words for which states could not reach an agreed definition[19] or for which no definition was thought necessary at the time of negotiation.[20] Different treaties may define the same word or words differently.[21]

The rules governing the interpretation of treaties are set out in Articles 31 and 32 of the 1969 Vienna Convention. Article 31 establishes the primary rule that a treaty is to be interpreted 'in good faith in accordance with the ordinary meaning to be given to the terms of the treaty in their context and

[18] See M. Fitzmaurice, 'Expression of Consent to be Bound by a Treaty as Developed in Some Environmental Treaties', in J. Klabbers and R. Lefeber (eds.), *Essays on the Law of Treaties* (1997), 59.

[19] See e.g. the failure to reach agreement on the definition of 'forest' in the 1992 Climate Change Convention, chapter 8, p. 360 below.

[20] See e.g. the difficulties caused by the failure of the 1973 CITES to define 'pre-Convention specimen': chapter 11, p. 512 below.

[21] See e.g. the different definitions of 'pollution' in the 1979 LRTAP Convention (chapter 8, p. 325 below), the 1976 Barcelona Convention and the 1982 UNCLOS (chapter 9, pp. 401 and 398 below respectively); of 'waste' (see chapter 13, pp. 677–81 below), and 'adverse effects' in the 1985 Vienna Convention and the 1992 Climate Change Convention (see chapter 18, p. 877 below).

in the light of its object and purpose'. From this general approach certain consequences follow. A person seeking to rely on a special meaning for the terms of a treaty, as opposed to the ordinary meaning, will have to prove that special meaning.[22] The context of a treaty includes the whole of its text, the preamble, annexes and, in the case of at least two environmental treaties, footnotes.[23] Any agreement made between all the parties in connection with the conclusion of the treaty and any instrument made by one or more parties relating to the conclusion of the treaty and accepted by the other parties as such are included in understanding the treaty's context.[24] Examples of the latter include a protocol adopted after the conclusion of a framework treaty. In relation to environmental treaties, this happens frequently and is usually specifically provided for in the treaty, and a protocol may incorporate certain parts of a framework treaty.[25] Finally, apart from the context, Article 31(3) of the 1969 Vienna Convention provides that account is also to be taken of certain factors which are extrinsic to the treaty: subsequent agreement between the parties regarding the interpretation or application of the treaty; subsequent practice in application of the treaty which establishes the agreement of the parties regarding its interpretation;[26] and any relevant rules of international law applicable in the relations between the parties.[27] A notable development in recent years has been the willingness of international courts charged with the interpretation and application of an international agreement to have regard to rules of international environmental law arising outside the treaty which is

[22] *Legal Status of Eastern Greenland Case*, PCIJ (1933), Ser. A/B No. 53, 49, as to the meaning of the term 'Greenland'.

[23] 1979 LRTAP Convention, Art. 8(f); and 1992 Climate Change Convention, Art. 1, which states that 'Titles of articles are included solely to assist the reader'. The latter footnote raises the question of the legal effect, if any, of titles to individual Articles, and was inserted at the instigation of the US delegation in an attempt to downplay the legal effect of Article 3, which is entitled 'Principles'.

[24] 1969 Vienna Convention, Art. 31(2). See e.g. Final Act of the Eleventh Antarctic Treaty Special Consultative Meeting, 4 October 1991, noting that the harvesting of ice was not considered to be an Antarctic mineral resource activity under the 1991 Antarctic Environment Protocol; see chapter 14, p. 713 below.

[25] 1987 Montreal Protocol, Art. 14.

[26] Decisions and acts of the institutions established by treaties, even if they are not binding, may thus assume a particular importance. See e.g. CITES Conf. Res. 5.11, concerning the meaning of 'pre-Convention specimen', chapter 10, p. 512 below; and Appendix I to Decision II/8, adopted at the second meeting of the parties to the Montreal Protocol establishing an indicative list of categories of incremental cost to be used by the Financial Mechanism, UNEP/OzL. Pro. 2/3, 41, 29 June 1990.

[27] On the interpretation of treaties by reference to customary international law, see the *Reparations for Injuries Case* (1949) ICJ Reports 174 at 182. The European Court of Human Rights has held that the reference to 'relevant rules of international law' includes general principles of law, 57 ILR 201 at 217 (1975). See generally P. Sands, 'Treaty, Custom and the Cross-Fertilisation of International Law', 1 *Yale Human Rights and Development Law Journal* (1998) (www.diana.law.yale.edu/yhrdlj/vol01iss01/sands_philippe_article.htm).

being interpreted.[28] Related to this approach is the recognition by the ICJ that it is appropriate, in interpreting and applying environmental norms, including those reflected in treaties, to have regard to new norms and standards which may have been developed in the period after a treaty has been adopted:

> Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past.[29]

If the application of the approach laid down by Article 31 produces a result which is not clear or which is ambiguous, Article 32 allows recourse to be had to supplementary means of interpretation, which may also be used to confirm a meaning already established. The principal supplementary means are the *travaux préparatoires* of a treaty, including the minutes of formal negotiations, reports of sessions, and prior drafts of a text. Other supplementary means include the circumstances of a treaty's conclusion, and the application of certain principles of interpretation, such as *in dubio mitius*,[30] and *expressio unius est exclusio alterius*.[31] The reliance on supplementary means of interpretation at a later date means that states will ensure during the negotiation of a text that they are alert to the possible consequences of adding or removing language, or of opposing or failing to oppose language. In the negotiation of recent instruments, such as the Climate Change Convention and the Biodiversity Convention, the number of states involved was so large that it proved impossible to keep detailed formal records of all aspects of proceedings, although informal records may be kept. This will make recourse to *travaux préparatoires* less feasible.

In practice, international bodies which are required to interpret and apply the language of a treaty apply widely differing approaches. One example of a 'restrictive' approach to treaty interpretation is the GATT Panel decision in the yellow-fin tuna dispute between Mexico and the United States, where the Panel interpreted Article XX(b) and (g) of the GATT to exclude the possibility of allowing an importer to take into account the environmental effects of a process leading to a product's final state when considering whether a product's

[28] See e.g. WTO Appellate Body, *US – Import Prohibition of Certain Shrimp and Shrimp Products*, 12 October 1998, paras. 129–34, 38 ILM 118 (1999); and P. Sands, 'International Courts and the Application of the Concept of "Sustainable Development"', 3 *Max Planck Yearbook of UN Law* 389–407 (1999).

[29] *Case Concerning the Gabcikovo-Nagymaros Project* (1997) ICJ Reports 7 at 78, para. 140. This has been referred to as the 'principle of contemporaneity' by Judge Weeramantry: *ibid.*, at 113 *et seq.*

[30] The PCIJ recognised the principle as meaning that 'if the wording of a treaty provision is not clear, in choosing between several admissible interpretations, the one which involves the minimum of obligations for the parties should be adopted': *Frontier Between Turkey and Iraq* (1925 PCIJ) Ser. B No. 12, 25.

[31] Oppenheim, vol. 1, 1279, s. 633, describes it as an 'essentially grammatical' rule.

import could be prohibited.[32] An example of a more 'expansive' approach to treaty interpretation is the holding by the European Court of Justice (ECJ) that environmental protection was one of the EU's 'essential objectives', even in the absence of any express reference to environmental protection in the original Treaty of Rome.[33]

Entry into force

Treaties provide expressly for the circumstances in which they will enter into force. This is usually upon ratification by a certain number of states.[34] In the field of environmental law, global treaties have tended to require a low number of ratifications for entry into force.[35] In some instances, entry into force depends upon the participation of certain states or states representing a certain percentage of a particular activity. Examples include the 1971 Oil Pollution Fund Convention (entry into force upon ratification by eight states importing 750 million tons of contributing oil),[36] the 1987 Montreal Protocol (entry into force upon eleven ratifications representing at least two-thirds of the 1986 estimated global consumption of substances controlled by the Montreal Protocol)[37] and the 1997 Kyoto Protocol (entry into force upon ratification by fifty-five states, incorporating developed states accounting for 55 per cent of total carbon dioxide emissions from developed states as at 1990).[38]

Establishing a link between entry into force and the participation of particular states or all states which negotiated the agreement is designed to ensure the fullest participation of key states. However, it is liable to make entry into force hostage to the decision of just one or two states, as has happened with the 1984 Protocols to the Oil Fund Convention and the Civil Liability Convention. Other environmental agreements which have not entered into force because of the participation requirements include the 1985 ASEAN Agreement and the 1988 CRAMRA. Concerns about delay and the difficulty of agreeing applicable criteria prevented the participation of certain states or categories of states from being required in the Climate Change Convention. No agreement could

[32] Chapter 19, pp. 955–8 below. The approach has not been followed by the WTO Appellate Body: see. n. 28 above and the accompanying text.

[33] ECJ, Case 240/83 *Procureur de la Republique* v. *Association de défense des brûleurs d'huiles vsagées* [1985] ECR 531, chapter 15, p. 742 below.

[34] Use of the term 'ratification' here includes the acceptance of, approval of or accession to a treaty.

[35] See e.g. the twenty states required for the entry into force of the 1985 Vienna Convention and the 1989 Basel Convention.

[36] Chapter 18, n. 261, p. 915, and n. 68, p. 139 below. The 1984 Protocol has not entered into force because the required number of ratifications have not been achieved: *ibid.*

[37] Art. 16(1). Cf. entry into force of the 1990 amendments to the Montreal Protocol, which require at least twenty ratifications: 1990 amendments, Art. 2(1).

[38] Art. 25(1).

be reached on which greenhouse gases or their proportions should establish a threshold for entry into force.

As environmental agreements increasingly affect national economic interests, and where a large number of states have been involved in the negotiation process, the number of states required to ratify to bring a treaty into force has increased. The Biodiversity Convention and the Climate Change Convention respectively require the ratification of thirty and fifty states.[39] UNCLOS, which required sixty ratifications, only entered into force twelve years after its conclusion. Treaties which have not entered into force may nevertheless have certain legal consequences. Under the 1969 Vienna Convention, signatory states must refrain from acts which would defeat the objects and purposes of the treaty they have signed (unless they have indicated an intention not to become a party),[40] and, partly with this in mind, arrangements have been made to allow for the provisional application of a treaty or part of a treaty, prior to its entry into force.[41] Moreover, a treaty which has not yet entered into force may also contribute to the development of customary international law,[42] or reflect in clearer terms pre-existing customary international law.

Reservations and interpretative declarations

Most recent international environmental agreements do not allow reservations.[43] A few are silent on the matter,[44] and some permit reservations only in strict accordance with specific provisions of the treaty.[45] The general tendency to prohibit the use of reservations is intended to avoid a proliferation of bilateral legal relations. There are two principal reasons for this in the environmental field. First, many environmental treaties are framework agreements providing general structures and guidelines, rather than specific commitments

[39] 1992 Biodiversity Convention, Art. 36; 1992 Climate Change Convention, Art. 23.

[40] Art. 18. An example of a state indicating its intention not to become a party to a convention which it has signed is the United States in relation to the 1997 Kyoto Protocol.

[41] See e.g. Resolutions 2 and 3 of the Conference adopting the 1990 Oil Pollution Preparedness Act calling for implementation of the Convention pending entry into force, including in particular Art. 12: Final Act, OPPR/CONF/24, 29 November 1990, reprinted in 1 *Yearbook of International Environmental Law* 546 at 569–70 (1990). See also the particular transitional arrangements in relation to the 1998 Chemicals Convention, chapter 12, p. 635 below.

[42] In the *Gabcikovo-Nagymaros* case, the ICJ referred to the adoption of the 1997 Watercourses Convention as evidence of the 'modern development of international law' notwithstanding (1) the fact that the Convention was adopted between the close of pleadings in the case and the Court's judgment, and (2) Slovakia had abstained in the adoption of the Convention: (1997) ICJ Reports 7 at 56, para. 85.

[43] 1985 Vienna Convention, Art. 18; 1987 Montreal Protocol, Art. 18; 1989 Basel Convention, Art. 26(1); 1992 Biodiversity Convention, Art. 37; 1992 Climate Change Convention, Art. 24.

[44] 1979 LRTAP Convention; 1991 Espoo Convention; 1992 Watercourses Convention.

[45] 1982 UNCLOS, Art. 309; 1993 Civil Liability Convention, Art. 35.

with implications for a particular activity or practice. Secondly, where a treaty does deal with particularly sensitive or controversial matters, especially where important economic interests are involved, the negotiated text will often represent a series of delicate compromises which would be undermined by allowing one or more states to opt out of certain provisions. Flexibility is intended to be built into the text itself. Reservations or other forms of opt-out are usually permitted in respect of 'secondary legislation', such as an act adopted by the institutions established under an environmental agreement. Examples include the reservations entered by the former Soviet Union, Norway, Iceland and Japan to the 1983 International Whaling Convention moratorium on commercial whaling,[46] and the reservation originally entered by the United Kingdom to the decision at CITES to uplist the African elephant from Appendix II to Appendix I and exclude for a limited period the operation of the decision to the territory of Hong Kong.[47] Where reservations are either expressly allowed or not prohibited, either for treaties or acts of institutions adopted under treaties, customary international law and the 1969 Vienna Convention provide certain guidance on the conditions in which they will be permitted.[48] Parties are free to object to reservations which have been entered, which usually happens when the reservation is considered to be incompatible with the objects and purposes of the treaty or another rule of international law.[49]

The trend towards limiting the permissibility of reservations has not prevented states, when signing or ratifying environmental treaties, from entering statements or 'interpretative declarations' explaining an understanding of a particular provision. Recent examples include: the declaration by the then Federal Republic of Germany to the 1989 Basel Convention;[50] the declaration entered by four small island states (Fiji, Kiribati, Nauru and Tuvalu) to the 1992 Climate Change Convention;[51] and the declaration entered by the United Kingdom in

[46] Chapter 11, p. 592 below. [47] Chapter 11, p. 509 below.

[48] 1969 Vienna Convention, Art. 19; see also the *Case Concerning Reservations to the Convention on the Prevention and Punishment of the Crime of Genocide* (1951) ICJ Reports 15.

[49] See e.g. the numerous objections to the reservations entered by the former USSR under the 1969 CLC (which includes no provision on reservations), purporting to exclude the application of certain jurisdictional rules under the Convention from being applied in respect of state-owned ships; see T. Scovazzi and T. Treves (eds.), *World Treaties for the Protection of the Environment* (1992), 642.

[50] The declaration provides, *inter alia*, that 'nothing in this Convention shall be deemed to require the giving of notice to or the consent of any state for the passage of hazardous wastes on a vessel under the flag of a party exercising its right of innocent passage through the territorial sea or the freedom of navigation in an exclusive economic zone under international law': see Scovazzi and Treves, *World Treaties*, 464.

[51] The states declare their 'understanding that signature of the Convention shall in no way constitute a renunciation of any rights under international law concerning state responsibility for the adverse effects of climate change and that no provisions in the Convention can be interpreted as derogating from the principles of general international law'.

respect of the 1992 Biodiversity Convention.[52] The legal effect of such interpretative declarations remains an open question for which there are no settled general rules. On the other hand, some treaties expressly require declarations to be entered in respect of procedural matters[53] or a choice among substantive options available under a treaty,[54] or allow generally for declarations or statements.[55] The majority are silent as to declarations.

Relations between international agreements

The proliferation of environmental treaties has raised the possibility of overlap or conflict between two or more treaties. This issue is particularly important for the relationship between the growing number of environmental treaties which prohibit trade in certain goods and the WTO, which seeks to restrict non-tariff barriers to trade, including national or, possibly, internationally agreed environmental protection measures. Potential conflict between environmental agreements also exists where regional and global agreements have been adopted for the same subject-matter, such as those for the protection of the marine environment (which might adopt different rules on the dumping of wastes)[56] and the international trade in waste (which might regulate rather than prohibit such trade).[57]

The relationship between WTO rules and the 1987 Montreal Protocol illustrates the potential for conflict. Parties to the 1987 Montreal Protocol are under an obligation to prohibit the import of controlled substances from any state not party to the Protocol, a requirement which may conflict with earlier GATT obligations, if both the countries concerned were parties to the GATT.[58] The 1990 amendments to the Protocol may be problematic, since they ban imports

[52] The declaration states, *inter alia*, 'the understanding that Article 3 of the Convention sets out a guiding principle to be taken into account in the implementation of the Convention', and that 'nothing in Article 20 or Article 21 authorises the Conference of the Parties to take decisions concerning the amount, nature, frequency or size of the contributions of the Parties under the Convention'; on these provisions, see chapter 10, p. 000 below; and chapter 19, pp. 000–0 below.

[53] 1985 Vienna Convention, Art. 11(3), providing for declarations concerning the acceptance of compulsory means of dispute settlement.

[54] 1991 VOC Protocol, Art. 2(2), requiring declarations to express a choice between three possible options setting dates and amounts for future emissions of volatile organic compounds.

[55] 1982 UNCLOS, Art. 310, allowing declarations or statements 'however phrased or named, with a view, *inter alia*, to the harmonisation of its laws and regulations with the provisions of this Convention, provided that such declarations or statements do not purport to exclude or to modify the legal effect of the provisions of this Convention in their application to that state'.

[56] Chapter 8, pp. 000–0 below.

[57] Chapter 12, pp. 000–0 below; although the GATT was only of provisional application, the issues posed are useful to illustrate the problem.

[58] 1987 Montreal Protocol, Art. 4(1). The matter is now further complicated by the adoption of the new WTO rules, including GATT 1994, which post-date the 1987 Montreal Protocol.

from third parties of products *containing* controlled substances (such as refrigerators).[59] In the event that a party to the Montreal Protocol were to ban the import of refrigerators containing CFCs from a third state, where both states were party to the GATT, which obligation would prevail?

Article 30 of the 1969 Vienna Convention sets forth rules governing the situation where states are parties to treaties relating to the same subject-matter (in this case, trade). Article 30(2) provides that, when a treaty specifies that it is subject to, or not incompatible with, an earlier or later treaty, then the provisions of the other treaty will prevail. Under Article 30(3), if all the parties to the earlier treaty are also parties to the later treaty, and the earlier treaty continues in force, then only those provisions of the earlier treaty which are compatible with the later treaty will apply. Finally, Article 30(4) governs the likely situations when the parties to the later treaty do not include all the parties to the earlier treaty. It provides that (a) as between states party to both treaties the same rule applies as in Article 30(3); and (b) as between a state party to both treaties and a state party to only one of the treaties, the treaty to which both states are parties governs their mutual rights and obligations.

The application of Article 30(4) would appear to lead to the following result: in the event of a conflict between the GATT (signed in 1947) (assuming that its obligations are to be considered treaty obligations) and the 1987 Montreal Protocol, where two states are parties to the GATT but only one state is a party to the Montreal Protocol, then the provisions of the GATT would appear to prevail, without taking into account any permissible exceptions under the GATT. However, if both states are parties to both instruments, then the later in time (the Montreal Protocol) will prevail.[60]

With the growing number of environmental agreements touching upon the same subject matter, the question has also arisen as to the conditions under which a party is entitled to invoke the dispute settlement provisions under one treaty as opposed to another. This may be a particularly complex issue where one treaty sets forth general rules and another more specialised rules, as is the case with the 1982 UNCLOS and more specific marine pollution or fisheries conservation agreements. The issue arose in the *Southern Bluefin Tuna* cases, which Australia and New Zealand chose to litigate under the 1982 UNCLOS rather than the (regional) 1993 Convention on the Conservation of Southern-Bluefin Tuna.[61] Japan argued that the UNCLOS Annex VII arbitral tribunal did not have jurisdiction, on the grounds *inter alia* that the 1993 Convention governed the dispute and Article 16 of that Convention (on dispute settlement) excluded the application of the procedures on dispute settlement under Part XV of UNCLOS.[62] By four votes to one, the UNCLOS arbitral

[59] 1990 amendment, Art. 4(3)–(4*bis*).

[60] See further chapter 19, p. 940 below.

[61] Chapter 11, pp. 580–1 below.

[62] Art. 281(1) of UNCLOS provides: 'If the States Parties which are parties to a dispute concerning the inter

tribunal accepted the argument: although Article 16 of the 1993 Convention did not expressly exclude any further procedure under Part XV of UNCLOS, the 'intent of Article 16 [was] to remove proceedings under that Article from the reach of the compulsory procedures of section 2 of Part XV of UNCLOS'.[63] The award declining jurisdiction has not been received with broad approval.[64] It should not be assumed that it will be followed,[65] particularly having regard to the approach taken by the International Tribunal for the Law of the Sea (ITLOS) the following year in the provisional measures phase of the *MOX* case, which raised a related, but distinguishable, issue.[66] The ITLOS rejected an argument by the United Kingdom to the effect that ITLOS did not have jurisdiction since the dispute was centred upon other conventions (and EC law) with their own dispute provisions, noting that:

> even if the OSPAR Convention, the EC Treaty and the Euratom Treaty contain rights or obligations similar to or identical with the rights or obligations set out in the Convention, the rights and obligations under those agreements have a separate existence from those under the Convention . . . the application of international law rules on interpretation of treaties to identical or similar provisions of different treaties may not yield the same results, having regard to, *inter alia*, differences in the respective contexts, objects and purposes, subsequent practice of parties and *travaux préparatoires*.[67]

The approach may be of particular importance for the interpretation and application of international environmental agreements, which often contain the same or similar language imposing substantive obligations, but which may have been negotiated or subsequently applied in a particular context.

Amendment

The need for expedited amendment processes for environmental agreements (to take into account changes of a scientific, economic or political nature) has led to the adoption of innovative approaches. Almost all environmental treaties

of the dispute by peaceful means of their own choice, the procedures provided for in this Part apply only where no settlement has been reached by recourse to such means and the agreement between the parties does not exclude any further procedure.'

[63] Arbitral Award of 4 August 2000, para. 57, 39 ILM 1359 (2000).

[64] See e.g. B. Oxman, 'Complementary Agreements and Compulsory Jurisdiction', 95 AJIL 277 (2001).

[65] See P. Sands, 'ITLOS: An International Lawyer's Perspective', in M. H. Nordquist and J. Norton Moore (eds.), *Twenty-Fifth Annual Conference: Current Marine Environmental Issues and the International Tribunal for the Law of the Sea* (2001)

[66] ITLOS, *MOX Plant* case, Order of 3 December 2001.

[67] Paras. 50 and 51. In June 2003 the Annex VII Tribunal in the *MOX* case suspended the proceedings pending clarification of jurisdictional issues relating to EC competence: see order No. 3, 24 June 2003 (available at www.pca-cpa.org).

make express provision for a formal amendment process by the adoption of a further treaty between the parties.[68] Informal amendment may also take place orally or by tacit agreement of the parties, including decisions or acts of organs established under a treaty which may amount to a *de facto* amendment.

The provisions of the 1985 Vienna Convention and the 1987 Montreal Protocol illustrate new techniques, which have been subsequently followed.[69] The 1985 Vienna Convention is a framework treaty with two annexes and provision for protocols.[70] To date, the only protocol is the 1987 Montreal Protocol, which was amended and adjusted in 1990, 1992, 1997 and 1999. The 1985 Vienna Convention establishes the rules for its own amendment as well as that of any protocols: as a last resort, amendments to the 1985 Vienna Convention may be adopted by a 'three-fourths majority vote of the parties present and voting' at a meeting of the conference of the parties; amendments to protocols require only a 'two-thirds majority of the parties to that protocol present and voting' at a meeting of the parties to the protocol.[71] The 1987 Montreal Protocol also provides an alternative to formal amendment by the adoption of 'adjustments and reductions' by the parties; adjustment may be made to the ozone-depleting potential of controlled substances identified in Annexes to the Protocol, as well as production or consumption levels of controlled substances.[72] As a last resort, adjustments and reductions are adopted by a two-thirds majority of the parties present and voting which represent at least 50 per cent of the total consumption of the controlled substances, and these are binding on all parties without the possibility of objection.[73] The Protocol also allows the parties to add or remove any substances from any Annex to the Protocol and decide on the mechanism, scope and timing of the control measures that should apply to such substances.[74] Such decisions become effective provided they have been accepted by a two-thirds majority of the parties present and voting, without specifying the manner of acceptance or the effect of any objection of a party outside the two-thirds majority.[75] Adjustments under Article 9 and decisions under Article 10 are made on the basis of assessments under Article 6. This procedure has been used to adopt adjustments at the second and fourth meetings of the parties to the Protocol.[76] Amendments to the Annexes to the 1985

[68] 1971 Fund Convention, Art. V(1); 1972 London Dumping Convention. Art. XV; 1989 Basel Convention, Art. 17; 1992 Biodiversity Convention, Arts. 29 and 30; 1992 Climate Change Convention, Arts. 15 and 16. See generally M. Bowman, 'The Multilateral Treaty Amendment Process: A Case Study', 66 ICLQ 540 (1995).

[69] See e.g. 1997 Kyoto Protocol; 2001 POPs Convention. [70] Art. 8.

[71] Art. 9. Amendments which have been adopted will then need to be ratified, approved or accepted before entering into force, by three-fourths of the parties to the Convention or two-thirds of the parties to the Protocol unless otherwise provided by the Protocol: Art. 9(5). The Convention has not been amended, but the Protocol was amended in 1990 and 1992: see chapter 8, pp. 346–7 below.

[72] Art. 9(a). [73] Art. 9(c) and (d). [74] Art. 10(a).

[75] Art. 10(b). [76] Chapter 8, pp. 346–7 below.

Vienna Convention or the 1987 Montreal Protocol are adopted in the same way as amendments to the Convention or Protocol.[77] However, the procedure for entry into force of an Annex amendment differs: it requires a party which objects to such an amendment to opt out, by notifying the depositary within six months of its adoption, failing which it will bind any state which has not objected.[78]

Other international acts

Other international acts include those adopted by international organisations (which may be binding or non-binding), and by states in the form of non-binding declarations or Action Plans. Non-binding acts are sometimes referred to as 'soft law'. Although not legally binding, they may contribute to the development of customary law or lead to the adoption of binding obligations by treaty or an act of an international organisation.

Acts of international organisations

Acts of international organisations, sometimes referred to as secondary legislation, provide an important source of international law: they may be legally binding *per se*, or they may amend treaty obligations, or they may authoritatively interpret treaty obligations.[79] Since binding acts of international organisations derive their legal authority from the treaty on which they were based, they can be considered as part of treaty law.

Many far-reaching decisions affecting the use of natural resources result from acts of international organisations. Examples include: the 1983 decision of the IWC to adopt a moratorium on commercial whaling;[80] the 1985 resolution of the consultative meeting of the parties to the 1972 London Convention adopting a moratorium on the dumping of radioactive waste at sea;[81] the 1989 decision by the CITES conference of the parties to ban the international trade in African elephant products;[82] and the 1991 Security Council resolution reaffirming the liability of Iraq for the environmental damage caused by its unlawful invasion of Kuwait.[83]

The legal effect of an act of an international organisation depends upon the treaty basis of the organisation, as the following examples illustrate. Usually, the treaty will specify the intended legal consequences. Under Article 25 of the UN Charter, UN General Assembly resolutions are 'only recommendatory',

[77] Art. 10(2) and (3). [78] Art. 10(2)(b).
[79] See generally P. Sands and P. Klein, *Bowett's Law of International Institutions* (2001, 5th edn), 275–92.
[80] Chapter 11, p. 593 below. [81] Chapter 9, p. 417 below.
[82] Chapter 11, p. 509 below. [83] Chapter 7, p. 315 below.

whereas resolutions of the Security Council are binding 'on all states';[84] Regulations, Directives and Decisions of the EU (the EC, ECSC and Euratom) are legally binding on member states and can create rights and obligations which are directly enforceable in the national legal systems of the member states.[85] Acts of organisations established by environmental treaties may be binding or non-binding. Such institutions often have a choice. Thus, the IWC can adopt regulations which are 'effective' for parties not presenting an objection, or it can adopt recommendations which are not legally binding.[86] The consultative meetings of the parties to the 1972 London Convention can amend the Annexes to the Convention, which enter into force either upon notification by a party or after a stated period of time, unless a party declares that it is not able to accept an amendment.[87] The CITES conference of the parties adopts amendments to Appendices I and II to the Convention which 'enter into force' for all parties except those making a reservation.[88] And the meeting of the parties to the 1987 Montreal Protocol may adopt amendments and adjustments which can bind even parties not accepting them.[89] In each case, a majority of the parties to a treaty may adopt binding acts, although the minority is usually free to opt out.

In other cases, an international organisation may adopt an act (which might be called a resolution, recommendation or decision), without a clear provision in the treaty establishing the legal consequences of that act. The legal effect of resolutions adopted under the 1972 London Convention is less clear (such as the resolution on the dumping of radioactive wastes at sea adopted by the ninth consultative meeting which agreed to a 'suspension of all dumping at sea of radioactive wastes and other radioactive matter').[90] Such resolutions, addressing substantive matters, are not binding *per se*, although they may contribute to the development of customary international law, or may set forth an authoritative interpretation of the international agreement under which it was adopted. Examples of such acts include the resolutions adopted by the Governing Council of UNEP which adopt or endorse principles, guidelines or recommended practices addressed to states and other members of the international community.[91] The resolution or act could also bind those states supporting it through the operation of some general principle of law, such as the principle of estoppel.[92] Where the act is an internal act of the organisation

[84] This categorisation may be somewhat misleading, however, since certain resolutions of the General Assembly can have 'definitive legal effect': see n. 93 below.

[85] Chapter 15, p. 734 below.

[86] 1946 International Whaling Convention, Arts. V(1) and (3) and VI.

[87] Art. XV(2).

[88] Arts. XI(3)(b) and XV.

[89] See pp. 138–40 above.

[90] Chapter 9, p. 418 below.

[91] See e.g. the 1985 Montreal Guidelines for the Protection of the Marine Environment Against Pollution from Land-Based Sources; and the 1987 London Guidelines for the Exchange of Information on Chemicals in International Trade.

[92] See *Nuclear Tests* cases, discussed at p. 151 below; see also P. Klein, *Bowett's Law of International Institutions* (5th edn, 2001), 289.

(adopting a budget or procedural rules, or establishing a subsidiary organ), the resolution may bind all members of the organisation as a matter of the internal law of the organisation.[93]

A further issue is the legal effect, if any, of an act of one international organisation upon another, to the extent that it is arguable that there exists a 'common law of international organisations'.[94] This would allow a measure, or interpretative act, adopted by one international organisation, to be relied upon by or have consequences for, another. The proliferation of international organisations addressing environmental issues increases the need for legal consistency and certainty. In practice, organisations do take account of each other's activities, in relation to both procedural and substantive matters, and precedents may be followed on an informal basis. Examples include: the emerging rules and practices governing the participation of non-state actors in the activities of international organisations; the definition of 'best available technology' adopted by the meeting of the parties to the 1974 Paris LBS Convention;[95] and the definition of the 'precautionary principle' adopted by the parties to the 1976 Barcelona Convention or the 1974 Paris LBS Convention.[96]

Conference declarations and other acts

Many intergovernmental conferences are convened every year to address environmental issues and issues linking environment and development. Many adopt declarations, statements or other non-binding acts, which may contribute to the development of international environmental law even if they are not binding as treaties or as formal acts of international organisations. The most important international conferences have been the 1949 UNCCUR, the 1972 Stockholm Conference, the 1992 UNCED and the 2002 WSSD. Each adopted non-binding acts, of which the Stockholm Declaration, the Rio Declaration and Agenda 21 include important elements which now reflect, or are contributing to the development of, customary international law. They continue to provide a significant influence on the development of new treaties and acts of international organisations.[97]

Other conferences have addressed specific, or sectoral, issues. These too can contribute to the development of binding international rules over time. Examples of declarations which have influenced international legislation include the 1990 Ministerial Declaration of the Second World Climate Conference, the Declaration adopted by the 1990 UNECE Bergen Conference

[93] The ICJ affirmed that resolutions of the General Assembly can have 'definitive legal effect': *Case Concerning Certain Phosphate Lands in Nauru* (1992) ICJ Reports 251 (concerning UNGA Res. 2847).

[94] See *de Merode*, WBAT Reports 1987, Decision No. 1, paras. 26 and 28.

[95] Chapter 9, p. 432 below. [96] Chapter 6, p. 268 below; chapter 9, p. 432 below.

[97] Chapter 8, p. 385 below; chapter 6, pp. 262–3 and 235 below.

on Sustainable Development, and regional conferences on environment and development. These contributed to the consensus at UNCED and the negotiations of the Climate Change and Biodiversity Conventions. The 1992 Rio Declaration may be the single most significant such declaration, in terms of its contribution to the development of international environmental rules and jurisprudence. Other conference declarations have led to acts of international organisations which are then followed by the adoption of a new treaty rule incorporating in binding terms the original conference act or objective. One such example is the 1990 Third Ministerial Declaration on the North Sea, elements of which were incorporated into resolutions of the Commissions established under the 1972 Oslo and 1974 Paris Conventions, and are now reflected in the 1992 OSPAR Convention.[98] A more recent example is the 1998 Sintra Ministerial Declaration on the prevention of pollution of the north-east Atlantic by radioactive substances.[99]

Another act frequently adopted by international conferences (or by international organisations) is the 'Action Plan', which also frequently forms the basis or context for the subsequent adoption of treaty rules. Examples include: the Recommendations adopted by the 1972 Stockholm Conference; the various Regional Action Plans adopted under the UNEP Regional Seas Programme; Agenda 21; and the WSSD Plan of Implementation. Action Plans have also been adopted on a range of sectoral issues, such as water resources, drought and desertification, national parks, and the conservation of biodiversity.

Customary international law

A. D'Amato, *The Concept of Custom in International Law* (1971); H. W. A. Thirlway, *International Customary Law and Codification* (1972); M. Akehurst, 'Custom as a Source of International Law', 47 BYIL 1 (1974–5); M. E. Villiger, *Customary International Law and Treaties* (1985); M. Mendelson, 'The Formation of Customary International Law', 272 RdC 155 (1998); International Law Association, *London Statement of Principles Relating to the Formation of General Customary International Law* (2000); I. Brownlie, 'A Survey of International Customary Rules of Environmental Protection', 13 *Natural Resources Journal* 179 (1973); P. M. Dupuy, 'Overview of Existing Customary Legal Regime Regarding International Pollution', in D. Magraw (ed.), *International Law and Pollution* (1991); D. Bodansky, 'Customary (and Not So Customary) International Environmental Law', 3 *Indiana Journal of Global Legal Studies* 105 (1995).

Customary law rules have played a secondary role in international environmental law, although they can establish binding obligations for states and other members of the international community and may be relied upon in the

[98] Chapter 6, p. 271 below; chapter 13, p. 686 below. [99] Chapter 9, p. 426 below.

codification of obligations in treaties and other binding acts. The significance of custom lies in the fact that it creates obligations for all states (or all states within a particular region) except those which have persistently objected to a practice and its legal consequences. Moreover, a customary rule may exist alongside a conventional rule, can inform the content and effect of a conventional rule, and can give rise to a distinct cause of action for dispute settlement purposes.

However, the process of developing rules of customary law cannot really be considered as part of a formal legislative process, and the existence of a customary rule may be difficult to prove.[100] Proving customary international law requires evidence of consistent state practice, which practice will only rarely provide clear guidance as to the precise context or scope of any particular rule. Nevertheless, 'customary law can be somewhat shaped and directed, because the practices of states can be consciously affected by various international actions',[101] including the non-binding acts of international organisations and the intergovernmental statements and declarations discussed above. Article 38(1)(b) of the Statute of the International Court of Justice identifies the two elements of customary international law: state practice and *opinio juris*.

State practice

State practice is notoriously difficult to prove, and little empirical research has been carried out on state practice relating to international environmental obligations.[102] State practice can be discerned from several sources, including: ratification of treaties; participation in treaty negotiations and other international meetings; national legislation; the decisions of national courts; votes and other acts in the UN General Assembly and other international organisations; statements by ministers and other governmental and diplomatic representatives; formal diplomatic notes; and legal opinions by government lawyers.[103] Preparatory materials to these sources can also provide useful evidence of state practice. Other sources include the pleadings of states before national and international courts and tribunals, parliamentary debates, collections of diplomatic materials and the records and *travaux préparatoires* of international conferences and treaty negotiations. Useful pleadings include those relating to the *Nuclear Tests* cases and the *Case Concerning Certain Phosphate Lands in Nauru*.

[100] As reflected in the fact that national courts in different countries may reach diametrically opposed conclusions as to the customary status of a rule or principle of international law: see e.g. the precautionary principle, at chapter 6, pp. 278–9 below.

[101] P. Szasz, 'International Norm-Making', in E. Brown Weiss (ed.), *Issues in International Law* (1992), 41 at 67.

[102] Useful sources of evidence of state practice in relation to environment matters include national reports prepared for UNCED by participating states; and the country/region reports in Part 2 (the Year in Review) of the *Yearbook of International Environmental Law*.

[103] See *Yearbook of the International Law Commission* (1950-II), 368–72.

The pleadings in New Zealand's resumed *Nuclear Tests* case (1995),[104] the ICJ's Advisory Opinion on the legality of the use of nuclear weapons[105] and the *Gabcikovo-Nagymaros Project* case are also likely to repay careful consideration. It is important to bear in mind that the failure of a state to act can also provide evidence of state practice: mutual toleration of certain levels of pollution, or of activities which cause environmental degradation, can provide evidence that states accept such levels and activities as being compatible with international law.

For state practice to contribute to the development of a rule of law, the practice must be general, although this does not mean that it requires the participation of all states across the globe or in a particular region. The ICJ has stated that:

> it might be that, even without the passage of any considerable period of time, a very widespread and representative participation in the convention might suffice of itself, provided it included states whose interests were specifically affected.[106]

More recently, the ICJ deemed it sufficient that the conduct of states should, in general, be consistent with such rules, and that instances of state conduct inconsistent with a given rule should generally have been treated as breaches of that rule, not as indications of the recognition of a new rule.[107]

In both cases, the ICJ was concerned with customary law arising in the context of treaty rules. The relationship between treaty and custom is close, often based upon elements of mutual interdependence. A treaty might codify or further develop a rule of customary law, as was the case in the 1982 UNCLOS. Alternatively, the conclusion and implementation of a treaty may reflect the existence of a rule of customary law. In the *North Sea Continental Shelf* cases, the ICJ found that state practice since the conclusion of the 1958 Geneva Convention on the Continental Shelf, including signature and ratification of the convention, could create a rule of customary law. In the *Military and Paramilitary Activities* case, the ICJ again considered the relationship between treaties and custom, finding that multilateral conventions 'may have an important role to play in recording and defining rules deriving from custom, or indeed in developing them'.[108] The frequent reference to, and incorporation of, Principle 21 of the Stockholm Declaration in the text of treaties is an example of treaties contributing to development of custom.[109] In 1996, the

[104] For a summary of the pleadings, see P. Sands, 'Year in Review: International Court of Justice', 6 *Yearbook of International Environmental Law* 531 (1995).
[105] *Ibid.*, 533.
[106] *North Sea Continental Shelf* Cases (1969) ICJ Reports 3, para. 73.
[107] *Military and Paramilitary Activities* Case (1986) ICJ Reports 98.
[108] (1986) ICJ Reports 97; and *Libya/Malta Continental Shelf* Case (1985) ICJ Reports 29.
[109] See chapter 6, pp. 231–4 below.

ICJ confirmed the customary status of the norm reflected in Principle 21,[110] but without addressing the extent or uniformity of state practice. It appears to have taken a similarly flexible approach the following year, in its judgment in the *Gabcikovo-Nagymaros* case, where it cited with approval the principle of 'equitable utilisation' referred to in Article 5(2) of the 1997 Watercourses Convention.[111] This suggests that in the environmental field the ICJ may well be conscious of the 'Herculean task' of deducing rules of customary international law directly from state practice,[112] and will divine the existence of such rules by more flexible and pragmatic means.

Opinio juris

The second element of customary law, *opinio juris sive necessitatis*, requires evidence that a state has acted in a particular way because it believes that it is required to do so by law. The ICJ in the *North Sea Continental Shelf* cases identified the content and role of *opinio juris*:

> Not only must the acts concerned amount to a settled practice, but they must also be such, or be carried out in such a way, as to be evidence of a belief that this practice is rendered obligatory by the existence of a rule of law requiring it. The need for such a belief, i.e. the existence of a subjective element, is implicit in the very notion of the *opinio juris sive necessitatis*. The states concerned must therefore feel that they are conforming to what amounts to a legal obligation. The frequency, or even habitual character of the acts is not in itself enough. There are many intentional acts, e.g. in the field of ceremonial and protocol, which are performed almost invariably, but which are motivated only by considerations of courtesy, convenience or tradition, and not by any sense of legal duty.[113]

Proving the existence of *opinio juris* will always be a difficult task, since it requires consideration of the motives underlying state activity. It has been suggested that it can be found from a number of sources, including: expressions of beliefs regarding acts of international organisations and other international meetings;[114] statements made by representatives of states;[115] and the conclusion of treaties.[116] Given the difficulties of proving *opinio juris*, there is a certain attraction in the view of Sir Hersch Lauterpacht, who proposed that the accurate principle consists in 'regarding all uniform conduct of Governments (or, in

[110] Chapter 6, p. 236 below. [111] Chapter 10, pp. 469–77 below.
[112] See D. Bodansky, 'Customary (and Not So Customary) International Environmental Law', 3 *Indiana Journal of Global Legal Studies* 105 at 113 (1995).
[113] (1969) ICJ Reports 3 at 44.
[114] *Military and Paramilitary Activities* Case (1986) ICJ Reports 99–101.
[115] *Ibid.*, 100–1. [116] *Nottebohm* Case (1955) ICJ Reports 22–3.

appropriate cases, abstention therefrom) as evidencing the *opinio necessitatis juris* except when it is shown that the conduct in question was not accompanied by any such intention'.[117] Such an approach, which shifts the burden of proof but which is not universally shared, would make the acceptance of principles and rules set out in treaties more likely to contribute to the development of custom.

Treaties and custom

State practice in treaty-making and in accordance with obligations under treaties can contribute to the development of customary law. Moreover, as the ICJ recognised in the *Military and Paramilitary Activities* case, customary rules may emerge which are identical to those of treaty law, and which exist simultaneously with treaty obligations.[118] In the *North Sea Continental Shelf* cases, the ICJ had to decide whether the principle of equidistance for delimitation of the continental shelf found in Article 6 of the 1958 Convention on the Continental Shelf constituted a rule of customary international law. The ICJ found that it was necessary to examine the status of a principle as it stood when a treaty was drawn up, as it resulted from the effect of the treaty, and in the light of state practice subsequent to the treaty.[119] The ICJ held that at the time of its conclusion the principle set out in Article 6 of the 1958 Convention was a treaty rule and not regarded as *lege lata* or as an emerging rule of customary international law. The ICJ then considered whether the principle found in Article 6 had passed into the general *corpus* of international law, and was accepted as such by *opinio juris*, so as to be binding even for countries which were not parties to the Convention: such a process was 'a perfectly possible one which does from time to time occur, although it could not be a result lightly regarded as having been attained'.[120] The ICJ identified the conditions to be fulfilled for a new rule of customary international law to be formed as a result of a treaty:

> It would in the first place be necessary that the provision concerned should, at all events potentially, be of a fundamentally norm-creating character such as could be regarded as forming the basis of a general rule . . . With respect to the other elements usually regarded as necessary before a conventional rule can be considered to have become a general rule of international law, it might be that, even without the passage of any considerable period of time, a very widespread and representative participation in the convention might suffice of itself, provided it included that of states whose interests were specially affected.[121]

[117] Sir Hersch Lauterpacht, *The Development of International Law by the International Court* (1958), 380.

[118] (1986) ICJ Reports 14. [119] (1969) ICJ Reports 37. [120] *Ibid.* [121] *Ibid.*, 41–2.

In this case, the number of ratifications was respectable but insufficient. As to the time element:

> [a]lthough the passage of only a short period of time is not necessarily, or of itself, a bar to the formation of a new rule of customary international law on the basis of what was originally a purely conventional rule, an indispensable requirement would be that within the period in question, short though it might be, state practice, including that of states whose interests are specially affected, should have been both extensive and virtually uniform in the sense of the provision invoked; and should moreover have occurred in such a way as to show a general recognition that a rule of law or legal obligation is involved.[122]

The ICJ held on the facts of the case that state practice was insufficient to transform the treaty obligation under Article 6 of the 1958 Convention into a customary obligation.

However, it should not be assumed that the mere fact that a large number of states are party to a treaty establishes a customary norm for all. For example, the ICJ declined to indicate that the rule prohibiting widespread and significant environmental harm in armed conflict reflected a customary rule.[123] For environmental treaties, provisions of a fundamentally norm-creating character which are capable of being considered as rules of customary law include those of a substantive nature, as well as principles which inform and guide decision-making. Examples of substantive obligations reflected in many treaties include: Principle 21 of the Stockholm Declaration; the obligation to co-operate on environmental problems associated with shared natural resources; the obligation to adopt general measures to protect the marine environment from significant damage; and the obligation to take measures to ensure the conservation of, and prevention of harm to, endangered species of flora and fauna. More specific examples of treaty rules which can be considered as having a 'fundamentally norm-creating character' arguably include: the obligation to use a shared international watercourse in an 'equitable and reasonable' manner; the obligation not to dump high-level radioactive waste in the marine environment; the obligation not to engage in commercial whaling; and the general obligation of developed states to limit emissions of gases such as sulphur dioxide. Guiding principles which may, through treaty practice, reflect existing or emerging norms of customary law might include the polluter-pays principle, the principle of precautionary action, and the principle of common but differentiated responsibilities of developed and developing countries. Procedural obligations which may be binding under customary law, at least within certain regions, include consultation, the provision of information on the environment and the obligation to carry out an environmental impact assessment for activities likely to cause significant environmental damage.

[122] *Ibid.*, 43. [123] (1996) ICJ Reports 226 at 242, para. 31.

Persistent objector

Since a rule of customary law may develop without the express or active support of all states in the international community, the silence or failure of a state to act will not necessarily prevent such a rule from becoming binding upon it, as is clear from the judgments of the ICJ in the *North Sea Continental Shelf* cases. However, a state can avoid being bound by a rule if it persistently objects to that rule. This was one of the issues in the *Anglo-Norwegian Fisheries* case, where the United Kingdom argued the unlawfulness of the Norwegian practice of drawing straight base-lines across the mouths of bays to measure the width of the territorial sea, and where both states accepted the existence of the 'persistent objector' principle.[124] An example of persistent objection in the environmental field is provided by the clear and consistent objection of the United States to the view that the 'right to development' exists as a legal rule.[125] Another example may perhaps be seen in the ICJ's 1996 opinion that environmental obligations under the 1977 Geneva Protocol I did not, at least at that time, reflect customary law in view of the unwillingness of certain states to recognise the application of the Protocol to nuclear weapons.[126] Closely related to the principle of the persistent objector is the operation of acquiescence, according to which the failure of a state to protest against the practice of other states over time will operate to limit or prevent a state from subsequently protesting against the fact that the practice is permitted as a matter of international law. The ICJ considered the principle of acquiescence in the *Anglo-Norwegian Fisheries* case, holding that the 'notoriety of the facts, the general toleration of the international community, Great Britain's position in the North Sea, her own interest in the question, and her prolonged abstention would in any case warrant Norway's enforcement of her system against the United Kingdom'.[127]

Regional custom

Rules of customary international law may also develop at the regional level. This was recognised by the ICJ in the *Asylum* case, holding that regional or local custom peculiar to Latin American states could be established where the rule invoked can be proved to be 'in accordance with a constant and uniform usage practised by the states in question'.[128] This is important in the field of environmental protection, where global regimes have been the exception rather than the rule, and in respect of which some regions (Europe and the Antarctic)

[124] *Anglo-Norwegian Fisheries* Case (1951) ICJ Reports 131.

[125] Chapter 6, pp. 265–6 below.

[126] See n. 9 above and the accompanying text.

[127] (1951) ICJ Reports 139.

[128] *Asylum* Case (*Colombia* v. *Peru*) (1950) ICJ Reports 266; in this case, the Court found that Colombia had not proved the existence of regional or local custom due to the uncertainty, contradiction, fluctuation, discrepancy and inconsistency in practice, which had also been influenced by political expediency.

are particularly well developed. A regional approach allows flexibility in encouraging groups of countries to develop rules which reflect their particular interests, needs and capacities. The Pacific region has been particularly active in developing international treaty rules prohibiting the presence of radioactive materials and the use of driftnet fishing practices in the region, both of which may now reflect rules of customary law for that region. A similar conclusion may be drawn from state practice supporting efforts adopted by African states to limit and prohibit the import of hazardous and other waste onto the African continent, or in respect of certain mineral activities in the Antarctic.

General principles of international law[129]

B. Cheng, *General Principles of Law as Applied by International Courts and Tribunals* (1953); A. McNair, 'The General Principles of Law Recognised by Civilised Nations', 33 BYIL 1 (1957); G. Herczegh, *General Principles of Law and the International Legal Order* (1969); E. Zoller, *La Bonne Foi en Droit International Public* (1977); M. Akehurst, 'The Application of General Principles of Law by the Court of Justice of the European Communities', 52 BYIL 29 (1981); B. Vitanyi, 'Les Positions Doctrinals Concernant le Sens de la Notion de "Principes Généraux de Droit Reconnus par les Nations Civilisées"', 86 RGDIP 48 (1982)

The inclusion of 'general principles of law recognised by civilised nations' in Article 38 is widely believed to have been intended to allow the ICJ to consider and apply general principles of municipal law, and in practice they are occasionally relied upon when gaps need to be filled. The ICJ has only rarely relied on general principles, although other international tribunals, such as the ECJ, have relied on general principles of municipal law to assist in reaching conclusions.[130]

The general principles relating to good faith in the exercise of rights and prohibitions on the abuse by a state of a right which it enjoys under international law have been invoked by the ICJ and arbitral tribunals which have considered international environmental issues.[131] The principle of good faith appears to have been relied upon by the President of the Tribunal in the *Fur Seal Arbitration* in finding that the exercise of a right for the sole purpose of causing injury to another (abuse of rights) is prohibited.[132] The award in the *Trail Smelter* case is also cited as an example of reliance upon the principle of

[129] General principles of the type discussed in this section should be distinguished from the general obligations and principles which have emerged specifically in relation to international environmental law and are addressed in chapter 6 below.

[130] See Case C-2/90, *EC Commission* v. *Belgium* [1993] 1 CMLR 365, chapter 19, pp. 990–1 below.

[131] On abuse of rights, see Oppenheim, vol. I, 407–10; B. Cheng, *General Principles of Law as Applied by International Tribunals* (1951), 121–36.

[132] Chapter 11, pp. 561–6 below.

good faith which governs the exercise of rights, to ensure that a proper balance is struck between a state's rights and obligations and a 'recognition of the interdependence of a person's rights and obligations'.[133] The abuse of rights doctrine is also considered to provide the basis for the rule that a state must not interfere with the flow of a river to the detriment of other riparian states,[134] and is related to the principle requiring respect for mutual interests which is now reflected in Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration, namely, *sic utere tuo ut alienum non laedas*. The principle of 'good faith' was relied upon by the ICJ in the *Nuclear Tests* cases to enable it to reach its conclusion on the legal effect of a French unilateral declaration that it would cease atmospheric nuclear tests. In recognising that unilateral declarations could have the effect of creating legal obligations which are binding 'if given publicly, and with an intent to be bound, even though not made within the context of international negotiations', the Court stated that:

> One of the basic principles governing the creation and performance of legal obligations, whatever their source, is the principle of good faith. Trust and confidence are inherent in international co-operation, in particular in an age when this co-operation in many fields is becoming increasingly essential. just as the very rule of *pacta sunt servanda* in the law of treaties is based on good faith, so also is the binding character of an international obligation assumed by unilateral declaration. Thus interested states may take cognisance of unilateral declarations and place confidence in them, and are entitled to require that the obligation thus created be respected.[135]

The ICJ held that a number of communications made by senior government officers speaking for France created binding legal obligations for that country. States which make unilateral declarations may establish binding environmental obligations. Examples include: the declaration by the UK that it would cease to permit the disposal of sewage sludge in the North Sea by the end of 1998;[136] the joint declaration by the EC and its member states that they would stabilise their emissions of carbon dioxide at 1990 levels by the year 2000;[137] and the declaration by Japan that it would prohibit driftnet fishing by the end of 1993.[138] It is important to recall, however, that these and other such declarations need to be considered carefully, as they are often drafted to allow discretion in the act required by a state, or may only be intended to have political or domestic effects.[139] Other 'general principles' which have relevance for environmental

[133] B. Cheng, *General Principles*, 130.

[134] Oppenheim, vol. I, 408 and 585; see generally chapter 10 below.

[135] *Nuclear Tests* Cases (1974) ICJ Reports 267, 268. [136] Chapter 9, p. 426 below.

[137] Chapter 15, p. 758 below. [138] See generally chapter 11, especially pp. 588–9 below.

[139] *Military and Paramilitary Activities* Case (1986) ICJ Reports 132, holding that a governmental statement did not involve a legally binding commitment; see also the *Case Concerning the Frontier Dispute (Burkina Faso and Mali)* (1986) ICJ Reports 554, 573 and 876.

matters include: the obligation to make reparation for the breach of an engagement;[140] the principle that a person may not plead his or her own wrong;[141] the principle that no one may be a judge in his or her own suit;[142] and 'elementary considerations of humanity'[143] and 'fundamental general principles of humanitarian law'.[144]

Equity

It is also important to consider the role of 'equity', which allows the international community to take into account considerations of justice and fairness in the establishment, operation or application of a rule of international law. In the *North Sea Continental Shelf* cases, the ICJ described the concept of equity as being a 'direct emanation of the idea of justice' and a 'general principle directly applicable as law' which should be applied as part of international law 'to balance up the various considerations which it regards as relevant in order to produce an equitable result'.[145] In that case, the ICJ held there were no rigid rules as to the exact weight to be attached to each element in a case, and that equity was not an exercise of discretion or conciliation or the operation of distributive justice.[146] The ICJ has linked equity with acquiescence and estoppel,[147] and applied it to the conservation of fishery resources to achieve an 'equitable solution derived from the applicable law'.[148]

Equity can therefore operate as a part of international law to inform the application of a particular rule. It may also be applied by the ICJ to decide a case *ex aequo et bono*, if the parties to a dispute agree, in application of Article 38(2) of the Statute of the Court, although no such judgment has yet been given by the ICJ. As described in chapter 6 below, many environmental treaties refer to or incorporate equity or equitable principles.[149] In applying equity in these treaties, it will be proper to establish its meaning in the context of its use in a particular treaty. Since, however, treaties rarely provide a working definition of equity, states, international organisations and international courts and tribunals may, ultimately, have to refer back to the general concept as interpreted and applied by the ICJ and other international tribunals.

[140] *Chorzow Factory* case and *Gabcikovo-Nagymaros* case, chapter 18, p. 873 below.
[141] *Jurisdiction of the Courts of Danzig*, PCIJ Ser. B, No. 15, 27.
[142] *Mosul* Case, PCIJ Ser. B, No. 12, 32. [143] *Corfu Channel* Case (1949) ICJ Reports 22.
[144] *Military and Paramilitary Activities* Case (1986) ICJ Reports 113–15 and 129–30.
[145] (1982) ICJ Reports 18. See also the Individual Opinion of Judge Hudson in the *Diversion of the Waters from the Meuse* Case, recognising equity as 'a part of international law': (1937) PCIJ Ser. A/B, No. 70, 76–7.
[146] *Ibid.* [147] *Gulf of Maine* Case (1984) ICJ Reports 246 at 305.
[148] *Fisheries Jurisdiction* Cases (1974) ICJ Reports 3 at 33; chapter 11, pp. 567–8 below.
[149] Chapter 6, pp. 261–3 below.

Subsidiary sources

R. Jennings and A. Watts (eds.), *Oppenheim's International Law* (1992, 9th edn), vol. I; M. Shaw, *International Law* (1997, 4th edn); P. Daillier and A. Pellet, *Droit International Public* (2002, 7th edn); I. Brownlie, *Principles of Public International Law* (2003, 6th edn); P.-M. Dupuy, *Droit International Public* (2002, 6th edn)

The main subsidiary sources are the decisions of courts and tribunals and the writings of jurists. The ICJ has only recently come to deal with the substantive aspects of international environmental protection: in the *Nuclear Tests* cases the dispute was settled by the ICJ before the merits could be addressed. The ICJ has considered the conservation of fisheries resources (*Icelandic Fisheries* cases), guiding principles of general application (*Corfu Channel* case, *North Sea Continental Shelf* cases), the protection of the environment in times of war and armed conflict (Advisory Opinion on *The Legality of the Threat or Use of Nuclear Weapons*) and general norms of international environmental law and principles governing the law of shared watercourses (*Gabcikovo-Nagymaros* case).[150] Other international courts dealing with environmental issues are the European Court of Justice (which has been called upon to interpret and apply EC environmental law and international agreements such as 1973 CITES, the 1979 Berne Convention and the GATT), the European Court of Human Rights, the WTO Appellate Body and the International Tribunal for the Law of the Sea, as well as panels established under the Canada–US Free Trade Agreement.[151] Awards of international arbitral tribunals have also contributed to the development of international environmental law. Four stand out in particular: the 1893 decision in the *Pacific Fur Seals Arbitration*, the 1941 decision in the much cited *Trail Smelter* case, the 1957 award of the *Lac Lanoux Arbitration*, and the 2003 award in the *OSPAR Information* case.[152] National courts and tribunals are increasingly faced with the task of interpreting international obligations in this field, and the jurisprudence of these tribunals is becoming an increasingly important source of reference in the development of international environmental law and policy.[153]

The writings of jurists have played a less significant role in developing international environmental law. The *Trail Smelter* case relied on the writings of Professor Eagleton, and there is some evidence that international jurisprudence on environmental issues has been influenced by academic and other writings.[154]

[150] Chapter 10, pp. 469–77 below.

[151] Chapter 5, p. 203 below; chapter 19, pp. 952–85 below.

[152] Chapter 11, pp. 561–6 below; chapter 8, pp. 318–19 below; chapter 10, pp. 463–4 below; chapter 17, pp. 857–8 below. At the time of writing, proceedings are also pending before an UNCLOS Annex VII arbitral tribunal (the *MOX* case).

[153] Chapter 8, pp. 318–19 below.

[154] See e.g. the opinions of Judge Weeramantry in the *Nuclear Tests* case (1995) ICJ Reports 34 *et seq.* and in the *Gabcikovo-Nagymaros* Case (1997) ICJ Reports 92–4.

Resolutions of groups of international jurists acting through the International Law Association and the Institut de Droit International have contributed in important ways to the development of subsequent treaty obligations, particularly in the field of water and atmospheric pollution, as will be seen in the chapters which follow.

Introduction to regulatory approaches

The principles and rules of international environmental law established by treaty and other sources of international law are applied to a range of regulatory techniques. These can be divided into two types: traditional forms of direct regulation (frequently referred to as 'command-and-control'), and techniques which make use of economic incentives (referred to as 'economic instruments').[155] Awareness of the limited effectiveness of international environmental regulation has resulted in numerous proposals for a new regulatory approach, referred to as integrated pollution prevention (or control), which aims to adopt a more comprehensive approach to regulation. It is beginning to gain favour at the national level and, at least in Europe, at the international level also.

The techniques relied upon are themselves the subject of political and ideological differences. The 1990 Ministerial Declaration of the Second World Climate Conference illustrates the tensions which exist as to the proper balance to be achieved in the use of two types of regulation, stating that:

> Appropriate economic instruments may offer the potential for achieving environmental improvements in a cost-effective manner. The adoption of any form of economic or regulatory measures would require careful and substantive analyses. We *recommend* that relevant policies make use of economic instruments appropriate to each country's socio-economic conditions in conjunction with a balanced mix of regulatory approaches.

The Rio Declaration also reflects support for a balanced approach. Principle 10 indicates that states should enact effective environmental legislation, and that 'environmental standards, management objectives and priorities should reflect the environmental and developmental context to which they apply'. Principle 16, the use of economic instruments, suggests only that national authorities should 'endeavour to promote' their use. It is therefore likely that the international use of command-and-control regulation will remain the primary approach, as reflected in recent instruments such as the Climate Change and

[155] For an illustrative list of regulatory technique, see Annex II to the 1985 Montreal Guidelines on Land-Based Sources of Pollution, chapter 8, p. 430 below. See also D. Driesen, 'Choosing Environmental Instruments in a Transnational Context', 27 *Ecology Law Quarterly* 1 (2001).

Biodiversity Conventions, and supplemented (where a consensus exists) with economic instruments.

Direct regulation

Under direct regulation ('command-and-control') the state instructs environmental protection or pollution control bodies to adopt and apply standards which are generally applicable in a uniform manner to their addressees. Once they have been 'commanded', the standards are enforced (or controlled) by public authorities (or, in some jurisdictions, by private persons as well). The environmental standards fall into four categories: environmental quality standards; product standards; emission standards; and technology or process standards.

Environmental quality standards

Environmental quality standards prescribe the levels of pollution, nuisance or environmental interference which are permitted and which must not be exceeded in a given environment or particular environmental media. International treaties and other acts frequently use this approach to environmental regulation. The earliest environmental treaties relating to the protection of flora and fauna provide for the designation of areas which are protected from environmental interference. Under the 1940 Western Hemisphere Convention, for example, 'strict wilderness reserves' are to be kept virtually inviolate and the quality of their flora and fauna are to be kept, as far as practicable, pristine.[156] National parks, on the other hand, may be subjected to some environmental interference, although commercial activity is not allowed.[157] International environmental law establishes a range of environmental quality standards which vary from the absolute prohibition of particular activities in order to maintain environmental and natural resources free from any change, to the more limited acceptance that certain changes in the quality of a given environment are inevitable and may be tolerated as a matter of law. Examples of international acts intended to maintain the environment or parts of it absolutely free from further interference by particular substances or activities include: the prohibitions on the dumping of certain hazardous substances at sea;[158] the moratorium on dumping of all radioactive waste at sea;[159] the moratorium on the killing or taking of whales for commercial purposes;[160] and the prohibitions on mining and related activities in the Antarctic,[161] interference with flora and fauna in certain protected areas,[162] the production and consumption of certain ozone-depleting substances,[163] the production and consumption of certain chemicals,[164]

[156] Art. IV. [157] Art. III. [158] Chapter 9, pp. 416–23 and 423–5 below.
[159] Chapter 9, p. 420 below. [160] Chapter 11, pp. 592–5 below.
[161] Chapter 14, pp. 721–6 below. [162] See generally chapter 11 below.
[163] Chapter 8, pp. 345–57 below. [164] Chapter 12, pp. 628–30 below.

incineration at sea,[165] and the import of hazardous waste into Africa and other parts of the developing world.[166]

Other environmental quality standards recognise that certain levels of environmental interference are the inevitable consequence of human activity. Rather than prohibit the activity and attempt to establish absolute protection of the environment at its existing level, these standards aim to establish a level beyond which pollution, nuisance or environmental interference is not permitted. Early examples of this approach include the limited protection given to certain areas under wildlife treaties. More recently, the same approach sets targets for acceptable levels of environmental interference by setting 'critical loads' which can be translated into individual country targets.[167] Other examples include: 30 per cent cuts in atmospheric emissions of sulphur dioxide for all EC states;[168] differentiated cuts of sulphur dioxide emissions of up to 70 per cent by EC member states;[169] the general objective of stabilising levels of greenhouse gas concentrations in the atmosphere at 'a level that would prevent dangerous anthropogenic interference with the climate system';[170] and maximum admissible levels of concentrations in the marine environment.[171] A different approach to achieving the same objective is reflected in the 1993 Lugano Convention which imposes strict liability for an operator carrying out certain hazardous activities, but allows a defence where the operator can prove that damage was caused 'by pollution at tolerable levels under local relevant circumstances'. Implicit in this approach is the recognition that environmental quality standards will have been maintained until a threshold of intolerability has been reached. The Convention does not provide guidance as to when such a threshold will be crossed.

Product standards

Product standards establish levels for pollutants or nuisances which must not be exceeded in the manufacture or emissions of a product, or specify the properties or characteristics of design of a product, or are concerned with the ways in which a product is used. This approach was only infrequently applied, as it required a degree of specificity which would have been unusual for an international treaty. Recently, however, there has been an increased tendency to target specific industrial activities even at the international level. Examples of

[165] Chapter 9, pp. 409–12 below; chapter 13, pp. 686–7 below.
[166] Chapter 13, pp. 695–6 below.
[167] 1988 NO_x Protocol, Art. 2; chapter 8, pp. 328–9 below.
[168] 1985 SO_2 Protocol; chapter 8, pp. 332–3 below.
[169] 1988 EC Large Combustion Directive, chapter 8, pp. 336–9 below.
[170] 1992 Climate Change Convention, Art. 2, chapter 8, pp. 357–68 below.
[171] EC Water Quality Directives, chapter 15, pp. 768–79 below; 1998 Sintra Ministerial Declaration (radioactive substances), chapter 9, p. 435 below.

product standards in international agreements include: the permitted use of certain ozone-depleting substances in manufacture;[172] the use of parts of endangered species in manufacturing;[173] and the construction of new oil tankers with 'double hulls'.[174] Product standards also include specifications relating to testing, packaging, marking, labelling and distribution.[175]

Emission standards

Emission standards set levels for pollutants or nuisances which are not to be exceeded in emissions from installations or activities. Examples of their international use include atmospheric emissions from aircraft,[176] automobiles[177] and large industrial utilities.[178]

Process standards

Process standards can be developed and applied to fixed installations and to mobile installations and activities. Two types are frequently used: 'installation design standards', which determine the requirements to be met in the design and construction of installations to protect the environment; and 'operating standards', which determine the requirements to be met in the course of activities and the operation of installations. Examples of process standards in international agreements include: processes for the treatment of municipal waste[179] and the incineration of hazardous waste;[180] methods and means of conducting fisheries activities[181] (such as driftnet fishing)[182] and the development of biotechnology.[183] 'Process standards' involve the application of particular types of technology, technique and practice. Many international environmental agreements require their use, although the permissibility of applying national standards to processes carried out beyond a state's jurisdiction is subject to

[172] 1987 Montreal Protocol, chapter 8, pp. 345–57 below.
[173] 1973 CITES, chapter 11, pp. 505–15 below.
[174] 1991 amendments to MARPOL 73/78, chapter 9, pp. 440–5 below.
[175] Chapter 12, pp. 626–7 below; 1985 UNEP London Guidelines, chapter 12, pp. 633–5 below.
[176] Chapter 8, pp. 341–2 below.
[177] ECE Regulations Concerning Gaseous Pollutant Emissions from Motor Vehicles, chapter 8, p. 324 below; see chapter 15, pp. 758–60 below.
[178] Chapter 8, pp. 336–9 below.
[179] 1991 EC Urban Waste Water Directive, chapter 15, pp. 776–8 below.
[180] 1991 Antarctic Environment Protocol, chapter 14, pp. 721–6 below.
[181] 1980 CCAMLR, Chapter 14, pp. 714–15 below. See also the views of the WTO Appellate Body, chapter 19, pp. 965–73 below.
[182] 1989 Driftnet Convention, chapter 11, pp. 588–9 below.
[183] EC Directives, chapter 12, pp. 658–62 below; 2000 Biosafety Protocol, chapter 12, pp. 653–8 below.

limits under WTO law.[184] Examples of obligations imposed upon states include the requirement that they ensure the use of: 'best available techniques';[185] or 'best environmental practice';[186] or 'best available technology';[187] or 'best available technology not entailing excessive cost';[188] or 'clean production methods';[189] or environmentally sound management;[190] or best available technology which is economically feasible.[191]

The techniques for implementing these four types of standard at the national level demand a central role for public authorities. It is they who must set the standards (increasingly by implementing international standards), and implement them through authorising, permitting, licensing and receiving information from potential users. Public authorities are also required, under many international environmental agreements, to enforce international standards at the national level through appropriate administrative, judicial and other means.[192] Environmental impact assessment and the broad dissemination of information are other techniques which are increasingly used to ensure the implementation of environmental quality, process and product standards.

Economic instruments[193]

OECD, *Economic Instruments for Environmental Protection* (1989); 'Report of the Working Group of Experts from the Member States on the Use of Economic and Fiscal Instruments in EC Environmental Policy (1990)', 14 *Boston College International and Comparative Law Review* 447 (1991); R. Hahn and R. Stavins, 'Incentive-Based Environmental Regulation: A New Era from an Old Idea?', 18 *Ecology Law Quarterly* 1 (1991); OECD, *Guidelines for the Application of Economic Instruments in Environmental Policy* (1991); E. Rehbinder, 'Environmental Regulation Through Fiscal and Economic Incentives in a Federalist System', 20 *Ecology Law Quarterly* 57 (1993); R. Wolfrum (ed.), *Enforcing Environmental Standards: Economic Mechanisms as Viable Means* (1996); P. Galizzi, 'Economic Instruments as Tools

[184] See GATT Panel Decision in *Yellow-Fin Tuna* Case, 1991, chapter 19, pp. 953–61 below.
[185] 1992 OSPAR Convention, Art. 2(3)(b) and Appendix 1.
[186] 1992 OSPAR Convention, Art. 2(3)(b) and Appendix 1; 1992 Black Sea Convention, Art. 3(3) and Annex II.
[187] 1992 Baltic Convention, Art. 3(3) and Annex II.
[188] Council Directive 84/360/EEC on the combating of air pollution from industrial plants, OJ L188, 16 July 1984, 20, Art. 4.
[189] 1991 Bamako Convention, Art. 4(3)(g); 1992 OSPAR Convention, Art. 2(3)(b).
[190] 1989 Basel Convention, Arts. 2(8) and 4(2)(b).
[191] 1979 LRTAP Convention, Art. 6; 1988 NO_x Protocol, Art. 2.
[192] Chapter 5, p. 176 below. Sometimes, non-state actors are also granted an enforcement role: *ibid.*
[193] For an early initiative, see 'Report of the Working Group of Experts from the EC Member States on the Use of Economic and Fiscal Instruments in EC Environmental Policy', 14 BCICLR 447 (1991).

for the Protection of the International Environment', 6 *European Environmental Law Review* 155 (1997); K. Bosselmann and B. Richardson, *Environmental Justice and Market Mechanisms* (1999); R. Stewart and P. Sands, 'The Legal and Institutional Framework for a Plurilateral Greenhouse Gas Emissions Trading System', in UNCTAD, *Greenhouse Gas Market Perspectives, Trade and Investment Implications of Climate Change* (2001), 82; R. Stewart, 'The Importance of Law and Economics for European Environmental Law', 2 *Yearbook of European Environmental Law* 856 (2002).

The use of economic policy instruments to protect the environment has been under discussion for several years as the international community addresses the fact that many environmental regulations have not resulted in environmentally cleaner behaviour, technologies or products. It is believed that current mechanisms have failed to provide adequate economic incentives to limit activities which are environmentally damaging and have failed to achieve their environmental objectives. The use of economic instruments is premised on a belief that the market can be used to provide incentives to guide human behaviour:

> If environmental resources are properly valued, the costs of using the environment will be taken fully into account in private economic decision-making. This implies that environmental resources are used in 'sustainable' quantities, provided that their prices are based on their scarcity and place an appropriate value on non-renewable resources. Economic instruments are meant to correct current market prices by internalising environmental costs which are treated by the market mechanisms as external.[194]

Economic instruments 'affect through the market mechanism costs and benefits of alternative actions open to economic agents, with the effect of influencing behaviour in a way which is favourable for the environment'.[195]

The use of economic instruments at the international level to supplement, or supplant, regulatory approaches to environmental protection is supported, at least in principle, by a growing number of states. The practical application is nevertheless limited. In so far as economic instruments are defined by reference to their attempts to use the market to internalise environmental costs, the polluter-pays principle first developed by the OECD and the EC in the early 1970s can be seen as a precursor to more recent discussions and proposals.[196] Explicit references in international acts to 'economic instruments' is a relatively recent phenomenon. In April 1990, the Presidency of the EC Environment Council concluded that EC Ministers 'acknowledged the value of supplementing existing regulatory instruments ... by the use of economic and

[194] *Ibid.*, 453–4. [195] *Ibid.*, 455.

[196] Chapter 6, pp. 279–84 below. On subsidies and competition, see chapter 19, pp. 1010–16 below.

fiscal instruments'.[197] The following month, the UNECE Bergen Ministerial Declaration stated that to support sustainable development it would be necessary 'to make more extensive use of economic instruments in conjunction with . . . regulatory approaches'.[198] By November 1990, the Ministerial Declaration of the Second World Climate Conference had found support for similar language at the global level.

Support for the use of economic instruments can also be found in other regional and global declarations such as the Rio Declaration. Agenda 21 refers frequently to the need to develop economic instruments. Support for the use of economic instruments is also reflected in soft law instruments and treaties. Examples include the 1992 Climate Change Convention, which requires developed country parties to co-ordinate relevant economic instruments,[199] and the 1992 Biodiversity Convention, which although it does not specifically mention economic instruments, calls on parties to 'adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity'.[200]

What are the different types of economic instruments available? The 1991 OECD Council Recommendation on the Use of Economic Instruments in Environmental Policy provided the clearest guidance yet adopted at the international level on the types of instrument the use of which is being envisaged in future years.[201] It recommends that member countries make greater use of economic instruments, improve the allocation and efficient use of natural and environmental resources, and make efforts to reach further agreement at an international level on the use of economic instruments.[202] The different types of economic instruments envisaged are set out in the Guidelines and Considerations for the Use of Economic Instruments in Environmental Policy contained in the Annex to the Recommendation. They include charges and taxes, marketable permits, deposit-refund systems and financial assistance. Other types of economic instrument not dealt with in the Recommendation include enforcement incentives, administrative charges, liability and compensation for damage, trade measures and consumer information incentives, as well as non-compliance fees and performance bonds. The permissibility of subsidies for environmentally beneficial activities is also premised upon an economic approach to environmental regulation.

[197] Quoted in 'Report of the Working Group of Experts from the EC Member States on the use of Economic and Fiscal Instruments in EC Environmental Policy', 14 BCICLR 447 at 448 (1991).

[198] 7 May 1990; see also 1985 Montreal Guidelines, Annex II.

[199] Art. 4(2)(e). [200] Art. 11.

[201] C(90)177 (1991). See also the Report of the Working Party on Economic and Environmental Policy Integration, 'Economic Instruments for Pollution Control and Natural Resources Management in OECD Countries: A Survey' (1999), ENV/EPOC/GEEI(98)35/REV1/FINAL.

[202] Para. I(i)–(iii).

Charges and taxes

The rationale behind charges and taxes is that they create an incentive for polluters to limit activities which can be harmful to the environment, such as emissions, the generation of waste, and the excessive use of natural resources. The difference between a charge and a tax reflects the different way in which the revenues are allocated: tax revenues are added to the general public budget, while charge revenues are used specifically to finance environmental measures. Charges can also have different purposes. Emission charges, which are levied on all dischargers, can be levied on discharges of effluents and gases and can be calculated on the basis of the quality and/or quantity of the pollution load. User charges are paid for services rendered by authorities, such as the collection and removal of municipal waste water and solid and hazardous wastes, and are only paid by persons who receive, or are associated with, the services.

Although widely used at the national level, charges and taxes have not yet been the subject of international legal measures. In May 1992, the first international environmental tax was proposed by the EC, to contribute to the implementation of its commitment to stabilise carbon dioxide emissions by the year 2000 at 1990 levels. The EC Commission proposal was to harmonise the introduction in the EC member states of a tax on certain fossil fuel products (coal, lignite, peat, natural gas, mineral oils, ethyl and methyl alcohol, electricity and heat),[203] levying the tax on the basis of carbon dioxide emissions and energy content.[204] The introduction of the tax was, however, conditional upon the introduction by the other OECD members of similar taxes or of measures having a financial impact equivalent to the draft Directive, and was to take account of issues of international competitiveness. The Directive was not adopted.

Joint implementation and tradeable permits

The suggestion that international law might encourage the use of tradeable permits is drawn from developments in the United States under the 1990 amendments to the Clean Air Act.[205] According to this approach, regions or utilities are granted a limited number of pollution rights; if they manage to use less than the amount allocated to them, they may sell their excess to another region or utility. Although the idea has generated some interest, the first international scheme was only adopted in 2002, by the EC. Early environmental agreements

[203] EC Commission Proposal for a Council Directive Introducing a Tax on Carbon Dioxide Emissions and Energy, COM (92) 226 final, 30 June 1992, Arts. 1(1) and 3(1) and (2). The draft excludes certain products: *ibid.*, Art. 3.

[204] *Ibid.*, Arts. 1(1) and 9(1).

[205] USC §§ 7401–671 (1988) and amendments in Supp. III to USC (1991). See J. Nash and R. Revesz, 'Markets and Geography: Designing Marketable Permit Schemes to Control Local and Regional Pollutants', 28 *Ecology Law Quarterly* 569 (2001).

allowed parties jointly to implement programmes and measures without specifying any criteria or conditions according to which this is to be achieved,[206] and since they did not establish specific pollution limits there was no intention for inter-state trading. The first elements of possible trading can be found in certain fisheries agreements (under which 'trade' in quotas may take place) and in Article 2(7) of the 1987 Montreal Protocol, which allows member states of a regional economic integration organisation (which currently might only include the EC) to agree to 'jointly fulfil their obligations respecting consumption' of certain ozone-depleting substances provided that their total combined calculated level of consumption does not exceed the levels required by the Montreal Protocol. The 1992 Climate Change Convention allows developed country parties and other parties included in Annex 1 to implement policies and measures required under Articles 4(2)(a) and (b) 'jointly with other parties', subject to decisions taken by the conference of the parties at its first session 'regarding criteria for joint implementation'.[207] The language is unclear on a number of points. Is it envisaged that parties with specific targets and timetables under Article 4(2)(a) and (b) should be able to implement their commitments with parties which have no such targets? And may joint implementation under the Convention proceed in the absence of criteria established by the conference of the parties? Interpretation of these provisions on the basis of an effort to ensure the long-term effectiveness of the Convention suggests that the answer to both questions should be no. A positive answer to the first question would, in effect, allow developed country parties to bypass their targets by supporting efforts in countries with no targets. While this may, over the short term, be cost-effective for developed countries, it may not, over the longer term, meet the commitment to be guided by principles of equity or to meet the ultimate objective of the Convention, as set out in Article 2. These questions have been overtaken by the 1997 Kyoto Protocol, which provides more detailed provisions on joint implementation.[208] The Kyoto Protocol also provides for the emergence of a system of tradeable permits (emission reduction units), the details of which will be elaborated by the conference of the parties at its first meeting.[209]

[206] 1974 Paris Convention, Art. 4(2).

[207] Art. 4(2)(a) and (d); see chapter 8, pp. 357–68 below.

[208] Art. 4; see A. Gosseries, 'The Legal Architecture of Joint Implementation', 7 NYUELJ 49, (1999).

[209] Art. 5. See generally J. C. Fort and C. A. Faur, 'Can Emissions Trading Work Beyond a National Program?: Some Practical Observations on the Available Tools', 18 *University of Pennsylvania Journal of International Economic Law* 463 (1997); J. R. Nash, 'Too Much Market? Conflict Between Tradeable Pollution Allowances and the "Polluter Pays" Principle', 24 *Harvard Environmental Law Review* 465 (2000); R. B. Stewart, J. L. Connaughton and L. C. Foxhall, 'Designing an International Greenhouse Gas Emissions Trading System', 15 *Natural Resources and Environment* 160 (2001); J. Yelin-Kefer, 'Warming Up to an International Greenhouse Gas Market: Lessons from the US Acid Rain Experience', 20 *Stanford Environmental Law Journal* 221 (2001).

In March 2003, the EC Council adopted a common position on a Directive establishing a scheme for greenhouse gas emission allowance trading within the EC, which is intended 'to promote reductions of greenhouse gas emissions in a cost-effective and economically efficient manner' and which it would be desirable to link with project-based mechanisms under the Kyoto Protocol, including joint implementation and the Clean Development Mechanism.[210] When it enters into force in December 2003, the Directive will establish the first international trading arrangement. The Directive demonstrates the potential complexities – and degree of intrusion – which will underlie the operation of such arrangements. Its operation is premised on the allocation of allowances[211] to operators of installations involving designated activities and resulting in emissions of certain greenhouse gases.[212] It requires each member state to ensure that with effect from 1 January 2005 all designated activities resulting in the emission of the designated gases must be authorised by a permit granted by a competent authority, which will be subject to certain conditions.[213] Each member state must develop a national allocation plan stating the total quantity of allowances it will allocate for a three-year period from 1 January 2005 and for a five-year period beginning 1 January 2008 (and subsequent five-year periods), consistent with its obligations to limit its emissions pursuant to the 1997 Kyoto Protocol and implementing EC law, and in accordance with the criteria set forth in Article 9.[214] Allowances for the first period (three years) will be allocated free of charge, and 90 per cent of allowances for the first five-year period are to be allocated free of charge, and will be valid for emissions during the period in which they are issued.[215] The allowances will be transferable between persons within the EU, and between persons within the EU and third countries listed in Annex B to the Kyoto Protocol which have ratified the Protocol and which have entered into agreements with the EU on the mutual recognition of allowances.[216] Provision is made for a certain number of

[210] 9 December 2002, http://europa.eu.int/comm/environment/climat/030318commonposition_en.pdf, Arts. 1 and 26(3).

[211] An allowance is 'an allowance to emit one tonne of carbon dioxide equivalent during a specified period' valid only for the purposes of the Directive and transferable only in accordance with the Directive: Art. 3(a).

[212] Art. 2. The activities are: energy; production and processing of ferrous metals; the mineral industry; and other activities (production of pulp and paper) (Annex I); the gases are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride (Annex II). Provision is made for the unilateral inclusion of additional activities and gases (Art. 23(a)) and for pooling of installations (Art. 25(b)).

[213] Arts. 4–7. Art. 8 provides for co-ordination with Directive 96/61 on integrated pollution control (chapter 15, pp. 754–5 below). In accordance with Art. 25(a), certain installations may be temporarily excluded.

[214] Arts. 9(1) and 11, and Annex III, para. 1. Specific reference is made to the requirements of EC competition law: see chapter 20, p. 1010 below.

[215] Arts. 10 and 13(1). [216] Arts. 12(1) and 24.

allowances to be surrendered (and cancelled) each year by the operator of each installation (to cover emissions during the previous year), and for the cancellation of allowances which are no longer valid.[217] The EC Commission will adopt guidelines on the monitoring and reporting of emissions, and member states will be required to ensure that emissions are duly monitored and that reports submitted by operators are verified.[218] Member states will lay down rules on penalties for infringements of implementing provisions, which must be effective, proportionate and dissuasive, as well as payment of an excess emissions penalty where an operator does not surrender sufficient allowances by 30 April each year to cover its emissions during the previous year.[219] Each member state is required to designate a competent authority, and to establish a registry to ensure the accurate accounting of the issue, holding, transfer and cancellation of allowances, and the Commission will designate a central authority to maintain an independent transaction log in relation to allowances, and to conduct automated checks.[220] The Commission may make a proposal to amend the list of activities and gases by 31 December 2004, and must report on the application of the Directive by 30 June 2006.

Deposit-refund systems

Deposit-refund systems require a deposit to be paid on potentially polluting products, such as batteries. bottles and other packaging. The return of the product or its residuals is intended to avoid pollution and is compensated by a refund of the deposit. The system is frequently used at the national level but has not yet been used at the international level. In the *Danish Bottles* case, a Danish deposit-and-return system was challenged by the EC Commission and other member states as incompatible with the rules on the free movement of goods. The ECJ upheld the deposit-and-return system as having lawful objectives of environmental protection despite its limitation on the application of the EC rules on free movement of goods (Article 30).[221]

Subsidies

Governments often seek to justify the grant of subsidies which might otherwise be unlawful on the grounds that they bring environmental benefits. They can nevertheless distort competition and run against the inherent purpose of the polluter-pays principle and may, on those grounds, fall foul of international

[217] Arts. 12(3) and 13(2) and (3). [218] Arts. 14 and 15 and Annexes IV and V.
[219] Art. 16. In the first three-year period, the excess emissions penalty is 40 euros per tonne of carbon dioxide equivalent emitted, rising to 100 euros per tonne in the first five-year period: Art. 16(3) and (4).
[220] Arts. 19 and 20. [221] Chapter 19, pp. 987–90 below.

competition and trade rules. International practice (in the EC and under the WTO) on the environmental aspects of subsidies is considered in chapter 19 below.

Enforcement incentives

Enforcement incentives, such as non-compliance fees and performance bonds, are closely linked to fiscal regulation. Non-compliance fees penalise polluters who exceed prescribed environmental standards, and performance bonds are payments to authorities which are returned when the polluter performs in accordance with its licence. Enforcement incentives have not been the subject of international legal measures, although recent developments suggest that they may be emerging. In November 1992, the parties to the Montreal Protocol adopted an indicative list of measures that might be taken by a meeting of the parties in respect of non-compliance with the Protocol which included, *inter alia*, suspending specific rights and privileges under the Protocol such as those relating to the receipt of funds under the financial mechanism.[222] The approach has been followed in other multilateral environmental agreements.[223]

Liability and compensation for damage

One of the objectives of the rules of international law establishing civil and state liability for environmental and related damage is the establishment of economic incentives for complying with international environmental obligations. As will be seen in chapter 18, however, the limited state of development of the rules of state liability, and the low financial limits on liability established by most of the international civil liability conventions do not properly fulfil the incentive functions.

Trade measures

Regulations and prohibitions on international trade were among the first economic instruments to be used at the international level in aid of environmental protection objectives, and they are considered in detail in chapter 19 below. They are designed to influence behaviour (i.e. not killing endangered species or not producing or consuming certain harmful substances) by limiting the availability of markets for certain products or by making the availability of markets dependent upon participation in an international regulatory arrangement. Despite their evident attractiveness to government environmental departments

[222] Fourth Report of the Parties to the Montreal Protocol. UNEP/OzL.Pro.4/15, 25 November 1992, 48 (Annex V); see chapter 5, pp. 203–5 below.

[223] Chapter 5, p. 205 below.

as an efficient and effective means to achieve environmental objectives, trade measures remain controversial, and are subject to a trade regime under the WTO which raises questions as to the circumstances in which they may be relied upon.

Investment incentives

More recently, increased attention is being given to identifying incentives for directing investment in clean technologies towards developing countries and countries with economies in transition. The most elaborate arrangement is the Clean Development Mechanism established under the Kyoto Protocol, which will provide credits to states whose companies invest in certain greenhouse gas reduction activities abroad.[224] Other arrangements aim to provide financial resources to developing countries to invest in certain clean technologies pursuant to the ozone and other international agreements.[225]

Environmental agreements

Alongside legislative and economic instruments, there has also been a growing use of 'environmental agreements', i.e. voluntary agreements between industrial undertakings which supplement regulatory requirements. A leading example is the agreement between associations of European, Japanese and Korean car manufacturers on the reduction of carbon dioxide emissions from passenger cars, which has been acknowledged by EC Commission recommendations.[226] In 1996, the EC Commission published a Communication on Environmental Agreements, which identified potential benefits as including a pro-active approach by industry, cost-effectiveness and tailor-made solutions, and the faster achievement of environmental objectives.[227] In 1999, the OECD published a survey of environmental agreements, identifying more than 300 in the EU alone.[228] In 2002, the EC Commission published a further Communication, identifying substantive and procedural criteria for the use of environmental agreements at the EU level, in the context of self-regulation (where economic and other actors establish on a voluntary basis in order to regulate and organise their activities) and co-regulation (where the legislator establishes the essential elements of the regulation and the economic and other actors then agree on the means for giving effect to it).[229]

[224] Chapter 8, p. 373 below. [225] Chapter 20, p. 1021 below.
[226] Recommendations 1999/125/EC, 2000/303/EC and 2000/304/EC.
[227] COM (96) 561 final, 2 July 1996.
[228] OECD, *Voluntary Approaches for Environment Policy – An Assessment* (1999).
[229] Environmental Agreements at the Community Level, COM (2002) 412 final, 17 July 2002. The substantive criteria include: cost-effectiveness, representativeness, quantified and staged objectives, involvement of civil society, monitoring and reporting, sustainability, and incentive compatibility.

Consumer information incentives

Consumer information incentives, which set out the environmental performance of companies, such as eco-labelling and eco-auditing, are designed to capitalise on the perception that many consumers take environmental considerations into account when buying products and services. In 1991, the EC adopted the first international eco-labelling scheme,[230] and the compatibility of national eco-labelling schemes with WTO rules and other international trade agreements is under consideration at the WTO and has been the subject of an early GATT case.[231]

Integrated pollution control

The continuous increase in pollution levels and environmental degradation provides evidence of the fundamental failure of traditional law-making to change human behaviour and patterns of production and consumption. The traditional approach to environmental regulation has been to address particular activities, substances or environmental media (air, water, soil and biota), and to focus pollution control and prevention efforts on each environmental medium. In reality, different substances and activities can move among, and have effects upon, a range of environmental media as they travel along a 'pathway' from a particular source to a particular receptor, and in that process may accumulate in the environment. The regulation and establishment of controls over releases of a substance to one environmental medium can lead to that substance being shifted to another environmental medium. This is recognised by a number of international environmental agreements which include provisions requiring parties not to transfer pollution or environmental damage elsewhere in the implementation of their treaty obligations.[232]

In the early 1990s, some states recognised that efforts to address each environmental medium separately may not be an efficient or effective way to protect the environment. Beginning at the national level, some began to rely upon 'integrated pollution prevention (or control)', which was defined in 1991 by the OECD Council as:

> taking into account the effects of activities and substances on the environment as a whole and the whole commercial and environmental life-cycles of substances when assessing the risks they pose and when developing and implementing controls to limit their release.[233]

[230] Chapter 17, pp. 860–2 below.
[231] Chapter 19, pp. 953–61 below; chapter 17, pp. 860–2 below.
[232] 1974 Baltic Convention, Art. 3(2); 1982 UNCLOS, Art. 195.
[233] OECD Council Recommendation on Integrated Pollution Prevention and Control, C(90)164/FINAL (1991), para. I(a).

This broader holistic approach to environmental regulation and protection is now reflected in a number of international instruments, including the attempts by the EC to take a 'cradle-to-grave' approach to eco-labelling and to address 'waste streams' in its developing waste prevention policy.[234] In 1992, the Oslo and Paris Commissions endorsed this approach by addressing particular industrial sectors and activities.[235] In 1996, the EU adopted the first international rules on integrated pollution control.[236]

The EU rules are premised on the approach recommended in the 1991 OECD Council Recommendation, which called on OECD member countries to support integrated pollution prevention and control by addressing impediments to an integrated approach, removing those impediments, and adopting appropriate new laws and regulations, taking account of the Guidance on Integrated Pollution Prevention and Control set out in the Appendix to the Recommendation.[237] The Guidance set out, for the first time in an international instrument, a detailed approach to implementing integrated pollution prevention and control and preventing or minimising the risk of harm to the environment taken as a whole; it recognises the integrated nature of the environment by taking account of the substances or activities on all the environmental media (air, water, soil), the living organisms (including people) that these media support, and the stock of cultural and aesthetic assets.[238] The Guidance identified five important elements of an integrated approach: the 'cradle-to-grave' concept; the anticipation of effects in all environmental media of substances and activities; the minimisation of waste quantity and harmfulness; the use of a common means to estimate and compare environmental problems (such as risk assessment); and the complementary use of effects-oriented measures (environmental quality objectives) and source-oriented measures (emission limits).[239]

The OECD Recommendation also recognised that certain policies were 'essential to an effective integrated approach', including sustainable development, the use of no- or low-waste technology and recycling strategies, cleaner technologies and safer substances, precautionary action, public information, the integration of environmental considerations into private and public decision-making, and consistent and effective compliance and enforcement policies.[240] Under the Recommendation, an integrated approach would shift the focus of decision-making, to a combination of the substances, the sources (including processes, products and economic sectors) and the geographical regions; it would provide for the use of a range of legislative forms such as mineral

[234] Chapter 15, pp. 789–91 below. The EC Commission has also proposed a draft Directive on Integrated Pollution Prevention and Control: COM (93) 423, 14 September 1993.
[235] 1992 Action Plan of the Oslo and Paris Commissions, Appendix A, in LDC 15/INF.11, Annex 3, 2 October 1992.
[236] Chapter 15, pp. 754–5 below. [237] Note 233 above, para. I(b) and (c).
[238] Guidance, para. 1. [239] *Ibid.* [240] *Ibid.*, para. 2.

rights, development aid and taxes.[241] The Recommendation recognised that an integrated approach would require changes in institutional arrangements, management instruments and technical methods. New institutional arrangements would require the establishment of co-ordinating mechanisms within and among government bodies and international co-operative arrangements within and among different levels of government within countries.[242] Proposals relating to management instruments included the following: issuing single permits which cover all releases and processes; linking environmental instruments with land-use planning and natural resource management; undertaking environmental impact assessments for policy proposals and projects; establishing integrated inspection and enforcement authorities; using economic instruments; encouraging and/or subsidising cleaner technologies; and covering whole life cycle-issues in the development of industry management plans.[243] An integrated approach to technical methods would encompass such things as life cycle analysis (from design through manufacture to disposal), analysis of multiple pathways of exposure, the use of inventories of releases and inputs, and more effective monitoring of the condition of environmental media, the biota they support, and the condition of cultural and aesthetic assets.[244] The necessity for such changes remains equally apparent with regard to international institutions, in respect of both their internal practices and their external relations.

Conclusions

From the discussion in this chapter of the different sources of international legal obligation, it will be evident that the principles and rules of international environmental law are set forth or are reflected in thousands of acts adopted at the national, bilateral, sub-regional, regional and global levels. There is no international legal text which sets out the principles and rules which are of general application, and it is unlikely that one will be adopted in the foreseeable future, despite the efforts of the IUCN Commission on Environmental Law in the 1990s. The lack of a central legislative authority, or of a coherent set of international legislative arrangements, has resulted in a law-making process and a body of rules which are *ad hoc*, piecemeal and fragmented. The limitations of existing arrangements are well known. Although existing international arrangements have apparently not limited the international community's environmental law-making over the past decade, there remains a real need to establish a coherent framework for the co-ordination of existing rules and the development of new rules. The UNCED process could have contributed to such a framework, by addressing three priority needs: to establish improved mechanisms for identifying critical issues and priorities for law-making; to ensure that

[241] *Ibid.*, paras. 3 and 4. [242] *Ibid.*, para. 5. [243] *Ibid.*, para. 6. [244] *Ibid.*, para. 7.

all relevant actors are able to participate fully and effectively in the international law-making process (in particular developing countries), including the negotiation, implementation, review and governance of international environmental agreements or instruments; and to rationalise the international law-making process by improving co-ordination between international organisations and their secretariats, in particular those established by environmental agreements. In the ten years since UNCED, however, it has become apparent that there is an absence of the political will which would be required to overhaul existing international structures.

It will also be clear from this chapter that the limitations and inadequacies of existing techniques for applying standards established by international principles and rules (principally by so-called 'command-and-control' methods) are, and should continue to be, the subject of critical international scrutiny. Developments since UNCED confirm that environmental protection will not be achieved merely by the adoption of a vast body of regulatory obligations. These regulations need fine-tuning, and they may need to be supplemented by introducing and applying a broad range of equitable and effective economic instruments which can provide incentives to improve compliance without exacerbating social injustice and which take account of the need to ensure that the poorer members of the international community are not disproportionately affected. So far, however, there has been little practical experience at the international level with the use of economic instruments, with the exception of trade instruments and the emerging efforts of the EC, and more work of a theoretical nature needs to be done to explore the implications and practical consequences of the various proposed arrangements. The limited experience of efforts to devise a system of 'joint implementation' under the 1992 Climate Change Convention suggests that legal and institutional issues of considerable complexity arise when economic theories are to be translated into practical, acceptable and effective international legal obligations and arrangements. That experience suggests that, although it may yet be premature to embark on a broad effort at adopting and applying economic instruments, international law may be about to embark on new efforts which selectively support such arrangements. In this regard, developments under the 1997 Kyoto Protocol will be of singular importance, even if – for the time being at least – traditional regulatory approaches will continue to be the primary approach. Efforts to devise new economic approaches will no doubt continue, supplemented by the obviously necessary move away from single-sector environmental regulation towards a more integrated approach to pollution prevention and control which seeks to address all environmental media on a comprehensive basis, and all products on a cradle-to-grave basis. Each of these new initiatives poses challenges to the international legal order.