

Principles of international environmental law

*Svitlana Kravchenko, Tareq M.R. Chowdhury
and Md Jahid Hossain Bhuiyan*

This chapter will explore and evaluate the general principles and sources of international environmental law and discuss their status and role in the global context. International environmental law is a highly fragmented area and determining the meaning and status of general principles is thus a complex task. Many revolve around the core issue of sustainable development, which is a difficult and contested concept itself. Principles that will be discussed include the notion of sustainable development, the precautionary principle, common but differentiated responsibility, inter- and intra-generational equity and the polluter pays principle.

Introduction

Principles of international environmental law are ‘reflected in treaties, binding acts of international organizations, state practice, and soft law commitments . . . they are potentially applicable to all members of the international community’.¹ Some of them are universally accepted and frequently endorsed in state practice.

Article 38 of the Statute of International Court of Justice recognises ‘general principles of law recognized by civilized nations’ as a source of law. General principles fill the gaps in international law which have not already been covered by treaty or custom. Therefore, courts rely on general principles in the absence of treaty or customary law.

After World War II, the geographical, industrial and scientific scenario of the world dramatically changed. The emergence of modern industrial society and consequent urbanisation has had a tremendously negative effect on the global environment.² The international community became concerned and to contain the damage, and also improve the environment, it recognised certain legal principles: for example, sustainable development, intergenerational equity, intra-generational equity, prevention of harm, common but differentiated responsibility, precaution, polluter pays, the right to a healthy environment and access to

¹ P. Sands, *Principles of International Environmental Law*, 2nd edition, Cambridge: Cambridge University Press, 2003, p. 231.

² A.S. Rao, ‘Enforcement of Environmental Laws’, *AIR Journal* 88, 2001, 222–4, p. 222.

information and public participation in environmental decision-making (good governance). These principles, though recognised by the international community, and in the absence of judicial decisions, opened a floodgate of conflicting interpretations making it difficult to determine their actual legal status. Each of these principles has to be interpreted in turn and their legal status should be considered taking into account the textual content, the transparency of the language and the circumstances of their creation. In the overall context of environmental governance many of these general principles are of less importance, but some play a significant role in protecting the environment and many states have already declared their allegiance to them.³

The aim of this chapter is to examine some of these principles in detail, including sustainable development, the precautionary principle, the polluter pays principle, the common but differentiated responsibility principle and relatively new and evolving principles such as access to information and public participation in environmental decision-making.

Sustainable development

In the Brundtland Report, prepared by the World Commission on Environment and Development, the expression 'sustainable development' was formally introduced.⁴ It was defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'. It essentially drew attention to two things: (1) the basic needs of the world's poor, and (2) the technological and social limitations on the ability of the environment to meet present and future needs. 'Needs' were given overriding priority.⁵

The International Union for the Conservation of Nature (IUCN) maintains that by ensuring ecological sustainability, economic viability and social desirability, quality of life or standards of living can be maintained for many generations. According to the IUCN this is the main meaning of sustainable development.⁶ According to Jena, the conservation of nature and maintenance of ecological order, which preserves biodiversity and thereby makes life on Earth possible now and in the future, is the real meaning of sustainable development.⁷

Subsequently, 'sustainable development' was included in the 1992 Rio Declaration which recognised the entitlement of human beings to a healthy and productive life in harmony with

³ P. Sands, *Principles of International Environmental Law I: Frameworks, Standards and Implementation*, Manchester: Manchester University Press, 1995, p. 183.

⁴ However, according to many, the concept of sustainability was reflected in state practice much earlier. Philippe Sands, for example, mentions that in 1983 the United States asserted the right to ensure legitimate and proper use of seals to protect them for the benefit of mankind and save them from wanton destruction. Subsequently, many treaties and other Acts have supported, directly or indirectly, the sustainable use of natural resources and advanced the idea that states have a legal obligation and responsibility to conserve natural resources and support the concept of sustainable development. *Ibid.*, p. 199.

⁵ World Commission on Environment and Development, *Our Common Future*, Oxford: Oxford University Press, 1987, p. 43.

⁶ IUCN – World Conservation Union, *Guide to Preparing and Implementing National Sustainable Development Strategies and Other Multi-sectoral Environmental and Development Strategies*, prepared by the IUCN's Commission on Environment Strategies Working Group on Strategies for Sustainability, the IUCN Secretariat and the Environment Planning Group of the IIED, pre-publication review Draft 1993, p. 6.

⁷ K.C. Jena, 'Ecology and Environmental Protection Movements: A Brief Conspectus', *AIR Journal* 92, 2005, 288–94, p. 289.

nature, and thus put humankind at the centre of concerns for sustainable development.⁸ It also recognised the fact that in order to achieve sustainable development environmental protection should constitute an integral part of the development process and must not be considered in isolation from it.⁹ Furthermore, treaties such as the 1992 UN Framework Convention on Climate Change (UNFCCC) recognise that all countries – especially developing countries – need access to resources required to achieve sustainable, social and economic development and thus acknowledged sustainable development as an instrument of interaction between states.¹⁰

Sustainable development has not been defined in such a precise way that its legal status can clearly be determined. Its paradigm-changing nature raises many questions and at present the lack of adequate articulation inhibits confident generalisations from being made. Indeed, whether it is a ‘principle’ or a ‘concept’ remains an issue. The argument that sustainable development has achieved the status of customary international law or a general principle has some support from the International Court of Justice (ICJ) and particularly the separate opinion of Judge Weeramantry.¹¹ Judge Weeramantry asserted that sustainable development was ‘more than a mere concept’ and was a ‘principle with normative value’.¹² He went on to state that ‘the right to development and the right to environmental protection . . . are important principles of current international law’¹³ and ‘the principle of sustainable development . . . is an integral part of modern international law’.¹⁴ This was, however, a minority decision.

Birnie and Boyle question the obligations of states with respect to conservation and sustainable development of natural resources and protection of the natural environment and conclude that it is still an open question.¹⁵ They do, however, agree with the proposition that the *Icelandic Fisheries* case and various treaties do support the existence of customary obligations to cooperate in the conservation and sustainable development of common property resources of the high seas. Handl in 1991 expressed the view that the notion of sustainable development has not yet become a norm of international law, but that it might in time even become a peremptory norm of international law.¹⁶

The understanding of sustainable development that has emerged from various international instruments does not really solve the problem of ascertaining its essential elements that apply in any particular context. However, they do underlie the fact that sustainable development is emerging as a principle of international law.¹⁷

Though a universally accepted definition of sustainable development is absent, global and regional treaties relating to international watercourses, wildlife conservation, habitat protection, endangered species and cultural and natural heritage also suggest that a wider legal

⁸ *Rio Declaration on Environment and Development* (1992), 31 ILM 874 (‘Rio Declaration’), Principle 1; S.P. Johnson, *The Earth Summit: The United Nations Conference on Environment and Development* (UNCED) Dordrecht: Martinus Nijhoff, 1992, p. 118.

⁹ Rio Declaration, Principle 4.

¹⁰ Ibid., Preamble.

¹¹ *Gabčíkovo-Nagymaros Project (Hungary v Slovakia)* (separate opinion of Judge Weeramantry) [1997] ICJ Reports 7.

¹² Ibid., para. 88.

¹³ Ibid., para. 89. See also his summary of the right to development and the right to environmental protection, paras 91–2.

¹⁴ Ibid.

¹⁵ P.W. Birnie and A.E. Boyle, *International Law and the Environment*, reprint 1994, Oxford: Clarendon Press, 1992, pp. 122–4.

¹⁶ Referred to by Birnie and Boyle, *ibid.*, p. 5.

¹⁷ Ibid., pp. 122–4.

significance has been achieved regarding conservation and sustainable development.¹⁸ It is clear that a meaning of sustainable development, requiring activities to be carried out without causing harm to the environment, is broadly respected by the world community.¹⁹

Precautionary principle

The precautionary principle provides guidance on the development and application of international environmental law in the absence of scientific certainty.²⁰ Where there is no firm scientific evidence on the measures to be taken in a development activity that may have an environmental effect, the principle advocates protective anticipatory action.²¹ The precautionary principle provides that lack of scientific certainty should not be used as a reason to postpone measures to be taken for the protection of human life, health and environment.²² The precautionary principle was first advocated in the 1970s under the name of *Vorsorgeprinzip* during discussions relating to West German environmental law.²³ While it is difficult to find the existence of such a concept in early legal writings in the United States (US),²⁴ there are some laws which have a precautionary nature, and the principle underlies much of the early environmental legislation in this country: for example, the *National Environmental Policy Act*, the *Clean Water Act* and the *Pollution Prevention Act*.

In the international context the precautionary principle compels a state to act in the face of scientific uncertainty to take measures to protect the natural environment.²⁵ Where a *prima facie* case is established that a measure or development programme may cause environmental damage, and there is a lack of full scientific certainty about the nature and dimension of the environmental damage that may happen if the activity is realised, this should not prevent action.²⁶ Thus the principle obligates authorities to take precautionary measures where there is a lack of scientific certainty about the consequence of its action and induces authorities

¹⁸ Ibid.

¹⁹ For a further discussion of sustainable development, see Chapter 37 by K. Bosselmann in this volume.

²⁰ Sands, op. cit., p. 208.

²¹ See J.A. Herrera Izaguirre, 'International Law and GMOS: Can the Precautionary Principle Protect Biological Diversity', *Boletín Mexicano de Derecho Comparado* 11, 2007, 97–136, p. 99. Online. Available HTTP: <http://www.estig.ipbeja.pt/~ac_direito/HerreraIz.pdf> (accessed 26 April 2012).

²² J. Ellis and A. FitzGerald, 'The Precautionary Principle in International Law: Lessons from Fuller's Internal Morality', *McGill Law Journal* 49, 2004, 780–800, p. 782. Online. Available HTTP: <http://lawjournal.mcgill.ca/documents/Ellis_and_FitzGerald.pdf> (accessed 23 November 2011).

²³ P. Sandin, *The Precautionary Principle: From Theory to Practice*, Stockholm, 2002, p. 3. Online. Available HTTP: <<http://kth.diva-portal.org/smash/get/diva2:7408/FULLTEXT01>> (accessed 23 November 2011).

²⁴ C.R. Sunstein, 'Beyond the Precautionary Principle', *University of Pennsylvania Law Review* 1(151), 2003, 1003–51, p. 1005. Online. Available HTTP: <http://sciencepolicy.colorado.edu/students/envs_5000/sunstein_2003.pdf> (accessed 23 November 2011).

²⁵ D. Anton, J. Kohout and N. Pain, 'Nationalizing Environmental Protection in Australia: The International Dimensions', *Environmental Law* 23, 1993, 763–83. Online. Available HTTP: <<http://www.ciesin.org/docs/010-567/010-567.html>> (accessed 23 November 2011).

²⁶ D. Freestone and E. Hey, 'Origins and Development of the Precautionary Principle', in D. Freestone and E. Hey (eds) *The Precautionary Principle and International Law: The Challenge of Implementation*, The Hague: Kluwer Law International, 1996, p. 13.

undertaking development activities based on exploitation of nature to take precautionary measures to minimise the possible degradation of nature.²⁷ It also encourages such bodies to consider less intrusive alternative approaches.²⁸

Usually the burden of proof lies with the individual, who refuses or opposes the carrying out of an activity, to prove that such activity is likely to cause environmental harm. However, in the case of the precautionary principle the burden of proof lies with the individual who wants to carry out an activity that may affect the environment to prove that such activity will not have any negative impact on the environment. This shifting of the burden of proof is explained by Birnie and Boyle in the following words:

A stronger version of the precautionary principle goes further by reversing the burden of proof altogether. In this form, it becomes impermissible to carry out an activity unless it can be shown that it will not cause unacceptable harm to the environment. Examples of its use in this sense include the resolution suspending disposal of low-level radioactive waste at sea without the approval of the London Dumping Convention Consultative Parties, the suspension of industrial dumping in the Oslo Commission area without prior justification . . . and the moratorium on whaling. The main effect of the principle in these situations is to require states to submit proposed activities affecting the global commons to international scrutiny.²⁹

It was in the Second International Conference on the Protection of the North Sea, in 1987, that the first explicit formulation of the precautionary concept was discussed at the international level. It was stated that a precautionary approach was necessary to protect the North Sea from possibly damaging effects of the most dangerous substances and it may require that action be taken even before a causal link has been established by absolutely clear scientific evidence.³⁰ During the Third Conference on the Protection of the North Sea, ministers agreed to abide by the rules of this principle under the 1990 Bergen Ministerial Declaration on Sustainable Development.³¹ The Declaration stated that the precautionary principle must serve as the foundation on which policies should be created in order to achieve sustainable development. Environmental degradation must be prevented with measures that predict and diminish threats to the environment. In cases where damage to the environment is inevitable, lack of scientific evidence should not be used to delay execution of measures to prevent environmental degradation.³² The amendment of the Montreal Protocol on Substances that Deplete the Ozone Layer in London in 1990 added a precautionary measure as a further safeguard to protect the

²⁷ D.M. Dharmadhikari, 'Environment – Problems and Solutions', *AIR Journal* 90, 2003, 161–70, p. 163.

²⁸ J.M. Van Dyke, *The Evolution and International Acceptance of the Precautionary Principle*, p. 359. Online. Available HTTP: <<http://mmc.gov/sound/internationalwrkshp/pdf/vandyke.pdf>> (accessed 23 November 2011).

²⁹ Birnie and Boyle, op. cit., p. 98.

³⁰ Para. VII, London, 24–25 November 1987. Online. Available HTTP: <www.vliz.be/imisdocs/publications/140155.pdf> (accessed 23 November 2011).

³¹ *Bergen Ministerial Declaration on Sustainable Development* (1990), The Hague, UN Doc A/CONF.151/PC/10. Online. Available HTTP: <<http://www.seas-at-risk.org/1mages/1990%20Hague%20Declaration.pdf>> (accessed 23 November 2011).

³² Ibid., para. 7.

ozone layer.³³ At the 1991 Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, it was set forth that parties should put some effort into implementing the precautionary approach to pollution, which would in turn prevent the release of substances which may be toxic to humans or the environment, without waiting for scientific proof to affirm the presence of such harm. The parties would have to work together to implement the precautionary principle and would have to adopt hygienic production methods to inhibit pollution.³⁴ The Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes incorporates the precautionary principle by providing that action to prevent, control or minimise water-related disease shall not be delayed on the basis that the scientific research has not fully proved a causal link between the factor at which such action is aimed, on the one hand, and the potential contribution of that factor to the prevalence of water-related disease and/or transboundary impacts, on the other hand.³⁵ In the 1992 OSPAR (Convention for the Protection of the Marine Environment of the North-East Atlantic) it was agreed upon that the precautionary principle has to be executed by contracting parties.³⁶ A further example of the principle is seen in the Protocol to the regional 1979 Convention on Long-Range Transboundary Air Pollution on Further Reduction of Sulphur Emissions, which called on states to take precautionary measures to predict, prevent and reduce hazardous air emissions and diminish their potentially detrimental effects. Similar to later protocols, it provides that where there are threats of serious or irreversible damage, lack of scientific certainty should not be used to defer precautionary measures, taking into consideration that such measures would be worthwhile to invest financially.³⁷

The use of the precautionary principle by parties as a medium to predict, prevent or reduce the causes of climate change and alleviate its harmful effects was included in the 1992 United Nations Framework Convention on Climate Change (UNFCCC). The Convention calls for parties to 'take precautionary measures' but 'taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest

³³ *Montreal Protocol on Substances that Deplete the Ozone Layer*, opened for signature 16 September 1987, 1522 UNTS 3 (entered into force 1 January 1989) ('Montreal Protocol') Preamble. Online. Available HTTP: <<http://ozone.unep.org/pdfs/Montreal-Protocol2000.pdf>> (accessed 23 November 2011).

³⁴ *Bamako Convention on the Ban of the Import to Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa*, opened for signature 30 January 1991, 30 ILM 773 (entry into force 22 April 1998), Art. 4(3)(f). Online. Available HTTP: <http://www.africa-union.org/Official_documents/Treaties_%20Conventions_%20Protocols/hazardouswastes.pdf> (accessed 23 November 2011).

³⁵ *Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes*, opened for signature 17 June 1999 (entered into force 4 August 2005) Article 5(a). Online. Available HTTP: <<http://www.unece.org/fileadmin/DAM/env/documents/2000/wat/mp.wat.2000.1.e.pdf>> (accessed 23 November 2011).

³⁶ *Convention for the Protection of the Marine Environment of the North-East Atlantic*, opened for signature 22 September 1992, 32 ILM 1069 (entered into force 25 March 1998) ('OSPAR Convention') Article 2(2)(a). Online. Available HTTP: <http://www.ospar.org/html_documents/ospar/html/OSPAR_Convention_e_updated_text_2007.pdf> (accessed 2 October 2007).

³⁷ *Protocol to the Regional 1979 Convention on Long-Range Transboundary Air Pollution on Further Reduction of Sulphur Emissions*, opened for signature 14 June 1994, UN Doc EB.AIR/R.84 (entered into force 5 August 1998) Preamble. Online. Available HTTP: <<http://www.unece.org/fileadmin/DAM/env/lrtap/full%20text/1994.Sulphur.e.pdf>> (accessed 23 November 2011).

possible cost'.³⁸ Although the 1992 Convention on Biological Diversity (CBD) does not put much emphasis on the precautionary principle it does state that in cases where there is a major risk of reduction or loss of biological diversity in significant magnitude, inadequate scientific knowledge should not be used as an excuse for delaying necessary measures to avoid or diminish such a threat.³⁹ Furthermore, the precautionary approach contained in Principle 15 of the 1992 Rio Declaration was reiterated in the 2000 Cartagena Protocol on Biosafety.⁴⁰ An outline of a plan for the application of the precautionary principle was presented as part of the 2000 Communication from the Commission on the Precautionary Principle.⁴¹ The precautionary principle also received recognition in the 2001 Stockholm Convention on Implementing International Action on Certain Persistent Organic Pollutants.⁴²

In terms of soft law the 1992 Rio Declaration stated that the states shall widely apply the precautionary principle in accordance with their capabilities for shielding the environment against harm. For situations in which the threats of damage to the environment cannot be avoided, inadequacy of scientific results shall not be used for postponing cost-effective procedures to prevent deterioration of the environment.⁴³

According to Agenda 21 an approach that would anticipate and take action against environmental threats is crucial; in other words a precautionary approach rather than a reactive one.⁴⁴

Academics do not agree as to the legal status of the precautionary principle. Cameron and Abouchar argue that there is sufficient evidence of state practice to make a good argument that the principle has become a norm of international law.⁴⁵ According to Birnie and Boyle, in spite of its importance and the novel and far-reaching effects of some applications, the late reception of the precautionary principle in international instruments suggests that it is not yet a principle of international law. Difficult questions, concerning the point at which it becomes applicable, remain unanswered and seriously undermine its normative character and realistic utility, although support for it does show greater prudence on the part of those states that intend to accept it.⁴⁶ Sands remarks that the legal status of the principle is still evolving.⁴⁷

³⁸ *United Nations Framework Convention on Climate Change*, opened for signature 4 June 1992, 1771 UNTS 107 (entered into force 21 March 1994) (UNFCCC) Article 3(3).

³⁹ *Convention on Biological Diversity*, opened for signature 5 June 1992, 31 ILM 818 (entered into force 29 December 1993) ('CBD') Preamble.

⁴⁰ *Cartagena Protocol on Biosafety*, opened for signature 29 January 2000, 39 ILM 1027 (entered into force 11 September 2003) Preamble. Online. Available HTTP: <<http://bch.cbd.int/protocol/text/>> (accessed 23 November 2011).

⁴¹ *Communication from the Commission on the Precautionary Principle*, Commission of the European Communities, Brussels, 2000. Online. Available HTTP: <http://ec.europa.eu/dgs/health_consumer/library/pub/pub07_en.pdf> (accessed 23 November 2011).

⁴² *Stockholm Convention on Implementing International Action on Certain Persistent Organic Pollutants*, opened for signature 22 May 2001, 40 ILM 532 (entered into force 17 May 2004) Preamble, Arts. 1, 8(9). Online. Available HTTP: <http://www.pops.int/documents/convtext/convtext_en.pdf> (accessed 23 November 2011).

⁴³ Rio Declaration, Principle 15; Johnson, op. cit., p. 120.

⁴⁴ *Agenda 21: A Programme for Action for Sustainable Development*, Report of the UN Conference on Environment and Development, Annex II, 12 August 1992, UN Doc A./Conf. 151/26 (Vol II-IV) Chapter 17, para. 17.21; Ibid., p. 311.

⁴⁵ J. Cameron and J. Abouchar, 'The Status of the Precautionary Principle in International Law', in Freestone and Hey, op. cit., p. 30.

⁴⁶ Birnie and Boyle, op. cit., p. 98.

⁴⁷ Sands, op. cit., pp. 212–13.

Udemgba, noticing the progress that has been made at the international level relating to the application of the principle, agrees with Sands and remarks that the precautionary principle seems to be emerging as a customary norm. He considers that the uncertainties in the meaning, application and implications of the principle make it difficult to reach a conclusion that the precautionary principle is a rule of customary law.⁴⁸

There is little doubt that the precautionary principle is now widely recognised and is taken into consideration by states and international organisations whenever they initiate large-scale environmental change. Moreover, it is incorporated into different international instruments and many states have adopted the principle at the national level. Despite the difference among academics about the legal status of the precautionary principle, the broad support and evidence of state practice in instruments such as the Rio Declaration, the UNFCCC and the CBD justify a strong argument that it reflects a principle of customary international law.⁴⁹

Polluter pays principle

The polluter pays principle is essentially based on a commonsense approach for the mitigation of environmental degradation. It simply means that s/he who damages the environment should bear the cost of rectifying that damage. In a broader sense producers of goods and other items should be responsible for any pollution which the process of production causes and therefore must also pay for prevention or rectification of the damage caused to the environment by such pollution.⁵⁰ Underlying the meaning of the polluter pays principle is the belief that when public authorities take measures to prevent potential and actual environmental damage, the expenses incurred should be borne by the person responsible for the pollution.⁵¹ In the event of environmental pollution the principle can be applied to require the producer and/or resource user to meet the costs of implementing an environmental standard. Where it is required, the resource user should also meet the necessary expenses for implementation of technical regulations. It is also suggested that introduction of liability regimes be introduced to make resource users liable for causing environmental harm and thus pay for the pollution caused by their authorities.⁵² It appears in Principle 16 of the Rio Declaration where it is noted that 'the polluter should, in principle, bear the cost of pollution'.

The polluter pays principle was first referred to at the international level explicitly in 1972 in a Council Recommendation on Guiding Principles Concerning the International Economic Aspects of Environmental Policies of the Organisation for Economic Co-operation and Development (OECD). In the Recommendation of the Council it was stated that:

the polluter should bear the expenses of carrying out the . . . measures decided by public authorities to ensure that the environment is in an acceptable state. In other words, the

48 S. Udemgba, 'The Precautionary and Differentiated Responsibility Principles in the Climate Change Context', Master of Law Thesis, 2005, University of Saskatchewan, Canada, pp. 23–4. Online. Available HTTP: <<http://library.usask.ca/theses/available/etd-09132005-171902/unrestricted/LLMTHESIS.pdf>> (accessed 27 April 2012).

49 Sands, op.cit, pp. 212–13.

50 S. Ball and S. Bell, *Environmental Law*, 2nd edition, Delhi: Universal Law Publishing, 1994, p. 97.

51 H. Smets, 'The Polluter Pays Principle in the Early 1990s', in L. Campiglio, L. Pineschi, D. Siniscalco and T. Treves (eds.) *The Environment After Rio: International Law and Economics*, London: Martinus Nijhoff, 1994, pp. 136–7.

52 C. Coffey and J. Newcombe, *The Polluter Pays Principle and Fisheries: The Role of Taxes and Charges*, London: Institute for European Environmental Policy, p. 1. Online. Available HTTP: <<http://www.ieep.eu/assets/238/thepolluterpaysprincipleandfisheries.pdf>> (accessed 27 April 2012).

cost of these measures should be reflected in the cost of goods and services which cause pollution in production and/or consumption. Such measures should not be accompanied by subsidies that would create significant distortions in international trade and investment.⁵³

The 1972 OECD Council Recommendation added the polluter pays principle to allocate costs of pollution prevention and control measures to promote frugal use of environmental resources and to prevent likely falsehood in figures on international trade and investment.⁵⁴ The polluter pays principle was reaffirmed as a fundamental principle for Member States during the 1974 OECD Council Recommendation on the Implementation of the Polluter-Pays Principle.⁵⁵ The 1989 OECD Council Recommendation concerning the Application of the Polluter-Pays Principle to Accidental Pollution provides that the principle implies that the operator of a hazardous installation is under an obligation to bear the cost of reasonable measures to prevent and control accidental pollution from that installation in conformity with domestic law before the occurrence of an accident in order to protect human health or the environment.⁵⁶ One particular application of the polluter pays principle in the Recommendation consists of adjusting fees or taxes, in concurrence with domestic law, to pay more fully for the cost of certain exceptional measures to prevent and control unexpected pollution in specific hazardous installations. Such measures are taken by public authorities to protect human health and the environment, and must be rational and directly related to accident prevention or the control of accidental pollution released by the hazardous installation.⁵⁷ Another application of the principle in the Recommendation consists of charging the cost of basic pollution control measures to the operator of the hazardous installation following an accident. Such a measure would allow the operator or the authorities to take prompt action, to completely avoid or at least minimise dissemination of environmental damage and to put a lid on the release of toxic substances, thus preventing any adverse effects on the environment.⁵⁸ However, the application of the principle does not extend to the point that would require the person at the origin of the accident or the operator to pay other costs connected with the public authorities' response to an accident or with the occurrence of the accident. But public authorities may demand compensation from the person responsible for the accident.⁵⁹

⁵³ OECD, *Council Recommendation on Guiding Principles Concerning the International Economic Aspects of Environmental Policies of the Organisation for Economic Co-operation and Development* (1972), C(72) 128, para A.4. Online. Available HTTP: <<http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=4&Lang=en&Book=False>> (accessed 27 April 2012).

⁵⁴ Ibid.

⁵⁵ OECD, *Council Recommendation on the Implementation of the Polluter-Pays Principle* (1974), C(74) 223, para I(1). Online. Available HTTP: <<http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=11&InstrumentPID=9&Lang=en&Book=False>> (accessed 17 February 2012).

⁵⁶ OECD, *Council Recommendation concerning the Application of the Polluter-Pays Principle to Accidental Pollution* (1989), C(89)88/Final, para. 4. Online. Available HTTP: <<http://acts.oecd.org/Instruments/ShowInstrumentView.aspx?InstrumentID=38&InstrumentPID=35&Lang=en&Book=False>> (accessed 17 February 2012).

⁵⁷ Ibid., para. 10.

⁵⁸ Ibid., para. 11.

⁵⁹ Ibid., para. 16.

The OECD initiative was the result of demands on governments and other institutions to introduce policies and mechanisms for the protection of the environment and the public from the threats posed by pollution in a modern industrialised society.⁶⁰ The principle was subsequently endorsed in 1973 when the European Community (EC) adopted a programme of action on the environment. Subsequently, an EC Council Recommendation (1975) provided that Member States should apply the polluter pays principle. It further provided that natural or legal persons must pay the price of such measures that are necessary to reduce or remove the pollution to meet the standards or equivalent measures laid down by public authorities.⁶¹ Although the EC Recommendation is not legally binding (unlike the OECD Recommendation), it encompasses many more issues with regards to the costs of environmental damage. The EC took another step in 1986 when it adopted the Single European Act regarding the environment, in which it stated that preventive action should be taken as a priority to rectify environmental damage at the source and the polluter shall be liable to bear the cost.⁶² This Act is legally enforceable. The polluter pays principle was also adopted in the ASEAN Agreement on Conservation on Nature and Natural Resources adopted in 1985. It provides that the originator of the activity that causes environmental degradation is to be held responsible for its prevention, reduction and control, and also for rehabilitation and remedial measures.⁶³

The polluter pays principle was recognised as a general principle of international environmental law in the 1990 International Convention on Oil Pollution, Preparedness, Response and Cooperation.⁶⁴ The Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes gives recognition to the polluter pays principle to place the costs of pollution prevention, control and reduction on the polluter.⁶⁵ A similar provision was adopted by the 1992 OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic.⁶⁶ The 1992 Convention on the Protection of the Marine Environment of the Baltic Sea Area also includes

⁶⁰ *Indian Council for Enviro-Legal Action v Union of India*, (1996) 3 SCC 212.

⁶¹ Council Recommendation 75/436/EURATOM, para. 2. Online. Available HTTP: <<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31975H0436:EN:HTML>> (accessed 17 February 2012).

⁶² *Single European Act regarding the environment*, Art. 25. Online. Available HTTP: <http://ec.europa.eu/economy_finance/emu_history/documents/treaties/singleeuropeanact.pdf> (accessed 17 February 2012).

⁶³ *ASEAN, Agreement on Conservation on Nature and Natural Resources* (1985), Art. 10(d). Online. Available HTTP: <<http://sedac.ciesin.org/entri/texts/asean.natural.resources.1985.html>> (accessed 17 February 2012).

⁶⁴ *International Convention on Oil Pollution, Preparedness, Response and Cooperation*, opened for signature 30 November 1990, 30 ILM 733 (entered into force 13 May 1995) ('OPRC Convention') Preamble. Online. Available HTTP: <<http://www.admiraltylawguide.com/conven/oilpolresponse1990.html>> (accessed 17 February 2012).

⁶⁵ *Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes*, op. cit., Art. 5(b). Online. Available HTTP: <<http://www.unece.org/env/documents/2000/wat/mp.wat.2000.1.e.pdf>> (accessed 17 February 2012).

⁶⁶ *OSPAR Convention for the Protection of the Marine Environment of the North East Atlantic*, opened for signature 22 September 1992, 32 ILM 1069 (entered into force 25 March 1998) ('OSPAR Convention') Art. 2(2)(b). Online. Available HTTP: <http://www.ospar.org/html_documents/ospar/html/OSPAR_Convention_e_updated_text_2007.pdf> (accessed 17 February 2012).

the polluter pays principle and directs the contracting parties to be guided by the principle.⁶⁷ It was recognised as a general principle of international environmental law by the 1992 Convention on the Transboundary Effects of Industrial Accidents.⁶⁸

The initiative to promote the polluter pays principle, taken by the OECD during the 1970s, has subsequently been widely endorsed in relation to the protection of the global environment. In essence, it could be said to be based on three elements: the need for preventive action; the need for environmental damage to be rectified at the source; and that the polluter should pay. However, the precise scope of the principle, and its implications for those involved in potentially polluting activities, has never been satisfactorily agreed. Furthermore, it is not yet unquestionably accepted as a principle of international law. For example, according to Sands, the polluter pays principle is yet to receive broad geographic and subject-matter support over the long term. He has serious doubts whether the principle has achieved the status of a generally applicable rule of customary international law.⁶⁹ On the other hand, there is strong support among academics, who have expressed the view that the polluter pays principle has obtained significant endorsement from a large number of states and international organisations. For example, Birnie and Boyle are of the view that as a policy the polluter pays principle represents an important strategy for controlling environmentally harmful activities by emphasising responsibility for their true economic costs and complementing the more obvious regulatory measures adopted under global and regional treaties.⁷⁰ Grossman has stated that the polluter pays principle has developed legal status and is now considered as a general principle of international environmental law.⁷¹

To conclude the above discussion, it can be safely stated that the international community has accepted the polluter pays principle as a strategic tool to protect the environment from pollution and degradation, and it has perhaps emerged as a customary rule of international law.

Common but differentiated responsibilities

The principle of common but differentiated responsibility has developed from the application of equity in international law and the recognition that the special needs of developing countries have to be taken into account.⁷² This principle is widely accepted in treaties and soft-law instruments. The Stockholm Declaration in Principle 23 emphasised the importance of assessing the 'applicability of standards which are valid for the most advanced countries but which may be

⁶⁷ *Convention on the Protection of the Marine Environment of the Baltic Sea Area*, opened for signature 9 April 1992, 13 ILM 546 (entered into force 17 January 2000) ('Helsinki Convention') Art. 3(4). Online. Available HTTP: <<http://www.helcom.fi/stc/files/Convention/Conv0704.pdf>> (accessed 17 February 2012).

⁶⁸ *Convention on the Transboundary Effects of Industrial Accidents*, opened for signature 18 March 1992, 32 ILM 1330 (entered into force 19 April 2000) Preamble. Online. Available HTTP: <<http://sedac.ciesin.org/entri/texts/industrial.accidents.1992.html>> (accessed 17 February 2012).

⁶⁹ Sands, *op.cit.*, p. 213.

⁷⁰ Birnie and Boyle, *op. cit.*, p. 111.

⁷¹ M. Rosso Grossman, 'Agriculture and Polluter Pays Principle', *Netherlands Comparative Law Association*, p. 2. Online. Available HTTP: <<http://www.ejcl.org/113/article113-15.pdf>> (accessed 17 March 2012).

⁷² Sands, *op. cit.*, p. 285.

inappropriate and of unwarranted social cost for the developing countries'.⁷³ Building on this statement, 20 years later, Principle 7 of the Rio Declaration formulated it as follows:

States shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit to sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.⁷⁴

The principle of common but differentiated responsibilities consists of two prongs. First, all states have a common responsibility for the protection of the environment. Second, this common responsibility needs to take into account different circumstances, resources and capabilities to carry it out and different contributions to the particular environmental problem. It requires all states to participate in the international response to the problem and take measures to address it. However, obligations imposed on different states have to be varied depending on the level of their economic development, circumstances and capabilities.

The most successful Multilateral Environmental Agreement (MEA) – the Montreal Protocol on Substances that Deplete the Ozone Layer – took into account the special situation and needs of developing countries, giving them a grace period of ten years allowing them to delay compliance with control measures.⁷⁵ However, after that period, commencing in 1999, developing countries started to participate in control schedules and phase-outs for the consumption of the controlled substances that deplete the ozone layer. Fulfilment of developing country obligations, to comply with the control measures, will depend upon the effective implementation of financial cooperation and the transfer of technology.⁷⁶

Support for the principle of common but differentiated responsibility can also be found in the preamble of the CBD, where it is acknowledged that 'special provision is required to meet the needs of developing countries, including the provision of new and additional financial resources and appropriate access to relevant technologies'.⁷⁷ The CBD includes in Article 20:

1. Each Contracting Party undertakes to provide, in accordance with its capabilities, financial support and incentives in respect of those national activities which are intended to achieve the objectives of this Convention, in accordance with its national plans, priorities and programmes.
2. The developed country Parties shall provide new and additional financial resources to enable developing country Parties to meet the agreed full incremental costs to them of implementing measures which fulfil the obligations of this Convention.

[. . .]

⁷³ *Stockholm Declaration on the Human Environment* (1972), 11 ILM 1416 ('Stockholm Declaration').

⁷⁴ Rio Declaration, op. cit.

⁷⁵ Montreal Protocol, op. cit., Art. 5.

⁷⁶ Ibid.

⁷⁷ CBD, op. cit.

4. The extent to which developing country Parties will effectively implement their commitments under this Convention will depend on the effective implementation by developed country Parties of their commitments under this Convention related to financial resources and transfer of technology and will take fully into account the fact that economic and social development and eradication of poverty are the first and overriding priorities of the developing country Parties.⁷⁸

Common but differentiated responsibilities is a key principle in the climate change regime. Article 3 of the UNFCCC defines this principle as follows:

The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.⁷⁹

Differences between obligations and commitments under the UNFCCC and the Kyoto Protocol for developed (Annex I) and developing (non-Annex I) countries are intended to fairly represent the historical contributions of developed countries to the climate change problem. The differences also take into account the right of developing countries to develop and to compensate climate change victims for harm caused to them and their territories as a result of climate change. Developing countries tend to be more vulnerable to climate change impacts, especially small island states. They have fewer resources and capabilities to combat the effects. Therefore, in the first commitment period of the Kyoto Protocol (2008 to 2012) developing countries do not have any mandatory commitments.

Reporting requirements are also different for developed and developing countries. Annex I parties are required to report greenhouse gas (GHG) emissions and transactions of emissions units under the Kyoto Protocol flexibility mechanisms in order to assess their compliance with emissions targets.⁸⁰ Non-Annex 1 Parties report nationally appropriate mitigation actions (NAMAs).⁸¹ Further developments include the Bali Action Plan, which anticipated that a new climate agreement would provide for the measurement, reporting and verification (MRV) of three different categories of action: developed country mitigation commitments or actions, developing country mitigation actions and the provision of support for developing country mitigation actions.⁸²

The principle of common but differentiated responsibilities can be controversial. It requires developed countries to provide financial assistance to developing countries, to transfer technology and build capacity to allow them to comply with international agreements. It also allows developing countries to have less rigorous compliance with MEAs. This issue was

⁷⁸ Ibid., Art. 20.

⁷⁹ UNFCCC.

⁸⁰ UNFCCC, National Reports. Online. Available HTTP: <http://unfccc.int/national_reports/items/1408.php> (accessed 19 June 2010).

⁸¹ Ibid.

⁸² UNFCCC, *Thirteenth Conference of the Parties* (2008), Bali, Indonesia, 3–15 Dec. 2007, *Report of the Conference of the Parties*, UN Doc FCCC/CP/2007/6/Add.1 ('Bali Action Plan') paras 1(b)(i)–(iii). Online. Available HTTP: <<http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf>> (accessed 5 July 2011).

difficult during the negotiation of the Kyoto Protocol. The lack of binding commitments for developing countries was a major reason for the US failure to ratify the Kyoto Protocol in 2001.⁸³ This controversy prevented consensus being reached between the 192 countries during negotiations at the Fifteenth Session of the UNFCCC Conference of the Parties (COP 15) in Copenhagen. Instead of a legally binding agreement, COP 15 resulted in only the Copenhagen Accord, which is a non-binding political document. Thus COP 15 only took note of the Accord and it appears unlikely that consensus will be achieved for a legally binding agreement in the near future. This is because developed countries want some level of *common* responsibility for all countries including developing ones, especially rapidly developing economies such as China (currently the main contributor to climate change), India and Brazil. And of course the world expects the US, not currently a party to the Kyoto Protocol, to be part of a new agreement and offer a serious commitment to reduce GHG emissions.

The Copenhagen Accord recognises that meeting the objective of deep GHG emission reductions will take ‘longer in developing countries . . . bearing in mind that social and economic development and poverty eradication are the first and overriding priorities of developing countries . . .’⁸⁴ The Accord states that ‘developed countries shall provide adequate, predictable and sustainable financial resources, technology and capacity building to support the implementation of adaptation action in developing countries’.⁸⁵ The Copenhagen Accord addressed common responsibility, stating that non-Annex I Parties to the Convention will implement mitigation actions in the context of sustainable development and least developed countries (including small island developing states) may undertake actions voluntarily and on the basis of support.⁸⁶ The Copenhagen Accord also established the Copenhagen Green Climate Fund to support projects, programmes, policies and other activities in developing countries related to mitigation, adaptation, capacity building, technology development and transfer.⁸⁷ This is consistent with the principle of common but differentiated responsibility and takes a step in the right direction towards a new legally binding treaty beyond (or as a successor to) the Kyoto Protocol.⁸⁸

Intergenerational equity

The principle of intergenerational equity is well known in international law. The interests of future generations were recognised as early as 1946 in the International Convention on the Regulation of Whaling, which states in its preamble the ‘interest of the nations of the world in safeguarding for future generations the great natural resources represented by the whale stocks’. Another example is found in Article 4 of the World Heritage Convention (1972), where parties agreed to ‘protect, conserve, present and transmit cultural and natural heritage to future generations’.⁸⁹

⁸³ D. Hunter, J. Salzman and D. Zaelke, *International Environmental Law and Policy*, 3rd edition, NSW Australia: Foundation Press, 2007, p. 495.

⁸⁴ UNFCCC Conference of the Parties Fifteenth Session (2009), Copenhagen, 7–18 December 2009, FCCC/CP/2009/L.7, (‘Copenhagen Accord’) para. 2. Online. Available HTTP: <<http://unfccc.int/resource/docs/2009/cop15/eng/l07.pdf>> (accessed 6 July 2011).

⁸⁵ Ibid., Art. 3.

⁸⁶ Ibid., Art. 5.

⁸⁷ Ibid., Art. 10.

⁸⁸ For further discussion of the international climate regime see Chapter 20 by A. Zahar in this volume.

In the Brundtland Commission Report *Our Common Future* the definition of sustainable development includes meeting the needs of the present generation without sacrificing the needs of future generations. This focus on future generations as beneficiaries of environmental protection has led to the principle of intergenerational equity.⁹⁰ The essence of this principle is that present generations cannot leave the environment in a worse condition than it had for itself. The principle of intergenerational equity requires taking into consideration impacts of current activities on future generations, giving them a 'seat at the table' where decisions are made, to avoid irreversible environmental damage.

Several MEAs include this principle in their preamble or substantive provisions. In the preamble of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) the contracting parties recognised that 'wild fauna and flora in their many beautiful and varied forms are an irreplaceable part of the natural systems of the earth which must be protected for this and the generations to come'.⁹¹ Article 2(5)(c) of the UNECE (UN Economic Commission for Europe) Water Convention states that '[w]ater resources shall be managed so that the needs of the present generation are met without compromising the ability of future generations to meet their own needs'.⁹² The preamble of the CBD notes the parties' determination 'to conserve and sustainably use biological diversity for the benefit of present and future generations'.⁹³ Article 3(1) of the UNFCCC acknowledges among its principles that '[p]arties should protect the climate system for the benefit of present and future generations of humankind'.⁹⁴

This principle is well established in soft law as well. The preamble of the Stockholm Declaration states that 'to defend and improve the human environment for present and future generations has become an imperative goal of humankind'.⁹⁵ Principle 1 of the Declaration states that man 'bears a solemn responsibility to protect and improve the environment for present and future generations'.⁹⁶ Principle 2 requires safeguarding of natural resources and ecosystems 'for the benefit of present and future generations'.⁹⁷ The Rio Declaration's Principle 3 recognises that '[t]he right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations'.⁹⁸

Professor Edith Brown Weiss, a leading scholar on this principle, proposed three basic conservation elements of intergenerational equity. First, each generation should be required to conserve the diversity of the natural and cultural resource base, so it does not unduly restrict the options available to future generations – 'conservation of options'. Second, each generation should be required to maintain the quality of the planet so that it is passed on in no worse condition than that in which it was received – 'conservation of quality'. Third, each

⁸⁹ *Convention Concerning the Protection of the World Natural and Cultural Heritage*, opened for signature 16 November 1972, 1037 UNTS 151 (entered into force 17 December 1975) ('World Heritage Convention'). Online. Available HTTP: <<http://whc.unesco.org/archive/convention-en.pdf>> (accessed 6 July 2011).

⁹⁰ Hunter et al., op. cit., p. 491.

⁹¹ *Convention on International Trade in Endangered Species of Wild Fauna and Flora*, opened for signature 3 March 1973, 12 ILM 1088 (entered into force 1 July 1975) ('CITES').

⁹² *Convention on the Protection and Use of Transboundary Watercourses and International Lakes*, op. cit.

⁹³ CBD, op. cit.

⁹⁴ UNFCCC, op. cit.

⁹⁵ Stockholm Declaration, op. cit.

⁹⁶ Ibid.

⁹⁷ Ibid.

⁹⁸ Rio Declaration, op. cit.

generation should provide its members with equitable rights of access to the legacy of past generations and should conserve this access for future generations – ‘conservation of access’.⁹⁹

The principle of intergenerational equity has been recognised by the ICJ in its Advisory Opinion on the Threat of Use of Nuclear Weapons: ‘the environment is not an abstraction but represents the living space, the quality of life, and the very health of human beings, including generations unborn.’¹⁰⁰

Access to information and public participation (good governance)

The principle of access to information and public participation (good governance) is relatively new and less well recognised in international environmental law. However, in the last decade it has been included in declarations, in about one hundred conventions and in jurisprudence in domestic courts. It consists of three pillars: access to information, public participation and access to justice in environmental decision-making (the third pillar is not covered here). It was formulated for the first time in Principle 10 of the Rio Declaration:

Environmental issues are best handled with 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.¹⁰¹

Public participation as a principle in international environmental law was first articulated in Agenda 21:

One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision making. Furthermore, in the more specific context of environment and development, the need for new forms of participation has emerged. This includes the need of individuals, groups and organizations to participate in environmental impact assessment procedures and to know about and participate in decisions, particularly those which potentially affect the communities in which they live and work.¹⁰²

Subsequently this principle was included in many global and regional MEAs.¹⁰³ For instance, Article 4(1)(i) of the UNFCCC obliges parties to ‘encourage the widest participation in this

⁹⁹ E.B. Weiss, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Equity*, New York: Transnational Publishers, 1996, pp. 37–8.

¹⁰⁰ *Nuclear Tests Cases (New Zealand v France)* 1974 ICJ Rep. 253.

¹⁰¹ Rio Declaration, Principle 10.

¹⁰² *Agenda 21: A Programme for Action for Sustainable Development*, Report of the UN Conference on Environment and Development, Annex II, 12 August 1992, UN Doc A/Conf. 151/26, para. 23.2.

¹⁰³ Joint UNEP-OHCHR Expert Seminar on Human Rights and the Environment, Geneva, Switzerland, 14–16 January 2002, *Background Paper No. 1: Human Rights and Environment Issues in Multilateral Treaties Adopted Between 1991 and 2001* (prepared by D. Shelton). Online. Available HTTP: <<http://www2.ohchr.org/english/issues/environment/enviro/bp1.htm>> (accessed 7 July 2011).

process, including that of non-governmental organizations'.¹⁰⁴ Article 6 further provides that parties shall promote and facilitate the public's access to information and public participation.¹⁰⁵

The Espoo Convention on Environmental Impact Assessment in a Transboundary Context guarantees non-discriminatory public participation in environmental impact procedures.¹⁰⁶

Article 2(6) states that:

The Party of origin shall provide . . . an opportunity to the public in the areas likely to be affected to participate in relevant environmental impact assessment procedures regarding proposed activities and shall ensure that the opportunity provided to the public of the affected Party is equivalent to that provided to the public of the Party of origin.¹⁰⁷

A comprehensive approach to public participation is established by the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, which was adopted in 1998 and has now been ratified by 44 parties.¹⁰⁸ According to the former United Nations Secretary-General Kofi Annan, the Aarhus Convention is the most impressive elaboration of Principle 10 of the Rio Declaration. As such it is the most ambitious venture in the area of 'environmental democracy' so far undertaken under the auspices of the United Nations. According to Article 6, public participation is guaranteed and required in regards to all decisions on whether to permit activities which may have a significant impact on the environment. The public shall be informed about the proposed activity 'early in the decision-making procedure and in an adequate, timely and effective manner'.¹⁰⁹ The public participation procedures shall include reasonable time, allowing the public 'to prepare and participate effectively during the environmental decision-making'.¹¹⁰ The public must have access to all relevant information on the proposed activities including, *inter alia*, a description of environmental impacts, measures to prevent or mitigate the effects, a non-technical summary of documents and main alternatives.¹¹¹ Public participation can be in the form of written or oral comments¹¹² and the outcomes shall be taken into account.¹¹³ All decisions shall be made public, along with the reasons and considerations on which the decision is based. In addition to providing for public participation regarding decisions on specific projects, the Aarhus Convention promotes public participation in the preparation of environmental plans, programmes, policies¹¹⁴ and regulations.¹¹⁵

¹⁰⁴ UNFCCC, Arts 6(a), 6(a)(ii).

¹⁰⁵ Ibid, Arts 6(a), 6(a)(ii)–(iii).

¹⁰⁶ *Convention on Environmental Impact Assessment in a Transboundary Context*, opened for signature 25 February 1991, 1989 UNTS 309 (entered into force 10 September 1997) ('Espoo Convention').

¹⁰⁷ Ibid., Art. 2(6).

¹⁰⁸ *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters*, opened for signature 25 June 1998, 2161 UNTS 447 (entered into force 30 October 2001) ('Aarhus Convention'). Online. Available HTTP: <<http://www.unece.org/env/pp/documents/cep43e.pdf>> (accessed 7 July 2011).

¹⁰⁹ Ibid., Art. 6(2).

¹¹⁰ Ibid., Art. 6(3).

¹¹¹ Ibid., Art. 6(6).

¹¹² Ibid., Art. 6(7).

¹¹³ Ibid., Art. 6(8).

¹¹⁴ Ibid., Art. 7.

¹¹⁵ Ibid., Art. 8.

Public participation is particularly important in environmental impact assessment (EIA) procedures. Environmental impact assessment in a transboundary context¹¹⁶ can evaluate and take into account environmental degradation or impacts of an activity of a country of origin and provide procedural rights of access to information and public participation in the decision-making process to those affected, including residents of the country of origin and the affected country. Public participation in EIA procedures (including in the transboundary context) has become a recognised norm and practice of civilised nations of the world. Indeed this is supported by the recent *Pulp Mills on the River Uruguay* ICJ decision, in which it was held that the requirement to prepare environmental impact assessments has become part of general international law.¹¹⁷

Furthermore, the UN High Commissioner for Human Rights has stressed the role that public participation should play:

[Public] participation in decision-making is of key importance in efforts to tackle climate change The right to participation in decision-making is implied in Article 25 of the International Covenant on Civil and Political Rights which guarantees the right to 'take part in the conduct of public affairs'.¹¹⁸

Conclusion

So far scientific progress, while contributing to the well-being and comfort of humankind, has also had a significant, negative effect on the global environment. The consequences of this have recently drawn the attention of developed and developing nations and the world has united in its effort to face the challenge of global environmental degradation including climate change.

In checking the progress of environmental degradation, a significant contribution has been made through the development of a framework of cooperation based on legal principles, such as sustainable development, intergenerational equity, prevention of harm, common but differentiated responsibility, the precautionary principle, the polluter pays principle and access to information and public participation in environmental decision-making (good governance). The above-cited principles developed by jurists, environmentalists and policy-makers, if followed by all nations, are a great step forward in mitigating the environmental crisis. Many states and international organisations have already accepted these principles in broad outline; what is now needed is consensus that the principles have the force of law.

¹¹⁶ Joint UNEP-OHCHR Expert Seminar on Human Rights and the Environment, op. cit.

¹¹⁷ *Case Concerning Pulp Mills on the River Uruguay (Argentina v Uruguay)* ICJ Reports 2010, para. 204.

¹¹⁸ Report of the Office of the United Nations High Commissioner for Human Rights on the relationship between climate change and human rights (2009), UN Doc A/HRC/10/61, para. 79. Online. Available HTTP: <<http://www.ohchr.org/Documents/Press/AnalyticalStudy.pdf>> (accessed 7 July 2011).