
FROM THEORY TO PRACTICE: THE ROLE OF ENVIRONMENTAL PRINCIPLES IN SHAPING GLOBAL GOVERNANCE

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ABSTRACT:

This research paper delves into the evolving landscape of international environmental law, focusing on the various principles that underpin global environmental governance. The study explores key principles such as the sovereignty over natural resources, sustainable development, the precautionary principle, the polluter pays principle, harm prevention, common but differentiated responsibility, intra-generational and intergenerational equity, responsibility and preventive action, and integration. By examining their theoretical foundations and legal implications, the paper highlights how these principles influence the development and interpretation of international legal obligations.

The analysis reveals that while some principles have achieved recognition as customary international law, others are still emerging. The paper underscores the role of sustainable development as a foundational doctrine that integrates environmental protection with economic and social development. The increasing adoption of principles like precautionary measures and common but differentiated responsibility in international agreements reflects a growing commitment to addressing global environmental challenges.

Understanding the legal status of these principles is crucial for interpreting obligations under multilateral environmental treaties and ensuring that international law effectively promotes sustainable development and addresses environmental justice. The paper concludes that these principles will continue to shape international environmental governance as global issues evolve.

Keywords: Principles, Sustainability, Regulation, Equity, Governance

INTRODUCTION

In recent decades, the international community has embraced numerous environmental principles through various international legal frameworks to tackle significant global environmental challenges. These principles play a crucial role in shaping international environmental regulatory systems and underpin the legal responsibilities established by different environmental regimes. Despite their roots in diverse national and international legal sources, defining the exact parameters or legal status of these evolving principles often proves challenging.¹ The regular endorsement of environmental principles by numerous national and international organizations highlights the necessity to examine their current legal status and scope.

Principles differ from rules in that rules impose specific obligations and clearly define required actions. In contrast, principles typically offer guidance on a course of action. While a rule might be founded on a guiding principle, it remains legally enforceable, whereas the principle itself is not. It is observed a *“rule is essentially practical and, moreover, binding...; there are rules of art as there are rules of government”*² while a principle *“expresses a general truth, which guides our action serves as a theoretical basis for the various acts of our life, and the application of which to reality produces a given consequence”*³. It is also observed that principles *“embody legal standards, but the standards they contain are more general than commitments and do not specify particular actions, unlike rules”*.⁴

The legal impact of a specific principle is influenced by several factors, including its origin, textual context, drafting precision, and the conditions under which it is applied. This includes its frequent citation in international legal documents and its use by international tribunals and state practices. Principles can have three primary legal outcomes. Firstly, they can aid in interpreting rules of obligation whose meanings may be ambiguous. Secondly, they can serve as a foundation for negotiating and developing future international legal duties. Thirdly, in some cases, they can offer specific guidance as norms of customary international law.

¹ Ian Brownlie, *Principles Of Public International Law* 19 (Oxford, ed. 4th, Clarendon Press 1990).

² D. Bodansky, *The United Nations Framework Convention on Climate Change: A Commentary*, 18 *Yale Journal of International Law*, 501 (1993).

³ *Id.*

⁴ *Id.*

THEORETICAL BASIS OF ENVIRONMENTAL LAW PRINCIPLES

Whether discussing principles of law or environmental law, they are inherently abstract. Generally, these principles are grounded in equity, justice, and good conscience, often considered part of natural law. Based on this foundation, law principles remain abstract, broad, and non-binding because abstract rules, like those of morality and societal conduct, are not legally enforceable. This is why people commonly state that general legal principles are non-binding. However, are these the only foundations of principles? Notably, many so-called general principles of (environmental) law are recognized and established in legal texts and instruments.

This type of legal recognition mirrors the codification of customary norms and grants principles of judicial viability and enforceability. Law principles can also be rooted in legal texts once they are identified and attributed to specific legal frameworks. This does not imply that legal texts create principles of law; rather, they provide a solid foundation for these principles.

The same applies to principles upheld and established by influential landmark decisions and precedents.⁵ When this occurs, the court decision that enshrines the principle as a precedent subsequently becomes the jurisprudential foundation of the principle.

The principle of permanent sovereignty over natural resources

What are the foundations of the principle? First, it is articulated in Principle 21 of the Stockholm Conference⁶, which states, “*States have, in accordance with the UN Charter, and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies...*”. The articulation in Principle 21 became a cornerstone of international environmental law. Twenty years later, during the Rio Declaration, states were almost entirely unable to alter its language or modify its articulation. It should be noted that the principle of permanent sovereignty over natural resources is declared alongside the obligation not to cause environmental harm. Since 1972, both principles have been upheld together without separation. It should also be clarified that the principle of permanent sovereignty over natural resources did not originate at the Stockholm Conference; since around

⁵ Trail Smelter Arbitration (U.S. v. Can.), 3 R.I.A.A. 1907 (1941).

⁶ United Nations Conference on the Human Environment, Stockholm, June 5-16, 1972, Final Act, vol. I, Resolutions Adopted by the Conference, Res. 1, annex, 11 I.L.M. 1416 (1973).

1952, the principle had been reflected in numerous UN Resolutions⁷ aimed at balancing sovereign states' rights over their resources with foreign companies' need for legislative certainty and investment stability. In addition to the Stockholm and Rio Conferences, the principle is also found in various documents⁸, such as the Convention on Biological Diversity (1992). This Convention asserts that states have “*sovereign rights... over their natural resources*” and that the authority to regulate access to genetic resources lies with national governments governed by national legislation.⁹ In addition to international texts and MEAs, several court rulings also affirm the principle of permanent sovereignty over natural resources. For instance, the International Court of Justice's decision in the case of *Kuwait v. American Independent Oil Company*¹⁰, in this case, the ICJ had the chance to clarify the importance of the principle. Later, the ICJ confirmed that the principle could be regarded as part of customary international law.¹¹

Principle of Sustainable Development

The principle of Sustainable Development aims to balance development demands with environmental protection. The term "Sustainable Development" was popularized by the 1987 Brundtland Commission Report, formally known as the World Commission on Environment and Development. It defines sustainable development as “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*” This concept encompasses two main ideas: (a) the emphasis on addressing the essential needs of the world's poor, which should be given priority, and (b) the constraints imposed by current technology and social organization on the environment's capacity to meet both present and future needs.¹²

In their report “Caring for the Earth: A Strategy for Sustainable Living,” the World

⁷ G.A. Res. 1803 (XVII), ¶23, U.N. Doc. A/RES/1803(XVII) (Dec. 14, 1962).

⁸ United Nations Framework Convention on Climate Change, May 9, 1992, S. Treaty Doc. No. 102-38, 1771 U.N.T.S. 107; International Tropical Timber Agreement, Jan. 26, 1994, 1955 U.N.T.S. 81, as amended, Jan. 27, 2006; Convention on Wetlands of International Importance Especially as Waterfowl Habitat, Feb. 2, 1971, 996 U.N.T.S. 245.

⁹ Convention on Biological Diversity art. 15(1), June 5, 1992, 1760 U.N.T.S. 79; Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization (ABS) to the Convention on Biological Diversity art. 6, Oct. 29, 2010, 3008 U.N.T.S. 3.

¹⁰ *Kuwait v. American Independent Oil Company*, 21 Int'l L. Rep. 76 (1954)

¹¹ *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 1996 I.C.J. 226.

¹² World Commission On Environment And Development, *Our Common Future* 43 (Oxford University Press, 1987).

Conservation Union (IUCN) and its partners defined sustainable development as “*improving the quality of human life while living within the carrying capacity of supporting ecosystems*”.¹³ The Australian national strategy defines Ecologically Sustainable Development (ESD) as the responsible use, conservation, and enhancement of community resources to ensure that ecological processes vital for life are preserved while also improving the overall quality of life both now and in the future.¹⁴

The Expert Group Meeting on Identifying Principles of International Law for Sustainable Development has recognized 17 key principles and concepts, including:

- (i) Principle of interrelationship and integration
- (ii) Right to development
- (iii) Right to a healthy environment
- (iv) Eradication of poverty
- (v) Equity
- (vi) Sovereignty over natural resources and responsibility not to cause damage to the environment of other States or to areas beyond national jurisdiction
- (vii) Precautionary principle
- (viii) Duty to co-operate in the spirit of global partnership
- (ix) Common heritage of humankind
- (x) Public participation
- (xi) Access to information
- (xii) Environmental impact assessment and informed decision-making

¹³ Caring For The Earth: A Strategy For Sustainable Living (IUCN,UNEP & WWF 1991).

¹⁴ Australian National Strategy For Ecologically Sustainable Development (Australian Government 1992).

- (xiii) Peaceful settlement of disputes in the field of environment and development
- (xiv) Equal, expanded and defective access to judicial and administrative proceeding
- (xv) National implementation of international commitments
- (xvi) Monitoring of compliance with international commitments.
- (xvii) Non-discrimination¹⁵

The principles outlined above form part of a legal framework that supports sustainable development. Despite the widespread use of the term "sustainable development" in international environmental agreements, there is no universally accepted international legal definition of the concept¹⁶. Recent UNCED (United Nations Conference on Environment and Development) documents also address the principle of sustainable development. Principle 1 of the Rio Declaration, 1992 states, "*Human beings are at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature*"¹⁷. Similarly, Principle 4 of the Declaration requires that "*in order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it*"¹⁸. The Framework Convention on Climate Change, 1992, also references the principle of sustainable development in its preamble by acknowledging that "*all countries, especially developing countries, need access to resources required to achieve sustainable social and economic development*".¹⁹

In this paper, it is noted that the concept of sustainable development—emphasizing that development activities should consider environmental concerns—is widely supported by both national and international frameworks. Environmental impact assessment (EIA), as a method for ensuring sustainable development, is recognized by nearly all legal systems globally. Most environmental laws mandate some form of EIA to prevent development projects from

¹⁵ United Nations Conference on Environment and Development, Rio Declaration on Environment and Development, Principle 1, U.N. Doc. A/CONF.151/26 (Vol. I) (1992).

¹⁶ *Id.*

¹⁷ Rio Declaration on Environment and Development, Principle 1, U.N. Doc. A/CONF.151/26 (Vol. I) (1992).

¹⁸ Rio Declaration on Environment and Development, Principle 4, U.N. Doc. A/CONF.151/26 (Vol. I) (1992).

¹⁹ Framework Convention on Climate Change, Preamble, U.N. Doc. A/AC.237/18 (Part II) (1992).

adversely affecting the surrounding environment. EIA is also broadly endorsed by international agreements.

In the case of *Bombay Dyeing & Mfg. Co. Ltd. v. Bombay Environmental Action Group*²⁰, the court carefully balanced town planning regulations favouring environmental protection with development demands. The court emphasized the necessity of conducting an environmental impact assessment (EIA) before any construction could begin or be completed. It stressed that qualified experts must carry out this assessment. The Supreme Court also held that, in suitable cases, it could oversee the enforcement of sustainable development policies by directing the State to establish expert committees.

While the Indian Constitution includes directives under Articles 48-A and 51-A(g), which outline the State's fundamental responsibility and citizens' duty to protect and enhance the environment, sustainable development itself is not explicitly mentioned in the Constitution or specialized environmental laws. Nevertheless, the Indian judiciary has shown remarkable innovation in interpreting and integrating the concept of sustainable development into both constitutional and environmental legal frameworks.

In *Vellore Citizens' Welfare Forum v. Union of India*²¹, the Supreme Court addressed the issue of untreated effluents from tanneries contaminating land and rivers, which served as the main water source for residents. The Court recognized "sustainable development" as part of customary international law, essential for balancing ecological and developmental needs. It highlighted that the "precautionary principle" and the "polluter pays principle" are integral to sustainable development and are now embedded in Indian environmental law.

In *M.C. Mehta v. Union of India*²², the Supreme Court tackled vehicular pollution and criticized the government's failure to phase out non-CNG buses and ensure adequate CNG supply. The Court mandated that auto policies should prioritize environmental protection, adopt the precautionary principle, and make balanced recommendations to address transportation needs while mitigating environmental damage.

²⁰ *Bombay Dyeing & Mfg. Co. Ltd. v. Bombay Environmental Action Group* 3 SCC 434 (2006).

²¹ *Vellore Citizens' Welfare Forum v. Union of India* 5 SCC 647 (1996); *A.P. Pollution Control Board v. Prof. M.V. Nayudu*, 2 S.C.C. 718 (1999).

²² *M.C. Mehta v. Union of India* 4 SCC 356 (2002).

In *N.D. Jayal v. Union of India*²³, the Supreme Court expanded the right to life under Article 21 to include the right to development. The Court affirmed that sustainable development balances environmental protection with development needs. It emphasized that principles such as intergenerational equity, the public trust doctrine, and the precautionary principle are fundamental to environmental jurisprudence. The Court warned that without robust legislation to support sustainable development, environmental laws risk becoming ineffective and urged a renewed commitment to these principles.

Precautionary principle

The precautionary principle suggests that if there are potential threats of serious or irreversible harm, the absence of complete scientific certainty should not be used as a reason to delay taking cost-effective actions to prevent environmental damage.²⁴

Despite varying formulations in international instruments, the precautionary principle consistently includes several key elements:

- The vulnerability of the environment.
- The limitations of science in predicting environmental threats and necessary preventative measures.
- The existence of practical alternatives that can reduce or eliminate environmental impact.
- The need for long-term economic considerations that account for the true costs of environmental degradation and waste management.²⁵

The Precautionary Principle differs from the Principle of Harm Prevention in that the former applies when there is scientific uncertainty about potential environmental harm, while the latter deals with clearly established damage from specific actions. The Precautionary Principle advocates for proactive regulatory measures even when cause-and-effect relationships are not

²³ *N.D. Jayal v. Union of India* 9 SCC 362 (2004).

²⁴ David Freestone et al., *The Precautionary Principle and International Law: The Challenge of Implementation* 27 (David Freestone and Ellen Hey, ed. 1st Kluwer Law International 1996).

²⁵ *Id.*

fully understood, rejecting the assimilative capacity approach. Instead, it emphasizes adopting clean production methods and conducting environmental impact assessments.

This approach shifts the focus from measuring the environment's capacity to handle pollution to developing technologies that prevent or minimize pollution.²⁶ The precautionary principle demands proactive environmental protection even before definitive scientific proof of harm is available. Legally, if a preliminary risk is identified, scientific uncertainty will typically be used against the potential polluter rather than in their favour²⁷.

The precautionary principle was first clearly articulated internationally in late 1990 in the Declaration of the Second International North Sea Conference on the Protection of the North Sea²⁸; many binding and non-binding international legal instruments, including the UNCED instruments, have adopted the principle. Thus, Rio Declaration²⁹ Agenda 21,³⁰ Climate Change Convention³¹, London Amendments to the Montreal Protocol,³² Convention on Biological Diversity³³, the Second Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution³⁴, etc, have adopted this principle.

The status of the Precautionary Principle as a rule of customary international law is contentious. Birnie and Boyle observes, *“Despite its attractions, the great variety of interpretations given to the precautionary principle, and the novel and far-reaching effects of some applications suggest that it is not yet a principle of international law. Difficult questions concerning the point at which it becomes applicable to any given activity remain unanswered and seriously undermine its normative character and practical utility, although support for it does indicate a policy of greater prudence on the part of those states willing to accept it”*.³⁵

²⁶ *Supra* note 24 at 6.

²⁷ *Id.*

²⁸ *Id.*

²⁹ Rio Declaration on Environment and Development, Principle 15, June 14, 1992, 31 I.L.M. 874.

³⁰ **Agenda 21, ch. 17, ¶ 17.21, U.N. Doc. A/CONF.151/26/Rev.1 (Vol. I) (1992); Agenda 21, ch. 22, ¶ 22.5(c), U.N. Doc. A/CONF.151/26/Rev.1 (Vol. I) (1992).**

³¹ U.N. Framework Convention on Climate Change art. 3(3), May 9, 1992, 1771 U.N.T.S. 107..

³² Montreal Protocol on Substances that Deplete the Ozone Layer pmbl. ¶ 6, as amended June 27-29, 1990, U.N. Doc. UNEP/Os.L. Pro 2/3, Annex II, at 25, 1 Y.B. Int'l Env't L. 591, 591-657 (1990).

³³ Convention on Biological Diversity pmbl., June 5, 1992, 1760 U.N.T.S. 79.

³⁴ Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Further Reduction of Sulphur Emissions pmbl., June 14, 1994, U.N. Doc. GE.94.31969.

³⁵ Patricia W. Birnie Et Al., International Law & The Environment 98, 122 (Oxford, ed. 1st, Clarendon Press 1992)

However, Cameron and Abouchar observe, “We argue that the precautionary principle in environmental regulation is now a general principle of international law with sufficient state practice evident to make a good argument that the principle has emerged as a principle of customary international law”³⁶.

In *R v. Secretary of State for Trade and Industry ex parte Duddridge*³⁷, a UK court acknowledged the existence of the precautionary principle. Indian courts have similarly applied this principle in recent cases. In *Vellore Citizens Welfare Forum v. Union of India*³⁸, the Supreme Court of India recognized the precautionary principle as crucial to sustainable development. According to the Court, this principle entails that (i) state governments and statutory authorities must anticipate, prevent, and address environmental degradation, (ii) measures to prevent serious and irreversible damage should not be delayed due to scientific uncertainty, and (iii) the burden of proof lies with the developer to demonstrate that their actions are environmentally safe³⁹.

In *Narmada Bachao Andolan v. Union of India*⁴⁰, public interest litigation was filed against the Sardar Sarovar Project, alleging ecological destruction due to the dam's construction on the Narmada River. Conversely, it was argued that the project would positively impact ecological preservation. The Supreme Court balanced environmental and developmental concerns, adding a new dimension to the "precautionary principle" through interpretation.

The Court ruled that the precautionary principle and the burden of proof apply to projects or industries with uncertain potential environmental damage. In such cases, the entity proposing the change must prove that ecological balance will be maintained. However, if the environmental impact is known, the focus should be on mitigation measures. The mere prospect of change does not imply ecological disaster. In this case, the Court noted that dam construction, unlike a nuclear facility or polluting industry, is unlikely to result in ecological disaster. India's 40-year experience with dam construction shows it can lead to ecological benefits, making the precautionary principle inapplicable here.

³⁶ James Cameron & Juli Abouchar, *The Status of the Precautionary Principle in International Law*, in *The Precautionary Principle and International Law: The Challenge of Implementation* 30 (David Freestone & Ellen Hey eds., 1996).

³⁷ **R v. Sec'y of State for Trade & Indus., ex parte Duddridge**, [1995] 1 C.M.L.R. Q.B. 681.

³⁸ *Vellore Citizens Welfare Forum v. Union of India*, (1996) 5 SCC 647.

³⁹ *Id.*

⁴⁰ *Narmada Bachao Andolan v. Union of India*, (2000) 10 SCC 664.

The Precautionary Principle has emerged as a customary rule in international environmental law for several reasons. Firstly, despite varying definitions across international instruments, common elements such as the threat of significant harm from regulatory inaction, scientific uncertainty regarding cause and effect, and the unjustifiability of regulatory inaction in such cases indicate a clear principle. Secondly, its growing recognition at both national and international levels suggests its establishment as a customary rule of international environmental law.

Cases such as *Vellore Citizens Welfare Forum v. Union of India*⁴¹ and *Narmada Bachao Andolan v. Union of India*⁴² demonstrate the Indian judiciary's application and endorsement of the precautionary principle, further supporting its customary status. The Supreme Court's interpretations and rulings reinforce that the precautionary principle is integral to sustainable development and environmental protection, regardless of scientific certainty. These evidence strongly favour the view that the precautionary principle is now a customary rule of international law.

The polluter pays principle

Principle 10 of the Rio Declaration states that the polluter should bear the costs of pollution control and prevention measures to maintain an acceptable environmental state. Essentially, the expenses for these measures should be included in the cost of goods and services that cause pollution during production or consumption. The polluter pays principle asserts that those responsible for pollution should cover its costs. However, this principle is contentious, potentially leading to retrospective liability for past pollution and imposing broader responsibilities on waste producers.

In *Indian Council for Enviro-Legal Action v. Union of India*⁴³, a public interest litigation by a non-government organization highlighted severe pollution in Bichhri Village, Rajasthan, caused by chemical manufacturing companies. These companies discharged toxic gypsum-based and iron-based sludge, contaminating groundwater and soil, making water unfit for consumption and irrigation, and rendering the soil unsuitable for cultivation. The Supreme Court held the polluters liable for the costs of remediation, directing the Central Government

⁴¹ *Supra* note 39 at 8.

⁴² *Supra* note 40 at 8.

⁴³ *Indian Council for Enviro-Legal Action v. Union of India*, (1996) 5 SCC 281.

to assess the necessary amount, which the companies were ordered to pay. The Court affirmed the "polluter pays principle" as universally accepted and applied it to hold the companies financially responsible for environmental damage. However, the Court did not address compensation for the victims, focusing solely on ecological remediation.

Principle of harm prevention

Under this principle, states must effectively control, prevent, and regulate sources of significant global environmental pollution or transboundary harm within their territory or jurisdiction. This harm prevention principle in customary international law also serves as a basis for reparation once harm has occurred. Arbitral and judicial decisions, along with widely accepted international legal instruments, support the view that this principle now constitutes a general rule of customary international law.⁴⁴ Thus, the well-known *Trial Smelter arbitration* held that "no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another"⁴⁵. Similarly, the Court in *the Corfu Channel case* indicated that it was "every state's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other states."⁴⁶

International environmental instruments recognize the Principle of harm prevention alongside state sovereignty over natural resources. Principle 21 of the 1972 Stockholm Declaration affirms states' sovereign rights to exploit their resources according to their environmental policies. It recognises that states are responsible for "ensuring that activities within their jurisdiction or control do not cause damage to the environment of other states or to areas beyond the limits of national jurisdiction". Similarly, Principle 2 of the 1992 Rio Declaration reiterates state sovereignty over natural resources and the obligation to prevent cross-border environmental damage. These principles ensure that states' rights over their resources are not unlimited.⁴⁷

⁴⁴ Philippe Sands, *International Law in the Field of Sustainable Development: Emerging Legal Principles*, in *Sustainable Development and International Law* 57, 62 (Winfried Lang ed. 1st, Manchester University Press 1995).

⁴⁵ *Supra note 5 at 2*

⁴⁶ *Corfu Channel Case (U.K. v. Alb.)*, 1949 I.C.J. 22; *Nuclear Tests Case (Austl. v. Fr.)*, 1974 I.C.J. 253; *Lac Lanoux Arbitration*, (1957) 24 I.L.R. 101.

⁴⁷ *Supra note 44 at 10*.

Several UN resolutions have also recognised the Principle of harm prevention⁴⁸. Many multilateral environmental treaties have adopted the principles of state sovereignty and harm prevention. For instance, Principle 21 of the Stockholm Declaration is reflected in the Biodiversity Convention, while Principle 2 of the Rio Declaration is echoed in the preambles of the Climate Change Convention and the Ozone Convention. Additionally, the normative significance of Principle 21 is acknowledged in Articles 192, 193, and 194 of the 1982 UN Convention on the Law of the Sea (UNCLOS).⁴⁹

While the principle of harm prevention typically addresses transboundary issues between states, Birnie and Boyle note that recent international agreements also mandate states to safeguard global commons, including Antarctica and regions beyond national jurisdiction like the high seas, the deep seabed, and outer space.⁵⁰

The Principle of harm prevention is crucial because it requires states to implement preventive measures beyond just addressing environmental damage. The “*due diligence standard*” used in this context does not make states absolute guarantors against harm. Still, it assesses the effectiveness of control measures, available resources, and the nature of the activity in question. To clarify the obligations under this principle, states can refer to internationally agreed minimum standards found in treaties or international body resolutions and decisions.

Alternatively, a “*standard of diligence*” can be developed by reference to the use of “*best available technology*” or similar formulations, such as “*best practicable means*”.⁵¹ Birnie and Boyle suggest that even if not explicitly in legally binding documents, specific standards of diligent conduct are often identifiable and can be overseen by international bodies or used by tribunals in disputes⁵². Most scholars concur that the Principle of harm prevention has indeed become a customary rule of international environmental law.

Principle of Common but Differentiated Responsibility

The Principle of common but differentiated responsibility addresses the fairness between

⁴⁸ UNGA Res. 2849, 26th Sess., U.N. Doc. A/8720 (1971); UNGA Res. 2995, 27th Sess., U.N. Doc. A/9029 (1972); UNGA Res. 2996, 27th Sess., U.N. Doc. A/9030 (1972); UNGA Res. 3281, 29th Sess., U.N. Doc. A/9631 (1974); UNGA Res. 34/186, 34th Sess., U.N. Doc. A/RES/34/186 (1979).

⁴⁹ Patricia W. Birnie et. al., *International Law & the Environment*, 91, 122 (Oxford, ed. 1st, Clarendon Press 1992)

⁵⁰ *Id.*

⁵¹ *Id.*

⁵² *Id.*

developed and developing countries in tackling global environmental issues. This principle is now embedded in environmental legal frameworks, originally from international economic law and applied under GATT rules. It recognizes that while all states share responsibility for environmental protection, their obligations vary based on their contribution to environmental problems and their capacity to address them⁵³.

The principle entails that all states must engage in international efforts to address environmental issues, assigns varying levels of responsibility among states, and requires developed nations to offer financial and technological assistance to help developing countries meet treaty obligations. The principle has been adopted, among others, by the Rio Declaration⁵⁴, the Climate Change Convention⁵⁵, the Biodiversity Convention⁵⁶, and the Montreal Protocol⁵⁷. Accordingly, both the Montreal and Kyoto Protocols establish distinct obligations for developing countries based on this principle⁵⁸. The Montreal and Kyoto Protocols also include financial and technical support mechanisms for developing countries, with compliance by these nations contingent on developed countries fulfilling their financial and technological obligations.

However, the common but differentiated responsibility principle has not yet become a customary rule of international environmental law. This is primarily because it has been recognized only for specific global environmental issues and because even negotiating developed countries have resisted setting it as a precedent.

Intra-generational equity

Intra-generational equity involves two main aspects: on an international scale, it addresses the unequal distribution of environmental benefits and burdens between countries, while on a national level, it focuses on disparities within a country among different community groups. This concept aligns with theories of distributive and environmental justice, highlighting that the most vulnerable, including the impoverished within wealthy nations, will suffer the most

⁵³ *Id.*

⁵⁴ Rio Declaration on Environment and Development, Principle 7, June 14, 1992, 31 I.L.M. 874.

⁵⁵ U.N. Framework Convention on Climate Change art. 3(1), May 9, 1992, 1771 U.N.T.S. 107.

⁵⁶ Convention on Biological Diversity pmbl., June 5, 1992, 1760 U.N.T.S. 79.

⁵⁷ Montreal Protocol on Substances that Deplete the Ozone Layer pmbl., Sept. 16, 1987, 1522 U.N.T.S. 3; *id.* art. 2.

⁵⁸ Montreal Protocol on Substances that Deplete the Ozone Layer art. 2, Sept. 16, 1987, 1522 U.N.T.S. 3; U.N. Framework Convention on Climate Change art. 4, May 9, 1992, 1771 U.N.T.S. 107.

from climate change.⁵⁹ The United Nations Convention on Climate Change reinforces the idea of intra-generational equity in Article 3(2), which states: “*The specific needs and circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention, should be given full consideration.*”⁶⁰

Article 3(2) of the UN Convention on Climate Change acknowledges the need to consider those vulnerable to climate change but does not specify how to support them. Article 4(8) lists groups likely to be affected, including small island nations, countries with low-lying coastal areas, and those prone to natural disasters or with fragile ecosystems. However, this does not explicitly include people lacking financial, technological, or emotional resilience. The Kyoto Protocol's Clean Development Mechanism and the Cancun Adaptation Framework provide more formal provisions addressing intra-generational equity issues.

The Clean Development Mechanism (CDM) of the Kyoto Protocol facilitates capacity and technology transfer. However, it faces criticism for issues like the additionality and sustainability of projects⁶¹, the concentration of projects in specific countries⁶², and complex processes that cause delays and reduce efficiency.⁶³

Although the Clean Development Mechanism (CDM) could be improved, there is general consensus that it successfully directs investment to developing countries, aiming to support their efforts to mitigate and adapt to climate change.⁶⁴ Relying solely on the Clean Development Mechanism is inadequate for addressing inter-generational equity issues. Stronger actions and commitments in climate adaptation policy are also necessary.

The Cancun Adaptation Framework recognizes “*that the largest share of historical global*

⁵⁹ Maxine Burkett, Just Solutions to Climate Change: A Climate Justice Proposal for a Domestic Clean Development Mechanism, 56 Buff. L. Rev. 169, 177 (2008).

⁶⁰ U.N. Framework Convention on Climate Change art. 3(2), May 9, 1992, 1771 U.N.T.S. 107.

⁶¹ Johannes Alexew, et al., An Analysis of the Relationship Between Additionality of CDM Projects and Their Contribution to Sustainable Development, 10 Int'l Envtl. Agreements: Politics, Law & Econ. 233, 233-48 (2010).

⁶² Alan Silayan, Equitable Distribution of CDM Projects Among Developing Countries (2005), available at <http://ageconsearch.umn.edu/bitstream/26098/1/re050255.pdf> (last visited Aug. 1, 2024).

⁶³ Axel Michaelowa, CDM Host Country Institution Building, 8 Mitig. Adapt. Strategies Glob. Change 201 (2003).

⁶⁴ Maxine Burkett, Just Solutions to Climate Change: A Climate Justice Proposal for a Domestic Clean Development Mechanism, 56 Buff. L. Rev. 169, 172 (2008).

emissions of greenhouse gases originate in developed countries, and that owing to this historical responsibility developed country Parties must take the lead."⁶⁵ Current adaptation instruments lack specific paralegal rules or legal frameworks to address these issues. Grasso's research shows that progress on creating, managing, and financing an adaptation fund is hindered by the absence of clear responsibilities in existing environmental agreements.⁶⁶ Future environmental mitigation and adaptation frameworks need to acknowledge climate change vulnerability and outline specific measures to address it. Integrating intra-generational equity into these instruments would help tackle issues of distributive justice.

Principle of Intergenerational Equity

The Principle of intergenerational equity asserts that the current generation must manage the earth responsibly, ensuring that future generations can enjoy its resources and benefits. Edith Brown Weiss supports this principle, emphasizing the responsibility each generation has to both past and future ones in managing the planet's resources. She argues that each generation acts as both custodian and user of these resources, with moral and legal duties to preserve them for future generations. This concept of intergenerational planetary rights and obligations reflects the legacy and rights passed down from our ancestors.⁶⁷ The theory of intergenerational equity identifies three main issues: resource depletion, degradation of resource quality, and unequal access to resources inherited from past generations. It argues that for fair distribution of burdens and benefits across generations, the principle of intergenerational equity must be applied within the context of generational relationships.

As beneficiaries of the Earth's legacy, everyone today should have fair access to it. In the context of intergenerational equity, this means that wealthier nations must help poorer countries achieve this access.

Edith Brown Weiss outlines three key principles of intergenerational equity. First, "conservation of options" mandates that each generation preserve the diversity of natural and cultural resources to ensure future generations have similar opportunities. Second,

⁶⁵ Report of the Conference of the Parties on Its Sixteenth Session, Cancun, Nov. 29–Dec. 10, 2010, U.N. Doc. FCCC/CP/2010/7, ¶ 8 (Mar. 15, 2011).

⁶⁶ Marco Grasso, *The Role of Justice in the North-South Conflict in Climate Change: The Case of Negotiations on the Adaptation Fund*, 11 *Int'l Envtl. Agreements: Politics, Law & Econ.* 365 (2011).

⁶⁷ Edith Brown Weiss, *In Fairness to Future Generations: International Law, Common Patrimony and Intergenerational Equity* 21 (Edith Brown Weiss, ed. 1st, United Nations University 1989).

“conservation of quality” requires maintaining the planet's quality so that it is no worse for future generations than it is now. Third, “conservation of access” ensures equitable rights to access resources from past generations and preserves this access for the future.

In recent decades, numerous international instruments⁶⁸, both binding and non-binding, have embraced the principle of intergenerational equity. Key treaties incorporating this principle include the 1946 International Whaling Convention⁶⁹, the 1972 World Heritage Convention⁷⁰, the 1992 Biodiversity Convention⁷¹, and the 1992 Climate Change Convention⁷².

It seems the principle of intergenerational equity has not yet become a customary international law for two main reasons. First, it lacks widespread recognition at both national and international levels. Second, there are no established legal mechanisms to address future generations' interests effectively.

Despite limited judicial reliance on this principle⁷³, scholars have proposed reforms to implement it better, Maltese proposal to the UNCED preparatory committee, Maxwell Bruce proposes establishing an “*office of Guardian for Future Generations*”. The guardian would advocate for future generations in state hearings, engage with states and international bodies, submit briefs, suggest actions, and take necessary steps to ensure their interests are represented.⁷⁴ Dr Emmanuel Agius proposes that the guardian's role would be to advocate for future generations, aiming to influence decisions rather than making them directly.⁷⁵

The principle of responsibility and preventive action

The definition and requirements of the principle of responsibility and prevention differ

⁶⁸ Declaration of the United Nations Conference on the Human Environment, Principle 1, June 16, 1972, U.N. Doc. A/CONF.48/14/Rev.1; U.N. GA Res. 35/8, U.N. Doc. A/RES/35/8 (Oct. 30, 1980); World Charter for Nature pmb., Oct. 28, 1982, G.A. Res. 37/7, U.N. Doc. A/RES/37/7; Rio Declaration on Environment and Development, Principle 3, June 14, 1992, 31 I.L.M. 874; Forest Principles, Principle 2(b), June 14, 1992, U.N. Doc. A/CONF.151/26 (Vol. I); Agenda 21, para. 8.7, June 14, 1992, U.N. Doc. A/CONF.151/26 (Vol. I).

⁶⁹ International Convention for the Regulation of Whaling pmb., Dec. 2, 1946, 161 U.N.T.S. 72.

⁷⁰ Convention Concerning the Protection of the World Cultural and Natural Heritage art. 4, Nov. 16, 1972, 1037 U.N.T.S. 151.

⁷¹ Convention on Biological Diversity pmb., June 5, 1992, 1760 U.N.T.S. 79.

⁷² U.N. Framework Convention on Climate Change pmb., May 9, 1992, 1771 U.N.T.S. 107; id. art. 3(1).

⁷³ *Minors Oposa v. Secretary of the Department of Environment and Natural Resources*, 33 I.L.M. 173 (1994).

⁷⁴ M. Bruce, Draft Instrument Establishing the Role of a Guardian, in *Future Generations & International Law* 163, 163-65 (E. Agius, ed. 1st, S. Busuttli & others eds., Earthscan 1998).

⁷⁵ E. Agius, *Obligation of Justice Towards Future Generations: A Revolution in Social and Legal Thought*, in *Future Generations & International Law* 3, 3-12 (E. Agius, ed. 1st, S. Busuttli & others eds., Earthscan 1998).

depending on the source⁷⁶. In the Trail Smelter Arbitration (USA v. Canada), the principle was defined as⁷⁷:

“Under principles of international law, as well as the law of the United States no State has the right to use or permit the use of territory in such a manner as to cause injury by fumes in or to the territory of another or the properties of person therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.”

The principle of preventive action holds that states must ensure that activities within their jurisdiction do not harm other states' environments or areas beyond national boundaries. While it is sometimes confused with the precautionary principle, they are distinct: the precautionary principle applies under scientific uncertainty, while the preventive principle relies on existing scientific certainty. This principle is enshrined in various international agreements, including the 1992 United Nations Conference on Environment and Development (Principles 2, 11, and 14), and was earlier articulated in the 1972 Stockholm Declaration (Principles 6, 7, 15, 18, and 24). It is also reflected in the 1982 United Nations Convention on the Law of the Sea (Article 194), the 1985 Vienna Convention on the Protection of the Ozone Layer (Article 2(2)(b)), and the 1987 Montreal Protocol's preamble. Additionally, the Convention on Biological Diversity and the Climate Change Convention incorporate aspects of this principle.⁷⁸

Additional clarity on the principle can be obtained from the International Law Commission's articles on State Responsibility.⁷⁹ Article 2 of the International Law Commission's articles defines an internationally wrongful act as one that is both attributable to the State under international law and breaches an international obligation. To attribute climate change harm to a specific State, evidence must show that emissions from that State caused damage in another country. Currently, scientific methods are insufficient to trace emissions to specific harm

⁷⁶ Riccardo Pisillo-Mazzeschi, Forms of International Responsibility for Environmental Harm, in *International Responsibility for Environmental Harm* 34 (Francesco Francioni & Tullio Scovazzi eds., ed. 1st, Graham & Trotman 1991).

⁷⁷ *Supra* note 5 at 2.

⁷⁸ Convention on Biological Diversity arts. 8(h), 14(1)(d), June 5, 1992, 1760 U.N.T.S. 79; Protocol on Biosafety to the Convention on Biological Diversity art. 2, Jan. 29, 2000, 2226 U.N.T.S. 208; Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization arts. 2(2)(d)(i), 5, Oct. 29, 2010, U.N. Doc. CBD/NAGOA/1/1; U.N. Framework Convention on Climate Change art. 2, May 9, 1992, 1771 U.N.T.S. 107.

⁷⁹ International Law Commission, Articles on Responsibility of States for Internationally Wrongful Acts, Adopted at the 53rd Session, U.N. Doc. A/56/10 (2001).

precisely. A proposed loss and damage mechanism within the adaptation framework might address this issue.

The climate change regime recognises the principle of responsibility and prevention but does not establish specific liabilities. Article 3(1) of the UNFCCC calls for parties to prevent or minimise climate change and mitigate its effects, but it lacks concrete obligations. Effective implementation of this principle may depend on technological advancements and record-keeping to identify emission sources and their impacts accurately.

The principle of integration

The principle dictates that environmental protection must be incorporated into all policy areas, focusing on advancing sustainable development.⁸⁰ The European Community Treaty mandates that environmental protection must be integrated into other community policies, including agriculture and industry.⁸¹ The principle of integration aims to embed environmental considerations into all policy areas to prevent conflicting objectives. For example, neglecting environmental impacts when liberalising air travel or planning road construction can lead to issues if environmental goals are not integrated into budgetary decisions.

The principle of integration, which calls for incorporating environmental considerations into all policy areas, is deeply embedded in international environmental law, though it has not yet reached the level of customary international law. This principle is enshrined in key international instruments such as the European Community Treaty, which mandates integrating environmental protection into various community policies, including agriculture and industry. Additionally, the Rio Declaration on Environment and Development of 1992, particularly Principle 4, emphasises the need for integrating environmental protection into developmental policies to ensure sustainable development. Similarly, Agenda 21, a comprehensive action plan from the United Nations Conference on Environment and Development, outlines strategies for integrating environmental concerns into policy-making processes across different sectors.

Despite its broad endorsement and implementation in various national and international frameworks, the principle of integration has not yet achieved customary international law status. For a principle to attain this status, it must be universally accepted and practised as a

⁸⁰ EC Treaty art. 6, Nov. 10, 1997, 37 I.L.M. 56.

⁸¹ EC Treaty art. 175, Nov. 10, 1997, 37 I.L.M. 56.

binding legal obligation by the international community, which has not fully materialised for the integration principle. Nevertheless, its widespread acceptance and influence in shaping policies highlight its crucial role in promoting sustainable development and ensuring that environmental considerations are not overlooked in policy formulation.

Conclusion

In conclusion, the principles of international environmental law, as reflected in various multilateral environmental treaties, are at different stages of development and recognition. While some principles have already become established as customary international law, others are emerging. The scholarly debate surrounding their legal status illustrates the complexity of their acceptance and application.

Most of these principles have evolved from the doctrine of sustainable development, which has provided a foundational framework for integrating environmental protection with economic and social development. The widespread adoption of principles such as precautionary measures, common but differentiated responsibility, and intergenerational equity in recent international agreements underscores their growing importance.

The increasing use of these principles in international legal instruments and state decision-making processes demonstrates a strong political commitment to addressing global environmental challenges. This commitment is evident in how principles are being used to set specific obligations and guide state actions in various conventions and protocols.

Understanding the legal status of these principles is crucial for interpreting the obligations of developing countries under multilateral environmental treaties. This insight helps ensure that international environmental law effectively promotes sustainable development and addresses environmental justice concerns. As global environmental issues continue to evolve, the principles derived from sustainable development will remain central to shaping effective and equitable international environmental governance.