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THE RIO DECLARATION AND ITS INFLUENCE ON INTERNATIONAL ENVIRONMENTAL LAW[1]

Did the recent United Nations Conference on Environment and Development ('UNCED') conclude with only pious aspirations or solid achievements? Among the documents adopted at UNCED were Agenda 21, an ambitious plan of action to tackle both global and national environmental problems, a Statement of Principles on Forests, and the Rio de Janeiro Declaration on Environment and Development. This article considers what influence, if any, the Rio Declaration might exert in relation to the further development of international environmental law.

I. INTRODUCTION

THE United Nations Conference on Environment and Development ('UNCED') – and popularly referred to as the Earth Summit – was held from 3 to 14 June 1992 in Rio de Janeiro to discuss ways and means of solving the major global environmental problems of our time, viz., protection of the atmosphere by combating climate change, depletion of the ozone layer, and transboundary air pollution; protection of the oceans and seas; protection and management of land resources, by combating drought, deforestation and desertification; as well as environmentally sound management of biotechnology, wastes and toxic chemicals. One hundred and seventy-two countries attended UNCED, with one hundred and sixteen of them being represented by their respective Heads of State or Government. It was the largest gathering of world leaders ever.[2]

Three important documents were adopted at UNCED: the Rio de Janeiro Declaration on Environment and Development[3] ('Rio Declaration'), Agenda 21 (a 800-page document setting out the necessary action to be taken in

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[1] An expanded version of a paper presented at the Institute of Policy Studies/National Council on the Environment/Nature Society Seminar on "A Report on Rio: Its Implications and Follow-up" held on 15 August 1992. The views expressed here are entirely in my personal capacity.

[2] The Heads of State segment of UNCED was held on 13 and 14 June 1992. Dr. Ahmad Mattar, Environment Minister led the Singapore delegation, which included officials from the Ministry of Foreign Affairs and Environment Ministry and the Attorney-General's Chambers.

[3] See [1992] 1 M.L.J. ccxxx at Appendix 1 for complete text. Also reproduced in (1992) 31 I.L.M. 874.

order to address global and national environmental problems) and a Statement of Principles on Forests.[4] In addition, the Framework Convention on Climate Change and the Convention on Biological Diversity, which were separately negotiated, were opened for signature,[5] Countries also agreed to request the United Nations General Assembly at its forty-seventh session to establish an Intergovernmental Committee on Desertification.[6]

II. The Rio Declaration

A. *A Political Compromise*

When it first began, the Rio Declaration was not known by that name – it was to have been called the Earth Charter. As originally conceived, it was meant to be a short, concise, inspirational document, no more than a page. It would set out the principles governing the relationships between states and peoples concerning the environment and development.[7] If states could abide by them, it was hoped that the future viability and integrity of Mother Earth as a hospital home for all – human and other forms of life – would thereby be more assured.

During the negotiations, one delegate from the developed countries stated thus: "The Earth Charter should be framed and put in the room of every child of the world." A delegate from the developing countries immediately retorted: "Not every child has a room, maybe not even abed!" This exchange reveals that delegates at the negotiations have quite different presuppositions, the difference in outlook being partly influenced by disparities in

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[4] (1992) 31 I.L.M. 881. The full title is: "Non-legally binding authoritative statement of principles for a global consensus on the management, conservation and sustainable development of all types of forests."

[5] One hundred and fifty-four countries (including Singapore) signed the former; 153 countries signed the latter. The Environment Minister indicated Singapore would sign the latter at a future date. Singapore did not participate in the negotiations of the Biodiversity Convention. See, *supra,* note 4 at pp. 818, 849 for a reference to the text of the Conventions.

[6] Primarily an African initiative.

[7] The task of formulating the principles was delegated to Working Group III. The Working Group was set up at the Second Session of the Preparatory Committee held at Geneva from 18 March to 5 April 1991. Its other tasks were to consider:

(i) a survey of existing environmental agreements and instruments, and criteria for their evaluation;

(ii) other legal, institutional and related matters, as well as legal and institutional aspects of cross-sectoral issues, including those referred to Working Group III by the other working groups or the plenary.

Working Group III met in Geneva from 22 August to 4 September 1991 and in New York from 2 March to 3 April 1992. The Earth Charter, although limited to basic rules of conduct, nevertheless provides an opportunity to go beyond current norms of international law. The writer was a member of Working Group III.

living standards, which in turn are influenced by differing rates of economic growth. This difference in outlook again surfaced in the dispute over the title itself. The title 'Earth Charter', favoured generally by developed countries, was rejected by the developing countries, who preferred to call it the 'Rio de Janeiro Declaration on Environment and Development'. It was thus that the Rio Declaration came into being.

There are 27 principles in the Rio Declaration, which were arrived at after much arduous negotiations. The final text is essentially a political compromise. To understand how these principles may have a bearing and indeed influence the development of international environment law,[8] some brief comments on (i) how customary international law emerges; and (ii) what is 'soft law', are in order.

Before turning to the abovementioned two points, however, it might be useful to briefly mention certain principles not dealt with in detail here. These other important issues in the Rio Declaration include the need to eradicate poverty (Principle 5), the special needs of developing countries (Principle 6), the need to reduce unsustainable patterns of production and consumption (Principle 8), and a commitment to enact effective environmental legislation (Principle 11). Some of the 'principles' may seem like bald statements of intentions, albeit very noble ones, but to the legal purist, contain insufficient substance or content to be properly described as 'principles' in the legal sense. Two examples may be cited: the vital role of women in environmental management and development (Principle 20); the creativity, ideals and courage of the youth of the world to be mobilised for sustainable development (Principle 21). Other than providing a psychological uplift, the language of Principle 20 is too general to be of any real practical help to the plight of many women in the world, particularly in developing countries, where there is an urgent need to improve the economic and educational opportunities available to women.

B. *Treaties and Custom*

International law comprises two main components *i.e.*, treaty and custom.[9] It also develops through treaties and custom. Treaty is a general term and

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[8] World Commission on Environment and Development, *Our Common Future* (1987), p. 332. The Commission stated that there is "... now a need to consolidate and extend relevant legal principles for a new charter to guide state behaviour in the transition to sustainable development." (p. 332). The WCED experts' group on international environment law submitted a set of proposed legal principles for the purpose of drafting a universal Declaration (pp. 348-351).

[9] See generally, L. Henkin, 216 Recueil des Cours 21 (1989-1V); R. Baxter, "Treaties and Custom" 129 Recueil des Cours 31 (1970-1), pp. 99-101.

includes any binding international agreement in any form.[10] Customary law or international custom is defined as "evidence of a general practice accepted as law."

In principle, customary law and treaty law have equal status so that in case of conflict, that which is later in time will prevail.[11] The essential feature about a treaty is the element of consent. Custom has been described as law resulting from a general and consistent practice of states' *opinio juris* (*i.e.*, legal convictions). In other words, states act with a sense that the practice is required by law, and is, therefore, not merely done as an act of courtesy or comity. To simplify somewhat, treaty law is *made* while customary law *results.* Treaties are made by an act of will, customary law grows.

To establish a principle of customary law, there are many questions that need to be answered. Does the act spoken of qualify as practice? How much practice is required? And for how long? How many states should be involved? Does treaty affect this practice and if so, to what extent? Do votes in the United Nations generally qualify as practice?

For customary law to emerge, therefore, two elements have to be present: (i) a general practice and (ii) its acceptance as law. Customary law may evolve slowly or rapidly; it is essentially a dynamic process. In international environmental law, the situation is changing very rapidly indeed.[12]

A key point to note about international legal development is the interplay between power and the perceived needs and aspirations of states. In a very real sense, international law is to give consensus to the political will of states.

C. *Soft Law*

In addition to treaty and customary international law, there is a category which has been described as 'soft law'.[13] Soft law may be described as law in the process of making. It is nascent, incipient, or potential law. It

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[10] See Article 38(l)(a) and (b), Statute of the International Court of Justice; Article 2(l)(a), Vienna Convention on Law of Treaties, 1969.

[11] See M. Akehurst, "The Hierarchy of the Sources of International Law" (1974-1975) 47 B.Y.B.I.L. 273.

[12] The UNCED Secretariat prepared an annotated list of international and regional environmental instruments in existence since 1972. One hundred such instruments were listed in the fields of nature conservation, marine environment, hazardous substances, nuclear safety etc. This is by no means an exhaustive list.

[13] O. Schachter, "The Nature and Process of Legal Development in International Society" in *The Structure and Process of International Law* (R.St.J. Macdonald and Douglas M. Johnston eds., 1983) at pp. 744-808 and, by the same author, "The Twilight Existence of Non-binding Agreements" (1977) 71 A.J.I.L. 296. See, also, Baxter, "International Law in 'Her Infinite Variety'" (1980) 29 I.C.L.Q. 549.

may be in the form of a declaration, a resolution, a statement of principles – which is morally but not legally binding. It operates on the basis of persuasion rather than on legal obligation. Its language is hortatory. For example, in the Rio Declaration itself, words like "should co-operate" (Principle 9), "should endeavour" (Principle 16), "should be mobilised" (Principle 21), *etc.* are used.

The Rio Declaration is not a treaty; it does not claim to codify customary international law; it is not legally binding. One may ask then of what use is it?

The answer is that it is the relevant consensus of nations available at a particular point in time, an overall package more or less acceptable by all. It provides a platform for further development of international law based on those principles. International consensus takes time to build. States may not be ready for specific and concrete legal obligations. When they participate in the development of international law, it is to be expected that national interest, ideology, economic benefits, security and order feature prominently, as well as regard for strict legal rules and principles.[14] All these factors interact and influence the direction of development of international law. In short, soft law has the potential to emerge as customary international law – given the right conditions.

Soft law is also important because it allows certain principles to be articulated and clarified. States may incorporate these principles in their own domestic legislation. If a sufficient number of states do so, such practice may spawn customary international law norms. The salient feature of soft law "... is an expectation that the states accepting these instruments will take their content seriously and will give them some measure of respect."[15] So we must not underestimate the power of soft law.[16]

D. *A Concrete Example: Principle 21 of the Stockholm Declaration*

An example of a principle in a non-binding declaration which has evolved into a generally accepted norm of customary international law is the famous

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[14] See generally Professor I. Seidl – Hohernveldern's lectures at the Hague Academy, 163 Recueil des Cours 1969 (1979-II).

[15] J. Gold, "Strengthening the Soft International Law of Exchange Arrangements" (1983) 77 A.J.I.L. 443.

[16] Take, for instance, the UN Universal Declaration of Human Rights 1948. It has only now really begun to come into its own. Some academics decry "soft law". "... general declarations, resolutions, acts, agreements and rules so loose in content as to prove virtually ineffective.": A. Cassese, *International Law in* A *Divided World* (1986), p. 198. The proliferation of "soft law" does not help the international normative system: P. Weil, "Towards Relative Normativity in International Law?" (1983) 77 A.J.I.L. 413, pp. 414-415.

Principle 21 of the Stockholm Declaration, adopted at the United Nations Conference on the Human Environment.[17]

Principle 21 reads as follows:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction.

This principle concerning transfrontier pollution has been included in the Charter of Economic Rights and Duties of States,[18] and the Programme of Action on the Field of the Environment adopted in 1973 and in 1977 by the Council of the European Communities (EC). It appeared in the Final Act, Helsinki Conference on Security and Co-operation in Europe, 1975. It also appeared in Article 194(2) of the Third United Nations Conference on the Law of Sea,[19] and Principle 21 of the World Charter of Nature.[20] The preamble to the Convention on Long Range Transboundary Air Pollution adopted in Geneva on 13 November 1979 stated that Principle 21 of the Stockholm Declaration "expresses the common conviction that states have ... the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or areas beyond the limits of national jurisdiction." Though Principle 21 only appears in the preamble, it testifies clearly that a customary international law rule to that effect now exists.

Two international arbitral cases, the *Trail Smelter*[21] and the *Lake Lanoux,*[22] had, in fact, earlier stated this principle. In the *Trail Smelter* case, the emission of sulphur fumes from a smelting plant at Trail, British Columbia had caused damage to the State of Washington over the period 1925 to 1937. The plant was owned by a Canadian corporation. Canada was held to be responsible and directed to pay compensation to the United States. The US-Canadian Tribunal discussed a number of inter-states cases on land, water and air pollution and concluded in these oft-quoted words: "Under the principles of international law, as well as of the law of the United States, no state has the right to use or permit the use of its territory in such a

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[17] Held in Stockholm from 5 to 16 June 1972. Twenty-six principles were adumbrated, including an action plan comprising 109 recommendations and 5 resolutions. It was here that concern for the environment was placed on the world agenda. See (1972) I.L.M. 1416.

[18] Article 30.

[19] A/CONF. 62/122 dated 7 October 1982.

[20] U.N.G.A. Resolution 37/7 of 1982.

[21] (1941) 3 UN Rep. Int. Arb. Awards, Vol. 3, 1911.

[22] (1957) 24 I.C.R. 101; (1941) 35 A.J.I.L. 684, p. 716.

manner as to cause injury by fumes in or to the territory of another from the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence." (p. 1965).

This is really a statement of the common law principle that one is not to use one's property so as to injure the property of another (from the maxim sic *utere tuo ut alienum non laedus*)[23] There has also been no international practice opposed to this. The authoritative Restatement of Foreign Relations Law of the United States (Third)[24] asserts the general principle that states are obligated to take such measures as may be practicable so that activities within their jurisdiction do not cause significant injury to the environment of other states or areas beyond national jurisdiction.[25] Twenty years hence, with the impetus given at Stockholm, it can fairly and confidently be said that such a rule of customary international law has finally emerged.

III. THE WAY AHEAD: PROGRESSIVE DEVELOPMENT

I now proceed to highlight a few principles in the Rio Declaration to illustrate how they may influence the development of customary international law in the future.

A. *Principle 2 – State Responsibility for Damage*

This principle reads as follows:

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental *and developmental* policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. [Emphasis added.]

Exactly the same words are found in the preamble to the Framework Convention on Climate Change. As formulated, the principle is almost identical to Principle 21 of the Stockholm Declaration[26] but with the words "and developmental" added. While most delegates were of the view that

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[23] Whatever be the theoretical basis for grounding liability for transfrontier pollution – good neighbourliness, prohibition of abuse of rights, *neminem laedere* – the important thing is that there is such a rule in international practice.

[24] American Law Institute (1987).

[25] *Ibid*., section 601 in Vol. 2, p. 103 (1987).

[26] See L. Sohn, "The Stockholm Declaration on the Human Environment" (1973) 14 Harv. Int. Law J. 423 for a definitive commentary.

Principle 21 of the Stockholm Declaration has entered into customary international law, they perceived the addition of the phrase "and developmental" as introducing an entirely new dimension altogether. The developing countries were especially concerned that environmental and developmental policies remain firmly in the hands of states, as an inviolable attribute of state sovereignty. There was also the intention to further develop international law on the environment, and it would not be appropriate to have simply reproduced Principle 21 of the Stockholm Declaration.

This principle is of course closely related to the 'right to develop' principle (discussed, *infra*). On one hand, it is arguable that the right to develop both of individuals and society is already implied in the Universal Declaration of Human Rights, 1948.[27] It may be said that the right to development is the sum of all rights in the Universal Declaration, especially the right to education and other economic and social rights, and also civil and political rights. Thus, "[e]veryone is entitled to a social and international order in which the rights and freedoms set forth in this Declaration can be fully realised."[28] With rights come duties. Thus "[e]veryone has duties to the community in which alone the free and full development of his personality is possible."[29] On the other hand, we have to realise the ambiguity in the concept 'right of development' itself: does it refer to economic, social or political development, or does it speak of individual or societal development? The late President of the International Court of Justice was of the view that the right to development is a juridical one as well as an inalienable right founded on the principles of the UN Charter, and is itself already a principle of public international law.[30] The writer's view is that the 'right to development' is an equivocal concept; clearly the last word on the subject has not been said.

In 1986, the United Nations General Assembly adopted a declaration on the right to development.[31] The concept of development has been variously employed in the Declaration as a legal right, as a goal, a guide as well

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[27] Together with (i) The International Covenant of Economic, Social and Cultural Rights (1966), (ii) International Covenant on Civil and Political Rights (1966), and the Optional Protocol to (ii), these 4 instruments are known as the International Bill of Human Rights. The Universal Declaration of Human Rights launched two movements: the "universalisation of the human rights idea" and the "internationalisation of human rights", *i.e.*, it was given prime place on the international agenda.

[28] Article 28.

[29] Article 29(1).

[30] N. Singh, "Sustainable Development As A Principle of International Law" in *International Law And Development* (Paul de Waart, Paul Peters and Erik Denters eds., 1988), pp. 1-2. See, also, *The Right To Development In International Law* (S.R. Chowdhury, Erik M.G. Denters & Paul J.I.M. de Waart eds., 1992).

[31] GA Resolution No. 41/128 (XII, 1986), 4 December 1986. Adopted by 146 votes to 1 (US) with 8 abstentions (Denmark, FRG, Finland, Iceland, Israel, Japan, Sweden and UK).

as a means. The 'right to development' declaration proclaims that every human being is entitled to participate and contribute to and enjoy economic, social, cultural and political development.[32] The declaration is, of course, not a convention. It is noteworthy that this declaration reaffirms that all human rights are interdependent; respect for some rights does not justify the violation of others; and that the right to develop cannot serve as a reason for violating any other rights. It also affirms the need for co-operation by states in order to achieve economic development.

Why did developing countries insist on the 'right to development'? They fear that environmental protection, important as it is, may be used by the developed countries as a pretext to curtail their own development effort, or to introduce a new form of conditionality in aid and development financing. After all, much of the global environmental degradation can be attributed to the industrialisation of the West. Having arrived at their present high standard of living and technological pre-eminence, the developed countries cannot now apply the brakes on the legitimate aspirations of the developing countries to improve their own standard of living. While this fear may not be entirely groundless, developing countries should nevertheless not repeat the errors of the developed countries by insisting on unsustainable patterns of development. Neither should they copy blindly the development models of the North. The North, too, has to be prepared to make sacrifices, for example, modify their consumption patterns.

B. *Principle 3 – Inter-Generational Equity*

Principle 3 states:

> The right to development must be fulfilled so as to adequately meet developmental and environmental needs of present and future generations.

Here, the right to development is simply assumed. How is development to be carried out? There is now a recognition that this right to develop should not be pursued recklessly and in disregard of the needs of future generations. The development model based on the economies of developed countries is no longer sacrosanct. This is an intellectual breakthrough. The need to integrate environment and development, the imperative to consider present and future needs, are now welded firmly together.

Closely linked to Principle 3 is the idea of sustainable development in Principle 4: "In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and

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[32] Article 1(1).

cannot be considered in isolation from it." 'Sustainable development' is very much a buzz-word today. Development is not sustainable if it depletes current available resources with no possibility of their replenishment. The Brundtland Commission Report defines it as that which "meets the needs of the present without compromising the ability of future generations to meet their own needs."[33]

Mother Earth is no longer to be seen merely as a vast inexhaustible resource pool to be exploited. The capital of the earth must be used in such a way as to be renewable, thus providing for future generations. The philosophy underlying this is that we are only custodians or trustees of the earth's resources; some would say, tenants. As tenants, we have no right to mortgage the planet's future!

There are a number of declarations where the 'inter-generation equity' principle has appeared. In the Langkawi Declaration of 21 October 1989, for example, Commonwealth Heads of State expressed their deep concern "at the serious deterioration of the environment and the threat this poses to the well-being of the *present and future generations."* Implied in this statement is a recognition of the responsibility of the present generation towards future generations with regard to resource conservation and use. Legal experts of the Brundtland Commission incorporated the inter-generational equity principle in Articles 2 and 3(c), in that states shall ensure the environment and natural resources are conserved and used for the benefit of present and future generations. Further, states shall observe, when exploiting living natural resources and ecosystems, the principle of optimum sustainable yield.

In contrast, the UN Convention on the Law of the Sea only stipulates a duty on coastal states to conserve the living resources of the exclusive economic zone and the high seas to the *"maximum* sustainable yield".[34]

A major jurisprudential criticism levelled against the inter-generational equity principle is that it makes no legal sense to speak of duties to or rights of the as yet unborn. However, on moral grounds, most people would willingly accept that there ought to be an obligation to future generations to give them an equitable chance to share in the planet's natural resources.

The basic principles of inter-generational equity have been aptly summarised by Professor E.B. Weiss as follows: first, the conservation of options, *i.e.*, conserving the diversity of natural and cultural resources; secondly, the conservation of quality, *i.e.*, the earth should not be passed on in a worse-off condition for future generations; thirdly, conservation of access, *i.e.*, the legacy of past generations should be conserved for equitable access

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[33] *Supra,* note 8, p. 8.

[34] Article 61 para. 3 and Article 119 para. l(a).

by future generations.[35] These principles would, if respected, have far-reaching impact on environmental planning and management.

C. *Principle 10 – Public Participation*

Principle 10 states thus:

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

In 1972, there were very few Non-Governmental Organisations (NGOs) represented at the Stockholm Conference. Today, according to one estimate, there are over 100,000 NGOs on the environment worldwide. NGOs were officially accredited to UNCED. More than 1,200 NGOs participated in UNCED as observers.[36] Public awareness of the severity of environment degradation has also increased. There is a growing consensus that the environment not only affects governments but ordinary people, who should therefore have a say, directly or indirectly, in decisions that would affect them in their daily lives.

The access to information proviso aroused the fears of some developing countries – not perhaps known for free and willing disclosure of information – since it may be used as a pretext for 'fact-finding'. This fear is not totally without foundation. The reservation is with so-called fact-finding teams who transgress the basic principle of state sovereignty in their search for human rights violations.

An earlier proposal to have 'all necessary information' was rejected as being too broad. Quite clearly, the ordinary running of government would be seriously jeopardised if the confidentiality of certain information was not respected and its access curtailed or restricted. Some delegates pointed out that trade secrets or industrial processes may also be confidential. There is an unavoidable tension between what the public wants to know and what

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[35] Edith Brown Weiss, "Our Rights and Obligations to Future Generations for the Environment" (1990) 84 A.J.I.L. 198.

[36] Approximately 2,500 NGOs held an alternative 'UNCED', the 'Global Forum' at Flamingo Park, downtown Rio.

the authorities may wish to disclose. In the event, the principle is watered down to only allowing citizens "the opportunity to participate".

Some developed countries were particularly keen on the need to provide effective legal redress in cases of environmental damage to individuals. It was felt that without some kind of court sanction, mere promises of environmental protection were inadequate. It is noteworthy that the principle stops short of giving a right – or recognising this possibility – to individuals in making and implementing international environmental law and policy. There have been attempts to ground a new human right to a healthy and peaceful environment, but this is rather inchoate at the moment.

As a start, meaningful participation would mean establishing notice, comment and petition procedures rather than formal seating in regulatory bodies. A more systematic manner of considering the views of the public will make meaningful participation a reality.

D. *Principle 15 – Precautionary Approach*

This principle reads as follows:

> In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

At its broadest, this principle (the word used in the text is 'approach' but the difference is not one of substance) reflects the willingness of states to act with care and foresight in pollution control. It merely adopts the adage that prevention is better than cure.[37] On a more profound level, if such an approach is institutionalised, it will have the effect of shifting the burden of proof from those who oppose environmental degradation to those proposing to engage in the activity alleged to cause harm. It is true that depending on national capacity, not all countries have equal capability to take measures to either prevent or reduce environmental harm. The precautionary principle tries to give effect to this. Finally, prevention is not only less onerous than reparation but is also of special importance since some activities may be highly dangerous.

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[37] See Article 4 para 3(f) of the Bamako Convention reproduced in (1991) 30 I.L.M. 773 and Article 11(b) of World Charter of Nature, *supra,* note 20. See, also, para. 7, Bergen Declaration: "Where there are threats of serious irreversible damage, lack of full scientific certainty should ('*shall*' in Rio Declaration) not be used as a reason for postponing measures to prevent environmental degradation."

The precautionary approach was by no means endorsed unequivocally by all states. During negotiations on the Climate Change Convention,[38] for instance, there was a school of thought which advocated the 'status quo' or 'do nothing' approach. The argument in favour of such a stance centred on the argument to the effect that since the scientific evidence was inconclusive, no action was necessary. However, the consensus that emerged was that full scientific certainty need not be awaited before action is taken.[39] After all, the increase in greenhouse gas concentrations in the atmosphere has potentially adverse affects – which may be irreversible – not only on natural ecosystems but on all mankind.

The precautionary principle has found itself embodied in a number of ministerial declarations and conference statements. For example, the Bergen Ministerial Declaration[40] on Sustainable Development in the Economic Commission for Europe ('ECE') region adopted on 16 May 1990 stated that "... [e]nvironmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation." Participants at the ASEAN Workshop on Scientific, Policy and Legal Aspects of Global Climate Change convened on 20 September 1990 endorsed the principle with these words: "... that where there are threats of serious or irreversible damage to the environment, ASEAN countries [*i.e.*, Association of South-east Asian Nations] base present and future development policy on the precautionary principle. This means that measures to promote economic development must anticipate and prevent the causes of environmental degradation ...."

The inclusion of the word "cost-effective" in Principle 15 should, however, be noted. This has the effect of modifying the 'measures' adopted, *i.e.*, only those which make economic sense. Many countries, both developed and developing, consistently adopt the line that whatever measures taken

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[38] These began in February 1991. The US, in particular, took a 'no-regrets' approach, *i.e.*, lack of scientific uncertainty is no excuse to postpone actions which are justified in their own right. See generally C. Boyden Gray and David B. Rivkin, Jr. "A 'No Regrets' Environmental Policy", Foreign Policy, Summer 1991, No. 831, p. 41. They also preferred a comprehensive approach to deal with all greenhouse gases, not just CO_2 emission.

[39] The Preamble to the Framework Convention on Climate Change noted that there are many uncertainties in predictions of climate change, particularly with regard to the timing, magnitude and regional patterns thereof. No scientific hypothesis is 100% certain; all science is an approximation to the truth. "Progress consisted in moving towards theories which tell us more and more – theories of ever greater content.": Sir Karl Popper, *Unended Quest* (1982), p. 79.

[40] Thirty-four countries in the ECE region and the EC Commission attended.

should be economically feasible.[41] The principle states that action should be taken where there are *threats* of serious or irreversible damage. The burden of proof has, as it were, been 'lightened'; regulators need not have to wait for full scientific certainty before taking action. At any rate, we need not wait for actual damage, as it may then be too late!

As was stated by a group of eminent scientists and scientific policy makers, "... after taking into account the possible costs of being wrong, it will be better to find out we have been roughly right in due time than precisely right too late."[42] The idea of foresight and careful environmental planning, inherent in the precautionary principle, is closely linked to the idea of sustainable development. This linkage is expressed in the Bergen Declaration – the first international legal document to do so – in these terms: "In order to achieve sustainable development, policies must be based on the precautionary principle."[43] It is difficult to see how it could be otherwise.

E. *Principle 16 – Polluter Pays*

This principle states:

> National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting trade and international investment.

This is the "polluter pays" principle. It is basically a principle of private law. There is both an economic as well as a social cost to pollution. If you pollute, therefore, you ought to pay the cost of cleaning-up. But, not surprisingly, industries do not accept this sober truth with open arms. Some states may therefore have little choice but to accept pollutive industries despite the consequent environment degradation. We thus have a situation where the costs of environmental damage are shifted, whether intentionally or otherwise, to the victim.

Developed countries have a fetish that a market-based approach (as an overriding principle in society) would solve all problems. This is by no

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[41] Climate change has little economic impact on advanced industrial societies. 87% of American GNP comes from sectors, including most services, that are negligibly affected by climate change (William D. Norhaus, *The Economist,* July 7, 1990 at pp. 19-20) However, see *The Straits Times,* 7 July 1992 (reprinting an article in *The Economist*) for an opposite assessment. William Cline estimated a US$40 billion loss in annual world farm output caused by a 2°C rise in temperature by the middle of the next century! Clearly, the methodology employed will affect the conclusions.

[42] Bergen Conference on Sustainable Development, Science and Policy.

[43] *Supra,* note 37, p. 3.

means a self-evident truth, at least in environmental regulation, and the obligation itself, *i.e.*, the "polluter pays", has of course not been accepted entirely by states. Traditional national accounting systems have to be modified, in particular, to reflect more fully the importance of natural resources as depletable or renewable economic assets. Similarly, investors should go beyond short-term gains in their investment analysis and consider the longer term sustainability of their proposals.

On existing public international law principles of state responsibility, states have to take action to seek redress on behalf of its nationals. The whole process takes a long time, and the full damage may not always be recoverable. Overall, present international law on state responsibility does not assist in the implementation of the "polluter pays" principle.[44] Related to this is the need to harmonise environmental policy among states to ensure that the economic costs passed to the polluter would not vary so much among states as to distort the actual prices of goods and services and thus affect international trade and investment.

In 1974, the Organisation for Economic Co-operation and Development ('OECD') recommended acceptance of the "polluter pays" principle in these terms: "... the polluter should bear the expenses of carrying out... measures decided by public authorities" to ensure that the environment is in an acceptable state.[45] With the passing of the Single European Act (1986), there is now a new legal basis for EC environmental measures: "Action by the Community relating to the environment shall be based on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source, and that the polluter should pay."

Presently, it cannot be conclusively stated that the "polluter pays" principle is sufficiently grounded in state practice as to amount to a principle of customary international law. When states implement the "polluter pays" principle by, for instance, incorporating it in domestic legislation, it is hoped that all industries will be more responsible in discharging their duties in future. One can hope, realistically, that over time, this will develop into a norm of customary international law, for this principle is not as yet widely supported outside of Europe and North America.[46]

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[44] A.E. Boyle, "Making the Polluter Pay? Alternatives To State Responsibility in the Allocation of Transboundary Environmental Costs" in *International Responsibility For Environmental Harm* (F. Franconi and T. Scovazzi eds., 1991), p. 366

[45] Article 235(3) of United Nations Convention on Law of the Sea, 1982 already provides that states should pay prompt and adequate compensation for pollution of the marine environment by, if necessary, compulsory insurance or compensation funds.

[46] *Supra,* note 44, p. 368.

F. *Principle 17 – Environmental Impact Assessment*

Principle 17 reads thus:

> Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of competent authority.

The main purpose of an Environmental Impact Assessment ('EIA') is to identify, predict and evaluate the impact on the environment of a proposed project. Whilst there is no single multilateral agreement mandating EIA, EIA has now found its way into many regional and specific environmental agreements. Examples include the 1982 UN Convention on the Law of the Sea,[47] the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources[48] and the 1988 Convention on the Regulation of Antarctic Mineral Resource Activities.[49]

One major initiative is the 1985 EEC Council Directive on the Assessment and Effects of Certain Public and Private Projects on the Environment.[50] The Directive spells out the type of projects subject to EIA as well as the types of information required. It is increasingly being used as a model by other countries.

Multilateral banks (*e.g.*, the International Bank on Reconstruction and Development) are also beginning to incorporate EIA into their decision-making processes which focus on whether or not to provide financial loans for development projects. The European Investment Bank established an EIA procedure as early as 1982. Other banks with such a procedure include the Asian Development Bank, the African Development Bank, the Caribbean Development Bank and the Inter-American Development Bank. Non-binding sources or guidelines are also available, the most notable being the UNEP Principles on Environmental Impact Assessment.[51]

It is worth noting that Principle 17 restricts the use of EIA as a *national* instrument. Developing countries were fearful of having an EIA imposed on them as this may retard their ability to proceed with much needed development projects. In most countries of the world where there is EIA legislation, it is used primarily as a tool to integrate environmental con-

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[47] Article 206. The 60th ratification by states has to be received by the end of 1992 for UNCLOS 1982 to come into force.

[48] Article 14(1).

[49] Articles 4, 15, 26 and 53.

[50] *O.J.* 1985 L175/1.

[51] (1987) 17 E.P.L. 36.

siderations into project planning.[52] It is thought that an independent panel of experts should be formed for this purpose. Developers or industries may not produce reliable reports on their own, given their vested interests. In addition, there has to be a procedure for the public to comment on the EIA.[53]

Not all projects are to be subjected to EIA; the burden on the regulatory agencies would be otherwise intolerable! Only those projects that are potentially of *significant adverse impact* on the environment need be considered. However, this seems to beg the question: how is one to prejudge whether a project would have potential adverse impact unless some kind of EIA is done? A practical way out – though not without its difficulties – is to mandate EIA by types of projects (*e.g.*, building of dams) or sources of funding (*e.g.*, those that are state-funded).

EIA as a concept is gaining respect and approval amongst states. In essence, it may be seen as a concrete application of the precautionary principle discussed earlier.

IV. Conclusion

The Rio Declaration highlights that the world should be guided by a new ethic in its collective search for progress and development. Such a new world ethic is needed to address and attack the growing global environmental degradation. Indiscriminate exploitation of natural resources must be stopped; sustainable development is the new ideal. Without sustainable development, the future of Mother Earth and our own existence will be greatly imperilled. Both states and people need to take drastic and quick action before it is too late.

The adoption of the Rio Declaration, and the possibility of some of these principles at least developing into customary international law, can only augur well for our future. In the same way that domestic law cannot jump ahead of social consensus, neither can international law on the environment with regard to international consensus. The complaint of some may be that

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[52] The Nature Society recently released its EIA on the Public Utilities Board's proposed 18-hole golf course on a nature reserve. It recommended that an alternative site be found. See *Proposed Golf Course at Lower Pierce Reservoir – An Environmental Impact Assessment* (1992).

[53] Although there is no EIA law in Singapore, all planning developments have to meet the requirements of zoning under the Master Plan for residential, recreational, commercial and other uses. Before new developments are allowed, the Central Building Plan Unit of ENV studies these proposals to assess the impact on the environment and ensure that new industrial and residential developments are properly sited so as not to pose unmanageable health and safety hazards and pollution problems and are compatible with surrounding land use. The need for EIA legislation has to be studied by the authorities.

international environmental law is not moving as fast as it ought! The Rio Declaration will serve as an important springboard for the future development of international environmental law.[54] That it is a political compromise couched in hortatory language does not detract from its significance. Fifty years hence, it is likely to be seen as one of the most important documents to have been negotiated and adopted by the states concerned.[55]

FOO KIM BOON*

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[54] Uruguay has submitted draft guidelines for an international environmental code to the UN Secretary-General"... to the strengthening of the principles of the Rio Declaration...." (UN A/C 2/47/9, 4 December, 1992).

[55] The negotiation of the Rio Declaration deserves a separate article. Ambassador Tommy T.B. Koh played a pivotal role when he personally took over the negotiations at the close of the 4th Preparatory Session at New York, when countries reached a deadlock. His diplomatic skills, sense of humour and decisiveness saved the day.

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