

THE PRINCIPLE OF « EQUITABLE USE » AS APPLIED TO INTERNATIONALLY SHARED NATURAL RESOURCES : ITS ROLE IN RESOLVING POTENTIAL INTERNATIONAL DISPUTES OVER TRANSFRONTIER POLLUTION *

par

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I. INTRODUCTION

It is the purpose of this article to analyze the contents of the principle of « equitable use » and thereby to cast light on its role in the avoidance of international environmental disputes in those potential conflict situations in which no specific norms regarding states' rights and duties are readily applicable.

Despite the undoubtedly rapid development of international environmental law in general, in many cases of concurrent national uses of an internationally shared natural resource, specific resource utilization standards either of a substantive or a procedural nature, may not be available for the initial guidance of states in respect of contemplated activities. In such a case recourse to general, and customary international, principles of law, most notably the principle of « equitable use » is necessary. This study thus aims at elucidating both the substantive and procedural limitations — inferable from the notion of « equitable use » — which apply to states' unilateral conduct (1)

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(1) « State activity » or « state conduct » as used in this report is to be understood as conduct or activity within the state's jurisdiction or control for which the state is either directly

in a situation of interdependent national utilizations of a natural resource common to two or more states (2). Any exposition of the substantive restraints inherently associated with equitable resource use is helpful as it should pave the way towards a more rational, environmentally less harmful, utilization of the internationally shared natural resource concerned. For states appear — as will be shown presently — to be under an international legal obligation to assess the transfrontier impact of a projected use prior to its commencement. In this initial evaluation clarity as to substantive as well as procedural legal restraints incumbent upon states is likely to be an essential factor in bringing about an internationalized decision-making process that promises to ferret out a contemplated use which poses a significant risk of transnational environmental harm.

Instead of examining the function of the concept in settling environmental disputes, and allocating liability for transfrontier pollution, this analysis will concentrate only on aspects of the concept's usefulness bearing on the prevention of such disputes.

Additional restrictions apply to the scope of this study in the sense that it will be limited first, to a consideration of transfrontier environmental aspects among the range of conceivable transnational effects likely to be produced by a given use of an internationally shared natural resource; secondly, to a consideration of international relations as the concept of equitable use is intrinsically associated with the determination of the limits of the territorial sovereignty of one state vis-à-vis another. Thus the examination of « equitable use » shall not provide the basis for a discussion of private individuals'

responsible or which is attributable to the state under the *Corfu Channel* case formula of « every State's obligation not to allow knowingly its territory to be used contrary to the rights of others » : [1949] ICJ Rep. 4, at 22.

As to the notion of « direct responsibility », see the ILC's draft arts. 5-10 on State Responsibility : *Report of the ILC on the Work of its Twenty-Ninth Sess.*, GAOR Thirty-First Sess. Suppl. N° 10, (A/32/10) 15-16 (1977).

(2) « Internationally shared natural resource » or « natural resources common to two or more states » usually refers to a natural resource shared by a limited number of states only. In a broad sense, air and water may, admittedly, be considered globally shared natural resources. There is, however, evidence of a strong international consensus to restrict the use of this term to situations in which the resource concerned characterizes the state of evident environmental interdependence among nation-states : see e.g. U.N. Doc. UNIP GC/44, 40-41, para. 86 (1975). It goes without saying that perception of this interrelationship is largely a function of scientific knowledge, of the correct interpretation of ecological phenomena. « State of evident environmental interdependence » in as much as it is a function of knowledge is a notion subject to change through time. But at any given moment of time it is the relevant point-of-departure in the application of the law. Consequently, application of the term in its narrow sense namely expressive of a perceivable cause-effect-relationship between uses of a natural resource in different national jurisdictions, will only exceptionally imply reference to a globally shared natural resource.

« Natural resources common to two or more states » or « internationally shared natural resource » shall, accordingly, be understood to denote natural resources the utilization of which in one national jurisdiction carries a significant risk of affecting other utilizations of that or other natural resources outside that area of jurisdiction.

rights in the context of transfrontier pollution. This topic has, in any event, been extensively dealt with elsewhere (3).

Finally it should be noted at the outset that this study at times draws heavily on quasi-international decisions, i.e., on judicial precedents in inter-state disputes, in support of its general conclusions. Given the abundance of U.S. law and the relative scarcity of other national decisions, the former has been principally relied upon for substantiating merely points of law which seemed already well developed on an international level. In other words, special care was taken not to rely on decisions in which constitutional considerations concerning, in particular, the question of relief, prevailed; and, in any event, to use them only in a supplementary fashion.

II. THE GENERAL CONTOURS OF THE PRINCIPLE OF EQUITABLE UTILIZATION

Once a natural resource common to two or more states in the above sense has been properly identified, it follows that there exists a legal interest in any given utilization of that resource which necessarily transcends national boundaries.

Thus in the *River Order* case the PCIJ stated :

« [A] community of interests in a navigable river [that traverses or separates the territory of more than one state] becomes the basis of a common legal right, the essential features of which are the perfect equality of all riparian States in the use of the whole course of the river and the exclusion of any preferential privilege of any one riparian State in relation to the others » (4).

In a similar vein, in *Société Energie Electrique du Littoral Méditerranéen v. Compagnia Imprese Elettriche Liguri*, the Italian Court of Cassation surveying state practice in respect of concurrent general utilizations of a common river, referred to the « principle of solidarity among states in the enjoyment of important common sources of wealth » (5).

In the first report of the International Law Commission's special rapporteur on the Law of the Non-Navigational Uses of International Water Courses (6), this nexus between factual interdependence among utilizations within a given river basin and international legal interdependence in respect

(3) See in particular several OECD reports on « equality of treatment » and « equal right of access » : Title D of OECD Council Recomm. on Principles concerning Transfrontier Pollution OECD Doc. C(74)224, in 14 *Int'l Leg. Mat.* 242, at 245 (1975); OECD Council Recomm. on Equal Right of Access in Relation to Transfrontier Pollution, OECD Doc. C(76)55 (Final), in 15 *Int'l Leg. Mat.* 1218 (1976); and OECD Council Recomm. for the Implementation of a Regime of Equal Right of Access and Non-Discrimination in Relation to Transfrontier Pollution, OECD Doc. C(77)28 (Final), in 16 *Int'l Leg. Mat.* 977 (1977).

(4) [1929] PCIJ Ser. A, N° 23, 27.

(5) [1938-1940] A.D. 120, at 122.

(6) U.N. Doc. A/CN.4/295 (1976).

of the protection of interests of all states belonging to that basin, has been affirmed as the basic premise in the drafting of an international convention on the subject matter (7). Finally, Draft Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Exploitation of Natural Resources Shared by Two or More States, drawn up by an intergovernmental working group under the auspices of UNEP, reflect the idea that internationally interdependent natural resource utilizations call for a coordination among interested states on the basis of equality (8).

This equality of right flows of course from the basic principle of the sovereign equality of states itself. For given an interdependence of resource utilizations in different national jurisdictions, territorial sovereignty-based claims concerning the exploitation of natural resources within one jurisdiction must be consonant with the respect due to the sovereignty of other states within whose territory the repercussions of the former's conduct will be felt. In such a situation insistence on the exclusive nature of sovereign rights over the shared natural resource within one state's territory therefore tends to be at variance with a claim of another state to rights in its own territory concerning the use of that resource.

The resolution of conflicts between equal ranking rights of states in respect of a shared natural resource along the lines of *sic utere tuo* has been a well-established international legal principle, some earlier assertions to the contrary notwithstanding (9). It appears thus universally accepted that to the extent utilizations, within different national territories, of an internationally shared natural resource are correlative and interdependent, they must be subject to reciprocally operating limitations. This principle was more specifically circumscribed in the *Lake Lanoux* case when the tribunal — by reference to inter alia « current international practice » — concluded that France in executing its hydroelectric project involving an international river, was under an obligation to take into account «... all [Spanish] interests, of whatsoever nature which ... [were] liable to be affected by the works undertaken, even if they ... [did] not correspond to a right » (10). It further stated that the rules of good faith required the upstream state « to seek to give ... [those interests] every satisfaction compatible with the pursuit of its own interests, and to show that in this regard it ... [was] genuinely concerned to reconcile the interests of the other riparian state with its own » (11). Similarly, in e.g. *New Jersey v. New York*, the U.S. Supreme Court in emphasizing that just as much as the upper riparian could not cut off the flow of water towards

(7) *Id.* at paras. 38-39.

(8) Report of the Intergovernmental Working Group of Experts on Natural Resources Shared by Two or More States on the Work of its Third Session, Held in Nairobi from 10 to 21 January 1977, U.N. Doc. UNEP/GC/101, 6 (1977).

(9) E.g. by U.S. Attorney-General Judson Harmon : 21 *Op Att'y Gen.* 274, at 283 (1895).

(10) 24 ILR 101, at 139.

(11) *Id.*

the lower riparian, the latter could not require the former to give up its interests in the river altogether in order that the river might come down to the latter undiminished. Accordingly, it concluded that « [b]oth States ha[d] real and substantial interests in the River that must be reconciled as best as they may » (12).

Recognition of the fact of reciprocity and interdependence of states' rights and duties in a situation of interrelated uses of an internationally shared natural resource, constitutes the very essence of concepts such as « international solidarity » as expressed in OECD Council Rec. C (74) 244 (13) and « ecological good neighbourliness », the latter to be understood as a functional notion expressive of a state of environmental interdependence among both adjacent and non-adjacent areas of national jurisdiction (14). The gist of these notions is simply that states share an equitable interest in the utilization of a common natural resource; that accordingly states are under an obligation to attempt to reconcile their interests with those of other potentially affected states; and that any claim to the rightful use of a shared natural resource has, therefore, to be judged in, in particular, the overall social, environmental and economic context in which the right is being asserted (15). It is hence only in the concrete circumstances of a specific situation that a given claim's compatibility with the principle of equitable use can be ascertained.

Of course, customary international environmental law has evolved to the point of clearly outlawing state conduct which results in transfrontier pollution that entails extraterritorial environmental damage. Thus principle 21 of the Stockholm Declaration (16), re-emphasized in Art. 30 of the Charter of Economic Rights and Duties of States (17), speaks of the international obligation of states to avoid « damage to the environment of other States or of areas beyond the limits of national jurisdiction » (18). However, the concept of « environmental injury » or « environmental damage » does not constitute a term of art and consequently its meaning may vary from case to case (19).

(12) 283 U.S. 336, at 342-43.

(13) *Supra* note 3, at 243-44.

(14) See also P. Dupuy, *International Liability of States for Damage Caused by Transfrontier Pollution*, OECD Doc. A/EV/TFP/ENV. 74.3, 12.

(15) Note in this context the International Joint Commission's view of the concept of « transboundary implications » as stated in the reference to the Commission, by the Governments of Canada and the United States in respect of the proposed completion and operation of the Garrison Diversion Unit in the State of North Dakota: *IJC (Canada/United States), Transboundary Implications of the Garrison Diversion Unit* 96-97 (1977).

(16) U.N. Doc. A/CONF. 48/14, 71 (1971).

(17) U.N. Doc. A/RES/3281 (XXIX), in 14 *Int'l Leg. Mat.* 251, (1975).

(18) *Ibid.* 260-61.

(19) See e.g. Handl, *Balancing of Interests and International Liability for the Pollution of International Watercourses: Customary Principles of Law Revisited*, 13 *Canadian Yearbook Int'l L.* 156, at 172-73 (1975).

Equally significant is the fact that the relevant portion of the classic proscription of transnational air pollution in the *Trail Smelter* case is couched in terms of « when the case is of a serious consequence » (20). A similar qualification of transnational environmental injury which would render the transfrontier pollution generating activity internationally wrongful, can be found in Art. X of the International Law Association's Helsinki Rules (21), in draft proposition VIII on the Law of International Rivers formulated by the International River Sub-Committee of the Asian-African Legal Consultative Committee (22) (AALCC) as well as in many bilateral or multilateral agreements (23) and is overwhelmingly supported in the international legal literature on this topic (24).

The determination of the exact limitations incumbent upon a state's contemplated use of a given internationally shared natural resource, thus — consistent with the concept of equitable use — entails a recourse to a contextual analysis of the state's claim in which the latter will be considered and balanced against potentially affected interests of all those states that share in the common natural resource.

A second basic characteristic of the principle of equitable use as evidenced in international legal practice is the fact that a state's utilization of an internationally shared natural resource is permissible as long as transfrontier pollutants do not produce a substantially or significantly detrimental impact on areas outside the acting state's jurisdiction. As a corollary of their physical co-existence, their dependence on a shared natural resource, states, therefore, have to tolerate some mutual environmental interference. In other words, territorial sovereignty cannot be invoked as an absolute defense against any transfrontier crossing of pollutants (25).

A third basic conclusion is that the qualification of « substantial » or « significant » transfrontier environmental damage is to be equated with an unreasonable or inequitable use, by the acting state, of the common natural resource, i.e., the transnational-effects-transfer medium or media. This follows clearly from comment (c) on Art. X of the Helsinki Rules which defines a transfrontier environmental injury as « substantial » if it materially inter-

(20) 3 U.N.R.I.A.A. 1905, at 1965.

(21) *ILA, Report of the Fifty-Second Conference, Helsinki 1966*, 484, at 496-97 (1966).

(22) Reproduced in U.N. Doc. A/CN.4/274 (Vol. II) 226, at 229 (1974).

(23) Cf. e.g. Art. 58, paras. 1 & 2(e) of the 1960 Boundary Treaty between Germany and the Netherlands, in U.N. Doc. ST/LEG/SER.B/12, at 757-58 (1963); and Art. 2 of Resolution N° 25 of the Declaración de Asunción sobre Aprovechamiento de Ríos Internacionales, in Ríos y Lagos Internacionales (Utilización para Fines Agrícolas e Industriales), OEA/Documentos Oficiales, OEA/Ser. I/VI, CIJ-75 rev. 2, 187 (1971).

(24) For a survey see Handl, *supra* note 19, at 174 note 78.

(25) Cf. in this context *American Law Institute, Restatement, Second, Torts* (Tent. Draft N° 17, 1971). « The very existence of organized society depends upon the principle of 'give and take, live and let live' and therefore the law of torts does not attempt to impose liability or shift the loss in every case where one person's conduct has some detrimental effect on another » : *Id.* at 27.

feres with or prevents a reasonable use of the shared natural resource concerned (26). *Argumento e contrario* such a result must in itself be due to an unreasonable or inequitable utilization of the shared natural resource. A qualification of the above sort, therefore, merely indicates that the concept of equitable use is the controlling factor and that consequently the legitimacy of any given use which entails a transfrontier environmental impact, requires a case by case examination that goes beyond the mere ascertainment of the detrimental nature of these effects.

Finally, the principle of equitable use implies the maximization of the aggregate utility of the shared natural resource concerned as the fundamental goal for any international legal regulation of concurrent and overlapping national uses of that resource. This notion of maximizing the efficiency of resource utilization or allocation irrespective of national boundaries is, for example, strongly reflected in OECD Council Rec.s C (74) 224 and C (72) 128 (the Polluter-Pays-Principle) (27). Besides, it has found unambiguous support in various instances of state practice or documents which may be taken to indicate a strong international consensus.

Thus, Art. 3 of the Charter of Economic Rights and Duties of States embodies a stipulation to the effect that states are under an international legal duty to co-operate « ... in order to achieve optimum use of ... [internationally shared natural resources] Q« (28); and, comment (a) on Art. IV of the Helsinki Rules states : « The idea of equitable sharing is to provide maximum benefit to each basin State from the uses of the waters with the minimum detriment to each » (29). Similar references can be found in the preamble of the Salzburg resolution of the Institute of International Law (30), in Recommendation 51 of the Stockholm Final Documents (31), in a recent study by a United Nations panel of experts on the management of international water resources (32), in international agreements such as e.g. the Swedish-Finnish Frontier River Agreement of 1971 (33); and it is clearly reflected in decisions in quasi-international cases such as *Aargau v. Zürich* (34) or *Kansas v. Colorado* (35).

(26) *Supra* note 21, at 500.

(27) *Supra* note 3; and Guiding Principles on the Environment, OECD Doc. C(72)128, in 11 *Int'l Leg. Mat.* 1172 (1972).

(28) *Supra* note 17, at 255.

(29) *Supra* note 21, at 486.

(30) English text in [1974] ILC Yearbook (vol. II part II) 202.

(31) Reproduced in 11 *Int'l Leg. Mat.* 1416, at 1443 (1972).

(32) *Management of International Water Resources : Institutional and Legal Aspects*, Natural Resources/Water Series N° 1, U.N.Doc. ST/ESA/5, 18, para. 53 (1975).

(33) Reference thereto in U.N. Doc. A/CN.4/274 (vol. I) 166, at 167 (1974); see also preamble to the 1977 Agreement between Bangladesh and India on Sharing of the Ganges' Waters, in 17 *Int'l Leg. Mat.* 103 (1978).

(34) Schweizerisches Bundesgericht, A.S. 4, 47 (1878).

(35) 206 U.S. 46, at 100-01.

Most recently, in its report on Transboundary Implications of the Garrison Diversion Unit (GDU) (36), the International Joint Commission (U.S.-Canada) emphasized the inadequacy of the traditional approach — under Art. IV of the 1909 Boundary Water Treaty (37) — to the management of the water quality of U.S.-Canadian boundary waters (38). Instead, it strongly endorsed an approach — based on equitable utilization — through agreed upon water quality objectives and standards. Such a management philosophy, it concluded, would « by its very agreement on commonly shared objectives ... prevent disputes and also ... likely enhance the possibility of the optimum use of a river without stimulating harassing debates as to who 'owns' what with the right to use or abuse 'his share' of the water » (39).

In summary, one may well characterize the concept of equitable use, as a maxim which implies « that the use of a common resource by each country, while aiming in principle at optimum exploitation, must be compatible with the safeguard of the interests of other countries concerned, on the basis of the conjunction of a series of criteria which vary according to the particular situation » (40).

III. SPECIFIC SUBSTANTIVE ASPECTS OF THE PRINCIPLE OF EQUITABLE USE

1. PRELIMINARY OBSERVATIONS

A list of such criteria which may serve as a convenient point of departure in the discussion of specific contents of the principle of equitable use, presents itself in Article V of the Helsinki Rules. Reference to this non-exhaustive enumeration of parameters is, of course, permissible in the context of any utilization of an internationally shared natural resource, as the Helsinki criteria are essentially applicable to any common natural resource. Such reference is, moreover, self-explanatory in view of the fact that the Helsinki

(36) *IJC*, *supra* note 15.

(37) The High Contracting Parties agree that, except in cases provided for by special agreement between them, they will not permit the construction or maintenance on their respective sides of the boundary of any remedial or protective works or any dams or other obstructions in waters flowing from boundary waters or in waters at a lower level than the boundary in rivers flowing across the boundary, the effect of which is to raise the natural level of waters on the other side of the boundary unless the construction or maintenance thereof is approved by the aforesaid International Joint Commission.

It is further agreed that the waters herein defined as boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other. (Emphasis added), USTS N° 548.

(38) *IJC*, *supra* note 15, at 118.

(39) *Id.* at 117.

(40) OECD Environment Directorate's Introduction to P. Dupuy, Legal and Institutional Aspects of « Integrated Management » of an International Hydrographic Basin, OECD Doc. ENV/TFP/76.3, ii.

Rules constitute the most comprehensive authoritative exposition of relevant criteria and as such have found incorporation in e.g. the AALCC's draft proposition III (41).

Paragraphs (1) and (3) of Article V read together state that « equitable use » is determined in the light of all relevant factors in each particular case considered together and that « the weight to be given to each factor is to be determined by its importance in comparison with that of other relevant factors » (42).

This multiple factor analysis, based on a balancing of the various interests involved, is, of course, an accurate reflection of practice concerning the ascertainment of what constitutes an « equitable use » and hence a lawful utilization of an internationally shared natural resource in a given situation both on an international level as well as on a national plane, i.e., between the territorial entities of federal states.

Thus although the triad of international judicial precedents usually referred to in an environmental context, namely the *Trail Smelter*, *Lake Lanoux* and *Corfu Channel* cases, merely suggest the applicability of a balancing-of-interests approach (43), other evidence in the form of state practice and quasi-international judicial decisions is clearly affirmative : Not only is the need for such an approach expressly acknowledged in most general survey studies made by international non-governmental organizations, but it is pervasively reflected in treaties and in such national decisions as in *Wurttemberg/Prussia v. Baden*, and *Solothurn v. Aargau*, (44) besides being encountered in a multitude of U.S. interstate disputes.

2. AN EVALUATION OF THE SPECIFIC CRITERIA OF REASONABLE USE

Para. (2) of Article V lists as relevant the following factors :

- (a) the geography of the basin, including in particular the extent of the drainage area in the territory of each basin State;
- (b) the hydrology of the basin, including in particular the contribution of water by each basin State;
- (c) the climate affecting the basin;
- (d) the past utilization of the waters of the basin, including in particular existing utilization;
- (e) the economic and social needs of each basin State;
- (f) the population dependent on the waters of the basin in each basin State;

(41) *Supra* note 22, at 228.

(42) Helsinki Rules, *supra* note 21, at 488.

(43) Handl, *supra* note 19, at 177-80.

(44) E. Staatsgerichtshof vom 17./18. Juni 1927, in 116 E Reichsgericht Zivilsachen, Anhang 8, 31-32; and E. Schweizerisches Bundesgericht, A.S. 26, I. N° 83, 444 (1900).

- (g) the comparative costs of alternative means of satisfying the economic and social needs of each basin State;
- (h) the availability of other resources;
- (i) the avoidance of unnecessary waste in the utilization of waters of the basin;
- (j) the practicability of compensation to one or more of the co-basin States as a means of adjusting conflicts among uses; and
- (k) the degree to which the needs of a basin State may be satisfied, without causing substantial injury to a co-basin State;

A. *The Scope of Interests Relevant to the Inquiry*

Factors (a) through (c) merely re-emphasize the need for an accurate assessment of the nature and extent of interdependence among utilizations in different national jurisdictions, of a given internationally shared natural resource, as a prerequisite for any analysis of the legitimacy of a utilization under examination. In other words, and as already indicated above, to the extent a natural resource may be said to be shared by two or more states in that a use of the resource in one national jurisdiction is capable of producing detrimental environmental effects in another, the interests bearing on the issue of utilization, of any of the potentially affected states, fall within the scope of inquiry.

B. *The Protection of Existing Beneficial Uses*

It is a well-recognized tenet of the principle of equitable use that the fact of prior existence of a beneficial use is an important criterion in deciding a conflict of competing uses. Express reference to the relevance of this criterion is made in factor (d) of Article V, in the corresponding AALCC formulations (45), as well as in, for example, *Washington v. Oregon* (46).

In a recent discussion in the General Assembly's Sixth Committee, the representative of Bangladesh referred to the protection of existing beneficial uses as « the first and most important criterion for determining what was equitable in respect of international waters », and based his view on inter alia a resolution by the Inter-American Bar Association (47). Article 2 of the latter's 1957 resolution on the Principles of Law Governing the Use of International Rivers, does indeed contain a strongly worded defense of « existing beneficial uses » : States that share in a natural resource are under a duty to recognize « the right of each state to the maintenance of the status of existing beneficial uses and to enjoy, according to the relative needs of the respective states, benefits of future developments » (48). It must, however, be

(45) Proposition III, para (c), *supra* note 22, at 228.

(46) 297 U.S. 517, at 527.

(47) *Inter-American Bar Association, Proceedings of the Tenth Conference, Buenos Aires 1957*, reproduced in [1974] ILC Yearbook (vol. II, part II) 208, para. 1092.

(48) *Ibid.*

obvious that such an emphasis on the preservation of existing beneficial uses is hardly compatible with the idea of equitable use, for to hold otherwise would mean that a state which might succeed in prior appropriation of all the waters of the basin to the exclusion of its co-basin states, would have a valid legal defense. Obviously such an arrangement would make a mockery of the idea of the equality of right.

The relativity of the protection accorded to existing beneficial uses emerges clearly in, e.g., *Nebraska v. Wyoming* (49). In that case the U.S. Supreme Court, while acknowledging the fundamental relevance of prior appropriation of waters, held that this principle had to be balanced against other factors and that therefore « existing use » was not per se the decisive element in determining the nature of the apportionment of waters of an inter-state stream as equitable :

« Priority of appropriation is the guiding principle but physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of waterful uses on downstream areas, the damage to upstream areas as compared to the benefits to downstream areas if the limitation is imposed on the former — these are all relevant factors. They are merely illustrative, not an exhaustive catalog. They indicate the nature of the problem of apportionment, the delicate adjustment of interest which must be made » (50).

Indeed, the fact that the protection of existing uses is subject to certain other conditions is reinforced by Article VIII of the Helsinki Rules which in paragraph (1) states :

« An existing reasonable use may continue in operation unless the factors justifying its continuance are outweighed by other factors leading to the conclusion that it be modified or terminated so as to accommodate a competing incompatible use » (51).

The corresponding provision of the AALCC document is contained in proposition VIII, paragraph (1) (52).

Additional questions may arise as to when a given use may be said to exist and as to the implications of the requirement that an existing use be beneficial.

As to the latter question, comment (b) on Article IV of the Helsinki Rules characterizes « beneficial use » as one that is economically and socially valuable without necessarily constituting the most efficient utilization (53). In e.g. *Washington v. Oregon*, the U.S. Supreme Court had earlier noted that « [t]he essence of the doctrine of prior appropriation ... [was] beneficial use, not a stale and barren claim », and one that « [o]nly diligence and good faith ... [would] keep alive » (54).

(49) 325 U.S. 589.

(50) *Id.* at 618; recited e.g. in *Illinois v. City of Milwaukee*, 406 U.S. 91, at 106.

(51) *Supra* note 21, at 493.

(52) *Supra* note 22.

(53) *Supra* note 21, at 487.

(54) 297 U.S. 517, at 527.

In regard to the former issue, both the Helsinki Rules (Art. VIII, paragraph 2 (a) and the draft proposition of the AALCC agree that a use must be deemed in existence « from the time of the initiation of construction directly related to the use or, when such construction is not required, the undertaking of comparable acts of actual implementation » (55). Correspondingly, an existing use loses its status through discontinuance of the use with the intention — express or implicit — to abandon it (Art. VIII, paragraph 2 (b) of the Helsinki Rules; AALCC proposition VII, paragraph 2 (b) (56).

C. Denial of Protection of Possible Future Uses

Closely related to the issue of protection of existing uses is the question of whether a state might be denied the present equitable use on the grounds that such a use would constitute an unreasonable interference with a contemplated future use of the environmental resource by another state.

There is little doubt that a reservation for a future utilization by a state, of a given share in the use of a natural resource, is incompatible with the basic maxim that the aggregate utilization of a resource concerned ought to be maximized. Article VII of the Helsinki Rules and proposition VI of the AALCC draft flatly reject the idea of a reservation for future purposes (57). So did, in an instructive fashion, the U.S. Supreme Court in *Connecticut v. Massachusetts* (58). In reviewing arguments supporting the granting of an injunction against a diversion by Massachusetts of waters of an inter-state river, the court concluded :

At most, there is a mere possibility that at some undisclosed time the owner [of an allegedly affected power station in Connecticut], were it not for the diversion, might construct additional works capable of using all the flow of the river including the waters proposed to be taken by Massachusetts. The injunction will not issue in the absence of actual or presently threatened interference (59).

D. The Absence of Any Inherent Preference Among Competing Uses

The principle of equitable use the main feature of which is its flexibility based on a contextual analysis of any given situation of interdependent resource utilizations, cannot, of course, be construed to entail recognition of certain uses as inherently preferable over others.

It is true that in *Connecticut v. Massachusetts*, for example, the Supreme Court found in what appears to be very general language, that « [d]rinking and other domestic purposes are the highest uses of water; » (60) and proposition V of the AALCC stipulates that « special weight should be given to

(55) Proposition VII, para. (1), *supra* note 22.

(56) *Supra* note w, at 493; and *supra* note 22.

(57) *Supra* note 21, at 492; and *supra* note 22, respectively.

(58) 282 U.S. 660.

(59) *Id.* at 673.

(60) *Id.*

uses which are the basis of life, such as consumptive uses » (61). However, since factual circumstances tend to vary from case to case of interdependent national utilizations of natural resources, no abstract ranking of uses is logically compatible with the over-riding goal of the maximization of the benefits flowing from the use of the resource as a whole.

The rejection of the idea of an inherent priority among uses is reiterated in Art. VI of the Helsinki Rules and is strongly echoed in the replies by various national governments to the International Law Commission's questionnaire on its provisional study outline of the question of fresh water uses. Several governments thus were at pains to stress that agreement to the ILC's listing of possible uses to be studied by the Commission, should not be construed to indicate acknowledgment of any established priority among them (62).

It follows that a resource polluting use is merely one of many conceivable beneficial utilizations of the resource and thus, in the abstract, on the same level of protection as other uses. A transfrontier pollution generating use is, therefore, not inherently incompatible with the principle of equitable use (62 a). However, as a polluting use may in general prejudice more than one concurrent use of the resource (in the case of an international watercourse these might include the use of water for irrigation, fishing, as drinking water, and the water's aesthetic function) it might tend to amount to an inefficient use. Its nature as an equitable one would thus be subject to doubt.

E. The Fundamental Stipulation that the Overall Resource Use Be Efficient

Maximization of the aggregate benefit of an internationally shared natural resource which is subject to competing national utilizations is the basic goal that inspires any management arrangement based on the principle of equitable use. As such it has already been dwelled upon in general terms. More specifically speaking, it may be noted that the fact that states enjoy an equality of right in respect of the use of an internationally shared natural resource does not imply that they are also entitled to equal shares in its utilization. Rather a state's claim to a share in the use of the resource concerned, will find recognition as prevailing over competing other claims to the extent it is perceived to be consonant with the maximization goal. Hence, for example, the rejection of the legitimacy of a claim that aims at reserving a share in the resource utilization for future activation at the cost of preventing an existing beneficial one.

(61) *Supra* note 22.

(62) *E.g.* the Governments of Brazil, Ecuador, Poland & Spain : U.N. Doc. A/CN.4/294, 48-56 (1976).

(62a) *Cf.* in this context the review, by the U.S. National Academy of Science, of the Environmental Protection Agency's antipollution regulations. It concluded that *e.g.* regulations governing oil and gas production in offshore areas were « generally not cost effective or even necessary » adding, « There... [was] little evidence to justify zero-discharge technology except for particularly susceptible areas » : N.Y. Times, June 28, 1977, 12, col. 3.

Ascertainment of whether a specific claim is compatible with the basic objective of making the overall use of the natural resource an efficient one as between the sharing states, requires a comparative analysis of the competing claims on the basis of criteria as listed in Art. V of the Helsinki Rules. Within the framework of, in particular, the economic and social needs of the countries concerned, these criteria include inter alia the availability to countries of alternative means to satisfy their respective needs, the degree to which the individual states' claims themselves aim at efficient resource uses, and the possibility of accommodating conflicting uses through partial modifications by way of compensatory payments etc.

Again, the Helsinki Rules merely reflect accurately relevant practice. For the importance of the above criteria for determining what constitutes an equitable use — with maximization of resource utilization as the basic point of reference — is confirmed by decisions in various quasi-international decisions as well as by the substance of international agreements relating to the allocation of shares in the use of natural resources common to two or more states.

Examples in point include *Connecticut v. Massachusetts* in which the U.S. Supreme Court went into a detailed consideration of the implications for the two litigant states of a theoretically feasible alternative arrangement under which Massachusetts could have avoided recourse to a diversion of waters from an inter-state stream and hence any possibility of conflict with Connecticut as the lower riparian. Clearly with the idea of optimum utilization in mind, the Court upheld Massachusetts' claim as both serving the interests of the state better than the alternative arrangement and as entailing no significant detrimental impact on Connecticut (63). In *Kansas v. Colorado* the Supreme Court in considering the change brought about in Kansas, the lower riparian, subsequent to the appropriation, by Colorado, of a certain portion of the flow of the inter-state river concerned, noted :

[I]f there may be many thousands of acres in Colorado destitute of vegetation, which by the taking of water from the Arkansas River and in no other way can be made valuable as arable lands producing an abundance of vegetable growth, and this transformation of desert land has the effect, through percolation of water in the soil, or in any other way, of giving to Kansas territory, although not in the Arkansas Valley, a benefit from water as great as that which would enure by keeping the flow of the Arkansas in its channel undiminished, then we may rightfully regard the usefulness to Colorado as justifying its action... (64).

An interesting example of a modification of a given use inspired by the quest for a maximization of the overall utility of an internationally shared natural resource, is the solution to the long-standing chloride pollution problem of the Rhine. In the 1976 Convention on the Protection of the Rhine Against Pollution of Chlorides (65) France undertakes to substantially re-

(63) *Supra* note 58, at 668-74.

(64) *Supra* note 35.

(65) English text in 16 *Int'l Leg. Mat.* 263 (1977).

duce its chloride discharges into the river. Thirty percent of the costs of the change in this dumping practice are to be borne by France and 39 percent by the Netherlands whose agricultural interests suffered significantly from the French discharges while the rest is to be defrayed by Switzerland and West-Germany (66).

What these cases share is the promise that efficient resource uses ultimately will prevail over competing inefficient ones. It can be concluded therefore that although states are not under a legal duty to per se relinquish an inefficient use for the sake of any one more efficient competing use by another state, both economic sense and the internationally owed commitment flowing from the principle of equitable use, to seek a solution that maximizes the aggregate resource utility, will dictate such an outcome. What form this adjustment will take in a specific situation, whether a modification will be achievable by way of compensatory payments to the inefficient — from the perspective of overall resource utility — user, will depend on the economics of the particular transfrontier pollution, on the weight to be given to the various factors listed in Art. V of the Helsinki Rules.

F. *The Applicability of the Principle of Non-Discrimination*

Title C of the OECD Guiding Principles on Transfrontier Pollution (C(74)224) and, more recently, Principle 3 of OECD Council Recommendation for the Implementation of A Regime of Equal Right of Access and

(66) Consonant with the maximization goal, an international agreement may — in a given situation — provide for a continuation of transfrontier pollution against payment of indemnity. As to one such case involving transfrontier air pollution by the Alusuisse Co., see *P. Dupuy and H. Smets, La responsabilité internationale pour les dommages dus à la pollution transfrontière, Rapport préparé pour la réunion de Groupe de travail des experts gouvernementaux et autres sur le devoir et la responsabilité en matière d'environnement, PNUE, Nairobi, février 1977*, 10 (texte provisoire), citing *J. Ballenegger, La pollution en droit international*, 224-26 (1977). Cf. in this context also McDougal and Schlei, *The Hydrogen Bomb Tests in Perspective: Lawful Measures for Security*, 64 *Yale L.J.* 648, at 694-95 (1954-55). As a general rule, however, states cannot be considered to be entitled to buy transnational pollution easements by way of compensation for the extraterritorial damage inflicted: see e.g. the classic statement in the *Trail Smelter* decision, *supra* note 20, at 1965-66; and, of course, Principle 21 of the Stockholm Declaration, *supra* note 16.

For an example revealing drastically the potential tension between the latter international legal principle, namely the duty to avoid the infliction of significant transnational environmental harm, and the principle that as between interdependent states the utilizations of the shared natural resource concerned be maximized, see the Scandinavian concern over the involuntary import of sulphur-dioxide and sulphate from in particular Britain. (As to the import/export ratios for various European countries, see *Steps Towards Controlling the «Export» of Air Pollution*, in *OECD Observer*, N° 88/Sept. 1977, 6, at 8.). It has been suggested that the therefrom resulting diseconomy to, for example, the Norwegian fishing industry, «on a scale of ten million dollars at the most,... [could] only be countered by corrective action on a European-wide basis costing at least one thousand million dollars, maybe ten times as much»: *Million-Dollar Problem - Billion-Dollar Solution?*, 268 *Nature* N° 5616, 89 (1977). It should be obvious that an accommodation of the conflicting national claims to the utilization of shared environmental resources while aiming at a reduction of transnational pollution, must be sought along the lines of a maximization of the aggregate utility of the resource concerned.

Non-Discrimination in Relation to Transfrontier Pollution (C(77)28 [Final]) (67) suggest that states in the use of an internationally shared natural resource, i.e., one that is capable of producing significantly detrimental trans-frontier environmental effects, should be held to their own standards of environmental protection, if under these standards the negative transnational environmental impact could be avoided.

Apart from the question of estoppel, such a standard of conduct with regard to the natural resource certainly flows from the basic tenet of the principle of equitable use according to which it is a state's duty to attempt, in good faith, to reconcile its own interests in the shared resource with potentially conflicting interests of other, sharing states. A state may therefore be said to be obliged to enforce at least the same standards of environmental conduct which would be applicable to non-internationally shared environmental resources within its territory, to uses of natural resources which it shares with two or more states.

Thus *Kansas v. Colorado* provides an early confirmation of the proposition that resource utilization standards applicable to a non-shareable resource within a national jurisdiction provide a guide of conduct which a state is not free to disregard in this use, to the detriment of the internationally shared resource.

As Kansas thus recognizes the right of appropriating the waters of a stream [within its own boundaries] for the purpose of irrigation, subject to the condition of an equitable diversion between the riparian proprietors, she cannot complain if the same rule is administered between herself and a sister State » (68).

Similarly, Council of Europe resolution (71) 5 recommends the application of a standard of non-discrimination between national and transnational environmental effects in border areas due to air pollution (69).

In short, a state may not externalize the environmental costs of the use of an internationally shared environment by risking a transfrontier degradation of the natural resource concerned, if an externalization of the environmental costs — if felt within the national territory — would be impermissible under that state's laws.

IV. SPECIFIC PROCEDURAL ASPECTS OF EQUITABLE USE : ENVIRONMENTAL DISPUTE PREVENTION

1. THE GENERAL BACKGROUND

A very significant role from the point of view of anticipating and hence avoiding international environmental disputes, is played by the procedural

(67) *Supra* note 3.

(68) *Supra* note 35, at 104-05.

(69) 19 *European Yearbook* 263 (1971).

restraints that have their origin in the principle of equitable utilization and which tend to re-inforce the relevance of the substantive limitations already incumbent on states' unilateral use of an internationally shared natural resource.

In the *Lake Lanoux* case the arbitration tribunal established very pertinently the relationship between factual environmental interdependence and states' procedural duties arising in the context of a given contemplated use. Starting again from the fundamental premise that states of necessity have — by mutual concessions — to reconcile conflicting interests brought into play by the use of a common natural resource, it states :

The only way to arrive at such compromises of interests is to conclude agreements on an increasingly comprehensive basis. International practice reflects the conviction that states ought to strive to conclude such agreements; there would thus appear to be an obligation to accept in good faith all communications and contracts which could, by broad comparison on interests and reciprocal good will, provide states with the best conditions for concluding agreements » (70).

The interesting aspect from a perspective of preventing disputes is the implications of what the tribunal and *e.g.* the U.S. Supreme Court in *New York v. New Jersey* (71) characterize as the ultimate method of adjusting competing claims to the rightful use of an internationally shared natural resource : the conclusion of agreements reflective of mutual concessions. For the process towards that goal entails steps which according to the *Lake Lanoux* tribunal's either express or implicit findings, the potentially involved states are required to take in good faith and which bear directly on the issue of the avoidance of international environmental conflicts :

(1) Exchange of information relevant to the projected use which includes both the duty on the part of the acting state to provide information to potentially affected states and to accept and consider pertinent information from the latter.

(2) Discussions with these interested states concerning the projected use with a view towards accommodating potentially conflicting interests.

These steps trace their origin to the principle of equitable use. In fact they presuppose what might be called the « duty to make an environmental impact assessment ». Such a duty though perhaps not recognized as one imposed by present-day international law (71 a), found the consensus of UNEP's Intergovernmental Working Group on « Draft Principles of Conduct » :

States should make environmental assessments before engaging in any activity with respect to a shared natural resource which may create a risk of significantly affecting the environment of another State or States sharing that resource » (72).

(70) *Supra* note 10, at 129-30.

(71) 256 U.S. 296, at 313.

(71a) For the generally guarded characterization by the Working Group of the legal implications of its formulations see U.N. Doc. UNEP/IG. 10/2, 5 (1977); and U.N. Doc. UNEP/IG. 7/3, 6 (1977).

(72) U.N. Doc. UNEP/IG. 10/2, 8 (1977).

A duty to make a transnational environmental impact assessment has also found expression in OECD Council Recomms. on Coastal Zone Management (73) and on the Implementation of a Regime of Equal Rights of Access and Non-Discrimination in Relation to Transfrontier Pollution :

When preparing and giving effect to their policies affecting the environment, Countries should... take fully into consideration the effects of such policies on the environment of exposed Countries so as to protect such environment against trans-frontier pollution (74).

Finally, Article 207 of the Informal Composite Negotiating text that has emerged from the various sessions of the Third Law of the Sea Conference, stipulates clearly :

When States have reasonable grounds for expecting that planned activities under their jurisdiction or control may cause substantial pollution of, or significant and harmful changes to, the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments... (75).

Indeed, what must be concluded is that if 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 » (76), compliance with this obligation presupposes compliance with a duty of assessment of potential transnational effects of contemplated national activity. There can be little doubt then that the steps enumerated by the tribunal in terms of general legal requirements incumbent upon States contemplating the use of a common natural resource, are part and parcel of today's international environmental law.

A. *The Existence of an International Duty of Information and Consultation*

At the Stockholm Conference on the Human Environment itself, the provision on prior information and consultation contemplated for inclusion in the Declaration proved to be somewhat controversial. Although a then

(73) OECD Doc. C(76) 161 (Final) 5, para. 22.

(74) Principle 1, OECD Doc. (77) 28 (Final) Annex 4.

(75) U.N. Doc. A/CONF. 62/WP.10, 111 (1977).

Cf. also Goldie, « Impact Reports » : A Domestic Law Analogy for International Legislation, 1 *Syracuse J. of Int'l L.* 39 (1972-73); and Goldie, International Impact Reports and the Conservation of the Ocean Environment, 13 *Nat. Res. J.* 256 (1973). Note further that national legislation increasingly requires transnational impact analyses for projected national activities carrying a risk of extraterritorial environmental effects. Thus note e.g. the applicability of the U.S. National Environmental Policy Act's (NEPA's) Sec. 102(2)(C) — the requirement of an environmental impact statement (EIS) — to at least activities, within the United States, with a transnational impact potential : see *Wilderness Soc'y v. Morton*, 463 F.2d 1261, at 1262-63 (1972); see further the 1976 Council on Environmental Quality Memorandum to Heads of Agencies on Applying the EIS Requirement to Environmental Impacts Abroad, reproduced in 15 *Int'l Leg. Mat.* 1427 (1976).

(76) Principle 21 of the Stockholm Declaration, *supra* note 16.

Principle 20 stipulating a duty of prior information was included in the report of the Intergovernmental Working Group on the Declaration on the Human Environment (77), which was forwarded by the Preparatory Committee without changes to the conference (78), the conference Working Group on the Declaration itself failed to submit the provision to the plenary session and instead recommended its consideration by the General Assembly at its 27th session (79). Subsequent action by the General Assembly resulted in the adoption of resolution 2995 (XXVII) which in its provisions on prior information and consultation lays down the following :

... cooperation between states in the field of the environment, including cooperation towards the implementation of principles 21 and 22 of the Declaration of the Stockholm Conference on the Human Environment, will be effectively achieved if official and public knowledge is provided of the technical data relating to the work to be carried out by states within their national jurisdiction, with a view to avoiding significant harm that may occur in the environment of the adjacent area.

... the technical data referred to in paragraph 2 above, will be given and received in the best spirit of cooperation and good neighborliness without this being construed as enabling each state to delay or impede the programs and projects of exploration, exploitation and development of the natural resources of the state in whose territory such programs and projects are carried out (80).

This resolution was substantially reinforced by General Assembly resolution 3129 (XXVIII) which stipulates quite clearly that « cooperation between countries sharing such [internationally shared natural] resources and interested in their exploitation must be developed on the basis of a system of information and prior consultation within the framework of normal relations existing between them » (81).

The same strong wording of a duty of prior information and consultation, can be found in Article 3 of the Charter of Economic Rights and Duties of States which declares : « In the exploitation of natural resources shared by two or more countries, each state must cooperate on the basis of a system of information and prior consultation in order to achieve optimum use of such resources without causing damage to the legitimate interest of others » (82).

The formal legal status of these resolutions as well as the significant number of abstentions from the recorded vote in one instance (83) does not

(77) U.N. Doc. A/CONF.48/PC.16, Annex III, 4 (1972).

(78) See U.N. Doc. A/CONF.48/PC.17, at 79, para. 83 (1972).

(79) See U.N. Doc. A/CONF.48/14, at 113 (1972).

(80) GAOR 27th Sess., Supp. 30, at 42.

(81) GA Res. on « Co-operation in the Field of the Environment Concerning Natural Resources Shared by Two or More States, U.N. Doc. A/RES/3129 (XXVIII), reproduced in 13 *Int'l Leg. Mat.* 232, at 233 (1974).

(82) *Supra* note 17.

(83) For example, the roll-call on GA res. 3281 (XXIX) adopting the Charter of Economic Rights and Duties of States was 77 votes in favor, 5 against and 43 abstentions. Yet, this fact could not be inveighed too heavily against the legal significance of the recitation of the duty of prior information and consultation as the abstaining and negative votes must presumably be explained as based on grounds quite unrelated to the question here under examination.

distract from the cited provisions' international legal relevance as reflective of widely held community expectations. For apart from the evidence introduced so far, there exists a fairly consistent pattern of state practice in respect of the duty of prior information and consultation that is in line with the provisions of the above resolutions and the findings of the *Lake Lanoux* tribunal.

Thus the duty of prior information and consultation is an essential feature of such bilateral or multilateral agreements as on weather modification (84), nuclear activities in frontier areas (85) the utilization of internationally shared fresh water resources (86) and activities in the marine environment (87). A UNEP report accordingly notes « ... that even in the absence of a joint commission or a formal convention or treaty, the principle of notification, exchange of information and prior consultation has been applied by some states with respect to proposed water utilization projects likely to affect significantly other co-riparian states of the basin » (88).

As a general legal consequence flowing from the principle of equitable utilization these obligations are also reflected in several declarations and in statements of principles adopted at international conferences or made by international non-governmental or, international regional, organizations. These documents often amount to authoritative expositions of the state of the law, or, in any event, given the peculiarities of the international law-making process, are highly significant in that they tend to reflect an emerging international consensus in respect of the provisions incorporated. An example in

(84) See e.g. Arts. I, II & IV of the U.S.-Canadian Agreement on Exchange of Information on Weather Modification Activities, 14 *Int'l Leg. Mat.* 589, at 590-92 (1975). For an extensive discussion see Handl, *An International Legal Perspective on Abnormally Dangerous Activities in Frontier Areas : The Case of Nuclear Power Plant Siting*, 7 *Ecology Law Quarterly* 1, at 24-27 (1978).

(85) See e.g. the 1974 agreement between Denmark, Finland, Norway and Sweden on Guidelines for Contacts concerning Nuclear Facilities in Border Areas with regard to Questions of Safety. English Translation of the text reproduced in 19 *Nuclear L. Bull.* 38-39 (1977); the arrangement between Spain and Portugal on co-operation on the siting of nuclear power plants in border areas, referred to in 20 *Nuclear L. Bull.* 32 (1978); the 1977 Agreement between Denmark and the FRG, regulating the Exchange of Information on the Construction of Nuclear installation along the Bord, text in 11 *Int'l Leg. Mat.* 214 (1978); and Handl, *supra* note 84, at 20, n. 135.

(86) See e.g. Art. 5 of the 1971 Act of Santiago (Argentina-Chile), U.N. Doc. A/CN.4/274 (vol. I) 180, at 181 (1974). For additional instances of state practice, see A.L. Levin, *Protection of the Human Environment : Procedures and Principles for Preventing and Resolving International Controversies* 3-5 (1977).

(87) See e.g. Art. 142, para. 2 of the Informal Composite Negotiating Text, *supra* note 75, at 76, which provides for consultations, including a system of prior notification, in respect of activities in the « Area », i.e., the seabed and ocean floor and subsoil thereof beyond the limits of national jurisdiction. See further the Decision of the OECD Council of 22 nd July 1977 establishing a Multinational Consultation and Surveillance Mechanism for Sea Dumping of Radioactive Waste, text in 20 *Nuclear L. Bull.* 37 (1978).

(88) Co-operation in the Field of the Environment Concerning Natural Resources shared by Two or More States, Report of the Executive Director, U.N. Doc. UNEP/GC/44, 8 (1975).

point is Article 5 of the Salzburg resolution of the Institute of International Law which provides that « works or utilizations referred to in the preceding article may not be undertaken except after previous notice to interested States » (89). The corresponding provision in the Helsinki Rules, namely Article XXIX, is framed only in terms of a recommendation (90); and the compromise texts on « notification, supply of additional information and consultation » as proposed by the chairman of UNEP's Intergovernmental Working Group on « Draft Principles of Conduct » are evenly balanced between recommendatory and obligatory concepts (91). Yet, proposition X of the AALCC states that « a state which proposes a change of the previously existing uses of the waters of an international drainage basin that might seriously affect utilization of the waters by another co-basin state, must first consult with the other interested co-basin states » (92). A similar and equally strongly worded obligation is embodied in Article 8 of the Inter-American Judicial Committee's 1965 Draft Convention on the Use of International Rivers and Lakes for Industrial and Agricultural Purposes (93). OECD work in the area of transfrontier pollution, may be taken to reflect at the very least a strong concern for the need for international co-operation on the basis of prior information and consultation. Thus, for example, Council Recomm. C(74)224 (Title E), C(76)161 (Final) (para. 22), C(77)28 (Final) (Title C) and most recently, C(78)77 (Final) (93a) have consistently espoused the position that states provide early information to other countries and enter into consultations with them in matters of transfrontier pollution or significant risks of such pollution (94).

Any lingering doubts as to the present-day existence of a duty of prior information and consultation should, however, be dispelled by a reconsideration of the substantive essence of the applicable principle of equitable utilization. For given the fundamental obligation of states to reconcile their interests in the use of an internationally shared natural resource with possibly conflicting interests of other states, assessment of the likely or possible transnational environmental impact, is a precondition for acting states to be able to fulfill their obligation. Thus the affected states' input in the acting states' decision-making process would appear to be essential to any accurate evaluation of transfrontier effects and the rational management of the com-

(89) 49 *Annuaire Institut Droit Int.* (vol. II) 381, at 382 (1961).

(90) *Supra* note 21, at 518.

(91) U.N. Doc. UNEP/GC/101, 10-11 (1977).

(92) *Supra* note 22, at 230.

(93) OEA/Documentos Oficiales, OEA/Ser. I/VI, CIJ-75 rev. 2, 131, at 133 (1971).

(93a) Annex I and II of the Recomm. for strengthening International Cooperation on Environmental Protection in Frontier Regions.

(94) See further Bourne, *Procedure in the Development of International Drainage Basins: The Duty to Consult and to Negotiate*, 10 *Canadian Yearbook of Int'l L.* 212, at 233 (1972); and cf. A.L. Levin, *supra* note 86, at 1-13. *Contra*, but unpersuasive, A. Ch. Kiss, *Survey of Current Developments in International Environmental Law*, IUCN Environmental Policy and Law Paper N° 10, 31 (1976).

mon resource. A duty of notification of a projected use, including the duty to supply data pertinent to the extent they characterize a transfrontier environmental impact potential, is an obvious procedural corollary to the substantive limits on states' unilateral action in a situation of interdependent, natural resource utilizations. So is the duty both to receive and consider data forwarded by the affected state, as well as the duty to enter into consultations.

In conclusion, there can be little doubt as to the existence of an international legal duty of prior information and of consultation which in the final analysis have their origin in the concept of equitable use. Therefore, even in the absence of an applicable treaty regime featuring such obligations, states contemplating the use of a given common natural resource, are subject to the requirements of prior information and consultation, provided of course the modalities of the use are not already specifically predetermined by applicable standards of resource utilization.

2. SCOPE AND NATURE OF THE DUTY OF PRIOR INFORMATION AND CONSULTATION

Broad and generic though the principle of equitable use appears at first sight, a functional analysis of its implications nevertheless permits some specific inferences.

As a preliminary step it should be reiterated that consistent with the above assessment of the substantive rights and duties of states in a given environmental dispute over the use of an internationally shared natural resource, the procedural duties are activated only if there is a significant risk of harmful transfrontier pollution. « Risk » is of course a composite notion that can very usefully be broken down to its elementary parts, namely, probability of the realization of the harmful occurrence and the consequences of this occurrence. In short, risk is definable as probability per consequence of a given event. « Significant risk » as the crucial criterion for the activation in a specific context of the duty of prior information and consultation (95), thus must be deemed to have reference to situations where the probability is low but the threatened consequences are severe as well as to situations where the contemplated use entails a high probability of transfrontier pollution of albeit minor consequences, provided the minimum threshold requirement is being met (96).

A. *The Duty to Provide Prior Information*

The duty of prior information arises vis-à-vis those countries which must or may reasonably be deemed to be exposed to a significant risk of transfrontier pollution associated with a given contemplated use of the shared natural resource. It goes without saying that sound policy suggests that the

(95) See e.g. Title C of OECD Council Recom. C(77)28 (Final), Annex 6, and UNEP's Draft Principles of Conduct, *supra* note 61, at 9; see further Handl, *supra* note 84, at 48-49.

(96) See *supra* TAN 20-24.

number of addressees be kept as large as reasonably possible since only such a strategy may help to establish the true dimension of the transnational environmental impact of the planned utilization.

« Appropriate information » on projected use should include any technical information pertinent to a verification by the exposed states of a preliminary transnational environmental impact assessment which should constitute the core of the acting states' initial notification. Such a duty, as noted above, could be inferred from the general proposition that states are under an obligation to consider possibly conflicting interests of other states and attempt to reconcile them with their own. Absent an arrangement for a joint international resource management, it would appear that the initial burden of making a preliminary transfrontier impact assessment thus lies with the acting state.

A crucial consideration in the process of this exchange of information is the element of time allowed the addressee to respond to the information supplied. Thus concern for this element emerges already in Recommendation 51 of the Stockholm Final Documents, in OECD Document C(74)224, and is strongly reflected in international agreements bearing on the use of internationally shared fresh water resources (97). The gist of these references to the time element is that the notified states may not unreasonably delay responding to the notification and thereby cause an unreasonable postponement of the initiation of the projected use. Or, conversely speaking, the acting state need only wait for a reasonable period of time before it can go ahead with the project on the assumption that the absence of a response after such a time indicates the absence of objections.

Requests, by either side, for additional pertinent information ought to be honored as long as they are made in good faith, a conclusion which is easily accommodated in the *Lake Lanoux* tribunal's holding. So is the duty of the acting state to receive and consider in good faith, any information supplied by the notified state(s) within a reasonable period of time.

B. *The Duty of Prior Consultation*

The concrete manifestation of the duty of prior consultation is, first, the duty — on the part of the acting state — to submit to a joint examination of the risk of significant transnational environmental effects associated with the proposed activity (98). Secondly, although the obligation to enter into con-

(97) *E.g.* the Act of Santiago, *supra* note 86, defines a period of reasonable time as one not exceeding five months.

(98) See, for example, the pledge by the Belgian Foreign Minister, that his government would not take a decision in respect of the siting of an oil refinery in the Liege area without a prior joint examination with Dutch authorities of the environmental aspects of the project : Response to parliamentary question N° 17, of Dec. 19, 1973, in 12 *Rev. Belge DI* 326 (1976); note further that in the case of the projected Dukovany nuclear power plant close by the Austrian-Czechoslovak border, the Austrian government demanded a joint safety evaluation of the project : *Die Presse*, July 30, 1975, 2; and 15 *Österr. Zeitschrift f. Aussenpolitik* 290 (1975); and see the safety consultation provision of Art. 6 of the Danish - German Agreement, *Supra* note 85, at 215.

sultations must be considered to arise generally upon the request by any one of the states to which a notification is due, it is questionable whether the principle of equitable utilization might not exceptionally require the acting state to seek such discussions regardless of any requests by the exposed states. Only acceptance of the principle of discussion upon request seems, it is true, to be fairly consistently reflected in state practice. On the other hand, Recommendation 70 of the Stockholm Final Documents stipulates indeed that states ought to « consult fully other interested states where activities carrying the risk of... [climatic] effects are being contemplated or implemented (99). This formulation although suffering from the critical shortcoming of being couched in recommendatory terms as well as referring to both planned and on-going activities, would nevertheless suggest that at times the initiative with regard to discussions of a projected use may lie with the acting state. However, state practice does not provide any authoritative guide as to this specific aspect of the relationship between the principle of equitable use and the duty of consultation prior to the initiation of a certain utilization.

Nevertheless, what can be gleaned from state practice and the fundamental tenets of the principle of equitable use, is the proposition that the greater the risk of transnational environmental damage associated with a proposed use of an internationally shared natural resource, the greater the likelihood that the acting state may be under an obligation to seek on its own initiative consultations with potentially affected countries. In other words, such an obligation would assure that states, which might otherwise merely receive a notification, would be particularly alerted to the risks they would become exposed to. Such an arrangement might be commendable in case of a major risk involved as a notified state, for one reason or another, might fail to take proper cognizance of the initial communication.

Lastly, the *Lake Lanoux* tribunal's statement that a duty of notification does not entail the duty to obtain the agreement from the notified state (100) extends comfortably to any duty of consultation. In other words, potentially affected states do not have a veto power in respect of a proposed use of an internationally shared natural resource despite the fact that such use carries a significant risk of transfrontier environmental damage (101), and some contrary evidence notwithstanding (102).

(99) *Supra* note 31, at 1449.

(100) *Supra* note 10, at 132.

(101) Rather they appear to be entitled to a « mutually acceptable solution » *see supra* TAN 70-71. This conclusion seems also to be borne out by decisions of the ICJ in analogous situations in which the Court instructed the parties to find an equitable solution to the respective disputes : *See North Sea Continental Shelf cases*, [1969] ICJ Rep. 3, at 48-55, paras. 87-101; and *Fisheries Jurisdiction case (United Kingdom of Great Britain and Northern Ireland v. Iceland)* Judgment of 25 July 1974, [1974] ICJ Rep. 3, at 30, para. 70. « Mutually acceptable solution » thus indicates the procedure for dispute settlement, namely by negotiations in which, as the ICJ put it, the conflicting interests of the parties are reconciled « in as equitable manner as possible » : *id.*

See further the report of the WMO/UNEP Informal Meeting on Legal Aspects of Weather Modification, Geneva, 17-21 Nov. 1975, U.N. Doc. UNEP/GC/61, Annex I, 8, para. 4.14 (1976),

V. FINAL ASSESSMENT

In the light of the foregoing exposition of the contents of the principle of equitable use it appears that even in the absence of specific conduct-related environmental protection standards, the legitimacy of a state's use of an internationally shared natural resource is quite extensively circumscribed by more readily ascertainable parameters than perhaps expected. A state which contemplates a utilization of a given internationally shared natural resource is thus subject to clear and far-reaching procedural restraints.

The twin pillars of these restraints, the duty of information and of consultation, aim at minimizing chances for a negative transfrontier environmental impact of the planned state activity by internationalizing the state's decision-making process in respect of that activity. At this stage clarity as to the basic interplay of substantive rights and duties of states in a situation of potentially conflicting uses of a common natural resource, will undoubtedly prove helpful in the search for a solution that avoids the emergence of a dispute (103) and is hence presumably in line with the overriding goal that the aggregate resource utilization be maximized.

which emphasizes « mutually acceptable arrangements » — as between the acting and risk-exposed states — regarding major weather modification activities.

(102) See e.g. Art. I, para. 3 of the res. adopted by the Inter-American Bar Association, *supra* note 47.

(103) See also comment (a) on Art. XXIX of the Helsinki Rules, *supra* note 21, at 519.