THE CODIFICATION OF THE LAW OF INTERNATIONAL WATERCOURSES: THE DRAFT ARTICLES ADOPTED BY THE INTERNATIONAL LAW COMMISSION

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SUMMARY: 1. Introduction.— 2. Background and overview of the ILC Draft Articles: A) Background of the ILC work on international watercourses; B) Survey of the Draft Articles adopted in 1994 by the ILC.— 3. The scope of the Draft Articles: A) The definition of international watercourse; B) The problem of transboundary confined groundwaters.— 4. The general principles: A) The principle of equitable utilization; B) The obligation not to cause significant harm; C) The relationship between the equitable utilization and the duty not to cause significant harm.— 5. The protection of international watercourses: A) Protection and preservation of ecosystems; B) Prevention, reduction and control of pollution.— 6. Conclusions.

1.— The utilization by States of the waters flowing in rivers which cross or border their respective territories raises complicated legal questions. In the not so distant past, riparian States kept rigid attitudes influenced by their geographical position on a shared watercourse: upstream States claimed absolute freedom to utilize transboundary waters regardless of the needs of downstream countries (absolute sovereignty theory), while the latters claimed the right to receive the unaffected natural flow of waters coming from upper countries (absolute territorial integrity theory)[1]. The first legal question, therefore, is to reconcile such absolute claims while allocating a quantity of

1. On the absolute sovereignty and territorial integrity theories, see BERBER, *Rivers in International Law*, London, 1959, p. 11 ff.; CAFLISCH, *Règles générales du droit des cours d'eau internationaux*, in *Recueil des Cours*, VII, 1989, p. 48-61; BRUHÁCS, *The Law of Non-Navigational Uses of International Watercourses*, Dordrecht, 1993, p. 41-48. For a survey of the disputes involving States riparian of international watercourses, see MCCAFFREY, *Water, Politics and International Law*, in GLEICK (ed.), *Water in Crisis - A Guide to the World's Fresh Water Resources*, Oxford, 1993, p. 92 ff.

water to each riparian State. Secondly, since the pollution of transboundary waters increases at the same rate as their intensive and multi-purpose economic exploitation, there is a problem of preserving the quality of the waters and related ecosystems[2].

In the absence of specific agreements among riparian States, general principles and rules of international law are called upon to solve these questions. In order to clarify such rules, the General Assembly in its resolution 2669(XXV) of 8 December 1970 recommended the International Law Commission (hereinafter "ILC" or "the Commission") to "take up the study of the law of the non-navigational uses of international watercourses with a view to its progressive development and codification"[3]. In 1994, after more than twenty years of work, the ILC completed its task with the adoption on second reading of a complete set of thirty-three draft articles on the topic. The Commission submitted the draft to the General Assembly, recommending the elaboration of a convention by the Assembly itself or by an international Conference of plenipotentiaries of States[4].

The purpose of the present paper is to analyze and comment on some selected issues dealt with in the ILC draft articles. Before engaging in the analysis, a brief consideration of the background of the ILC work on international watercourses and an overview of the draft finally adopted in 1994 is provided.

2.— A) In 1971, following the General Assembly resolution 2996 (XXV), the topic of international watercourses was included in the ILC general

2. On the problem of pollution of international watercourses see GAJA, *River Pollution in International Law*, in ACADÉMIE DE DROIT INTERNATIONAL DE LA HAYE, *La Protection de l'environnement et le droit international - Colloque 1973*, p. 353 ff.; SETTE-CAMARA, *Pollution of International Rivers*, in *Recueil des Cours*, III, 1984, p. 125 ff.; LAMMERS, *Pollution of International Watercourses*, The Hague, 1984; NOLLKAEMPER, *The Legal Regime for Transboundary Water Pollution: Between Discretion and Constraint*, Dordrecht, 1993.

3. See *Resolutions Adopted by the General Assembly during its Twenty-Fifth Session*, General Assembly Official Records, 25th Session, Suppl. n. 28 (UN Doc. A/8028), p. 127.

4. The text of the draft articles and of related commentaries, together with the recommendation of the ILC, are reproduced in *Report of the International Law Commission on the Work of its Forty-Sixth Session*, General Assembly Official Records, 49th Session, Suppl. n. 10, (UN Doc. A/49/10), chapter III, p. 195-326.

programme of work. At its 1974 session, the Commission set up a sub-committee to consider the subject. In its report, the sub-committee pointed out a number of preliminary issues - such as the scope and the exact meaning of the term "international watercourse", the uses of waters to be examined and the opportunity to deal with the problem of pollution of international watercourses - and proposed that a questionnaire on the issues be conveyed to Governments[5]. At its 1976 session, the Commission considered the replies of 21 governments to the questionnaire[6], together with the report of the first special rapporteur appointed for the topic, Richard D. Kearney. The general debate at that session led the Commission to draw the outlines of its future study on watercourses. First of all, the Commission decided not to pursue at the outset of the work the question of determining the exact scope of the term "international watercourse". Secondly, the ILC resolved to devote its attention to the formulation of general principles applicable to legal aspects of the uses of watercourses. The Commission pointed out, in this regard, that these principles should be designed to promote the adoption of régimes for individual international rivers and should be of a residual character. Thirdly, the Commission agreed to include problems related to pollution of international watercourses in the study[7].

During the following years, several changes in the special rapporteurship delayed the development of the draft. In 1980, the Commission was able to adopt a first group of six articles, proposed by the special rapporteur Stephen M. Schwebel, on a provisional basis[8]. Those articles were then withdrawn by the subsequent special rapporteur, Jens Evensen, and in 1984 a new set of nine articles, dealing with the general principles of the topic, was adopted[9].

5. The report of the sub-committee is reproduced in *Report of the International Law Commission on the Work of its Twenty-Sixth Session*, General Assembly Official Records, 29th Session, Suppl. n. 10 (UN Doc. A/9610/Rev. 1), p. 140-142.

6. See the text of the questionnaire and the replies of governments in *Yearbook of the International Law Commission* (hereinafter *ILC Yearbook*), 1976, vol. II, pt. one, p. 149 ff.

7. For these conclusions of the Commission see *Report of the Commission on the Work of its Twenty-Eight Session*, in *ILC Yearbook*, 1976, vol. II, pt. two, p. 153 ff. (in particular p. 162).

8. Cf. *Report of the Commission on the Work of its Thirty-Second Session*, in *ILC Yearbook*, 1980, vol. II, pt. two, p. 110 ff.

9. Cf. *Report of the Commission on the Work of its Thirty-Sixth Session*, in *ILC Yearbook*, 1984, vol. II, pt. two, p. 89 ff.

In 1985, the appointment of the new special rapporteur, Stephen C. McCaffrey, opened the way to a period of continuity in the study, a factor which led the Commission, during its session of 1991, to adopt on first reading a set of thirty-two articles[10]. At the same session the Commission decided to send the draft articles to governments, to elicit their comments and observations.

The consideration of the topic was resumed at the 1993 session. In the light of the comments received from 21 governments[11] and under the guidance of the newly appointed special rapporteur, Robert Rosenstock, the Commission made the necessary adjustments to the first reading, and at its 1994 session, adopted the second reading of the draft.

B) The draft articles adopted by ILC on second reading are similar in most respects to those approved in 1991. A significant change, apart from the redrafting of some provisions, is the addition of a new article 33 on settlement of disputes; moreover, a resolution on transboundary confined groundwater is annexed to the draft. On the whole, the draft is conceived as a framework instrument, setting forth general principles and rules that may be applied and adjusted by specific agreements among States sharing individual international watercourses.

In terms of structure, the thirty-three draft articles are organized in six parts or chapters. Part I, the Introduction, contains four articles devoted to the scope of the project (Art. 1), the use of terms (Art. 2), the application of the project to individual watercourses through specific watercourse agreements (Art. 3) and the position of riparian States in respect to watercourse agreements (Art. 4). Part II of the draft includes the general principles of the subject: the rule of equitable and reasonable utilization (Art. 5), the list of factors relevant to equitable utilization (Art. 6), the obligation not to cause significant harm to other watercourse States (Art. 7), the general obligation to cooperate with other watercourse States (Art. 8), the duty to exchange data and information concerning a shared watercourse on a regular basis (Art. 9) and the principle that no use enjoys inherent priority over other uses (Art. 10). Part III, entitled "Planned Measures", contains articles 11 to 19, which specify the

10. See the text of the articles adopted on first reading in *Report of the Commission on the Work of its Forty-Third Session*, in *ILC Yearbook*, 1991, vol. II, pt. two, p. 66-70.

11. Cf. *Comments and Observations Received from States*, UN Doc. A/CN.4/447 and *Addenda* 1, 2 and 3.

obligations of prior notification and consultation that bind riparian States in case of projected new uses of an international watercourse. Part IV includes seven articles, dealing respectively with the protection and preservation of ecosystems related to international watercourses (Art. 20), the prevention, reduction and control of pollution (Art. 21), the introduction of new species in an international watercourse (Art. 22), the protection and preservation of the marine environment (Art. 23), the joint management and the regulation of international watercourses (Arts. 24 and 25) and the maintenance and security of installations related thereto (Art. 26). Part V contains only two articles, devoted to the prevention and mitigation of harmful conditions resulting from natural causes or human conduct, such as floods, siltation, erosions, etc., and to the obligations of riparian States in emergency situations (Arts. 27 and 28). Part VI of the draft gathers, under the title of "Miscellaneous Provisions", a number of unrelated provisions on different subjects: protection of watercourses and related installations in times of armed conflict (Art. 29), indirect procedures of notification and consultation among watercourse States (Art. 30), data and information concerning watercourses vital to national security of riparian States (Art. 31), non-discrimination with regard to access to judicial or administrative procedures (Art. 32) and settlement of disputes (Art. 33).

In the following, selected aspectes of the draft articles will be discussed: the meaning of "international watercourse"; the two general principles of equitable utilization and prohibition to cause harm; and the question of the protection of watercourses and related ecosystems against pollution.

3.— A) The first aspect of the draft articles that deserves attention is the definition of the concept of international watercourse. This is of primary importance, since the scope of the constraints posed on States in the utilization of water resources located in their territories depends on the exact delimitation of the term "watercourse".

The central issue seems to be the determination of the components that form a watercourse and that, consequently, are subject to international regime. Generally speaking, States are not inclined towards broad interpretations of the term watercourse, or one that includes such hydrological components as tributaries, lakes, underground aquifers, glaciers, etc. which, although distinct from the main stem of a river, are connected with it .

On the other hand, it must be kept in mind that, due to the physical nature of water and its constant movement in streams, the different components of a watercourse listed above are integrally connected. As a consequence,

the negative impact of human activities in one part of a watercourse located within the territory of a particular State can spread and be perceived at other points of the same watercourse, located in the territories of other riparian States[12]. Therefore, the physical and hydrological unity of a watercourse must be considered by States in order to ensure the optimal management and the adequate protection of the watercourse itself.

These conflicting considerations emerged dramatically in 1974, when the Commission circulated a questionnaire to governments addressing the two questions of the scope of the definition of "international watercourse" and whether this definition should be based on the concept of "drainage basin". The drainage basin concept, elaborated mainly in the Helsinki Rules on the Use of Waters of International Rivers, adopted by the International Law Association in 1966, refers to the entire geographic area (known as "watershed") in which all the sources, both surface and underground, that provide water to the main river are situated[13].

The replies of the governments to these questions revealed a sharp division of opinions. In particular, the issue of the term "drainage basin" being used in the draft articles proved to be highly controversial. Certain countries (generally downstream) pronounced themselves in favour of that notion, arguing that the drainage basin would provide a sound conceptual basis for dealing with the hydrographic coherence of a watercourse, and would reflect the legal relevance of the interdependence among its various components[14].

On the other hand, some upstream States strongly opposed the inclusion of the term drainage basin in the draft articles, fearing that the geographical implications involved in that concept could open the way to undue restrictions on the sovereignty of States in freely disposing of the land areas through which an international river flows[15]. The same States favoured the inclusion of a narrower approach based on the "traditional" definition of international watercourse, which appears in some ancient treaties on river navigation. This

12. See, for these considerations, SCHWEBEL, *First Report on the Law of the Non-Navigational Uses of International Watercourses*, in *ILC Yearbook*, 1979, vol. II, pt. one, p. 146 ff.

13. See Art. II of the Helsinki Rules in INTERNATIONAL LAW ASSOCIATION, *Report of the Fifty-Second Conference*, Helsinki, 1996, p. 484-485.

14. See in particular the replies of Argentina, Finland, United States, in *ILC Yearbook*, 1976, vol. II, pt. one, p. 152, 154 and 160.

15. See for example the comments of Brazil, Ecuador and Spain, *ibidem*, p. 152-153, 154, 159-160.

definition limits the concept of international watercourse to the main surface water channel of a river that crosses or borders the territories of different States, and is intended to exclude not only tributaries, but also other hydrographic components such as groundwater[16].

The same difference of views emerged among the members of the ILC[17]. In the absence of a consensus over the definition of international watercourse, and in order not to compromise the advancement of the draft articles, the Commission decided to defer the consideration of the question of the use of terms to a later stage of its work.

The Commission was able to agree on a definition of international watercourse only at its 1991 session, at the time of the adoption of the entire first reading of the draft articles[18]. The same definition appears, with slight modifications, in the second reading of the draft, adopted in 1994. According to Art. 2 of this draft, an international watercourse is "a watercourse, parts of which are situated in different States", and a watercourse is further defined as "a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus"[19].

The definition in Art. 2 is based on the watercourse as a hydrologic system formed by a number of different components, both surface and underground, through which water flows. Hence, as long as these elements are physically interrelated, they form part of a watercourse. Moreover, the system

16. The traditional definition of international river is deduced from Art. 108 of the Final Act of the Congress of Vienna of 1815, which provides that "The Powers whose States *are separated, or crossed by the same navigable river*, engage to regulate, by common consent, all that regards its navigation" (text reprinted in CAPONERA (ed.), *The Law of International Water Resources*, FAO Legislative Study n. 23, Rome, 1980, p. 29 - emphasis added).

17. See the summary records of the debates held during the 1976 session of the Commission, in *ILC Yearbook*, 1974, vol. I, p. 286-283. For more details on the various positions expressed in the ILC and in the Sixth Committee of the General Assembly on the questions of the definition of international watercourse, see WESCOAT, *Beyond the River Basin: The Changing Geography of International Watercourse Law*, in Colorado Journal of International Environmental Law and Policy, 1992, p. 301 ff.

18. See *Report of the Commission on the Work of its Forty-Third Session*, in *ILC Yearbook*, 1991, vol. II, pt. two, p. 63-66. See also MCCAFFREY, *Seventh Report on the Law of the Non-Navigational Uses of International Watercourses*, in *ILC Yearbook*, 1991, vol. II, pt. one, p. 49 ff.

19. See UN Doc. A/49/10 cit., p. 199.

of surface and underground waters must normally flow into a "common terminus". The "common terminus" requirement is intended to prevent that, for example, two different river basins connected by an artificial canal can be considered as a single watercourse for the purpose of the draft articles. This way, a limitation is introduced in the geographic scope of the draft articles[20].

As a whole, the definition included in draft Art. 2 appears as a viable compromise between the two conceptual interpretations of the meaning of international watercourse described above. On the one hand, the concept of hydrological system helps to overcome the limits of the traditional definition of international watercourse, making it clear that a watercourse is not merely "a pipe carrying water", but a complex hydrological reality whose components are relevant for the purposes of international legal regulation. On the other hand, the description of watercourse as a system of water components helps to avoid the "territorial" implications of the concept of drainage basin, suggesting that the draft articles apply only to international water resources of States and not to their land territories.

In fact, some doubts remains as to the extent to which the activities of States on land could be totally ignored or excluded from the scope of a legal regime governing the utilization of international watercourses. Such doubts are justifiable considering that certain land-use activities could affect the natural conditions of a watercourse (*i.e.* deforestation)[21], or cause the indirect pollution of its waters (*i.e.* the dumping of toxic wastes onto the land)[22]. In order to deal with these problems, it seems appropriate to adopt a wider notion of international watercourse. In this respect, it is interesting to note that in some recent international conventions riparian States have used terms as "river

20. See the commentary of the Commission to Art. 2, *ibidem*, p. 200-201.

21. See MCCAFFREY, *Fifth Report on the Law of the Non-Navigational Uses of International Watercourses*, in *ILC Yearbook*, 1989, vol.II, pt. one, p. 93-97; BANKES, *International Watercourse Law and Forests*, in CANADIAN COUNCIL OF INTERNATIONAL LAW (ed.), *Global Forests and International Environmental Law*, Dordrecht, 1996, p. 137 ff.;

22. Cf. MCCAFFREY, *Seventh Report* cit., p. 59, para. 56 (especially footnote 97). The concept of "basin" appears particularly suitable in dealing with the problems of cross media-pollution: see HOHMANN, *Cross-Media Pollution and International Environmental Law*, in Natural Resources Journal, 1994, p. 536-539. See also the Draft Articles on the Relationship between Water, Other Natural Resources and the Environment, adopted in 1980 by the International Law Association, in INTERNATIONAL LAW ASSOCIATION, *Report of the Fifty-Ninth Conference*, Belgrade, 1980, p. 373 ff.

basin" or "catchment area" to define the scope of the obligations they have assumed to ensure the adequate protection of their shared watercourses[23].

Be that as it may, the definition finally elaborated by the ILC probably represents a positive achievement in terms of its being acceptable to States. This conclusion seems corroborated by the support for Art. 2 of the draft expressed by State delegates during the 1994 session of the Sixth Committee[24].

B) A more specific problem raised by draft Art. 2 is whether it covers all transboundary groundwaters. The definition of international watercourse as a system of water components constituting a unitary whole by virtue of their physical relationship entails as a consequence that groundwaters are part of the system only to the extent that they interact (are physically linked) with the surface waters forming a watercourse. As a result, the so-called "confined groundwaters", that is underground aquifers with no relationship with surface waters, are excluded from the definition of "international watercourse" embodied in draft Art. 2.

Despite the ILC unwillingness to include confined groundwaters in the scope of the draft articles adopted in the first reading in 1991, the special rapporteur Rosenstock suggested that the question be reconsidered during the examination of the second reading of the draft[25]. Finally, the Commission decided to annex a resolution on transboundary confined groundwaters to the

23. See for example Art. 1 of the Agreement on the Cooperation for the Protection and Sustainable Use of the Danube (Sofia, 20 June 1994 - text in BURHENNE, *International Environmental Law - Multilateral Agreements*, 994:49/1), where the terms "catchment area" and "hydrological river basin" appear; Arts. 1 and 3 of the twin Conventions for the Protection of the River Meuse and the River Scheldt (Charleville Meziers, 26 april 1994 - text in *International Legal Materials*, 1995, p. 854 and 859), where the terms "river basin" and "drainage area" are used. See also the 1992 Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes (text in *International Legal Materials*, 1992, p. 1312): although Art. 1 of this Convention contains the definition of "Transboundary waters", Art. 9 further provides that "... Riparian Parties shall specify the *catchment areas*, or part(s) thereof, subject to cooperation" (emphasis added).

24. See *Topical Summary of the Discussion Held in the Sixth Committee of the General Assembly during its Forty-Ninth Session* [1994], UN Doc. A/CN.4/464/Add.1, p. 46-47.

25. Cf. ROSENSTOCK, *First Report on the Law of the Non-Navigational Uses of International Watercourses*, UN Doc A/CN.4/451, p. 5-6.

second reading of the draft articles. In this resolution the Commission, recognizing "the need for continuing efforts to elaborate rules pertaining to confined transboundary groundwaters", recommends States "to be guided by the principles contained in the draft articles on the law of the non-navigational uses of international watercourses, where appropriate, in regulating confined transboundary groundwaters"[26].

The intermediate course taken by the Commission in 1994 may have resulted partly from the lack of a proper understanding of the physical features of confined groundwaters and of their interconnections with surface waters. More realistically, the Commission's choice was also influenced by its wish not to extend excessively the scope of the draft articles[27]. Be that as it may, it seems odd, however, that a draft, of which the main purpose is to establish a comprehensive legal framework for the utilization of international water resources, excludes from its application an important category of underground aquifers. This result is even more unfortunate if one considers the recent trends in the field of water management, as expressed by various international instruments, such as the Agenda 21 adopted at the 1992 United Nations Conference on Environment and Development[28]. These instruments consider the integrated management and planning of all types of water resources, including groundwaters, as the most adequate way to attain their proper utilization and protection[29].

Moreover, it seems that the general principles that lie at the core of the ILC articles - such as the principle of equitable utilization and the obligation not to cause harm embodied in draft Arts. 5 and 7 - will also cover the problems relating to the use and management of confined groundwaters. It is worth noting that the same principles are expressly recalled by the recent instruments where Israelis and Palestinians addressed the issue of the equitable apportionment of the (confined) groundwaters contained in the West Bank aquifers[30].

26. Text in UN Doc A/49/10 cit., p. 326.

27. See *Report of the Commission on the Work of Its Forty-Fifth Session*, in *ILC Yearbook*, 1993, vol. II, pt. two, p. 88.

28. See Chapter 18 of Agenda 21 in *Report of the United Nations Conference on Environment and Development*, UN Doc. A/CONF.151/26 (Vol. II), p. 167 ff.

29. For a thorough assessment of such instruments see ROSENSTOCK, *Second Report on the Law of the Non-Navigational Uses of International Watercourses*, UN Doc. A/CN.4/462, p. 29-33.

30. See para. 1 of Annex III to the Declaration of Principles on Interim Self-Government Arrangements (Washington, 13 September 1993), where the two

Considering these trends of State practice, a further step of the ILC towards the explicit inclusion in the draft articles of transboundary confined groundwaters would have been welcome.

4.— Part II of the draft articles codifies the basic rules of customary international law governing the utilization of international watercourses: the principle of equitable utilization and the duty not to cause significant harm to other riparian States.

A) The first basic rule of international water law obliges riparian States to utilize an international watercourse in an equitable and reasonable manner. This rule stresses the equal and correlative rights of riparian States in respect to the use of a shared watercourse. In other words, every riparian State is entitled to enjoy, within its territory, a reasonable and equitable share of the uses and benefits of an international watercourse, but this entitlement is limited by the duty not to deprive other riparian States of their right to equitable utilization[31]. In the case of conflicting claims to utilization, the measure of the rights of each State will be determined by taking into account the equity and reasonableness of the respective needs. The latter consideration implies that it is impossible to establish *in abstracto* what is a reasonable and

Parties agreed to focus their future cooperation on "... the equitable utilization of joint water resources... "; See also Art. 40 of Annex III to the Interim Agreement on the West Bank and the Gaza Strip (Washington, 28 September 1995), where the Parties, specifying their respective rights and responsibilities in the use and management of the West Bank water resources, recalled the following principles: "Using the water resources in a manner which will ensure sustainable use in the future, in quantity and quality" (para. 3.c); "Taking all the necessary measures to prevent any harm to water resources... " (para. 3.e) (both texts reproduced in Jerusalem Media and Communication Centre, Occasional Document Series, August 1996, n. 7, p. 254 and 126 respectively). On the question of the sharing of the West Bank aquifers, see BENVENISTI & GVIRTZMAN, *Harnessing International Law to Determine Israeli-Palestinian Water Rights: The Mountain Aquifer*, in Natural Resources Journal, 1993, p. 543 ff.

31. On the general features of the equitable utilization principle see LIPPER, *Equitable Utilization*, in GARRETSON, HAYTON & OLMSTEAD (eds.), *The Law of International Drainage Basins*, Dobbs Ferry, 1967, p. 15 ff.; MCCAFFREY, *Second Report on the Law of the Non-Navigational Uses of International Watercourses*, in *ILC Yearbook*, 1986, vol. II, pt. one, p. 110 ff.; SCHWEBEL, *Third Report on the Law of the Non-Navigational Uses of International Watercourses*, in *ILC Yearbook*, 1982, vol. II, pt. one, p. 75 ff.

equitable utilization of an international watercourse. The equitable and reasonable utilization of a watercourse will be evaluated case by case, by weighing and balancing all factors relevant to the concrete situation, and without according to any of such factors an inherent priority over others.

These general features of the rule of equitable utilization are embodied in articles 5, 6 and 10 of the ILC draft. The first of these articles reads as follows:

"1. Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimum utilization thereof and benefits therefrom consistent with adequate protection of the watercourse.

2. Watercourse States shall participate in the use, development and protection of an international watercourse in an equitable and reasonable manner. Such participation includes both the right to utilize the watercourse and the duty to cooperate in the protection and the development thereof, as provided in the present articles"[32].

The two paragraphs of draft Art. 5 elaborate upon the principle of equitable utilization. Under the first paragraph, the optimum utilization is indicated as the goal to be sought by riparian States in their utilization of an international watercourse; under the second paragraph, riparian States are called to cooperate and participate on an equal basis in the attainment of that goal.

In its commentary to draft Art. 5 the Commission explained that the aim of optimum utilization does not mean the achievement of the maximum use of the watercourse or the most economically valuable use: rather, it implies attaining maximum possible benefits for all riparian States while minimizing the detriment to each. Moreover, paragraph one of draft Art. 5 further qualifies the goal of optimum utilization, pointing out that the economic exploitation of an international watercourse must not be pursued blindly by States, but in a manner "consistent with the adequate protection of the watercourse"[33]. This sentence seems to refer to some of the basic requirements which lie at the core of the concept of "sustainable use" of natural and environmental resources, that is, a use of such resources that avoids their depletion and meets the needs

32. Text in UN Doc A/49/10 cit., p. 218.

33. See the commentary to Art. 5, *ibidem*, p. 218-219.

of the present and future generations[34]. In fact, although the concept of "sustainability" is not explicitly mentioned in the text of Art. 5, the records of the 1994 session reveal that certain members of the ILC felt that the objective of sustainable use of an international watercourse was adequately covered by the final phrase of paragraph one of the article[35]. Nevertheless, an explicit reference to sustainable use in the text of the article would be preferable, in order both to reflect the recent trends of international environmental law, and to clarify the ambiguous notion of "optimum utilization".

The concept of equitable participation set forth in the second paragraph of Art. 5 represents a development of the principle of equitable utilization[36]. The second sentence of the paragraph specifies the affirmative nature of equitable participation, providing that riparian States have not only a right to use the watercourse, but also a duty to cooperate and participate in its protection and development. At the time of the adoption of Art. 5, some members of the ILC questioned the mandatory implications of the equitable participation concept, arguing that States could hardly be obliged to participate in the use of an international watercourse[37]. The second paragraph of Art. 5 was then adopted on the understanding that it must be interpreted not as imposing a strict obligation of participation on States, but in the sense that when riparian States decide to participate in the use of an international watercourse, they

34. See the definition of "sustainable use" contained in Art. 2 of the United Nations Convention on Biological Diversity (Rio de Janeiro, 1992 - text in *International Legal Materials*, 1992, p. 818). The principle of "sustainable use" of water resources is mentioned in Annex III to the Israeli-Palestinian Interim Agreement on West Bank and Gaza Strip of 28 September 1995 (see *supra*, footnote 30). Art. 2, para. 5, of the 1994 Sofia Convention on Cooperation for the Protection and Sustainable Use of Danube River also refers to "sustainable water management" (text in BURHENNE, *International Environmental Law - Multilateral Agreements*, 994:49/013). On the relationship between the optimum utilization and sustainable development principles in the field of water resources see HAFNER, *The Optimum Utilization and the Non-Navigational Uses of International Watercourses*, in Austrian Journal of Public and International Law, 1993, p. 113 ff.; HEY, *Sustainable Use of Shared Water Resources: The Need for a Paradigmatic Shift in International Watercourse Law*, in BLAKE ET AL. (eds), *The Peaceful Management of Transboundary Resources*, Dordrecht, 1995, p. 127 ff.

35. See *Summary Records of the Meetings of the Forty-Sixth Session*, in *ILC Yearbook*, 1994, vol. I, p. 174-176.

36. On the concept of equitable participation see SCHWEBEL, *Third Report* cit., p. 85-86.

37. See in particular the doubts expressed by Koroma and Al-Khasawneh at the 1987 ILC session, in *ILC Yearbook*, 1987, vol. I, p. 239, paras. 35, 37, 39, 40.

should do so in an equitable an reasonable manner. In this respect, the equitable participation could be intended as the expression of a general principle of cooperation instrumental to the realization of the goals spelled out in precedent paragraph of the article[38]. In fact, the commentary to Art. 5 helps to clarify this rather obscure point. It provides that "the core of equitable participation is cooperation among riparian States through participation, on an equitable and reasonable basis, in measures, works and activities aimed at attaining optimal utilization of an international watercourse, consistent with adequate protection thereof"[39]. From this point of view, the second paragraph of Art. 5 anticipates the general obligation of cooperation embodied in Art. 8 of the draft[40].

As noted above, the rule of equitable utilization is a very general and flexible one, and its proper implementation requires taking into account all the circumstances pertaining to each single case. To this end, draft Art. 6 provides a list of factors that are relevant in determining, in each concrete situation, what an equitable and reasonable utilization of the watercourse is. It is important to stress that the list contained in Art. 6 is merely indicative and non-exhaustive. The list refers to factors of natural, economic and social character, such as geographic, hydrographic, hydrological, climatic or ecological conditions, the social and economic needs of the watercourse States concerned, the population dependent on the watercourse in each watercourse State, the existing and potential uses of the watercourse, etc.[41].

Finally, the first paragraph of draft Art. 10 provides that, in the absence of contrary agreements or customs, no use of an international watercourse enjoys inherent priority over other uses. This important principle is completed by the second paragraph of the article, according to which any conflict concerning the uses of an international watercourse will be settled by the application of draft articles 5 to 7, "with special regard being given to the

38. See the declarations of Arangio-Ruiz, Calero Rodriguez and Beesley, *ibidem*, p. 239-240, paras. 41, 43 and 45.

39. Cf. UN Doc. A/49/10 cit., p. 219-220.

40. Art. 8 of the draft provides that "Watercourse States shall cooperate on the basis of sovereign equality, territorial integrity and mutual benefit in order to attain optimal utilization and adequate protection of an international watercourse". The commentary to the article further explains that "cooperation between watercourse States with regard to their utilization of an international watercourse is an important basis for the attainment and maintenance of an equitable utilization of the uses and benefits of the watercourse" (*ibidem*, p. 244).

41. See the text of Art. 6 in UN Doc A/49/10 cit., p. 231.

requirements of human vital needs"[42]. The purpose of the latter sentence does not seem to derogate from the basic criterion of absence of priority among uses. Nevertheless it represents a remarkable statement in favour of the special attention that riparian States must pay to providing sufficient water to sustain human life when they utilize an international watercourse[43].

B) The second basic rule of international water law, derived from the ancient Latin dictum *sic utere tuo ut alienum non laedas*, is the obligation of watercourse States to use an international watercourse in such a way as not to cause harm to other riparian States[44]. As a negative provision, the "no harm" rule sets limitations to the sovereign freedom of States to exploit their water resources. But the extent of these limitations on State sovereignty will depend on the way in which the "no harm" rule is framed.

In this connection, a first question is to define the kind of damage forbidden by the duty not to cause harm. Of course, the rule does not cover the *de minimis* or trivial harm, but only harm above a certain threshold of seriousness. The difficulty lies in ascertaining the threshold above which the harmful consequences of the use of an international watercourse become legally relevant to the application of the rule, and are therefore prohibited[45].

A second question pertains to the definition of the obligation embodied in the "no harm" rule as one of "conduct" or one of "result", and to the standard of responsibility hereby involved. In other words, the issue at stake is whether a State may avoid responsibility for causing harm to another riparian State by adopting the conduct that could reasonably be expected or required in order to prevent the harm; or whether the responsibility of the State is

42. See the text of Art. 10 *ibidem*, p. 256.

43. On this point see MCCAFFREY, *A Human Right to Water: Domestic and International Implications*, in Georgetown International Environmental Law Review, 1992, p. 17-23.

44. On the obligation not to cause harm to other riparian States see, in general, CAFLISCH, *Règles générales* cit., p. 135-141; BRUHÁCS, *The Law of Non-Navigational Uses* cit., p. 121-154.

45. On this problem see SACHARIEW, *The Definition of the Threshold for Transboundary Environmental Injury under International Law: Development and Present Status*, in Netherlands International Law Review, 1990, p. 193 ff.; JAIN, *Shared Natural Resources and the Concept of Appreciable or Significant Damage in International Law*, in Indian Journal of International Law, 1986, p. 138 ff.

involved, regardless of the conduct adopted by it, in any case in which the prohibited harm has taken place[46].

The attitude of the ILC on these issues has evolved considerably in the shift from the 1991 to the 1994 final version of the draft articles.

Draft Art. 7 included in the first reading was very concise, stating that "Watercourse States shall utilize an international watercourse in such a way as not to cause appreciable harm to other watercourse States"[47]. Notwithstanding the fact that the commentary to the article seeks to explain that the qualifier "appreciable" embodies a factual as well as an objective standard, the threshold envisaged by this term remains rather vague. In fact, "appreciable" could indicate any harm that is merely "measurable", with the consequence that the threshold of prohibited harm is a very low one. Moreover, the unconditional wording of the text seems to envisage a cogent interpretation of the duty not to cause harm, conceived in terms of an obligation of result involving the strict responsibility of the State that has caused the damage.

The ambiguities of draft Art. 7 adopted on first reading were criticized by a certain number of governments, both during the 1991 session of the Sixth (Legal) Committee of the General Assembly and in their written comments to the first reading of the draft articles[48].

Taking into account the criticisms of the governments, and following the suggestions of the special rapporteur Rosenstock, the ILC adopted on second reading at its 1994 session a thoroughly revised version of Art. 7. The first paragraph of the new text is particularly aimed at solving the above mentioned shortcomings, and reads as follows:

46. See McCAFFREY, *The Law of International Watercourses: Some Recent Developments and Unanswered Questions*, in Denver Journal of International Law and Policy, 1989, p. 519-525.

47. See the text and the related commentary in *Report of the Commission on the Work of its Fortieth Session*, in *ILC Yearbook*, 1988, vol. II, pt. two, p. 35-41.

48. See, for example, the written comments of the Nordic Countries (UN Doc. A/CN.4/447 cit., p. 27), United States (*ibidem*, p. 40-41) and Canada (UN Doc. A/CN.4/447/Add. 1 cit., p. 4) and the declarations of the delegates of Netherlands (UN Doc. A/C.6/46/SR.26, p. 7-8), Switzerland (*ibidem*, p. 10-11) and Turkey (UN Doc. A/C.6/46/SR.34, p. 7) in the Sixth Committee of the General Assembly.

"1. Watercourse States shall exercise due diligence to utilize an international watercourse in such a way as not to cause significant harm to other watercourse States"[49].

The first relevant innovation is the replacement of the word "appreciable" with the word "significant" as a qualifier of the prohibited harm. This change is intended to make the threshold of prohibited harm more certain, avoiding the dual meaning of the term "appreciable" as both "measurable" and "significant". At the same time, in its commentary to the draft articles, the Commission has pointed out that "significant" is not intended to raise the applicable standard: in the ILC understanding, "significant" indicates the harm more than simply measurable, but not necessarily "substantial"[50].

The major innovation contained in the first paragraph of the new Art. 7 is the reference to the concept of "due diligence"[51]. This mention underlies a radical change of perspective in the scope of the prohibition to cause harm. The "due diligence" obligation contained in the first paragraph of Art. 7 is not intended to guarantee that in utilizing an international watercourse significant harm would not occur, but that user States perform their best efforts to prevent significant harm to other watercourse States. As the ILC makes clear in its commentary to the article, what is here involved is "an obligation of conduct, not an obligation of result"[52]. As a consequence, a user State can be deemed to have breached its obligation under draft Art. 7 only when it has failed to adopt the conduct required, or the measures necessary, to prevent the occurrence of the harmful event. This way, the Commission has definitively clarified the nature of obligation not to cause significant harm and the standard of responsibility required for its breach.

The introduction of the "due diligence" concept in the new text of Art. 7 is worthy of appreciation. From a general point of view, this change has the merit to bring the ILC draft in line with the trends of State practice in the field of use and protection of natural and environmental resources. Indeed, in many recent multilateral treaties concluded in this field, States have been ready to

49. Text in UN Doc. A/49/10 cit., p. 236.

50. Cf. *ibidem*, p. 211-212.

51. On the concept of "due diligence", see DUPUY, P.M., *La diligence due dans le droit international de la responsabilité*, in OCDE, *Aspects juridiques de la pollution transfrontière*, Paris, 1977, p. 396 ff.; PISILLO-MAZZESCHI, *"Due diligence" e responsabilità internazionale degli Stati*, Milano, 1989.

52. See UN Doc. A/49/10 cit. p. 237.

accept provisions framed in terms of "due diligence", rather than rules imposing absolute or strict obligations; such provisions call upon States to adopt "appropriate efforts", "practical steps" or "best practicable means" directed to prevent the harmful effects of their activities on the natural environment[53].

As far as the utilization of international watercourses is concerned, the introduction of the "due diligence" standard in draft Art. 7 has the effect to soften the impact of the "no harm" rule, making its application more flexible and more consistent with the requirements of the principle of equitable utilization[54]. The latter consideration leads us to deal with the delicate problem of the relationship between the two general principles contained in the ILC draft articles, as it will be described in more details in the next subsection.

C) A very delicate issue related to the two principles of "equitable utilization" and "no harm" is how they can be reconciled or which of them prevails in case of conflict. In fact, the possibility of such a conflict is not a remote one. Suppose an upstream State X is planning to build a dam on an international watercourse, whose effect is to deprive the downstream State Y of a share of the waters used by that State for purposes of agricultural irrigation. Since the principle of equitable utilization allows to strike a balance between the respective benefits and detriments of user States, State X will invoke that principle as the basis for its right to build the dam. State X could claim that the detriment caused to State Y is allowable under an equitable and reasonable utilization of the watercourse. On the contrary, State Y could invoke the strict application of the "no harm" rule, arguing that the building of the dam could cause a significant harm to its utilization of the watercourse, and therefore must be prohibited. The outcome will be different depending on whether priority is accorded to one principle or to the other. If the "no harm"

53. See for example Art. 2 of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Helsinki, 1992 - text in *International Legal Materials*, 1992, p. 1315); Art. 2 of the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991 - text *ibidem*, 1991, p. 803); Arts. 3 and 6 of the Convention on the Transboundary Effects of Industrial Accidents (Helsinki, 1992 - text *ibidem*, 1992, p. 1335-1336).

54. Cf. MC CAFFREY, *The Law of International Watercourses: Present Problems, Future Trends*, in KISS & BURHENNE GUILMIN (eds.), *A Law for the Environment - Essays in Honour of W.E. Burhenne*, Gland and Cambridge, 1994, p. 118.

principle prevailed, the upstream State X would not be permitted to build a dam that would cause harm to its downstream neighbour. If the equitable utilization principle prevailed, the harm to downstream State Y would be one factor to be weighed in determining whether the dam is permissible[55].

The question is even more complicated when the utilization of an international watercourse causes the pollution of its waters and the deterioration of the environment at large[56]. In such instances, it is difficult to accept the conclusion that the pollution of a watercourse must be tolerated as the result of its equitable utilization. In other words, the application of the "no harm" rule seems better suited in cases involving pollution or other threats to the environment[57].

The ILC, in adopting the first reading of the draft articles, decided to give priority to the prohibition to cause significant harm over the principle of equitable utilization. The Commission's understanding at that time was to consider every utilization of an international watercourse involving appreciable-significant harm to other watercourse States as inherently inequitable and unreasonable and, therefore, prohibited[58].

However, a certain number of States, in their written comments to the draft articles adopted on first reading, criticized the choice of the Commission as an unbalanced solution, which would have the effect to prevent upstream States from undertake any new development of an international watercourse that could cause appreciable-significant harm to downstream States[59].

55. See MCCAFFREY, *The International Law Commission Adopts Draft Articles on International Watercourses*, in American Journal of International Law, 1995, p. 399.

56. This issue seems to characterize the current dispute between Slovakia and Hungary on the construction of a system of locks on the Danube: for a survey of this case see ARCARI, *La controversia tra Slovacchia ed Ungheria circa la costruzione di un sistema di dighe sul Danubio*, in Rivista Giuridica dell'Ambiente, 1993, pp. 951 ff.

57. Cf. MCCAFFREY, *Recent Developments and Unanswered Questions* cit., p. 510.

58. See the commentary to draft Art. 7 adopted by the ILC on first reading, in *Report of the Commission on the Work of its Fortieth Session*, in *ILC Yearbook*, 1988, vol. II, pt. two, p. 36.

59. See the references *supra*, footnote 48. The choice of the Commission to give priority to the "no harm" rule in the first reading of the Draft was also criticized by various authors: see CAFLISCH, *Sic utere tuo ut alienum non laedas: Règle prioritaire ou élément pour déterminer le droit d'utilisation d'un cours d'eau international?*, in *Festschrift für Walter Müller*, Zürich, 1993, pp. 27 ff.; BOURNE, *The International Law Commission's Draft Articles on the Law of International*

Following these reactions, the special rapporteur Rosenstock, in his first report of 1993, proposed a new text of the draft article on the duty not to cause harm, in which the order of priority was reverted in favour of the principle of equitable utilization. At the same time, the text proposed by Rosenstock introduced an exception to the supremacy of the equitable utilization rule in cases where the uses of an international watercourse cause significant harm in the form of pollution; these uses were in fact presumed to be inequitable and unreasonable[60].

During the adoption of the second reading of the draft articles at its 1994 session, the Commission added a new paragraph to the text of the article on the duty no to cause harm, with the intention to clarify the relationship between the two general principles. Paragraph 2 of Art. 7 adopted on second reading goes as follows:

"2. Where, despite the exercise of due diligence, significant harm is caused to another watercourse State, the State whose use causes the harm shall, in the absence of agreement to such use, consult with the State suffering such harm over:

(a) the extent to which such use is equitable and reasonable taking into account the factors listed in article 6;

(b) the question of ad hoc adjustments to its utilizations, designed to eliminate or mitigate any such harm caused, and, where appropriate, the question of compensation"[61].

This paragraph must be read in the light of the "due diligence" obligation not to cause significant harm to other watercourse States set forth in the first paragraph of Art. 7. Paragraph 2 comes into effect only when a significant

Watercourses: Principles and Planned Measures, in Colorado Journal of International Environmental Law and Policy, 1992, pp. 65 ff.; WOUTERS, *Allocation of the Non-Navigational Uses of International Watercourses: Efforts at Codification and the Experience of Canada and the United States*, in Canadian Yearbook of International Law, 1992, pp. 43 ff.

60. This is the text proposed by Rosenstock in 1993: "Watercourse States shall exercise due diligence to utilize an international watercourse in such a way as not to cause significant harm to other watercourse States, absent their agreement, except as may be allowable under an equitable and reasonable use of the watercourse. A use which cause significant harm in the form of pollution shall be presumed to be inequitable and unreasonable use unless there is: (a) a clear showing of special circumstances indicating a compelling need for ad hoc adjustment; and (b) the absence of any imminent threat to human health and safety" (ROSENSTOCK, *First Report* cit., p. 9-11).

61. UN Doc. A/49/10 cit. p. 236.

harm is caused "despite the exercise of due diligence" by the user State, that is when the user State has not breached the obligation of diligent conduct set forth in the previous paragraph. The kind of situation envisaged should be one in which any question of international responsibility of the user State for wrongful act is excluded. In this case, the specific obligations of consultation spelled out in paragraph two of Art. 7 apply.

In first place, under letter (a) of the paragraph, the State causing harm must enter into consultation with the victim State regarding the extent to which the harmful use is an equitable and reasonable one. This subparagraph involves the recognition of the possibility that an harmful use of a watercourse may nevertheless be equitable and reasonable. An important limitation to this possibility is spelled out in the relevant part of the commentary, which explains that a use entailing significant harm to human health and safety is understood to be inherently inequitable and reasonable[62]. But, apart from this important specification, the precise effects of subparagraph (a) remain rather obscure.

The commentary points out that the burden of the proof in establishing that the harmful use is equitable and reasonable lies on the user State[63]. But the same commentary does not explain what the consequence of a negative finding would be. One may wonder if the user State could even be accredited with a diligent conduct in preventing the harmful consequences of its activity when it has failed to adequately weigh and apply all the factors relevant to an equitable and reasonable utilization of the watercourse. In all events, the failure to prove the equitable character of the utilization would amount to a breach by the user State of its international obligations, preventing the application of the special regime provided for in the second paragraph of Art. 7[64].

Some difficulties arise also in the opposite hypothetical case: when the user State has been successful in showing proof of equitable utilization. In particular, it is not clear whether this State is then released from any further

62. See *ibidem*, p. 241-242.

63. *Ibidem*.

64. See the following declaration of Barboza during the 1994 debates in the ILC on Art. 7: "Which were the substantive consequences of harm? The State of origin had to prove the extent to which the use was equitable and reasonable. The burden of proof lay on that State... If that State did not prove it, then no due diligence was accredited and one fell back on the case of paragraph 1: breach of an obligation of due diligence" (*ILC Yearbook*, 1994, vol. I, p. 177).

obligation, or whether the specific provisions of letter (b) of the second paragraph of Art. 7 apply. The more plausible answer is that subparagraph (b) applies also in the case of a positive finding on the equitable character of the utilization. In that case, the user State is obliged to consult with the victim State on the question of *ad hoc* adjustment aimed to eliminate or mitigate the significant harm and on the question of the payment of appropriate compensation[65]. This interpretation admits the conclusion that the significant damage arising out of a diligent use is one of the relevant factors that must be weighed in determining an equitable and reasonable utilization of an international watercourse. In this connection, the commentary of the ILC underlines the important role of the payment of a compensation as "a means of balancing the equities in particular cases"[66].

Incidentally, the analogy should be emphasized between the obligations of consultation provided for in subparagraph (b) of Art. 7 and some of the basic conclusions reached by the ILC in the context of its work on the topic "International Liability for Injurious Consequences Arising out of Acts not Prohibited by International Law". This topic is intended to cover, *in abstracto*, situations in which States perform on their territories activities that are lawful - in the sense that they are not prohibited by international law - but that cause significant harm to other States[67]. In these situations, the ILC understanding was that the characterization of the harmful activity as lawful and permissible must not override the principle that the victim of transboundary harm should not be left to bear the entire loss. To ensure this result, the ILC has singled out the basic obligation of the State of origin of the harm to negotiate with the victim State in order to provide him with adequate compensation or other

65. MCCAFFREY, *The International Law Commission Adopts* cit., pp. 400-401; FITZMAURICE, *The Law of Non-Navigational Uses of International Watercourses - The International Law Commission Completes its Draft*, in Leiden Journal of International Law, 1995, p. 370-372.

66. See UN Doc. A/49/10 cit., p. 243.

67. On the problem of the international liability of States for activities not prohibited by international law and on the works of the ILC on the topic see BARBOZA, *International Liability for the Injurious Consequences of Acts not Prohibited by International Law and the Protection of the Environment*, in *Recueil des Cours*, III, 1994, p. 295 ff.; PISILLO-MAZZESCHI, *Le Nazioni Unite e la codificazione della responsabilità per danno ambientale*, in Rivista Giuridica dell'Ambiente, 1996, p. 371 ff.; LEFEBER, *Transboundary Environmental Interference and the Origin of State Liability*, The Hague, 1996.

relief (for example a modification in the operation of the activity so as to avoid or minimize future damages)[68].

The legal reasoning that lies behind the "State Liability" approach may also explain the conditions under which a diligent and equitable use of an international watercourse remain lawful, in spite of the significant harm caused to other riparian States. The introduction of this legal reasoning in the law of the non-navigational uses of international watercourses represents the most significant innovation realized by paragraph 2 (b) of Art. 7[69].

As a whole, the second paragraph of Art. 7 aims to reconcile the "equitable utilization" and "no harm" principles, rather than declaring the supremacy of one term on the other. Unfortunately, the wording of the paragraph is not entirely consistent with such intent, and some further clarification is needed concerning the way it operates.

Finally, it may be noted that the second paragraph of Art. 7 does not address the question of the relationship between "equitable utilization" and "no harm" principles in cases involving pollution. It remains to be seen whether the answer to this question can be found in Part IV of the draft articles, specially devoted to the protection of international watercourses.

5.— The obligations of riparian States relating to the protection of international watercourses and of their environment are spelled out in four articles, included in Part IV of the draft. As articles 22 and 23 deal specifically with the issues relating to the introduction of new species in the watercourse and of the protection of the marine environment, our attention will focus on the more general provisions contained in articles 20 and 21.

A) Part IV of the draft opens with Art. 20 which states that "Watercourse States shall, individually or jointly, protect and preserve the ecosystems of international watercourses"[70].

68. See for these conclusions the report of the Working Group on International Liability established by the ILC at its 1996 session, in *Report of the International Law Commission on the Work of its Forty-Eight Session*, General Assembly Official Records, 51st Session, Suppl. n. 10, UN Doc. A/51/10, p. 235-327 (in particular p. 235-236, and 270-272).

69. See, in this sense, FITZMAURICE, *The Law of the Non-Navigational Uses* cit., p. 371-372.

70. Text in UN Doc. A/49/10, p. 280.

This article is based on the assumption that an international watercourse must be considered not only as an economic resource to be exploited, but also as an ecological unit deserving protection. The key concept of this approach is the notion of "ecosystem". The term "ecosystem" is defined by the commentary annexed to Art. 20 as "an ecological unit consisting of living and non-living components that are interdependent and function as a community". As in the case of the term "international watercourse", the boundaries of the concept of ecosystem are identified by reference to the interrelationship (usually observable) among its various components. In this case also, the Commission has been careful to avoid any possible "geographical" or "territorial" extension of the notion of ecosystem. The term ecosystem was preferred in Art. 20, being more precise than "environment"; the ILC believed that the latter term could be interpreted too broadly to apply to areas surrounding a watercourse that have minimal bearing on the protection and preservation of the watercourse itself[71].

As to the content of the undertakings imposed on States by Art. 20, the commentary points out that the obligation to "protect" implies that riparian States shield the ecosystems related to international watercourses both from actual harm and from the threat of future harm. The relevant footnote specifies that the obligation to protect ecosystems is "a general application of the principle of precautionary action"[72]. On the other hand, the obligation to "preserve" covers the ecosystems that are in pristine or unspoiled conditions, and requires riparian States to maintain those ecosystems as much as possible in their natural state[73]. What the commentary does not entirely clarify is whether the obligation of protection and preservation involves also the duty of States to restore the conditions of ecosystems that are currently degraded[74].

71. See, for these considerations, *ibidem*, p. 280-281.

72. On the precautionary principle see SCOVAZZI, *Sul principio precauzionale nel diritto internazionale dell'ambiente*, in Rivista di Diritto Internazionale, 1992, p. 699 ff.; HOHMANN, *Precautionary Legal Duties and Principles of Modern International Environmental Law*, Dordrecht, 1994; CAMERON & ABOUCHAR, *The Status of Precautionary Principle in International Law*, in FREESTONE & HEY (eds.), *The Precautionary Principle and International Law*, Dordrecht, 1996, p. 29 ff.

73. UN Doc. A/49/10 cit., p. 282.

74. See on these points NANDA, *The Law of the Non-Navigational Uses of International Watercourses: Draft Articles on Protection and Preservation of Ecosystems, Harmful Conditions, and Protection of Water Installations*, in Colorado Journal of International Environmental Law and Policy, 1992, p. 183-185.

Be that as it may, the major innovation of Art. 20 is that the application of the obligations herein provided is not made dependent on significant harm eventually suffered by riparian States. In fact, the obligation of protection set forth in Art. 20 goes further than the "no harm" rule codified in Art. 7 of the draft, since it implies the taking of protective measures that may be necessary even if no pollution harm is caused to other riparian States[75]. What Art. 20 intends to attain, according to the ILC, is a utilization of international watercourses that may be "ecologically sustainable", so that the ecological balance of watercourses and the possibility of their future use are not compromised. The commentary to Art. 20 is very clear on this point, stating that "together, protection and preservation of aquatic ecosystems help to ensure their continued viability as life supporting systems, thus providing an essential basis for sustainable development"[76].

As a final remark, it must be noted that the commentary to Art. 20 points out that the obligation of protection of ecosystems is a specific application of the requirement mentioned in Art. 5 of the draft, according to which riparian States use and develop an international watercourse in a manner consistent with the adequate protection thereof[77]. On the other hand, the text of Art. 20 - in prescribing that States shall "individually or jointly" protect and preserve ecosystems - acknowledges the opportunity that riparian States cooperate on an equitable basis in the implementation of protective aims. These specifications prove that the ILC has conceived the protection of ecosystems as an essential factor in the attainment of the equitable and reasonable utilization of international watercourses[78].

B) The problems relating to pollution of international watercourses are dealt with in Art. 21 of the draft[79]. The first paragraph of the article contains the definition of pollution, intended as "any detrimental alteration in the composition or quality of the waters of an international watercourse which results directly or indirectly from human conduct". This is a neutral and purely

75. See in this sense MC CAFFREY, *Recent Developments and Unanswered Questions* cit. p. 514.

76. Cf. UN Doc. A/49/10 cit., p. 282.

77. *Ibidem*, p. 282-283.

78. See BRUNNÉE & TOOPE, *Environmental Security and Freshwater Resources: A Case for International Ecosystem Law*, in Yearbook of International Environmental Law, 1994, p. 64-65.

79. Text in UN Doc. A/49/10 cit., p. 289.

factual definition of pollution; it does not mention either any particular kind of pollution or pollutant agents, or the threshold of gravity of the pollution, and not even the specific targets or detrimental effects of the pollution (such as harm to human health, property or living resources).

These aspects are defined more precisely in the second paragraph of Art. 21, that reads as follows:

"Watercourse States shall, individually or jointly, prevent, reduce and control pollution of an international watercourse that may cause significant harm to other watercourse States or to their environment, including harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse. Watercourse States shall take steps to harmonize their policies in this connection".

The obligation set forth in this paragraph applies to polluting activities that cause, or may cause, "significant harm". The commentary explains that pollution falling below that threshold might be covered by the provisions of Art. 20 of the draft. This apparent limitation is balanced by the second paragraph of Art. 21, which prohibits pollution that affects, in the form of significant harm, not only the beneficial uses of an international watercourse, but also the "environment" at large of the riparian States. According to the commentary, the term environment is intended to cover matters such as "the living resources of the international watercourse, flora and fauna dependent upon the watercourse, and the amenities connected with it", and thus it encompasses a broader concept than the term "ecosystem" included in preceding Art. 20[80].

Turning to the content of the obligation set forth in the second paragraph of Art. 21, the commentary clarifies that it represents a specific application of the general principles spelled out in articles 5 and 7 of the draft.

In applying the general principle of "no harm" to the case of pollution, the ILC has been inspired by two main considerations. The first observation was that some international watercourses are already polluted to varying degrees, while others are not. The second remark was that State practice shows a general willingness to tolerate even significant pollution harm, provided that the State of origin is making its best efforts to reduce or control the pollution. These arguments convinced the ILC that an absolute requirement to abate the existing pollution causing harm could result in undue hardship for riparian

80. *Ibidem*, p. 293-294.

States, "especially where the detriment to the watercourse State of origin was grossly disproportionate to the benefit that would accrue to the watercourse State experiencing the harm"[81].

As a result, the second paragraph of Art. 21 does not express an absolute ban of pollution. Rather, it calls upon riparian States to control or reduce the existing forms of pollution and to prevent the new ones. Also in this case, the obligation involved is one of "due diligence". Thus, only a failure of the polluter State to exercise due diligence in reducing the pollution to an acceptable level would entitle the affected State to claim that the polluter State has breached its obligation under paragraph two of Art. 21. Moreover, the emphasis laid on the need to prevent pollution implies that the principle of precautionary action is applicable here, as it is in Art. 20. The commentary suggests that the latter principle can provide important guidance in the conduct of States, especially when dangerous - e.g. toxic, persistent and bioaccumulative - substances are involved[82].

On the basis of these considerations, it is now possible to examine a problem that had been left unanswered at the end of the preceding section. This concerns the relationship between the "equitable utilization" and "no harm" principles in case of activities that involve the pollution of international watercourses. The question was considered by the ILC at its 1988 session, when the special rapporteur McCaffrey presented a set of draft articles dealing with the protection of international watercourses. McCaffrey suggested to adopt a "no pollution harm" rule not qualified by exceptions in favour of the principle of equitable utilization, on the understanding that water uses causing pollution must be regarded as being *per se* inequitable and unreasonable. On the other hand, according to the special rapporteur, the possibility of conflict between the two general principles could be minimized by the introduction of the standard of due diligence in the context of the "no pollution harm" rule. McCaffrey noted that the latter concept could introduce certain considerations of equity, that lie behind the principle of equitable utilization, in the application of the "no harm" rule[83].

81. See, for these considerations, the commentary to Art. 21, *ibidem*, p. 291-292.

82. *Ibidem*, p. 295.

83. See MCCAFFREY, *Fourth Report on the Law of the Non-Navigational Uses of International Watercourses*, in *ILC Yearbook*, 1988, vol. II, pt. one, p. 241.

These arguments were substantially accepted by the ILC in 1988[84], and led to the adoption of the text of Art. 21 included in the first reading of the draft articles[85]. In the absence of substantial modifications either to the text or the commentary on Art. 21 in the second reading of the draft, it is presumed that the same considerations are still valid.

However, one could wonder whether the general emphasis given to the concept of "due diligence" could, by itself, entirely solve the question of the conflict between "equitable utilization" and "no harm" in the case of pollution[86]. In this respect, it is useful to remind that a more explicit answer to this question was envisaged in 1993 by the special rapporteur Rosenstock, when he introduced a new draft Art. 7 on the duty not to cause harm; that text recognized the inequitable and unreasonable character of the uses that cause harm in the form of pollution[87]. Unfortunately, this proposal was not adequately explored by the Commission. The adoption of such an explicit solution may well have eliminated some of the ambiguities that still affect the present wording of articles 7 and 21.

At the end of the review of Art. 21, it is useful to briefly recall its third paragraph, which requires riparian States to enter into consultation, at the request of any of them, to establish lists of substances, the introduction of which into an international watercourse is to be prohibited, limited, investigated or monitored. This paragraph codifies a well-founded State practice, confirmed by a great number of international treaties relevant to the protection of fresh and marine waters[88]. It is stressed here that the existence of lists of

84. Cf. *Report of the Commission on the Work of its Fortieth Session*, in *ILC Yearbook*, 1988, vol. II, pt. two, p. 27-30.

85. Cf. *Report of the Commission on the Work of its Forty-Second Session*, in *ILC Yearbook*, 1990, vol. II, pt. two, p. 60-63.

86. See the doubts expressed on this point by BOURNE, *Principles and Planned Measures* cit., p. 82.

87. See *supra*, footnote 60 and accompanying text.

88. See for example Annexes I and II to the Convention for the Protection of the Rhine against Chemical Pollution (Bonn, 1976 - text in BURHENNE, *International Protection of the Environment - Multilateral Treaties*, 976:89/1); Annex II to the Convention for the Protection and Sustainable Use of the Danube River (Sofia, 1994 - text *ibidem*, 994:49/1); Annexes I and II to the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources (Athens, 1980 - text *ibidem*, 980:37/11); Annexes I and II to the Protocol on the Protection of the Black Sea Marine Environment against Pollution from Land Based Sources (Bucharest, 1992 - text in *International Legal Materials*, 1993, p. 1122).

such substances, of which the discharge into rivers must be prohibited or subjected to special regulation, could provide a useful parameter to assess the adherence by riparian States to the "due diligence" obligations set forth in articles 21 and 7 of the draft.

6.— Following their submission to the General Assembly, the draft articles adopted on second reading by the ILC were discussed in the Sixth Committee in 1994. In general, States reacted positively, praising the text finally adopted by the Commission as a balanced document. Interestingly, a more thorough look at the summary records reveals that government representatives focused their comments especially on the issues reviewed in this paper. To this connection, two main points emerged from the 1994 debates in the Sixth Committee:

— First, the majority of the delegates agreed that Part II represented the core of draft articles. But, apart this unanimous admission, the views on the delicate question of the relationship between the articles on equitable utilization and the duty not to cause significant harm were divided. While a number of representatives welcomed the text of Art. 7 elaborated in the second reading by the ILC as a viable solution to strike a balance between the two general principles[89], others criticized the unclear meaning of the new version of the article and, in particular, the subjective character of the standard of the "due diligence" introduced in that article. The same representatives proposed to revert to the 1991 version of Art. 7[90]. These opposite reactions suggest that the solution adopted in the second reading of the draft has not completely solved the problem of the coexistence of the two fundamental principles of international water law.

— Second, a large number of representatives in the Sixth Committee praised the incorporation into the ILC draft of rules and principles relating to

89. See the declarations of United States (UN Doc. A/C.6/49/SR.22, p. 14, para. 58), Switzerland (*ibidem*, p. 16, para. 69), Spain (UN Doc. A/C.6/49/SR.23, p. 10, para. 54), United Kingdom (UN Doc. A/C.6/49/SR.26, p. 10, para. 48), Ethiopia (UN Doc. A/C.6/49/SR.28, p. 3, para. 7).

90. See the declarations of Greece (UN Doc. A/C.6/49/SR.17, p. 19. para. 94), Brazil (UN Doc. A/C.6/49/SR.22, p. 17, para. 75), Egypt (UN Doc. A/C.6/49/SR.24, p. 8, para. 29), Bangladesh (*ibidem*, p. 9, para. 34), Venezuela (*ibidem*, p. 10, para. 39), Vietnam (*ibidem*, p. 11, para. 45).

environmental protection. Moreover, some representatives felt that the draft articles should include the additional concepts that had been formulated and developed in recent international instruments concluded in the field of international environmental law[91]. It was pointed out that, in particular the general principles codified in articles 5, 6 and 7, should explicitly mention concepts such as "sustainable use", "sustainable development", "environmental impact assessment", "best available technologies", "best environmental practices"[92]. These suggestions prove that the question of environmental protection is an aspect inherent in any attempt to elaborate legal rules governing the economic exploitation of international watercourses. Following the general debate on the ILC draft in the Sixth Committee, the General Assembly, by its resolution 49/52 of 9 December 1994, decided that, at the beginning of the 1996 session, "the Sixth Committee shall convene as a working group of the whole... to elaborate a framework convention on the law of the non-navigational uses of international watercourses on the basis of the draft articles adopted by the International law Commission...".

The elaboration of a comprehensive legal regime of the utilization of international watercourses seems to approach its conclusion. This is an important achievement to which the ILC, with its outstanding effort at codification developed during more than twenty years, has greatly contributed.

91. Cf. the declarations of Finland (UN Doc. A/C.6/49/SR.22, p. 10, para. 36), Germany (*ibidem*, p. 14, para. 50), Mexico (UN Doc. A/C.6/49/SR.24, p. 4, para. 13), Slovakia (A/C.6/49/SR.27, p. 15, para. 56).

92. See in particular the remarks of Finland (UN Doc. A/C.6/49/SR.22, p. 11, para. 42), Uruguay (UN Doc. A/C.6/49/SR.23, p. 5, para. 19) and Canada (*ibidem*, p. 8, para. 41-42)