

The Helsinki Rules, the UN Watercourses Convention and the Berlin Rules: Perspectives on International Water Law

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ABSTRACT *Shared water resources remain the most important area without a universal treaty regulating the uses and protection of such resources. This is notwithstanding the extensive work of two scholarly non-governmental organizations, the Institute of International Law and the International Law Association, as well as the work of the International Law Commission of the United Nations. The work of those institutions resulted in some basic international water law rules, such as the Helsinki and Berlin Rules, and the United Nations Watercourses Convention. The paper analyzes those instruments, discusses the basic areas of similarities and differences among them, and examines the basic challenges facing international water law.*

Introduction

The multi-dimensional uses of international rivers and lakes have been classified, for legal purposes, into navigational and non-navigational uses. The main reason for such a distinction is that a separate set of international rules has emerged for each of the two uses. The rules regulating navigational uses started emerging as early as the beginning of the 19th century. At that time, navigational uses were more important than non-navigational uses, and it was also relatively easier to get an agreement on rules regulating such uses. Indeed, the first treaty on navigational uses was concluded at the beginning of the 19th century, and that treaty was followed by a number of other agreements. On the other hand, although some basic customary rules have emerged, there is still no universal treaty in force that regulates the non-navigational uses of international watercourses. This situation has persisted despite the tremendous efforts and work of the United Nations and other scholarly international institutions. The United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (the UN Convention), which was adopted by the United Nations General Assembly on 21 May 1997, after 23 years of preparatory work by the International Law Commission (ILC), and extensive deliberations by the General Assembly thereafter, has yet to enter into force and effect.

Two scholarly non-governmental organizations, the Institute of International Law (IIL), and the International Law Association (ILA), have made major contributions to the law

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of international watercourses through adoption of a number of resolutions and rules. Their work predated by many years that of the ILC on the UN Convention. The work of the ILA includes, among other things, the famous Helsinki Rules that were issued in 1966 and the Berlin Rules that were issued in 2004 seven years after the UN Convention was adopted.

As such, questions keep arising regarding the relative weight of those rules, the relationship between them and the UN Convention, and the status of the Convention. The purpose of the paper is to discuss and analyze the work of the IIL and the ILA, in particular the Helsinki and Berlin Rules, as well as the UN Convention, and to examine the relationship between them. The paper also discusses the different perspectives adopted by those instruments, and analyzes some of the major challenges facing international water law.

Regulation of Navigational Uses

The commencement of the industrial revolution in Europe caused massive movement of goods and materials, as well as people, across the continent. Governments and industries turned to rivers as the main mode of transportation because other means of transportation were then at an early stage of development. Additionally, non-navigational uses of rivers, such as irrigation and hydropower, were not major competitors with navigation at that time. Accordingly, by the beginning of the 19th century, navigation became the single largest user of rivers in Europe, virtually turning such rivers into international highways. The extensive uses of rivers for navigation necessitated some form of regulation, and prompted the major European powers to conclude a treaty in 1815, named the Act of the Congress of Vienna. The Act established the principle of freedom of navigation for all riparian states on the rivers they share, on a reciprocal basis, as well as its priority over other uses.

The trend towards freedom and priority of navigation established by the Act of the Congress of Vienna continued to prevail, and was confirmed and expanded in 1885 by another treaty, the General Act of the Congress of Berlin with regard to the Congo and Niger Rivers in Africa. The purpose of that Act was to facilitate the movement of the colonial powers in Africa by opening some of its rivers for all of them. As a result, this Act extended the freedom of navigation to non-riparian states as well. The 1919 Peace Treaty of Versailles continued the liberalization trend in navigation by opening all the navigable rivers in Europe to all the European countries.

However, the growth and expansion of the industrial revolution itself resulted in speedier and more efficient modes for transportation of goods and materials, and also necessitated other uses of rivers, such as for hydropower and industries. The steady growth in population also rendered other uses, such as domestic and irrigation, more demanding and necessary. The Barcelona Convention (Convention and Statute on the Regime of Navigable Waterways of International Concern), which was concluded in 1921, reconfirmed the principle of freedom of navigation, but recognized other uses of rivers as well. Two years later in 1923, the Geneva Convention (General Convention Relating to the Development of Hydraulic Power Affecting More than One State) was adopted. That Convention dealt with the right of any riparian state to carry out on its territory any operations for development of hydraulic power that it may consider desirable, subject to "the limits of international law". The adoption of this Convention marked yet another step in the decline of the supremacy of navigation that prevailed throughout the 19th century.

Freedom of navigation was also affected. After the Second World War and the division of Europe into east and west camps, freedom of navigation was gradually restricted only to the riparian states of the particular shared river. This situation has continued to prevail and represents contemporary customary international law in this field (Caffisch, 1998).

Emergence of Rules Regarding Non-navigational Uses

The decline in the primacy and freedom of navigation continued, and was further necessitated by the increasing and heavy reliance on rivers and lakes for non-navigational purposes as a result, largely because of the reconstruction and development efforts after the Second World War. The steady growth in population was another important factor. However, this increased reliance on rivers and lakes was not accompanied by the adoption of any official rules to regulate such non-navigational uses. Different theories and principles reflecting varying state practice on the uses of international rivers and lakes started to emerge late in the 19th century.

One of those principles is that of absolute territorial sovereignty which is also known as the Harmon Doctrine. Judson Harmon was the Attorney General of the United States of America when he gave an opinion in 1895 regarding the uses of the waters of the Rio Grande that the United States and Mexico share. His opinion concluded that a state is free to dispose, within its territory, of the waters of an international river in any manner it deems fit, without concern for the harm or adverse impact that such use may cause to other riparian states. However, this opinion and the principle it entailed were criticized and discredited, for obvious reasons, by subsequent decisions of international tribunals and writings of experts in this field. The basic principles of international law, contrary to the Harmon Doctrine, prohibit riparian states from causing harm to other states, and call for cooperation and peaceful resolution of disputes.

A second principle that emerged is absolute territorial integrity. It establishes the right of a riparian state to demand continuation of the natural flow of an international river into its territory from the upper riparian or riparians, but imposes a duty on that state not to restrict such natural flow of waters to other lower riparians. At most, this principle tolerates only minimal uses by an upstream state. In essence, this principle is the exact opposite of the principle of absolute territorial sovereignty as it is intended to favour downstream riparians, often by protecting existing uses or prior appropriation. This principle has also been criticized and, like the Harmon Doctrine, is not recognized as a part of contemporary international water law.

The third principle, that of limited territorial sovereignty or limited territorial integrity, asserts that every riparian state has a right to use the waters of the international river, but is under a corresponding duty to ensure that such use does not harm other riparians. Accordingly, this principle restricts both principles discussed above, and asserts the equality of all riparians in the uses of the waters of the international river.

The fourth principle is the community of co-riparian states in the waters of an international river. The basis of this principle is that the entire river basin is an economic unit, and the rights over the waters of the entire river are vested in the collective body of the riparian states, or divided among them either by agreement or on the basis of proportionality. As such, this principle is a further extension of the third principle, but goes beyond the third principle by vesting the rights over the river in a collective body. This principle did not gain wide acceptance because riparian states believe that it forces them

into reaching an agreement. Clearly, this is an ideal principle that overlooks sovereignty and nationalism, and the competing demands of the different riparians.

Hence, only the third theory, that of limited territorial sovereignty survived and formed the basis of modern international water law. The theory, which is based on the equality of all riparian states, encompasses both the right to use the waters of the shared watercourse, as well as the duty not to cause significant harm to other riparians. However, working out the details of the relationship between those two principles proved quite complex and challenging. Indeed, the major area of the debate on international water law for the last half a century has been the relationship between those two principles, as will be discussed in the next parts of this paper.

Philosophy and Contribution of the IIL and the ILA

The IIL and the ILA are both scholarly non-governmental organizations established in 1873, and working on various fields of international law. The IIL is a smaller organization whose membership is by election and invitation. The ILA, on the other hand, is larger and its membership is open to all international lawyers through recommendations. Both institutions adopt resolutions and rules which aim at codifying international law as it exists. However, it should be clarified that those resolutions and rules do not have a formal standing, and are not legally binding *per se*. They differ from conventions and treaties which derive their binding effect from the fact that states sign and ratify those conventions and treaties. However, those rules and resolutions possess a considerable authority by virtue of the fact that they reflect the established customary principles of international water law, and from the expertise and respectability of the members of both institutions.

The resolutions of the IIL emphasize, and are centred on, the obligation not to cause significant harm to other riparian states. Its first resolution, known as the Madrid Declaration and adopted in 1911, established absolute prohibition against activities that may result in injury to other riparians. The Declaration stood in sharp contrast to the Harmon Doctrine. This approach was elaborated, but curtailed, by the Salzburg Resolution which the IIL adopted in 1961. The Salzburg Resolution emphasized the obligation of the states not to cause harm to other states, but subjected the right of that state to use the waters of the shared river to the right of use by other states. Thus, the absolute prohibition of the Madrid Declaration was somewhat relaxed by the Salzburg Resolution. The resolutions adopted by the IIL in 1979 and 1997 dealt with the environment, including that of the shared watercourses. Those resolutions prohibit any acts that may cause pollution to such watercourses, or adversely harm other riparians.

The resolutions and rules adopted by the ILA differ from those of the IIL in that they emphasize the principle of reasonable and equitable utilization of shared watercourses. The first such resolution, known as the Dubrovnik Statement, was issued by the ILA in 1956. The Statement confirmed the sovereign control each state has over the international river within its own boundaries, but required that state to exercise such control with due consideration of its effects on other riparian states.

The approach started by the Dubrovnik Statement was refined by the New York Resolution which was adopted by the ILA in 1958. The Resolution stated that each co-riparian state is entitled to a reasonable and equitable share in the beneficial uses of the waters of the drainage basin. The principle of equitable utilization was the essence of discussion by the ILA at the Tokyo meeting that was held in 1964, as well as the Helsinki

meeting in 1966. The latter meeting established the principle as the guiding rule for the work of the ILA in the field of international rivers.

The Helsinki Rules

The statements and resolutions adopted by the ILA in Dubrovnik and New York and the discussion in Tokyo in the first 10 years since it started working on international rivers paved the road for the comprehensive rules issued by the ILA in its meeting in Helsinki in 1966. Those rules are known as the 'Helsinki Rules on the Uses of the Waters of International Rivers'. Although the title of the Rules refers to international rivers only, Article I states that the Rules are applicable to the use of the waters of an international drainage basin. Such a drainage basin is defined as "a geographical area extending over two or more States determined by the watershed limits of the system of waters, including surface and underground waters, flowing into a common terminus". As such, the Helsinki Rules also apply to groundwater connected to surface water. This is the first time that transboundary groundwater was addressed by any international legal instrument.

The Helsinki Rules established the principle of "reasonable and equitable utilization" of the waters of an international drainage basin among the riparian states as the basic principle of international water law. For that purpose, the Helsinki Rules have specified a number of factors for determining the reasonable and equitable share for each basin state. Article V of the Helsinki Rules states that the relevant factors to be considered include, but are not limited to: (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; (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 (ILA, 1966).

The Rules devote a separate chapter to each of pollution, navigation and timber floating. With regard to navigation, the Rules incorporate the customary international law principle that grants each riparian state the right of free navigation on the entire course of the river or lake on a reciprocal basis. It is noteworthy that this is the first international legal instrument to include rules for both navigational and non-navigational uses of international rivers. Article VI of the Helsinki Rules confirmed the decline of the primacy of navigation by stating that a use or category of uses is not entitled to any inherent preference over any other use or category of uses. The Article, as such, equates all uses of international drainage basins. The Rules also include a chapter on procedures, not only for settlement, but also for the prevention of disputes. The latter part of the chapter deals with notification of other riparians of any proposed construction or installation that would alter the regime of the basin or give rise to a dispute. As such, the Helsinki Rules cover a wide range of issues, including both navigational and non-navigational uses of international watercourses.

Henceforth, reasonable and equitable utilization of the waters of the international drainage basins emerged as the guiding principle in the work of the ILA. It should be mentioned that the Helsinki Rules do not include a separate reference to the obligation not to cause harm, but rather specify the injury that may result from the use of the river by one riparian as one of the factors for determining equitable utilization. Another factor included in the Rules that needs to be considered in determining equitable utilization is past utilization of the waters of the basin, including in particular existing utilization. Accordingly, the Helsinki Rules treat prior appropriation as one element in determining equitable utilization. Clearly, the Helsinki Rules have established the principle of reasonable and equitable utilization as the cardinal rule of international water law, and have placed the obligation not to cause harm as one of the elements for determining such reasonable and equitable utilization (ILA, 1966).

Like other IIL and ILA rules and resolutions, the Helsinki Rules have no formal standing or legally binding effect per se. However, until the adoption of the UN Convention 30 years later, they remained the single most authoritative and widely quoted set of rules for regulating the use and protection of international watercourses. Indeed, those Rules are the first general codification of the law of international watercourses. As noted by Charles Bourne, the Helsinki Rules were soon accepted by the international community as customary international law (Bourne, 1996). The Rules have been referred to or adopted by a number of organizations and countries. For example, the Asian-African Legal Consultative Committee, Sub-committee on International Rivers, embraced in 1973, in its meeting in New Delhi, India, the principle of reasonable and equitable share and included, to a large extent, the factors specified in Article V of the Helsinki Rules as the factors for determining such share. Similarly, the Protocol on Shared Watercourse Systems in the Southern African Development Community (SADC) concluded in 1995 was based largely on the Helsinki Rules, and the Protocol itself made explicit references to such Rules. Some of the bilateral treaties also made specific reference to the Helsinki Rules such as the 1992 Agreement between Namibia and South Africa on the Establishment of a Permanent Water Commission. When India and Bangladesh presented their case on the dispute over the Ganges River to the United Nations in 1975, both relied heavily on the Helsinki Rules (Salman & Uprety, 2002). Moreover, many of the decisions of the Supreme Court of the United States of America on inter-states water disputes relied on similar factors in determining the water share of each of the riparian states (Sherk, 2000).

From the Helsinki Rules through the Campione Consolidation to the Berlin Rules

The ILA work on international water law did not taper off after the issuance of the Helsinki Rules. In 1972 the Association issued its Articles on Flood Control, and in 1976 the Rules on Administration of International Watercourses were adopted. In 1980, the Belgrade Conference of the Association adopted two sets of rules. The first set dealt with the regulation of the flow of the water of international watercourses, and the second dealt with the relationship of international water resources to other natural resources' environmental elements. Separate Articles on pollution of the waters of an international drainage basin were adopted at the Montreal Conference in 1982. In 1986 at its Seoul conference, the ILA adopted the 'Complementary Rules Applicable to International Water Resources' that were intended to clarify certain elements with regard to the application of the Helsinki

Rules. The Complementary Rules dealt with three issues: substantial injury to co-basin states, the installation of works or the use of water resources in the territory of co-basin states, and notification procedures, all of which were addressed in a general way under the Helsinki Rules. In addition, the Seoul Rules dealt with transboundary groundwater, extending the application of the Helsinki Rules to transboundary aquifers that do not contribute water to, or receive water from, surface waters of an international drainage basin. The Seoul Rules also dealt with protection of groundwater and urged the riparian states to consider the integrated management of their international groundwater, including conjunctive use with surface waters. Supplemental rules on pollution and private remedies were adopted in 1996.

By the late 1980s and early 1990s it became clear that the rules the ILA had adopted were expanding, and provisions governing the same issue may be scattered in more than one instrument. Accordingly, the ILA decided to consolidate those rules in one instrument. The draft of the consolidated rules, known as 'The Campione Consolidation of the ILA Rules on International Water Resources, 1966–1999', was completed during the Water Resources Committee meeting in Campione, Italy, in June 1999. Those Rules did not present new work, but rather a compilation and consolidation of all the work approved by the ILA since the Helsinki Rules were issued in 1966.² The ILA meeting in London in 2000 took note of the Rules because their content had already been approved by the ILA. The Campione Consolidated Rules consist of 67 Articles and two Annexes, one on the establishment of an international water resources association, and the other on dispute settlement (Bogdanovic, 2001).

Following the issuance of the Campione Consolidated Rules, the ILA decided in 2000 to proceed further with the revision and updating of the Helsinki Rules to correspond to the present state of customary international water law. The Committee on Water Resources held a series of meetings and worked on a number of reports on the new rules. The final report was presented and approved in Berlin in 2004, as will be discussed later.

As such, the work of the ILA has been quite extensive and has addressed a wider array of issues of international water law. The work embraced and expounded the principle of 'reasonable and equitable utilization' elaborated in the Helsinki Rules as the cardinal rule for international water law. And although they do not have any legally binding effect, the Helsinki Rules have been, as stated before, widely accepted as representing customary international law, and have had major influence on subsequent developments on international water law. This influence is particularly apparent in the United Nations Watercourses Convention, as discussed below.

The United Nations Watercourses Convention

On 8 December 1970, the United Nations General Assembly adopted a resolution asking the ILC to study the topic of international watercourses. The ILC is a UN body composed of legal experts nominated by states, elected by the United Nations General Assembly, and is tasked with the codification and progressive development of international law. The ILC started working on the draft Convention in 1971. It completed its work and adopted the articles of the draft Convention in 1994, and recommended the draft articles to the General Assembly that year. After three years of informal and formal deliberations by the Sixth Committee of the UN (the Legal Committee), convened as Working Group of the Whole (the Working Group), and by the General Assembly of the United Nations, the Convention

was adopted by the General Assembly on 21 May 1997. A total of 103 countries voted for the Convention, with 3 against (Burundi, China and Turkey), and there were 27 abstentions, while 52 countries did not participate in the voting.

The Convention was opened for signature on 21 May 1997, and remained open for three years until 20 May 2000. By that time only 16 states signed the Convention. Although signatures closed on 20 May 2000, states can still become parties to the Convention by acceding to it. This means that they can have the Convention approved or accepted through their legislative process without having it signed. The Convention needs 35 instruments of ratification or accession to enter into force. As of this year, 10 years after its adoption, the Convention is still to enter into force. It has only been ratified or acceded to by 16 states, a number far short of that required under the Convention, as discussed later.

The Convention is based largely on the ILA work, particularly the Helsinki Rules, and partly on that of the IIL. Indeed, the Convention itself recognizes “the valuable contribution of international organizations, both governmental and non-governmental, to the codification and progressive development of international law in this field”.

The Convention is a framework convention that aims at ensuring the utilization, development, conservation, management and protection of international watercourses, and promoting optimal and sustainable utilization thereof for present and future generations. As a framework convention, it addresses some basic procedural aspects and few substantive ones, and leaves the details for the riparian states to complement in agreements that would take into account the specific characteristics of the watercourse in question. Such agreements can adopt or adjust the provisions of the Convention.

The Convention is divided into seven parts and consists of 37 Articles. In addition, it includes an Annex on arbitration. The main areas that the Convention addresses include the definition of the term ‘watercourse’; watercourses agreements; equitable and reasonable utilization and the obligation not to cause harm; planned measures; protection, preservation and management; and dispute settlement.

The term ‘watercourse’ is defined by the Convention to include both “surface water and groundwaters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus”. This definition is based largely on that of the international drainage basin under the Helsinki Rules, and includes only groundwater that is connected to surface water. It does not incorporate the expansion of the definition of groundwater under the Seoul Rules, which, as noted earlier, includes transboundary aquifers that do not contribute water to, or receive water from, surface waters of an international drainage basin.³

Similar to the Helsinki Rules, the Convention embraces the principle of equitable and reasonable utilization, and lays down in Article 6 certain factors and circumstances that should be taken into account for determining such equitable and reasonable utilization. Article 6(1) of the Convention states that utilization of an international watercourse in an equitable and reasonable manner, within the meaning of Article 5, requires taking into account all relevant factors and circumstances, including: (a) geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character; (b) the social and economic needs of the watercourse states concerned; (c) the population dependent on the watercourse in the watercourse state; (d) the effects of the use or uses of the watercourse in one watercourse state on other watercourse states; (e) existing and potential uses of the watercourse; (f) conservation, protection, development and economy of the water resources of the watercourse and the cost of measures taken to that effect; and (g)

the availability of alternatives, of comparable value, to a particular planned or existing use. In comparing those factors with the factors under the Helsinki Rules, it can be concluded that the factors under the UN Convention are based largely on those of the Helsinki Rules. Similar to Article V of the Helsinki Rules, Article 6 of the Convention states that the weight to be given to each factor is to be determined by its importance in comparison with that of other relevant factors. The Article further clarifies that in determining what is reasonable and equitable use, all relevant factors are to be considered together and a conclusion reached on the basis of the whole. This is the exact language of Article V of the Helsinki Rules.

The Convention also deals with the obligation not to cause significant harm, and requires the watercourse states to take all appropriate measures to prevent the causing of significant harm to other watercourse states. It is worth clarifying in this connection that lower riparians tend to favour the no harm rule, as it protects existing uses against impacts resulting from activities undertaken by upstream states. Conversely, upper riparians tend to favour the equitable and reasonable utilization principle, because it provides more scope for states to utilize their share of the watercourse for activities that may impact on downstream states. Agreement on which rule takes priority has proven elusive and the issue dogged the ILC throughout its work on the Convention. Different ILC rapporteurs dealt with the issue differently, equating the two principles or subordinating one principle to the other. The issue was discussed by the Working Group where sharp differences between the riparian states on those two principles surfaced. After lengthy debate, a compromise regarding the relationship between the two principles was reached. The compromise addressed Article 7 on the obligation not to cause significant harm. The new language of Article 7 requires the state that causes significant harm to take measures to eliminate or mitigate such harm "having due regard to Articles 5 and 6". Those two Articles deal with the principles of equitable and reasonable utilization. As Lucius Caflisch noted:

The new formula was considered by a number of lower riparians to be sufficiently neutral not to suggest a subordination of the no-harm rule to the principle of equitable and reasonable utilization. A number of upper riparians thought just the contrary, namely that, that formula was strong enough to support the idea of such subordination. (Caflisch, 1998, p. 15)

However, notwithstanding this compromise language, the prevailing view is that the Convention has, like the Helsinki Rules, subordinated the obligation not to cause significant harm to the principle of equitable and reasonable utilization. This conclusion is based on a close reading of Articles 5, 6 and 7 of the Convention. Article 6 enumerates a number of factors for determining reasonable and equitable utilization. Those factors include: (i) "the effects of the use or uses of the watercourse in one watercourse State on other watercourse States", and (ii) "existing and potential uses of the watercourse". Those same factors will also need to be used, with other factors, to determine whether significant harm is caused to another riparian, because harm can be caused by depriving other riparians of the water flow and thereby affecting their existing uses. Moreover, Article 7(1) of the Convention obliges watercourse states, when utilizing an international watercourse in their territory, to take all appropriate measures to prevent the causing of significant harm to other watercourse states. Nevertheless, when significant harm is caused to another

watercourse state, then Article 7(2) of the Convention requires the state causing the harm to “take all appropriate measures, having due regard to Articles 5 and 6, in consultation with the affected State, to eliminate or mitigate such harm, and where appropriate, to discuss the question of compensation”. As noted before, Articles 5 and 6 of the Convention deal with equitable and reasonable utilization. As such, Article 7(2) requires giving due regard to the principle of equitable and reasonable utilization when significant harm has nevertheless been caused to another watercourse state. The paragraph also indicates that the causing of harm may be tolerated in certain cases such as when the possibility of compensation may be considered. Accordingly, a careful reading of Articles 5, 6 and 7 of the Convention should lead to the conclusion that the obligation not to cause harm has indeed been subordinated to the principle of equitable and reasonable utilization. Hence, it can be concluded that, similar to the Helsinki Rules, the principle of equitable and reasonable utilization is the fundamental principle of the UN Watercourses Convention.

This view has been endorsed by the International Court of Justice (ICJ) in the Danube case between Hungary and Slovakia (the *Gabcikovo-Nagymaros* case). The case was decided in September 1997, four months after the Convention was adopted by the United Nations General Assembly. In that case the Court emphasized the concept of equitable and reasonable utilization when it directed that “the multi-purpose programme, in the form of a co-ordinated single unit, for the use, development and protection of the watercourse is implemented in an equitable and reasonable manner” (ICJ, 1997). The Court did not refer to the obligation not to cause harm.

Other basic obligations under the Convention include the obligation to cooperate through, *inter alia*, the establishment of joint mechanisms or commissions and the regular exchange of data and information, and through notification of other riparian states of planned measures with possible significant adverse effects.

The Convention also includes a detailed part on the environment entitled ‘Protection, Preservation and Management’ of international watercourses. This part deals with a number of elements, including: protection and preservation of ecosystems; prevention, reduction and control of pollution; introduction of alien or new species; and protection and preservation of the marine environment. Article 33 and the Annex to the Convention deal with dispute settlement mechanisms and procedures. The Article lays down a number of methods for settlement of disputes, including negotiations, jointly seeking the good offices of, or mediation and conciliation by a third party, or use of joint watercourse institutions, or submission of the dispute to arbitration or to the International Court of Justice.

Ten years after its adoption by a large majority of the General Assembly of the United Nations, the Convention has not yet obtained the necessary number of instruments of ratification or accession to enable it to enter into force and effect. As of December 2006, only 16 countries have ratified or acceded to the Convention.⁴ The reasons for the reluctance of the states to ratify or accede to the Convention are beyond the scope of this paper. However, the different understandings of the riparian states of the manner in which the Convention has dealt with the issue of the relationship between equitable and reasonable utilization and the obligation not to cause significant harm is no doubt a major reason for this situation. As discussed earlier, this issue generated lengthy discussion during the Working Group debate, which resulted in a compromise language. Apparently many states are no longer satisfied with that compromise, and for them there is still considerable ambiguity as to which of the two principles prevails.

The Berlin Rules

As indicated earlier, the ILA completed the Campione Consolidation in 2000, but this Consolidation did not consider whether the rules adopted since 1966 needed revision. In 1997, the year the UN Convention was adopted, the Water Resources Committee of the ILA started considering the question of how to proceed with the revisions of the Helsinki Rules. Discussions took place during the ILA conference in London in 2000 and the revision process continued after that conference. The Committee presented its third report at the New Delhi Conference in 2002 where it was agreed to set a goal of completing the project by 2004. During the Gent meeting of the Water Resources Committee in March 2004, the 11 members of the Committee who attended the meeting (out of the 22 members) completed the work and voted unanimously to present the revised set of rules to the ILA. The rules were discussed and approved during the ILA Seventy-first Conference held in Berlin in August 2004. The previous title of the rules 'The Revised ILA Rules on Equitable and Sustainable Uses in the Management of Waters' was changed, and a new title 'The Berlin Rules on Water Resources' replaced it (ILA, 2004).

The Berlin Rules are quite comprehensive and detailed. They consist of 73 Articles, divided into 14 chapters, covering various issues on water resources which go beyond the Helsinki Rules and the UN Watercourses Convention. The Report of the Water Resources Committee stated that the Rules incorporate the experience of the nearly four decades since the Helsinki Rules were adopted:

taking into account the development of important bodies of international environmental law, international human rights law and the humanitarian law relating to the war and armed conflict, as well as the adoption by the General Assembly of the United Nations of the UN Convention.

The emphasis by the Committee of the developments in international environmental law is worth noting, given the manner in which the Berlin Rules dealt with the relationship between the principle of equitable and reasonable utilization and the obligation not to cause harm, as will be discussed later.

It is also worth noting that a number of the Berlin Rules are applicable to the management of all waters, both national and international. This is indeed a major deviation by the ILA from its entire previous work that dealt exclusively with international rivers, international drainage basins and transboundary groundwater. The Berlin Rules also stand in sharp contrast to the work of the IIL and ILC in this field. Chapter II of the Berlin Rules addresses various issues related to all waters, ranging from participation of persons likely to be affected by decisions concerning the management of waters; the conjunctive management of surface waters, groundwater and other waters in a unified and comprehensive manner; and integration of the management of waters with the management of other resources, as well as the sustainable management of water and the prevention or minimization of environmental harm.

Chapter III applies to internationally shared waters. Article 12 states that:

Basin States shall in their respective territories manage the waters of an international drainage basin in an equitable and reasonable manner having due regard for the obligation not to cause significant harm to other basin States.

The approach set forth by this Article contrasts sharply with that of both the Helsinki Rules and the UN Watercourses Convention. Article IV of the Helsinki Rules states that “Each basin state is entitled, within its territory, to a reasonable and equitable share in the beneficial uses of the waters of an international drainage basin”. Similarly, Article 5 of the UN Convention states that “Watercourse States shall in their respective territories utilize an international watercourse in an equitable and reasonable manner ... taking into account the interests of the watercourse States concerned”.

The major distinction between the Helsinki Rules and the UN Convention on the one hand, and the Berlin Rules on the other, is that the former establish and emphasize the right of each basin state to a reasonable and equitable share. This is based on the concept of equality of all riparian states in the use of the shared watercourse. On the other hand, the Berlin Rules obliges each basin state to manage the waters of an international drainage basin in an equitable and reasonable manner. The term ‘manage’ is defined in Article 3(14) of the Berlin Rules to include “the development, use, protection, allocation, regulation, and control of the waters”. Thus, whereas the Helsinki Rules and the UN Convention establish and emphasize the right of each of the riparian states to a reasonable and equitable share, the Berlin Rules emphasize the obligation to manage the shared watercourse in an equitable and reasonable manner.

Another major distinction related to the above is that the requirement under the Berlin Rules to manage the waters of an international drainage basin in an equitable and reasonable manner is subject to having due regard for the obligation not to cause significant harm to other basin states. As noted before, the Helsinki Rules addressed the obligation not to cause harm only through the factors for determining the reasonable and equitable utilization. The UN Convention followed the same approach, but added, unlike the Helsinki Rules, a separate Article on the obligation not to cause significant harm. However, that Article, as discussed earlier, subordinated the obligation not to cause harm to the principle of equitable and reasonable utilization.

After subjecting the principle of equitable and reasonable utilization to the obligation not to cause significant harm, as stipulated in Article 12, the Berlin Rules addressed significant harm separately in Article 16. That Article requires the basin states, in managing the waters of an international drainage basin, to refrain from and prevent acts or omissions within their territory that cause significant harm to another basin state “having due regard for the right of each basin State to make equitable and reasonable use of the waters”.

The Commentary on Article 12 of the Berlin Rules attempts to explain the intention of the drafters and the differences between this Article and the UN Watercourses Convention. The Commentary states:

The language introduces another change from the UN Convention in order to resolve the most debated issue in the drafting of the UN Convention: the relationship of the principle of equitable utilization to the obligation not to harm another basin State (Article 16). The phrasing adopted here emphasizes that the right to an equitable and reasonable share of the waters of an international drainage basin carries with it certain duties in the use of those waters. The change of phrase from the original *Helsinki Rules* is not a running away from the right to share in the benefits of the transboundary resource. Rather, it recognizes that with the right to share come obligations that can only be fulfilled by acting in an equitable and reasonable

manner, having due regard to the obligation *no (sic)* to cause significant harm to another basin State. The interrelation of these obligations must be worked out in each case individually, in particular through the balancing process expressed in Articles 13 and 14. (ILA, 2004, p. 362)

Accordingly, it can be concluded that by subjecting each principle to the other, the Berlin Rules present the two principles as equal. There is no doubt that this is a major deviation from the Helsinki Rules that established reasonable and equitable utilization as the cardinal rule of international water law. It is also a deviation from the UN Watercourses Convention that has subordinated the obligation not to cause significant harm to the principle of equitable and reasonable utilization, as discussed earlier. In this connection, the Berlin Rules are also not in line with the decision of the International Court of Justice in the Danube case where the Court confirmed the principle of equitable and reasonable utilization as the guiding principle for international water law, and made no reference to the obligation not to cause harm. Some experts in the field have gone further and indicated that the Berlin Rules actually render the principle of equitable utilization subordinate to the no harm rule, reversing the established principle of the Helsinki Rules (Bourne, 2004).

Thus, rather than clarifying the relationship between the two principles, the Berlin Rules have added to the already existing confusion in this area. It should be clarified that harm can be quantitative or qualitative or both. The quantitative harm is addressed through the principle of equitable and reasonable utilization, while the qualitative harm is addressed through the environmental obligations.

Indeed, the environmental provisions of the Berlin Rules are quite comprehensive. Chapter V of the Berlin Rules deals with protection of the aquatic environment, and calls for implementation of the precautionary approach in the implementation of the obligations under that Chapter. It requires the states to take all measures to protect the ecological integrity necessary to sustain ecosystems dependent on particular waters, and to prevent, eliminate, reduce or control pollution and harm to the aquatic environment. The Chapter also requires taking all appropriate measures to ensure flows adequate to protect the ecological integrity of the waters of a drainage basin, and to prevent the introduction of alien species, and hazardous substances. Chapter VI requires the states to undertake prior and continuing assessments of the impact of programmes, projects or activities that may have a significant effect on the aquatic environment, and lays down detailed procedures for the impact assessment process. Those detailed environmental provisions of the Berlin Rules cover, in adequate and clear manner, the qualitative aspects of shared watercourses.

Chapter IV deals with the right of persons. Article 17 under that Chapter states that every person has a right of access to sufficient, safe, acceptable, physically accessible and affordable water to meet that individual's vital human needs. Groundwater is covered under Chapter VIII, while Chapter IX deals with navigation. Chapter XI on 'International Cooperation and Administration' deals with a number of aspects including exchange of information, notification of programmes, plants, projects or activities, and the detailed procedures for such notification, establishment of basin-wide joint management, compliance review and sharing of expenses. Settlement of disputes is addressed under Chapter XIV of the Berlin Rules.

This over-view of the Berlin Rules indicates that the Rules have drawn heavily from the Helsinki Rules and the UN Watercourses Convention. However, three basic features distinguish the Berlin Rules from their predecessors. First, a number of the provisions

of the Berlin Rules apply to both national as well as international waters. This is a marked departure from all other international water law instruments that apply strictly to shared waters. Questions are being raised about the wisdom of application of principles of international law to waters that are exclusively domestic. The questions are particularly pressing given the fact that the world community has not yet succeeded in agreeing on a treaty that would regulate the uses of international watercourses. Second, the Berlin Rules have gone beyond what the ILA considered as established principles of customary international law, and incorporated emerging principles as well. This approach differs from the Helsinki Rules which reflect the established principles only. Similarly, the UN Watercourses Convention reflects, as widely agreed, the basic established principles of customary international law (McCaffrey, 1998). The distinction between the two is that, whereas the established principles are legally binding, the emerging ones are not. Moreover, the Berlin Rules do not clarify which articles reflect established principles, and which ones reflect the emerging ones. The word “shall” has been used throughout the Rules equating the two sets of principles.

Third, in its attempts to incorporate the current customary rules and thinking on international environmental law, the Berlin Rules have downgraded the established and cardinal principle of international water law of equitable and reasonable utilization, and have equated it with the obligation not to cause significant harm. This contrasts sharply with both the Helsinki Rules and the UN Watercourses Convention. Both of them treat harm as one of the factors for determining equitable and reasonable utilization, and accordingly subordinate the obligation not to cause harm to the principle of equitable and reasonable utilization. This point, as well as the other two, have been discussed in more detail, and sharply criticized in the Dissenting Opinion presented to the ILA by some members of the Water Resources Committee (Bourne, 2004).

Conclusion

Approximately 300 rivers, 100 lakes, and a yet to be determined number of aquifers, are shared by two or more states. Those water resources are facing acute challenges resulting from the steady increase in population, industrialization, urbanization and environmental degradation, as well as hydrological variability. Aside from some few rivers in Europe, none of the major basins in the world is governed by an agreement encompassing all the riparians. Even when agreements exist, interpretation and implementation of these agreements has not been an easy task. As a result, disputes over shared waters are on the increase, and now cover a wide array of issues that go beyond quantity and quality of the shared waters (Salman, 2006). Given this situation, it is quite unfortunate that the world community has not yet succeeded in agreeing on a universally applicable treaty to regulate the uses and protection of shared water resources.

Despite their adoption more than 40 years ago, and the fact that they are not legally binding *per se*, the Helsinki Rules have exerted a major influence in the field of international water law. This is based on the two aspects of the Rules. The first is the cardinal principle of the equality of all the riparian states in the uses of the shared watercourse, which the International Court of Justice reconfirmed in the Danube case in 1997. The second are the factors for determining equitable and reasonable utilization. Those factors have been incorporated, by and large, by both the UN Convention and the Berlin Rules. Although the UN Watercourses Convention is based largely on the Helsinki Rules, the political

compromise introduced by the Working Group on the relationship between equitable and reasonable utilization and the obligation not to cause harm has generated considerable ambiguity for some states as to which principle prevails. The Berlin Rules have exacerbated this confusion. As stated before, this controversy has been one main reason for the reluctance of the states to sign and ratify, or accede to the Convention.

Indeed, the recent history of, and the work on, international water law has been occupied largely by the relationship between those two principles. As indicated earlier, activities of one riparian state on the shared watercourse may harm another riparian state with regard to the quantity or quality (or both) of the shared waters. The quantitative harm can and should be dealt with under the principle of equitable and reasonable utilization. On the other hand, the qualitative harm should be covered through the environmental obligations of the riparian states under the respective international legal instrument. Clearly, it is the bundling of both types of harm, and viewing them as one element, that has compounded the confusion over the relationship between the principle of equitable utilization and the obligation not to cause harm. As previous discussion showed, the factors for determining such equitable and reasonable utilization include existing uses, which, if not taken into account, could result in harm to other riparians.

As Stephen McCaffrey aptly stated:

... while the no-harm principle does qualify as an independent norm, it neither embodies an absolute standard nor supersedes the principle of equitable utilization where the two appear to conflict with each other. Instead, it plays a complementary role, triggering discussions between the states concerned and perhaps, in effect, proscribing certain forms of serious harm. (McCaffrey, 2001, p. 348)

Along the same lines, Ibrahim Shihata called the relationship between the two principles 'the fictitious dichotomy'. He cautioned that this fictitious dichotomy: need not stand in the way of such cooperative management for the optimal and sustainable uses of the international waterways. After all, equitable distribution must take account of existing uses and the need to maintain the livelihood of the population who came to be dependent on these uses (Shihata, 1998, p. vii).

Thus, the idea of subordinating equitable and reasonable utilization to the obligation not to cause harm, or equating the two principles, strikes at the fundamental and cardinal principle of international water law. Clearly, this lengthy controversy on the relationship between the two principles is misguided and unfortunate.

Shared water resources remain the most important area that is not yet regulated by a binding international convention or treaty. Given that water is the most precious resource that humanity shares, and given the ever-increasing challenges facing shared water resources, it is indeed quite unfortunate that the task of sharing and protecting water resources still lacks a universally agreed upon treaty, mainly because of this unwarranted controversy.

Notes

1. The views expressed in this article are those of the author and do not necessarily reflect the views of the World Bank.
2. It should be clarified that Article 10 of the Campione Consolidated Rules on 'Adequate Stream Flows' was adopted at the London Conference itself in 2000, and was incorporated in the Campione Consolidated Rules at

that meeting. Hence, Article 10 provides an exception to the statement that the Campione Consolidated Rules do not present new work.

3. Although the ILC restricted the definition of 'watercourse' only to groundwater connected to surface water, the ILC issued a separate resolution recommending that other types of groundwater be governed by the same rules laid down in the Convention. For the text of this Resolution see, Salman M. A. Salman (Ed.) *Groundwater—Legal and Policy Perspectives* (World Bank Technical Paper No. 456 (1999), p. 235.
4. Those countries are South Africa, Namibia, Finland, Norway, Hungary, Sweden, The Netherlands, Portugal, Syria, Lebanon, Jordan, Iraq, Qatar, Libya, Germany and Uzbekistan.

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