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Allocation and Use of International Rivers: Recent Developments in International Law

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Boundaries and Water: Allocation and Use of a Shared Resource

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I. Introduction

A. Background: Issues and Politicalization

International rivers exist in vast numbers throughout the world. Well-known examples include the Amazon, Amur, Colorado, Congo, Danube, Euphrates, Indus, Jordan, Mekong, Nile, Rhine, and St. Lawrence Rivers. These take the form either of rivers bordering the territories of two or more States, called "contiguous" rivers, or of rivers passing through the territories of two or more States, called "successive" rivers.

The allocation and use of the water in international rivers give rise to many issues. One not discussed in this paper concerns navigational uses. Other questions, which are the subject of this paper, involve the quantity and timing of flow, and water quality, i.e., pollution. The vital economic, social, and military importance of these questions, and the fact that upstream and downstream States typically have diametrically opposed interests with respect to them, have led to frequent and often violent conflict throughout history.
B. Summary of Developments

Each of the three sources of international law -- customary international law, general principles common to the major legal systems of the world, and international agreements -- affects the allocation of international rivers.

Most authorities would agree that the major norms of customary international law concerning the non-navigational use of international rivers are the principles of no harm and of equitable utilization. According to the former principle, a riparian State should utilize an international river so as not to cause significant harm to other riparian States. What constitutes significant harm, especially in a situation of insufficient flow or where opportunity costs are at issue, is not clear. According to the latter principle, each State is entitled to a reasonable and equitable use of an international watercourse. Whether a particular apportionment is reasonable and equitable is determined by weighing all the facts and circumstances, including the history of prior use. Both principles thus suffer from ambiguity. And substantial controversy exists regarding how they interrelate, i.e., may a use significantly harm a downstream State but nevertheless be equitable and thus permissible?
The principles of no harm and, to a lesser extent, equitable realization are supported by the principle *sic utere tuo ut alienum non laedas* (one should exercise one's rights so as not to injure another), which is most probably a general principle of law common to the major legal systems of the world (and thus probably an international law norm). But this principle also lacks specificity.

The principles referred to above apply globally. It is also possible that customary norms exist that apply only regionally, e.g., between Canada and the United States.

Because the no-harm and equitable-utilization principles (assuming they exist) came into existence only over several centuries and because, in any event, they are so vague, States have entered into well over 200 international agreements governing international rivers. The United States is a party to watercourse agreements with each of its neighbors -- Canada and Mexico. Those relationships differ, both substantively and procedurally. The agreements have been used to set rules and resolve disputes, most recently with respect to the Cabin Coal Mine/Flathead River controversy between the United States and Canada. The major international-river dispute between the United States and Mexico has concerned the Colorado River, a dispute that may arise again if climate change occurs.
Because of the importance of international rivers and because of the controversy and ambiguity surrounding customary international law and general principles as applied to international rivers, the United Nations International Law Commission is now studying this topic. Its work, which is meant to complement, not supplant, more specific treaty regimes covering particular international rivers, recognizes the no-harm and equitable-utilization principles and a duty to cooperate; and it specifies procedures for prior consultation. The Commission's work will almost certainly help clarify and develop the law.

C. General References


II. Existing International Legal Regime

A. Introduction

The international legal system differs from typical domestic legal systems in three fundamental respects. First, there is no authoritative law-making institution, i.e., no centralized legislative authority. Second, there is no dispute-settlement mechanism with mandatory jurisdiction, i.e., no binding adjudicatory authority. And third, there is no centralized enforcement body: the U.N. Security Council has enforcement powers if the dispute threatens the peace, but the exercise of that authority is effectively blocked by the veto power of the five permanent members.

As a result, determining the proper allocation and use of international rivers -- questions that usually pit one sovereign State (i.e., nation) against another -- is more difficult than river allocation is within a country. Often, it is not clear whether there exists a relevant rule of law about a particular use and, if one does exist, what it means. Moreover, absent the
agreement of all States party to a dispute about a river, there is no body to apply existing law to the facts, or even to determine the facts. And finally, there is no body to enforce a determination that international law requires a certain remedy, even if such a determination can be gotten. In spite of these barriers, however, international law usually is followed -- both in general and in particular about international rivers.

Each of the three sources of international law is relevant to international rivers. Those sources are: (1) customary international law, i.e., general and consistent State practice, done in the belief that such practice was required or permitted by international law (State practice plus opinio juris); (2) general principles common to the major legal systems of the world; and (3) international agreements, i.e., agreements (whether called treaties, conventions, accords, or any other name) among two or more States that establish legal obligations or rights.

B. Customary International Law

1. Principle of no harm

Probably the most widely recognized customary norm concerning international rivers is the principle that no riparian State, through the use of the international river, may cause significant (or "substantial" or "appreciable") harm to another
riparian State. This principle is a particular application of the more general rule, expressed in the Corfu Channel case ((U.K. v. Albania) Merits, 1949 I.C.J. Rep. 4, 22-23 (Judgment of April 9)), of "every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States."

The no-harm principle, though relatively well-established, is often unclear in its application. For example, what constitutes harm: must persons or property be damaged, or will injury to the environment suffice? Also, what level of harm must occur or be threatened before a State's responsibility is engaged? Particular uncertainty arises where quantity or quality are already impaired or where one State alleges an opportunity cost rather than a harm to an existing beneficial use.

2. Principle of equitable utilization

Most authorities would agree with the existence of this principle, which provides that "each State is entitled to a reasonable and equitable share of the beneficial use of the waters of an international watercourse." J.G. Lammers, supra, at 364. Whether a particular apportionment is reasonable and equitable is determined by weighing all the facts and circumstances, including the history of prior use. This approach provides desirable flexibility, in particular in

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balancing the right of a sovereign (riparian) State to act as it likes in its own territory and the corresponding duty not to interfere with another sovereign (riparian) State's ability and right to act as it likes in its own territory. But those advantages are offset, at least to some degree, by the principle's ambiguity: what is a reasonable and equitable use? That ambiguity is particularly problematic in the international sphere because of the typical lack of a judicial or arbitral authority with mandatory jurisdiction, or of an institution with river-management authority.

3. Duty to cooperate and negotiate

The principle of equitable utilization is reinforced by one aspect of the duty to cooperate, i.e., the upstream State's duty to negotiate with a downstream State that will be disadvantaged by a proposed use. But that duty also is vague and often indeterminable. (See, e.g., Lake Lanoux arbitral award (France v. Spain), [1957] I.L.R. 101, 140-41.)

4. Relation between no-harm and equitable-utilization principles

Many authorities who recognize the principles of no harm and equitable utilization are troubled by the relation between them. Suppose a proposed use that is "reasonable and equitable" would harm another riparian State: should it be permitted? Some argue
that the fundamental principles of sovereignty and equality of States indicates that the use should be allowed, because otherwise one State is able to stop a "reasonable and equitable" activity of another State in its own territory. Others respond that that solution would result, in the absence of a binding international rule-making or dispute-settlement mechanism, in a winning advantage to the stronger State; that typically the States involved do not have equal power; and that the no-harm principle must therefore prevail, also based on an appeal to the principle of sovereign equality of States.

5. Regional customary international law

The principles discussed above apply globally. It is also possible that regional customary norms exist regarding an international river, i.e., customary norms that would apply only to two or a few riparian States. I know of no studies on that question as applied to river allocation and use. One could easily imagine that such norms might exist between Canada and the United States or between Mexico and the United States, based on their extensive cooperation in the fields of natural resource management and protection generally or of international rivers specifically. Professor Toru Iwama of Fukuoka University, Fukuoka, Japan, is researching the former possibility. For lists of specific behavior relevant

C. General Principles Common to the Major Legal Systems of the World

These "general principles" are recognized as sources of international law by the Restatement (Third) of Foreign Relations Law of the United States, § 102(1)(c) (1987) and in the International Court of Justice, I.C.J. Statute, art. 38(1)(c). The general principle most relevant to the allocation and use of international rivers is *sic utere tuo ut alienum non laedas* (the duty to exercise one's rights in ways that do not harm the interests of other subjects of law). This principle, which is related to the doctrine of abuse of rights, is the source of a State's duty not to interfere with the flow of a river to the detriment of other riparian States. (See, e.g., I L. Oppenheim, *International Law: A Treatise* 346 (8th ed., H. Lauterpacht ed. 1955). The principle is subject to varying application in a particular situation because, for example, of disagreement about the scope of State's rights. It thus also suffers from vagueness.

D. International Agreements
1. General

Because of the large number of international rivers, because the principles referred to above developed only slowly over time, and because of the vagueness of those principles, well over 200 international agreements are in effect that govern the allocation and use of international rivers. (See Legislative Texts and Treaty Provisions Concerning the Utilization of International Rivers for Other Purposes than Navigation (U.N. Publication Sales No. 63.V.4).)

The earliest such agreement of which I am aware was entered into in 805. For a 1754 Venice treaty, see XI International Protection of the Environment -- Treaties and Related Documents (B. Ruster & B. Simma, eds. 1975). Most of these agreements are bilateral, such as that between Finland and the Soviet Union. (United Nations, 379 Treaty Series 330.) Some are regional, such as that governing the Rhine River. When such an agreement exists, it can provide more specificity regarding substantive rights and procedural mechanisms than do the customary norms and general principles referred to above.

2. United States

The United States has international agreements with both of its immediate neighbors creating regimes regarding international rivers.
Canada and the United States have a relatively long and generally successful history of dealing with natural-resource disputes, including those regarding the allocation and use of international rivers. This relationship, in fact, is probably the most successful example of bilateral environmental cooperation in the world (in spite of the current controversy about acid deposition).

In 1909 the United States and Great Britain (on behalf of Canada) entered into the Boundary Waters Treaty. (Boundary Waters Treaty, Jan. 11, 1909, U.S.-Great Britain, 36 Stat. 2448, T.S. No. 548.) That treaty establishes certain obligations with respect to boundary waters and also provides a binational mechanism -- the International Joint Commission ("IJC") -- for helping resolve boundary-water disputes. Notably, Article IV of the Treaty provides: "It is further agreed that the waters herein defined as boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other." That language, which is (probably unrealistically) absolute and unyielding on its face, is nowhere in the Treaty defined more precisely, and there does not appear to be any detailed analysis of the terms "polluted," "injury," "health," and "property." The force of Article IV might be
reduced considerably by the inclusion of a provision akin to the "Harmon Doctrine" -- i.e., that a nation has the unqualified sovereign right to utilize and dispose of the waters of an international river flowing through its territory -- in Article II of the Treaty. But the United States has never actually asserted that doctrine -- in connection with the Treaty or in any other context. And Canada also has not insisted on a strict interpretation of Article II.

The IJC, which is composed of three members from each nation, is a quasi-judicial body with mandatory jurisdiction and binding authority to approve or disapprove the quantitative -- but not the qualitative -- aspects of projects such as boundary-water diversions or obstructions. In addition, the Treaty provides that the nations jointly may refer environmental matters to the IJC for its binding or nonbinding recommendation (Articles IX & X). No disputes have been referred for the former, but more than 100 disputes have been sent to the IJC for nonbinding consideration. The IJC's recommendations normally have been followed in spirit, thus resolving difficult disputes in an amicable and timely manner.

The IJC typically proceeds by forming an advisory board composed of equal numbers of technical experts from each nation. The board is directed to investigate and report on the factual basis of the dispute. Making
policy recommendations normally is not part of the board's mandate. Nevertheless, the board's findings (which usually are unanimously endorsed by the board) have frequently eliminated much of the controversy, by removing factual misunderstandings or disagreements that had interfered with developing bilateral consensus.


b. Mexico-United States

In 1944, Mexico and the United States entered into a treaty dealing with three international
rivers -- Colorado, Tijuana, Rio Grande -- and establishing the International Boundary Waters Commission ("IBWC") to plan, build, and manage border water works, to enter into further agreements regarding international waters, and to settle disputes regarding interpretation of the Treaty if both parties consent. (See Treaty Relating to the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, Feb. 3, 1944, Mex.-U.S., 59 Stat. 1219, T.S. No. 994, 3 U.N.T.S. 313.) (The IBWC replaced the International Boundary Commission, which was created by treaty in 1889 to settle boundary demarcation disputes. See Convention Between the United States and Mexico, March 1, 1889, 26 Stat. 1512, U.S.T.S. 232, 9 Bevans 877.)

The IBWC has been quite active. Several problems currently exist in connection with international rivers or watercourse basins, including the threat that increased Mexican irrigation will harm Organ Pipe Cactus National Monument in Arizona by lowering the groundwater table there. (See U.S. Dep't of the Interior, Nat'l Park Service, Organ Pipe National Monument Natural and Cultural Resource Management Plan 55-68 (1983).)

The regime governing the Colorado River has developed significantly since 1944. Article 10 of the 1944 Treaty guarantees Mexico 1.5 million acre-feet of Colorado River water per year, with two provisions:
(1) the United States will deliver up to an additional 1.7 million acre-feet whenever flows exceed all U.S. uses plus the 1.5 million acre-feet due Mexico; and (2) deliveries to Mexico may be reduced in proportion to consumptive uses in the United States in case of drought or damage to U.S. irrigation systems.

The Treaty ignores groundwater use. The Treaty also does not mention water quality, an omission that created difficulties as U.S. uses drove the salinity of the water delivered to Mexico ever higher. From 1950-1960, the salinity of the Colorado River ranged from 700 parts per million (ppm) to 920 ppm. Salinity jumped to 1,340 ppm in 1961 as the result of the filling of Lake Powell and other activities. Mexico formally protested in November 1961, alleging violations of the Treaty and of customary international law. Mexico was unable to use the water after 1961 and let it flow unused into the Gulf of Mexico.

After initial denials by the United States, the IBWC gradually became the focal point of negotiations by the two countries. Several interim measures were tried unsuccessfully. Finally, in 1973, the United States agreed not to supply Mexico with water with salinity concentrations more than 115 ppm over the concentrations delivered to the Imperial Dam in California. Both countries also agreed to limit groundwater pumping within five miles of the border to

The United States Congress passed implementing legislation the next year. That legislation provided, inter alia, for building a mammoth desalinization plant at Yuma, Arizona and lining the Coachella Canal in California to save water to use toward satisfying the U.S. Treaty obligation. (Colorado River Salinity Control Act of 1974, 43 U.S.C. § 1591.)

III. Recent Developments

A. The United Nations International Law Commission

Because of the importance of international rivers and because of the lack of certainty regarding the relevant international norms generally applicable to those watercourses, the United Nations International Law Commission ("Commission" or "ILC") undertook a study of "The Law of the Non-Navigational Uses of International Watercourses" in 1974, after prodding from the U.N. General Assembly. The goals, generally
speaking, were to codify and develop international law in this area.

The international-watercourse topic proved to be highly political, probably the most political topic that the Commission has undertaken. The intense difference in views arose, of course, because of the strongly conflicting interests of upstream and downstream States. Progress has also been hampered by the need to appoint a series of special rapporteurs to guide the study: Richard Kearny, 1974-76 (U.S.); Stephen Schwebel, 1977-81 (U.S.); Jens Evensen, 1982-84 (Norway); and Stephen McCaffrey, 1985-present (U.S.). The fact that three of the four special rapporteurs have been from the United States is due to the United States' being fairly equally an upstream State and a downstream State.

Generally speaking, the Commission has adopted a framework-agreement approach, i.e., an overarching set of general legal principles that may be supplemented or even supplanted by regional (or bilateral) agreements designed to fit the particular characteristics of the river (or a relevant part of it). A continuing debate has concerned how comprehensively to define the scope of the topic: should it relate only to the water in contiguous and successive rivers, or should it include all the hydrologic components such as groundwater? In 1980, the Commission agreed to set aside that
controversy for a later time -- an agreement it still honors -- by using the ambiguous term "watercourse [system]" in its draft provisions.

The Commission has provisionally adopted 20 articles. Most significantly, two of these contain the equitable-utilization and no-harm principles discussed above (parts II.B.1 & 2):

**Article 6**

**Equitable and reasonable utilization**

and participation

1. Watercourse States shall in their respective territories utilize an international watercourse [system] in an equitable and reasonable manner. In particular, an international watercourse [system] 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 international watercourse [system].

2. Watercourse States shall participate in the use, development and protection of an international watercourse [system] in an equitable and reasonable manner. Such participation includes both the right to utilize the international watercourse [system] as provided in paragraph 1 of this article and the duty to cooperate in the protection and development thereof, as provided in article . . .

**Article 8**

**Obligation not to cause appreciable harm**

Watercourse States shall utilize an international watercourse [system] in such a way as not to cause appreciable harm to other watercourse States.

These principles had already been recognized by many authorities, including the International Law Association in its pioneering work. (See International Law Association, Helsinki Rules on the Uses of Waters of International Rivers, in Report of the 52nd Conference of the International Law Association, Aug. 14-20, 1966 (1967), reprinted in The Law of International Drainage Basins 779 (A. Garretson, R. Hayton & C. Olmstead, eds. 1967).) Their recognition by the Commission will reinforce their position as customary international law.

The Commission discussed the relationship between those two provisions. The Commission concluded that, at least prima facie, a use causing appreciable harm to another State is not equitable. The Commission further recognized, however, that if an equitable use does result in appreciable harm to a downstream State, the affected States should specifically agree to an accommodation. (See McCaffrey, supra, at 164.)

The Commission also provisionally adopted several other notable provisions, concerning the duty to cooperate, the duty to exchange data and information on a regular basis, and procedural rules applicable when a State plans measures that may have adverse effects.
(including pollution) on other riparian States. (See id. at 161-63.) Finally, the Commission will be considering three articles dealing specifically with environmental protection, pollution, and environmental emergencies at its upcoming sessions.

The Commission's drafts are not binding international law \textit{per se}. But they are strong evidence of international law and presumably will be incorporated in some fashion later in an international convention. The Commission's work in this area thus is of great significance. Its work on the related topic of International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law is also relevant.

B. The Cabin Creek Coal Mine Dispute

As indicated above (part II.D.2.a), the 1909 Boundary Water Treaty between Canada and the United States established a body -- the International Joint Commission ("IJC") -- to help resolve boundary-water disputes.

The most recent controversy to be considered by the IJC involved a proposed coal mine on Cabin Creek, British Columbia. The United States argued that the coal mine would pollute the North Fork of the Flathead River, killing fish, harming the recreational value of the area, and causing other damage. The dispute is especially troublesome because eastern British Columbia
is not very developed economically and because the North Fork of the Flathead River constitutes the western boundary of Glacier National Park.

The dispute was referred to the IJC for nonbinding resolution in December 1984 (U.S.) and February 1985 (Canada). The IJC appointed an advisory board, which engaged in a fact-finding inquiry of the type described above and submitted a series of reports during the period 1986-1988.

In December 1988, the IJC adopted the report of the fact-finding board. The IJC concluded, \emph{inter alia}, that the Cabin Creek Coal Mine should not be approved as proposed, in order to protect the use of the Flathead River. The IJC’s recommendations are as follows.

The Commission recommends that, in order that Governments can ensure that the provisions of Article IV of the Boundary Waters Treaty are honoured in the matter of the proposed coal mine at Cabin Creek in British Columbia:

(1) the mine proposal as presently defined and understood not be approved;

(2) the mine proposal not receive regulatory approval in the future unless and until it can be demonstrated that:

(a) the potential transboundary impacts identified in the report of the Flathead River International Study Board have been determined with reasonable certainty and would constitute a level of risk acceptable to both Governments; and, 

(b) the potential impacts on the sport fish populations and habitat in the Flathead River system would not occur or could be
fully mitigated in an effective and assured manner; and,

(3) the Governments consider, with the appropriate jurisdictions, opportunities for defining and implementing compatible, equitable and sustainable development activities and management strategies in the upper Flathead River basin.


These recommendations are notable in several respects. They are based in part on international programs other than the Treaty: Glacier National Park has been nominated by the United States as a World Heritage Site pursuant to the World Heritage Convention (to which both Canada and the United States are parties), and Glacier National Park and the adjoining Waterton Lakes National Park in Canada operate joint activities as part of the UNESCO's Man and the Biosphere program. (See id. at 6, 19, 25.) Recommendation (3) is also interesting, with its recommendation of a joint management regime for the river basin -- an idea that hopefully will become a reality in an increasing number of river basins.

The IJC's recommendations are not binding, so the ultimate resolution of the Cabin Creek dispute is up to the political branches of the two governments. But there is no reason to think that the IJC's conclusions will be disregarded in this instance.
Many commentators, including myself, advocate giving the IJC mandatory jurisdiction to make binding judgments about allocation and use issues or otherwise strengthening the IJC. Nevertheless, even as it currently stands, the IJC offers a relatively effective means of resolving issues regarding the allocation and use of international rivers.