WATER LAW AND CRITERIA FOR WATER ALLOCATIONS

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At the heart of water conflict management, is the question of "equity." A vague and relative term in any event, criteria for equity are particularly difficult to determine in water conflicts, where international water law is ambiguous and often contradictory, and no mechanism exists to enforce principles which are agreed-upon. However, application of an "equitable" water-sharing agreement along the volatile waterways of the world is a prerequisite to hydropolitical stability which, finally, could help propel political forces away from conflict in favor of cooperation. This section describes some measures of water-sharing equity which do exist, their strengths, and their weaknesses, in the context of global hydropolitics.

A. Rights-Based Criteria: International Water Law

According to Cano (1989, 168), international water law did not substantially begin to be formulated until after World War I. Since that time, organs of international law have tried to provide a framework for increasingly intensive water use, focusing on general guidelines which could be applied to the world's watersheds. (These general principles developed by advisory bodies have no legal bearing, and are referred to as "soft law.") The concept of a "drainage basin," for example, was accepted by the International Law Association (ILA) in the Helsinki Rules of 1966, which also provides guidelines for "reasonable and equitable" sharing of a common waterway (Caponera 1985). Article IV of the Helsinki Rules describes the over-riding principle:

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1 Excerpted from Wolf, A. "International Water Conflict Resolution: Lessons from Comparative Analysis." Water Resources Development. Sept. 1997.

> 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.

Article V lists no fewer than eleven factors which must be taken into account in defining what is "reasonable and equitable."[2] There is no hierarchy to these components of "reasonable use;" rather they are to be considered as a whole. One important shift in legal thinking in the Helsinki Rules is that they address the right to "beneficial use" of water, rather that to water *per se* (Housen-Couriel 1994, 10). The Helsinki Rules have been used only once to help define water use -- the Mekong Committee has used the Helsinki Rules definition of "reasonable and equitable use" in formulation of their Declaration of Principles in 1975, although no specific allocations were determined.

When the United Nations considered the Helsinki Rules in 1970, objections were raised by some nations as to how inclusive the process of drafting had been. In addition and, according to Biswas (1993), more importantly, some states (Brazil, Belgium, China, and France, for instance) objected to the prominence of the drainage basin approach, which might be interpreted as an infringement on a nation's sovereignty. Others, notably Finland and the Netherlands, argued that a watershed was the most "rational and scientific" unit to be managed. Others argued that, given the complexities and uniqueness of each watershed, general codification should not even be attempted. On December 8, 1970, the General Assembly directed its own legal advisory body, the International Law Commission

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2 The factors include a basin's geography, hydrology, climate, past and existing water utilization, economic and social needs of the riparians, population, comparative costs of alternative sources, availability of other sources, avoidance of waste, practicability of compensation as a means of adjusting conflicts, and the degree to which a state's needs may be satisfied without causing substantial injury to a co-basin state.

(ILC) to study "Codification of the Law on Water Courses for Purposes other than Navigation."[3]

It is testimony to the difficulty of marrying legal and hydrologic intricacies that the ILC, despite an additional call for codification at the U.N. Water Conference at Mar de Plata in 1977, took 21 years to complete its Draft Articles. It took until 1984, for example, for the term "international watercourse" to be adequately defined (a process described in exquisite detail by Wescoat 1992). Problems both political and hydrological slowed the definition: in a 1974 questionnaire submitted to member states, about half the respondents (only 32 of 147 nations responded by 1982) supported the concept of a drainage basin (eg. Argentina, Finland and the Netherlands), while half were strongly negative (eg. Austria, Brazil, and Spain) or ambivalent (Wescoat 1992, 311); "watercourse system" connoted a basin, which threatened sovereignty issues; and borderline cases, such as glaciers and confined aquifers, both now excluded, had to be determined. In 1994, more than two decades after receiving its charge, the ILC adopted a set of 32 draft articles which, with revisions, were adopted by the UN General Assembly on May 21, 1997 as the "Convention on the law of the Non-Navigational Uses of the International Watercourses."

The 1997 Convention includes language very similar to the Helsinki Rules, requiring riparian states along an international watercourse in general to communicate and cooperate. Provisions are included for exchange of data and information, notification of possible adverse effects, protection of eco-systems, and emergency situations. Allocations are dealt with through equally vague but positive language. "Reasonable and equitable use" within each watercourse state, "with a view to attaining optimal utilization thereof and benefits therefrom," is balanced

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3 In its reference to the ILC, the General Assembly excised all mention to the Helsinki Rules to allay political concerns over the drainage basin approach (Wescoat 1992, 307).

with an obligation not to cause significant harm. Reasonable and equitable use is defined similar to the Helsinki Rules, to be based on seven relevant factors.[4] The text of the Convention does not mention a hierarchy of these factors, although Article 10 says both that, "in the absence of agreement or custom to the contrary, no use...enjoys inherent priority over other uses," and that, "in the event of a conflict between uses..[it shall be resolved] with special regard being given to the requirements of vital human needs."

Groundwater is dealt with explicitly, most recently, in the Ballagio Draft Treaty, developed as a document of "soft law" in a process described by Hayton and Utton (1989). It too includes eight factors for consideration in allocations,[5] and suggests that, "the weight to be given to each factor is to be determined by its importance in comparison with that of the other relevant factors."

The problems arise when attempts are made to apply this reasonable but vague language to specific water conflicts. For example, riparian positions and consequent legal rights shift with changing boundaries, many of which are still not recognized by the world community. Furthermore, international law only concerns itself with the rights and responsibilities of states. Some political entities who might claim water rights, therefore, would not be represented, such as the Palestinians along the Jordan or the Kurds along the Euphrates.

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4 These factors include: geographic, hydrographic, hydrological, climatic, ecological, and other natural factors; social and economic needs of each riparian state; population dependent on the watercourse; effects of use in one state on the uses of other states; existing and potential uses; conservation, protection, development and economy of use, and the costs of measures taken to that effect; and the availability of alternatives, of corresponding value, to a particular planned or existing use.

5 The eight factors for consideration are: hydrogeology and meteorology; existing and planned uses; environmental sensitivity; quality control requirements; socio-economic implications; water conservation practices; artificial recharge potential; and comparative costs and implications of alternative sources of supply. In separate comments, Hayton and Utton (1989) suggest that a Commission, established under treaty, should also consider the traditional rights of nomadic or tribal peoples of a border region.

Even once the details are worked through, the principles would not have the force of law until approved by the U.N. General Assembly (Solanes 1987). Even then, cases are heard by the International Court of Justice (IJC) only with the consent of the parties involved, and no practical enforcement mechanism exists to back up the Court's findings, except in the most extreme cases. A state with pressing national interests can therefore disclaim entirely the court's jurisdiction or findings (Rosenne 1995).

Given all the intricacies and limitations involved, it is hardly surprising that the International Court of Justice only decided a single case regarding international water law.[6]

B. Rights-Based Criteria: Hydrography vs. Chronology

Extreme Principles

International water law has focused on providing general guidelines for the watersheds of the world. In the absence of such guidelines, some principles have been claimed regularly by riparians in negotiations, often depending on where along a watershed a riparian state is situated. Many of the common claims for water rights are based either on hydrography, i.e. from where a river or aquifer originates and how much of that territory falls within a certain state, or on chronology, i.e. who has been using the water the longest.

Initial positions are usually extreme (from Housen-Couriel 1994, and Matthews 1984). The "doctrine of absolute sovereignty" is often initially claimed by an upstream riparian. This principle, referred to as the Harmon Doctrine for the

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6 The ICJ came into being in 1946, with the dissolution of its predecessor, the Permanent Court of International Justice. That earlier body did rule on four international water disputes during its existence from 1922-1946. The single ICJ decision on intrenational waters was in 1997 on the Gabcikovo Dam on the Danube.

US attorney-general who suggested this stance in 1895 regarding a dispute with Mexico over the Rio Grande, argues that a state has absolute rights to water flowing through its territory (LeMarquand 1993, 63).[7] Considering this doctrine was eventually rejected by the United States (itself a down-stream riparian of several rivers originating in Canada), never implemented in any water treaty (with the rare exception of some internal tributaries of international waters), nor invoked as a sources for judgment in any international water legal ruling, and was explicitly rejected by the international tribunal over the Lac Lanoux case in 1957 (described below), the Harmon Doctrine is wildly over-emphasized as a principle of international law.[8]

The down-stream extreme claim often depends on climate. In a humid watershed, the extreme principle advanced is "the doctrine of absolute riverain integrity," which suggests that every riparian is entitled to the natural flow of a river system crossing its borders. This principle has reached acceptance in the international setting as rarely as absolute sovereignty. In an arid or exotic (humid headwaters region with an arid down-stream) watershed, the down-stream riparian often has older water infrastructure which is in its interest to defend. The principle that rights are acquired through older use is referred to as "prior appropriation," that is, "first in time, first in right".

These conflicting doctrines of hydrography and chronology clash along many international rivers, with positions usually defined by relative riparian positions. Down-stream riparians, such as Iraq and Egypt, often receive less rainfall than their up-stream neighbors and therefore have depended on river-water for much

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7 "The fundamental principle of international law is the absolute sovereignty of every nation, as against all others, within its own Territory" (cited in LeMarquand 1993, 63).

8 As far back as 1911, the Institut de Droit International had asserted that the dependence of riparian states on each other precludes the idea of absolute autonomy over shared waters (Laylin and Bianchi 1959, 46).

longer historically. As a consequence, modern "rights-based" disputes often take the form of upstream riparians such as Ethiopia and Turkey arguing in favor of the doctrine of absolute sovereignty, with downstream riparians taking the position of prior appropriation.[9]

Moderated Principles

It quickly becomes clear in negotiations that keeping to an extreme position leads to very little room for bargaining. Over time, rights become moderated with responsibility such that most states eventually accept some limitation to both their own sovereignty and to the river's absolute integrity. The negotiations which led to the disavowal of the legal principles of absolute sovereignty and absolute riverain integrity was the Lac Lanoux case (Laylin and Bianchi 1959; MacChesney 1959). In the early 1950's, France, citing absolute sovereignty, proposed diverting water from the Carol River, which crosses from the French into the Spanish Pyranees, across a divide towards the Font-Vive for hydropower generation -- Spain would be compensated monetarily. Spain objected, citing absolute riverain integrity and the existing irrigation needs on its side of the border. Even when France agreed to divert back first the water needed for Spanish irrigation, then *all* of the water being diverted, through a tunnel between the divide, Spain insisted on absolute riverain integrity, claiming it did not want French hands on its tap.[10] Both absolute principles were effectively dismissed when a 1957 arbitration tribunal ruled in the case that "territorial sovereignty...must bend before all international obligations," effectively negating doctrine of absolute sovereignty, while admonishing

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9 For examples of these respective positions, see the exchange between Jovanovic (1985, 1986) and Shahin (1986) in respective issues of Water International about the Nile; and the description of political claims along the Euphrates in Kolars and Mitchell (1991).

10 This is a concern which is raised regularly in negotiations, recently between Egypt and Ethiopia, and for a series of proposed canals from Turkey or Lebanon into the Jordan basin. It is primarily this concern which causes Israel to emphasize desalination over possibly less-expensive water import schemes.

downstream state from the right to veto "reasonable" upstream development, negating the principle of natural flow or absolute riverain integrity. This decision made possible the 1958 Lac Lanoux treaty (revised in 1970), in which it is agreed that water is diverted out-of-basin for French hydropower generation, and a similar quantity is returned before the stream reaches Spanish territory.

The "doctrine of limited territorial sovereignty" reflects rights to reasonably use the waters of an international waterway, yet with the acknowledgment that one should not cause harm to any other riparian state.

In fact, the relationship between "reasonable and equitable use," and the obligation not to cause "appreciable harm," is the more-subtle manifestation of the argument between hydrography and chronology. As noted above, the 1997 Convention includes provisions for both concepts, without setting a clear priority between the two. The relevant articles are:

Article 5: Equitable and reasonable utilization and participation

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 optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of the watercourse States concerned, consistent with adequate protection of the watercourse.

Article 7: Obligation not to cause significant harm

Watercourse States shall, in utilizing an international watercourse in their territories, take all appropriate measures to prevent the causing of significant harm to other watercourse States.

Article 10: Relationship between different uses

1. In the absence of agreement or custom to the contrary, no use of an international watercourse enjoys inherent priority over other uses.

2. In the event of a conflict between uses of an international watercourse, it shall be resolved with reference to the principles and factors set out in articles 5 to 7, with special regard being given to the requirements of vital human needs.

Not surprisingly, up-stream riparians have advocated that the emphasis between the two principles be on "equitable utilization," since that principle gives the needs of the present the same weight as those of the past. Likewise, down-stream riparians have pushed for emphasis on "no significant harm," effectively the equivalent of the doctrine of prior appropriation in protecting pre-existing use.

According to Khassawneh (1995, 24), the Special Rapporteurs for the ILC project had come down on the side of "equitable utilization" until the incumbency of J. Evensen, the third Rapporteur who, along with Stephen MacCaffrey, the final Rapporteur for the project, argued for the primacy of "no appreciable harm." Commentators have had the same problem reconciling the concepts as the rapporteurs: Khassawneh (1995, 24) suggests that the latter Rapporteurs are correct that "no appreciable harm" should take priority, while, in the same volume, Dellapenna (1995, 66) argues for "equitable use." The World Bank, which must follow prevailing principles of international law in its funded projects, recognizes the importance of equitable use in theory but, for practical considerations , gives "no appreciable harm" precedent -- it is considered easier to define -- and will not finance a project which causes harm without the approval of all affected riparians (see World Bank 1993, 120; and Krishna 1995, 43-45).

Even as the principles for sharing scarce water resources evolve and become more moderate over time, the essential argument still emphasizes the *rights* of each state, and rests on the fundamental dispute between hydrography and chronology. In addition, defining concepts precisely which are inherently vague both for reasons of legal interpretation and for political expediency -- "reasonable," "equitable," and "significant" -- guarantee continued ambiguity in the legal realm.