

# **The Berlin Rules on Water Resources: A New Paradigm for International Water Law**

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## **Introduction**

Water is an ambulatory resource that largely ignores human boundaries, giving rise to a considerable risk of conflict among neighbouring communities and nations (Teclaff 1967; Zacklin & Caflisch 1981). No wonder English derives the word “rival” from the Latin word “*rivalis*,” meaning persons living on opposite banks of a river. Considerable evidence, however, suggests that cooperative solutions to water scarcity problems are more likely than prolonged conflict (Dellapenna 1997; Wolf 1998). A well-developed body of international law addresses transboundary water problems. Water’s status as an international public good is central (Kaul, Grunberg, & Stern 1999). Water cannot simply be divided among competing users. States must cooperate to increase trust and eliminate water as a possible reason for war. a

## **Customary International Law Generally**

Customary international law consists of practices of states undertaken out of a sense of legal obligation—a sense that law requires the practice (Wolfke 1993). Despite obvious difficulties in determining the precise content of customary international law, the system has been remarkably successful. No form of international life could exist without shared norms that are largely self-effectuating. Focusing on a relatively few highly dramatic instances of international legal failure creates an impression of ineffectiveness. Focusing on similar failures in national legal systems would lead to a similar evaluation. The United Nations has codified successful areas of customary law.

## **The Evolution of the Customary International Law of Water Resources**

A rich body of customary law regarding internationally shared fresh water has emerged, largely in the last century or so (Dellapenna 2001; McCaffrey 2001). Industrialization brought the intensive use and extensive diversion of water from its source of origin (Teclaff 1985). The resulting international claims and counterclaims quickly settled into a predictable pattern, depending on the riparian status of the state making the claim. Today, all states agree that only riparian states—states across which, or along which, a river flows—have any legal right, absent agreement, to use the water of a river, lake, or other surface source (United Nations 1997: arts. 2(c), 4). Beyond that point, however, the patterns of international claim and counterclaim initially diverged sharply according to the riparian status of the state making the claim (Dellapenna 2005).

The uppermost riparian state always initially claims “absolute territorial sovereignty”—often called the Harmon Doctrine—claiming the right to do whatever it chooses with the water regardless of its effect on other riparian states. Downstream states general-

ly open by claiming a right to the “absolute integrity of the watercourse”—a claim that upper riparian states can do nothing that affects the quantity or quality of water that flows down the watercourse. The utter incompatibility of such claims guarantees that neither claim will prevail in the end, although the process of negotiating or otherwise resolving the dispute embodied in these claims might require decades (Dellapenna 1994). The solution is the rule of “equitable utilization” (United Nations 1997: art. 5). That rule ensures that each state receives a fair share of the available water or of its benefits, a right that is sometimes expressed as an obligation not to cause unreasonable injury to other states. Treaties generally are so tailored to the particulars of a specific drainage basin that it is impossible to derive a more specific rules for waters not yet allocated by treaty.

Perhaps the best evidence of the customary rule is found in arbitral and judicial decisions applying that law to particular disputes—decisions unanimously in favor of the rule of equitable utilization. The best example remains the statement of the Permanent Court of International Justice (the predecessor institution to the International Court of Justice) in discussing the authority of the Permanent Commission of the River Oder:

When consideration is given to the manner in which states have regarded the concrete situations arising out of the fact that a single waterway traverses or separates the territory of more than one state, and the possibility of fulfilling the requirements of justice and the considerations of utility which this fact places in relief, it is at once seen that a solution of the problem has been sought not in the idea of a right of passage in favour of upstream states, but in that of a community of interest of riparian states. This community of interest in a navigable river becomes the basis of a common legal right, the essential features of which are the perfect equality of all riparian states in the use of the whole course of the river and the exclusion of any preferential privileges of any riparian state in relation to others. (Permanent Court of International Justice 1929)

Equitable utilization thus rests ultimately on the concept of an international drainage basin as a coherent juridical and managerial unit (Dellapenna 2001; McCaffrey 2001). The rule has been codified several times, most influentially in the *Helsinki Rules* of 1966 (International Law Association 1966). The International Law Association drafted other rules for water-centered activities not addressed directly or adequately in by the *Helsinki Rules*, including flood control (1972), pollution (1972 and 1982), navigability (1974), the protection of water installations during armed conflicts (1976), joint administration (1976 and 1986), flowage regulation (1980), general environmental management concerns (1980), ground water (1986), cross-media pollution (1996), and remedies (1996). The International Law Association also developed what some see as a second principle governing the management of internationally shared water resources, that each nation shall not cause “substantial damage” to the environment or the natural condition of the waters beyond the limits of the nation’s jurisdiction. This is often referred to as the “no harm” rule. The organization did not attempt to work out the relation between the “no harm” rule and the “equitable utilization” rule, a failure that would produce considerable confusion and difficulty in later years.

Reliance on customary international law to allocate surface or subsurface waters among states simply has not worked very well. The system is too informal, lacks precise rules, and lacks means for enforcing such rules as it does have. The remarkable thing is that this informal system has worked as well as it has in many parts of the world. Yet international law is simply too primitive to solve the continuing management problems in a timely fashion. While uncertainty of legal right can induce cooperation among those shar-

ing a resource (Benvenisti 1996), it can also promote severe conflict. Relying upon an informal legal system alone to legitimate and limit claims to use shared water resources is inherently unstable. The system becomes unsettled either if a state considers that it is so militarily dominant that it can disregard its neighbors, or if a state concludes that their interests are so compromised by the existing situation that even a military defeat is better than continuing the present situation without challenge. To create the sort of regime necessary to allay conflict and optimize the use and preservation of the resource requires a treaty that includes all basin communities, creates appropriate representative basin-wide institutions, and has the clout to enforce its mandates. International practice provides numerous examples as models for institution design (Dellapenna 1994; Kliot, Shmueli, & Shamit 1998).

The United Nations sought to put these rules on a sounder footing by codifying the customary rules in a treaty, but that effort did little to address the institutional weakness of the system. In 1970, the UN General Assembly called upon the International Law Commission to prepare a set of “draft articles” on the “non-navigational uses of international watercourses. This effort led to the UN General Assembly approving the *UN Convention on the Law of Non-Navigational Uses of International Watercourses* by a vote of 104-3 in May 1997 (United Nations 1997). While the *Convention* will not come into effect until it receives 35 ratifications, it already is the best summary of the customary international law (International Court of Justice 1997).

The major controversy, both in the International Law Commission and in the General Assembly, was over the relation of the rule of equitable utilization to the “no harm” rule. In the end, the Assembly subordinated the “no harm” rule to the rule of equitable utilization (United Nations 1997: art. 7). Even with that settled, argument persists over the meaning of the rule of equitable utilization. Some argue that “equitable” sharing must mean equal sharing. Perusal of the standards for equitable utilization demonstrates that while equal access is guaranteed, equal shares are not. Therefore, when each interested state agrees to the rule of equitable utilization, states still dispute what should be the common standard for sharing and the proper application of the agreed standard. This uncertainty is illustrated by the list of relevant factors in article 6 of the *UN Convention*:

- (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 effects of the use or uses of the watercourse in one watercourse State on other watercourse States;
- (d) existing and potential uses of the watercourse;
- (e) conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect; and
- (f) the availability of alternatives, or corresponding value, to a particular planned or existing use.

Non-lawyers, particularly engineers and hydrologists, sometimes see in this list as a poorly stated equation: If one simply fills in numerical values for each factor, one could somehow calculate a state’s share of the water without reference to political or other non-quantitative variables. But the *UN Convention* is a legal document that ultimately calls for judgments, and in English, at least, the word “judgment” carries a connotation that the result is not dictated in any immediate sense by the factual and other inputs that the judge

relies upon in exercising judgment. Treating this list as an algorithm misses the point entirely.

### **The Berlin Rules: A New Paradigm for International Water Law**

Soon after the General Assembly approved the *UN Convention*, the International Law Association decided that the customary international water law needed further development beyond the codification in the *UN Convention*. This process resulted in the International Law Association unanimously approving the *Berlin Rules on Water Resources* in August 2004 (International Law Association 2004). In particular, the Association sought to incorporate into the summary of the customary international water law the new bodies of international law that emerged after 1966 but which were largely ignored in the *UN Convention*. The most significant developments not directly reflected in the current customary international law are the emergence of environmental concerns, integrated management, and sustainable development as central principles of international resource and environmental law. These newer concepts are found today in the practice of states (including conventional and customary international law), in the writings of the leading publicists on the international law of environmental and resource management, and in the documentary record of the United Nations and other relevant international organizations (Dellapenna 2005: §§ 49.07, 49.08).

The *Berlin Rules* set forth a clear, cogent, and coherent summary of the relevant customary international law, incorporating the experience of the nearly four decades since the *Helsinki Rules* were adopted, taking into account the development of important bodies of complementary customary international law (including 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 *UN Convention*. The *Berlin Rules* include within their scope both national and international waters to the extent that customary international law speaks to such waters (International Law Association 2004: art. 1). Some of the rules go beyond speaking strictly about waters and address the surrounding environment that relates to waters (the “aquatic environment”) (International Law Association 2004: arts. 3(1), (6), 6, 22 to 29, 56(1), 57(3), 58(1), 62, 66(a), 68 to 71). The major changes in the *Berlin Rules* relate to the rules of customary international law applicable to all waters—national as well as international, although there are certain refinements in the rules relating strictly to international waters. By including all of these matters within a single set of rules, a lawyer, a jurist, a water manager, a water policy maker, or anyone else concerned about the rules of customary international pertaining to water will, for the first time, find all the relevant law in one place, with attention to the interrelationships of the rules as well as to their clear statement.

After an initial chapter setting forth the scope of the chapter and key definitions, Chapter II of the *Berlin Rules* summarizes the general principles applicable to all waters: the right of public participation, the obligation to use best efforts to achieve both the conjunctive and the integrated management of waters, and duties to achieve sustainability and the minimization of environmental harm. Chapter III summarizes the basic principles applicable solely to international waters, including the right to basin States to participate in the management of shared water, the duty of basin States to cooperate, the principle of equitable utilization, and the obligation to avoid transboundary harm. The remaining chapters develop these basic principles in significant detail. The refinements in the rules applica-

ble solely to international waters (principally found in chapters III, IX, XI) pertain mostly to recognizing the importance of the obligations regarding environmental protection and public participation that apply even to those waters. The International Law Association revisited the recurring debate about the relation of the rule of equitable utilization and the rule requiring the avoidance of significant harm, with a new formulation of that relation that will lead to yet more discussion of the question (International Law Association 2004: arts. 12, 16). Other chapters, relating to armed conflict (chapter X), cooperative administration (chapter XI), state responsibility (chapter XII), private legal remedies (chapter XIII), and the settlement of international disputes (chapter XIV), also contain refinements without making a substantial departure from the *Helsinki Rules* and the *UN Convention*.

Much of the chapters dealing with all waters (national and international) either are new or are significantly different from the content of the *Helsinki Rules* and the *UN Convention*, both of which restricted their coverage solely to international waters. Chapter IV deals with the rights of persons, including the right of access to water, the right to participate decisions and to the necessary information, rights of persons organized as communities. Chapter V deals in considerable detail with the protection of the environment, including the obligation to protect the ecological integrity of the aquatic environment, the obligation to apply the precautionary approach, and the duty to prevent, eliminate, reduce, or control pollution as appropriate (including a special rule on hazardous substances). Chapter VI addresses the obligation to undertake the assessment of environmental impacts of programs, projects, or activities relating to all waters—national and international. Chapter VII sets forth obligations for cooperative and separate responses to extreme situations, including highly polluting accidents, floods, and droughts.

The *Berlin Rules* represent a bold departure in the formulation of the customary international law of water resources when compared to the *Helsinki Rules* or the *UN Convention*. Yet compared to international environmental law and the international law of human rights, the *Berlin Rules* are not bold at all. The nature of customary international law being always leaves room to debate whether a particular practice of States has reached the status of binding international law, as well as about the precise content of the customary rules. Some of the new articles are firmly grounded in international human rights law, and are beyond question. Other articles are supported by international environmental agreements that have entered into force and are widely followed even in nations that have not ratified them. The International Law Association concluded that these rules correctly summarize the current state of customary international as it pertains to water resources.

In sum, the International Law Association approved a new paradigm for synthesizing these rules into a coherent whole based on recognized legal principles. The new paradigm includes of five general principles that apply to States in the management of all waters, wholly national or domestic waters as well as internationally shared waters:

1. Participatory water management;
2. Conjunctive management;
3. Integrated management;
4. Sustainability; and
5. Minimization of environmental harm.

The *Berlin Rules* also posit four further principles relating to water in a strictly international or transboundary context:

6. Cooperation;
7. Equitable utilization;
8. Avoidance of transboundary harm; and
9. Equitable participation.

This new paradigm—a coherent, comprehensive, and comprehensive vision of the current state of the relevant customary international law—should serve lawyers, water managements, and other decision makers well.

### **Groundwater Internationally**

In contrast to the considerable state practice regarding the sharing of surface water sources, remarkably little state practice exists regarding the sharing of groundwater. Before the spread of vertical turbine pumps after World War II, groundwater was a strictly local resource that could not be pumped in large enough volumes to affect users at any considerable distance away. With the newer technologies, and with the exponential growth in the demand for water of the last several decades, groundwater has emerged as a critical transnational resource that has increasingly become the focus of disputes between nations, yet for which little in the way of a consistent body of state practice has emerged (Dellapenna 2005: § 49.06).

Most legal scholars and several courts have concluded groundwater must be subject to the same rule of equitable utilization as applies to surface sources (Reichsgerichtshof 1927; Hayton & Utton 1989). Groundwater and surface water are not merely similar, they are the same thing—they are simply water moving in differing stages of the hydrological cycle. As the hydrological, economic, and engineering variables involved are the same for surface and subsurface water sources, the law must also be the same for both sources. The *UN Convention* did not, however, include groundwater except to the extent that it is tributary to an international watercourse (United Nations 1997: art. 2(a)).

Perhaps the most significant innovations in the *Berlin Rules* are in chapter VIII dealing with groundwater. While principle the same rules apply to groundwater (the obligation of conjunctive management implies as much), the characteristics of groundwater are so different from surface water sources that the *Berlin Rules* spell out in some detail how the general principles and rules apply specifically to the management of aquifers. Most of the rules in chapter VIII apply to all aquifers (national and international), although one rule speaks specifically to legal issues relating to transboundary aquifers. Chapter VIII also makes explicit that its rules apply to all aquifers, regardless of whether the aquifer is connected to surface waters or whether it receives any significant contemporary recharge.

### **Conclusion**

While stress on water resources creates real pressures for cooperative solutions to the problems confronting the communities sharing a particular resource, the creation of a formal legal system is a necessary prerequisite to preventing conflict over water in any setting where water resources are under stress. Cooperative management has taken many forms around the world, ranging from continuing and unceasing consultations, to a system of active cooperative management that remains in the hands of the participating states, to the creation of a variety of regional institutions capable of making and enforcing their decisions directly. Experience as well as theory thus suggests that serious conflict in

one form or another cannot be avoided without a legal mechanism for the orderly investigation and resolution of the disputes characteristic of that theory. And any resulting mechanism must reflect the broad range of concerns that today are of concern to the international community as well as critical to proper management of water resources.

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