Devising new law to address global water scarcity

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Abstract

In 1966, the International Law Association approved the Helsinki Rules on the Uses of International Rivers. The Helsinki Rules quickly came to be seen as the authoritative summary of the customary international law on transboundary or internationally shared waters. The United Nations General Assembly, in 1970, refrained from endorsing the Helsinki Rules, instead choosing to request the International Law Commission to prepare a set of “draft articles” on the “non-navigational uses of international watercourses” modelled on the Helsinki Rules. The Commission’s Draft Articles, completed in 1994, in turn were reworked by the Sixth (Legal) Committee of the General Assembly into the United Nations Convention on the Law of Non-Navigational Uses of International Watercourse, approved by the General Assembly by a vote of 103-3 on May 21, 1997. While ratifications of the UN Convention have proceeded slowly and it has yet to enter into force, it has become recognized as authoritative on the customary international law governing the issues that it addresses. Finally, on August 21, 2004, the International Law Association, meeting in Berlin, approved the Berlin Rules on Water Resources as the authoritative summary of all the customary international law applicable to waters—including this time all waters and not just to transboundary or international waters. The Berlin Rules thus for the first time incorporate into a single document the customary international law applicable to transboundary or internationally shared waters, the relevant international environmental law, the relevant international law of human rights, and the relevant international humanitarian law.

Keywords: Berlin Rules; conjunctive management; customary international law; equitable utilization; integrated management; international environmental law; international groundwater; Helsinki Rules; international watercourses, participatory management; sustainable development; transboundary waters; UN Convention on International Watercourses.
1 Introduction

Only air is more directly vital to sustaining human life than water. Deprive us of air, and we die in minutes. Deprive us of water, and we die in days. Deprive us of food, and we can go on for weeks or months, depending on our physical condition at the beginning of the fast—and on whether we have adequate supplies of water. Yet potable water is an increasingly scarce resource [1,2,3]. The problem is particularly alarming when viewed against the expanding global population [4,5]. The United Nations recently estimated that one billion people (one-sixth of the world’s population) do not have access to a supply of potable water [6]. The prospect of global climate change could worsen this situation dramatically [7,8].

Water is an ambient resource that does not respect human boundaries. The 264 largest river basins in the world—home to about 50 percent of the world’s population—are shared by more than one nation [9]. The most cordial and cooperative of neighbouring nations have achieved mutually acceptable arrangements to govern their transboundary waters only with difficulty, even in humid regions where fresh water is usually sufficient to satisfy most or all needs; disputes between nations or states located in arid regions are endemic and intense despite otherwise friendly relations or even membership in a federal union [10,11]. No wonder English derives the word “rival” from the Latin word “rivalis”—persons living on opposite banks of a river [12]. Remarks attributed to capture the point: “Whiskey’s fer drinkin’, water’s fer fightin’.”

The rivalry inherent in different persons or communities sharing a common source of water has intensified as demand for water has outstripped the supply in recent decades. Many observers now take it as a given that the wars of the twenty-first century will be over water [13,14]. Yet there is in fact considerable evidence that water actually is too important to fight over [2,9]. In the twentieth century, nations have carefully avoided targeting each other’s water facilities even during full-scale wars, and no nation has gone to war directly as a result of disputes over water. Historian Robert Collins summed this truth up in these words: “[M]an will always need water; and in the end this may drive him to drink with his enemies” [15].

The only alternative to war for resolving such disputes is law. As a result, the law applicable to water resources has become dramatically more important at the local, national, and international level—even though most lawyers have not yet recognized this change [16]. Everyone interested in water management and in peaceful adaptation to global hydro-political stresses should become familiar with the legal principles and processes involved in resolving these disputes. I have been working in the field of water law for more than 30 years, at all three levels, and played a prominent role in the recent reformulation of the basic rules of customary international law relating to water resources by the International Law Association. This process was completed in Berlin in August 2004. The following briefly surveys what was done and why.
2 What is the role of customary international law?

Customary international law provides rules to enable nations to coexist peacefully within a single, shared river basin unless they reach a more precise agreement on managing those waters [17]. Customary international law arises from the practices of nations if taken out of a sense of legal obligation [18]. This is similar to the customary law that is applied in other decentralized societies. Consider, for example, what would happen if global climate change were to open an island, hitherto too cold to be inhabited by humans, to human settlement and two villages were created in different parts of the island. At first, people going between the two villages would freely choose any path that they might prefer. Eventually there would emerge that single path that people nearly always used to travel between the villages. This path might emerge because it was the shortest or the most convenient (say, with the least climbing involve). Or it might emerge because those with the heaviest tread preferred it. Or there could be other reasons. So long as this path was used simply because it was convenient to its users, we have a customary practice, but not a rule of law. But sooner or later people will come to think of the path as the “right” way to travel and, especially if humans have settled across other possible pathways, those who stray from the established path will be accused of trespassing. At this point, we are speaking in legal terms and not just in terms of convenience or customary practice. If all, or nearly all, agree that straying from the path is a trespass, we are now dealing with a rule of customary law.

Customary international law emerges in much the same way. Usually it emerges through a process of claim and counterclaim between states in which the states express their desires or demands in legal terms. When the states reach a consensus on the correct line of behaviour, they will also express the result in legal terms, creating customary international law [19,20]. The resulting law is highly decentralized and institutionally undeveloped, similar in this respect to the customary law found among subsistence farmers or nomadic tribesmen [21]. Customary international law empowers international actors by legitimating their claims while also limiting the claims they are able to make [22]. Because of the general absence of a neutral enforcement mechanism, however, international law often has no better method for sanctioning violations than the vendetta. As a result, customary international law by itself has not been unable to solve the problems of managing transboundary water resources [17]. Just because it is not sufficient to resolve transboundary water disputes, however, does not mean that it is not necessary for such resolutions.

3 The evolution of the customary international law of water resources

The International Law Association was organized in 1873 as a private organization of international lawyers, jurists, and scholars. The Association has long undertaken to summarize various bodies of customary international law. The Association approved the Helsinki Rules on the Uses of International Rivers
in 1966 as a summary of the customary international law applicable to internationally shared water resources [23]. Governments and courts quickly accepted the Helsinki Rules as the correct summary of the law. The Helsinki Rules crystallized the rule of equitable utilization (fair sharing) as the basic rule applicable to transboundary waters. Since 1966, the emergence of international law addressing significant environmental problems and the protection of basic human rights has broadened and deepened the customary international law applicable to the world’s waters. The International Law Association approved supplemental rules from time to time in response to some of these developments [24]. Yet the Helsinki Rules and their supplements remained wedded to the rule of equitable utilization as the only rule to be applied in resolving disputes over such diverse issues as transboundary water pollution, internationally shared groundwater, floods, and other subjects of the supplemental rules.

The General Assembly of the United Nations the International Law Commission (an organ of the United Nations composed of legal experts) to draft a comprehensive treaty based upon the Helsinki Rules in 1970. The Commission finished its work only in 1994, and in May 1997 the General Assembly approved the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses based upon the Commission’s work [25]. The UN Convention did include some general obligations regarding the environment and the law of war, as well as fairly detailed procedures regarding the obligation of cooperation among states sharing an “international watercourse.” The UN Convention also posited as second basic rule regarding the sharing of the benefits of international watercourses—the “no harm rule.”

The no-harm rule does not prohibit all harm, but only significant harm in one state caused by activities in another state. If the rule were understood in an absolute sense (even limiting it to significant harm), it would overrule the rule of equitable utilization to require that upstream states always defer to the needs of downstream states in order to avoid causing harm in the downstream state. The relationship of the no-harm rule to the rule to the rule of equitable utilization became very controversial, both within the International Law Commission and during the deliberations of the General Assembly. In the end, the UN Convention, as approved by the General Assembly, provides that the no-harm rule is to be applied “having due regard” for the rule of equitable utilization. While not everyone agreed on what the “having due regard” phrase means, it seems to subordinate the no-harm rule to the obligation of fair sharing expressed in the rule of equitable utilization [17]

4 The Berlin Rules on water resources

In June 1997, the Water Resources Law Committee of the International Law Association concluded that the changes in customary international law were so profound, and the attempts to keep abreast of these developments (including the UN Convention) were so limited, that it was necessary to undertake a comprehensive revision of the Helsinki Rules and its supplements. The
Committee reached this conclusion for three reasons. First, none of the most disputed internationally shared waters are covered by an agreement among all the interested nations, leaving a need for a clear, cogent, and coherent summary of the relevant customary international law. Second, ratifications of the UN Convention have been slow in coming. Third, much of the new customary international law applies to waters within a nation (“national waters”) as well as waters that cross or form international boundaries (“international waters”) [26].

There was some controversy within the Water Resources Law Committee regarding whether to revise the Helsinki Rules and, once that decision was made, what the new rules were to look like. In the end, four of the 23 members of the Committee dissented from the final report. The International Law Association as a whole, however, found much less reason to dispute the conclusions of majority of the Committee, and the plenary session of the Association’s biennial meeting approved the Berlin Rules on Water Resources unanimously on 21 August 2004 [26]. I served as rapporteur (principle draftsman) of the Berlin Rules.

4.1 Scope of the Berlin Rules

The Berlin Rules go well beyond the scope of both the Helsinki Rules and the UN Convention because the Berlin Rules summarize all of the customary international law applicable to water resources, and not just the customary international law applicable to transboundary or internationally shared waters. Thus the Berlin Rules cover both national and international waters. Indeed, some of rules go beyond speaking strictly about waters and address the surrounding environment of the waters (the “aquatic environment”).

The Berlin Rules take into account the development of international environmental law, international human rights law, and the humanitarian law relating to the war and armed conflict. The major changes in the Berlin Rules relate to the rules of customary international law applicable to all waters—national as well as international. These changes principally relate to the right of public participation, the obligation to use best efforts to achieve both conjunctive and integrated management of waters, and duties to achieve sustainability and the minimization of environmental harm. These general principles are set forth in chapter II of the Berlin Rules, and most of the remaining chapters are more specific rules elaborating on the application of general principles in specific contexts.

4.2 Participatory management

The principle of participatory management begins by recognizing a right of access to water, as well as right to have a voice in decisions affecting one’s well being [27]. These rights are rooted in international human rights law. To be made effective, persons must be allowed access to the relevant educational resources. Furthermore, particularly vulnerable communities (including, but not limited to, indigenous peoples following a traditional life style) are afforded special protections, and in any event are to be compensated for any losses that result should they be deprived of the resources necessary for meeting their needs either
as individuals or as communities. All of these various rights would be of little use without access to appropriate legal remedies, and the Berlin Rules has a chapter precisely on such remedies—including possible legal remedies in one state on behalf of affected persons in another state.

4.3 Sustainability and minimization of environmental harm

The principles of sustainability and the minimization of environmental harm derive from international environmental law. These principles together require that states take appropriate steps to preserve the basic ecological integrity of the aquatic environment. This in turns requires not only steps to prevent or control pollution, but also steps to ensure the maintenance of ecological flows, the prevention of the introduction of alien species, and special measures to deal with hazardous substances or emergencies. These obligations in turn imply the duty to undertake prior assessment of the environmental affects of programs, plans, policies, or activities before they are implemented [28]. More generally, the principles of sustainability and the minimization of environmental harm require the application of the precautionary principle and the obligation to compensate affected individuals, all with a goal of producing the least net environmental harm. None of this would be possible without both conjunctive management and integrated management of water resources.

4.4 Groundwater: conjunctive and integrated management

There is still little established international law regarding groundwater. The Berlin Rules breaks new ground with an entire chapter (chapter VIII) devoted to summarizing the emerging state practice applicable to groundwater. It starts from the premise that in principle groundwater is subject to the same rules as surface waters [29,30]. Yet the Berlin Rules recognize that often the differing physical characteristics of groundwater require the general principles and rules to be applied differently to groundwater than to surface water. The Berlin Rules make clear that groundwater must be managed conjunctively with surface waters (and with atmospheric waters and frozen water), and that this management must be integrated with the management of the environment (or at least the aquatic environment) generally. The Berlin Rules also require special protection for groundwater as compared to other waters for groundwater exhibits special vulnerabilities that must be taken into account in managing it. All of the foregoing applies to all groundwater and not just to internationally shared groundwater. Internationally shared groundwater requires special arrangements when it is being allocated or managed across borders, and the Berlin Rules indicates what, at a minimum, those special arrangements need to be.

4.5 International waters

The Berlin Rules contain few changes in the rules applicable solely to international waters, although there are some refinements in certain of those rules. Comparing the Berlin Rules to the Helsinki Rules shows that most of the
refinements regarding international waters actually simply reflect refinements introduced by the UN Convention. The Berlin Rules differ from the UN Convention (which, remember, applies only to international waters) in only a very few points. One of the most important of the refinements not derived from the UN Convention but which goes beyond provisions of the original Helsinki Rules are three articles that develop the minimum requirements for a joint, basin-wide (or at least transnational) management regime. Customary international law does not require states to enter into such arrangements, but they are becoming more common in today’s world. The Berlin Rules set about to provide some guidance on how to establish such a regime, without attempting to prescribe in minute detail the terms of such an arrangement.

4.6 Other rules: navigation; war and armed conflict; dispute resolution

Finally, the Berlin Rules includes chapters on navigation, on war and other armed conflicts, and on dispute resolution. The chapter on navigation is very similar to that in the Helsinki Rules, for there has been little change in the nearly 40 years since the Helsinki Rules were approved. Generally speaking, it requires free navigation on a water body that forms or straddles and international boundary, but this freedom of navigation is limited to “riparian states”—states whose reach or include part of the water body. While states sharing a navigable water body might choose to confer a right of free navigation on non-riparian states, customary international law does not require them to do so. The chapter on war or armed conflict draws directly and heavily on Geneva Conventions on the Laws of War. There are two chapters on dispute resolution—one on disputes between states, and one on disputes relating to private persons (natural or artificial).

5 Conclusion

The Berlin Rules do not pretend to lay down a set of rules that one could simply pick up and apply without further consideration to the allocation or management of the world’s waters. The specifics of any water basin, aquifer, or other aspect of water management or policy are too highly varied to expect a succinct set of legal rules to provide automatic answers. Rather they set forth the principles and guiding rules that water managements must take into account in devising a water management regime that will properly balance the use and the protection of water resources in the future. Built around international cooperation, public participation, reasonable and equitable use, and environmental protection, the Berlin Rules are well designed to provide such guidance.

The Berlin Rules represent a bold departure in the formulation of the customary international law of water resources if they are compared to either the Helsinki Rules or to the UN Convention. Yet compared to international environmental law and the international law of human rights, the Berlin Rules are not bold at all. Time will tell whether governments, courts, and international
lawyers will accept the _Berlin Rules_ as fully or as quickly as they accepted the _Helsinki Rules_.

**References**


