

Chapter 18

“Water Wars” and Water Reality: Conflict and Cooperation Along International Waterways

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There are 261 international rivers, covering almost one half of the total land surface of the globe, and untold numbers of shared aquifers. Water has been a cause of political tensions between Arabs and Israelis, Indians and Bangladeshis, Americans and Mexicans, and all 10 riparian states of the Nile River. Water is the only scarce resource for which there is no substitute, over which there is poorly developed international law, and the need for which is overwhelming, constant, and immediate. As a consequence, water and war are two topics being assessed together with increasing frequency. This chapter investigates the reality of historic water conflict and draws lessons for the plausibility of future water wars. The data sets of conflict are explored for those related to water—only seven minor skirmishes are found in this century; no war has ever been fought over water. In contrast, 149 water-related treaties have been signed in the same period. These treaties, collected and catalogued in a computerized database along with relevant notes from negotiators, are assessed for patterns of conflict resolution. War over water seems neither strategically rational, hydrographically effective, nor economically viable. Shared interests along a waterway seem to overwhelm water's conflict-inducing characteristics. Furthermore, once cooperative water regimes are established through treaty, they turn out to be tremendously resilient over time, even between otherwise hostile riparian states, and even as conflict is waged over other issues. These patterns suggest that the more valuable lesson of international water is as a resource whose characteristics tend to induce cooperation, and incite violence only in the exception.

1. INTRODUCTION: “WATER WARS”

Water and war are two topics being assessed together with increasing frequency. The 261 international watersheds (Wolf et al., in press), covering a little less than one half of the land surface of the globe, affect about 40% of the world's population. Water is a resource that has no substitute and is vital to human survival; it ignores political boundaries, fluctuates in both space and time, and has multiple and conflicting demands on its use. The problems of water management are compounded in the international realm by the fact that the international law that governs it is poorly developed, contradictory, and unenforceable. As a consequence, recent articles in the academic literature (e.g., Cooley, 1984; Remans, 1995; Starr, 1991) and popular press (e.g., Bullock & Darwish, 1993) point to water not only as a cause of historic armed conflict, but also as *the* resource that will bring combatants to the battlefield in the 21st century. Invariably, these writings on water wars point to the arid and hostile Middle East—

where armies have, in fact, been mobilized and shots fired over this scarce and precious resource—as an example of a worst-case scenario. Citing water as the prime motivator for military strategy and territorial conquest, elaborate, if misnamed, hydraulic imperative theories have been developed for the region, particularly to deal with potential conflict between Arabs and Israelis.

The argument that water will show itself to be the single greatest threat to peace goes, basically, as follows: Water is a resource that is vital to all aspects of a nation's survival, from its inhabitants' biology to their economy. The scarcity of water in an arid and semi-arid environment leads to intense political pressures, often referred to as water stress, a term coined by Falkenmark (1989). Furthermore, water not only ignores our political boundaries; it also evades institutional classification and eludes legal generalizations. Water's natural management unit, the watershed—where quantity, quality, surface water, and ground water all interconnect—strains both institutional and legal capabilities often past capacity. Analyses of international water institutions find a rampant lack of consideration of quality considerations in quantity decisions, a lack of specificity in rights allocations, disproportionate political power by special interest, and a general neglect for environmental concerns in water resources decision making.

The establishment of legal principles to address water ownership and allocation has been equally elusive (described in more detail in Wolf, 1997). The 1997 Convention on the Non-Navigational Uses of International Watercourses Commission, which took 27 years to develop, reflects the difficulty of marrying legal and hydrologic intricacies: while the Convention provides many important principles for cooperation, including responsibility for cooperation and joint management, it also institutionalizes the inherent upstream/downstream conflict by calling for both "equitable use" and an "obligation not to cause appreciable harm." These two principles are in implicit conflict in the setting of an international waterway: upstream riparian states have advocated that the emphasis between the two principles be on "equitable use," since that principle gives the needs of the present the same weight as those of the past. In contrast, downstream riparian states have pushed for emphasis on "no significant harm," which effectively protects the pre-existing uses generally found in the lower reaches of most major streams. The Convention also provides few practical guidelines for allocations—the heart of most water conflict. The Convention proposes that allocations be based on seven relevant factors, which are to be dealt with as a whole.¹

Furthermore, international law only concerns itself with the rights and responsibilities of *states*. Some political entities that might claim water rights, such as the Palestinians along the Jordan River or the Kurds along the Euphrates River, therefore would not be represented. In addition, cases are heard by the International Court of Justice (ICJ) only with the consent of the parties involved, and, except in the most extreme cases, no practical enforcement mechanism exists to back up the Court's findings. A state with pressing national interests can therefore disclaim entirely the