



Conflict and Cooperation along International Rivers: Scarcity, Bargaining Strategies and Strategic Interaction

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Water scarcity has often been cited as leading to international conflict and, as was demonstrated by a show of hands at the outset of the Connecticut College Goodwin-Niering Center Conference, “Water Scarcity and Conflict,” it was the belief of many in attendance that the next major international war might indeed be over water. Shlomi Dinar, an Assistant Professor of Politics and International Relations at the Florida International University, Miami, presented an alternate view on water scarcity during the last session of the conference. Dinar set out to argue how the scarcity of water has led to a wide range of instances of trans-national cooperation all over the globe. To start his presentation a review of the academic literature on water scarcity was given. He suggested that from this review it could not be proven empirically that water shortages necessitate or even increase the probability of international conflict. Instead he was prepared to argue that in most cases the shortage of water has led to cooperation and negotiation amongst countries that share scarce water resources. This is a significant claim especially due to the fact that several scholars in the water war camp are convinced that the increasing water scarcities caused by climate change and rising demand will bring about international conflicts. However, far from suggesting that water shortages never produce political, economic, or violent conflicts Dinar was instead highlighting the great potential for cooperation that exists when two countries are faced with a dwindling supply of water.

He followed this hopeful claim with a multitude of examples from every continent save Antarctica. In North America, Mexico and US reached an agreement concerning the Colorado, in Asia between Pakistan and India, in South America between Brazil and Uruguay, in the Middle East Palestine and Jordan, and Africa’s Eritrea and the Sudan have each negotiated an agreement surrounding the use and conservation of their shared water resources. “Over 200 river basins have been documented, of which 176 are shared by only two states” (Dinar 2006, 413). The number of countries in the world that have shared rivers along their borders is immense as is the number of cases demonstrating successful cooperation. This fact came as something that was hard to believe, as a student of International Relations, having taken a course involving International Environmental Cooperation and the many obstacles it faces. This idea presented by Dinar ran contrary to most of the material we studied which cited the failures of international treaties concerning land-based sources of marine pollution, endangered species protection, climate change, rainforest preservation, nuclear waste disposal, intellectual property rights, only to name a few of the treaty cases that have had less than stellar track records. This hopeful view on water resource cooperation was for these reasons a bit hard to buy into at first. But the argument presented continued to add increasingly convincing theoretical nuances to the claim that cooperation of shared water resources should be understood as the norm in international relations.

Some of the several factors affecting the formation of treaties concerning trans-boundary rivers are; geography (upstream state and downstream states' relative positions), the measure of each state's eco-political power, the presence or absence of incentives for side-payments, and the degree of issue linkage. Though each of these factors can have a significant impact on how interstate negotiations progress, Shlomi Dinar uses geography as the primary independent variable in his 2006 study, "Assessing side-payment and cost-sharing patterns in international water agreements: The geographic and economic connection," that determines the presence of side-payments and the level of cost sharing between two states. Dinar also makes note of a secondary independent variable, the relative economic status of the states involved. He defines three types of geographic relationships that pertain to the orientation of the river relative to the two states and their borders. A through border river flows from one country through the border of another country; these rivers create an upstream down stream relationship between neighbor states. At the other end of the theoretical spectrum lies the border creator river which flows along the shared border of two states and never crosses into the territory of one or the other (Dinar 2006, 416). His thesis posits, contrary to scholarly opinions of proponents of realism's hegemonic stability theory, that states regardless of their power status in the world arena will participate in cooperation over their shared river resource.

The hegemonic stability theory as promoted by Lowi holds that, "the interest of a hegemonic state along a river is often a pre-requisite for cooperation between two riparian states" (Dinar 2006, 416). Shlomi Dinar contends that treaties occurring between unequally powerful states, such as the US and Mexico, France and Spain, Switzerland and France, are indicative of hegemonic stability theory's inability to fully explain international water treaty formation. In these cases wealthy upstream states agreed to treaties that would improve the water supplies of their neighbor downstream. An example, present in Dinar's 2006 article and repeated in his presentation for the Goodwin-Niering Center's Water Conference of May 2009, is the 1973 Colorado River Agreement between Mexico and the US. The US having used the Colorado's fresh water supply so intensively that salinization occurred agreed to desalinate the contaminated river water for Mexico's use. According to the hegemonic stability theory the US, acting both as the more powerful and upstream state, should have had little to no incentive for cooperating with Mexico over the usage of the Colorado. However, contrary to this theory's understanding of water negotiations, "the US not only entered into an agreement with Mexico but also paid for the costs of desalinating the waters of the Colorado flowing into Mexico" (Dinar 2006, 417).

Instead of a hegemonic stability understanding of water agreements Dinar believes that side-payments and equitable cost-sharing agreements are dependant on the geographic orientation of the river in question (border-creator or through-border) and the relative economic situation of two states in question. In general, Dinar argues that through-border and border-creator river geographies are both conducive to negotiations, though the treaties will look different. In the upstream/downstream scenario created by a through-border river side payments will be more likely than in the cases where rivers form a border. And, finally, in both cases the richer state will be more likely to absorb the costs associated with the treaty arrangements.

Supporting Dinar's conclusion that in through-border scenarios side-payments become important tools in negotiation are 37 agreements analyzed in his 2006 report, 67% of which had side-payments from the downstream state to the upstream state (Dinar 2006, 425). Although he also

notes several examples of through-border river negotiations where side-payments are not utilized. The possible explanations for a lack of side-payments are multiple, and could include issue-linkage agreements between states, the development of mutually beneficial hydro-power or purification projects, the richer states greater ability to pay or just simply good will that can ease future diplomatic or economic relations. An example of the later, can be made out of the Colorado River case, where part of the US' willingness to pay for the improved quality of the Mexico's Colorado River water was the expected economic gains to be realized in future relations. Amongst the cases of border-creator rivers Dinar concludes from the fact that all nine cases had no side payments that these types of riparian relationships are intrinsically more equitable in that both states evenly bear the burden of water shortage and pollution. Instead of side-payments countries are willing to share the costs equally and there is less of a requirement for additional incentives to cooperate because what one country does to the river water (good or bad) can be reciprocated by the other country. Added to this is the mutual benefit that comes with having reached a treaty, and as would stand to reason countries that are both gaining are willing to share the costs of the treaty equally.

Professor Dinar's message concerning the propensity for states to cooperate over their shared water resources was a particularly hopeful and optimistic view of how the world's nations will deal with the current global water crises. However, while Dinar argued against the traditional linear relation between scarcity and cooperation, he suggested that a non-linear relationship may exist. This indicates that while the increasing scarcity of water does not necessitate higher incidences of violent international conflict it may mean that as water becomes virtually unavailable the likelihood of cooperation between states could decrease dramatically. So while Dinar presented an uplifting viewpoint on the likelihood of violent conflict that contrasted starkly with earlier claims about the next major international war being a water war, he made clear that his findings may only hold up until a certain level of scarcity. Beyond this peak, of the likelihood for water cooperation as the shortages become more acute and the crisis more severe, his theorizing may indeed become less useful as a predictor for peaceful conflict resolution.

Reference:

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