

Water Institute Distinguished Scholar Seminar Series

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Thursday, February 3, 2011  
3:00 PM – 4:00 PM  
209 Emerson Alumni Hall

Title: Would Climate Change Really Affect the Cooperation and Stability of International Water Treaties?

Abstract: While flow variability in rivers is not unheard of, it is expected that with climate change, the magnitude of flow variability will increase and affect existing water management schemes. International river basins, governed by treaties, are especially vulnerable if the treaties are connected to rigid institutions for the allocation of the basin water among the riparian states and the various sectors that use the water. On one hand, the situation international river basin riparians face is more complicated because of the likely conflict-sovereignty tradeoff between the riparian states. On the other hand, a solution to this situation can be identified using a much broader set of options than those found in the domestic basin case. The presentation will focus on two aspects of this problem: (1) is increased water variability leading to less cooperation (more conflict)? and (2) how can riparian states address the impact of climate change on the stability of their treaties? To address the first aspect I will assess the impact of water supply variability on 'treaty cooperation' (defined here as the likelihood of treaty formation and number of treaties formed) between international bilateral river basin riparian states, under past climate situation. I will use a dataset of all bilateral treaties signed between 1850 and 2003. I will claim and try to demonstrate that water supply variability in international bilateral basins creates an impetus for cooperation rather than leading to conflict. I will discuss the assumptions needed for the extrapolation from past climates to future climate change. To address the second aspect, I propose the concept of 'strategic alliances' as the basis for a cooperative arrangement to cope with the impact of climate change on stability of treaties. An analytical framework is developed and used to demonstrate how pooling resources, not subject to a treaty, can provide the needed expansion cushion in situations where climate change is affecting the basin. Because of the additional transaction costs associated with water supply variability, a departure from the existing treaty, and forming strategic alliances between a subset of riparians, is also demonstrated. In addition, several examples are used from a number of international basins and a model is applied to a condensed version of one of them.