A *Scarcity Value* based Explanation of Transboundary Water Disputes in *Water Scarce Economies*

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Abstract

The dissertation attempts to show that valuation of water resources has colossal implications in providing an explanation to transboundary water disputes. The present work challenges the "scarcity induces disputes" contention, and proposes that the potential cause of dispute over transboundary water resources is not the physical scarcity of the resource, but the way in which "scarcity" of the resource is being valued by co-riparians. This is being referred here as the "scarcity value" of water.

Based on the neoclassical economic theory, I have defined "scarcity value" as the value that could have been generated if the ceiling on water availability in the water scarce economies is relaxed by a unit. However, under scarce conditions, the ceiling does not get relaxed, and the value is not generated, and hence the name. It is merely this feeling of deprivation due to scarcity that causes the discontentment among the competing stakeholders in the transboundary context, and compels them to react, which leads to disputes over water. I have proceeded to empirically validate these contentions through the cases of Cauvery Water Disputes in South India, and the Colorado Water Disputes between the seven states of Western and South-Western United States. In both cases, it is the agricultural water use that has been primarily responsible for the disputes, with a large amount of water being diverted to agriculture. Hence, the "scarcity value" of water in the agricultural sector in the basins becomes important, and it has been shown that disputes in the basins have been associated with enhanced "scarcity values" of water with respect to the high water-consuming crops. The research further attempts to assert that appropriate demand-side management mechanisms can reduce "scarcity value" of water in the sector, and might help the process of resolving disputes.

The discipline of “water resources development” is undergoing a paradigm shift away from the traditional supply augmentation plans to demand side management, giving water its due importance for the immense ecological services, along with its economic services. Despite this analysis being confined to the “scarcity value” of economic (or agricultural in the context of this thesis) services of water, it has been argued that “scarcity value” of ecological services of water is extremely important in the context of the new emerging paradigm of water resource management. “Scarcity value” has been projected in this thesis not only as an objective instrument for explaining and understanding disputes, but also as a tool for comprehensive assessment of the water development projects keeping the integrity of the full socio-economic and eco-hydrological cycles. With the notion of “scarcity value” being embedded in the new emerging paradigm of water resource management, the shift from the old paradigm to the new paradigm should be understood as the shift from addressing “scarcity” to understanding “scarcity value”.