

# GLOBAL GOVERNANCE

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Abstracts

# Governance and the Global Water System: A Theoretical Exploration



*Claudia Pahl-Wostl, Joyeeta Gupta, and Daniel Petry*

Public policy on water has long been approached in the context of a locality, a country, or a river basin. However, scientific evidence now provides compelling arguments for adopting a global perspective on water management. This article argues that water governance today needs a multi-level design, including a significant global dimension. The discussion defines global water governance, highlights the implications for multilevel governance, and examines global water governance through the lens of governance typologies. The analysis along the categories of globalization/regionalization, centralization/decentralization, formality/informality, and state/nonstate actors and processes reveals that current global water governance is a fragmented, mobius-web arrangement. The article concludes by considering possible future trajectories of global water governance. **KEYWORDS:** global water governance and institutions, multilevel governance, global environmental change.

# Toward Global Law on Water



*Joseph Dellapenna and Joyeeta Gupta*

With increasing recognition of a global crisis in water resources, it becomes relevant to ask whether existing legal systems can make serious contributions to the management of the earth's water resources. This article examines the evolution of national water law and its key features, the coevolution of international water law, and a new focus in the twenty-first century to develop *global* water law against a backdrop of growing pluralism in water governance. In the past, national and international water law has generally reflected prevailing social beliefs and state practice rather than shaped them. However, contemporary developments in national and international water law suggest that an emergent global law is increasingly shaping practice instead of merely reflecting it. This global law seeks proactively to influence future water management, rather than being limited by past decisions. **KEYWORDS:** international law; water law; water history; water governance.

# Integration in the Management of International Waters: Economic Perspectives on a Global Policy Discourse



*Ines Dombrowsky*

In recent years an emergent global policy discourse has promoted the concept of Integrated Water Resources Management (IWRM) as a strategy for the sustainable management of international waters. However, integration remains a considerable challenge in large international river basins. This article addresses the relevance of the global discourse on IWRM, asking how much integration can be expected and how much integration is desirable in international water management. The article presents a novel compilation of eighty-six international river basin organizations and examines their degree of integration in terms of three dimensions: membership, substantive scope, and form. More particularly, the article examines the integration problem from an economic perspective, asking whether integration serves the self-interest of the respective riparian states. The empirical evidence highlights the difficulties of integration, as the majority of international river basin organizations remain narrow in membership and scope. Economic considerations suggest that voluntary cooperation in river basins is institutionally demanding and that the degree of integration depends on the problem at hand. Hence, the challenge for international waters management is to search for the economically desirable degree of integration in each case. **KEYWORDS:** international river basins, Integrated Water Resources Management, Coase theorem, integration.

# Compliance and Performance in International Water Agreements: The Case of the Naryn/Syr Darya Basin



*Thomas Bernauer and Tobias Siegfried*

Many case studies and some large-N research have shown that upstream-downstream cooperation in international river basins occurs quite frequently. The same holds for global water governance efforts more generally. Yet such findings are blind in one eye because they focus primarily on political commitments or compliance with international agreements. A policy performance metric (PER) allows for a more substantive assessment of success or failure in international water governance. To test its viability, this article applies this metric to the Naryn/Syr Darya basin, a major international river system in Central Asia. Management of the Toktogul reservoir, the main reservoir in the Naryn/Syr Darya basin, was internationalized in 1991 when the Soviet Union collapsed. *Compliance* with an international agreement, concluded in 1998, has been quite high. This agreement establishes an international trade-off among water releases for upstream hydro-power production in winter and water releases for downstream irrigation in summer. However, *performance* of this agreement over time has been very low and highly variable. The management system in place is therefore in urgent need of reform. Studies of international and global water governance should pay more attention to the degree to which political commitments actually further de facto problem solving. **KEYWORDS:** international cooperation, governance, compliance, performance, water management, Naryn/Syr Darya, Toktogul dam.

# Global Trade and Water: Lessons from China and the WTO



*Yongsong Liao, Charlotte de Fraiture,  
and Mark Giordano*

Agricultural trade and water use are intrinsically linked. The case of China illustrates how (1) trade liberalization may impact water use; and (2) failure to consider water resources may distort analysis of trade liberalization. This article incorporates water constraints into forecasts of future agriculture in China and thereby creates a new set of scenarios that explicitly examine linkages between agriculture, water, and global trade. These new assessments show that many existing projections regarding agriculture in China are unrealistic due to water scarcity. For instance, China may import more wheat and export fewer vegetables and fruits than has typically been predicted. The findings also indicate that WTO accession provides China with opportunities to better manage demand for water in its agricultural sector while still addressing key food security concerns. The article emphasizes that it is crucial to include water as a factor of production when analyzing global agricultural trade. Global governance mechanisms of trade, such as the WTO, need to fulfill their key role in the design of effective water resources policy. **KEYWORDS:** China irrigation, WTO accession, agricultural trade, water management.