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THE TEXAS WATER JOURNAL is an online, peer-reviewed journal devoted to the timely consideration of Texas water resources management, research, and policy issues. The journal provides in-depth analysis of Texas water resources management and policies from a multidisciplinary perspective that integrates science, engineering, law, planning, and other disciplines. It also provides updates on key state legislation and policy changes by Texas administrative agencies.

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**Book review:**  
**The international law of transboundary  
groundwater resources**

Eckstein, G. 2017. The international law of transboundary groundwater resources. New York City (New York): Routledge.  
ISBN 9781138842984. 174 p.

Reviewed by Dr. Rosario Sanchez<sup>1\*</sup>

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I once heard that water should not be considered a human right but a survival right. This simple statement can change the paradigm in which international law evolves toward the construction of an international groundwater legal framework, which today is nonexistent.

As Professor Gabriel Eckstein describes in his most recent contribution to the law of transboundary water — *The International Law of Transboundary Groundwater Resources*, “Groundwater resources have historically been both neglected under and often omitted from international agreements and legal norms and therefore cursorily misunderstood among the lay, political, and legal communities.” As population increases at a rate higher than society’s ability to fulfill water needs, drought conditions become more ordinary, and land use patterns favor development and economic gain over ecosystems preservation, the risks associated with lack of groundwater regulation becomes more clear and pressing. Regardless of the political boundary, groundwater tends to be presumed as a never-ending resource, mostly because of limited understanding of the hydrogeological complexity of an aquifer system. An additional barrier to public understanding is the lack of policies designed to protect and efficiently manage the “hidden treasure,” as the author has referred to transboundary aquifers in the past. If we add the transboundary element to the discussion of managing groundwater, the result is a less-than-adequate attention to the topic, probably avoiding the fear of what lies beneath or acknowledging too much for a limited political appointee.

The law of transboundary groundwater resources – if there is any, as the author suggests — has not received proportional attention considering the level of dependency on groundwater resources for all uses and current or potential vulnerability of the overlying population, economic activities, and ecosystems. The compilation and analysis that this book achieved makes the book a required read for anyone interested in groundwater resources, as well as the role of groundwater in the international arena. It constitutes a textbook of the basics and inter-related topics and challenges that aquifers face as part of the hydrological cycle, in the context of the geopolitical boundaries that reign over the natural systems.

The author begins his writing offering a practical hydrological description of the physics of groundwater to set the stage of how groundwater moves and behaves underneath shared land, some implications of the present level of groundwater use, and current challenges from a global perspective. It then addresses the different models of transboundary aquifers that could potentially be subjects of international water law (currently limited to the 1997 UN Watercourse Convention), and those aquifers that fell outside the realm of the international legal context. Eckstein and Eckstein 2005 previously published these models in detail. The following sections focus on the development of the legal instruments that exist to address transbound-

ary groundwater resources, early efforts since the middle of 1800s until the current stage of development of bilateral agreements (again limited to a couple), and evaluating the priority that the international arena has given to shared groundwater resources vis-à-vis surface water. The book analyzes in-depth the common principles and criteria that govern the UN Watercourse Convention that came into force in 2014 and its applicability to groundwater resources. It is worth mentioning that the United States, Mexico and Canada are not signatories to the convention; though it might be a source of international customary law, its enforceability is limited in this part of the continent.

The book’s last two chapters constitute the most important contribution from the author. In these chapters, Eckstein discuss in-depth the current stage of groundwater and aquifers from an international law perspective, particularly the recent Draft Articles of the Law of Transboundary Aquifers. He covers this section from an interdisciplinary approach addressing the different aspects included in the discussion of shared groundwater resources: legal considerations, criteria and principles, governance and institutional challenges, and binational agreements. Eckstein brings a truly international perspective with a variety of examples that cover the global spectrum. He offers an in-depth analysis of the scope and potential long-term effectiveness of the law of transboundary aquifers, as well as limitations including the gaps and grey areas that have not been clearly defined. For example, the principle of “not to cause significant harm” has been commonly referred as one of the most contentious principle of the current stage of the law given its ambiguity and relativeness to the subject. The “threshold of significant harm” as the author refers to it, “has yet to be considered.”

This book can easily be considered as the most important reference on the law of transboundary groundwater resources. The beauty of *The International Law of Transboundary Groundwater Resources* derives from its ability to present the complexity of the topic in plain and simple language for anyone interested in the topic without any specific expertise, bridging the science and policy perspectives into one book.

## REFERENCE

- Eckstein Y, Eckstein G. 2005. Transboundary aquifers: conceptual models for development of international law. *Groundwater* 43(5): 679-690.