

Book Review

Transboundary Hydro-Governance: From Conflict to Shared Management: Book Review. Written by Jacques Ganoulis and Jean Fried. Springer: Cham, Switzerland, 2018, 222 pages. ISBN 978-3-319-78624-7; eBook ISBN 978-3-319-78625-4

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This book came as a support of the UNESCO International Hydrological Programme (IHP) activities on the International Shared Aquifer Resources Management (ISARM) project launched in the year 2000, with the goal of developing wise practices and guidance tools for the shared management of groundwater resources and to contribute to the multifaceted efforts required for global water cooperation. A key result of the project was the publication by UNESCO of the first world map of 592 transboundary aquifers. In spite of progress made, UNESCO's work required continuation. The book written by Jack Ganoulis and Jean Fried, with both authors being long-term collaborators of the UNESCO IHP, comes as a significant contribution to the transboundary groundwater education and training, offering a bridge between theory and practice.

The objectives set by the authors for the book included addressing the very important question of "water security" in an era of "major systemic risk" for humanity. The book starts with an old task of balancing water availability and water demand through "hydro-governance", defined as "an interactive process for managing at different levels and with different actors all kinds of water, including not only natural water resources but also new-water from wastewater after recycling and seawater desalination" (page vii). The book is correctly focusing on "transboundary hydro-governance" of water transboundary catchments that cover almost half of the world's land surface, including about 60% of global river flow and an area inhabited by 40% of the world's population. The main innovation introduced in the book is "integrated transboundary hydro-governance", which includes both surface water and groundwater. The book provides methodologies, practical tools, and examples of "effective transboundary hydro-governance".

The book is divided into three parts and eight chapters, starting with the main characteristics of transboundary waters (Part I), followed by the definition of transboundary hydro-governance (Part II), and ending with the discussion of transboundary hydro-governance in practice (Part III).

The first part offers (in three chapters) basic information on transboundary waters, water security, and topics of water conflicts and cooperation. The justification for employing a shared approach is clearly presented, and useful recommendations are provided for collaborative scientific approaches. Water security is also analyzed in this part, starting from the water variability in space and time. The ending chapter of Part I suggests the recognition of water districts at risk of conflict and the assessment and classification of different causes and various types of transboundary conflicts. The ending section focuses on the investigation of conflict prevention strategies and the ways to reverse potential conflicts into cooperation.

The second part of the book (in three chapters) provides clear distinctions between management, policy, and governance and analyzes some basic tools used to implement these concepts. This part is a

bit more technical. The main innovation presented in this section of the book is a multi-disciplinary integrated approach and its adoption to international settings. Discussion extends to an examination of what international joint institutions can be established and instruments that are needed to implement transboundary hydro-governance in practice. Tools and instruments (economic, shared, legal, and diplomatic) are reviewed in the last chapter of the Part II.

The third part of the book (in two chapters) is devoted to examples of hydro-governance in practice. Organizations and examples are studied from all around the world. From Danube to Mekong, and from Rhine to Senegal, the authors systematically analyze the pros and cons of approaches that lead to “good” transboundary hydro-governance. The analytical model of good hydro-governance can be derived from the experience presented in the book. However, in agreement with the authors and based on my own personal experience, there is still a long way to go.

This book is timely and pragmatically addresses worldwide problems, like climate change and significant floods and droughts, especially in parts of the world where every drop of water counts. The book can be used by experts and practitioners. Examples from the book could serve university courses on water resources management. The book has the potential to be a guiding manual and a reference tool.

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