

## ERKKI J HOLLO, ED., *WATER RESOURCE MANAGEMENT AND THE LAW* (EDWARD ELGAR 2017)

Reviewed by: Amrithnath SB, Assistant Professor, Faculty of Law, University of Delhi

## **BOOK REVIEW**



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Water scarcity resulting either due to pollution and over-extraction of water resources has become a major global-scale environmental issue. It is the result of several inter-related factors such as population growth, economic development and changing consumption patterns. The global demand for water may continue to grow in response to the economic development and growing population. It is in this regard that there is a need to ensure water security and management in present times. This edited volume through its four parts discusses the pertinent issue of water management and the laws governing the same. The first part deals with the role of public and private law in water allocation while the second part elaborates on different models of water allocation. An evaluation of transboundary water management is considered next and the final part deliberates on water allocation in the context of environmental destruction. The entire volume elaborates on the existing scenario of water management around the world and the regulatory structures dealing with it.

Erkki J. Hollo, the editor, introduces the readers to concepts and traditions of water management law to give an understanding on use of water as a resource and its regulation. The development of water law is presented through the origin of western water law touching upon Roman law, French law, Common law, Germanic law and Scandinavian law. This discussion gives a conceptual clarity to the reader on the development of regulation of water resources and its significance to address water scarcity. Based on different approaches, the author classifies the categories of water management projects into two, growth oriented and adaptive water management. He also recognizes the importance of soft law instruments as far as the regulation of international water is concerned.

Douglas Fisher elaborates on the common law regulation of water resource and the modes of access to use. He categorizes the modes on the basis of practice and custom, rules-based systems and administration-based systems. The chapter gives an insight into the development of doctrines associated with the regulation of access and use of water. Instances of conflicts between public water supply projects and riparian or property right holders and case studies on

these issues present a picture of challenges on the implementation of common law rules. Ed Couzens and Meda Couzens emphasize upon the lack of constitutional validation of water rights in majority of south African states (out of 16 only three have) and its shortcomings. The authors identify the limited approaches taken by these countries towards regulation of water for access and use which resulted in poor management of water resources.

Pekka Vihervouri elucidates the experience of community level or village-level ownership, private property and state ownership from the Finnish perspective to highlight a sustainable system prevailing in the world. The author explains that in such places, permit systems play a major role in regulating access based on land use patterns. Under the Finnish water law, a permit in practice reflects balancing of interests, rights and expectations along with compensation for losses caused. Maria Onestini provides an overview of Argentine water rights in various statutes and the cases related to water management which promotes water rights in the garb of the right to healthy environment. Ezekiel Nyangeri Nyanchaga analyses the struggle for water rights between natives and European settlers in Kenya. He chronicles the conflict that led to several commissions being appointed to study the issue which resulted in legislation prescribing licenses for water rights. It presents a significant narrative of the conflict between indigenous people and exploiters which is still prominent in many places around the world. Hence the first part of the volume in toto gives an idea about various systems of allocation and rights over water at different parts of the world. It also elaborates on the shortcomings and challenges faced by each of these systems.

The second part discusses models of water allocation to the relevant users and related issues. Liping Dai, Marleen van Rijswick and Bram Schmidt offer an analysis of the legal instruments dealing with water allocation ranging from international law to regional instruments like EU law to a specific location in Indonesia. The authors advocate for a sustainable and equitable water allocation mechanism after evaluating the legal instruments on the basis of values and principles, stakeholder involvement, regulatory framework and enforcement and conflict resolution. Sharon Mascher and Deborah Curran examine the role of private property regime in water allocation focusing

on Australia and Canada, and the need to balance water security and incentivizing efficiency. They also analyze the conceptualization of private property rights on water in the context of exclusivity, duration, security and transferability. Antti Belinskij advocates for the recovery of costs for water uses and suggests that water must be treated as an economic commodity to avoid its wasteful use. The author proposes that by following the EU Water Framework Directive, costs of water use can be divided into financial, environmental and resource costs for the purposes of recovery. He also advocates that recovery of costs must be on the basis of polluter pays principle. The second part of the volume gives an overview of various models of water allocation implemented through legal instruments internationally. It also suggests ways to control water usage and the means to recover the costs associated with water consumption.

The third part deliberates on transboundary water management. Tuomas Kuokkanen evaluates how international law regulates protection and utilization of water. For this, he distinguishes water on the basis of four dimensions; spatial, subjective, temporal and material. He suggests that legal issues relating to utilization and protection of water must be treated differently. He provides an example of hydroelectric power coming under energy law and water protection being dealt with under environmental law. He points out that while dealing with water issues, these multiple dimensions should be taken into account and priority is to be accorded to respective dimensions based on the corresponding issues. Nigel Bankes considers the Columbia River Treaty Between USA and Canada and the changes, including effects of climate change, which occurred in the basin that might impact the treaty. He has also suggested possible alternatives and amendments to the treaty. Itzchak E Kornfeld examines the inter-state dispute of Kansas v. Colorado in order to discuss state sovereignty and equitable water allocation. He refers to one of the most important decisions in Nebraska v. Wyoming where Justice William O. Douglas discussed apportionment doctrine, which even though relevant today, is not applied in its true spirit by international tribunals in water issues. The author suggests the potential elements which are to be considered by the international courts and tribunals in the future. These elements include consideration of entire river basin instead of only assessing water from a given river, evaluating the

basin's climate, the extent of state's dependence and examining the conservation methods adopted by the states. The third part of the volume provides an overall understanding of water management by sovereign states within a country and between countries. It suggests an integrated approach to be undertaken by states in a mutually agreed manner.

The fourth and final part discusses water allocation under the threat of environmental destruction. Moritz Reese evaluates the regulatory challenges to climate change adaptation in water management. The author identifies the key requirements of climate sensitive water governance and suggests that water management should be based on impact of climatic developments on water quality and quantity. The author also recommends legal foundations for fair management and effective adaptation on climate change. Liping Dai analyses the water quality management framework in China and the different approaches undertaken. In that regard she analyses various laws from which water management framework can be identified such as constitutional law, natural resources law and also law relating to prevention of pollution and environmental management. One of the approaches followed in China needs to be highlighted as it gives binding targets for officials to achieve, based on which they are both liable for failure and rewarded for better performance. Tiina Paloniity considers the practical effects of EU regulatory framework on agricultural run-off. The author recognises that agricultural run-off and farming practices causing land based water pollution do not fall under the scope of environmental protection laws and that it should be considered separately under a comprehensive law. Hennie Coetzee and Louis J Kotzé analyse the regulatory issues related to shale gas development in South Africa. They identify that there is no 'single' law which takes in to account the various water aspects during shale gas development. In that regard the author advocates the need to have an integrated law which would consider international practices as well as unique natural and socio-economic conditions in South Africa. This part of the volume gives an idea as to how water management must be finetuned to meet the needs of the future taking into account the climate variables. It also advocates for allocation of water and the regulation of it while keeping a balance between developmental needs and climate change effects.

The book provides an analysis of water allocation rights, its development and also the variations under public law and private law. Since watercourses are interterritorial in nature, an attempt to evaluate crossjurisdictional issues is also done through the chapters. The importance of having location specific resolutions instead of a uniform approach is another highlight of the book. Various water management strategies undertaken at different places are presented through case studies to give an understanding of practical solutions. The book is to be considered as a scholarly work on water management law which will be useful for anyone interested in the conservation of water as well as proper management and allocation of water.

Even though the book gives the reader a fair idea on importance of water management in different contexts, there several other issues for further and future research. For instance, it does not discuss the regulation of groundwater and its management considering the importance of groundwater as a global water resource. Another aspect which could have been included is a discussion regarding the usage and regulation of desalinated seawater in Gulf countries as a resource. It is significant in present times when cheaper solutions for desalination are being introduced in some of the underdeveloped countries in order to meet the water scarcity crisis.

