

‘Water Law as Environmental Law’: An Introduction to the Special Issue

1 Introduction

Water is the source of life. Water is an irreplaceable element of the environment, of which people, animals and plants form an integral part. The nexus of water, food, energy, environment, ecosystem and climate has been widely recognized. The sustainable development of the world’s freshwater resources is essential for humans to survive and prosper.

In many parts of the world, freshwater has been available in sufficient quality and quantity since time immemorial, and thus the legal regulation and governance of freshwater resources was not an issue for many countries. Due to environmental degradation and the negative impact of climate change, this is no longer the case for an increasing percentage of the world’s population. Humans continue to engage in environmentally harmful activities that threaten the quality and quantity of available freshwater resources. This has led to increasing water insecurity, characterised by insecure supply of and inequitable access to sustainable, affordable and potable freshwater. Unsustainable agriculture and inappropriate production and consumption patterns are drivers of water insecurity. In addition, the links between freshwater problems and the marine environment must be recognized, particularly those relating to river and coastal pollution, as well as aquaculture.

Because there is no alternative resource that can substitute freshwater in entirety, except perhaps through costly desalinization of saltwater, there is reason for significant alarm. Poor freshwater resources management poses a great threat to sustainable development. If managed reasonably and equitably (understood as referring both to intra- and intergenerational equity), freshwater resources can continue to serve as a fundamental element of the world’s sustainable development. Thus water security, water and health, water and sanitation, the human right to water, the human right to a healthy environment, water and adaption to climate change, are amongst the most pressing issues on the global agenda.

In the case of transboundary freshwater resources – ie, freshwater resources shared by two or more States – individual States often focus on the immediate

demands of their own current population and their economic development. Because of water shortages, downstream riparian countries are facing increasing pressure with respect to the very survival of their people, as well as major restrictions on economic development. There exist overlapping and competing claims to the use of one and the same freshwater resource. In this transnational competition for water, the rights and interests of people residing beyond the State's territory, the rights and interests of future generations, the rights and interests of vulnerable groups, and even the rights and interests of the river itself and its ecosystem, are often neglected. Concepts such as 'global solidarity', and 'a community of shared future', are explored, as alternative conceptual frameworks for more equitable and reasonable solutions to transnational water law issues.

2 The Special Issue

This Special Issue provides us with an excellent opportunity to focus on a specific area of research that falls within the aims and scope of the *Chinese Journal of Environmental Law*. This special issue, the second one for our journal, presents water law as part of the broad area of environmental law. Largely speaking, water law, including domestic, regional and international water law, is in substance a part of environmental law. The special issue brings together a collection of articles that look at a variety of aspects of this 'green' and 'blue' approach to international, transnational, regional, and domestic water law. Issues traditionally regulated by water law, such as water allocation, all have environmental implications. Environmental problems that water law seeks to address include water pollution, waste of water, water scarcity and drought, damage to aquatic biodiversity and freshwater ecosystems, coastal ecosystems, and flood-risk management. All these problems are transboundary, ie, they do not 'respect' national borders.

The special issue thus brings together theoretical, doctrinal, empirical, and practical analyses addressing international, transnational, regional, transboundary, and domestic environmental problems – with a particular focus on water and the issue areas and fields of law relating to freshwater resources. The topics covered by the papers can be broadly categorized into four groups: (a) human right to water, (b) an ecosystem approach to water governance, (c) river basin, national and regional water management practices, and (d) settlement of disputes over the use and protection of water. The special issue aims to identify international, transnational, regional, and domestic legal

approaches to negotiating and implementing effective governance strategies for shared water resources and the actors and sectors that depend on them.

3 An Overview of the Papers

Ruby MOYNIHAN MAGSIG's article, entitled 'An Ecosystem Approach in International Environmental Law relevant to Transboundary Freshwater Ecosystems', introduces the reader to the ecosystems approach to water law. Freshwater ecosystems are degrading, and access to a sustainable water supply is increasingly inequitable within and between States. The ecosystem approach has emerged as a concept to transform ecosystem management and prioritise equitable participation and outcomes for vulnerable societies, but its normative content and international legal status remain unclear. The author draws from international environmental law and human rights law to ask what normative elements of an ecosystem approach in the context of international law are relevant to transboundary freshwater ecosystems, and what is the added value of an ecosystem approach for water law. She then explores the United Nations Economic Commission for Europe (UNECE) environmental instruments as a structurally distinct regime and demonstrates how the regime provides the strongest clarification of an ecosystem approach in international water law. Finally, her paper demonstrates how the ecosystem approach stimulates mutual supportiveness between different areas of international law.

The article by Yang LIU is 'Interpreting "Vital Human Needs" under the UN Watercourse Convention'. In her view, clarification of the concept of 'vital human needs' versus the right to water as found in General Comment No 15 and Sustainable Development Goal (SDG) Target 6.1, is needed to determine who enjoys vital human needs for what and whether vital human needs are prioritized. She concludes that parallel concepts in General Comment No 15 and the SDG Target 6.1 can help clarify the meaning and scope of the rather obscure term 'vital human needs' for water under article 10(2) of the United Nations Watercourses Convention.

Amael NOTINI MOREIRA BAHIA and Lucas Carlos LIMA contribute a piece entitled 'The Environmental Perspective of the Right to Water in the Case Law of the Inter-American Court of Human Rights'. The authors firstly introduce the human right to water in general international law. They then go on to examine the constructions implemented in the jurisprudence of the Inter-American Court of Human Rights (IACtHR). Thereafter, they discuss Advisory Opinion 23/17 on innovations regarding human rights to water from

an environmental perspective. Finally, the repercussions of this decision are presented by the authors in the context of the recent jurisprudence of the IACtHR, which recognizes the interconnection between the promotion of the human right to water and the protection of freshwater resources. They argue that, despite the jurisdictional challenges to the human right to water in the IACtHR, the integration of the protection of the environment and the human right to water provides a new normative perspective in domestic and international human rights law for the protection and utilization of freshwater resources.

Flavia MARISI prepared an article with the intriguing title, 'Skating on Thin Ice: The Human Right to Water in Investor-State Dispute Settlement'. In several investor-State dispute settlement cases between the 2000s and the 2010s, a tension arose between the State's duty to protect its inhabitants by means of policy measures aimed at safeguarding the environment and human health, ensuring that people can enjoy clean, available, and affordable water, and the State's commitment to protect foreign direct investment under international investment treaties. MARISI discusses the right to water as acknowledged by international agreements and United Nations resolutions, retraces the evolution of foreign direct investment in water services management, examines the interests at stake in investment disputes, and suggests options for balancing the rights of investors and the right to water.

Miharu HIRANO gave us an article called 'Settling Water Disputes through International Investment Arbitration'. HIRANO analyses relevant investment treaty provisions and cases concerning water resources management to examine when water disputes can be submitted to investment arbitration and what standards tribunals have applied to settle them. He demonstrates that water disputes over investment projects can be broadly covered by investment treaties, but they do not automatically turn water resources into legally protected commodities. Investment arbitration is commonly used by foreign investors to challenge the legality of water-related measures adopted by host States under an applicable investment treaty, but it can also be used to enforce domestic environmental law. In most controversial cases, arbitral tribunals applied reasoned decision-making and regulatory coherence as emerging global regulatory standards.

Owen MCINTYRE submitted an article 'International Water Law's Role in Addressing the Problem of Marine Plastic Pollution: A Vital Piece in a Complex Puzzle'. He believes that the management and protection of water resources, and thus the practice of water law, is central to every aspect of human well-being. This is as true at the international level as at the domestic level. Water pervades every area of human activity and connects almost

every form of pollution and environmental harm. This truism is clearly illustrated, he argues, by the highly topical problem of marine plastic pollution which, though it concerns the ubiquitous use and eventual accumulation in the marine environment of a broad category of environmentally persistent synthetic materials, is intrinsically linked to the environmental management of major rivers, many of which are shared international watercourses. While the general international obligation to prevent marine pollution by plastics can be derived from both international marine environmental law and international water law, evolving practice under the latter framework, and under related sub-fields of international and transnational environmental law, provides helpful clarity regarding the normative parameters of the due diligence standard of conduct expected of all States in this regard.

Stellina JOLLY and Gayathri NAIK prepared a very creative piece entitled 'Rivers as Legal Personalities in India and Bangladesh from an Eco-Centric Perspective'. In 2017 through two judgments (*Mohammed Salim v State of Uttarkhand* and *Lalit Miglani v State of Uttarkhand*), the High Court of Uttarakhand, India declared the rivers Ganga and Yamuna, and the glaciers respectively, as legal persons enjoying rights and duties of a living entity. The article aims to explore the developments in India and Bangladesh in articulating the right of rivers. This has been done to understand core elements of judicial recognition of legal personhood to rivers in these jurisdictions. Considering the transboundary impact of these decisions, the paper then analyses the rights of rivers in a transboundary setting to see if there are entry points under international water law to incorporate the rights of nature as part of its operational structure.

Yuqing ZHAO contributed to this special issue with an article on the 'Evaluation of Damage to Wetland Ecosystems in International Compensation'. Yuqing ZHAO's work aims to contemplate the approach for evaluating damages to wetland ecosystems, that is, how to decide on the amount of compensation due for damage to wetland ecosystem services. At the outset, the sources of an international obligation to protect wetland ecosystems and the compensability of damage to wetland ecosystems, notably ecosystem services, are analysed. After explaining the difficulties concerning the quantification of wetland ecosystem services, the article introduces a range of valuation techniques relating to valuing wetland services. Then it outlines the key considerations that facilitate the choice among competing techniques and approaches in international judicial proceedings. In the conclusion, the article points out that under certain circumstances, equitable considerations may be drawn upon to determine the quantum of compensation. The goal is to facilitate the development of a legal framework for evaluating damages to wetland ecosystems.

Dinara R ZIGANSHINA wrote on 'Water Law Reforms in Central Asian Countries'. Her paper provides an overview of water legislation with a focus on water management institutions of the Central Asian countries at national, basin and local levels. It has an introduction of economic mechanisms in water use and management as well as provisions related to a human right to water and environmental protection. Based on the resultant insights, the paper identifies five recent trends and areas for further improvement, including the need to (i) strengthen water regulatory frameworks as a part and parcel of the overall political and economic transformations in the countries; (ii) reform water institutions with a clear focus on the sector performance and foster coordination between different stakeholders; (ii) enable context-specific arrangements for a workable basin and local water management; (iv) address the issues of human and environmental needs on water, which are becoming increasingly important under the impact of climate change, industrialization, and urbanization; and (v) expand the effectiveness of economic mechanisms in water use and regulation to ensure cost recovery and investment flow into the sector.

Hendrik SCHOUKENS sent us a wonderful article on 'The Conservation of Aquifers in Flanders as a Regulatory Challenge'. This article includes a comprehensive case study with a particular focus on the interplay with the existing regulatory schemes regarding groundwater extraction and drainage and the unfavourable status of many groundwater-dependent natural habitats in the Flemish Region in Belgium. The analysis presented is primarily a legal one, zooming in on the existing legislation, regulations and jurisprudence that exist with respect to the topic of aquifers and aquatic ecosystems. A main emphasis is placed on the compliance by the Flemish Region with the aquifer-related conservation duties that are included in European Union (EU) environmental law. As the Flemish Region is bound by EU environmental legislation, it provides a logical benchmark for discussing the strengths and weaknesses of the Flemish groundwater management policy in light of the impending drought scenarios. In addition to the EU Habitats Directive, the EU Water Framework Directive comes to the forefront in this analysis since it provides a substantive benchmark for EU Member States with respect to groundwater extraction. With reference to recent case law developments in the context of protected aquatic ecosystems in Flanders, this article outlines the main regulatory challenges and sketches the potential solutions that are available. Potential solutions are identified in the concluding section, with reference to recent, more promising shifts in the relevant jurisprudence and recent litigation strategies, both in the Flemish Region and at the level of the Court of Justice of the European Union (EU), which is the chief judicial authority of the EU and oversees the uniform application and interpretation of European Union law.

Qiu QIU, Liping DAI and Marleen VAN RIJSWICK together prepared an article on 'Improving Joint Operation System of Reservoir Groups in the Yangtze River Basin'. This paper examines the joint operation system of key reservoir groups in the Yangtze River Basin from a legal perspective and discusses its implementation as well as the challenges in practice. Issues impeding the effective implementation of the joint operation system include the lack of a legal basis for the system, limitations related to the organizations that participate in the joint operations, limitations on the scope and objects of the joint operation system, and the lack of a systematic structure for operation. They offer suggestions to improve the system.

Finally, Pierre THIELBÖRGER submitted a commentary on a recent development, being the 20th anniversary of the recognition of the human right to water. He points out that the right to water is still often considered a 'new' right. General Comment No 15 of the Committee on Economic, Social and Cultural Rights (ESCR-Committee) must be considered the right's hour of birth, says THIELBÖRGER, meaning 2022 marks the right's 20th 'birthday'. However, although the right to water has been an integral component of the human rights framework for two decades now, current developments show the fragility of the right in terms of its factual realization. Both the steady advance of climate change and the increase of privatization activities by multinational businesses pose not only growing challenges to the individual access to water, but also highlight the increasing importance of water for international peace and security. To address these pressing challenges and to honour the occasion of the right's 20th anniversary, THIELBÖRGER's note traces the right's unique history and legal basis, then briefly summarizes the right's normative content and recognition in national jurisdictions and by the International Court of Justice, and finally examines recent developments and challenges lying ahead for the human right to water.

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