

Editorial

Critical Issues in Water, Oceans and Sustainability Law

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1. Introducing the Utrecht University Centre for Water, Oceans and Sustainability Law

Water is fundamental to the survival of any living beings. Be it freshwater or oceans, it consists of a source of food and energy, of communication routes, and of special habitats. Its sustainable use is one of the main challenges of present times, in particular considering the expansion of human activities and of the consequences of climate change. Clearly bearing these challenges in mind, the Utrecht University Centre for Water, Oceans and Sustainability Law (UCWOSL) has been created in order to investigate the role that law plays or can play in achieving the sustainable management of oceans, freshwater systems and deltas, on the basis of mutual responsibilities, and to pursue an equitable distribution of associated risks and natural resources.¹ The Centre takes a multidimensional approach in its research and about thirty lawyers with different backgrounds (international, European, national, private, criminal, constitutional, administrative law as well as legal theory) work together with other disciplines such as environmental sciences, hydrology, biology, marine sciences, planning, sociology, philosophy, public administration and economics. The main focus is however the legal approach.

The research programme of UCWOSL strives to attain this general aim by concentrating on four points of focus, each with its specific research questions.

The first point of focus deals with the 'Normative Perspective: Sustainable and Equitable' and strives to answer the following research question: What are the main values in water and oceans law and how can human rights, principles from customary international law and relevant treaties, EU law and constitutional principles contribute to the normative framework? Research within this point of focus deals with the development of a normative framework that delivers substance to the concepts of sustainability and equity.

The second point of focus concentrates on the 'Institutional Perspective: Mutual Responsibilities'. This point of focus is aimed at institutional (governance) aspects of sustainable and equitable management, as seen from a multilevel perspective (i.e. international, regional – EU – and the national dimension, and the interactions amongst them) and a multi-actor perspective (i.e. states and decentralized state agencies, civilians, NGOs, businesses, and intergovernmental organizations). This point of focus aims to answer the following specific research question: What are the bottlenecks in the current institutional

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1 See the UCWOSL Research Programme 2013-2014 available on the Centre's website: <<http://ucwosl.rebo.uu.nl/en>>.

structure and what improvements are required for the sustainable and equitable management of river basins, oceans and deltas?

The third point of focus on the 'Instrumental Perspective: Regulatory Approaches, Policy Instruments and Management' addresses the following research question: By the use of what mix of public and private means can the sustainable and equitable management of river basins, oceans and deltas be accomplished? This point of focus concentrates on the analysis of regulatory approaches, legal instruments and management tools concluded by the relevant actors, and aims at identifying which of these approaches and/or tools best guarantee the sustainable and equitable management of the resources.

The last and fourth point of focus deals with 'Dispute Settlement: Prevention, Settlement and Remedies'. The multiplicity of fields of law and of the actors involved in the sustainable and equitable management of water and ocean resources triggers a multiplicity of legal tools/mechanisms in the event of a dispute. The research within this point of focus thus aims to answer the question: Which dispute resolution mechanisms and what remedies can contribute to the sustainable and equitable management of river basins, oceans and deltas, based on mutual responsibilities, for oceans and freshwater systems? The case law of the relevant courts at the national, supranational and international level will be analysed, but also the work of compliance mechanisms and of any other monitoring or audit system, which is deemed useful for the research.

By answering these four questions, the researchers of the UCWOSL aim to contribute to the sustainable and equitable management of water and ocean resources, thanks to a better understanding of the role of law and of the potential of law in reaching those goals. A first step towards that end was the international conference organised by UCWOSL on 'Water and Oceans Law in Times of Climate Change'. The present special issue of the *Utrecht Law Review* is the result of that event, and of the hard work of UCWOSL researchers and eminent guests.

2. Water and oceans law in times of climate change

Adaptation to climate change is one of the major challenges of our time and is inextricably linked to the management of oceans and fresh water systems. Increasing temperatures, sea level rises, changing rain patterns, melting ice and snow, more violent storms, the acidification of oceans, etc. call for adaptive measures to ensure resilience to flood and drought risks, and to preserve the adaptive capacity of both oceans and fresh water systems. While oceans and fresh water systems each play their role, they also interact. Both are under increasing pressure by human activities and human-induced climate change. Fish stocks are overfished or have collapsed; sea level rises threaten low-lying islands and coastal areas; aquifers are emptied or can no longer be used due to pollution; mistakes in land use contribute to erosion and floods. All these issues point at the necessity to find solutions which guarantee the sustainable use of oceans and fresh water resources, mitigate climate change effects and enhance adaptation.

The multidisciplinary conference, which took place in Utrecht on 31 October and 1 November 2013, aimed to bring together lawyers, hydrologists and specialists in the field of planning, environmental sciences, public administration and governance working on water and ocean management, sustainability and adaptation to climate change in order to discuss how the law can and should contribute to the achievement of the sustainable management of oceans, river basins and deltas.² The resulting collection of papers is divided into three sections. The first section consists of four papers discussing and critically assessing the values, principles and rights in water, oceans and sustainability law. In the second section, four papers focus on embedding adaptiveness into water and oceans law in order to prevent, reduce and manage environmental and climate risks. The last section consists of five articles which discuss compensation measures, each from a different region or country perspective. This 'compensation' section stems from the meeting of the European Network for Water Law/Reseau d'eau Européenne and of the Observatoire juridique Natura 2000/Observatory Nature 2000, which was held on the second day of the UCWOSL conference.

2 See for the conference programme and the power points of the presentations the Centre's website: <<http://ucwosl.rebo.uu.nl/en>>.

Values, principles and rights in water, oceans and sustainability law

This section is dedicated to the development of a normative framework for water and oceans management. The focus is on identifying, analyzing and critically assessing the core values, principles and rights which compose and shape the legal framework which is applicable to adaptation to climate change at the national, supranational (i.e. European Union) and international level.

In the first paper on ‘Public Values in Water Law: A Case of Substantive Fragmentation?’, Ambrus, Gilissen and Van Kempen investigate whether there is substantive fragmentation (i.e. differences in the protection of public values across different institutional levels) in water law at the international, European, sub-regional (Danube River Basin), and Dutch domestic level. To this end, they first suggest a working definition of the concept of ‘public water values’ and then draw four main conclusions on the degree of substantive fragmentation in water law across the institutional levels mentioned. First, ‘there does not seem to be particularly strong substantive fragmentation between the various levels regarding the ‘core values’ of prevention, precaution, sustainability, equality and equity’. A second observation is that ‘generally, the domestic and the European level seem to protect a longer list of specific values in addition to these core values’. Third, ‘both the European and the sub-regional level display a gap regarding the values pertaining to drinking water’, and fourth, ‘one can see that – although present at the international level – horizontal fragmentation of water law is less visible at the European and the domestic levels’.

The second paper in this section, by Stoa, addresses the issue of ‘Subsidiarity in Principle: Decentralization of Water Resources Management’. According to the author, the principle of subsidiarity aims ‘to promote efficiency and local ownership over policies and regulation, while placing a check on centralized governance and consolidation of authority at the highest levels of government’. The application of this principle has induced the decentralization of water resources management, which has been performed in different parts of the world and with different results. This paper focuses on three countries’ experiences with decentralized water resources management, namely Haiti, Rwanda, and the state of Florida in the United States of America. The author considers that these countries ‘offer varied and timely lessons for the international community’ and they demonstrate that ‘decentralized water resources management should be undertaken with an emphasis on the financial and human resources needed to successfully carry out that approach’. Stoa concludes that the principle of subsidiarity has become ‘a pillar of integrated water resources management’ but only if it is pursued with ‘rigorous and transparent intent’, will ‘water resources and human communities (...) stand to benefit’.

Lindhout and Van den Broek analyse the ‘The Polluter Pays Principle: Guidelines for Cost Recovery and Burden Sharing in the Case Law of the European Court of Justice’. The polluter pays principle is a fundamental legal tool in environmental law, at the international, EU and national level. It is now provided in a plethora of instruments; however, its implementation is not always easy. In this paper the authors discuss the importance of the polluter pays principle for cost recovery, as an instrument to stimulate sustainable water use. The starting point of their argument is Article 9 of the Water Framework Directive, which obliges EU Member States to take account of the principle of the recovery of the costs of water services in accordance with – in particular – the polluter pays principle. After studying the recent evolution of the principle, in particular in the case law of the European Court of Justice, the authors suggest that current interpretations of the principle provide guidelines for cost recovery and burden sharing in instances of multi-causation of the environmental harm.

In his paper Van Hees discusses ‘Sustainable Development in the EU: Redefining and Operationalizing the Concept’. Stating that sustainable development plays an important role in EU law, van Hees concludes that neither EU law nor EU policy clearly explains what the concept means and how it must be put into practice. His argument is that policy makers, NGOs, politicians and businesses need ‘guidance on sustainable development for the purpose of good policy-making, for effectively holding the EU accountable, and for the design of CSR programmes’. To that end the author explains the guidance which EU law and policy already offer on sustainable development. To do this he takes a closer look at the treaties, the policy and environmental principles and the environmental and other impact assessments. Subsequently van Hees proposes a more workable definition of sustainable development than the definition designed by Brundtland: ‘Sustainable development means stimulating and encouraging economic development (e.g. more jobs, creativity, entrepreneurship and revenue), whilst protecting and improving important

aspects (on global and European level) of nature and society (inter alia natural assets, public health and fundamental rights) for the benefit of present and future generations.' He develops a framework of application for sustainable development, then he applies it to a decision in the field of energy policy. Van Hees concludes that 'The main disadvantage of the EU's current approach towards sustainable development (and therefore of the proposed framework of application) is that it mainly requires the implementation of a decision-making process. It does not, however, guarantee that this process also has a sustainable outcome (...). A possible solution for this problem will have to be found by politicians who should mark the boundaries of economic development.'

The final paper in this first section is co-authored by Misiedjan and Gupta and deals with 'Indigenous Communities: Analyzing their Right to Water under Different International Legal Regimes'. Indigenous communities are the first victims of the mismanagement of water resources by governments and corporations. Indigenous communities lose access to water resources, which they traditionally used, or those same resources are now too polluted for human consumption or agriculture. Misiedjan and Gupta address these problems by asking what the content of the human right to water is, as applied to indigenous communities, and what the added value of this right is. The authors highlight how the human right to water applies to indigenous peoples, but 'more as individuals than as a group', and that the 'human right to water is just one part of a larger bundle of water rights that includes the right to use water for cultural reasons, for subsistence agriculture and livelihoods, for environmental reasons, general land rights and that includes a prohibition of pollution of their water resources'. They then stress how 'the confusion regarding the extent of the right to water, and the diversity of rules, agencies and whether the rights are legally binding or not makes it difficult for this minority and marginalized community to actually assert these rights'. Moreover, few complaint mechanisms are available to indigenous communities in order to claim their right to water.

Embedding adaptiveness into water & oceans law in order to prevent, reduce and manage environmental and climate risks

This section focuses on legal instruments and governance approaches for public and private parties concluded in order to ensure the sustainable management of water resources. Instruments for adaptation to climate change effects are of particular importance because they aim to reduce the vulnerability of natural and human systems to climate change effects.

Special emphasis is here given to transboundary contexts, such as in the paper by Van Eerd, Wiering and Dieperink on 'Exploring the Prospects for Cross-Border Climate Change Adaptation between North Rhine-Westphalia and the Netherlands'. The three authors highlight how, as climate change consequences do not respect borders, climate adaptation is a 'transnational challenge'. Their paper aims to better understand the factors that stimulate or constrain the transboundary governance of climate change adaptation. Their analysis focuses on one case study, the Rhine river basin where North Rhine-Westphalia and the Netherlands are dealing with climate adaptation governance, both on the national and on the transboundary level. Their presumption is that the level of congruence between policy arrangements on both sides of the border has an impact on the prospects for cooperation. By applying the Policy Arrangement Approach they found similarities and differences between North Rhine-Westphalia and the Netherlands. They conclude that the degree of congruence between the two states is rather high and they argue that this situation offers good opportunities for further cooperation.

De Smedt chooses the Flanders region as a case study in his paper 'Towards a New Policy for Climate Adaptive Water Management in Flanders: The Concept of Signal Areas'. In Flanders, the Belgian Government has recently established an innovative policy framework to preserve the water storage capacity in flood-prone areas. In this context, the concept of 'Signal Areas' (*signaalgebieden*) has been created. The framework outlines in what way one needs to deal with the flood risk in these areas. The intention is to work with tailor-made solutions for each separate area and the final objective is to create an efficacious, area-oriented adaptation strategy for climate-proof spatial planning. The author studies how these instruments can contribute to a stronger linkage between water management and spatial planning and therefore to a solid climate change adaptation strategy, as well as the factors of success and failure of this new policy framework.

Beijen, Van Rijswijk and Tegner Anker discuss 'The Importance of Monitoring for the Effectiveness of Environmental Directives. A Comparison of Monitoring Obligations in European Environmental Directives'. This paper focuses on the monitoring obligations in European environmental directives, their objectives and the different designs. In fact, European environmental directives contain various norms and standards, such as quality standards or emission standards. Moreover, many directives also contain additional instruments, such as the obligation to set up action programmes and an obligation to monitor and report the results to the European Commission. These obligations are essential for the directives to be effective, but the form and contents of these obligations tend to differ. The authors recommend that 'especially in cases where flexibility and adaptiveness are leading in an environmental directive, monitoring requirements should be designed in such a way that all monitoring objectives can be achieved, with specific attention for the design of monitoring requirements that aim to facilitate the adaptiveness of the particular legislation'.

This second part of the special issue ends with an article by Dai who presents some comparative insights in her study 'Something Old, Something New, Something Borrowed and Something Blue: Tackling Diffuse Water Pollution from Agriculture in China: Drawing Inspiration from the European Union'. Diffuse water pollution from agriculture is increasingly recognized as a main contributor to water pollution both in China and Europe. A great deal of effort has been put into mechanisms for addressing such pollution, especially through legislation and policy. This article provides an overview of the current policy design regarding diffuse water pollution management in China and of its shortcomings, and an overview of the legal framework for diffuse water pollution control in China and the European Union (EU). This article then discusses to what extent the EU legal framework could provide inspiration for China, and concludes that China could learn valuable lessons from the EU experience, 'e.g. the integration and harmonization of water and agriculture policies, good agriculture practices, the best technology for pesticide production, and the rural development incentive programmes'. The author also points out that further research is needed in order to 'build an efficient legal framework or apply incentive instruments in China', in the light of the many differences which exist between the two legal orders here under scrutiny.

Compensation in the European Union: Natura 2000 and water law

The last section of the special issue is dedicated to the issue of compensation and more specifically to the work that has been done on compensation in water and nature conservation law by the Observatory Natura 2000 and the European Water Law Network. Both networks are hosted by the Centre International de Droit Comparé de l'Environnement (CIDCE) in Limoges (France), and consist of a group of specialized lawyers in the field of environmental, nature conservation and water law. They have a long-standing tradition in discussing and evaluating the implementation, in several Member States of the EU, environmental directives in the field of water management and Natura 2000. The 2014 meeting of the two networks was organized on November 1st at the Utrecht University Centre for Water, Oceans and Sustainability Law as part of the conference Water and Oceans Law in Times of Climate Change. The topic for discussion at the 2014 meeting was the way both regimes (nature conservation and water law) deal with compensation requirements. Not all presentations during the conference resulted in papers for this special issue, but the presentations and discussions during the conference were most useful in enhancing the understanding of compensation regimes in European and national environmental law. Presentations were delivered by:

- G. van Hoorick (Ghent University): 'Compensatory Measures in European Nature Conservation Law'
- H. Schoukens and A. Cliquet (Ghent University): 'Mitigation and Compensation in Flemish Nature Conservation Law: Towards Cutting the Gordian Knot?'
- J. Makowiak (Limoges University): 'Compensation in French Law'
- J. Zijlmans: 'Compensation in Dutch Nature Conservation Law'
- B. van den Broek and W. van Doorn-Hoekveld (Utrecht University): 'Compensation in Dutch Water Law'
- M. Reese (Helmholz Centre for Environmental Research): 'Compensation in German Law'
- E. Höllö (University of Helsinki): 'Compensation in Finnish Law'
- M. Albuquerque Nobre (University of Coimbra): 'Compensation in Portuguese Law'

- C. de Guerrero (University of Zaragoza): ‘Compensation in Spanish Law’
- K. Ilchev: ‘Compensation in Bulgarian Law’
- P. Humlickova (Calla/Green Circle): ‘Compensation in Czech Republican Law’
- L. Dai (Utrecht University): ‘Eco-Compensation Mechanism within Watersheds in China – A Case Study in the Tai Lake Watershed’

As this section stems from the meeting of the European Network for Water Law/Reseau d’eau Européenne and of the Observatoire juridique Natura 2000/Observatory Nature 2000, the articles focus mainly on the EU experience, or on regions or Member States of the EU.

The section on compensation starts with an article by Aragão and Van Rijswijk ‘Compensation in the European Union: Natura 2000 and Water Law’ in which a comparison between the several papers and country reports is made. Water law and nature conservation law are strongly interwoven, as many Natura 2000 sites are established in or in the vicinity of rivers, lakes, or the sea or are strongly dependent on sufficient and clean groundwater. Compensation is closely related to urban development or developments of public works. They discuss several approaches towards compensation focussing on preventive or restorative compensatory measures, the impact of EU law on compensatory regimes in several Member States of the European Union and the difference between mitigation and compensation. A closer look shows a discussion on the conditions of admissibility of compensation measures. The main questions relate to ‘When to compensate?’, ‘Where to compensate?’ and ‘How to compensate?’. The authors conclude that there are many uncertainties concerning compensatory measures which need to be solved in the near future.

Van Hoorick proceeds in this section with his article on ‘Compensatory Measures in European Nature Conservation Law’. The Birds and Habitats Directives are the cornerstones of EU nature conservation law, aiming at the conservation of the Natura 2000 network, a network of protected sites under these directives, and the protection of species. The protection regime for these sites and species is not absolute: Member States may, under certain conditions, allow plans or projects that can have an adverse impact on nature. In this case compensatory measures can play an important role in safeguarding the Natura 2000 network and ensuring the survival of the protected species. This article analyses whether taking compensatory measures is always obligatory, and discusses the aim and the characteristics of compensatory measures in relation to other kinds of measures such as mitigation measures, usual nature conservation measures, and former nature development measures. The author concludes that compensatory measures are one of the means in order to achieve the goals of the directives, but not the only one.

Woldendorp and Zijlmans describe in their paper ‘Compensation and Mitigation: Tinkering with Natura 2000 Protection Law’ the compensation regime in Dutch nature conservation law and they discuss the close relationship between mitigation and compensation. Their contribution strongly focuses on creative new approaches to deal with compensation requirements under EU, Dutch and Flemish law. In this respect they discuss the ‘balancing of effects’, ‘nature inclusive design’ (at the project level) and two types of ‘integrated planning’, the area-based approach and the programmatic approach. Moreover, they delve into the requirements of functionality within the compensation regime and they discuss issues such as, for example, the sustainability and timeliness of those measures, the responsibility for the taking of compensatory measures, the guarantee of the implementation and monitoring of compensatory measures, the choice between different compensatory measures and, finally, the location of the compensatory measures. They state that one of the most important questions nowadays is ‘under which circumstances can the obligation to take compensatory measures under Article 6(4) Habitats Directive be avoided by mitigating or other measures in the context of Article 6(3) Habitats Directive?’. Their conclusion is that ‘The Dutch Council of State provides more leeway for creative solutions than many had expected. The Belgian Council of State looks at such solutions more critically. Practice and science now stand at a crossroads: must we continue to follow the path of a more tolerant interpretation or return to a strict interpretation of the Habitats Directive?’

‘Mitigation and Compensation under EU Nature Conservation Law in the Flemish Region: Beyond the Deadlock for Development Projects?’ is the title of the fourth article of this section by Schoukens and Cliquet. This article reviews the most important judicial decisions in relation to mitigation and

compensatory measures in the Flemish Region. The authors also refer to similar relevant cases in other EU Member States in order to unravel the confines of the discretion offered to Member States by the Habitats and Birds Directives. The authors conclude that despite the obvious importance of 'mitigation' and 'compensation' as instruments for better aligning economic and biodiversity interests, 'Member States are still left adrift as regards the specific delimitation of the two concepts'. Consequently, 'many national planning authorities opted for a broad interpretation of the concept of 'mitigation', since this would allow many project developers to circumvent the strict confines of the derogation clauses', and the planning and permitting practices in the Flemish Region poignantly illustrate these trends. However, the Belgian Council of State seems to have adopted a more active role in nature conservation cases in its recent rulings where it no longer shies away from allowing nature conservation to prevail over policy preferences favouring development. The Belgian Council of State seems to be surprisingly keen to allow nature conservation interests to prevail when interpreting the Habitats and Birds Directives.

The Dutch experience with compensation in water law is the object of the last article by Van Doorn-Hoekveld on 'Compensation in Flood Risk Management with a Focus on Shifts in Compensation Regimes Regarding Prevention, Mitigation and Disaster Management'. In the Netherlands, the compensation of damage caused by lawful acts of an administrative body (no-fault liability) has mainly developed in the field of water management. The compensation of no-fault liability in the Netherlands is part of public law, and not of private law. This does not mean that the administration cannot be held liable for wrongful actions, but that in such an instance private law applies. There is a strict distinction between wrongful and lawful acts of the administration; both can cause damage, but public law applies to lawful acts, and wrongful acts are submitted to private law (tort law). This article only considers the public law dimension, because that is the most important one for the compensation of damage caused in the field of water safety. In order to assess no-fault liability the historical development of the responsibility of the state for water management tasks in general should be taken into consideration. In this paper, the author addresses this historical development, together with the system of no-fault liability regarding measures to prevent flooding. ¶