

THE PROTOCOL ON WATER AND HEALTH AS A STRATEGY FOR GLOBAL WATER GOVERNANCE INTEGRATION

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Abstract The 2018 report issued by a High-Level Panel on Water convened by the UN Secretary-General and the President of the World Bank, and consisting of 11 sitting heads of State and government, concluded that one of the main challenges facing global water governance is integration. Finding ways of integrating the different layers and areas of global water governance will, in turn, require institutional innovation. This article explores the potential of a well-tested yet largely under-studied approach to integration, namely that provided by the UNECE/WHO-Europe Protocol on Water and Health. It proposes that the Protocol be relied on both as an instrument and as a model that can be harnessed in four main ways: accession by a State or a regional organization (eg the EU) to the Protocol; amendment to give the Protocol a global scope; as a model framework for development, cooperation and foreign policy; as a model framework for the adoption of a contextualized instrument in another regional context.

Keywords: comparative water law, global water governance, High-Level Panel on Water, Protocol on Water and Health, rights to water and sanitation.

I. INTRODUCTION

Despite significant efforts at the international level, most recently with the adoption of Sustainable Development Goal (SDG) 6 in 2015¹ and the publication in March 2018 of the final outcome document of the High-Level

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¹ See Res 70/1, 'Transforming our World: The 2030 Agenda for Sustainable Development' (21 October 2015) UN Doc A/RES/70/1, including a set of Sustainable Development Goals (SDGs). SDG 6 calls for States to ensure 'the availability and sustainable management of water and sanitation for all' and identifies several targets relating to access to water, good water management, and the protection of waterbodies and associated ecosystems

Panel on Water (HLPW),² global water governance remains scattered across a diverse body of instruments, domestic, regional and international, with different geographical and substantive scopes and limited links among them.³ The challenges to be overcome are daunting. Water is a vital resource, for which there is no known substitute, and its availability to a growing population is threatened as a result of climate change, pollution and misuse. The threat is imminent, with recent projections suggesting that, on its current trajectory, the world may face a 40 per cent shortfall in water availability by 2030.⁴ But the response to such a threat remains unclear.

In this context, the HLPW's outcome document is a welcome contribution, as it proposes an agenda for action based on three pillars: understanding water, valuing water, and managing water. The purpose of this article is to explore options for water management and, more specifically, to consider very concrete steps to expand the frontier of water governance within and across countries. The HLPW proposed three main avenues to promote the integration of global water governance, namely the establishment of UN water meetings at the highest possible level, the possibility (following in the footsteps of the IPCC⁵) of creating a scientific panel on water, and the use of the UN General Assembly's Water Action Decade as a platform for policy dialogue, exchange of best practices and the development of partnerships.⁶ Given the composition of the HLPW, which consisted of sitting Heads of State and Government, these broad parameters can be reasonably taken as a proxy for what would be politically possible to envisage. Within the scope thus set, this article proposes specific measures based on an assessment of the three main fault-lines of global water governance, namely the need for better integration (a) across governance levels (international, regional, national and local), (b) across vantage points (inter-State water governance instruments and human rights approaches to water and sanitation), and (c) across sectors (further integration of the predominantly sectorial water governance).

In what follows, the article first provides a concise overview of the organization of water law at the domestic and international levels in order to

² The HLPW was convened in 2016 at the initiative of the UN Secretary-General and the President of the World Bank to champion an agenda to meet SDG 6 and other SDGs relying on water. It consisted of 11 sitting Heads of State and Government and one Special Adviser (a former Head of Government) and it delivered its outcome package, in the form of a galvanizing video, an Open Letter to Global Leaders and an Outcome Document: HLPW, *Making Every Drop Count. An Agenda for Water Action (14 March 2018)* ('HLPW Outcome Document').

³ For up-to-date overviews of water governance see P-M Dupuy and JE Viñuales, *International Environmental Law* (2nd edn, Cambridge University Press 2018) Ch 4; P Sands and J Peel *et al.*, *Principles of International Environmental Law* (4th edn, Cambridge University Press 2018) Ch 9.

⁴ HLPW Outcome Document, at 7.

⁵ Intergovernmental Panel on Climate Change. On this organization see R Encinas de Munagorri (ed), *Expertise et gouvernance du changement climatique* (LGDJ 2009).

⁶ See HLPW *Outcome Document*, at 9 (increase global water cooperation). See further at 20 (addressing transboundary water governance) and 30 (addressing global cooperation on water).

identify three main fault-lines in this governance landscape (II). It then focuses on the potential of one existing instrument, the UNECE/WHO-Europe Protocol on Water and Health,⁷ the peculiar features of which could provide a realistic, cost-effective, flexible and yet ambitious avenue to bridge the international/national, inter-State/human rights, and inter-sectorial divides. The article concludes with a concise restatement of the approach proposed in this article.

II. FAULT-LINES IN THE ARCHITECTURE OF WATER LAW

A. Overview

This section describes the ‘architectural plans’ or, in other words, the basic structure of water governance at the domestic and international levels. It is, of course, not possible to capture the complexity of such a vast phenomenon in a few paragraphs, but at the same time this overview is necessary to situate the main fault-lines in the architecture of water law. This section discusses the overall structure and contents of domestic water law (II.B), the international law relating to water (II.C) and the resource management approaches on which legal frameworks are based (II.D). The section concludes by highlighting that the main fault-lines in the water governance landscape concern three main connections: the international/national levels; the inter-State/human rights vantage points; and inter-sectorial interactions.

B. Domestic Water Governance

At the domestic level, the management of water resources is a classical area of State regulation, often based on one or more sectorial laws.⁸ Water management

⁷ Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes (17 June 1999) 2331 UNTS 202 (hereafter referred to as ‘the Protocol’ or the ‘PWH’).

⁸ See eg Australia: Water Act 2007 (Cth), Water Regulations (2008), Water Charge and Water Market Rules, Water Efficiency Labelling and Standards Act (2005); Brazil: National Water Resources Policy Act No 9433 (1998); Canada: Canada Water Act (1985); China: Water Law (1988), Water Pollution Prevention and Control Law (1984), revised in 2016; EU: Directive 2000/60/EC: Water Framework Directive (2000), Directive 2008/105/EC: Environmental Quality Standards (2008), Directive 2013/39/EU: Environmental Quality Standards/Priority substances (2013), Directive 2006/118/EC: Groundwater Directive (2006), Directive 2007/60/EC: Floods Directive (2007), Directive 98/83/EC: Drinking Water Directive (1998), Directive 2006/7/EC: Bathing Water Directive (2006), Directive 91/271/EEC: Urban Waste Water Treatment Directive (1991), Directive 91/676/EEC: Nitrates Directive (1991), Directive 2008/56/EC: Marine Strategy Framework Directive (2008); France: Environmental Code, book II, title I (2000) and regulations; Germany: Federal Water Management Act (1976); India: Water (Prevention and Control of Pollution) Act (1974), Water (Prevention and Control of Pollution) Cess Act (1977); Indonesia: Water Law (1974), reinstated following the revocation by the Supreme Court in 2015 of the Law No. 7/2004 on Water Resources (2004); Japan: Water Pollution Prevention Law, No. 138/1970 (1970), Law Concerning Special Measures for the Conservation of Lake Water Quality, No. 61/1984 (1984); Mexico: National Waters Act (1992); Singapore: Environmental Protection and Management Act (1999), Environmental Protection and Management (Trade Effluent) Regulations

approaches have varied significantly over time and across countries, but some degree of convergence can be discerned around two main ideas:⁹ the minimization of concentrated or diffuse discharges of pollutants into waterbodies (regulation of pollution), and the conservation and management of water resources (protection of the object).

The traditional approach to the consequences of water pollution was horizontal and focused on private-to-private good neighbourliness duties and the reparation of possible harm, whether through tort law or civil liability regimes. This is still important today, but it is not the main response to water pollution. The centre of gravity moved—at different periods depending on the country¹⁰—from a horizontal to a vertical or top-down regulatory approach aimed at minimizing discharges of pollutants into waterbodies through increasingly demanding command-and-control approaches and, to a lesser extent, through market mechanisms.¹¹ Such vertical regimes are typically based on a permits system making discharges into waterbodies conditional upon the payment of effluent charges, the use of pre-treatment technology standards, and the reduction of pollution concentration in the discharge (particularly for so-called ‘toxic’ pollutants).¹²

Regulation of pollution can be seen as a—particularly important—component of the broader approach to water conservation and management. The latter also relies on other techniques, including the development of a database of waterbodies, the setting of quality standards (eg for dissolved oxygen, heat and turbidity), zoning and area restrictions (excluding certain activities in certain areas),¹³ the recognition of ‘instream’ or environmental

(2008), Sewerage and Drainage Act (1999); South Africa: National Water Act 36 (1998); South Korea: Water Quality and Ecosystem Conservation Act (2005), Public Waters Management and Reclamation Act (2010), Groundwater Act (2015), Water Supply and Waterworks Installation Act (2016), Drinking Water Management Act (2016); UK: Water Resources Act (1991), Water Supply (Water Quality) Regulations (2016); US: Clean Water Act (1972).

⁹ See D Tarlock, ‘Water Governance’ in E Lees and JE Viñuales (eds), *The Oxford Handbook of Comparative Environmental Law* (Oxford University Press, forthcoming 2019).

¹⁰ This transition is insightfully discussed, by reference to the case of Britain, in M Lobban, ‘Tort Law, Regulation and River Pollution: The Rivers Pollution Prevention Act and Its Implementation, 1876–1951’ in TT Arvind and J Steele (eds), *Tort Law and the Legislature: Common Law, Statute and the Dynamics of Legal Change* (Hart Publishing 2013) 329–52. Lobban describes, among other things, how the vertical regulatory regime introduced through the 1876 Rivers Pollution Prevention Act was carefully drafted to focus on the negative externalities without interfering with the underlying transaction.

¹¹ See eg M Selman *et al.*, *Water Quality Trading Programs: An International Overview* (World Resources Institute Issue Brief 2009); J Shortle, ‘Economics and Environmental Markets: Lessons from Water-Quality Trading’ (2013) 42 *Agricultural and Resource Economics Review* 57.

¹² For example, in the US, under the Clean Water Act (1972), Title III, industrial wastewater discharges are subject to a permit (National Pollutant Discharge Elimination System – NPDES Permit) issued by the EPA or by the authorities of federated States, which rely on standards (‘Effluent Guidelines’) that define technology-based requirements for each industry reflecting the highest pollutant reductions that are ‘economically achievable’.

¹³ See eg Brazil: Federal Law No. 9433/1997 (1997) (instituting the national policy on water resources and management), and CONAMA Framework Resolution 357/2005. More generally, many States specifically protect wetlands, a development that was significantly encouraged by

flows¹⁴ (eg through water abstraction permits subject to certain ecological conditions¹⁵ or ‘legal reserves’¹⁶) or, less frequently, the restoration of altered watercourses.¹⁷

This overview cannot possibly be complete, but it is sufficient to emphasize that water regulation at the domestic level is mainly based on a vertical or top-down approach, even when it resorts to market mechanisms. Horizontal approaches (good neighbourliness and tort/liability) are still significant, but, at the domestic level, the centre of gravity is clearly situated on the vertical side of governance. As discussed below, at the international level, the opposite is true.

C. The International Law of Freshwater

International water law relies mostly on a horizontal cooperative logic whereby States commit to certain principles (reasonable and equitable utilization, no-harm, cooperation, prevention of environmental harm)¹⁸ grounded on both customary international law¹⁹ and a wide web of treaties.²⁰

the adoption in 1971 of the Convention on Wetlands of International Importance especially as Waterfowl Habitat (2 February 1971) 996 UNTS 245 (Ramsar Convention).

¹⁴ See generally AH Arthington, *Environmental Flows: Saving Rivers in the Third Millennium* (University of California Press 2012).

¹⁵ See eg France: Environmental Code (2000) art R 214-1.

¹⁶ See eg South Africa: National Water Act 36 (1998), section 1(xviii)(b) and 12–13.

¹⁷ For an overview of international experience in river restoration see B Smith, NJ Clifford and J Mant, ‘The Changing Nature of River Restoration’ (2014) 1 *Wiley Interdisciplinary Reviews: Water* 249 (referring to developments following the adoption of the EU Framework Water Directive).

¹⁸ For an overview of these principles see S McCaffrey, *The Law of International Watercourses* (Oxford University Press 2007) Ch 9 and 14.

¹⁹ On the recognition of the customary grounding of these principles by the International Court of Justice (ICJ) see M Kohen, ‘Les principes généraux du droit international de l’eau à la lumière de la jurisprudence de la Cour internationale de Justice’ in SFDI, *L’eau en droit international, Colloque d’Orléans* (Pedone 2011) 61–78. There is a vast body of codification initiatives of these principles developed throughout the 20th century, particularly by: the Institut de Droit International (*Utilization of Non-Maritime International Waters (except for Navigation)*, Salzburg, 1961 (‘Salzburg Resolution’)); the International Law Association (ILA) (*Helsinki Rules on the Uses of the Waters of International Rivers, adopted at the 52nd conference of the ILA in August 1966* (‘Helsinki Rules’), *Seoul Complementary Rules*, adopted at the 62nd conference of the ILA in 1986 (‘Seoul Rules’), *Berlin Rules on Water Resources*, adopted by the ILA on 21 August 2004 (‘Berlin Rules’)); and the UN International Law Commission (ILC) (which resulted in the adoption of the 1997 *New York Convention* and 2008 *Draft Articles on the Law of Transboundary Aquifers*, discussed next in this section). This body of work also provides evidence of the customary grounding of the main principles governing watercourses. Of course, customary grounding always requires a case-by-case analysis of specific aspects of a rule, but as a general matter, it is accurate to state that the international law of watercourses rests upon well settled principles. See A Tanzi, *The Economic Commission for Europe Water Convention and the United Nations Watercourses Convention: An Analysis of their Harmonized Contribution to International Law* (2015) UN Doc ECE/MP.WAT/42.

²⁰ However wide this web of treaties, it does not cover all or even most relevant waterbodies. According to the HLPW *Outcome Document* (at 20), at the global level, there are over 286 rivers and 600 aquifers which cross borders, and 60 per cent of transboundary river basins still lack any cooperative arrangement.

The instruments embodying this horizontal logic are mostly of a limited geographical scope (eg watercourse specific treaties²¹), although there are three (possibly four²²) instruments of a general scope, namely the 1992 UNECE Water Convention (now open to accession by any country, even beyond the UNECE region),²³ the 1997 New York Convention,²⁴ and the 2008 ILC Draft Articles on Transboundary Aquifers,²⁵ which adapt the principles applicable to surface (and surface-linked) waterbodies to all aquifers (including confined ones). Despite the importance of these instruments, which in some cases include sophisticated cooperation (eg river commissions) and dispute settlement (eg the Implementation Committee of the Water Convention) mechanisms, their centre of gravity is clearly on the horizontal inter-State relationship. Vertical obligations requiring States to take measures domestically in relation to water management are essentially an extension of (a form of implementing) the requirements of horizontal cooperation. The only exception to this horizontal approach at the international level is the now well-established recognition of the human rights to water and sanitation.²⁶ Human rights, by their very design, entail a vertical relationship akin to domestic public law whereby States (and to some

²¹ For an overview of existing watercourse specific agreements see UNEP, Oregon State University and FAO, *Atlas of International Freshwater Agreements* (UNEP 2002). The Oregon State University hosts a database of watercourse agreements.

²² The Ramsar Convention has been argued to be an important global water treaty because of its focus on the protection of wetlands as ‘natural infrastructures’ that regulate water quantity and quality. See Dupuy and Viñuales (n 3) 220–1. However, this argument sees the Ramsar Convention approach as a vertical and regulatory one (rather than as horizontal and cooperative).

²³ Convention on the Protection and Use of Transboundary Watercourses and International Lakes (18 March 1992) 1936 UNTS 269 (‘Helsinki Convention’ or ‘Water Convention’).

²⁴ United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (21 May 1997) 36 ILM 700 (‘New York Convention’).

²⁵ ‘Draft Articles on the Law of Transboundary Aquifers’ (11 December 2008) GA Res 63/124, UN Doc A/RES/63/124 (‘ILC Draft Articles on Aquifers’), as complemented by the UNECE *Model Provisions on Transboundary Groundwaters* (2014), UN Doc ECE/MP.WAT/40.

²⁶ Committee on Economic, Social and Cultural Rights, General Comment No. 15 (2002) *The Right to Water (Arts 11 and 12 of the International Covenant on Economic, Social and Cultural Rights)* (26 November 2002) UN ESCOR Doc. E/C.12/2002/11 (‘General Comment 15’). The existence of one right with two aspects (water and sanitation) or of two different rights was unclear for several years. This is apparent from the terminological evolution in the relevant resolutions from the UN General Assembly and the Human Rights Council. See, in ascending chronological order: Res A/64/292, ‘The Human Right to Water and Sanitation’ (28 July 2010) UN Doc A/64/L.63/Rev.1; Res 15/9: ‘Human Rights and Access to Safe Drinking Water and Sanitation’ (24 September 2010) A/HRC/15/L.14; ‘Human Rights Obligations Related to Access to Sanitation’ (1 July 2009) UN Doc A/HRC/12/24; Res 70/169, ‘The Human Rights to Safe Drinking Water and Sanitation’ (17 December 2015) UN Doc A/RES/70/169 (the latter resolution recognized, at para 2, that: ‘the human right to safe drinking water entitles everyone, without discrimination, to have access to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use, and that the human right to sanitation entitles everyone, without discrimination, to have physical and affordable access to sanitation, in all spheres of life, that is safe, hygienic, secure, socially and culturally acceptable and that provides privacy and ensures dignity, while reaffirming that both rights are components of the right to an adequate standard of living’).

extent non-State actors such as regulated utilities) have the obligation towards individuals to respect, protect and fulfil human rights entitlements. Such obligations would normally be spelt out in both constitutional rights and a legislative and regulatory framework with the basic form described in relation to domestic water management law.

Yet, as it will be discussed in more detail later in this article (section III.C below), the horizontal logic of international watercourse law is not well integrated with the vertical logic of the human rights to water and sanitation. This is partly due to historical reasons (the latter developed after the bulk of the former had taken shape) as well as to political ones. Indeed, some States are reluctant to let the vertical human rights logic change the arms-length horizontal logic of international watercourse law. This is because the human rights logic could involve potentially far-reaching obligations for water-rich States to share their water resources with other States.²⁷ However, for present purposes, the key consideration is that international watercourse law, with its horizontal logic, is insufficiently integrated with the international law relating to the human rights to water and sanitation, with its vertical logic.

D. The Sectorial Nature of Water Governance

An additional complexity which arises in both domestic and international law is the sectorial focus of most instruments. The article has already referred to the sectorial scope of domestic water laws as well as to the fact that the international law of watercourses is structured around watercourse-specific treaties or broader conventions applicable to watercourses in general. This presents a challenge because for water governance to be effective it may need to focus not only on water but also to take a broader perspective at the many interactions between the water cycle and other natural cycles and human processes.

Since the 1990s, the management of water resources has been increasingly organized following the so-called ‘integrated water resources management’ approach (IWRM), advocated for in some influential policy documents.²⁸ This approach is still prevalent in international policy instruments²⁹ although starting in 2011 an alternative—albeit consistent—approach has been

²⁷ See eg General Comment 15, paras 30–36 (discussing so-called ‘international obligations’, ie what I call here horizontal cooperative obligations. These set of paragraphs is premised on the idea, stated in para 31, that ‘[t]o comply with their international obligations in relation to the right to water, States parties have to respect the enjoyment of the right in other countries’). Yet, as it will be discussed later in this article, the language used in these paragraphs is less assertive than in the other sections of General Comment 15.

²⁸ Report of the United Nations Conference on Environment and Development, A/CONF.151/26/Rev.1 (Vol. I), Res 1, Annex 2: Agenda 21, Ch 18. See also Protocol on Water and Health (17 June 1999) 2331 UNTS 202, arts 4(1) and 5(j).

²⁹ See eg Sustainable Development Goal 6.5, in Resolution 70/1, ‘Transforming Our World: The 2030 Agenda for Sustainable Development’ (21 October 2015) UN Doc A/RES/70/1.

developed focusing on the nexus between water and other cycles (mostly energy and food,³⁰ but possibly other terms such as health, air pollution, waste, etc). This other approach has not yet been introduced into either domestic or international laws or even practices, although there have been some initiatives to mainstream it within the Water Convention.³¹ However, at present, water governance is still clearly sectorial, which raises the question of whether more inter-sectorial integration is needed and, if so, how can it be achieved.

Overall, this short overview of the architecture of water governance highlights three main fault-lines. The first concerns the link between domestic water law (with its deep vertical and regulatory logic) and international watercourse law (with its horizontal cooperative logic). The second concerns the insufficient integration at the international level between the horizontally organized law of watercourses and the human rights to water and sanitation. The third concerns the limited integration of inter-sectorial interactions and feedbacks which gives water governance its (still) predominantly sectorial focus. These three fault-lines introduce discontinuities in the laws governing water. For each fault-line, a link between two provinces of water law is missing. In what follows, the use of one existing instrument as a realistic and cost-effective strategy to provide such missing links is examined.

III. THE PROTOCOL ON WATER AND HEALTH AS AN INTEGRATION INSTRUMENT

A. Overview

The different nature of the fault-lines identified above means that no single instrument would be capable of providing the missing link, whether it is a global water convention or a soft-law instrument, such as a set of guidelines to the intention of policy-makers.

The Protocol on Water and Health (PWH) is no exception to this rule. Yet, when carefully considered, the PWH presents many advantages as a realistic, cost-effective, flexible, yet ambitious first step. This is because the PWH is not envisioned here only as a specific treaty, with its State parties and treaty bodies, but more generally as a ‘template’ or structured approach, which could serve as the basis for a development and cooperation strategy at various levels, including regional (eg the EU development and cooperation policy or the approach followed by the UN Economic Commission for Latin America and the Caribbean) and global (eg as part of the approaches recommended by the UN Special Rapporteur on the rights to safe drinking water and sanitation or

³⁰ See H Holf, *Understanding the Nexus. Background Paper for the Bonn 2011 Conference: The Water, Energy and Food Security Nexus* (Stockholm Environmental Institute 2011).

³¹ See Water Convention Secretariat, *Reconciling Resource Uses in Transboundary Basins: Assessment of the Water-Food-Energy-Ecosystems Nexus* (UNECE 2015).

by the UN High-Level Political Forum-Level Political Forum in examining the implementation of the SDG 6).

The following sections, provide some essential background regarding the PWH (III.B) and then discuss its potential to address the three fault-lines (III.C) as well as the possible routes through which it could be harnessed (III.D).

B. The Protocol on Water and Health

The PWH was adopted in 1999, in London, and it currently binds 26 States from the Pan-European region, including some Member States of the European Union. The Protocol is a stand-alone treaty under the aegis of the UNECE as well as of the European Office of the World Health Organization (WHO).³² Like the other major instrument concluded within the UNECE in the late 1990s, ie the Aarhus Convention,³³ the Protocol is a peculiar instrument half way between an inter-State and a human rights treaty. Such instruments, which can for present purposes be called ‘hybrid’, are rare, but they may become less so in the future.³⁴

The PWH established both a vertical (regulatory) and a horizontal (cooperative) system requiring State Parties to manage and protect their waterbodies so as to ensure the rights to water and sanitation in the area covered by the Protocol. Overall, the PWH requires States to exercise due diligence so as to provide access to water and sanitation.³⁵ This general duty is fleshed out through four clusters of obligations.

³² Perhaps as a result of this double-umbrella, the Protocol has enjoyed (and suffered from) a reputation as a strong and credible instrument. This may in part explain why it is still relatively under-studied. One could even say that there is a gap in the literature. Only a handful pieces have been devoted to it. See eg SL Chuffart and JE Viñuales, ‘From the Other Shore: Economic, Social and Cultural Rights from an International Environmental Law Perspective’ in E Reidel, G Giacca and C Golay (eds), *Economic, Social and Cultural Rights: Current Issues and Challenges* (Oxford University Press, 2014) 286–307; O McIntyre, ‘The UNECE Water Convention and the Human Right to Access to Water: The Protocol on Water and Health’ in A Tanzi *et al.* (eds), *The UNECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes: Its Contribution to International Water Cooperation* (Nijhoff 2015) 345–66; A Tanzi, ‘Reducing the Gap between International Water Law and Human Rights Law: The UNECE Protocol on Water and Health’ (2010) 12 *International Community Law Review* 267. Some books also discuss the Protocol, but not in great detail. See eg Dupuy and Viñuales (n 3) 380–90; J Sohnle, *Le droit international des ressources en eau douce: solidarité contre souveraineté* (La documentation française 2002) 198–200.

³³ Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (25 June 1998) 2161 UNTS 447 (‘Aarhus Convention’).

³⁴ See eg Escazú Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (4 March 2018) (hereafter ‘Escazú Agreement’, not yet in force); *Proposal of a Directive of the European Parliament and of the Council on the quality of water intended for human consumption (recast)*, Brussels 1.2.2018, COM(2017) 753 Final, 2017/0332 (COD) (Drinking Water Directive Recast Proposal) (combining a vertical regulatory approach with a new art 13 on ‘Access to water intended for human consumption’).³⁵ PWH, art 4(1)–(2), read in the light of the principles in art 5.

The first cluster requires States to set targets in numerous areas relating to water management, sanitation and health,³⁶ as well as to monitor them and regularly report on their achievement.³⁷ Although this is a procedural obligation of result, in that States are bound to set targets in all the areas—unless the ‘national or local circumstances make [targets in some areas] irrelevant’ (Article 6(1) *in fine*)—and monitor their achievement, such a system is flexible and admits several implementation approaches (which may and do differ significantly from one country to another, both in content, form, prioritization and time frame). The goal of this initial cluster of obligations is one of harmonization across countries to ensure a minimum level of protection of waterbodies that can meet human needs, but the approach is necessarily one of ‘equivalence’; namely, one whereby country systems may differ as long as they constitute duly diligent efforts to ensure the minimum standard.

The second cluster of obligations concerns the establishment, improvement and maintenance of a system to respond to water and health-related emergencies.³⁸ Such a system entails surveillance, early-warning systems and contingency response plans at all relevant levels (national but also local, as relevant) with respect to health-related emergencies and, again, the requirement is an expression of the broad duty of due diligence in that the conformity of the systems is based on their (duly diligent) ability to achieve their protective objectives. Such emergencies may arise from different causes, including major industrial accidents or other threats, which are governed by other relevant treaties adopted under the aegis of the UNECE. Such is the broader context within which the PWH operates, which includes not only the UNECE Water Convention but goes much further and encompasses the entire set of resource and environmental management treaties established under the aegis of the UNECE.³⁹

The third cluster of obligations also emphasizes this broader normative context. It provides for information development (through awareness-raising, training and research),⁴⁰ access to information,⁴¹ public participation in decision-making processes,⁴² and appropriate access to judicial and administrative review of relevant decisions.⁴³ This cluster restates the general requirements envisioned in another major UNECE instrument, the Aarhus

³⁶ *ibid.*, art 6(2)(a)–(n).

³⁷ *ibid.*, art 6 and 7.

³⁸ *ibid.*, art 8.

³⁹ There are five main agreements forming the backbone of the UNECE approach, namely: Convention on Long-range Transboundary Air Pollution (13 November 1979) 1302 UNTS 217 (with its eight subsequent protocols); the Convention on Environmental Impact Assessment in a Transboundary Context (25 February 1991) 1989 UNTS 310 (with a protocol), the Convention on the Transboundary Effects of Industrial Accidents (17 March 1992) 2105 UNTS 457 (with its joint protocol with the Water Convention); the Water Convention (with two joint protocols, including the PWC), and the Aarhus Convention (expanded by a protocol). On this cluster of agreements see W Schrage, K Bull and A Karadjova, ‘Environmental Legal Instruments in the UNECE Region’ (2007) 18 *YbIntEnvL* 3.

⁴⁰ PWH, art 9.

⁴¹ *ibid.*, art 10.

⁴² *ibid.*, arts 5(i), 6(2) and 6(5)(b).

⁴³ *ibid.*, art 5(i).

Convention, thus creating further synergies between the two instruments and highlighting their hybrid nature.

The fourth cluster of obligations focuses on inter-State—horizontal—cooperation.⁴⁴ Significantly, this cluster incorporates the obligations of cooperation on transboundary waters for Parties of the UNECE Water Convention and, on one point, it goes beyond them. Indeed, Article 13, paragraph 1(c), requires State Parties to the PWH to adapt or define the relevant agreements or arrangements in a manner which is consistent with the Protocol, subject to certain conditions.⁴⁵

The PWH relies on a sophisticated institutional structure to further its development and implementation, including a Meeting of the Parties (MOP) every three years, an active Secretariat, and meetings of permanent bodies, such as the Bureau and the Working Group on Water and Health, which are both formed of State representatives, and the Compliance Committee,⁴⁶ which consists of nine independent experts serving in their own individual capacities. The latter can *inter alia* undertake a ‘Consultation Process’ to assist States in the implementation of the Protocol⁴⁷ and it can also hear cases of non-compliance, including communications from the public.⁴⁸

This overview of the PWH provides the essential background for the discussion in the next section regarding the potential of this instrument to provide the three missing links in the architecture of global water governance.

C. Providing the Missing Links

As has been noted in the previous section, the PWH is peculiar in three main ways. First, it contains both a vertical regulatory system addressing pollution regulation and protection of water as an object (akin to domestic water governance) as well as a horizontal system of inter-State cooperation (akin to the international law of watercourses). Secondly, in addition to its inter-State dimension, it also has a very developed human rights dimension, which

⁴⁴ *ibid.*, arts 11–14.

⁴⁵ See *Interpretation of the provisions of the Protocol on Water and Health related to transboundary waters, prepared by the Compliance Committee, with the assistance of the UNECE secretariat*, in November 2016, with editorial changes and clarifications introduced by the Compliance Committee in May 2017.

⁴⁶ The Committee was established pursuant to art 15 of the Protocol. See Decision I/2, ‘Review of Compliance’, ECE/MP.WH/2/Add3, EUR/06/5069385/1/Add.3 (3 July 2007).

⁴⁷ Consultation Process: Terms of Reference, available at <https://www.unece.org/fileadmin/DAM/env/documents/2014/WAT/11Nov_25_CC/ToR_Consultation_Process_amended_10th_meeting_Nov14_final.pdf>. This procedure is currently being used to advise Estonia, Latvia and Lithuania on the implementation of the Protocol. Previously, it was used to advise Albania, Azerbaijan and Bosnia and Herzegovina.

⁴⁸ Decision I/2, ‘Review of Compliance’ paras 11(a) and 16–22. Only one communication has been submitted so far against Portugal, for failure to submit its report during the third reporting cycle in 2016. Portugal subsequently submitted its report. The procedure, which had in the meantime changed course as a Committee-initiated procedure, was discontinued.

addresses both substantive and procedural aspects of access to water and sanitation. This human rights dimension is confirmed by the fact that the public can bring communications before the Compliance Committee in a manner analogous to complaints before human rights bodies. Third, the PWH expressly foresees the need for inter-sectorial integration at the planning and even the institutional levels, and it operates within a wider network of UNECE environmental treaties dealing with air pollution, environmental impact assessment, industrial accidents, water cooperation and public participation. How each of these peculiar features make the PWH not only a useful instrument (for accession) but, more generally, a useful model that could be explored in other contexts will now be considered.

The *first fault-line* identified in the architecture of global water governance is the missing link between the horizontal (cooperative) approach followed by the international law of watercourses and the vertical (regulatory) approach followed in domestic water governance. The discontinuity arises from the fact that the level of domestic protection of waterbodies required by international law is indirect in that it is only when shortcomings in domestic regulation lead to transboundary problems that the horizontal cooperative approach places bounds on domestic regulation. The model of the PWH may operate here as a sort of hinge or juncture which, by its vertical and horizontal nature, is capable of articulating the domestic and international approaches, thereby providing some degree of integration across different types of obligations. A concrete illustration of this hinge function is provided by Article 12 of the PWH which makes the vertical requirements of the first (target setting and monitoring), second (emergency response) and third (participation) clusters an explicit area of the fourth cluster, inter-State horizontal cooperation. Such horizontal cooperation is an extension of the standards set in the vertical clusters of obligations.

The *second fault-line* referred to earlier concerns the insufficient linking between the inter-State law of international watercourses and the human rights to water and sanitation. This is a complex question which requires some fine-grained examination. The international law of watercourses, whether custom or treaty law, is based on the principle of equitable and reasonable utilization.⁴⁹ This principle strikes a balance between the interests of the upstream and the downstream States by recognizing the right of the former to use the watercourse as long as such use is not inequitable and unreasonable, in which case the interests of the downstream State would be affected to a point that its rights are violated. By its very definition, this principle operates in a transboundary context. More specifically, it concerns effects that are felt beyond the State of origin of the harm. The affected State

⁴⁹ See New York Convention, art 5; Water Convention, art 2(2)(b); Berlin Rules, art 12. The ICJ has referred to this principle in the case concerning the *Gabčíkovo-Nagymaros Project (Hungary v Slovakia)*, Judgment, ICJ Reports 1997 at 7, para 78.

can claim that the use of the watercourse has been inequitable and/or unreasonable, which, in the absence of a specific treaty, would depend on a range of criteria (eg factors of a natural character, social and economic needs, existing and potential uses, effects on other watercourse States, etc) codified mostly in Article 6(1) of the 1997 New York Convention.⁵⁰ No criterion prevails over another, with one caveat. Article 10(2) states that ‘in the event of a conflict between uses of an international watercourse, it shall be resolved with reference to articles 5 to 7, *with special regard being given to the requirements of vital human needs*’ (italics added). This caveat recognizes, to some extent, the overriding logic of the right to water. However, and very importantly, it does so in a very limited manner because: (i) it only states that ‘special regard’ will be given to such needs and not that such needs will always prevail; (ii) it neither clarifies whether that priority emerges from certain human rights or what those ‘needs’ are (eg are sanitation needs included?); (iii) more fundamentally, no specific obligations arising from the mild priority given to ‘vital human needs’ are identified. In short, this horizontal structure is utterly insufficient to implement the rights to water and sanitation. Other treaty frameworks, particularly watercourse specific treaties, may go further but, as a general matter, they are all based on a similar horizontal cooperative logic. At the other end of the spectrum, the instruments recognizing the human rights to water and sanitation present two main limitations. First, to the extent that such rights are expressly recognized in the text of a treaty—which is not the case in the main general source⁵¹—they are formulated in terms of rights. The obligations arising from these rights (as for other human rights) are essentially the result of interpretation and conceptual elaboration rather than specifically formulated duties. Secondly, the transboundary dimensions of the rights to water and sanitation—or, in other words, the obligation of a State not to deprive individuals in other States of their rights to water and sanitation—are less assertively stated in the main sources (which use in this context the modal verb ‘should’ rather than ‘shall’).⁵² Thus, whether one looks at the fault-line from the standpoint of international watercourse law or from that of human rights law, neither perspective offers an adequate link.

In this specific context, the PWH, because of what was referred to earlier as its hybrid nature, can provide the missing link. As noted earlier, the Protocol emphasizes from the outset that its objective ‘is to promote at all appropriate

⁵⁰ See also Helsinki Rules, art V(2); Berlin Rules, arts 13(2) and 14.

⁵¹ The rights to water and sanitation are not expressly stated in the International Covenant on Economic, Social and Cultural Rights on which General Comment 15 is based. They are based on an interpretation of the rights to an adequate standard of living (art 11) and to health (art 12), which are expressly stated. This caveat has not been forgotten by States. The most recent UNGA resolution on these rights (Res 70/169, ‘The Human Rights to Safe Drinking Water and Sanitation’ (17 December 2015) UN Doc A/RES/70/169) recognizes them ‘while reaffirming that both rights are components of the right to an adequate standard of living’.

⁵² See General Comment 15, paras 32–36.

levels, nationally as well as in transboundary and international contexts, the protection of human health and well-being, both individual and collective' (Article 1). This objective is further reflected when the Protocol states, in Article 4, the overarching due diligence duty to 'take all appropriate measures for the purpose of ensuring [...] adequate supplies of wholesome drinking water [...] adequate sanitation of a standard which sufficiently protects human health'. Further still, this objective is reflected in the principles guiding the Protocol (equitable access under Article 5(1)⁵³ and the public participation triad under Article 5(i)) and in the specific clusters of obligations (eg Article 6(1)(a)–(b) states the aims of 'access to drinking water for everyone' and 'the provision of sanitation for everyone'). Thus, the vertical regulatory obligations expressly formulated in the Protocol have the specific aim of ensuring the rights to water and sanitation. And because, as discussed with respect to the first fault-line, the vertical clusters are expressly articulated with the inter-State horizontal—cooperation—cluster of obligations, the PWH sets up a joint standard system, shared by State Parties, to implement the rights to water and sanitation. It does so by providing the missing link between the inter-State and human rights aspects of international water law. It extends the inter-State horizontal obligations through a system of vertical regulatory obligations aimed at ensuring the rights to water and sanitation. And it also extends the human rights instruments through a system of horizontal cooperation aimed at setting a common standard across all States Parties.

Finally, the *third fault-line* in the architecture of global water governance concerns the essentially sectorial focus on water law, both domestically and internationally, and the potential need for further integration with the policy responses to other challenges. The approach of the PWH in this regard is resolutely integrative at the level of substantive scope (the nexus between water management and health), management techniques (including planning),⁵⁴ institutional coordination,⁵⁵ and integration within the wider

⁵³ The 'equitable access' dimension of the PWH has been actively developed as a follow-up to the UN General Assembly recognition, starting in 2010, of the rights to water and sanitation. Two noteworthy examples are a compilation of good practices (*No one left behind. Good practices to ensure equitable access to water and sanitation in the Pan-European region*, ECE/MP.WH/6, available at <www.unece.org/index.php?id=29170>) and the development of an 'Equitable Access Score-card' for countries to conduct self-assessments (*The Equitable Access Score-card*, ECE/MP.WH/8, available at: <www.unece.org/index.php?id=34032>).

⁵⁴ PWH, arts 2(10) (defining expansively water management plans), 4(1) (formulating the general due diligence duty of the Protocol as 'within a framework of integrated water-management systems aimed at sustainable use of water resources, ambient water quality which does not endanger human health, and protection of water ecosystems'), 5(j) (formulating the principle that water resources should be managed 'in an integrated manner on the basis of catchment areas') and 6(5)(b) (relating to plans to achieve water targets).

⁵⁵ PWH, arts 5(a) (requiring the establishment of 'national or local arrangements for coordination between their competent authorities') and 9(3)(b) (development of integrated information systems).

body of agreements developed under the aegis of the UNECE.⁵⁶ The Working Group on Water Health (WGWH), an open-ended subsidiary body established by the Meeting of the Parties at its first meeting in January 2007, operates as a science-policy interface on a broad range of issues concerning water and health. By way of illustration, in its meeting in November 2017 the WGWH discussed, among other topics, the role of the PWH in the 2030 Agenda for Sustainable Development and approaches to increase resilience to climate change. Thus, the PWH adopts an approach according to which both the understanding of the problem and the policy response are expected to go beyond a merely or predominantly sectorial focus on water. By doing so, it provides a flexible basis for States to undertake a range of administrative and regulatory reforms, whether 'soft' (eg the creation of informal inter-ministerial dialogues) or more formalized (eg integrated management divisions, plans or even regulations connecting two or more statutes). Each State will operate within its own political and legal constraints, but the PWH offers a basis to promote cross-sectoral intervention.

The potential of the PWH as an instrument to provide the three missing links identified and examined so far is not limited to the Protocol as a legal instrument, but concerns the model embodied by the Protocol more generally. The next section explores different routes through which the potential of this model can be harnessed to promote global water governance integration.

D. Harnessing the Potential of the PWH for Water Governance Integration

Aside from being a specific treaty, the PWH epitomizes a model that could be explored to provide the three missing links discussed in this article. Such a model has significant advantages. First and foremost, it is realistic, cost-effective and flexible, and it does not lack ambition. Of course, it is less ambitious than other possible steps that could be taken to promote water governance integration, including those proposed by the HLPW in its final outcome document. But, perhaps for that reason, it may be a sound initial step and even an ambitious one depending on how this model is harnessed. There are different routes through which to do so.

The first route would involve becoming a Party to the PWH through accession. At present, accession is not open to any State but only to those contemplated in Articles 21 and 22 of the Protocol, in essence States members of the UNECE or of the Regional Committee for Europe of the WHO. Significantly, regional economic organizations composed of States members to the UNECE or WHO-Europe could also accede. That includes the EU, which could find it useful to accede to the PWH for three main reasons. First, the requirements of the PWH could be largely implemented by

⁵⁶ See eg PWH, art 4.7 (expressly referring to the Espoo Convention).

means of existing—and proposed—EU water law, including through the recasting of the Drinking Water Directive. The PWH would offer, in this regard, both a basis for action at the European level and a way of securing a human rights approach to water and sanitation if the currently contentious inclusion of a provision on the right to water in the recast of the Drinking Water Directive proves to be unworkable. Secondly, accession by the EU would assuage the concerns that some EU Member States have aired regarding the link between the PWH and EU instruments relating to water. Within the context of the Consultation Process with three EU Member States, Estonia, Latvia and Lithuania, and at their request, the Protocol Compliance Committee is currently studying this question in order to provide some clarification. Third, accession to the PWH would allow the EU to rely on the Protocol to ensure certain minimum standards of water and health protection in countries of the Pan-European region covered by the UNECE and WHO-Europe which border the territory of the Union but are not members. From this perspective, the PWH offers an instrument to expand the geographical scope of water management harmonization.

The second route also concerns the PWH as such. It would consist of amending the relevant provisions of the Protocol to enable accession by any country, as is the case of the Water Convention, which has become a global water instrument alongside the 1997 New York Convention. Significantly, some other instruments of the UNECE cluster of environmental conventions have also been opened to accession by countries beyond the UNECE. These include the 1991 Espoo Convention on Environmental Impact Assessment,⁵⁷ the Aarhus Convention and its Protocol on Pollutant Release and Transfer Registers (PRTR Protocol).⁵⁸

The third route draws on the PWH model rather than on the Protocol as such. Given its potential to provide certain key missing links in the architecture of global water governance, the PWH model could be used as a framework to structure comprehensive water governance in contexts where reliance on model water laws (which typically neglect the first and third fault-lines) or on the inter-State horizontal—cooperative—approaches (which leave largely unaddressed the three fault-lines) seem insufficient. Such a model could be relied upon in the development, cooperation and foreign policy work of different organizations, including regional organizations such as the EU, the UNECE or other UN Economic Commissions, or of global organizations, such as the Human Rights Council (including by so-called Special Procedures, eg Special Rapporteurs) or the High-Level Political Forum for Sustainable Development.

⁵⁷ Such possibility was introduced following the first amendment to the Convention, adopted in 2001 and entered into force in 2014.

⁵⁸ Protocol on Pollutant Release and Transfer Registers to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, Kiev (21 May 2003) 2626 UNTS 119 (known as the PRTR Protocol or the Kiev Protocol).

The fourth route is related to the third. In much the same way as the UNECE has a solid cluster of environmental conventions, other UN economic commissions could find it useful to adopt regional instruments relying on a tested prior model. Such has been the case in the area of public participation in environmental matters with the adoption in early March 2018 of the Escazú Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean under the aegis of the ECLAC. The need for a more contextualized instrument on public participation had already been voiced at the 2012 Rio Summit on Sustainable Development.⁵⁹ A similar approach could be explored with respect to a regional PWH, which would be responsive to the specific regional needs of the ECLAC or of other regions.

IV. CONCLUDING OBSERVATIONS

The PWH has significant potential as a realistic, cost-effective and flexible model to address three key challenges of water governance integration and a means of advancing the third pillar (managing water) of the HLPW's Agenda.

Summarizing the analysis conducted in this article, there are three main fault-lines in the architecture of global water governance. The first is the missing link between, on the one hand, the vertical and regulatory approach of domestic water law and, on the other hand, the horizontal cooperative approach of international water law. The second is the missing link, within international water law, between the inter-State approach of the law of watercourses and the human rights approach developed in relation to the rights to water and sanitation. The third fault-line is the missing link between the sectorial governance of water both at the domestic and international levels and the governance of other closely related problems.

Against this background, the Protocol on Water and Health offers a realistic model to provide the missing links. Indeed, the Protocol combines in one-single instrument both vertical regulatory clusters of obligations (as domestic water law) and horizontal cooperative ones (as international water law), and it can therefore serve as a hinge or juncture. Moreover, it has a hybrid nature that combines both an inter-State logic with a human rights logic, thus integrating vertical regulatory obligations expressly formulated to promote the rights to water and sanitation with horizontal cooperative obligations that expand such protection to a transboundary context. Furthermore, the Protocol pursues an integrative approach at the levels of its substantive scope (the nexus between water management and health), management techniques (IWRM), institutional coordination, and integration within the wider body of agreements developed under the aegis of the UNECE. Last but not least, the

⁵⁹ 'Declaration on the Application of Principle 10 of the Rio Declaration on Environment and Development' (25 July 2012) UN Doc A/CONF.216/13.

Protocol can be harnessed through at least four routes, namely through accession by a State or a regional organization to the Protocol; by amendment to enable a global scope; as a model framework for development, cooperation and foreign policy; and as a model framework for the adoption of a contextualized instrument in another regional context.

For these reasons, the Protocol on Water and Health can provide, indeed, a realistic strategy for global water governance integration. The relative lack of attention to it in both academic and policy circles is somewhat puzzling. It is possibly due to the Protocol's hybrid nature, which places it at the crossroads of different domains and approaches. Yet, in a governance context where more and more integration is needed, this hybrid nature may become a major asset.