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CONTENTS

Special Issue: The Law of the River toward The Right of the River: A Sustainable Shift?

Guest Editors: Marleen van Rijswick, Cathy Suykens, and Herman Kasper Gilissen

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Editors' introduction

Cathy Suykens, Herman Kasper Gilissen and Marleen van Rijswick

Utrecht Centre for Water, Oceans and Sustainability Law, Utrecht University, Netherlands

Freshwater resources are under increasing pressure. A substantial amount of the environmental flow, i.e., the water the aquatic ecosystem requires in order to thrive, has already been appropriated in rivers around the world (Acreman, 2010; Gerten et al., 2013). The 2030 Water Resources Group (2009) has predicted a 40% gap between freshwater demand and availability. It is expected that climate change will have a substantial impact on the hydrological cycle and freshwater resources. The risk of droughts and flooding in many areas is likely to increase as a result of intensifying precipitation patterns (Bates et al., 2008). The vulnerabilities related to freshwater resources lie in the combination of physical pressures and human development and decisions, such as economic development, increased population and urbanization, (in)sufficient governance (including funding and planning), ageing infrastructure, and so forth (Gain, Giupponi, & Wada, 2016).

Given these increasing pressures, resilient and effective river basin management is paramount and one of the key components of sustainable development (Gerten et al., 2013; Rockström et al., 2009; Steffen et al., 2015; Suykens, 2015; Van Rijswick, Edelenbos, Hellegers, Kok, & Kuks, 2014). The institutional, regulatory, financial and administrative arrangements to manage and govern the river and allocate its use and resources can be referred to as the 'law of the river' (Suykens, 2018).[1] This governance framework aims at providing water security and sustainable use of the river, taking into account hydrological, ecological, economic and social values. But this traditional approach appears inappropriate to protect the ecological and some of the social values, especially for ecologically vulnerable groups and indigenous people (Misiedjan, 2019). In the past few years, a wave of legislative and judicial initiatives around the world have opened up new perspectives on how to better protect rivers, which go well beyond theoretical concoctions and which have caused a whirlwind of debate and excitement. These initiatives have opened up new possibilities in the legal and governance landscape of water management, which we happily explore in this very special special issue: Is there a move from the law of the river to the rights of the river, and is it a sustainable one?

Let us dive right in. In March 2017 New Zealand granted legal rights to the Whanganui River through legislation, and the Uttarakhand High Court in India declared the Ganga, Yamuna and their tributaries living entities (although soon after, the Supreme Court of India stayed this judgement, leaving it currently *sub judice* [Salmi v State of Uttarkhand and others, 2017]). Two months later, the Constitutional Court of Colombia granted legal rights to the Atrato River (n T-622). The commonality in these different legal developments is the consideration that conservation efforts for water resources need

CONTACT Cathy Suykens c.b.r.suykens@uu.nl

to be expanded, for the river itself and often combined with the rights of indigenous people or other environmentally vulnerable groups.

The possibility of granting '(human) rights to a non-human entity' and, specifically, its implications for river basin management have been underexplored in the literature. The challenges associated with granting such rights are multifaceted and touch on several disciplines, in science and in social science and the humanities. The common theme throughout this special issue is that the authors aim to identify 'what the river needs' and whether and how rights-based regimes can help fulfil these needs beyond the possibilities of existing, more traditional river basin management set-ups. All of the articles in this special issue look at legal personhood from the perspective of specific rivers and countries, going beyond theoretical ideas and giving us a unique insight into the different DNAs of river basins and their respective governance landscapes. Approaching the topic from different angles, we obtain a holistic view of what the shift from the 'law of the river' to the 'rights of the river' actually entails.

As passionate advocates for the well-being of rivers, we want to start from the perspective of the river's health: what does a river need to be healthy? Wuijts et al. (2019) have dived deep into the meaning of a 'healthy river' by identifying the ecological requirements for naturally functioning rivers. The authors look at the physical, chemical and biological characteristics of a river and tease out the various direct and indirect stressors that impact the health of a river. They then add a layer to the analysis by linking rivers' needs from an ecological perspective to conditions of governance. They find that the transfer of legal rights to a river could have the added benefit of giving a stronger voice to its needs, although such a transfer does not necessarily resolve important issues in river basin management. For example, legal requirements often are not easily matched with complex biological responses associated with rivers' realities. Furthermore, within a river basin many interests are at stake and have to be combined. Granting legal rights to these rivers would not change this reality.

In fact, several articles in this special issue demonstrate that granting legal rights to rivers would not necessarily, *à priori*, overcome the limitations of existing instruments, but could have added value if the right frameworks are in place.

Two articles in this special issue take a step back and approach the topic of river rights regimes conceptually. Kang (2019) investigates the social conditions that determine whether river rights will be successful, employing the context of hydropower development in the Mekong region. Kang puts forward the six fundamental values of the Grant Wilson Universal Declaration of River Rights: the right to flow; the right to perform essential functions in its ecosystem; the right to be free from pollution; the right to feed and be fed by sustainable aquifers; the right to native biodiversity; and the right to restoration. He argues that the strategy of insisting that such river rights have unlimited moral validity, which does not properly account for the consequences of associated decisions, is unlikely to succeed. The way forward is through procedural legitimacy. The article ends with a brain teaser, which we do not want to withhold from the reader:

> Only if the social environment of systems calls for positive ecological reputation (Thematic dimension), will law and politics show leadership to implement river rights (Social dimension), but when negotiating the specifics, it is the perceived risk of the future where authority is found (Temporal dimension) – and whose guesses about the future validity of river rights are correct, well that is a question of who is in power. .

Wilk, Hegger, Dieperink, Kim, & Driessen (2019) further conceptualize the rights of rivers by zooming in on different categories of substantive and procedural river-related rights, and use the Rhine as an example to guide the reader through their analysis. They analyze the transformational power of granting rights to the Rhine and look at path dependency and conflicting interests: stronger ecological voices conflicting with vested interests in flood protection and navigation. They rightly wonder whether an ecocentric approach can be achieved by granting rights to rivers, as humans will need to interpret what the river might want. This brings us to the next article.

One of the key issues in river rights regimes is custodianship. If a river becomes a legal person, it can in principle sue (to protect its health, for example) and be sued. Therefore, the river needs to be represented by a custodian to defend and enforce its rights. The question of custodianship is explored in depth in the article of Gilissen et al. (2019) through the lens of the Scheldt and Ems multijurisdictional rivers. If legal personality is given to a non-human entity such as a river, as with corporations, a custodian or representative needs to be appointed, which proves to be a significant challenge. Indeed, in the current legal and governance landscape, for example in the European Union, it is quite clear that the concept of governance through hydrological units exists more in theory than in practice (Suykens, 2018; Van Rijswick, Gilissen, & van Kempen, 2010). Although the introduction of river rights regimes could be a valuable next step in river basin management, it would greatly depend on the good will of states that share transboundary rivers to put the river basin level front and centre and equip the custodian with a clear mandate and enforceable responsibilities.

These findings can be tested by looking into legal and governance regimes in countries where river rights regimes have actually been introduced, or will potentially be introduced (or possibly annulled, in the case of India), through (case) law, in particular in New Zealand, the Netherlands, India and Australia.

In this regard, an article that reads almost as a pamphlet against introducing rights-based regimes is the one by Chaturvedi (2019). She gives us insight into the Ganga and Yamuna Rivers. The Uttarakhand High Court delivered a judgement conferring legal rights on these two rivers. In contrast to the articles mentioned above, Chaturvedi does not believe in the added value of river rights regimes. She argues that an adequate regulatory framework for deterring pollution is already in place in India through a combination of existing environmental principles, e.g., the precautionary principle, anti-pollution laws and court orders. The problem lies in deficient implementation and enforcement and a lack of adequate capacity of regulatory authorities. Resources and effort should thus be put into remediating these conditions instead of creating yet another governance regime.

De Vries et al. (2019) looked at the added value of rights-based regimes in overcoming the limitations of private property rights to protect rivers in the Netherlands and New Zealand. Private property rights have their place in nature and specifically conservation, if often to a limited extent, as where a river cannot be privately owned, such rights are not commonly used as instruments of protection. In the Netherlands and New Zealand, (limited) property rights have been used to protect rivers, with the major restrictions being that the water itself cannot be privately owned, and neither can the riverbed. In the Whanganui River in New Zealand, the ownership of the riverbed by the Crown has been

transferred to the river itself. These may no longer be alienated, which could lead to more sustainable nature conservation.

Argyrou and Hummels (2019) have also looked into the Whanganui River, not from the perspective of private property regimes but from the perspective of social entrepreneurship. They applaud the set-up of the Te Awa Tupua Act as the basic framework enabling the river's sustainable economic well-being. But they also point out that Māori social and community entrepreneurship is still underdeveloped. Thus, it is crucial that the principle of prior consent from the Māori is implemented properly: a development should not take place without the consent of its leadership.

Whereas the discourses in New Zealand and India focus on creating rights for rivers, the Yarra River in Australia has been granted a 'voice of the river' through the establishment of a statutory-based independent voice. O'Bryan (2019) demonstrates the distinction between the two legal constructions through a comparative exercise of the relevant legislation, case law and policy in Australia and New Zealand. The Yarra River is now treated as a living and integrated natural entity that should be protected, whereby Indigenous perspectives should be thoroughly reflected. Indeed, Aboriginal values are explicitly acknowledged in applying the protection principles. The Birrarung Council, which is the River's dedicated 'voice', should have two Aboriginal members. That the relevant legislation does not give an independent legal status to the river or legal capacity in the Birrarung Council (e.g., to seek redress in court) does not make the shift in river basin management any less meaningful, O'Bryan argues, especially taking into account the more meaningful role for 'traditional owners'.

Lastly, Lambooy, van de Venis, and Stokkermans, (2019) explore the possibility of granting legal personality and 'self-ownership' to the world's largest interconnected tidal flats and wetland system, the Wadden Sea. A UNESCO World Heritage area, the Wadden Sea is home and foraging ground to large populations of birds, seals and other wildlife, and therefore highly valued for its rich biological diversity. But economic activities and fragmented governance structures pose constant threats to the region. Inspired by the international trend of granting rights and legal personality to rivers and building on concrete developments in Dutch legislation, the article introduces and discusses the concept of 'natureship' (*natuurschap*) as a promising legal construction and governance arrangement to protect the Wadden Sea ecosystem. In this think piece, Lambooy et al. aim to inspire Dutch, German and Danish policy makers and academics worldwide to find new legal arrangements to better protect aquatic ecosystems.

One more contribution to this special issue must be acknowledged. Gabriel Eckstein, Ariella D'Andrea, Virginia Marshall, Erin O'Donnell, Julia Talbot-Jones, Deborah Curran and Katie O'Bryan (2019) have prepared a series of essays in response to the move from the law of the river to the rights of the river. The compilation, which first appeared in the blog of the International Water Law Project (www.internationalwaterlaw.org), offers insightful and often provocative analyses, and serves as a thought-provoking and complementary companion to the longer pieces in this issue.

To conclude, this special issue challenges all of us to think further on the idea of granting rights to rivers and aquatic ecosystems. Of course, this is easily said, but it is difficult to implement, as many aspects have not been elaborated on before. The

multidisciplinary approach gives a unique perspective, and hopefully brings the current discussion a step further.

Note

1. This phrase originally relates to the legal framework of the Colorado River. We use it to refer to the multi-levelled rules and regulations applicable to rivers.

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An ecological perspective on a river's rights: a recipe for more effective water quality governance?

Susanne Wuijts[a,b], Jappe Beekman[a], Bas van der Wal[c], Cathy Suykens[d], Peter P. J. Driessen[b] and Helena F. M. W. Van Rijswick[d]

[a]National Institute for Public Health and the Environment (RIVM), Centre for Sustainability, Environment and Health, Bilthoven, The Netherlands; [b]Copernicus Institute of Sustainable Development, Utrecht University, The Netherlands; [c]Foundation for Applied Water Research (STOWA), Amersfoort, The Netherlands; [d]Utrecht Centre for Water, Oceans and Sustainability Law, Utrecht University, The Netherlands

ABSTRACT

In several countries, the transfer of legal rights to rivers is being discussed as an approach for more effective water resources management. But what could this transfer mean in terms of a healthy river? We address this question by identifying the ecological requirements for naturally functioning rivers and then explore the demands which these requirements impose on society, the current policy responses to these requirements and whether the transfer of rights to the river could facilitate the preservation of healthy freshwater ecosystems.

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Introduction

The ambitious objectives put forward by the United Nations' Sustainable Development Goal (SDG) no. 6 for the preservation and restoration of freshwater ecosystems to be achieved by 2020 and the full implementation of Integrated Water Resources Management at all levels by 2030 set a challenge to countries worldwide. Climate change and socio-economic developments add to this challenge and extend it beyond the timeframe of the SDGs, creating a need for a coherent, integrated approach to ensure healthy ecosystems.

In the literature on freshwater ecosystems, to create a sense of common understanding, the concept of a river's 'health' is frequently used (Grizzetti et al., 2017; Hering et al., 2010) in the assessment of a river's condition. The term 'health' seems to be used in a way that is analogous to 'human health', but leaves room for interpretation as well (Norris & Thoms, 1999). Here, we define an 'ecologically healthy river' as a river in which the conditions of the ecosystem are in such a state that conditions for biodiversity are met, different species can thrive and thus a good ecological status can be achieved.

What physical, chemical and biological characteristics identify a healthy river, and how can these be translated into effective measures that will realize the ambitions set in SDG 6? Vörösmarty, McIntyre, Gessner, Dudgeon, and Prusevich (2010) calculated that

CONTACT Susanne Wuijts susanne.wuijts@rivm.nl

65% of the freshwater systems worldwide are moderately to highly threatened by anthropogenic stressors. Direct stressors include changes in land use (e.g., agriculture), urbanization, industrialization, and water works like dams, reservoirs and channels. Indirect stressors such as economic welfare, political willpower and institutional settings (Woodhouse & Muller, 2017) may influence the capacity of a state to adapt to these threats (Misiedjan, 2017; Vörösmarty et al., 2010).

In addition, the hydrological connectivity of a river basin plays an important role in the impact that these stressors have on the freshwater and riparian ecosystems throughout the basin (Leroy Poff & Zimmermann, 2010; Nadeau & Cable Rains, 2007; Pringle, 2003). The interaction between hydrology and ecology, also referred to as ecohydrology, is an important carrier for realizing healthy freshwater ecosystems (Allan, 2012).

As a result, social-economic, legal, ecological and hydrological disciplines all contribute to the realization of a healthy river. The interactions between these disciplines are important conditions for effective water quality governance (Wuijts, Driessen, & Van Rijswick, 2018). Water quality governance, therefore, involves taking steps to address these links between the use of ecosystems by humans, also referred to as ecosystem services, and the checks and balances required to account for the intrinsic value of ecosystems in societal decision making (Watson & Zakri, 2003). The difficulty of balancing the short-term societal demands on ecosystems (e.g., water abstraction, land use for intensive agriculture, and industry) with the long-term objectives of preserving ecosystems is most apparent in developing countries. Ecosystem degradation tends to most affect the poorest populations worldwide (Misiedjan, 2017; Vörösmarty et al., 2010; Watson & Zakri, 2003).

Legal scholars describe transferring of legal rights to the river as an approach for realizing healthy rivers (Boyd, 2017). These rights can be both procedural and substantive. Procedural rights concern the right of access to information, the right to participate and the right of access to justice. Substantive rights may include the right of a river to be protected from pollution to maintain its good ecological status. In the current legal system, these rights are assigned to natural persons or legal entities, e.g., companies, represented by natural persons (De Vries-Stotijn, Van Ham, & Bastmeijer, 2018).

Recently, legal rights have been transferred to rivers in New Zealand, Colombia and India (under appeal), albeit in different ways and for different reasons, such as the importance of the river as a cultural heritage or the protection of water resources (Suykens et al., 2018). Transferring rights to the river involves considering a number of different issues, e.g., who should act as a custodian, how the river's rights will be balanced with other societal interests such as the 'right to water', what will be the consequences for transboundary rivers and what might be the effects of the transfer on the ecological requirements for a healthy river.

This article addresses the question of what a river needs to be healthy and how the transfer of legal rights could support this, from an *ecological perspective*. For this purpose, the central question is divided into three sub-questions: What does a river need to be healthy from an ecological perspective? How do these needs relate to the conditions for effective water quality governance in both the planning and the implementation phase? And how would the transfer of rights serve the needs of a healthy river from an ecological perspective? Analyzing a river's needs from an ecological perspective first allows the governance conditions necessary for these individual needs to be assessed before any

discussion takes place on how these needs are valued by society and what that means for the realization of these needs. We will address this question in the European context. In Europe, the ecological ambitions for freshwater, transitional waters and coastal waters have been set out in the Water Framework Directive (WFD, 2000/60/EC), aiming to realize 'good ecological and chemical status' for river basins in Europe by 2027. So far, many member states are facing difficulties in improving water quality and realizing the WFD ambitions by 2027 (EC, 2017).

In response to the first research question, we have used an earlier systematic literature review on the effectiveness of water quality governance from an ecological perspective and its interactions with legal and social-economic perspectives (Wuijts et al., 2018) and complemented this by following up references (snowball sampling). To address the second question, we analyze the conditions of governance for each of the ecological requirements and illustrate this by reference to case-study material from the Netherlands on the implementation of the WFD. The impact of the transfer of legal rights on a river's health is examined in the discussion section by reflecting on experiences gained so far in the realization of ecological requirements for healthy rivers.

Analytical framework

As it was our proposition that different river needs could impose different demands on conditions of governance, we developed a framework that offered an opportunity to test this. We combined an analytical framework designed for sustainable water governance (Van Rijswick, Edelenbos, Hellegers, Kok, & Kuks, 2014) with an analytical framework for ecological requirements in flowing waters (Mellor, Verbeek, & Van de Wijngaart, 2017).

The analytical framework for water governance (Van Rijswick et al., 2014) was selected from multiple frameworks on governance (OECD, 2015; Pahl-Wostl, Lebel, Knieper, & Nikitina, 2012; Van Rijswick et al., 2014) for its capacity to explicitly address the implementation phase. This framework is designed to identify strengths and weaknesses in water governance approaches that need to be addressed in order to deal with water issues effectively. The 10 building blocks are interdependent and evolve over time. This offers an opportunity to assess the adaptive capacity of a governance approach in order to improve water quality in time. Each of the building blocks contains several questions to be answered to assess the governance approach for that element.

Analytical frameworks for ecosystem health in rivers focus on the integrity of the system as a whole. Common elements are related to chemical water quality and hydromorphology (Grizzetti et al., 2017; Mellor et al., 2017; Skoulikidis et al., 2017; Watson & Zakri, 2003). Differences can be found in the focal points chosen within these categories in the different frameworks. The focal points used can be explained by reference to the specific circumstances in the area of study; the difference between climate zones, for instance, upstream or downstream waters, morphological dynamics, perennial or non-perennial (intermittent) waters, specific drivers of pollution and specific vulnerable species.

In this study, the focus of the legal and institutional setting is the European context. As the WFD is strongly procedural, its mode of implementation in national law and policy programmes has a strong influence on its results as well (Giakoumis & Voulvoulis, 2018; Keessen, Van Kempen, Van Rijswick, Robbe, & Backes, 2010). For

this reason, we focused on the Netherlands and selected an analytical framework for the ecological requirements tailor-made for Dutch running waters (Mellor et al., 2017). The focus on the Dutch institutional context implies that for the use of the results in other countries, the institutional context in those countries must be taken into account as well. Using the resulting framework (Figure 1), we analyzed how conditions for effective water quality governance relate to a river's needs and what experience has been gained so far with the implementation of the WFD.

Ecological requirements for a healthy river

Norris and Thoms (1999) describe the following physical indicators of a river system's condition: sediment composition; soil and sediment erosion; stream flow; stream channel morphology; stream sediment storage and load; surface water quality; and

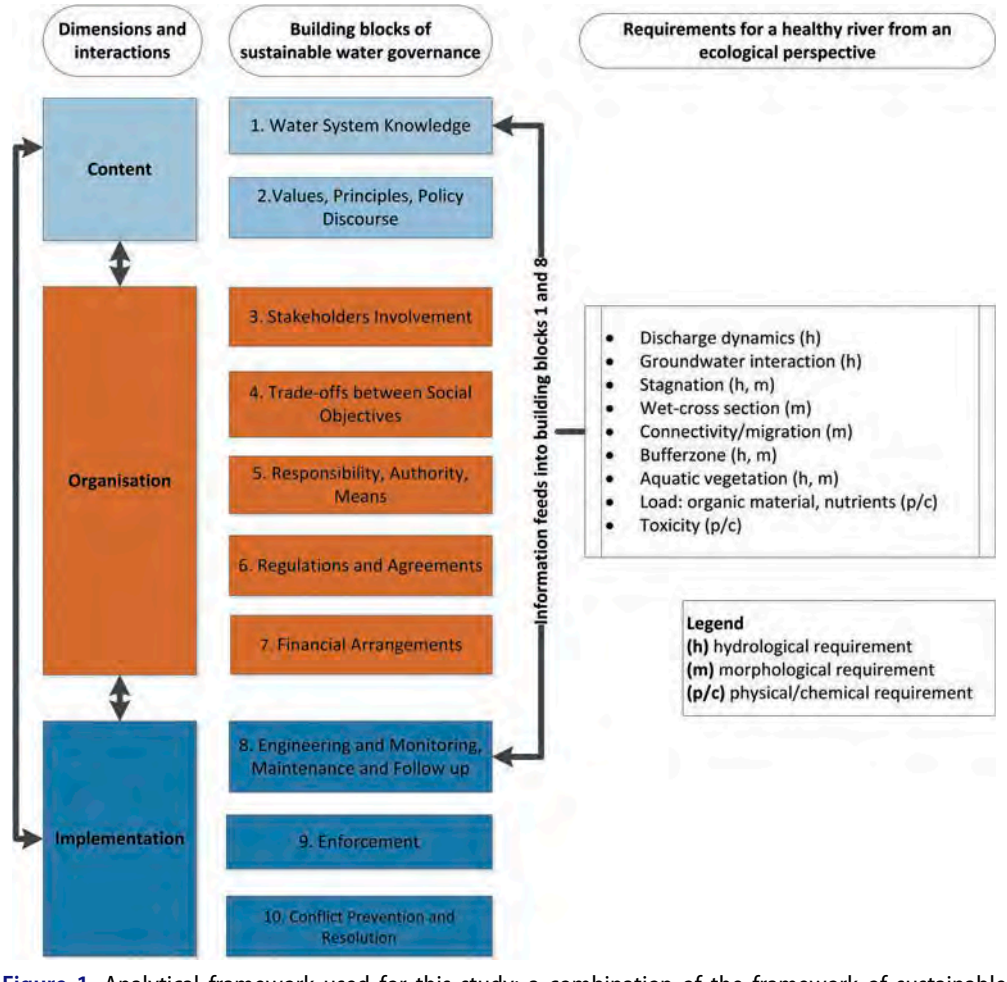

Figure 1. Analytical framework used for this study: a combination of the framework of sustainable water governance (Van Rijswick et al., 2014) and the ecological requirements for a healthy river (Mellor et al., 2017).

floodplains/wetlands structure and hydrology. Grizzetti et al. (2017) identified indicators of the pressures that might affect the river system's condition: nutrient loads; chemical pollution; water demand; alteration of natural low-flow regimes; density of infrastructure in floodplains; natural areas in floodplains; artificial and agricultural land cover in floodplains; and artificial and agricultural land cover in the drained area.

Hydrological requirements

Leroy Poff and Zimmermann (2010) found impaired ecological status (of both water and riparian land) in response to various types of flow alterations or discharge dynamics in 92% of the 165 studies they assessed. The flow components studied included magnitude, frequency, duration, timing and rate of change. A more recent European study on WFD progress provided similar results although analyzed on a much larger and aggregated scale (Grizzetti et al., 2017). These flow components can result from human alterations to the water system but may have a natural cause as well (e.g., periods of drought). Reported responses include loss of sensitive species, reduced diversity, altered assemblages and dominant taxa, reduced abundance, failure of seedling establishment and an increase in non-native species.

Flow alterations can also affect hydrologic connectivity within river basins, including groundwater interaction. Pringle (2003) describes the range of definitions used for this term in different contexts and disciplines. Here, we define hydrological connectivity as the extent to which a river basin landscape impedes or facilitates movement of organisms among resource patches, along the dimensions of time and space. The dimensions of space include longitudinal interaction (upstream to downstream river and vice versa), lateral interaction with the riparian zones (buffer zones and floodplains) and vertical interaction with groundwater (leakage and seepage). Changes in connectivity caused by dams and other waterworks affect the migration of organisms like fish (e.g., salmon) and shellfish, with cascading ecosystem effects. The dimension of time is especially relevant for intermittent streams with periodically dry riverbeds, e.g., on the balance of nutrients in downstream waters, but also for waters where artificial recharge takes place during drought. Hydrological connectivity sets a challenge to water quality policy, as actions may have consequences in other areas and jurisdictions of the river basin (Pringle, 2003).

Morphological requirements

To facilitate land use functions like agriculture and urbanization and water functions like shipping and energy supply, morphological modifications to the natural dynamics of the waterbody by dams, weirs and channelization have taken place in many river basins (Braioni, Braioni, Locascio, & Salmoiraghi, 2017; Hering et al., 2010). Changes in morphology can affect the passage of fish such as salmon, cause excessive growth of macrophytes by changing growing conditions, degrade reproduction conditions required by fish and invertebrates, and cause excessive growth of phytoplankton because of the accumulation of organic material and nutrients.

Physical-chemical requirements

Demographic and economic growth since the 1950s has resulted in a large-scale conversion of natural zones to agricultural, industrial and urban areas (Vörösmarty et al., 2010). Nutrient runoff and point-source emissions from riparian agricultural and urban areas, emissions of toxic substances (Hagemann et al., 2014; Plant, Walker, Rayburg, Gothe, & Leung, 2012), but also the extensive use of natural resources, like overfishing and over-abstraction, all affect chemical water quality and the freshwater ecosystem as a consequence (Hering et al., 2010; Jesenska, Nemethova, & Blaha, 2013). Brack et al. (2015) report that the 'universe of chemicals' potentially present in rivers imposes a challenge that cannot be resolved by a strategy targeted at one single chemical. The toxicological effects on the ecosystem should be included in the assessment of risks and the choice of solutions (Munthe et al., 2017).

Conditions of governance for a river's needs

This section describes the analysis of the river's requirements or needs, and the governance conditions required, applied to the characteristics of Dutch rivers, their institutional settings and legal framework. The results of this analysis are shown in Tables 1 and 2. Box 1 provides some background information to support the description of the results.

Water system knowledge for system diagnosis

With the WFD (2000/60/EC), a new and systematic approach for assessing the ecological status of rivers and other waters was introduced. Member states had to designate waterbodies and assess their status using data on biology, hydromorphology, chemistry and the physical-chemical elements supporting the biological elements (Figure 1). So far most member states have had difficulty realizing the ecological ambitions of the WFD (Grizzetti et al., 2017). The biological response to restoration measures in rivers is complex, with many unknowns, and changes could continue to occur for some time (Hering et al., 2010).

Furthermore, different hydrological scales need to be considered for different river's needs. For some, the level of the river (sub)basin is relevant (Figure 2), e.g., discharge dynamics, groundwater interaction, connectivity, load and toxicity. For others, the scale of a waterbody suffices, e.g., wet cross-section, buffer zone, aquatic vegetation and stagnation (Mellor et al., 2017). A consequence of these differences in hydrological scale is that the extent and the influence of other functions that may impact the river's needs may be very different, as well as the window of opportunity available to act on these needs.

Finally, there is a lack of comparable data at national and EU levels on both ecological status and the effect of measures taken, which hampers the formulation of effective measures.

Over the first six-year planning period of the WFD (2009–2015), water authorities in the Netherlands made a huge effort to identify and characterize waterbodies. This exercise resulted in a large number of research questions having to be addressed concerning data collection from specific waterbodies and their issues, and capacity building, e.g., on the effectiveness of measures (Van Gaalen et al., 2015). As a result

Table 1. River's needs from an ecological perspective, anchoring of those needs in the WFD, other functions with a potential impact on river's needs and actors that could influence this impact in the Netherlands.

River's needs from an ecological perspective	Contribution of needs to the freshwater ecosystem (healthy river)	Anchoring of river's needs in WFD (2000/60/EC)	Other functions in waterbody with a potential impact on river's needs	Actors that could influence this impact (Authorities in *italic*)
 Discharge dynamics	• Discharge dynamics and sediment transport as dominant processes for ecological state of a water body	Aim WFD Article 1 sub c,e	• Shipping • Energy supply • Drinking water • Irrigation for agriculture • Drainage for agriculture or other land use • Industry	• *Regional water authority* • *Upstream water authorities* • *National and riparian authorities* • Federation of skippers (Schuttevaer) • Federation of agriculture (LTO)
 Groundwater interaction	• Soil type and groundwater-management add to run off and discharge dynamics • Water temperature balance	Ecological status Articles 4, 11, 17 Annex 5.2.1 and GWD	• Land use / drainage for agriculture and other usages (e.g. housing) • Drinking water • Industry	• *Regional water authority* • *Province* • *Municipalities* • Regional farmers and agricultural contractors
 Stagnation	• Accumulation of organic matter • Excessive growth of phytoplankton or aquatic vegetation	Ecological status (morphology) Article 4 Annex 5.1	• Shipping • Fishing • Flood management	• *Regional water authority* • Federation of skippers (Schuttevaer) • Dutch Fishing Confederation
 Wet cross-section	• Dynamics of sedimentation, morphology and discharge	Ecological status (morphology) Article 4 Annex 5.1	• Shipping • Fishing • Flood management	• *Regional water authority* • Federation of skippers (Schuttevaer) • Dutch Fishing Confederation
 Connectivity	• Ability of sediment, organic matter and organisms to move in waterbody	Ecological status (morphology) Article 4 Annex 5.1	• Shipping • Energy supply	• *Regional water authority* • Federation of skippers (Schuttevaer) • Federation of agriculture (LTO)

(*Continued*)

Table 1. (Continued).

River's needs from an ecological perspective	Contribution of needs to the freshwater ecosystem (healthy river)	Anchoring of river's needs in WFD (2000/60/EC)	Other functions in waterbody with a potential impact on river's needs	Actors that could influence this impact (Authorities in *italic*)
 Bufferzone	• Lateral connectivity: Connection water, the bank and floodplain • Influences light and temperature conditions • Reproduction of fish and macroinvertebrates	Ecological status (morphology) Article 4 Annex 5.1	• Agriculture • Shipping • Fishing • Flood management	• *Regional water authority* • *Province* • Federation of agriculture (LTO) • Federation of skippers (Schuttevaer) • Dutch Fishing Confederation
 Aquatic vegetation	• Macrophytes regulate water system dynamics • Form a substrate for other organisms	Ecological status (morphology) Article 4 Annex 5.1	• Agriculture • Shipping • Fishing	• *Regional water authority* • Federation of agriculture (LTO) • Federation of skippers (Schuttevaer) • Dutch Fishing Confederation
 Load (organic, nutrients, salt)	• Eutrophication leads to inbalanced oxygen concentrations • Oxygen depletion due degradation of organic matter • Algae blooms, excessive growth of aquatic vegetation, fish mortality	Ecological status Articles 4, 10, 11 Annex 5.1 Other EU directives: • Nitrate (91/676/EEC) • Urban waste water (91/271/EEC and 98/15/EC)	• Agriculture • Human waste water effluent emission, run-off and overflows • Industrial waste water effluent emission	• *EU/ National authority* • *Regional water authority* • *Provinces* • *Municipalities* • Federation of agriculture (LTO) • Regional farmers and agricultural contractors • Industries
 Toxicity	• Toxic pressures on ecosystem by a mixture of chemicals due to multiple activities	Chemical status Articles 4, 10, 16 Annex 5.1.4 Other directives, e.g.: • REACH (1907/2006/EC) • Pharmaceuticals (2001/83/EC) • Biocides (528/2012/EC) • Pesticides (1107/2009/EC)	• Agriculture • Human waste water effluent emission and overflows • Industrial waste water effluent emission	• *Regional water authority* • *Upstream (water) authorities* • *National and riparian authorities* • *Provinces* • *Municipalities* • Industries • Agriculture

Table 2. River's needs from an ecological perspective, administrative instruments, policy interventions and physical interventions (examples) to address these needs in the Netherlands.

River's needs from an ecological perspective	Administrative instruments in the Netherlands to protect river's needs*	Policy interventions	Physical interventions in the water system (examples)
 Discharge dynamics	• River basin agreements on water distribution • National/regional water policy plans • Assign and protect nature preservation areas	• Integrated decision making, short term usages versus long term benefits for river's and human health • Subsidies • Trade-offs in river basin • Upstream water retention	• Increase upstream storage capacity and slow release of water
 Groundwater interaction	• Licensing of abstractions • Spatial planning instruments	• Stakeholder involvement • Information and advice to actors • Pricing/ subsidies	• Retention of surface run-off in agricultural and built areas, stimulate natural infiltration, decrease drainage
 Stagnation	• Regional water plans • Project-related decision making or licensing	• Trade-offs to other regional functions: agriculture, shipping, fishing	• Remove weirs
 Wet cross-section	• Regional water plans • Project-related decision making or licensing	• Trade-offs to other regional riparian functions: agriculture, shipping, fishing	• Remove artificial banks and give room to flooding processes
 Connectivity	• Regional water plans • Project-related decision making or licensing	• Trade-offs to other regional riparian functions: agriculture shipping, fishing, energy supply, flood management	• Remove weirs • By-passes • Fish passages

(*Continued*)

Table 2. (Continued).

River's needs from an ecological perspective	Administrative instruments in the Netherlands to protect river's needs*	Policy interventions	Physical interventions in the water system (examples)
 Bufferzone	• Regional water plans • Project-related decision making or licensing	• Trade-offs to other regional riparian functions: agriculture, spatial planning	• Physical restoration measures to create or restore (parts of) a bufferzone • Plant trees
 Aquatic vegetation	• Regional water plans • Project-related decision making or licensing	• Trade-offs to other regional riparian functions: shipping, fishing	• Nature based river banks • Reduce mowing
 Load (organic, nutrients, salt)	• National general regulations on use of manure (e.g. buffer zones with restricted use of manure) • Provincial site specific conditions • Additional requirements by water authorities or local municipalities • Enforcement	• Voluntary instruments (win/win) • Financial incentives/grants • Sustainable arrangements for agriculture (CAP) • Information and advice to actors • Capacity building for enforcement	• Reduce emissions agriculture • Upgrade waste water treatment plants, including stormwater overflow • Reduce industrial waste water emission
 Toxicity	• EU directives: REACH, Pesticides and Biocides, WFD, Industrial Emissions • National general regulations on use of pesticides etcetera • Provincial site specific conditions • Additional requirements by water authorities or local municipalities • Licensing and enforcement	• Voluntary instruments, create win/win situations • Financial incentives/grants • Sustainable arrangements for agriculture (CAP) • Information and advice to actors on use of e.g. pesticides • Capacity building for enforcement	• Upgrade municipal and industrial waste water treatment plants • Reduce emissions of pesticides by drift prevention, timings of spraying, good housekeeping etcetera.

Note: *This table focuses on administrative instruments. Private agreements are being used as well in some regions.

Box 1. General characteristics of Dutch rivers, institutional setting and legal framework.

The Netherlands can be characterized as a delta area with small to negligible height differences in the landscape, partly below sea level and with a sandy underground with intermediate layers of clay and peat, situated in a moderate climate zone (IenM, 2015). The Netherlands is one of the most densely populated countries in Europe, with a high degree of industrialization and agriculture. Traditionally, water management has had a strong focus on ensuring safety from flooding for its citizens and economic interests (OECD, 2014).

The Netherlands encompass the deltas of four international river basins, the Meuse, Scheldt, Rhine and Ems. The country is governed at three administrative levels: national, provincial and local/regional. A national water authority is responsible for the management of the main rivers, lakes and coastal waters, and 21 regional water authorities for the regional waters (Water Act). Regional water authorities are delineated by hydrological borders. They operate at the same institutional level as municipalities, with their own authority and their own means regarding water management, enforcement and levying, as far as this is not covered by higher authorities. The 12 provinces and 380 municipalities have responsibility for spatial planning and environmental policy.

Relevant national legislation and policy are developed by the Ministry of Infrastructure and Water Management (e.g., Water Act, Environmental Act) and the Ministry of Agriculture, Nature and Food Quality (Fertilizer Act). Environmental objectives and standards, as well as agricultural policies, are set by the national authority. Other, regional objectives and standards, e.g., on non-natural waters, can be set by provinces, based on advice from the regional water authority.

The river-basin approach introduced by the WFD did not align with the existing institutional settings. To facilitate its implementation, a working approach was introduced with bottom-up development of plans and top-down instructions from the Ministry before adaptation of the plans (Van der Heijden et al., 2014).

of this capacity building, which can be recognized in the European arena as well (Hering et al., 2010; Skoulikidis et al., 2017), the recharacterization of 2015 resulted in new yardsticks being constructed for use in biological assessment and extensive fact sheets being completed for each of the Dutch water bodies, but, as yet, limited attention has been given to measures and their effectiveness in achieving WFD objectives.

Values, principles, policy discourse

In general, trends like decentralization, deregulation, decreasing government involvement and the demand for a strict division of responsibilities and accountability have been dominant in environmental policy development over the last few decades in the Netherlands (Driessen & Van Rijswick, 2011). These developments have created a need for bridging mechanisms to be put in place between related responsibilities, e.g., for water quality and agriculture.

The implementation of the WFD in the Netherlands has led to an intense political debate between environmental and agricultural values (Behagel and Arts, 2014), which culminated in an implementation policy that would not introduce any additional costs for the agricultural sector (Parliamentary Papers 2002, 27 625 Water Policy, Amendment Van der Vlies No. 92). This discourse foregrounded the political dynamics of the WFD implementation and its 'pragmatic' implementation approach, for instance by using existing plans for brook recovery as part of WFD plans, but also in the identification of waterbodies and the use of exemptions provided by the WFD.

Compared to other countries, the Netherlands has identified a large number of the water bodies as heavily modified (42%) or artificial (53%). This means that water authorities can set biological and physical-chemical objectives that are feasible for the respective waterbody. The biological objectives, for example, are usually lower than the

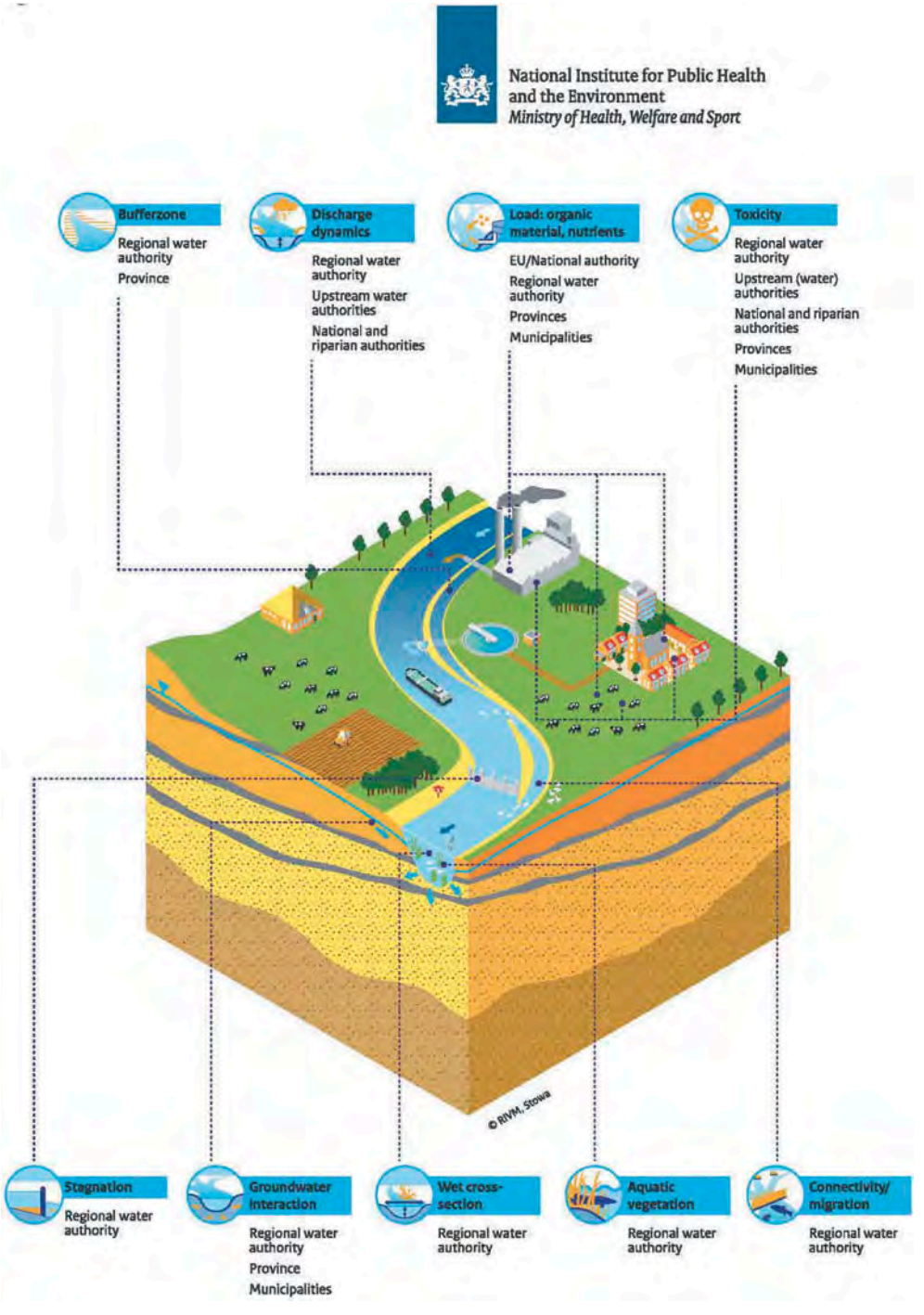

Figure 2. A river's needs and the authorities involved with those needs in the Netherlands.

objectives for natural waters. The long history of reconstructing rivers and streams to protect the Netherlands from flooding, and the facilitation of intensive agriculture, can be regarded as reasons for this (Bourblanc, Crabbé, Liefferink, & Wiering, 2012). 250

Recently, a shift in the policy debate on water quality, albeit in its early stages, can be identified. The Dutch Delta Approach on Water Quality (IenM, 2016) was set up by a large forum of authorities and other actors involved to step up the WFD implementation process in order to realize its objectives. The approach aims to support the third planning cycle of the WFD (2021–2027). This approach could have a positive impact, especially on the realization of a river's needs regarding toxicity and load.

Stakeholder involvement

Hydrological scales need to be considered when identifying stakeholders and actors who could influence the impacts on a river's needs (Figure 2). For instance, the realization of a river's needs on the scale of a waterbody, like the presence of aquatic vegetation or a buffer zone, may require the involvement of local actors like farmers, citizens and fishermen, as well as local nature conservation groups. The realization of a river's needs on the scale of a river (sub)basin, e.g., to reduce the level of nutrients or chemical pollution, involves multiple institutional levels and stakeholder groups who can represent their interests at these different levels (Newig & Fritsch, 2009).

So far, the realization of rivers' needs in the Netherlands has focussed on measures that can be taken on a regional or local scale and much less on measures on a national or international scale (Van Gaalen et al., 2015). Local stakeholder groups, in a process initiated by regional water authorities, have been organized in various phases of the design process of the measures. However, to realize the WFD objectives, an extra incentive is necessary which encompasses rivers' needs on a basin scale as well, like toxicity, load and hydrological needs (Van Gaalen et al., 2015).

Trade-offs between social objectives

For all of a river's needs, other interests are at stake, but the extent and complexity of these needs may differ (Figure 2). For instance, the river's needs related to aquatic vegetation, stagnation or buffer zones have a smaller impact on other interests than the river's needs related to discharge dynamics, load and toxicity. For these latter, it is not only the number of different interests that increases but also the scale of these interests, which adds to the complexity of trade-offs with other objectives.

So far, most of the WFD measures that have been carried out could be realized by the regional water authorities themselves. For specific projects, stakeholder groups have been organized to balance other interests, for instance, in the design of nature-friendly riverbanks (serving the river's needs regarding aquatic vegetation and stagnation). However, to fulfil the river's needs in regard to discharge dynamics, load and toxicity, priority setting needs to take place between short-term economic interests and long-term ecosystem preservation.

The pragmatic implementation approach which was taken resulted in a situation where over half of the waterbodies in the Netherlands currently do not meet nutrient objectives (nitrate and phosphate). Agriculture is the major contributor to these nutrient emissions and has shown little decline since WFD implementation, especially compared to other contributors and to human and industrial effluent (Van Gaalen et al., 2015).

Responsibility, authority, means

The interaction between institutional settings (Box 1) and the different hydrological scales creates a complex framework of responsibilities in water quality management (Figure 2). Primarily, water authorities are responsible for realizing WFD objectives within their own jurisdictions, with the Ministry of Infrastructure and Water Management having overall national responsibility. For several river's needs, however, an incentive has to come from other policy fields as well if the WFD objectives are to be realized. Regional water authorities have an important role in the agenda-setting of the WFD ambitions and its practical realities. Discussions and trade-offs on policy ambitions, however, predominantly take place at the national and European levels, which underlines the importance of the two-way interaction with the national authority.

Regulations and agreements

From an ecological perspective, the ecological objectives set by the WFD and its river basin approach can be regarded as important milestones in European water quality policy. Respecting the specific circumstances, the WFD has set out mainly procedural requirements for realizing its objectives, including requirements for public involvement. The river's needs listed in Figure 1 can be recognized in the WFD ecological assessment as well (listed in 2000/60/EC, Annex II), and they are all covered by the scope of the directive and its provisions. The procedural approach, however, leaves a great deal of discretion for the member states to exercise when deciding on the mode of implementation and its effectiveness as a result (Bourblanc et al., 2012; Keessen et al., 2010). Other directives regulating specific sources of pollution, such as the Nitrate Directive (91/676/EC) on agricultural sources, do not necessarily support the realization of WFD objectives (Keessen et al., 2011; Platjouw, 2015). This inconsistency can be recognized at the national level as well.

For instance, the classification of waterbodies as artificial or heavily modified in the Netherlands implies that the specific ecological objectives are being set at a provincial level, for instance, at the level of nutrients. The application rules for manure are set at the national level and related to a human-health based standard of nitrate. This standard, however, is more stringent than the ecologically based objective for nitrate. Freriks, Keessen, Korsse, Van Rijswick, and Bastmeijer (2016) concluded that existing general rules on the use of manure and pesticides are not comprehensive enough to support WFD ambitions. To fill this gap, provinces and regional water authorities can assign specific application rules to specific vulnerable zones. Because of the high coverage of agriculture in the Dutch landscape, this option seems unfeasible and is rarely used in practice.

Financial arrangements

Some 90% of water quality management in the Netherlands is financed from regional levies and consumer payments, and 10% by the national government (OECD, 2014). The guiding financing principles are 'user pays', 'polluter pays' and

'interest, pay, say', i.e. if you have an interest, you should pay and then you have a say. If there are diffuse sources of pollution and it is unclear how this affects a fair division of the financial burden of water quality management for society and of the public funds for the provision of private goods (OECD, 2014), then the 'polluter pays' principle is only partially implemented in the financial arrangements. Specific taxes are levied in response to point sources like industrial spills, based on their water quality impact. Subsidies, European and national, are often used to develop innovative solutions and best practices to improve water quality and thus serve a river's needs related to toxicity and load.

For agricultural initiatives, for instance, this is covered by the Common Agricultural Practice (CAP) on a European level and at national level by the Delta Plan Agricultural Water Management. This initiative from the Federation of Agriculture (LTO) and the Ministry of Infrastructure and Water Management aims to help and support farmers and increase cooperation with water authorities to improve water quality. Critical in this process is the transition towards implementation when financial support ceases, the degree of participation of farmers to be effective in terms of water quality, and the continuity of their commitment to these practices, since their primary interest is farming.

Engineering and monitoring, maintenance and follow-up

For the first planning cycle of the WFD, water authorities identified that the main ecological improvement of Dutch waters was to be expected from restoration measures like nature-friendly river banks, remeandering and fish traps, and to a lesser extent the reduction of nutrients by optimizing wastewater treatment plants. These were all measures within the jurisdiction of water authorities themselves.

However, a lack of data was also identified in the Netherlands, which made it hard to identify the ecological effects of measures taken (Ligtvoet, Beugelink, Brink, Franken, & Kragt, 2008). Recent studies point to the need for an extra incentive on water quality improvement (Van Gaalen et al., 2015), regarding both capacity building for the effectiveness of measures, and their effects on the ecosystem (IenM, 2016).

Enforcement

In general, enforcement can take place both *ex ante* (projection of results) and *ex post* (compliance monitoring and reporting) (Suykens, 2018). Both serve the purpose of creating a common understanding of how each part of the plans (might) contribute(s) to the realization of the objectives and whether any adaptation is necessary (Allan, 2012). The importance of enforcement varies for the different needs of the river. For the needs related to groundwater interaction, toxicity and load, enforcement can play a valuable role in ensuring the use of best practices for specific activities. For this purpose, knowledge of the specific contribution of different pressures to water quality in the river is indispensable. In the Netherlands, water authorities have identified this as a knowledge gap (IenM, 2016) and initiated several projects to fill it. The current fact sheets used for reporting on status, progress and planned measures on the scale of

a waterbody do not explain the expected contribution of planned measures to water quality improvement and how this will be monitored and managed.

Conflict prevention and resolution

The presence of multiple activities in a river basin that may affect water quality is of itself a potential source of conflicts over objectives, responsibilities, agreements, etc. (Van Rijswick et al., 2014). The importance of principles regarding such shared water resources was demonstrated by Suykens (2018) in a comparative case study of the Scheldt River basin (Netherlands, Belgium and France) and the Delaware River basin (USA). Depending on the river's need, the impact of other activities, such as flood protection, agriculture, urbanization and industry, differs and thus the potential trigger of conflict differs. So far, the main focus in WFD implementation in the Netherlands has been on measures available within the jurisdiction of water authorities themselves. The involvement of other actors, upstream and on other institutional levels and policy domains, necessary to address the river's toxicity and load appears to be more complex, resulting in vagueness about objectives, responsibilities and necessary measures. In the Netherlands, regional water authorities have no opportunity to use legal procedures against other authorities with competences in both water management or other policy domains, such as agriculture, land use planning, infrastructure and traffic, or environment to put this debate to the test, and instead have to rely on the civil and administrative management processes ensuing from the WFD. But the role of other policy fields in these processes is limited.

Discussion: potential impact of the transfer of legal rights on a river's health

In this section, we discuss how the transfer of legal rights to the river could affect the realization of ecological objectives based on a systematic analysis of a river's needs and the conditions of governance required to meet those needs. From the literature, three groups of needs can be identified: hydrological, morphological and physical-chemical. We subdivided these groups into nine different needs for our study in the context of Europe and the Netherlands, but they can be recognized in other regions as well (Grizzetti et al., 2017; Norris & Thoms, 1999). The conditions of governance differ for each need and strongly depend on the characteristics of the freshwater system, e.g., when determining the relevant scale to consider reducing nutrient and pesticide loads. The issue of scale, therefore, directly affects the extent of the societal impact of the measures, e.g., with respect to restrictions on agriculture or emissions, and the complexity in specifying and implementing these measures.

The transfer of legal rights to a river could give a more explicit and stronger voice to its needs. Currently, at the European level, the WFD, with its river basin approach, offers an all-inclusive overarching framework to address a river's needs. However, the mode of implementation created by the social-economic contexts and national institutional settings have limited the use of its full potential, such as the river basin approach and the multi-sectoral approach for the realization of the WFD objectives (Giakoumis & Voulvoulis, 2018). The transfer of rights does not, however, automatically ensure its

proper ranking in priority setting when it comes to balancing a river's needs with other societal interests like flood protection, agriculture and shipping, but requires political willpower and legislative support.

In the Netherlands, for instance, priority setting on water quality objectives can be found in the procedures for licensing point-source emissions. For other functions that affect water quality, e.g., agriculture and shipping, priority setting is not included in the decision-making process and supporting legislation. This is remarkable as prioritization during floods and droughts has been common practice for centuries in the Netherlands. This prioritization policy could be used as a model for prioritization in water quality management. During droughts, safety comes first (dyke stability) in this policy, followed by nature vulnerable to irreversible damage, drinking water and energy supply, small-scale high-value use (capital-intensive crops, process water) and then other social-economic interests (IenM, 2015).

Second, the complex and often delayed biological response also hampers the formulation of legal requirements. Howarth (2018) describes, from a legal perspective, based on UK experiences, how difficult it is to impose flow as a legal requirement if the effect on the ecological objectives is ambiguous and cannot be monitored properly. A similar example was described in the US in regard to the Clean Water Act (Nadeau & Cable Rains, 2007). The transfer of legal rights to the river in this instance would not necessarily resolve the issue.

Third, the issue of scale, which concerns physical, institutional and temporal aspects, is important to consider when deciding whether to transfer legal rights to rivers. A river's needs encompass different scales, from the regional or local to the scale of a (transboundary) river basin, as well as different institutional levels (local, regional/provincial, national, European), and are temporal in relation to the effects of measures taken and the timeframe of the WFD. The importance of the river basin as the unit of governance has been described by many authors (Metz & Ingold, 2014; Pahl-Wostl et al., 2012; Suykens, 2018). Other policy domains, such as agriculture and economic development, play an important indirect role in water quality management as well, but their institutional setting is often not aligned with the river basin scales. However, there is no 'one size fits all' regarding a river's needs: some, such as wet cross-section, buffer zone, aquatic vegetation and stagnation, are better served on a regional scale.

The custodian who expresses the 'voice of the river' must be capable of acting effectively at all these different scales and levels if measures regarding a river's needs are to be realized. Currently, enforcement is a major barrier to the effectiveness of measures taken at the different levels of the river basin, be it provincial, regional, national or international. The commission active at the international river basin level in the EU merely has an advisory role. Moreover, the ability to act effectively implies that decisions are being properly enforced. In the case of the transfer of legal rights to the river, it is important to consider whether decisions about a river's needs will be made by the custodian, based on data submitted by the different competent authorities, or whether the custodian would have an advisory role in this regard.

Although these reflections have been confined to the Dutch context, it is anticipated that similar questions about the transfer of rights to the river will be raised in other countries as well, especially in countries with a high degree of decentralization.

Conclusions

In this study, we have analyzed the conditions of governance for healthy rivers to address the question as to whether a transfer of legal rights to the river could support the realization of WFD and SDG 6 ambitions, from an *ecological perspective*. To date, many member states struggle with these ambitions. With the analytical framework developed in this study, a synthesis of a governance and an ecological framework, we could link conditions of governance to individual river needs. This is vital as our results show that different river needs put different demands on the governance conditions. These conditions are related to scale, the actors who need to be involved and the coherence and consistency of the legal and policy frameworks in place. Therefore, the system assessment of a river's needs and analysis of the areas requiring improvement are necessary if the appropriate conditions of governance are to be identified.

Furthermore, a river's needs often have to be balanced with societal interests like flood protection, agriculture, urban and industrial emissions, fishing and shipping. To increase effectiveness, political choices need to be made on priority setting and balancing the river's needs with other societal interests. In line with the WFD's ambitions, this issue could be resolved within the current legal and institutional context or by granting legal rights to the river. This transfer potentially offers the opportunity to address the importance of healthy rivers now and for future generations, but must be accompanied by enforceable rules, laid down in legislation, on priority setting and the role of the custodian across multi-jurisdictional hydrological scales and institutional levels.

Disclosure statement

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ORCID

Susanne Wuijts http://orcid.org/0000-0003-1170-8082

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RESEARCH ARTICLE

On the problem of the justification of river rights

Kenneth Kang

Humanities & Law Department, Faculty of Media & Communication, Bournemouth University, UK; Utrecht Centre for Water, Oceans and Sustainability Law, Utrecht University, Netherlands

ABSTRACT

This article aims to work out the social conditions that determine whether the communication of river rights finds success in society. Employing the context of hydropower development in the Mekong region, the article finds that an essentialist strategy which claims that river rights have unlimited 'moral' validity regardless of any of the decision consequences is unlikely to succeed. Instead, it is proposed that moral conflicts over river rights may ultimately only be resolvable 'unmorally', that is, by procedural legitimacy – and this is best captured by employing a methodological framework composed of thematic, social and temporal dimensions.

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Introduction

In recent years river rights have gained traction in political discourse not only as a reaction to unsustainable practices, but also because river rights themselves produce new violations, and hence new modes of litigation actors can be subject to (Chaturvedi, 2019). The problem is that since river rights are, so to speak, works in progress; nobody knows exactly what they are. For example, what is their scope: the river, the freshwater ecosystem, the environment as a whole? And who is to say which jurisdictional mandate counts? These are just some of the unanswered questions.

At a first glance, one could employ the six fundamental values of the Grant Wilson Universal Declaration of River Rights (UDRR, 2017a, 2017b):

- The right to flow
- The right to perform essential functions within its ecosystem
- The right to be free from pollution
- The right to feed and be fed by sustainable aquifers
- The right to native biodiversity
- The right to restoration.

Indeed, such normative aspirations provide a useful 'starting point and baseline standard' (UDRR, 2017a, p. 3) for constitutionalizing the rights of nature, as exemplified in Ecuador; triggering new modes of legal action to grant rivers the status of legal personhood to sue or be sued, as exemplified in New Zealand (O'Donnell & Talbot-Jones, 2018; Youatt, 2017); or

CONTACT Kenneth Kang kkang@bournemouth.ac.uk

empowering river activists to oppose the dominance of hydropower 'productionist-oriented' regimes (Blake & Barney, 2018), as exemplified in the Mekong River, which flows from China to Vietnam crossing six national boundaries (WWF, 2016). That said, although these six fundamental rights may direct attention to the problem of which values should be imputed to rivers, this does not mean that concrete blueprints for action will automatically proceed from them. In fact, due to their abstractness, only picturesque details in judicial reasoning can be offered to guide the mediation of experience. Why?

Consider an activist lawyer who employs river rights as a normative reflex of human rights (Kersten, 2017), draws support from the Universal Declaration of River Rights, and argues that a river's right to flow is so morally imperative that 'all dams that lack a compelling social and ecological purpose' (UDRR, 2017a, p. 3) should be decommissioned, regardless of consequences. What one finds is that the success of the claim derives not so much from ordaining abstract river right principles but from the state in which the claim happens to be made at a given time. This means it is not a sender–receiver (telegraph) model which dictates the claim's success (for this simply directs attention to the skilfulness of the lawyer that announces the claim); rather, the claim must endure a negotiation process akin to a 'conductor-less jazz orchestra' (of improvisers following each other's lead), which includes the problem of information and understanding (Winkin, 2001, cited in Guy, 2018).

In the Mekong region, which this article will employ to illustrate the nuances of river rights, the problem of promoting interests can be described as follows. On the one hand, hydropower dam planners today may pay more attention to the articulation of announced laws, such as the right to equitably utilize water resources, but in 50 years' time, the repertoire of relevant scientific information may change the contextualization of these announcements, and hence the understanding of hydropower dam planners. On the other hand, a river activist today may pay more attention to the articulation of announced scientific evidence, such as the ecological degradation of river basins caused by dams, but in 50 years' time, the repertoire of relevant policy-driven information may change the contextualization of these announcements, and hence the understanding of the river activist. The point here is that the significance and meaning of river right claims derive neither from the truth value of information, nor the expressive behaviour of an actor's announcements, nor from a presupposed combination of background information and articulated announcements which informs us that it is reasonable to seek understanding and consensus. Rather, the significance and meaning of river right claims derive from the 'circular linkage' of *information, announcement* and *understanding* – an often hard-won achievement, considering that announcements and understandings are separated in time by the buzzing, booming, confusing world of information. How then to come to terms with this complexity?

This article proposes that Niklas Luhmann's (2004) strictly scientific endeavour to begin with certainty in the analysis offers an innovative way forward. But in order to acquire this objective diagnosis, a paradigm shift from normative to post-ideological jurisprudence is required. This is a shift from normative jurisprudence, which presupposes normative standards against which to improve practice (Devlin & Devlin, 1965), to post-ideological jurisprudence, which radically distances itself from ideological positions and normative standards so as to improve *the account*of practice (Philippopoulos-Mihalopoulos, 2009). Here *improve* refers to, in the tradition of science, a guarantee 'at least' that the account of

practice is 'correctly false' (i.e. investigating what is not true in order to define problems more specifically). Of course, this aim to begin with certainty in the analysis does not mean that post-ideological jurisprudence is better than normative jurisprudence: it simply assists normative jurisprudence by describing practice in a different way from how practice observes itself. But then what relevance does this have for practice? If relevance is defined broadly as making a difference, then post-ideological jurisprudence may have no relevance (because practice might already know what is described). But if relevance is defined as the reconnectability of practice to a methodological framework composed of the thematic, social and temporal dimensions, the endpoints of reflection,[1] then it could catch the interest of practitioners, as it gives new contours to the problem of the justification of river rights. And this is useful because only by defining problems more specifically can one more adequately describe the social conditions that determine whether the communication of river rights finds success in society – the research aim of this article, which is to be analyzed in three parts:

- The thematic dimension articulates the conceptual relevance practice has to social information systems which enable variation in the assessment of river rights.
- The social dimension articulates the instrumental relevance practice has to the forecast of communication, namely the expressive behaviour of announced legal arguments seeking to stabilize the expectations of river rights.
- The temporal dimension articulates the legitimative relevance practice has to the understandings of valid river right claims, which is distinguished by whether one pays more attention to the thematic dimension at points in time, or the social dimension.

In what follows, I first provide a summary of the proposed paradigm shift from normative to post-ideological jurisprudence. Drawing on the analytical lens of the latter, I then address the research question by employing a methodological framework comprising thematic, social and temporal dimensions, with conclusions presented in the last section.

From normative to post-ideological jurisprudence

How does society induce itself to reflect on the question of the validity of river rights? At a first glance, the aspiration of normative jurisprudence to improve the practice of river rights by pursuing some sort of secularized search for redemption through guiding principles, universal values or categorical imperatives might seem the logical way forward. However, if one unmasks this 'cloak of professionalism' (Mattei & Russi, 2012, p. 267), one finds that the ideals of rationalism are upheld not by identifying the ultimate justification for river rights but by employing rhetorical 'shock and awe' strategies. For example, first moral outrage is created about the unilateral development of hydropower dams along the Mekong River and their potential destructive impact on the region's ecosystem, fishing grounds and the livelihoods of local indigenous communities (Fawthrop, 2018b; Santasombat, 2011; Van Ha, 2012). Then, beautiful counter-visions are suggested, such as treating rivers as living entities (Yogendran, 2017), holistic guardianship of river basins (Studley & Bleisch, 2018), and hydrosolidarity as a potential emancipatory alternative to water conflicts (Falkenmark & Rockström, 2004).

In short, the assumption here is that by embracing the 'collaborative turn' in water governance and its core values of 'inclusivity, holism and representation' (Harrington,

2017, p. 257), humankind can, in accordance with the traditional optimistic ways of thought, rationally plan or at least decide on its own future (Allmendinger, 2002). But what happens when one finds that such utopian counter-visions are hard to come by? Moreover, what happens when one finds that the prevalent reality of our globalized '3.0' world (Friedman, 2006) creates the conditions whereby human actions are increasingly 'mediated by technological loops, financial opacity, political interests, legal complexity, and so on' (Philippopoulos-Mihalopoulos & Webb, 2015, p. 447)? Under these circumstances, perhaps what we need most is not a more trenchant critique of the crisis at hand, nor another blueprint for action to patch up problems, but a thoroughly constructed framework or set of guidelines by which the social landscape of river rights can be observed and described adequately.

This is where the analytical value of post-ideological jurisprudence can be found: not because it intervenes in decision making by proving the necessity of river rights claims, but because it deconstructs, from a normatively neutral stance, how such claims are justified in the first place. Admittedly, this 'reflexive form of critique' (Esposito, 2017, p. 24) does not lead directly to better principles, guidelines or blueprints for action. But what it can do is assist normative jurisprudence by improving the account of practice – and doing so in a manner which leaves legal practice free to do what it deems right, as opposed to having always to reassure jurisprudence of the foundations of river rights, as claimed by philosophers such as Nussbaum (2005) and Stone (1972).

Due to this non-interventionist stance, post-ideological (or post-philosophical) jurisprudence does not follow the impulse to react to the issues of river rights with 'shock and awe'. This is not to say that it is blind to the suffering that 'exists on a massive scale and in such forms that are beyond description' in today's world (Luhmann, 2005, p. 269). But what it can do is warn society of the traps of either overenthusiastic hopes or numbing fears: that when these themes about river rights appear in society, they are not constructed by groups of people who then lay down their own particular agendas; rather, they are the result of an 'information society' which communicates these hopes and fears via worldwide networks, yet in a manner which has been neither thought out (in terms of coping with the loss of central agency) nor understood or accepted in society as one had wished or planned.

To offer an illustration, the 'mountain cults' of the Tibetan lay people may trust and hope that the *ghzhi bdag* spiritscapes – animistic beliefs which paint the watershed as spiritual resources, as opposed to an exploitable commodity (Studley & Jikmed, 2016) – grant them the legitimacy to protect their livelihood practices within governance discourses. However, this legitimacy does not immediately become part of society until it has been given meaning and significance by one or more social (communication) systems. For example, the *ghzhi bdag* spiritscapes have to be recognized by a Buddhist religious system which constructs communications such as animistic 'mountain cult' rituals – and which constantly reproduces these experiences through a network of communications – on the basis of its observational frame, its ritual code (revelation/non-revelation); a legal system which constructs communications such as the principle of 'community participation', on the basis of its legal code (lawful/unlawful); a science system which constructs communications such as best practices of 'environmental governance', on the basis of its science code (truth/non truth); an economic system which constructs communications such as the 'national account system', on the basis of its economic code (pay/non-pay); and/or a mass media

system which constructs communications such as news broadcasts, on the basis of its media code (informative/non-informative).[2]

If one accepts this description, then the 'sociological insult' (Moeller, 2012, pp. 19–31) here is that the ideals of enlightenment, rationality and progress are no longer determined by individual groups of people, actors or nation-states; rather, it is social systems themselves that are the genuine 'medium of Enlightenment' (Luhmann, 1967, cited in King & Thornhill, 2003, p. 133). Indeed, this observation dramatically undermines river right approaches which advocate a more inclusive world according to universal principles, rational necessity and/or moral obligations. For the issue here is that in a hypercomplex society where different social systems reconstruct different versions of enlightenment (indigenous justice, economic justice, juridical justice) and where we humans are constrained by the outcome of these unreliable systems, this disturbingly means that nothing can be described as necessary or problematic any longer in any objective sense (Kang, 2018a). Instead, every individual perspective co-emerges and co-evolves with the particular requirements of social systems, as exemplified in the systemic rule of rationality, which determines that all legal observations of river rights takes place first on legal terms, and only second is recontextualized from an economic, political or indigenous point of view. This is not necessarily a bad thing, of course, but what it does suggest is that it is social systems, not people, which actually stimulate and perpetuate the processes of societal rationalization. Which raises the question: If it is true that each social system uses a different criterion for success and relevance, but an equally legitimate problem construction and remedial imperative of river rights, how then to adequately reflect on the social validity of river rights? The answer, I propose, can be found by employing a methodological framework oriented to problems, as opposed to normative interests.

Improving the account of practice via methodology

To keep track of the difference between normative and post-ideological jurisprudence, I propose a methodological framework comprising thematic, social and temporal dimensions. Here the difference is maintained since the framework does not start out with normatively charged concepts such as water security, sustainability, or hydrosolidarity – concepts, that is, which typically seek to promote interests.[3] Instead, it starts from a normatively neutral stance, and this is acquired by constructing the framework from the ground up independent of any scholastic conventions. Indeed, it is through this independence that the framework is able to complete its 'spherical' way of thinking, which is that its thematic, social and temporal dimensions cannot be isolated empirically. They must be combined as a unity, just like the Holy Trinity,[4] even though they are to be distinguished analytically to provide three different phases of decision making (Figure 1).

- The thematic dimension articulates the conceptual relevance practice has to social information systems which enable variation in the assessment of river rights. It is concerned with bringing conceptual awareness to the form of the 'black box'[5] problem of different social systems, generating different questions about what constitutes the validity of river rights.
- The social dimension articulates the instrumental relevance practice has to the forecast of communication. It is concerned with bringing instrumental awareness to the willingness of legal argumentation – which is more rigid than policies and plans – to guard

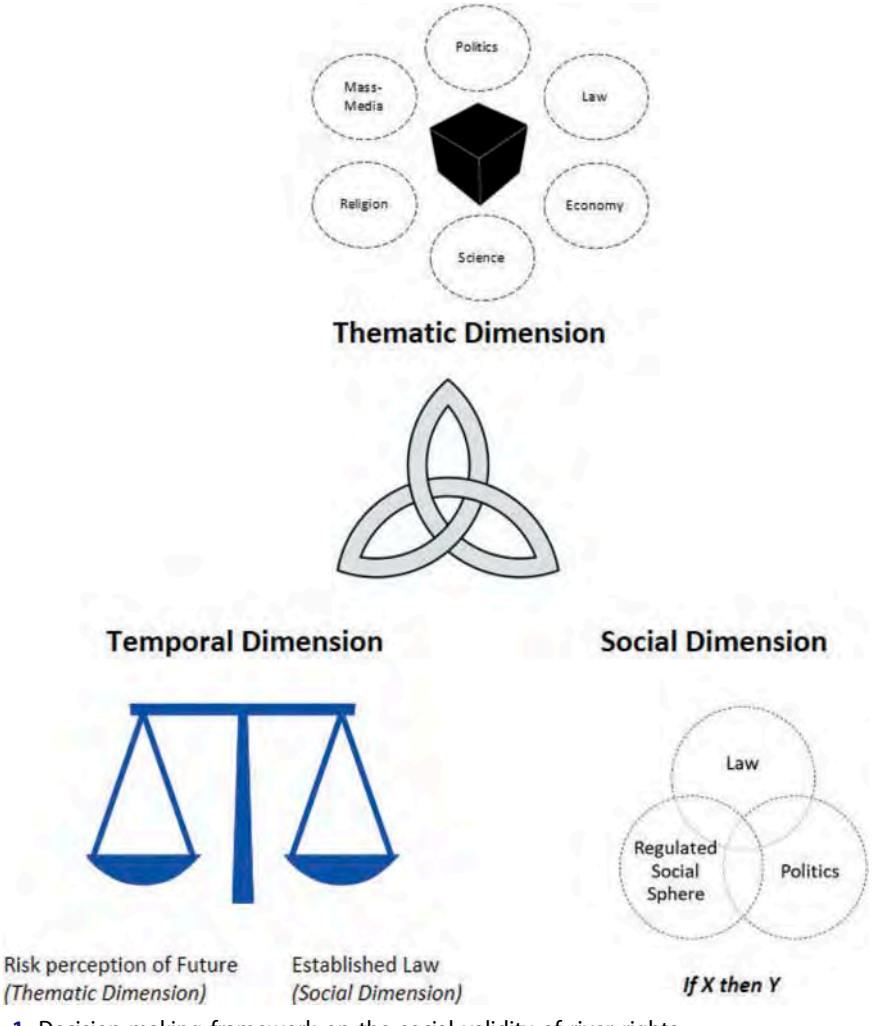

Figure 1. Decision-making framework on the social validity of river rights.

itself against changes that see river rights potentially go against law's conditional programme, if X then Y.

- The temporal dimension articulates the legitimative relevance practice has to the understandings of valid river right claims. It is concerned with bringing legitimative awareness to how understandings of validity evolve depending on the emphasis of ordering (experiencing) the thematic/social dimensions at different points in time.

The contribution of this decision-making framework is that it helps us understand what interests lie behind the problem/solution constructions of river right claims (thematic dimension). This in turn helps explain why the promotion of interests becomes a problem, especially since in detailed planning the number of opposing interests that suffer increases (social dimension). And the root of this social problem derives from the temporal dimension, in the various forms of realizing future uncertainty, that is, the problem of the justification of river rights, as will be explored next.

Thematic dimension

The thematic dimension articulates the conceptual relevance practice has to social information systems which offer a repertoire of possible solutions to the problem of what constitutes river rights. More specifically, this is a 'black box' problem derived not from the content of river rights themselves but from the problem of how social systems react to river rights. For the empirical observation here is that river rights do not directly affect river basins themselves; rather, their effects or normative qualities are always purely socially constructed by social systems. Indeed, if river rights do show up on the radar of highly distinct social systems such as law, politics, or the economy, they are often introduced, so to speak, from the sidelines. This is because the underlying ecological problems which river rights aspire to resolve have no genuine roots in any of these social systems. Their questions, therefore, can be effectively treated only in accordance with purely local or system-specific criteria (Borch, 2011). This explains why each system may have quite a different perspective on river rights, and thus why systems such as the law find it so difficult to determine their jurisdictional scope.

But these differences in perspective do not necessarily lead to less dynamic discourses. In fact there is more room for dynamism the more that the systemic rule of rationality kicks in and systems ask the questions that matter to them. The political system asks how river rights can legitimize (or undermine) the government's actions. The law asks how river rights can continue (or discontinue) the law's requirements for consistency in decision making. The economy asks how river rights can facilitate (or inhibit) the cost-saving transactions of freshwater management. The science system asks how river rights can generate (or block) more research proposals which address the conditions and effects of river protection. The system of religion asks how river rights can reinforce (or undermine) the supremacy of religious values. And the mass media system asks how river rights can satisfy the media's rigorous selection filters to improve the prospects that people will watch tomorrow's news.

That said, although system-specific criteria is the precondition for meaningful river right discourses, they also create (conceptual) boundaries which prevent systems from operating outside their own problem trajectories. Science may propose that an ecologically healthy river is one where the ecosystem has the ability to maintain its structures and function over time in spite of external stresses (Costanza & Mageau, 1999), but this cannot be read as such by the legal system, and must instead be transposed into concepts such as legality. A legal conclusion that a 'healthy' river equates to the environmental standard of 'not too degraded' (Kauffman & Sheehan, 2019) may not map onto topocosmic beliefs that consider rivers spiritual entities. Topocosmic beliefs cannot be translated directly into terms that are meaningful to the economic system, except in concepts such as 'tourism destination reputation', to allow the economy to calculate the profitability of monetary investments. The economic rationality of investment risks posed by the environmental impacts of tourism is not identical to scientific understandings of risk minimization, or more specifically, 'ecosystem-based management' (Scrimgeour & Wicklum, 1996). In short, what this description unveils is that social systems do not have direct inputs and outputs to one another; they cannot directly steer one another, and they do not share the same perceptions of what ought to constitute the specific technicalities of river rights.

Social systems can, nevertheless, complement each other. Although they may seem independent, and thus increasingly able to follow their own logic, this does not mean that their dependence on other systems is decreasing. To the contrary, it is increasing. For example, the politically acceptable threshold level of a hydropower dams water release for irrigation purposes in the Lower Mekong region will reappear as a factor that reduces or increases profits in the economic world of energy supply distribution, while the language of profit derived from this energy supply will reappear in the world of politicians as a limitation on how far promises can be made to guarantee a river's right to 'natural' flow. Significantly, what this process of systems feeding into each other and adjusting to each other describes is how each social system proceeds to reconstruct the unity ('realness') of river rights in its own functionally distinct ways.

Admittedly, this system of checks and balances may also spark conflicts. For river rights cannot be colonized and isolated according to the functional priorities of any one dominant system. Instead, systems have to struggle over what exactly constitutes river-rights-specific technicalities. After all, what is deemed valid in one world might be invalid according to the logic of another. Take for example the practice of river rights essentialism and the 'politics of obstruction' – 'no dam building on the river', 'no blowing up of the river basins rapids', and so on. Nothing prevents Thai politicians, for example, from demanding or promising a river's right to native biodiversity (Nijhuis, 2014). But this is only because they are not obliged to think about or act on how such actions may affect the economies of upstream states, and do not have to face the consequences (such as the loss of energy supply and jobs). What matters above all to the system of Thai politicians is whether these calls to action can maximize or limit the power of the opposition party. Where is one led by this mode of essentialism? From the perspective of social contribution, it leads to a situation whereby an involved/uninvolved spectator is created, one who demands to take part in changes while being protected from their consequences – a demand, that is, which hardly begins to solve the problems of the natural environment.

Indeed, if it is true that person-centred moral judgements are increasingly swept aside by the overwhelming (amoral) priorities of social systems,[6] then the underlying problem is not how to define some sort of ultimate (moral) ground from which all matters about river rights can be derived; the more analytically useful question is, what kind of expectational burdens can river rights endure? In other words, how much monetarization, scientification, politicalization and religionization are river rights able to generate and cope with, and how much of these specialisms at the same time (rather than, say, monetarization alone)? The answer is that the implementation of river rights can only work if the 'magic triangle' of political, legal and the relevant social spheres in regulation can also continue. Only if the political game is given space to continue, 'to negotiate land use and value extraction' (Van Assche, Beunen, Smit, & Verschraegen, 2015, p. 51), and the regulated social systems are given space to calculate their own criteria for success and relevance, such as the monetary calculation of social entrepreneurship in economics (Aikaterini & Hummels, 2019), can decision makers adequately implement river rights – something which legal processes help manage, as will be explored next.

Social dimension

The social dimension articulates the instrumental relevance practice has to the willingness of legal argumentation to assume responsibility for the risks involved in operationalizing river rights. This is best captured in the law's conditional programme, the 'if-then' formula, which takes on the primary role of 'formalizing' normative expectations: only if fact X is given can it be decided whether Y is legal or illegal. Or more specifically: only if a rivers' right to be free from pollution is violated, such as with the illegal dumping of untreated waste, can the decision of illegality be made. Here the advantage of employing the conditional programme is that it enables the law to function as a risk-reducing institution, because it aligns an actor's expectations and behaviours long before any serious disagreement arises. In doing so, the programme therefore provides the possibility that violators face serious sanctions if they do not live up to the law's expectations – a possibility which should normally not become relevant if the legal system fulfils its function properly.

That said, the problem with the conditional programme is that it is input-oriented, as only the correct identification of what is formalized, or concretized, will lead to a certain planned legal measure being carried out. In practice, this means that the willingness of legal argumentation to assume responsibility for operationalizing river rights depends to a large extent on the principle of voluntariness, which in effect permits states to induce a race to the bottom and decide only the softest obligations. This is exemplified in the Mekong region (Hirsch et al., 2006; Johns, Saul, Hirsch, Stephens, & Boer, 2010). Here this race to the bottom takes a form whereby river rights cannot go against the established law, as shown in the conditional programme: only if contract law and international customary norms are not violated will the law enforce the obligation 'to protect … the ecological balance of the Mekong River Basin' (MRC, 1995, Article 3).[7] In other words, the extent to which river rights are legally binding, with enforcement effect, depends on the degree to which other regulations remain in effect, such as the law on investment property and commercial navigation – the essential building blocks for development initiatives put forth by organizations such as the Lancang Mekong Cooperation (Biba, 2018). Thus, it is only realistic to assume that the established legal framework (which includes environmental law and quality standards) accommodates the interests of the dominant, since the law could not conduct itself otherwise, or else lose binding recognition and support from nation states such as China (as occurred when China refused to join the Mekong River Commission).[8] Nonetheless, what is also crucial here is the extent to which the law can be purged of structural biases, and this is best exemplified when the law attempts to correct its optical biases by employing purposive programmes.

Purposive programmes are output-oriented: they define fixed goals to be attained, as exemplified in the formula: to decide Y for the purpose of achieving X. Or in the context of international customary law: to impose the notification of planned measures, even in the absence of treaty agreement, to achieve the standard set by the requirement not to cause significant harm (UNWC, 1997). Of course, from the perspective of legal validity this does not mean that the no-significant-harm programme is receptive to claims that evolve around the 'big questions', such as actual factual harm caused to rivers (Kang, 2018a). This is because the no-significant-harm purposive programme, a variant of the conditional programme, prescribes that in the event of violation, it is the conduct of state practice, not the

expectation of factual harm, which is wrong.[9] Hence, dam development without prior consultation is forbidden, as claimed for instance in the Pak Beng Dam lawsuit, which questioned the legality of the power purchase agreement between Laos and Thailand (Roykaew, 2017). Paradoxically, this also means that what is not forbidden, such as actual factual harm, is permitted (within reason) – and this is why lawyers and policy makers are able to speak of 'fully legally compliant' hydropower dam projects (Reuters, 2018), and the subsequent 'good' international practices of 'benefit sharing' (Suhardiman, Wichelns, Lebel, & Sellamuttu, 2014).

Admittedly, this does not necessarily mean that the law is just. In fact, the more law tries to exclude non-legal communications, such as actual factual harm caused to rivers, the more does the consciousness of this arbitrariness establish itself. This is amplified when one considers that in a hyper-complex modern society, the established procedures, rules and 'normal' rational criteria offer little help, because one is inclined to expect the improbable (Esposito, 2017). Chinese officials may draw on law and science to assure Southeast Asia that the Yunnan dams will have a positive environmental impact in terms of enhanced flood/drought management – but a catastrophe could always happen tomorrow, because 100% security against these extreme events does not exist. And here a problem arises because anxiety 'cannot be regulated legally nor contradicted scientifically' (Luhmann, 1989, p. 127). In fact, once the theme of anxiety gains enough traction that it can no longer be seen in a negative light, such as after the flash floods of the Xe Pian-Xe Nam Noy dam collapse in Laos (Fawthrop, 2018a; Sim, 2018), it has the effect of cutting loose the law from its 'social moorings' (Luhmann, 2004, p. 162). In other words, anxiety acquires the advantage of replacing the difference of norm and deviation by forcing the law to yield to the authority of the temporal dimension, as will be explored next.

Temporal dimension

The temporal dimension articulates the legitimative relevance of practice to the tensions between the future and past which arise in operationalizing river rights. That is, between the perceived act of significant harm, and the established legal procedure for restitution, or in other words, between the eruption of events in the thematic dimension and the social dimension. But this mode of legitimation awareness is not attuned to the time-binding arrangements of 'rational' solutions (especially where rational means capable of or requiring consensus). It refers here to the possibility of recognizing errors in the risk perception of the future, which, under the conditions of ecological modernization, overtakes the past as the meaningful construction of the present.

At a first glance, the essentialist strategy of river rights activism might seem a viable candidate, as exemplified when Thailand-based activists protest the blasting of rocks in the Mekong Rivers' rapids; the media decry the violations; and the government commissions feasibility studies (Nation, 2017; Perlez, 2005). But where such essentialism provides a useful 'alarm' function to safeguard society from being aligned with (unquestioned) policy objectives, it also generates a social environment whereby either too little or too much ecological noise is produced. On the one hand, too little noise is produced because river rights activism tends to get drowned out by information overload. Consider the possibility that humans and fish that swim in the Mekong River might

die because is it so polluted. As long as this observation does not become the subject of communication, it will have no social effect: as the saying goes, *pas d'intérêt, pas d'action* (no interest, no action). But if the ecological noise does gain traction, then the evolution of river rights activism takes on a paradoxical form: the capacity for river rights to become known and affirmed depends not on the extent of ecological degradation but on the extent to which river rights are validated by their very violation and subsequent outcry – and due to the busy and exhausting tasks of daily life, it is never very long before all this fades into the white noise of the mass media.

On the other hand, river rights activism may produce too much ecological noise, due to 'over-engaged' announcements. The mass media, for example, may turn to science and announce that it is 'the weather' that caused fish to die in Vietnam (VNS, 2017). This will typically give the general public more knowledge and more ignorance at the same time: more knowledge because more normative statements are provided, and more ignorance because such knowledge comes set against a 'virtual reality' which is typically announced metaphorically: 'is this information manipulated?' and 'does this violate a river's rights?' lead to the question, 'who's colluding with who?' And when this occurs, the individual case becomes uniquely common, so much so that the problem for the government is no longer the underlying environmental risk: how to minimize harm to the fish and to the river's integrity. It becomes a conflict between decision makers and those affected, whereby the government, due to the fear of political revolt, is forced to focus on its own legitimacy – a distraction which may result in episodes of state-linked violence, as observed in the discourses surrounding the Pak Mun Dam (Foran & Manorom, 2009).

Viewed in this way, one can see that river rights essentialism generated from protest and dissidence is not particularly helpful in legally prohibiting the environmental degradation of river basins. It may actually obstruct the acceptance of laws, because it pretends to go beyond the established juridical world, and thus be more than law. For what drives its implementation is not the functioning of law's code, legal or illegal – what counts is humanity. And the error here is that river rights essentialism which tries to impose itself on the law, or even ignore the law (e.g. by assuming that everybody wants a naturally free-flowing river, not a dammed-up river, which violates the principle of consultation), is not actually a solution but a disappointment-ridden mode of conflict resolution. Why? It is because this lethargic attitude to the law pressures politics into politicizing risks of all kinds which, in this era of unsustainable co-evolution (Kang, 2018b), politics can no longer resolve. This is not to say that river rights should be given up; their practical implications, after all, serve the important function of protecting rivers from ecological degradation. But how then to give legitimacy to the communications of those whose actions count on the belief that river rights are socially valid?

This is the point where the return to legal technique, the management of differences between the perceived act of harm and established legal procedure, shows its potential. Here a viable candidate is the granting of legal personality to rivers. Granting rivers (as legal persons) organizational representatives and giving them rights and duties offers an advantage because these representatives are socially addressable. In principle, this form does not cause any general problems, because the unlawful (representatives) can always be legalized if they are imported into the law and regulated. Of course, the structural biases of law's social dimension will resist the personification of rivers, because granting

them rights and duties via representatives could go against the established law. But the law cannot go on as if nothing has happened. This is because the personification of rivers perturbs general expectations in the thematic, social and temporal dimensions.

From the perspective of the thematic dimension, legal personhood for rivers, such as the Whanganui River in New Zealand (more specifically, the 2017 Te Awa Tupua Act, clause 38, prioritizing regulatory conformity with Maori practices), sets a precedent for other jurisdictions. The effect here is that the more that such rules are implemented, and the more this becomes the norm rather than the exception, the greater are the reputational risks for jurisdictions that resist personification.

From the perspective of the social dimension of law, the validity of granting a river legal personality depends on existing rules. But the personification of a river challenges this structural bias not because it pushes the establishment to the point that it bursts, but because it works against it from the inside: it absorbs the undecidability of political conflicts that evolve around rights, resistance and dissent into, at least in the world of law, decidable technical inquiries about representation, participation and the judiciary of 'citizens' tribunals' (GARN, 2009).

Finally, from the perspective of the temporal dimension, giving legal personality to rivers keeps the future open to all possible preferences, such as shifts in balancing river rights with the 'right to water', or the ideological fault lines over whether animistic worldviews should be protected only if they contribute to conservation outcomes (Jonas et al., 2017). This is crucial not only because it enables the law to 'catch up' with its social environment, but also because it maintains the law's presentation that its operations are not in fact based on structural biases. Indeed, only by maintaining this presentation that the law is legitimate, just and fair can it paradoxically maintain legal security, stabilize expectations and pacify conflicts.

Conclusion

This article aims to work out the social conditions that determine whether the communication of river rights finds success in society. Employing the context of hydropower developments in the Mekong region, we find that an essentialist strategy which claims that river rights have unlimited 'moral' validity regardless of consequences is unlikely to succeed in society. This is because from the perspective of social contribution an essentialist strategy is not revolutionary but conservative, since it neglects the all-important problem trajectory structures of social systems.

To come to terms with this complexity, I propose a paradigm shift from normative to post-ideological jurisprudence. Where normative jurisprudence pursues the search for the ultimate (moral) foundation of river rights (often with spectacular disappointments), post-ideological jurisprudence recognizes that moral conflicts over river rights may ultimately only be resolvable 'unmorally', that is, by procedural legitimacy, as captured in the proposed decision-making framework (Figure 1).

- The thematic dimension articulates the conceptual relevance practice has to the various (amoral) social information systems, such as politics, economics and science. It is concerned with bringing conceptual awareness to the form of the 'black box' problem,[10] of different social systems generating different questions about what constitutes the validity of river rights.

- The social dimension articulates the instrumental relevance practice has to the expressive behaviour of announced legal arguments. It is concerned with bringing instrumental awareness to the willingness of legal argumentation to guard itself against changes that see river rights potentially go against law's conditional programme, if X then Y.
- The temporal dimension articulates the legitimative relevance practice has to the understandings of valid river right claims. It is concerned with illuminating why validity lies not in essentialism (where one presupposes an ordering of the thematic/social dimension to justify ultimate (moral) grounds) but in the principal impossibility in modern society of predicting who can say which normative interests count.[11]

And it is precisely this operation of law, to keep the future open against all final judgements, which granting rivers legal personality facilitates: not because this legal technique repairs social problems directly, but because it absorbs uncertainty; because it enables society to deal with problems, to inquire about what questions one should ask the other,[12] without risking the freezing side-effects of confronting and solving problems directly. Indeed, giving rivers rights as juristic/legal persons or living entities may have vital functions, even if it is only on the symbolic level.

In sum, when one combines the thematic, social and temporal dimensions into a singular decision-making framework, the insights offered are not impractical orientations which one cannot seriously recommend, let alone put into practice. After all, what is contributed is a creative lateral way of thinking, which advises that when things fall short, perhaps it is more rewarding not to look for better solutions to problems – problems that are constructed by the mass media – but to ask instead, 'What is the problem in the first place?' This does not mean simply reiterating the ways in which multiple sovereign borders and jurisdictions structurally disconnect communications, nor does it mean ordaining a narrow criticism of the asymmetry between river rights and prevailing hydropower development agendas in regions such as the Mekong River. Rather, the 'critical attitude' (Esposito, 2017) here is that by defining the problem of the justification of river rights more specifically, one can more adequately describe the social conditions that determine whether the communication of river rights finds success in society or not, as can be summarized as follows: only if the social environment of systems calls for positive ecological reputation (thematic dimension) will law and politics show leadership in implementing river rights (social dimension); but when negotiating the specifics, it is the perceived risk of the future where authority is found (temporal dimension). And whose guesses about the future validity of river rights are correct – well, that is a question of who is in power.

Notes

1. In the sense that these dimensions are the definitive lines beyond which one starts to lose analytical power. Accordingly, I draw support from my interpretation of Luhmann's offhand comparison with the doctrine of the Holy Trinity. The Father is the world of information (*thematic dimension*); the Son, the reality of announcements (*social dimension*); and the Holy Spirit, how the meaning of the Father and Son is acquired through the evolution of understanding (*temporal dimension*). For further details see Rasch (2013).
2. For more details on this non-exhaustive list of social systems, see Roth and Schütz (2015).
3. In the sense that these concepts typically seek to show why the particular interests are the common interest, or at least cover many other interests as well.

4. See note 1.
5. Here 'black box' articulates the problem of working out what lies inside a system which cannot be recognized because it is too complex.
6. In the sense that each social system employs an amoral code of rationality, such as legality in law, efficiency in economy, or risk minimization in science.
7. See for example Article 36 of the 1995 Mekong Agreement (MRC, 1995).
8. For more details, see Ho (2014).
9. As McCaffrey (2001, p. 347) points out, the rule regarding no significant harm 'is not factual harm per se but injury to a legally protected interest that the law prohibits'.
10. See note 5.
11. As Přibáň (1997, p. 345) supports, that 'law is legitimate to the extent to which it is open to outside critique; by different vocabularies and language games'.
12. Procedural right questions such as the right of information, the right to participate and the right of access to justice, or substantive right questions such as a rivers' right to be protected from pollution to maintain its good ecological status. For more details, see Wuijts et al. (2019).

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ORCID

Kenneth Kang http://orcid.org/0000-0002-2256-0805

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The potential limitations on its basin decision-making processes of granting self-defence rights to Father Rhine

Bettina Wilk, Dries L. T. Hegger, Carel Dieperink, Rakhyun E. Kim and Peter P. J. Driessen

Environmental Governance, Copernicus Institute of Sustainable Development, Utrecht University, the Netherlands

ABSTRACT

Recent grants of legal rights to rivers would seem to infuse traditional anthropocentric river governance with greater eco-centrism. Through a thought experiment, we scrutinize this proposition for the Rhine basin. We consider the governance implications of granting (procedural/material) rights to the river and elaborate on their implications for the three highly institutionalized regimes of the Rhine River of water quality, flooding and transport. Since we find that a shift to more eco-centrism has already occurred and since the right granted to the river would not be absolute, we deem radical transformations unlikely.

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Introduction

Until recently, river basin governance globally has had an anthropocentric focus (Suykens, 2018). Recent legislative initiatives in different jurisdictions, however, have paved the way for more eco-centric approaches in which rights are bestowed on rivers and other non-human entities (Global Alliance for the Rights of Nature, 2018). In 2017, the New Zealand Parliament granted legal rights to the Whanganui River through a legislative act (Te Awa Tupua Act, 2017). In the same year, the courts of India and Colombia recognized the legal personhood of the Ganges and Yamuna Rivers and the Atrato River, respectively (Corte Constitucional, 2016; Mohd Salim v State of Uttarakhand and Others, 2017). The granting of legal personhood to non-human entities is heralded as a progressive approach that promises the protection of the rights of rivers as well as those of socially marginal or environmentally vulnerable groups. It is assumed that such a change in the legal framework could act as a transformative force for river basin governance towards more eco-centrism. Advocates see this new 'rights of the river' approach as a model to be replicated in different geographical, cultural and institutional settings (Misiedjan, 2017).

Yet we lack insight into the mechanisms through which granting rights to rivers might impact or co-evolve with existing river basin governance approaches. Moreover, the rights approach to rivers has been developed in countries where indigenous values and knowledge of the traditional custodians of the rivers are still intact to a certain

CONTACT Carel Dieperink c.dieperink@uu.nl

extent (Argyrou & Hummels, 2019, this issue). Assessments of the implications of granting rights to rivers in Europe are non-existent. We explore this knowledge gap by critically scrutinizing the proposition that the granting of rights to the river will lead to a transformation in decision-making processes concerning water quality, flooding and navigation in the Rhine basin.

We will do so by conducting a thought experiment on the river Rhine. The key question we try to address is what the granting of rights to what the Germans call Vater Rhein (Father Rhine) might entail.

First, we conceptualize what in general granting rights to a river would imply for river basin management in procedural and substantive terms (next section). Then we apply this concept to the Rhine River basin and its regime, identifying procedural features (third section), as well as substantive components (guiding principles, norms and plans) with regard to water quality, flooding and transport (fourth through sixth sections). We see the Rhine River basin as a paradigmatic case (Flyvbjerg, 2006) for other highly institutionalized river basins in the Global North with defined duties and obligations in place that promote the implementation of policies and measures. Data on the Rhine regime were collected by reviewing the scientific literature and policy documents on the Rhine in Scopus by using (combinations of) search terms like 'Rhine', 'water quality', 'meandering', 'river continuity', 'groundwater governance', 'pollution', 'biodiversity', 'renaturation', 'retention areas', 'conservation', 'restoration' and 'room for the river'. Policy documents (action plans, performed measures and monitoring results) were retrieved from the website of the International Commission for the Protection of the Rhine (ICPR). In the seventh section, we discuss the potential implications for current decision-making processes of granting rights to the river. We conclude with a reflection on the tenability of the proposition presented in this paper.

Conceptualizing and operationalizing the rights of rivers

Scholarly treatments of rights of the river are still in an embryonic stage, so we need to base our conceptualization on discourses as they can be found in practice. The rights-of-the-river approach says that not only humans and animals have rights related to a river, but the river itself can have rights. Table 1 shows the different categories of river-related rights we identify, both procedural and substantive. From top to bottom, the rights become less institutionalized and more recent.

The right of humans to use the river has been (indirectly) recognized worldwide in international conventions (e.g., the United Nations Convention on the Non-navigational Uses of International Watercourses), constitutions, specific laws and common law systems (Beaumont, 2000; McCaffrey, 2001).

The conventional rights-based approach to environmental protection promotes the right of individuals or a group of individuals to a healthy environment. It is recognized by many countries through constitution, legislation or international agreements (Boyd, 2012). Procedurally, this means that the individuals whose rights are infringed by, for example, river pollution can bring their case to court for their rights to be protected. Under this environmental rights approach, protection of the environment is a by-product of protecting fundamental human rights.

The granting of rights to animals is the next and more recent step (Broom, 2011). For the first time, non-human entities have rights that are to be protected by legal custodians for their non-instrumental, intrinsic values. In a sense, the animal rights movement for granting rights to certain animal species, such as chimpanzees, seems to have paved the way for other rights-of-nature approaches, including the rights of the river. While existing cases of granting rights to rivers are to some extent idiosyncratic, the granting of rights to animals has arguably facilitated the discussion about the universal applicability of the river rights approach. From an animal rights perspective, the protection of a river is a product of our efforts to protect the substantive and procedural rights of animals.

Finally, the new approach of recognizing the rights of rivers fits with the rights-of-nature paradigm. Substantively, it recognizes the rights of ecosystems as a whole to be free from significant anthropogenic influence so their integrity is maintained. Ecuador is the first country to recognize rights of nature in its constitution. The constitution argues that nature in all its life forms has the right to exist, persist, maintain and regenerate its vital cycles (National Assembly Legislative and Oversight Committee, 2008). Bolivia recognized the rights of nature in the Law of Rights of Mother Nature in 2010, subsequently revised as the Framework Law of Mother Earth and Integral Development for Living Well. This Bolivian law enumerates seven specific rights to which Mother Earth and her constituent life systems, including human communities, are entitled: to life, to the diversity of life, to water, to clean air, to equilibrium, to restoration, and to live free of contamination (Government of Bolivia, 2012).

Applying such an approach to the rights of rivers, the Earth Law Center drafted a Universal Declaration of River Rights (Global Alliance for the Rights of Nature, 2018), in which they argue that rivers should be entitled to six specific rights: the right to flow; the right to perform essential functions in their ecosystem; the right to be free from pollution; the right to feed and be fed by sustainable aquifers; the right to native biodiversity; and the right to restoration.

These rights may help rivers fulfil certain needs to maintain their health and integrity (Wuijts et al., this issue). The rights can be enacted in various, often context-specific ways. For instance, in the New Zealand case, the river was granted property rights over its own riverbed (Vries-Stotijn et al., this issue). Procedurally, recognizing the rights of

Table 1. Different categories of river-related rights.

	Substantive rights	Procedural rights
User rights	Individuals or organizations have the right to use the river for drinking, shipping, fishing, irrigation, hydropower production and wastewater discharge.	Individuals or organizations have access to information, public participation and justice; states have access to international courts.
Environmental rights	Individuals or organizations have the right to a safe and clean environment; states have the sovereign right not to be impacted by transboundary harm.	Individuals or organizations have access to information, public participation and justice; states have access to international courts
Animal rights	Animals have the right to a healthy or clean environment for their survival.	Animals have access to information, public participation and justice (represented by guardians).
Rights of nature specific to rivers	A river has the right to be free from significant anthropogenic influence (or to remain ecologically intact).	A river has access to information, public participation and justice (represented by guardians).

nature means a river gets agency. The New Zealand case is useful to understand what these procedural rights can entail (Te Awa Tupua Act, 2017).

In the case of the Whanganui River, an office of the river representative is established, with full capacity and all the powers reasonably necessary to achieve its purpose and perform and exercise its functions, powers and duties. The river representative performs key functions, such as to act and speak for and on behalf of the river; uphold the river's status; promote and protect the health and well-being of the river; perform landowner functions for and on behalf of the river; and maintain the river register. Moreover, the river representative, in performing these functions, must act in the interests of the river; must develop appropriate mechanisms for engaging with and reporting to stakeholders with interests in the river on matters relating to the river, as a means of recognizing the inalienable connection of those stakeholders with the river; may report publicly on matters relating to the river; may engage with any relevant agency, other body or decision maker to assist it to understand, apply and implement the river's status; and may participate in any statutory process affecting the river in which a river representative would be entitled to participate under any legislation (Te Awa Tupua Act, 2017).

Getting agency also implies that non-human entities get legal standing to protect their substantive rights (Boyd, 2012). Another consequence of having legal personhood is that a river can be held liable by other involved actors. The river is to be represented at legal proceedings by two people selected by the government and the local indigenous group (*iwi*), who will act and speak on behalf of the river, and work to promote and protect its health and well-being (Te Awa Tupua Act, 2017).

The right-of-the-river approach can be seen as an operationalization of a deep ecology perspective (Naess, 1990). Granting procedural and material rights to the river implies that an eco-centric, normative stance is taken. In this moral position, humans are not above or separate from nature, but are on par with, in this case, rivers. This implies that the existing set of rights held by humans will need to be restricted and that humans will have to take on certain additional duties (or responsibilities).

Both the procedural and the material rights discussed could have implications for the governance of river basins. An actor speaking on behalf of the river will have access to political decision making and will have legal standing in courts. In terms of material rights, river basin management must consider a river's integrity and take measures accordingly.

The question is what the above could mean for the regime of the Rhine. Will it grant Father Rhine 'new guns', or only result in moderate changes? Before we can answer these questions, we must give an outline of the existing regime of the Rhine, starting with its procedural component.

The procedural component of the Rhine regime

The existing regime of the Rhine is fragmented over different levels and sectors. The Rhine originates in Switzerland, and crosses the territories of France, Germany and the Netherlands. Luxembourg discharges its waters to the Rhine through the Moselle. The Rhine watershed also covers (parts of) Italy, Austria, Liechtenstein and Belgium. Two functionally differentiated river basin organizations have been set up. The ICPR addresses

quality and quantity issues, while the Central Commission for Navigation on the Rhine (CCNR) addresses navigation issues. The European Union, representing its member states, is a formal member of the ICPR and involved in the activities of the CCNR.

Formed in 1950, the ICPR is a central coordinating body for transnational collaboration of its riparian states and develops transboundary river programmes, which are then executed by the states at a national or sub-national level. The 1963 Convention on the International Commission for the Protection of the Rhine against Pollution (Treaty of Bern), replaced by the 1999 Convention on the Protection of the Rhine, serves as the formal mandate of the ICPR. It formalizes composition, obligations, and working and decision-making procedures, states the objectives to be fulfilled by contracting parties and regulates the structure for interaction (Dieperink, 1998, 2011; ICPR, 1999). The ICPR is formally recognized as a legal entity, to be represented by its chairperson. Representatives from five member countries and the EU meet annually. Issue-specific working groups prepare these meetings. In these working groups different societal interests are represented by environmental NGOs, industry and shipping organizations, as well as power and drinking water producers. Along with 20 NGOs, Belgium, Liechtenstein and eight intergovernmental water organizations have observer status (no voting rights) during the annual conferences of the parties (ICPR, 1999; Mostert, 2009). A coordination group determines the actual planning and coordination of ICPR's work (Bernauer & Moser, 1996; ICPR, 2013). Influential in defining the political goals, agenda and work programmes of the commission is the Conference of Rhine Ministers.

Along with a set of environmental and sustainability principles, the Convention on the Protection of the Rhine sets out specific stipulations for the contracting parties, cutting across water quality, ecological and biodiversity issues (ICPR, 1999, 2017b). The central tasks of the ICPR are setting up international measuring programmes and studies of the Rhine ecosystem, if required, together with scientific institutions; issuing proposals for measures and programmes; coordinating the Rhine Warning and Alert Plan; and determining and measuring the effectiveness of actions based on monitoring published in reports and studies by contracting states.

The CCNR has existed since 1815 and is the world's oldest international organization dealing with infrastructure (Henrich-Franke & Tölle, 2011). Its main function is to foster European prosperity by guaranteeing a high level of security for navigation on the Rhine. Switzerland, France, Germany, Belgium and the Netherlands are member states. Eleven other states have observer status, while NGOs on a European scale with an interest in inland navigation may obtain the status of approved organization. This status enables them to participate in the CCNR's working parties and other activities and gives them access to the CCNR's working documents. The approved organizations are not only consulted regularly, they are also encouraged to submit their problems and proposals to the CCNR (Henrich-Franke & Tölle, 2011).

Regulations dealing with water issues have also been formed at the wider European Union level, often in close interaction with the ICPR. Within the European Union, water pollution first was addressed by developing water quality standards and uniform emission standards (EC Directive 76/464/EEC on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community, and several sub-directives), the Birds and Habitat Directives, and later the Water Framework

Directive and the Floods Directive (ICPR, 2004, 2015; Junier & Mostert, 2012). Within the European Union, the European Commission has the formal mandate to initiate policy proposals, which must be approved by the European Parliament and the Council of Ministers from the 28 EU member states.

Within the wider EU regime, environmental NGOs have legal standing in court. One of the first court cases concerned chlorides discharged into the Rhine by French potassium mines, harming Dutch horticultural interests (Dieperink, 2011). The Clean Water Foundation, a Dutch NGO, together with some horticulturists and water companies, started legal proceedings in France, which eventually resulted in compensation paid by the mine owners to the horticulturists in the Netherlands. Legal standing, as well as access to environmental information and public participation in environmental decision making, is formally provided by the 1998 Aarhus Convention, which has been ratified by all Rhine riparian states.

The Rhine water quality regime

Since the 1930s, Dutch drinking water companies have raised concerns about the increasingly deteriorating water quality of the Rhine. In the 1950s and 1960s, ongoing industrial and municipal wastewater discharges and growing agricultural activity resulted in severe pollution, which prompted the Netherlands to put these issues on the agenda of the ICPR (Dieperink, 1998).

The first regulatory impulses for water pollution control and abatement in the Rhine catchment were set in the Rhine Chemicals and Rhine Chlorides Conventions (1976). The ICPR elaborated proposals with threshold values for harmful substances in wastewater discharges, following EC Directive 76/464/EEC on pollution (Dieperink, 1998, 2000; IKSR, 1976). The Chlorides Convention set concrete thresholds for chloride discharges from the Alsatian potassium mines.

Riparian states committed to mitigating the discharge of harmful chemical substances by implementing national pollution abatement programmes and water quality monitoring programmes.

Political pressure built in response to the toxic pesticides spill at the Sandoz plant near Basel in 1986, which caused major ecosystem damage and a public and media uproar. Several safety measures were implemented to prevent accidental spills, and the warning and alert system was improved (Froehlich-Schmitt, 2003). As a result, in 1987 the ICPR implemented the Rhine Action Program, with ecological (along with chemical) quality standards and measures.

Under the Rhine Action Program, which marks an important step towards integrated water management, the ICPR drafted a list of priority substances harmful to water organisms, species and drinking water production and identified their sources. It also made proposals for their abatement and set a state of the art for several industrial sectors involved in production and effluents. This led to a decisive reduction of point-source discharges and a sharp rise in the adoption of wastewater treatment plants by municipalities and industrial plants (Villamayor-Tomas et al., 2014; Wieriks & Schulter-Wülwer-Leidig, 1997).

A more eco-centric perspective of a 'living Rhine' is reflected in the Rhine 2020 programme from 2001 onwards (Buijse, Coops, & Staras, 2002; Jungwirth, Muhar, &

Schmutz, 2002). There are notions of a 'breathing river' that is 'not yet cured', which requires the 'removal of obstacles from the circuit' and a 'transplantation of green lungs' (ICPR, 2008, p. 21). This implies a major shift in concept, from a river subject to human intervention and control, to revaluing the Rhine as a living entity with a fragile ecosystem (ICPR, 2001, 2005). Considering impacts on both humans and the environment, actions focus on the reduction of gradual pollution from diffuse sources like pesticides seeping from agricultural land into the Rhine (ICPR, 2001). All riparian countries have initiated measures to reduce substance loads of micro-pollutants from municipal, agricultural and industrial activity, for instance through legal authorizations, bans or substance restrictions (ICPR, 2018; Plum & Schulte-Wülwer-Leidig, 2014).

The restoration of the natural water cycle is another focus area of a more eco-centric approach. This implies improving groundwater and sediment quality, and preventing abstraction from exceeding natural replenishment. Since groundwater pollution originates mostly from agricultural practices, measures like sustainable practices and voluntary agreements (EMAS, ISO 14001, etc.) have been promoted, aiming at reducing fertilizer application and nitrate leaching (ICPR, 2001, 2017a).

During the Sediment Management Plan of 2005–2009, a baseline assessment of the most important contaminants was performed and areas of concern with risks of remobilization were identified (Cals, Postma, Buijse, & Marteijn, 1998; Plum & Schulte-Wülwer-Leidig, 2014).

It has become clear that improvements in water and sediment quality do not result in ecological recovery without improvements in physical habitat conditions (Cals et al., 1998), and the Salmon 2000 programme addresses this issue. This programme aimed at the return of the Atlantic salmon to the catchment by the turn of the century. Since 1987, restoring the Rhine and its alluvial areas to a healthy, well-functioning ecosystem with abundant biodiversity has been a major ambition of the ICPR (ICPR, 2001, 2006; IKSR, 2013). Several measures were initiated to improve river continuity and biodiversity, including the construction of fish passes and restoration of salmon spawning and nursery areas (ICPR, 2013; Neumann, 2002; Raat, 2001). Other dedicated programmes aimed at restoring and improving biodiversity were started in Switzerland, France and Germany (Bundesamt für Umwelt, 2017; French Agency for Biodiversity, 2017; IKSR, 2013; Regierungspräsidium Karlsruhe, 2012; Staatliche Naturschutzverwaltung Baden-Württemberg, 2010). The ecological approach of the Rhine riparian states has strongly influenced EU water governance initiatives. A prominent and renowned initiative is the EU Water Framework Directive, which imposes substantive and enforceable requirements on member states regarding water quality and waters' ecological potential (ICPR, 2004, 2015; Junier & Mostert, 2012; Liefferink, Wiering, & Uitenboogaart, 2011; Newig, Schulz, & Jager, 2016). The EU Natura 2000 policy also requests the regular development and update of management plans and monitoring reports on the ecological condition of water bodies and riverbanks (IKSR, 2013; Koordinierungskomitee Rhein, 2007).

Although Rhine water quality has improved decisively over the years, and a more eco-centric approach has been applied in water quality policy, further ecological recovery remains a challenge. High-tech treatment is still needed before Rhine water can be turned into safe drinking water. De facto, the rights to be free from pollution, to

feed and be fed by sustainable aquifers, and to native biodiversity and restoration are recognized.

The Rhine flood regime

Flood defence by means of dikes used to be the dominant flood risk management strategy in the Rhine basin. Since the eleventh century dikes have been erected along the Rhine and its tributaries to reduce flood risk. The near-floods in the mid-1990s in Germany and the Netherlands prompted more holistic flood risk management. Since increasing human encroachment and activities had put a strain on available water retention areas, more 'room for the river' was required (Froehlich-Schmitt, 2003; ICPR, 2005). This implies a fundamental change in mindsets towards the acceptance of floods as part of the natural hydrologic cycle, and letting the river expand naturally during floods. Based on this perspective, river dynamics instead of human land use has become the force that at least in theory structures spatial development (Buijse et al., 2002; ICPR, 2001, 2005).

The paradigm shift in the policies of revaluing ecosystems and their services also facilitated this change in flood risk management approaches. Under umbrella concepts of holistic flood prevention, ecological and river continuity and habitat connectivity, efforts to restore the free flow in the mainstream of the Rhine up to Basel and its tributaries became popular. Holistic flood prevention aims for secure human livelihoods and ecological integrity and adopts both an anthropocentric and an eco-centric angle (Thomas & Knüppe, 2016). Its implementation is elaborated in the Rhine Action Plan on Floods and was later integrated into the Rhine 2020 programme. Its aim is to increase water retention to prevent flood damage and reduce extreme flood stages while protecting alluvial areas. Measures have been implemented at state and regional levels in Switzerland, Germany, France, Luxemburg and the Netherlands, including moving dikes back, implementing new retention areas along the Upper and Lower Rhine, reactivating and widening existing floodplains and lowering alluvial plains (ICPR, 2001, 2005). In both the Netherlands and Germany, national 'room for the river' programmes facilitated projects in several locations. The ICPR coordinated the development and implementation of national 'room for the river' plans, in line with the very open procedural prescriptions of the EU Floods Directive. According to this directive, flood risk management is a joint task of policy makers, infrastructure providers and authorities which requires collaboration across governmental levels and sectors, as well as with the wider public (ICPR, 2015).

In sum, we conclude that within the Rhine flood regime the right to flow and the right to restoration are de facto recognized.

The Rhine transport regime

Due to the favourable distribution of precipitation over the whole Rhine catchment area, water discharge levels are rather constant, and have thus offered good conditions for navigation. Over time, measures have been taken to improve navigation options. The first irreversible human interventions in the Rhine's natural conditions go back to the Roman Empire. For war purposes and respective waterway requirements, the river Ijssel was connected to the Rhine system, and a channel was dug to connect the main delta of the Rhine with the Meuse.

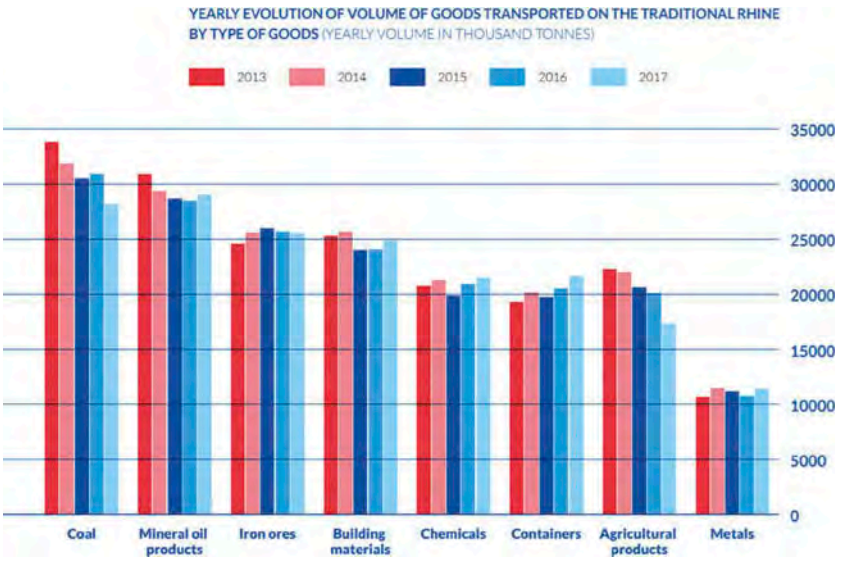

Figure 1. Yearly evolution of volume of goods transported on the traditional Rhine.
Source: Central Commission for Navigation on the Rhine, *Quarter 2: Annual Report Year 2018*, p. 39, https://www.ccr-zkr.org/13020800-en.html.

Over the years, river transport intensified. By the fourteenth century the Rhine had developed into an important cultural and economic artery of Europe (Huisman, n.d.a, n.d.b). Anthropogenic correction and straightening measures were taken to allow bigger ships to go from Rotterdam to Duisburg, the world's largest inland harbour, and further upstream as far as Rheinfelden in Switzerland. Figure 1 shows that substantial volumes are transported by river. As a result, the natural meandering of the river course was altered decisively, tributaries and alluvial arms cut off and natural river dynamics interrupted (Buijse et al., 2002; Wieriks & Schulter-Wülwer-Leidig, 1997).

The Rhine navigation regime is formalized in the Act of Mannheim (1868), which defines a single jurisdiction for shipping matters. According to this convention, shipping on the Rhine is free, sailors and fleet must be equally treated, an exemption from shipping charges is implemented, and customs clearance is simplified. Also, riparian states are obliged to maintain the Rhine's banks and must remove physical barriers to shipping. Ship safety and ship traffic regulation are standardized by the CCR. Specific regulations for the transport of dangerous substances have been developed to reduce the risk of spills from ships. The Act of Mannheim also establishes a commission to monitor these principles and has introduced specific Rhine waterway courts (CCNR, 2018).

The Rhine navigation regime specifies user rights. It is hard to argue that a de facto recognition of the rights of the river can be perceived.

Discussion: what could granting rights to Father Rhine imply for decision making?

Over the years the original characteristics of the Rhine basin were highly modified, but the previous sections also showed that procedures and policies have been developed to

counterbalance the man-made modifications of the Rhine water system. The question could be raised, what implications for the existing regime would result from granting procedural and substantive rights to the Rhine? Is it plausible that upgrading Father Rhine by granting him rights will result in a totally new game to be played in terms of decision making? To answer this question we will discuss who would be the river representative and guardian; where this agent could represent the rights of the river; how could this be done; and what the agent would demand.

Who should be the river representative and guardian, and where should this agent represent the river?

Since the river cannot speak for itself, it requires custodianship/guardianship to defend and protect its rights. In procedural terms, the Rhine would get a legal representative or a group of representatives with legal standing throughout the catchment area. Through this guardian or guardians, it could make use of the court system to settle any legal disputes arising from the breach of the rights and duties of either the river or the affected individuals or states. This means that any injury could be recognized: a polluter can be held liable for harm, and/or compensation could be ordered to benefit the river. The Rhine could be represented before national or supranational courts, such as the European Court of Justice. Guardianship also includes the duty to defend the substantive rights of the river not only in courts but also in other fora. This inevitably brings us to the question of who should represent the river. Guardianship is managed differently in Colombia, India and New Zealand. In Colombia, the court mandated the government to set up a commission of guardians, consisting of two river representatives (one community representative and one government representative) and an advisory team with scientists and NGO representatives (Cano Pecharroman, 2018). In India, the representatives appointed in *loco parentis*, human faces to protect and preserve the Ganga and Yamuna, are a mix of government representatives, academics and court members. In the case of the Whanganui River, guardianship is shared by the indigenous Iwi people and the government. It is complemented by an advisory team appointed by the trustees, the Whanganui Iwi and local authorities, and a strategy group with representatives of organizations with an interest in the river, comprising indigenous people, local authorities, river users, departments of states and environmental NGOs (Kothari & Bajpai, 2017). There are indications that the approach followed in New Zealand should be seen, at least partly, as a means of conflict resolution rather than an effort to effectuate river rights (Vries-Stotijn et al,, this issue). Finally, from the example of Ecuador we can learn that a legal representative need not be formally appointed as such. In Ecuador the court system interpreted and applied the river rights legislation (National Assembly Legislative and Oversight Committee, 2008).

So, guardianship may take many different forms. The question of guardianship seems to be inextricably linked with questions of efficiency, legitimacy and accountability (Suykens et al., this issue). Since there are no indigenous peoples identifiable in relation to the Rhine, it will be hard to decide which existing or future body should represent the river and how it should be composed. Should it be the long-established ICPR, together with the NGOs that currently have observer status to balance interests, or a new body to be established? Or could it be done on an ad hoc basis by an NGO that files a complaint in court arguing that a right of the river is being violated? In the

latter case no official guardian has to be nominated. The available examples and scholarship show that, paradoxically, the appointment of a legal representative for the Rhine will be an inherently anthropocentric and political process, not necessarily inspired solely by an inherent wish to appoint and effectuate river rights.

How should the representation be done?

Let us think through the consequences of granting rights to the river in the unlikely extreme case that procedural rights are formulated and implemented that give the river a key position in key decision-making arenas. The river will get access to decision-making procedures on the European, basin, national and sub-national levels. A key question is what this access will mean in practice (Suykens et al., this issue). Will the representative get observer status in a working group of the Rhine Commission (being the 12th out of then 21 NGOs with a green or nature profile), or will it get the same voting power as a member state in the plenary assembly of the Rhine Commission? And what about access to EU decision making? Member status is highly unlikely if not impossible, according to the Copenhagen criteria for EU accession. And since Rhine basin governance is fragmented over different levels and sectors, it could be challenging for the legal representatives to participate in all relevant decision-making fora.

What could a guardian demand?

Given that guardians have the option to defend the river's rights in front of court, we can assume that they do so in case of a detected violation of its substantive rights. Thus, we can infer that the most probable demand of these guardians would be that of restitution of the river to its state prior to this event and/or compensation for the damage. Things become more complicated when the damage was done in the past and no single culprit can be identified, which is the case for the Rhine. Could restitution then imply restoration to a healthy state prior to the violation (Kothari & Bajpai, 2017)?

India, Colombia and New Zealand are dealing with similar issues. For instance, the proposal for the National Ganga River Rights Act (Ganga Action Parivar, 2016) includes a provision to restore the ecosystem to its pre-damage state. In the Colombian case of the Atrato River, restoration of the river and its tributaries is stipulated by the new ruling. However, baseline data are absent, so there is a question about where to set the baseline of the pre-damage state to which the river should be restored (Cano Pecharroman, 2018). Another question is, who would receive compensation in the case of the Rhine, given the absence of an indigenous group to receive it? The Whanagnui River Claims Settlement Act of New Zealand, for instance, exhibits strong commitment to compensation, acknowledging the government's violations of the health of the river, and the rights and well-being of the indigenous people living on its riverbanks over the last century (Kothari & Bajpai, 2017).

In the face of these precedents, if the rights of the Rhine were to be officially recognized, actors would be facing the same questions of where to set the baseline for restitution (e.g., the pre-industrial river condition), how to deal with violations that happened in the past, and who to compensate for these past violations.

Our review has provided evidence for the de facto recognition of the rights to restoration of natural water quality (third right in the Universal Declaration); ecological recovery (second, fourth, fifth and sixth rights in the Universal Declaration); and restoration of free flow (first right in the Universal Declaration). In the Rhine basin, the shift towards a more eco-centric perspective has been institutionalized in policy programmes and associated monitoring systems and compliance mechanisms. But these are soft compliance mechanisms that focus on reporting, without strong material requirements. The latter might change if there were a river representative defending substantial river rights.

A river representative would probably request intensification of ongoing programmes for ecological recovery, asking for a strict implementation of the memorandum of the Rhine drinking water companies. According to this position paper (surface) water should be drinkable after simple filtration. Moreover, it is expected that cleaning up contaminated sediments will be higher on the agenda and that more ambitious ecological standards will be aimed for in the next round of elaboration of the Water Framework Directive. This may for instance result in strict standards limiting medicine residues in water. Further development of ecological monitoring will also be supported. Since the 1990s, under the Rhine Action Program and Rhine 2020, international and national monitoring of biological parameters has been carried out along the whole Rhine catchment. The recently adopted monitoring programme Biology 2018/2019 harmonizes monitoring efforts along the main stream by outlining minimum requirements for measuring stations and specifying sampling and data processing methods (ICPR, 2019; Koordinierungskomitee Rhein, 2007).

The representative of the Rhine might play a proactive role in the elaboration of a flood regime based on the natural flow of the river. This could include the designation of areas in which urban development will be prohibited. In its extreme form, we could see a managed retreat from flood-prone areas that are vital for the economy. In this case the guardian of the river needs enforcement power. The latter is not very likely, but we may expect the river's support for additional ways to live with the water, including houses on stilts, floating houses and other forms of flood mitigation. These options seem feasible, but restoring free flow and natural floodplains may severely conflict with transport interests, as it could result in the removal of weirs and dikes and thus lower water levels in the main channel, which could make shipping impossible.

Reinforcing the substantive rights of the river will inevitably conflict with the interests and rights of humans (see also Wuijts et al. and Chaturvedi, this issue). The latter might be restricted, which could have major implications for production and consumption, as well as land use. Hence, it seems implausible that the rights of Father Rhine would be absolute. After all, it is still humans who decide whether rights will be granted to the river and what they may imply in practice. We expect that substantive rights of the river will be viewed as relative rights, which are bound by the rights of other, human entities. So, balancing and prioritization of rights will be needed.

A key question here is how the rights of the river will be weighed against other rights and how they will be enforced. A closer look at cases in Ecuador and India provides insight into the range of real-life outcomes where the rights of nature were weighed against societal needs. Ecuador adopted rights for nature in its constitution of 2008, which the constitutional court officially recognized as central to the constitution. In

2016, citizens filed a protective action against the provincial government of Loja concerning the Vilcabamba River. The government had dumped excavation material from a road-widening project into the river, which changed the river flow and induced flooding in 2009 and 2010. Referring to the violation of nature's rights as laid down in the constitution, the court ordered the provincial government to avoid further damage in the future and to submit a plan to remediate the damage (Iorns Magallanes, 2018). In that case, the court acted as the authority on how to balance nature and other rights. In India we can see a more pragmatic approach of favouring development needs over environmental considerations. Following an order of the Uttarakhand High Court, the central government was obliged to set up a Ganga Management Board to improve river management, whose function is ambiguous. It mainly supports hydropower generation, navigation and industry at the expense of the rights of the Ganga and Yamuna (Kothari & Bajpai, 2017).

We therefore expect that the direct influence of granting rights to the Rhine, in the sense of clearly identifiable changes in decision-making processes that reflect a more eco-centric approach to river basin management, will be limited in the Rhine context. Much progress towards such an approach has been made in the past decades, to the extent that such progress is not in conflict, or even in synergy with human interests. But it seems unlikely that humans will grant rights to rivers, with corresponding implementation, monitoring and enforcement mechanisms, that severely restrict human activities for the sake of the river only.

Conclusion

We have explored whether the granting of rights to Father Rhine would transform decision-making processes concerning water quality, flooding and navigation in the Rhine basin. We find that granting rights would result in a new ecological voice in decision-making in the Rhine basin, which could team up with already present voices of environmental and nature protection organizations and drinking water companies. But a stronger ecological voice could conflict with vested interests in flood protection and navigation. Substantive changes therefore would greatly depend on the specific powers granted to the river. Due to the high stakes involved, it is quite unlikely that the river will get a decisive role in decision making over Rhine water governance issues.

The reflection in the previous section, however, suggests that the legal changes introduced by the Rhine treaties and the EU Water and Habitats Directives could act as a driving force towards a long-term transformation in river basin governance. The transformational route we envisage is a gradual one, where legal changes indirectly lead to amended policy discourses that, with some degree of uncertainty, can be expected to influence policy outcomes and impacts. Granting rights to rivers will probably not lead to radical and clearly visible impacts in the short term. A reason for this obduracy in the short term, besides existing path-dependency mechanisms, is that rights are not absolute: they are always relative, and the rights of a river need to be balanced with the rights of other entities, such as humans, other rivers, and possibly other non-human entities such as forests (if and when we grant rights to them as well). Voices that aim to effectuate the rights of the river will be counterbalanced by voices with some other aim.

In the Rhine basin some de facto implementation of material rights is already present. The voice of the river could reinforce these trends, but granting rights to Father Rhine may also be considered an example of symbolic ('feel-good') policy making. In other basins, where ecological recovery is not yet being addressed, granting rights to the river may put new ecological ideas on the governance agenda. In such cases, granting rights to the river may really make a difference. But since rivers need to be represented by people, the question arises whether a real eco-centric approach can be achieved by granting rights to rivers. In the end, it will always be humans who must interpret what the river might want.

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Towards a rights-based approach in EU international river basin governance? Lessons from the Scheldt and Ems Basins

Herman Kasper Gilissen[a], Cathy Suykens[a], Maarten Kleinhans[b], Marleen van Rijswick[a] and Karianne van der Werf[b]

[a]Utrecht Centre for Water, Oceans and Sustainability Law, Department of Law, Utrecht University, Netherlands; [b]Department of Physical Geography, Utrecht University, Netherlands

ABSTRACT

This article finds that the introduction of a rights-based approach in EU transboundary river basin management to remedy observed systemic difficulties and to better achieve legal water quality standards could be a next step in achieving integrated river basin management. However, its effectiveness largely depends on the willingness of member states to share river basin districts to subordinate their separate socio-economic interests to ecological needs, as well as to grant a clear mandate and partly transfer responsibilities and powers to a competent supranational authority.

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Introduction

A great deal of effort has been expended in the European Union (EU) to meet the environmental requirements of the Water Framework Directive (WFD) since it was issued at the beginning of this century. Nonetheless, despite considerable progress, the chemical quality and ecological potential of many surface water systems still fail to meet prescribed standards (Wuijts, Driessen, & Van Rijswick, 2018). One reason for this is the absence of effective mechanisms for coordination and cooperation for the many transboundary river basins (Van Rijswick, Gilissen, & van Kempen, 2010). Existing approaches appear to have reached their limit, necessitating consideration of unconventional approaches to EU water quality law and governance. Among these are recognizing that natural entities such as rivers have legal rights. While far from a new idea (Stone, 1972), legal recognition of such rights is a very recent phenomenon globally (Hutchison, 2014; Morris & Ruru, 2010; O'Bryan, 2017). Since rivers are 'voiceless', implementation of their rights requires representation by an authoritative body, or *custodian*, that can act *in jure* to safeguard it from unlawful infringements of its rights (Stone, 1972).

This article builds on the idea of introducing a rights-based approach in EU water quality governance, drawing inspiration from such developments. In this article, an authoritative body as mentioned above is referred to as the river's *custodian*, and its assigned set of tasks and competences as its *custodianship*. The central question of this article is what constitutes custodianship, and what are the opportunities for and barriers to the implementation of such a rights-based approach. This question is discussed in

CONTACT Cathy Suykens c.b.r.suykens@uu.nl

the light of the EU's 'river basin management approach' in general (Keessen, van Kempen, & van Rijswick, 2008), and then focusses on the international river basin districts (IRBDs) of the Scheldt and the Ems.[1] In this article, 'the Scheldt' and 'the Ems' refer to the respective IRBDs, unless explicitly stated differently.

The Scheldt has its headwaters in the French Hauts-de-France region, follows its course through the Walloon, Flanders and Brussels regions of Belgium, and runs into the North Sea through the Western Scheldt Estuary in the Dutch province of Zeeland; thus, the IRBD of the Scheldt (including its tributaries) partly covers the territory of three EU member states (France, Belgium and the Netherlands). The Ems has its headwaters in the German state of Nordrhein-Westfalen, follows its course through the state of Niedersachsen, and runs into the Wadden Sea through the Ems-Dollard Estuary; thus the IRBD of the Ems (including its tributaries) partly covers the territory of two EU member states (Germany and the Netherlands).

The article substantively and methodologically builds on empirical research and desk studies conducted by the authors within the frameworks of a combination of earlier and current mono- and interdisciplinary research projects (Gilissen, 2009; Mees, Suykens, & Crabbé, 2017; Suykens, 2018b; Van Rijswick et al., 2010).[2]

This article is structured as follows. First, it discusses the substantive and institutional dimensions of the concepts of river rights and custodianship to create a general framework for further analysis. Then, it delves into the physical characteristics and 'needs' of river systems, in particular those of the Scheldt and the Ems. This is an important first analytical step, as these needs, which can vary per river system, are – based on this article's line of argument – inextricably linked to a river system's rights, on the safeguarding of which custodianship focuses. Third, the current EU river basin management approach is briefly discussed, followed by further scrutiny of the institutional arrangements for the governance of the Scheldt and the Ems. This is another important analytical step, because it gives insight into the particular legal and governance landscapes in which custodianship has to be rooted. Fifth, the added value and particularities (e.g., opportunities and constraints) of granting rights and custodianship to rivers are discussed. Finally, on the basis of these findings, we preliminarily assess whether granting rights to rivers might abate current observed flaws in EU river basin management, and thus whether transboundary EU rivers, in particular the Scheldt and Ems, could benefit from obtaining rights.

General framework: substantive and institutional dimensions of custodianship

Assuming that introducing the concept of custodianship per se can be beneficial for safeguarding 'river rights' and improve the ecological potential of river systems under pressure from economic use, two key questions emerge when contemplating the introduction of this concept in the EU domain of river basin management. The first is substantive, and the second is institutional: what would custodianship over specific river systems substantively constitute, and how could this be implemented in the existing governance structures of specific IRBDs? Constituting the backbone of this article's analysis, these dimensions are first generally elaborated on below. In the following sections, the IRBDs of the Scheldt and the Ems are further analyzed through

the lens of these dimensions to assess whether the introduction of the concepts of river rights and custodianship could be of added value in the governance of these IRBDs.

Before being able to meaningfully discuss forms of custodianship in relation to river systems, a sound construct of 'river rights' is to be created. How do we define river rights, and how do these relate to other rights and demands, including those of humankind? In defining river rights, we first have to recognize that river systems have a 'will' which is essentially dictated by the laws of nature and physics. What a river 'wants' is to freely and undisturbedly pursue this will, regardless of institutional or other man-made boundaries. From the perspective of the river itself, i.e., a purely ecocentric perspective, the freedom to undisturbedly pursue its will can be seen as the most comprehensive and abstract right, from which more specific rights can be derived (see below). Any disturbance can be seen as an occurrence or an act against this will and thus as an infringement of these rights. However, whereas these rights can only be fully respected in the pure absence of any disturbing factors, including other rights, needs and demands, which is currently not the case, these rights can never be absolute but have to be balanced against the needs of others, notably human beings. Nonetheless, such river rights can formally be recognized (e.g., through granting legal personality to river systems), and they can be subject to safeguarding by a custodian.

But what specifically are these more concrete river rights? It should be understood that ecological characteristics of river systems and ecological, hydro-morphological, climatic and other relevant circumstances vary across the world. While ecosystem value and functioning are difficult to measure and characterize, they are strongly coupled to the physical characteristics and geographical setting, together pragmatically called the natural system. A close determination of such characteristics and circumstances is needed to determine a specific river system's 'will' and needs. In addition to more general conceptions of river rights, such as the right to flow, the right to perform essential functions in its ecosystem, the right to be free from pollution, the right to feed and be fed by sustainable aquifers, the right to native biodiversity, and the right to restoration (Earth Law Center, 2017), and in anticipation of a closer analysis in the following sections, examples of ecological needs of river systems which can be considered as river rights are the availability of a temporally variable but on average constant salinity gradient from the river to the sea; natural variability in conditions of freshwater supply, sediment and tides; perpetually migrating channels and dynamic shoals and bars; and a constant volume and area of salt marsh and flood basin area. Such ecological needs should be distinguished from other needs, such as navigability and quantitative or trajectory controllability, which are important from an anthropocentric perspective but are no criteria for calling a river a river from an ecological point of view. In representing a river system, a custodian would primarily focus on that system's rights and needs and thus take an ecocentric approach.

Since perspectives differ (Van Rijswick, 2008), needs for or uses of water resources can be at odds, even incompatible. This creates a need to systematically balance interests. Indeed, combatting environmental and ecological degradation and conflicts between differing needs and interests has been on political and legal agendas for the previous decades. Yet the anthropocentric perspective remains dominant in ecologically and environmentally oriented agreements and regulations. Striking examples are the possibility of designating artificial or heavily modified bodies of surface water as exempt

categories under the WFD, and more generally the directive's exemption clauses as such. To balance diverging needs and interests from an ecocentric perspective, a custodian would estimate the degree to which human activities would interfere with ecological processes and judge their allowability accordingly, instead of trying to give ecological interests a place in a man-made environment.

In this sense, the concept of custodianship can be seen as a novel response to the idea of the malleability of earth systems, which is predominant in most current environmental policies (Gilissen, 2015). Apart from rethinking the position of mankind in relation to its living environment, introducing a concept such as custodianship raises questions about its implementation in current governance settings. Just as ecological, geological and climatic circumstances vary across the world, governance structures vary politically, legally and culturally. Thus, just as river rights can differ regionally, there is and can be no one-size-fits-all construct for custodianship. Instead, tailored arrangements should be made to root custodianship in existing legal and institutional frameworks and societal context. General aspects to be taken into account are the division of responsibilities and competences among relevant actors in regional water governance structures, and regulations or customs relating to the engagement of interested parties in policy- and decision-making procedures, as well as their admissibility in court. This becomes even more important – and potentially more complex – when a river system covers the territory of two or more states (Gilissen, 2009; Suykens, 2018b).

To conclude, what is the role of a custodian, and how can this role and the custodianship be implemented? The key role of a river's custodian would be to represent that river and give voice to its interests, needs and rights in crucial stages of decision making that potentially affect that river's essential conditions, preferably not only in court. Functioning as the 'environmental conscience' in policy and decision making, a custodian should not be blind to any other interests or needs, but would argue from the perspective ('will') of a river system and would approach and value other interests from an ecocentric perspective. Importantly, to sharpen the focus and assign tasks to a custodian, the specific ecological needs and other characteristics of a river system need to be understood. Likewise, it is crucial to understand the river's governance environment in which a custodian is to operate, as the institutional form in which custodianship is moulded can be decisive for the effectiveness of the execution of its tasks among other actors. Lastly, but considerably most important in such a politicized domain as river system management, a custodian (and the river rights it seeks to safeguard) should be recognized by all relevant parties as a key actor in the decision-making process and should be given the space and mandate to properly fulfil its tasks. This requires considerable independence.

Analysis of river system characteristics: specifying the substantive focus of custodianship

Connectivity as a key characteristic of river systems

River systems are best characterized by connectivity in a number of basic properties that interact locally, in the downstream direction along the entire system, and upstream over a considerable distance. The upstream drainage basin, meaning the entire area

from which precipitation flows into the river, supplies freshwater, sediment ranging in size from mud to boulders if the streamflow can carry it, nutrients, organic matter, seeds and living species (Kleinhans, 2010). This means, for example, that upstream changes in overland and channel flow affect downstream flood levels and frequency, and that upstream water quality affects downstream ecological functioning. Thus, fluxes of matter connect the entire system from headwaters to the sea in hydrologic, sedimentary and ecological ways.

This connectivity is the reason the river basin approach was formulated (Van Buuren, Gerrits, & Teisman, 2010). In governance terms, it translates into integrated river basin management, which can be understood as 'the process of coordinating conservation, management and development of water, land and related resources in a given river basin, to maximize the economic and social benefits derived from water resources in an equitable manner while preserving and, where necessary, restoring freshwater ecosystems' (Global Water Partnership, 2000).

Connectivity also exists in an upstream direction in most rivers. Flow in lowland rivers is slowed by the downstream reduction of gradient and presence of vegetation, structures, dams and dikes, all of which raise water levels. The water level rise is not only local but extends upstream through the backwater effect. The upstream distance over which water level effects are noticeable depends on water depth and inversely on gradient and range, from one to tens of kilometres inland. This affects areas both along the river and across its floodplains, where vegetation steers floodwaters that spread sediments and seeds. Below, we provide case studies with more specific information on the Scheldt and the Ems.[3]

The Western Scheldt estuary

In the case of estuaries such as the Western Scheldt and the Ems there is much greater downstream-to-upstream connectivity. Focusing on the Scheldt, the width and depth of the mouth where the river debouches into the sea is so much larger than that of the upstream river that the contribution of the river discharge to the flow of water is negligible. On the other hand, saline water and sediment from the sea flow in and out of the estuary, driven by the tides (Savenije, 2015). The gradual mixing of saline and fresh water causes a salinity gradient that strongly affects mud dynamics and species. Zones with relatively high mud concentrations are unique to estuaries, as are plant and animal species that can survive in habitats with variable salinity and good water quality. The strong tidal currents cause perpetual movement of channels and bars, while mud flats and salt marshes are destroyed in one place and recreated in another (Leuven, Kleinhans, Weisscher, & Van der Vegt, 2016), and precisely these dynamics are required by the species specific to estuarine habitats (Cozzoli et al., 2017).

Furthermore, the vertical tidal water level fluctuations in the sea propagate upstream as a tidal bore; in the Scheldt system, far landward of Antwerp. The upstream speed of the wave depends on water depth, meaning that channel deepening by dredging enhances tidal propagation. More importantly, the decay of the wave in the landward direction depends on the width of the entire estuary and the presence of intertidal area, salt marsh and flood basins (Smolders, Plancke, Ides, Meire, & Temmerman, 2015). This means that reduced decay due to channel deepening and estuary narrowing in the

seaward part raises the flood level far upstream. The upstream tidal effects interact with the backwater effects far upstream of the zone where the currents no longer reverse during the tidal cycle (Hoitink & Jay, 2016). Good water quality, a variable salinity gradient, the movement of channels and continuous natural formation and destruction of tidal flats and marshes are system characteristics and needs that a river custodian should focus on when representing the voice of the river.

The Ems-Dollard estuary

The Ems basin spans northern Germany and the Netherlands. Its estuarine system comprises the lower Ems River (or Tideems) in Lower Saxony (Germany) and the Ems-Dollard estuary. The Dollard originated in a series of storm surges in the thirteenth and fourteenth centuries AD (RWS, 1966; Stratingh & Venema, 1855). Ever since, the morphology of the river and estuarine system has been dramatically altered by human intervention, including land reclamation, sluices, dams and barriers, channel deepening and straightening, to benefit navigation and the regional economy. In the 1950s, the Ems-Dollard was engineered into a single (main) channel, unlike its previous multiple-channel system characteristic of natural estuaries (Bos et al., 2012).

The main concerns regarding the extensive construction and dredging works in the river are the high concentration of mud in the water and an increase in tidal range (De Jonge, Schuttelaars, Van Beusekom, Talke, & De Swart, 2014; Van Maren, Van Kessel, Cronin, & Sittoni, 2015a). The zone of maximum sediment concentration has moved 25 km upstream (De Jonge et al., 2014). This is highly destructive to the ecosystem, which relies on light penetration for primary production of single-cell organisms at the bottom of the food chain. Primary production has decreased by about 50% compared to 1970s, especially at the seaward area of the estuary (Taal, Schmidt, Brinkman, Stolte, & van Maren, 2015), and is disruptive of the entire aqueous ecosystem (PRW, 2012). Flood risk has also increased as the inland tidal range at Papenburg increased from 1.6 m in 1950 to 3.6 m in 2010 (Van Maren, Winterwerp, & Vroom, 2015b). These adverse changes, mainly caused by human interference, are evident in other European estuaries and foreshadow ecological degradation, in particular in the Scheldt and Ems.

From river needs to river rights

The key role of a custodian is to represent a river system in the safeguarding of its rights. These rights can be derived from the system-specific characteristics and needs of river systems. On the basis of the preceding analysis, some concrete examples of needs of both the Scheldt and the Ems that could be considered rights that constitute custodianship, are:

- A temporally variable but on average constant salinity gradient from the river to the sea. This is important for species, and could be disrupted by changing the upstream freshwater supply and by downstream barrages that reduce salinity intrusion (as in Lake Grevelingen) or increase salinity due to channel deepening (as in the Nieuwe Waterweg/Meuse estuary at the city of Rotterdam).

- Natural variability in conditions of freshwater supply, sediment and tides. Downstream storm surge barriers reduce the tidal amplitude that supports natural dynamics (Cozzoli et al., 2017). Upstream dikes and dams change or remove natural variation in discharge, which strongly affects cyclic rejuvenation of floodplain plant species and makes invasion of species more likely (Van Oorschot, Kleinhans, Buijse, Geerling, & Middelkoop, 2018). Reduction of sediment input leads to lower sedimentation rates or even erosion of wetlands (Van der Deijl, van der Perk, & Middelkoop, 2017).
- Perpetually migrating channels and dynamic shoals and bars. This is as important as meander migration and cut-off in rivers to rework the habitats from higher to lower intertidal, and to rejuvenate populations (Leuven et al., 2016; Van Oorschot et al. 2018). But it is disrupted by hard bank protection and by dredging that tends to fix channels in place, and by disposal of dredged material on shoal margins.
- A constant area and volume of salt marsh and flood basin area. This is reduced by land reclamation (as in the Braakman) and by sedimentation (as in the Verdronken Land van Saeftinghe), but increased by tidal wetland creation (Smolders et al., 2015).

Analysis of legal and governance arrangements for transboundary river basins: determining the custodian's institutional environment

EU river basin management

Before focusing on the legal and governance mechanism of the Scheldt and the Ems, it is relevant to scrutinize the EU context. The countries sharing the Scheldt and the Ems are EU member states and thus are responsible for implementing relevant EU legislation. Quintessential in this context is the so-called river basin approach put forward by the EU with the entry into force of the WFD in 2000, which also lies at the basis of the 2007 Floods Directive (FD) (Keessen et al., 2008; Van Rijswick et al., 2010; Van Rijswick & Havekes, 2012). The river basin approach entails that EU member states sharing a river system govern it on the basis of its hydrological boundaries, as opposed to the administrative and legal boundaries separating their respective territories (Keessen et al., 2008). The relevant hydrological units are referred to as international river basin districts.

A series of requirements exists for states to cooperate in these IRBDs (Gilissen, 2009; Hey & van Rijswick, 2010; Suykens, 2018b; Van Rijswick et al., 2010). More specifically, states should adopt the appropriate administrative arrangements to assign individual river basins in their territories to (international) river basin districts. Subsequently, the WFD requires member states to designate a competent authority (Articles 3.1 and 3.2). This competent authority is not necessarily the entity operating at the international district level. Member states are not obligated to designate the entity acting at the IRBD level as the competent authority *vis-à-vis* the EU level (European Parliament, 1999, Amendment 5).

Remarkably, in the process of adoption of the WFD, the provisions related to the power of the competent authorities were loosened. The commission's initial proposal explicitly required member states to ensure that these authorities would be granted

sufficient power to execute their tasks (European Commission, 1997), but this provision was not retained in the final version of the WFD. In practice, there is widespread incoherence in the manner in which these authorities have been designated for (international) river basin districts across the EU. For example, some member states have designated several authorities for one river basin district, whereas others have designated one authority for several river basin districts (Suykens, 2018b).

The cooperation paradigm is mainly reflected in the coordination of plans (river basin management plans for the WFD and flood risk management plans for the FD). However, the legal value of the applicable cooperation requirements can be questioned. Member states need to ensure coordination with the aim of submitting one single international plan, but if they fail to do so, they may promulgate plans for the parts of the IRBD in their respective territories. Although there are coordination requirements for the adoption of the plans as a whole, albeit obligations of effort as opposed to obligations of results, neither the WFD nor the FD makes substantive requirements for cooperation with regard to specific elements that constitute the relevant plan, e.g., the setting of objectives (including the needs of the river basin itself as described above) or the preparation of maps (Suykens, 2018b).

In conclusion, the river basin approach constitutes a landmark shift in EU environmental and water law (Van Rijswick & Havekes, 2012), but tangible requirements and mechanisms to actually sculpt governance in international river systems, necessary to bring the river basin approach to life, are weak and vague. Apparently politically infeasible at the end of the previous century, strengthening this transboundary dimension of the directives should be reconsidered to increase the effectiveness of integrated and transboundary river basin management (Suykens, 2018b). Perhaps it is time to revisit the institutional mechanisms governing transboundary river basin management in the EU.

This is where river rights and custodianship come into play. Would river rights and custodianship be an appropriate instrument to enhance the currently applicable river basin approach, and thus be helpful to improve the water quality and ecological potential of transboundary water systems? And would the authority operating at the level of the IRBD be an appropriate custodian to enforce the rights of the river, or would this rather be (one of) the national authorities or even a newly established institution? The subsections below further explore the governance regimes of the Scheldt and the Ems (see the online supplemental data at https://doi.org/10.1080/02508060.2019.1649629 for more information), with the goal of demonstrating the practical relevance of this question.

The IRBD of the Scheldt

A complex web of authorities

Since the Scheldt runs exclusively through the territories of three EU member states (France, Belgium and the Netherlands), the EU river basin approach and the administrative arrangements associated with the designation of the status of IRBD apply to this river system. In other words, the IRBD of the Scheldt should be governed as a hydrological unit, despite the territorial boundaries separating the three states (and regions). But almost two decades after the entry into force of the WFD, this has proven

to be much more easily said than done. The institutional arrangement for the Scheldt is complex and fragmented (Suykens, 2018b).

This complexity can be traced back to several factors. First, the number of competent authorities at all levels of governance is significant (Gilissen, 2009; Gilissen et al., 2016). At the highest level of governance, this means that negotiations are not limited to three countries but to five, as competences in Belgium with respect to environmental and water-related matters belong to the level of the regions, namely the Flemish Region, the Brussels Capital Region and the Walloon Region. Second, there is a mismatch at administrative and political levels in terms of authorities responsible for river basin management in the countries involved (Chilla et al., 2016; Gilissen, 2009; Suykens, 2018b). Dutch regional water authorities truly are 'hydrological-scale entities' as they operate at the appropriate hydrological scale and have legal personality, binding decision-making power and financial autonomy. In contrast, their Flemish counterparts, the so-called 'sub-basin boards', do not have legal personality and are dependent on the Flemish government for human, financial and administrative resources (Mees et al., 2017).

The International Scheldt Commission and the Flemish-Dutch Scheldt Commission

Besides the national and regional authorities, bilateral and international entities have been created to enable cooperation in governing the Scheldt. The entity operating at the level of the Scheldt IRBD is the International Scheldt Commission (ISC). This is the relevant authority for the multilateral governance of the Scheldt in the context of the EU river basin approach, as its geographical scope extends to the whole river basin (Gilissen, 2009; Suykens, 2018a). Cooperation under the auspices of the ISC takes place on the basis of the 2002 Scheldt Treaty (Gilissen, 2009; Van Rijswick et al., 2010). This treaty enables the multilateral cooperation process necessary for the implementation of the WFD and FD. The Scheldt Treaty provides that 'states work together' to coordinate the implementation of the requirements of the WFD for the IRBD and adopt a single management plan for the WFD. Such coordination constitutes an obligation of best effort, mirroring the EU provision the treaty aims to implement.

But the ISC has not been designated as the competent authority in the meaning of the EU directives. Instead, the national-level authorities have been put forward as the appropriate competent authorities. This is an important element to consider in considering which of the current entities (if any) would be the most eligible to be considered the custodian of the Scheldt (see below). Nonetheless, the ISC does constitute the platform for international cooperation, for example, for the coordination of the joint 'roof report' which supplements the national river basin management plans and flood risk management plans.

There is yet another authority that operates in parallel to the ISC, but only for a part of the IRBD, namely the Scheldt Estuary. This is a bilateral entity that addresses relations between the Netherlands and the Flemish Region is the Flemish-Dutch Scheldt Commission (FDSC). The geographical scope of the FDSC extends to the Scheldt Estuary, which is the area of the Scheldt where freshwater and seawater mix and which is constituted by the Seascheldt landward of Antwerp and the Western Scheldt that debouches into the North Sea. The treaty which underlies the functioning of the FDSC dates from 2005 and requires this commission to evaluate whether and

how the objectives set forth in the treaty have been achieved and to advise the parties to the treaty on measures in this regard (Technical Scheldt Commission, 2001; De Jong, 2010; Flemish-Dutch Scheldt Commission, 2014, 2015). The FDSC is involved in the preparation of permits for dredging for shipping channel maintenance. This indicates that the main focus of the treaty and the FDSC is on maintaining navigability for economic reasons. The well-documented increase of flood levels due to the deepening of the estuary in the Netherlands is monitored and compensated for by the Sigma Plan in Flanders (Levy, Plancke, Peeters, Taverniers, & Mostaert, 2014). Maintaining sufficient ecologically valuable habitat is also regulated, particularly for the intertidal area in the Netherlands and for water quality, which has consequences for the disposal of dredged material.

The IRBD of the Ems

Governance of the Ems basin is spread across several administrative levels in two countries (Germany and the Netherlands), tied to the WFD, the FD and the Birds and Habitats Directive (BHD), including provisions on Natura2000 sites. The Permanent Dutch-German Ems Committee settles practical matters relating to the use of the disputed border area (Ems-Dollard Treaty 1960), but management for compliance with the WFD and FD is in the hands of the German states (*Länder*) North Rhine-Westphalia and Lower Saxony, joined in the Flussgebietsgemeinschaft Ems (Ems River Basin Community), and the Dutch central government. The environment and infrastructure ministries are the competent authorities that form the Ems Steering Group on the strategic level, and the Ems Coordination Group on the operational level (SGD Eems, 2015).

The ecological state of the Ems, in terms of the WFD, was considered poor and difficult to ameliorate, especially in the Tideems. Therefore, an extra five-year management cycle was decided on to reach the WFD standards by 2021 (SGD Eems, 2013). The BHD is integrated in the river basin management plan, which focuses on habitats and flora and fauna species in 12 'special areas of conservation or protection' within the Ems basin. The competent authorities in that respect are the German states and the Dutch province of Groningen. The federal/national governments are involved only for decisions in the disputed area and law making (Netherlands), or when it touches on national matters of water management and navigation (Germany). At lower administrative levels, the regional water management authorities (Netherlands), Landkreise (districts in Germany) and municipalities (Netherlands and Germany) are involved.

In the Ems-Dollard area, economic use (navigation, harbours, shipyards) and nature conservation have conflicting interests when it comes to managing the estuarine system. The situation and possible plans for compliance with both the WFD and the BHD, along with views and interests of other parties and stakeholders, are described in the Integral Management Plan. This plan explicitly does not weigh interests for decision making, nor is it legally binding; however, it does provide the specialist grounding for management (IMP, 2016), which is further specified for each country in the Masterplan Ems 2050 (D) and MIRT (NL) (Ministry I&M, province Groningen, 2015), which are legally binding. These policy documents express a desire to cooperate across the border, which takes shape in the project Ems-Dollard 2050 and facilitates the platform

Economy and Ecology in Balance. It is up to the competent authorities in both Germany and the Netherlands to balance the needs of economic use with those of nature for decision-making on management plans in the river system.

Despite these efforts, the Ems-Dollard region is still in the process of defining strategies for the implementation of the WFD and the BHD. The economic stakeholders, especially in Germany, are concerned that nature restoration measures hinder economic activities. The functioning of harbours and shipyards has been addressed in policy documents, such as the Masterplan Ems 2050. The deepening of the Ems, however, is one of the main causes for the current poor state of the ecosystem as well as the sediment problems.

Discussion: potential for and constraints on the introduction of a rights-based approach in the legal and governance arrangements of selected IRBDs

In the foregoing sections, insight was given into the characteristics and ecological needs of river systems, in particular those of the Scheldt and the Ems. The EU integrated river basin approach was scrutinized, as well as the particular institutional and governance arrangements within these IRBDs. This was done to specify the scope and focus of custodianship (i.e., to determine which river rights a custodian would seek to safeguard; examples were listed above) and the institutional environment in which a custodian is to operate. On the basis of this information, in this section the added value and feasibility of a rights-based approach in the legal and governance arrangements of these IRBDs and their overarching EU framework are discussed.

Precedents

Two recently adopted legal and policy initiatives exemplify the role of custodians in the rights-based river basin management spectrum. These are the Whanganui River in New Zealand and the Yarra River in Australia. The Whanganui River has been granted legal personhood through the Te Awa Tupua Act 2017, and the Yarra River has been granted 'a voice' through a custodian pursuant to the Yarra River Protection Act 2017. For the Whanganui River, the relevant custodian is the Te Pou Tupua, which is referred to as 'the human face of the river' and which has the competence to act on behalf of the river (O'Bryan, 2017, 2019 [this special issue]; see Article 18 of the Te Awa Tupua Act 2017). The interests of the Yarra River are defended by the Birrarung Council, the 'voice' of the river.

A major difference between the two custodians is that the Te Pou Tupua is the legal guardian, acting on behalf of the Whanganui River as a legal person, whereas the Birrarung Council cannot be considered the legal guardian of the Yarra River, as it does not have legislative or enforcement powers to act on behalf of the river (O'Bryan, 2017). Indeed, the Yarra itself is not considered a legal person (in contrast to the Whanganui). The Birrarung Council is a statutory body that provides advice to the government in developing strategies and plans to protect the health of the river. In contrast to the advisory role of the Birrarung Council, the Te Pou Tupua acts as a landowner on behalf of the river, and has 'full capacity and all the powers reasonably necessary to achieve its purpose and perform and exercise its functions, powers and duties' (Article 18(3), Te Awa Tupua Act 2017).

The Te Pou Tupua and the Birrarung Council also differ in size and membership. The former has just two members, one a representative of the government and the other of the indigenous *iwi* (tribe); the latter has 12 members, including representatives of indigenous groups, industry and environmental associations (Article 20, Te Awa Tupua Act 2017; and Article 29, Yarra River Protection Act). It is too early to draw empirical conclusions about the effectiveness of the respective legal frameworks underpinning the 'voice' of the Yarra River and the 'human face' of the Whanganui River. Although these two initiatives can serve as a source of inspiration for the introduction of rights-based approaches in river basins all over the world, the site-specificity of their circumstances and objectives should be kept in mind.

Would a rights-based approach be of added value in EU river basin management?

A first general question that arises is whether the introduction of a rights-based approach, inspired by the examples above, would be of added value to the current system of EU transboundary river basin management. Compared to many transboundary river basins in the world, the EU approach of integrated river basin management as developed in the WFD and the FD itself has been an important first step towards managing river systems in a comprehensive way. This has fostered and formalized the recognition of ecological needs and the need to improve and safeguard water quality and ecological potential. Additional legislation, such as the BHD, further aims to take the needs of river ecosystems into account as an integral part of river system management.

Nonetheless, the observed flaws and ineffectiveness of the current system and the ecological state of river systems after almost two decades of integrated river basin management, noted above, require and justify a next step in development. Drawing inspiration from developments in other parts of the world (Hutchison, 2014; O'Bryan, 2017, 2019), considering the introduction of a rights-based regime can be such a next step. Although this would most likely require fundamental systemic and attitudinal changes and thus pose major challenges to current actors in river basin management, the introduction of such a regime could also be seen as a potential progression in the line of development in the EU environmental/water policy domain of the last decades.

How and where to implement river rights?

Assuming that a rights-based approach can be of added value, a next question is at which level of governance such an approach could best be implemented; would this be at the EU, international river basin (bilateral or multilateral), domestic, or regional level? Domestic and regional do not seem to be the proper levels, at least not in case of transboundary river systems, mainly because that would not respect the high degree of connectivity within such systems (see above). Given the potential differences between ecological needs and other characteristics of transboundary river systems, which are relevant to formulate specific river rights, the EU level also does not seem to be the proper level to *substantively* implement river rights, although this level could provide a general framework to promote uniformity and coherence in approaches across the EU. Indeed, the international river basin level seems to be most apt, as at this level specific circumstances can best be taken into account

by relevant actors in their specific river conventions. These conventions (treaties) could be a legal basis for granting legal personhood and the accompanying river rights to river systems, as well as for the implementation of custodianship.

Nonetheless, implementing a rights-based approach would require a complete substantive overhaul of current legal and governance arrangements and would depend on the willingness and perseverance of member states sharing transboundary river basins. Although the current provisions of the WFD and FD do not prohibit member states' adopting a rights-based approach for their shared IRBDs, the adoption of more compelling (overarching) provisions thereto in those directives seems unfeasible, especially considering the laborious process of formulating those provisions in the first place (European Commission, 1997; Suykens, 2018b). This becomes even less feasible because such amendments to EU legislation require unanimous voting in the Council, as they will touch on quantitative management of water resources and/or affect the control over the physical territories of member states (Article 192(2), Treaty on the Functioning of the European Union). Still, the current situation does create momentum for structural reconsideration of these notorious weak spots in EU water legislation in future evaluations (Hey, 2009; Priest et al., 2016; Suykens, 2018b; Van Rijswick et al., 2010).

Thus, implementing rights-based approaches in the legal and governance arrangements for IRBDs would ultimately be within the discretionary powers of the relevant member states. In other words, member states that share an IRBD can decide and determine themselves whether such an approach is desirable and achievable. For virtually all river basins for which river conventions have been concluded this will require substantial and fundamental amendments of these arrangements. Reaching agreement thereon is likely to be more complicated in IRBDs with many conflicting interests, especially when these are socio-economic in nature. This is clearly the case in both the Scheldt and the Ems, where inland harbours (Antwerp, Eemshaven, Delfzijl and Emden) and a shipyard (Papenburg) are not only of great economic importance but also essential for regional employment (IMP, 2016; SGD, 2009). This will increase the pressure on member states to reach agreement on ecologically meaningful arrangements and measures that are mutually beneficial for ecology and economy (e.g., the innovation project on dredged mud; ED2050, 2017), or at least do not inadmissibly disadvantage either one.

Who would be the custodian?

A last question to address here is which entities are most eligible to be granted custodianship to safeguard the rights of specific river systems. Above, the international river basin level was deemed the best suited to legally embed river rights. Likewise, the most appropriate entity to entrust with custodianship would be an organization operating at the level of the international river basins. The member states sharing an IRBD could establish such an organization and decide on its tasks and competences in their river conventions (or other types of agreements). Indeed, for many transboundary river systems in the EU (e.g., Rhine, Meuse, Scheldt, Danube) international river commissions have been established on the basis of such conventions; yet, for a number of IRBDs, including the Ems, no such organization exists (Van Rijswick et al., 2010). The organizations that have been established on the basis of river conventions or

agreements alike vary in structure, role and competences, as well as in the perceived effectiveness of their performance (Nollkaemper & de Villeneuve, 2007).

For the success of the implementation of custodianship, it is essential that the custodian has a clear task and proper powers and competences to fulfil this task independently of other relevant institutions, and thus can influence relevant decision making and/or to enforce river rights (see above). For the Scheldt, the ISC would be the appropriate designated institution to grant custodianship to, as it is the entity that operates at the proper hydrological scale (the IRBD of the Scheldt) and has been instituted to maintain a basin-wide perspective. However, it can be questioned whether this commission in its current form has the proper tools to safeguard basin-wide coherence. It currently operates as an advisory platform with limited legal personality, and limited financial and human resources. It is a vehicle that mainly serves information exchange and discussions, as there is no follow-up mechanism to evaluate whether and how parties have implemented its advice. The Scheldt Treaty, in this respect, is drafted so as to maintain a maximum of sovereignty and a minimum of state engagement, and it does not grant the ISC a clear legal mandate. Coordination efforts do exist, for example with respect to monitoring and the adoption of a 'roof report' for the EU institutions, but the governance arrangement of the Scheldt can currently not be considered an integrated river basin regime (Suykens, 2018b), as at the end of the day, the governance of the Scheldt is the sum of the governance output of the respective national river basin districts (Nollkaemper & de Villeneuve, 2007). This is even more the case for the Ems, which lacks an integrated basin-wide legal framework and an institution that could speak on its behalf altogether.

For it be able to effectively execute its tasks and competences as a custodian, the position of the ISC should be strengthened, partly at the expense of the position of the relevant member states. It is questionable whether member states are willing to transfer powers to an external organization or commit themselves to a larger extent to follow the recommendations of such an organization, especially when this could interfere with their individual (socio-economic) interests. Another option is to establish a new organization as custodian of the Scheldt. This could solve an observed opportunity gap (Suykens, 2018b) and meet the need for more thoroughly developed cooperation across the relevant borders (Gilissen, 2009; Suykens 2018b; Van Rijswick et al., 2010), but besides the issues mentioned, this would lead to the introduction of yet another player in an already complex web of institutions. Thus, feasibility seems rather limited.

Conclusions

In this article, opportunities for and barriers to the introduction of a rights-based approach in EU transboundary river basin management have been analyzed and further specified to the IRBDs of the Scheldt and the Ems. An overall conclusion is that the introduction of such an approach could be of added value as a next step in the development of integrated river basin management. It could help overcome institutional complexity and other difficulties and could be beneficial for water quality and ecological potential in transboundary river systems. However, the implementation of such an approach largely depends on the willingness and perseverance of the member states sharing IRBDs, as the river basin level is the proper level at

which river rights and custodianship are to be shaped. This also means that they should be willing to reconsider the relation between ecological needs and their individual socio-economic interests, as well as to grant a clear mandate and partly transfer responsibilities and powers to a competent authority operating at the IRBD level. In this respect, the Scheldt and the Ems – given the current circumstances, and particularly the existing major tension between ecological needs and economic interests – might not be the IRBDs best suited to experiment with as yet unconventional concepts such as river rights and custodianship. But at the same time, these very circumstances make the introduction of more unconventional approaches at least worth considering.

Notes

1. Although the analytical structure of this article can be applied to any type of (transboundary) river system, this article focuses on river systems in the EU, where IRBDs have been introduced as hydrological managerial units on the basis of the WFD's 'river basin approach'.
2. Key projects on which this article builds are 'STARFLOOD: Towards More Resilient Flood Risk Governance' (https://www.starflood.eu), 'Environmental Quality Standards' (https://www.uu.nl/en/utrecht-centre-for-water-oceans-and-sustainability-law), and 'Custodianship: Towards the Acknowledgement of the Natural Being of River Systems: A Case Study of the Ems-Dollard Estuary in Northwest Europe' (https://www.uu.nl/en/utrecht-centre-for-water-oceans-and-sustainability-law).
3. An even more elaborate analysis of the Ems is to be found at https://www.uu.nl/en/utrecht-centre-for-water-oceans-and-sustainability-law.

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RESEARCH ARTICLE

Why the Ganga should not claim a right of the river

Ipshita Chaturvedi

Founding Partner, C&C Advisors, Mumbai, India

ABSTRACT

This article examines the global history of a rights-based approach to nature and then focuses in on whether conferring legal rights on the River Ganga (Ganges) in India would help in its management or on the contrary produce a conflict between human rights and the right of nature. Finally, it considers the legal perils of articulating a universal right of a river by comparing the Ganga and Whanganui cases.

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Introduction: a brief history of the rights of nature in Western legal practice

The right of the river originated in Christopher Stone's (1972) celebrated article, 'Should Trees Have Standing? Toward Legal Rights for Natural Objects'. This was the first suggestion in the mainstream legal literature of a rights-based approach to environmental protection, wherein nature would have rights of its own. Since then, this idea has slowly but steadily spread,to the point where courts around the world are now conferring legal personhood on nature and natural objects. In Sierra Club v. Morton (1972), the case that spurred Stone to write his essay, the US government wanted to build an extensive ski resort in the Mineral King Valley in the Sequoia National Forest. The Sierra Club brought a suit against this plan, objecting on behalf of the valley. As the case progressed, the chief controversy, and the basis for Stone's essay, proved to be the preliminary question of whether the Sierra Club had the legal standing to sue: could they legally represent the valley in order to protect it? The Court of Appeals held that the Sierra Club lacked such standing because it had not alleged individualized harm to itself or its members (Payne & Newman, 2015). The Sierra Club case brought to the fore the issue of whether 'trees and by extension nature could/should have standing', so that their protection is not based on anthropocentric harm.

In 2011, a similar case was brought before Ecuadorian courts, and standing was granted to a river. In 2008 Ecuador had become the first country to legally bestow rights on nature by constitutionally establishing such rights.[1] In the case of *Richard Wheeler and Eleanor Huddle v. The Director of Attorney General's Office in the State of Loja*, discarded rocks, sand and gravel from a project to widen the Vilcabamba-Quinara Road was destroying the banks of the river and narrowing its course. The plaintiffs, an American couple who owned a farm along the banks of the river, brought action not on the basis of injury to themselves from the construction but under Article 71 of the

CONTACT Ipshita Chaturvedi ipshitachaturvedi@candcadvisors.in

Ecuadorian Constitution, which states that Nature, or Pachamama, where life is reproduced and occurs, has the right to integral respect for its existence and for the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes. Unlike in *Sierra Club*, the appellate court ruled in favour of the petitioners and the Vilcabamba River, that the provincial government had violated *the rights of nature* through lack of respect for the river's existence and the maintenance and regeneration of its life cycles, structure, functions and evolutionary processes (Suarez, 2013).

In 2009, Bolivia introduced constitutional reform to include new rights for citizens that had a bigger role for indigenous peoples and their rights to protect the environment (Article 30 (II) 10, 15). Article 34 of the Bolivian constitution states that

> Any person, in his own right or on behalf of a collective, is authorized to take legal action in defense of environmental rights, without prejudice to the obligation of public institutions to act on their own in the face of attacks on the environment.

As in Ecuador, the Bolivian constitution empowers people by granting them rights to protect the environment without having to show personal injury, but unlike Ecuador, the right-bearer in this instance is the human instead of nature. In the Bolivian constitution, the issue of standing is resolved without granting rights to nature, and while keeping the indigenous understanding of nature intact. Be that as it may, Bolivia expressly provided nature rights in 2010 in its Law 071, which bestows legal rights of life, restoration and freedom from pollution on Mother Earth. Article 10 creates an ombudsman, whose mission is 'to watch over the applicability to, promotion and diffusion of, and compliance with the rights of Mother Earth' and is presumably the procedural lever for the enforceability of the right.

It can be said that the case that has propelled the rights of nature into mainstream legal and cultural discourse is the Te Urewera region and the Whanganui River in New Zealand. In 2014, the New Zealand government passed the Te Urewera Act, which recognized the Te Urewera region as a place of spiritual value, having its own *mana* (spiritual power) and *maori* (life force), and made Te Urewera a *legal entity*, with all the rights, powers, duties, and liabilities of a legal person (Sections 3 and 11). The New Zealand judgement went beyond the initial idea that the environment might have some rights, but not every right we can imagine, or even the same body of rights as human beings have (Stone, 1972).

In legal terms, Te Urewera is jointly governed the Tuhoe people and the New Zealand government. The act established a Te Urewera Board, which would act on behalf of and in the name of the Te Urewera region. Following the Te Urewera Act, on 20 March 2017 the Whanganui River became a legal person when the Te Awa Tupua (Whanganui River Claims Settlement) Act was passed by the New Zealand Parliament. The Whanganui River, like the Te Urewera, was been given all the rights, powers, duties, and liabilities of a legal person.

After New Zealand granted legal rights to the Whanganui River, the Indian High Court of Uttarakhand pronounced a judgement granting similar rights to the Ganga and Yamuna rivers and extending these rights to the glaciers that feed the two rivers as well (Mohd Salim v. State of Uttarakhand, 5 December 2016). This judgement was stayed (suspended) by the Supreme Court of India in 2017. No new developments have happened in the case since then. The impacts of granting rights to rivers in India,

including the elements of the two High Court judgements, form the bulk of this article and are detailed in the next sections. Apart from these judgements, the Ganga Action Pariwar, an India-based organization with support from the US-based Community Environmental Legal Defense Fund, drafted a national Ganga River Rights Act which is currently under consideration in India. The act would 'recognize the river's right to exist, thrive, regenerate, and evolve', prohibit activities interfering with those rights, establish enforcement mechanisms, including government offices, for defending those rights, and require that any damages awarded for violations be used to restore the ecosystem to its pre-damaged state. In a nutshell, the proposed act would address pollution of the Ganga.

For an advocate of granting legal rights to the Ganga, the main assumption would be that the basic reason the Ganga is so polluted is the lack of standing/relevant legislation to bring about environmental litigation for its protection. This article will question this assumption while asking two other questions: First, can there be a universal or homogeneous understanding of the right of nature, and will such an understanding simplify existing but often ignored conflicts, both of law and other interests? Second, would a rights-based approach help address pollution of the Ganga by adequately filling the gaps left by existing tools for environmental litigation in India?

More recently, in India, the Uttarakhand High Court has granted rights to the entire animal kingdom in addressing the issue of the protection and welfare of animals, more specifically the vaccination and medical check-ups of horses plying between Nepal and India for suspected infections (Narayan Dutt Bhatt v. Union of India, 4 July 2018).

It can be said that a nature's-rights-based regime is being touted as a way forward for environmental protection and arresting pollution and the degradation of resources. Boyd (2017) indicates that people are viewing the scope of nature's rights almost as a panacea for problems surrounding rivers and their conservation – a right that can be wielded to address pollution, water use and other practical problems in natural resources governance. Justice Rajiv Sharma, the Indian judge who declared the Ganga and Yamuna Rivers and their source glaciers legal persons, opined that there has been a slow but observable shift from the anthropocentric approach to a more nature's-rights approach in international environmental law, etc. This shift, he says, has three stages: human self-interest reasons for environmental protection; international equity – i.e., the extension of treaties beyond the requirements of the present generation to also meet the needs of future generations of human beings; and nature's own rights (Narayan Dutt Bhatt v. Union of India, 4 July 2018). The third stage is reflected in initiatives such as the Global Alliance for the Rights of Nature and the Universal Declaration of the Rights of Mother Earth.[2] To understand to what extent the perceived objectives of this new right would be efficient, it is important to go back to the initial argument for the right of nature and its background.

A literature review was carried out to study and compare all existing perspectives on rights of nature across relevant jurisdictions. The material consisted of books, journal articles, primary legislation and case law and Internet sources, particularly the translated versions of Spanish cases.

Western perspectives leading to the idea of 'rights of nature'

It is important to specifically understand the reasoning behind Stone's (1972) argument, since it has become one of the founding texts for the 'rights of nature' movement. Stone starts by describing the nature and history of these rights by explaining the origins of one of the first rights in the world: children's rights. Until legal rights were given to children, they were objects whose life and death belonged to their father. The same way 'we' made children legal persons by granting them rights even though they were not 'persons' per se, we have made legal persons of prisoners, aliens, women, the insane, Blacks, foetuses and Indians by granting them rights, Stone says (p. 452). When absorbing this statement, it is important to ask who the giver of rights – the 'we' in his statement – is. Stone explains that the jurisprudential rationale of rights was to reduce the inequities caused by discrimination that certain groups of people inflicted on others. Historically, rights were given to groups of people who 'did not have a right' to certain privileges.

Rights of nature: a valid shift to ecocentricism or just an extension of the anthropocentric understanding of nature?

After Stone, Roderick Frazier Nash (1989) charted a comprehensive history of rights before intertwining it with Stone's argument. According to Nash, ancient Greek and Roman philosophers had a conception of natural (rather than made-made) law and did not speak about 'rights' because people had existed before governments. However, with the advent of Christianity, nature took a back seat in Western ethics, and the assumption that nature existed only to serve humans became concretized. Christianity affirmed this through Genesis, which said that 'God gave humankind dominion over nature and the right to exploit it without restraint.' This created a duality in the treatment of nature, which is the basis of *anthropocentrism*, the idea that there is an *us* (man) and there is a *them* (nature), that the two are separate, and that laws bridge the inequities that evolve from this separation. Nash traces in Western philosophy an eventual shift from a sharp dualism between man and nature[3] to an interconnectivity between players in nature.[4] He then moves on to Bentham's advocacy of rights based on his theory of utilitarianism, according to which the most unethical act was the one that caused the most pain. While these theories would bring forward the argument that man must not be cruel to animals and that animals might have rights, they did not apply to natural objects.

In contrast, Nash (1989) pointed out that Native American religions and ethnic systems did not recognize a duality between man and nature. He quoted the words sometimes attributed to Chief Seattle of the Suquamish Tribe as saying, 'The rocky crests, the juices in the meadows, the body heat of the pony and man – all belong to the same family.' He also pointed out that traditional tribal culture could not comprehend 'the white tendency to objectify, desacralize, and exploit nature', or the idea of exchanging habitat for money. Therefore, rights as a concept was born from the West's journey of attempting to bridge the inequities created by dualities that sprang from the history and philosophy endemic to the West, since such dualities did not exist in tribal and ancient philosophies around the world.

Applying the arguments of Stone and Nash, and by extension nature's rights, uniformly across jurisdictions, overriding the richness of older wisdom in lieu of this new framework, is also a kind of Western interventionism. If the problem of the man-versus-nature duality did not exist in many cultures, people who have not shared Western struggles cannot appropriately perceive the solution in the form of a rights-based framework either.

According to Stone, a holder of rights must have a legally recognized worth and dignity in its own right, and not merely serve as a means to benefit 'us'. This involves three elements: the holder of rights should be able to institute legal actions at its behest, in determining the granting of legal relief; the court must take injury to it into account; and the relief must benefit the holder. While Stone's sentiment is well-placed, even if nature is the holder of the right, ensuring the enforcement of the three elements will require human interaction. The reason this enforcement has worked satisfactorily in artificial vehicles such as nation-states and corporations is that their existence is owed to humans, who created them for human benefit. In contrast, nature exists regardless of whether rights are given to it. How will ascribing rights to nature address the potential enforcement issues that may arise out of the human behaviour that caused the degradation in the first place?

Stone advocated a rights-based approach to protect nature after the Sierra case because it was his understanding that the protection of nature must not be dependent on proving human harm. On the issue of granting rights (standing) to inanimate objects, Stone gave the example of the extension of legal rights beyond the human form to entities such as trusts, corporations and nation-states as the basis of extending rights to natural objects. Stone's main argument in ascribing rights to nature was that when addressing pollution in a lake, the lake itself has no rights and there is in general no way to challenge the polluter's actions save at the behest of another human being (the lower riparian) who is able to show an invasion of his rights, as one can witness in the Sierra case. Here, Stone's main thrust is that there is no legal remedy for pollution unless anthropogenic harm is proved. We will put this assumption aside for the time being and bring it up again when discussing India and the Ganga.

Would a nature's-rights-based framework address pollution in the Ganga?

In 1988, India's celebrated environmental lawyer M. C. Mehta initiated an action against the leather industry and the municipal corporation of Kanpur, Uttar Pradesh, for releasing industrial and domestic effluents to the Ganga (MC Mehta v. Union of India and Others, 12 January 1988). Mr Mehta's petition had more than eight respondents, including representatives from 75 tanneries, the chair of the Central Pollution Control Board, the chair of the Uttar Pradesh State Pollution Control Board, and the Indian Standards Institute. The petition also claimed that the Municipal Corporation of Kanpur (the local regulatory body) was not fulfilling its responsibilities. The court subsequently bifurcated the petition into two parts. The first dealt with the tanneries of Kanpur, and the second with regulatory authorities. These became the 'Ganga pollution cases' of India. It is to be noted that the 1988 case pertains to Ganga pollution exclusively in the city of Kanpur. There have been several other Ganga suits in different Indian courts as well. Even though M. C. Mehta was not

an aggrieved party like the Sierra Club, he was still able to file a writ petition asking the court to address Ganga pollution. He could do so because Indian laws allow any public-spirited citizen to bring suit against regulatory authorities in matters of public concern, so Indian law does not have the issue of standing. In the M. C. Mehta case, the Supreme Court held:

> The petitioner before the Court was no doubt not a riparian owner. He was a person interested in protecting the lives of the people who made use of the water flowing in the river Ganga and his right to maintain the petition could not be disputed. The nuisance caused by the pollution was a public nuisance, wide-spread in range and indiscriminate in its effect, and it would not be reasonable to expect any particular person to take proceedings to stop it as distinct from the community at large. The petition was entertained as a *public interest litigation*. On the facts and in the circumstances of the case we are of the view that the Petitioner is entitled to move this Court in order to enforce the statutory provisions which impose duties on the municipal authorities and the Boards constituted under the Water Act.

A public interest litigation is a writ petition filed under Articles 32 and 226 of the Indian constitution, under which individuals may seek redress of the violation of their fundamental rights, which may extend to a cause greater than themselves.

In 1981, the term 'public interest litigation' was used for the first time in the Supreme Court when it held that 'standing' in civil litigation must have 'liberal reception at the judicial door-steps' (Fertilizer Corporation Kamgar v. Union of India). The concept of standing kept getting broadened since then, until now, when public interest litigation is widely used to resolve issues around environmental disputes in India and which has liberalized *locus standi* (standing). A number of environmental cases, on quarrying, water pollution, wildlife protection, industrial pollution, etc., have been adjudicated by petitions filed by NGOs or individuals with no direct injury under the Indian public interest litigation regime (Sahu, 2008). With the advent of public interest litigation, standing was broadened to include addressal of government conduct or policy seen as contrary to societal interests, even if the litigant had themselves faced little or no harm (Faure & Raja, 2010). Based on M. C. Mehta's petition in the Ganga pollution cases, by 1995 the Supreme Court had fined over 200 industries, penalized the State Pollution Control Boards for false reporting, and pressed the Ministry of Environment to streamline its proposals for treatment plants through a set of supervisory committees (Mehta 2018). The court observed that pollution of the Ganga was a public nuisance which was widespread in range and indiscriminate in its effect. Therefore, the contention that rights of nature will remedy the issue of standing does not hold water in India, because public interest litigation already does that.

Why is the Ganga so polluted: an example of the city of Kanpur and the Ganga pollution cases

The main reason for the Kanpur Ganga pollution is that the growth of the technology and efficiency of the common effluent treatment plant and the sewage treatment plant have not been commensurate with the growth of the leather industry

Figure 1. Sewage treatment plant outfall at Jajmau.
Photo credit: http://www.indialegallive.com/top-news-of-the-day/news/ngt-deems-jajmau-effluence-treatment-plant-useless-29460

(Figure 1) (Singh, 2006). At the time the Ganga pollution cases were being heard, the government of India was initiating its first environmental scheme to combat river pollution in northern India. The Ganga Action Plan (GAP) was created to address problems of wastewater management by diverting and treating industrial and municipal effluent before it reached the Ganga. The Dutch government funded the GAP for 10 years and applied an upflow anaerobic sludge blanket in sewage plants below the Kanpur tanners. Prior to the GAP, irrigation in the area was half wastewater and half water from the Ganga. After the GAP, only a mix of sewage and tannery effluent was supplied for irrigation, without river water. This led to massive agricultural losses and adverse human health impacts. The leather industry also contended that they had contributed a large amount to the treatment plants and that the systemic breakdown was because of the failure of GAP (Singh, 2006). Be that as it may, there is no denying that the Supreme Court of India did everything (at least on paper) within its mandate to rectify the Ganga situation. An Indian think tank analyzed data for 1986–2004 from demographic surveys, pollution monitors and the geospatial coordinates of rivers to identify the impact of the M. C. Mehta ruling on river pollution. They found that after the decision and the heavy penalties, there was a significant drop in river pollution and that the ruling increased the likelihood of the river water in the area around the tanneries being in the 'fit for bathing' category by 40% (Joshi, 2016).

Figure 2. The Kanpur Ganga.
Photo credit: https://www.livemint.com/Politics/EXfrjlPucmeozXKoPAiFFM/Nearly-all-Ganga-water-in-UPBengal-stretch-unfit-for-drinki.html

After things started to change positively, around 1995, following the Ganga pollution cases and the extensive judgement, another public interest litigation was filed in the Allahabad High Court, which then directed the central government to create a 'river police force' to check the problem of unclaimed bodies being thrown into the Ganga by the police (RK Jaiswal v. State of Uttar Pradesh and others, 1997). The river police force was to make sure that people do not defaecate on the banks of the Ganga in Kanpur, and that corpses and industrial pollutants are not thrown in the river. This signifies the extent of systemic breakdown of Ganga governance in India in just one region. Even though the government directed officials to conduct specific actions to clean up the river, these orders were not implemented adequately (Alley, 2009) (Figure 2).

The Allahabad High Court set up a monitoring committee to assess the working of the GAP, which faced criticism in the Ganga pollution cases as well. The committee found that wastewater discharge from a drain directly into the Ganga had to be stopped. But everyone knew that unless there was an overhaul of the entire sewer system, the problem could not be fixed with a one-time allocation – though the local authorities took public money to rectify the situation, adding the issue of misappropriation of funds (Alley, 2009). Apart from the regulatory shortcomings, corruption, problems in the sewerage system itself, and the inefficiency of aid-run programmes, it has been opined that the government made a mistake in accepting responsibility for the massive pollution in the Kanpur Ganga, which was in fact caused by the industry (Singh, 2006). After an appraisal of pollution of the Ganga by the leather industry in the town of Jajmau, Kanpur (where the Dutch government had offered to set up three sewage treatment plants), and its intersection with the GAP, Singh points out that the while the GAP was funded by the government of the Netherlands, no arrangement was made to make the agencies created under the programme self-sufficient.

Currently, the new agency responsible for Ganga governance is the National Mission for Clean Ganga, under which is the Namami Gange Programme (n.d.) (officers of which were envisaged to be *in loco parentis* for the Ganga, before the Supreme Court stayed the

order). The programme has been in force since 2014 and has a budget of INR 20,000 crore (more than €200 million). This programme replaced the GAP completely, and there is no public document examining the shortcomings of the GAP. The Namami Gange Programme is funded by the German International Cooperation to rejuvenate the Ganga based on their prior experience in the Danube, Rhine and Elbe of Europe.[5]

Rights of the Ganga and implementation issues of existing judgements

In commenting on the Ganga pollution cases, Shylon Mehta (2018) points out that as the struggle for power was intensifying on paper; as the judiciary sought, through courtroom dramas, fines and punishments, to check the power of the executive branch and industry throughout the country; this judicial activism was limited by the very system it sought to check. By calling on the same agencies it reprimanded to implement its orders, the Supreme Court was rendered profoundly ineffective. Mehta quoted the Supreme Court, which held, in its order of 29 October 2014,

> We regret to say that the intervention and sustained effort made by us over the past 30 years notwithstanding no fruitful result has been achieved so far, except shutting down of some of the polluting units. This is largely because while orders have been passed by us, the implementation remains in the hands of statutory authorities … which have done practically nothing to effectuate those orders or to take independent steps that would prevent pollution of the river.

Coming back to the rights of the Ganga, the 2018 case started with the petitioner, Mohammed Salim, challenging the failure of the state governments of Uttar Pradesh and Uttarakhand in constituting the Ganga Management Board as required by Section 80 of the Uttar Pradesh Re-organization Act of 2000, which was again an enforcement issue.[6] In its judgement, the court spent a fair amount of time on the legal justification and backing for granting rights to the Ganga and Yamuna and described the importance of the river by quoting several Hindu texts. After recounting the religious and cultural significance of the river and without any further context, the court wrote,

> The constitution of Ganga Management Board is necessary for the purpose of irrigation, rural and urban water supply, hydro power generation, navigation, industries. There is utmost expediency to give legal status as a living person/legal entity to Rivers Ganga and Yamuna r/w Articles 48-A and 51A(g) of the Constitution of India (para 18).

How the constitution of a Ganga Management Board is linked with rights of the Ganga is completely unexplained here. The court then declared certain regulatory authorities persons *in loco parentis,* which refers to the legal responsibility of a person or organization to take on some of the functions and responsibilities of a parent, while stating that the Ganga and Yamuna, all their tributaries, streams, and every natural water flowing with flow continuously or intermittently of these rivers, are 'juristic/legal persons/living entities having the status of a legal person with all corresponding rights, duties and liabilities of a living person'.

In the next case, in which the Uttarakhand High Court declared the Gangotri and Yamunotri Glaciers juristic persons with fundamental rights, the court used the same line of reasoning as in the Ganga rights case. The Court declared a bunch of people (the same regulatory authorities), as well as M. C. Mehta, persons *in loco parentis* – 'as the human

face to protect, conserve and preserve all the Glaciers including Gangotri & Yamunotri, rivers, streams, rivulets, lakes, air, meadows, dales, jungles, forests wetlands, grasslands, springs and waterfalls in the State of Uttarakhand'. It has been seen time and again, and reiterated in the Ganga pollution cases as well, that enforcement by regulatory authorities has been the ever-looming challenge in the Indian environmental narrative. How would it help to making the same authorities persons *in loco parentis* for a natural resource? It is also almost shocking to note that in the glaciers' rights case, the court in fact praised the regulatory/implementation authorities 'for their untiring efforts made to save River Ganga in particular and environment in general'(p. 66).

Innumerable public interest cases have been brought against the government or public authorities in India to compel them to take specific action. From the environmental viewpoint, the specific action would be to compel the polluter to reduce the emissions/pollution (Faure & Raja, 2010). One of the main issues in Ganga governance is the enforcement of specific actions prescribed by various courts (O'Bryan, 2019), including the Supreme Court. Therefore, in the case of the Ganga, standing, judicial review and soundness of judgement are not the reasons for the continued pollution of the river. A rights-based regime can resolve neither implementation issues nor law enforcement.

In a situation so dire, so complex and so shambolic, it is important to ask whether introducing a new legal principle to follow the international bandwagon with no background study whatsoever is beneficial or detrimental to the Ganga story. Even though the Supreme Court stayed the order of the Uttarakhand High Court, the same judge has gone ahead and declared fundamental rights for the entire animal kingdom and declared the citizens of Uttarakhand persons *in loco parentis* as the human face for the welfare and protection of animals. If the entire animal kingdom in the state of Uttarakhand now has rights, does this mean meat will be banned in the state, and vegetarians will start suing meat eaters as persons *in loco parentis*? Will the killing of flies and mosquitoes be illegal as well? Where will this inane right start, and where will it end? And the most important question is, should the Supreme Court be using its limited time and resources to adjudicate such legal points when there are ongoing Ganga pollution cases much more serious and pointed on the main issues of enforcement and implementation?

Potential conflicts of nature's and human rights in the context of culture: observations from India

A major problem that emerges when trying to give rights to the Ganga is the conflict of rights between the human right to the river, cultural rights and the right of the river itself. According to the World Health Organization (Sharma, 1997), the main sources of pollution in the Ganga are

(a) Domestic, industrial and solid waste thrown directly into the river;
(b) Non-point sources of pollution from agricultural runoff containing residues of harmful pesticides and fertilizers;
(c) Animal carcases and half-burned and unburned human corpses thrown into the river;
(d) Defaecation on the banks by low-income people; and
(e) Mass bathing and ritualistic practices.

When fundamental rights are enforced by courts that have the authority to interpret them (e.g., constitutional courts, the European Court of Human Rights, the Indian courts through writ petitions), each right becomes increasingly refined through the case law; i.e., through the judicial creation of 'sub-rights' not explicitly foreseen by the drafters of the constitution or treaty (Brems, 2008). Therefore, when there is a perceived conflict between a human right (to nature) and the right of nature, in the absence of nature's 'sub-rights' because of its newness and lack of judicial precedent, judicial reasoning by courts to uphold the right of a natural resource to 'clean itself' will naturally lose to the human right to exploit the resource.

Perhaps the most relevant case to discuss conflicts of rights between humans and non-humans is the Indian Jallikattu case. Jallikattu is a traditional sport played in the south of India, particularly in the state of Tamil Nadu. A bull is released into a crowd of people, and many human participants try to grab the large hump on the bull's back. In 2014, the Supreme Court of India held that Jallikattu was inherently cruel and that bulls have a right to live in a healthy and clean atmosphere, not to be beaten, kicked, bitten, tortured, plied with alcohol by humans or made to stand in narrow enclosures amidst bellows and jeers from crowds (Animal Welfare Board of India v. A. Nagaraja and others, 2014). In 2017, amid the great furore over this ruling, the government of Tamil Nadu (the state where the sport is played ritualistically) passed the Prevention of Cruelty to Animals (Tamil Nadu Amendment) Act and drafted it in a way that ensured that Jallikattu could continue in the state. Their argument was:

> Considering the vital role played by the event of 'jallikattu' in preserving and promoting tradition and culture among people in large parts of the State of Tamil Nadu and also considering the vital role of jallikattu in ensuring survival and continuance of native breeds of bulls, the government of Tamil Nadu decided to exempt the conduct of jallikattu from the provisions of the said Central Act 59 of 1960.

The matter has now been referred to a constitutional bench of the Supreme Court to examine whether the states of Tamil Nadu and Maharashtra can conserve Jallikattu and bullock cart races as their cultural right and demand their protection under the Indian constitution (Rajagopal, 2018).

This is a good indication of what a conflict of rights might look like when humans and their right to 'culture' are at odds with protection of nature or animals. If ritualistic practices are one of the main reasons of sustained pollution in the Ganga, then granting rights to the Ganga could bring about a situation similar to Jallikattu, whereby courts and legislatures are at loggerheads trying to resolve a rights-based deadlock, with public opinion completely divided. A constitutional dilemma typically has two elements: a choice between two separate goods (or evils) protected by fundamental rights; and the fundamental loss of a good protected by a fundamental right, whatever the decision (Zucca, 2018). In Ecuador, Pachamama's rights are ensconced in the constitution, in a hierarchy where nature's rights trump human rights. In countries where there is no such constitutional prescription, how does the judiciary resolve the dilemma? While Zucca (2018) refers to this dichotomy as a constitutional dilemma caused by two conflicting human rights, the same dilemma may be extended to several courts in the future because of conflicts between the rights of nature and the right to nature. Stone's theory that a nature's-rights-based legal system would rectify the conflict of rights might therefore not

be true universally. He opined that between riparian rights of personal inconveniences of pollution and the public good in causing the pollution, the "stream itself is lost sight of in 'a quantitative compromise between two conflicting interests', without foreseeing that the right of the stream could also contribute to a conflict." The stream will stand to lose again in the conflict between the rights of the stream versus the cultural rights to the stream (especially when it is of religious significance, like the Ganga). The protection of the stream is unfortunately not guaranteed merely by ascribing rights to it.

It therefore becomes very important to understand the inherent conflict of rights before suggesting that a nature's-rights-based framework is a panacea for the pollution of resources. Further, even though New Zealand and India granted rights to the two rivers at around the same time, the reasons for the development of nature's rights were very different in the two countries. While pushing for nature's rights globally, the Community Environmental Legal Defense Fund's claim that the movements in New Zealand and India to recognize certain rights of ecosystems are progressing from legal systems which treat nature as property to laws which recognize the inherent rights of nature might be misplaced, even if the intent is noble. To elucidate, let us deconstruct nature's rights in the comparative context of New Zealand and India.

'Rights' as a method of correcting colonial wrongs: fundamental historical differences between the Whanganui and the Ganga

As European settlers flooded into New Zealand in the nineteenth century, they indiscriminately killed rebels and people suspected of shielding rebels, particularly in the Urewera area. They also confiscated 400,000 acres of Maori land in Te Urewera, eventually returning only 142 acres, while no compensation was paid. The 1840 Treaty of Waitangi was the main agreement that structured the relationship between the Maoris and the Crown. The Tuhoe people in the Te Urewera region refused to sign the treaty because they wanted to retain sovereignty over their lands and waters. This indigenous claim and the conflicting idea of New Zealand's sovereign rights over its resources as a country saw innumerable clashes between the government and the people over many years. The Tuhoe people finally filed a claim with the Waitangi Tribunal in 1987.[7] The tribunal sharply criticized the New Zealand government and eventually issued six reports spanning 3500 pages, which then culminated in the Te Urewera Act of 2014. At the signing, treaty negotiations minister Chris Finlayson formally apologized on behalf of the government, saying, 'The relationship between Tuhoe and the Crown, which should have been defined by honour and respect, was instead disgraced by many injustices including indiscriminate raupatu, wrongful killings, and years of scorched-earth warfare.'

The Crown issued this historic apology for its unjust and excessive behaviour and the burden carried by generations of Tuhoe who suffered greatly and carried the pain of their ancestors. To correct this colonial wrong, rights were granted to the Te Urewera and the Whanganui River, and against this backdrop, one must view the rights of the Whanganui river as (1) granted to correct a past colonial mistake (which can be linked with the history of rights generally), and (2) an issue of property: thefocus is that governance of the area had to be given back to its initial title holder. That the title holder views the river as intrinsic to itself is a peripheral, though wonderful outcome. Also, the Maori understanding that the Te Urewera exists in its own right is different from having rights. Such

an understanding goes beyond rights, beyond human ideas of property – it is spiritual, and that which is spiritual can be understood and felt but not bottled and encased in any framework, even a rights-based framework. To explain more, when defending their claim to manage the river as rightful guardian, it was underscored by the native saying *Ko au te awa, ko te awa ko au*, or 'I am the river, and the river is me', reflecting the native values of equal relations between nature and humans (Magallanes, 2015). A rights-based framework does not encapsulate this sentiment, as there is a duality between the granter of the right and the grantee. Understood correctly, there cannot be a legal procedure for deep ecology, which is in the realm of philosophy and culture.

New Zealand has bestowed personhood on the Whanganui River and the Te Urewera area because the colonial conquest of land from native peoples, on which New Zealand is founded, resulted in irreparable spiritual and socio-economic losses. In both scenarios, the rights-of-nature settlements were symbolic of the process of government remediation and reparations for this historical injustice (Magallanes, 2015). Comparing this situation with India and the Whanganui with the Ganga makes little sense, since while the articulation of cultural rights in the context of New Zealand is to resolve a previous colonial injustice, while cultural rights in the context of India are the right to access and worship the river. Also, unlike the Whanganui River legislation, which provides clear structures, rules and funding for implementation, after eight years of careful negotiation that gave everyone plenty of notice of the coming changes, the recognition of the Ganga's and Yamuna's legal personality occurred almost overnight (Colwell & Carr-Wilson, 2017). There are also several differences between the histories of individual jurisdictions granting rights to rivers. Though all have overlapping factors, the US's push for rights of nature was started to resolve a legal issue of standing, and the South American movement was to reaffirm the ancient philosophies of indigenous persons. In New Zealand, while the result of rights of nature aligns with indigenous philosophies, making amends for human rights atrocities and other destructive consequences of colonization is the more prominent and driving feature (Magallanes, 2015).

Like the Maori, Hindus in India were also subjected to British settler colonialism, and continue to have a common law legal system rooted in Western, Judeo-Christian cultural assumptions and traditions that differ from their own culture and spiritual beliefs (Colwell & Carr-Wilson, 2017). However, even though the rivers' legal personality was recognized in part because of their sacredness to Hindus, the idea of rights itself comes from Western cultural assumptions. Hindu philosophy views nature as sacred through many stories and mythologies. Individual medicinal plants have been worshipped in India for centuries. More generally, the Rigveda says that trees are the lords of the forest – *vanaspati*, self-regenerating and eternal, the homes of the gods (Haug, 2008). The idea that so long as the earth is able to maintain mountains, forests and trees, the human race and its progeny will be able to survive, is deeply embedded in Hindu thought. In a hymn, the Rigveda venerates Aranyani, the goddess of the forest:

> She is an elusive spirit, fond of solitude, and fearless. The poet asks her to explain how she can wander so far from civilization without fear or loneliness. He creates a beautiful image of the village at sunset, with the sounds of the grasshopper and the cicada and the cowherd calling his cattle. She is a mysterious sprite, never seen, but her presence is felt

> by the tinkling of her anklets and her generosity in feeding both man and animal. (Krishna, 2018)

Advocates of the rights of nature have called it a paradigm shift from the Western legal culture of consumerism, capitalism and predation of natural resources, to include philosophies from indigenous groups more respectful to nature (Jayatilaka, 2017). But the respect for nature in indigenous and ancient philosophies does not mean that nature has rights. As an example, rural Hindu communities such as the Bishnois, Bhils and Swadhyaya have maintained strong communal practices to protect local ecosystems such as forests and water sources. These communities carry out these conservation-oriented practices not as 'environmental' acts but rather as expressions of *dharma* (duty). When Bishnois protect animals and trees, when Swadhyayis build *vrikshamandiras* (tree temples) and *nirmal nirs* (water harvesting sites), and when Bhils practise their rituals in sacred groves, they are expressing their reverence for creation according to the Hindu teachings, not 'restoring the environment'. These traditional Indian groups do not see religion, ecology and ethics as separate arenas of life. Rather, they understand it to be part of their *dharma* to treat creation with respect (Jain, 2011). The holiness of the Ganga has not been a successful deterrent to its continued obscene pollution.

Conclusion

Boyd (2017) asks, 'Could the Te Urewera and the Whanganui River laws be the death knell for the human conceit that nature is nothing but mere property, to be used and exploited for our exclusive benefit?' Boyd inadvertently takes the Western narrative of nature as man's property and calls it a 'human conceit'. Older civilizations and philosophies have never viewed nature as man's property (at least in theory), so there is a danger that the Western understanding of rights to remedy this conceit will be thrust on cultures whose understanding of ecocentrism might be richer and deeper. The use of the word 'man' is intentional here. Cultural feminism attempts to reclaim the connection between women and nature as a source of power and celebration (Longenecker, 1997), an idea that is closer to indigenous understandings of a lack of a dichotomy between humans and nature. It is telling that male proponents of the idea of rights of nature, such as Nash, rarely mention women thinkers, such as Mary Wollstonecraft, who have spoken on the subject, as if Western philosophy pertaining to nature were the historical preserve of Western men. Bjornerud (1997) detailed the ways in which the Enlightenment and post-Enlightenment may have limited the range of acceptable metaphors for the natural world when discussing Western theories of man and nature. Hence, given its Western male origin, it is reasonable to question the validity of a universal nature's-rights-based system.

Advocates for the rights of the Ganga claim that under existing law, people defending ecosystems can only recover damages based on an individual's loss of that ecosystem. This is inaccurate. It would be more meaningful to explore and articulate the procedural aspects of other established principles and focus on proper implementation than to come up with new rights, at least in the Indian context. It is recommended that more effort be put into understanding how to build state capacity and the capacity of regulating

authorities to enforce court orders efficiently. Education and community-based monitoring and evaluation systems for the Ganga would also help in the abatement of pollution. Together, if properly implemented, existing judgements and court orders in India, along with anti-pollution laws, provide an adequate regulatory framework to deter environmental pollution. The problems lie not in whether or not the Ganga has rights, but in failures of implementation of existing frameworks due to a lack of will. For that, there is no law-based solution.

Notes

1. Technically, the first recognition of the rights of nature in law was the 2006 case of Tamaqua Borough. The municipality of Tamaqua Borough, in Schuylkill County, Pennsylvania, sought to ban waste corporations from dumping toxic sewage sludge and coal fly ash into abandoned mining pits, and passed the world's very first legally enforceable rights of nature. See Tamaqua Borough, Pennsylvania, 31 August 2015, https://celdf.org/2015/08/tamaqua-borough/, accessed 28 July 2018.
2. In April 2010, Bolivia hosted the Peoples Conference on Climate Change and the Rights of Mother Earth, where the Universal Declaration of the Rights of Mother Earth was drafted and approved. The Global Alliance for the Rights of Nature is pushing the UN General Assembly to adopt the declaration, which was modelled on the Universal Declaration of Human Rights. World People's Conference on Climate Change and the Rights of Mother Earth, https://pwccc.wordpress.com/programa/, accessed 26 July 2018.
3. Decartes (1596–1650) considered his basic axiom, 'I think, therefore I am', applicable exclusively to the human organism, as opposed to animals, which in his view did not think and therefore could not feel pain. The denial of non-human subjectivity and agency was a prerequisite for the progress of science and industrial civilization.
4. Spinoza (1632–1677) propounded a pantheistic notion that said that every being or object was a manifestation of a common God-created substance.
5. Indo-German Implementation Agreement on Ganga Rejuvenation Signed between MoWR, RD &GR and German International Cooperation (GIZ), Germany, https://www.nmcg.nic.in/writereaddata/fileupload/38_Brief%20of%20the%20Program.pdf, accessed 29 July 2018.
6. Per Section 80(2)(b) of the act, two full-time members, one from each of the successor states, are to be nominated by the respective state government as members of the Ganga Management Board.
7. The tribunal was created in 1975, following widespread Maori protests throughout the 1960s and 1970s, to hear Maori grievances about Crown breaches of the Waitangi Treaty.

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Protection through property: from private to river-held rights

Anne De Vries-Stotijn[a], Ilon Van Ham[a] and Kees Bastmeijer[b]

[a]Department of Private Law, Tilburg University, Netherlands; [b]Department of European and International Public law, Tilburg University, Netherlands

ABSTRACT

This article explores how private owners can protect bodies of water through private property rights. It compares the use of conventional property rights in the Netherlands and New Zealand with a novel approach whereby a New Zealand river owns itself.

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Introduction

Protecting aquatic ecosystems and freshwater bodies is often seen as a public law matter. Indeed, a comprehensive complex of international, European and national water legislation has been established to protect water bodies from further degradation and to ensure ecological restoration. However, generally known weaknesses of public environmental law makes this a challenging task. Examples of such weaknesses include the difficulty of addressing diffuse sources of pollution, the role of politics in implementing strict licensing systems, the difficulty of ending historic rights to pollute, and weak supervision and enforcement.

Against this backdrop, this article explores the potential of private property rights in the Netherlands and New Zealand as additional legal instruments to protect bodies of water, with special attention to rivers. Property rights are rights or duties which relate to the possession or use of an object (e.g., ownership and easement rights).[1] Property rights can, within certain limits, be used to protect the environment. For example, a farmer may refrain from using parts of his land adjoining a river to allow natural aquatic wildlife to return. He may even bind subsequent owners to this non-use. However, the scope of this article goes beyond the conventional approaches in property law and includes an exploration of an alternative approach to property rights which recently emerged in New Zealand: letting a river own itself (Te Awa Tupua Act 2017).

There is a growing body of literature on comparative property law (Erp, 2006; Erp & Akkermans, 2012). Although some authors discuss the right to access water (e.g., Schorr, 2017), these comparative studies do not specifically focus on protecting the aquatic environment. The literature on property rights used for nature conservation purposes often includes

CONTACT Anne de Vries-Stotijn a.devries@uvt.nl

only one particular (type of) legal system and does not specifically look at protection of the aquatic environment (e.g., Adams & Moon, 2013; Merenlender, Huntsinger, Guthey, & Fairfax, 2004; Saunders, 1996; Law Commission, 2014). This article, however, intends to compare two traditionally different property law systems in respect of protection of bodies of water: New Zealand and the Netherlands (the authors' native system). The inclusion of the novel use of property rights in New Zealand, whereby a river owns itself, gives it a unique angle.

A comparison between New Zealand and the Netherlands is particularly interesting because they belong to the two different major property law traditions of the Western world. The civil law tradition, present in the Netherlands and most other continental European countries, implies a civil code which encompasses the majority of private law rules. The common law tradition, occurring in New Zealand and most other English-speaking Western countries, implies law made by judges (case law) supplemented with legislation (Erp, 2006; Erp & Akkermans, 2012, p. 3). Comparing these two systems may give us some insight as to whether the novel approach to property rights in New Zealand could also be useful in civil law countries such as the Netherlands.

After briefly setting out the research question and methodology, the discussion starts with a theoretical and historical background of property rights and their (traditionally) anthropocentric nature. Next, the theoretical use of property rights in water protection will be discussed, exemplified by two cases from practice. Despite several advantages, these conventional uses of property rights as a water conservation tool are subject to several limitations as well. Hence, the classical Western approach to property rights will be compared with the novel approach recently adopted in New Zealand. The aim is to establish whether the latter approach – which fundamentally changes the relationships in property rights – has an added value for the protection of bodies of water. Although this article will focus on the role of property rights in protecting water quality and aquatic wild life, it may also bear relevance for the protection of other natural components (e.g., forests).

Research questions and methodology

This article addresses two questions. First, what is the potential of using private property rights for protecting bodies of water, and what are the limitations? Second, can a shift to nature-held property rights overcome these limitations? The aim is to evaluate whether the latter approach has advantages over the first. This will be done by comparing (conventional) property rights in New Zealand and the Netherlands to the novel approach in New Zealand whereby a river owns itself.

The two property regimes will be compared by using the functional method of comparative law, which is (arguably) 'the mantra of comparative law' (Michaels, 2006, p. 340). This method deems national legal institutions comparable if they fulfil similar functions in different legal systems and society as a whole (Michaels, 2006, p. 342). The idea is that laws in different legal systems respond to similar societal needs or problems (Zweigert & Kötz, 1998). Thus, an essential presumption in this comparative study is that in both countries there is a societal need to protect the aquatic environment. The different property rights will be evaluated according to how they can serve this particular function (Michaels, 2006). This requires the researcher to look at the law

in action, rather than to focus only on black letter law or legal theory (Michaels, 2006). Therefore a practical example from both jurisdictions has been selected to illustrate how property rights can (or cannot) be used to protect waters.

Private property rights and human–nature relationship

Relationships within property rights

Defining 'property rights' is not easy

Because of the different meanings 'property' may have in different cultures, often a safe approach is taken by describing characteristics of property rights. Property rights have, for instance, been defined by Singer (2014, pp. 1288–1298) as 'legal relations among persons with respect to things'. He also notes that 'under any rubric or conception, property suggests a stable basis of expectation with respect to control of valued things'. Property rights have also been described as 'particular rights that people have to do certain things with certain objects – rights which vary considerably from case to case, from object to object, and from legal system to legal system' (Waldron, 1985, p. 313).

A common denominator in these definitions is that, from a legal perspective, ownership is primarily about relationships between humans, or human-established legal persons, as right and duty holders. The object itself is not recognized as a holder of rights and duties and, therefore, the owner–object relationship appears legally less relevant (Waldron, 1985). Another prominent feature is that the owner has control and therefore takes a dominant position over the object. This also applies to ownership of components, living and non-living, of nature. Legally this is not problematic, as these components are considered 'things'.

Reflection of the dominant human–nature relationship in property theory

Both characteristics, the focus on human relationships and the control of the owner, often dominate legal discussions on ownership of (components of) nature. This reflects the dominant position that humankind in the Western world has taken over nature in previous centuries. For a very long time, humankind has positioned itself above nature, based on the conviction that nature was meant for human use (Passmore, 1974/1980). For explanations for this dominant position, reference has been made to the process of domestication of animals (around 8000–4000 BC, depending on the geographical region – Wells, 2010), Aristotle's *Politica* (Cliteur, 2005), the Judeo-Christian tradition (Minteer & Manning, 2005, White, 1967), and the 'mechanization of nature' in the theory of Descartes (1596–1650) (Bastmeijer, 2011).

This dominant attitude of humanity towards nature made it logical to think that living and non-living components of nature may be regarded as 'objects' without rights and duties that may be appropriated as private property. In fact, the dominant position of humankind has explicitly been used to justify private ownership of nature. For instance, John Locke (1690, chapter 5 at 25; see also Bastmeijer, 2016) explained that 'the earth and all that is therein is given to men for the support and comfort of their being'. This implies that appropriation of nature as private property is legitimate and even necessary. Under 'fruits and beasts of the earth', Locke stated:

'being given for the use of men, there must of necessity be a means to appropriate them some way or other before they can be of any use, or at all beneficial, to any particular men' (see also Grotius, 1583/1645). Similarly, human use, occupancy or cultivation was considered a fundamental requirement for the right to appropriate territory by states.

Certain parts of nature – such as the sea and beaches – were considered common property and outside of the scope of private property. In relation to freshwater bodies and rivers, Hugo Grotius (1583/1645, Book 2, Ch. 2, Para. 3) explained that 'fluids, which cannot be limited or restrained, except they be contained within some other substance, cannot be occupied. Thus ponds, and lakes and rivers likewise, can only be owned as far as they are confined within certain banks.' Consequently, 'rivers may be occupied by a country, not including the stream above, nor that below its own territories' (Para. 4), and 'rivers separating two powers may be occupied by both, to each of whom their use and advantages may be equal' (Para. 5).

Shifting human–nature relationships

An important nuance in this topic is that human–nature relationships have changed over time, and certainly in the last two centuries. In the nineteenth century the appreciation of nature increased, amongst other things because of the air pollution, crime and disease in cities (see e.g., Thomas, 1983). This mental shift has been reflected in nature protection law. For instance, in the twentieth century one may observe more attention to stewardship in nature protection law (Bastmeijer, 2011). After World War II several international conventions and declarations even explicitly started to emphasize the importance of intrinsic values of nature (Bastmeijer, 2011). For instance, the 1982 World Charter for Nature of the United Nations states: 'Every form of life is unique, warranting respect regardless of its worth to man.' More recently, such ecocentric and holistic views have also been reflected in global movements such as the Earth Charter initiative (http://earthcharter.org), in academic thinking such as the 'wild law' concept (Cullinan, 2011), and in domestic laws (e.g., the explicit recognition of the intrinsic values of nature in Article 1.10 of the Dutch Nature Conservation Act 2017).

These shifts to more nature-friendly attitudes may have influenced the way people think about relationships to nature in private property law. For instance, Rosenbloom (2014, at 53) explains that 'embedded in the definition of common pool resource is an assumption that human interaction with and appreciation of nature is primarily one of appropriation, where humans consume the resource'. But 'in some circumstances "rational" actors may be motivated to preserve or add to – and not consume – nature for a variety of reasons, including to promote human development (such as health)'. So, property of nature may entail much more than human exploitation. Nature-friendly attitudes may even result in a situation where a person is interested in property rights with the motive of protecting nature against the use or damaging influences caused by other human actors. One could state that in that case, while relationships in property still relate to human actors only, the intention is clearly to contribute to a more positive human–nature relationship.

The legal framework: property rights and water

Now for a closer look at the legal options for nature protection. Via property rights, one can – to a certain extent – protect bodies of water. However, where an object cannot be (privately) owned, nature conservation through (private) property rights is not an option. The question is whether rivers can be privately owned. Therefore, it is important to get acquainted with the (rather technical) requirements for ownership and other property rights in bodies of water, and rivers in particular. These requirements may differ between legal systems, but remarkable common features can be seen between the Netherlands and New Zealand.

Ownership

A person can own an object and can therefore 'rule' (within certain legal limits) over that object. This is because, in both New Zealand and the Netherlands, ownership is considered the most comprehensive property right one can have in an object (Art. 5:1 of the Dutch Civil Code [DCC]; Honoré, 1961). However, in both jurisdictions, the water in rivers cannot be owned: streaming water is considered *res nullius* – belonging to no one (Getzler, 2004; *Ballard v Tomlinson* (1885) 29 Ch D; *Mason v Hill* (1833) 110 ER 692; Memelink, 2011).

In the Netherlands, the riverbed can be owned, but the bed of public navigable waters is presumed to be (publicly) owned by the State (Art. 5:27 DCC). Privately owning such a riverbed is therefore unlikely. Similarly in New Zealand, the bed of a navigable river is vested in the Crown and cannot be privately owned. When it comes to non-navigable rivers, the owner of the adjacent land has an *usque ad medium filum aquae* right: ownership is presumed to extend to the midpoint of the riverbed (*Attorney-General and Southland County Council v Miller* (1906), 26 NZLR 348).

All in all, it is to a certain extent possible to acquire ownership over a river (i.e., buying a riverbed or adjacent land), for nature conservation purposes if one likes (as further illustrated later in the article). However, the fact that the water itself cannot be owned and the restrictions in both jurisdictions on privately owning riverbeds are important legal limitations.

Easement rights

Limited property rights are derived from the right of ownership, but are not as comprehensive. The advantage of limited property rights is that, once vested, they 'stick' to the property and therefore pass on to subsequent owners. This could lead to long-term nature conservation. Nevertheless, it is argued that only a few limited property rights are (at least somewhat) suited for large-scale private nature conservation.

The right of easement (Art. 5:70 DCC) is a right of enjoyment and is a relatively well-known limited property right. It implies a burden on a ('servient') land to the benefit of another party. In the Netherlands, an easement must benefit a dominant *land* and can entail a duty for the owner of the servient land to either tolerate something or to refrain from doing something on the servient land (Van der Plank, 2012; Van

Leuken, Van de Moosdijk, & Tweehuysen, 2017; Van Zeben, Du Pon, & Olthof, 1981). For example, it can entail the duty for a factory to refrain from discharging chemicals into a river to the benefit of a dominant land which might be affected (Van Zeben et al., 1981). However, the requirement of the existence of a dominant *land* makes the Dutch easement less preferable for large-scale water conservation. After all, private parties may very well have an interest in protecting waters even where it has no value for their own land. Furthermore, Dutch easement rights cannot entail a (main) duty to undertake positive action, such as a duty to instal a water treatment plant.

In New Zealand, the existence of a dominant land is not required (New Zealand Property Law Act 2007, S. p. 291). However, under New Zealand law easements can only relate to a *right for the benefited party to use* the servient land by *doing* something on the servient land (e.g., installing a water treatment plan). Unlike the Dutch easement (Art. 5:71 DCC; Asser, Bartels, & Van Velten, 2017), a plain right to restrain certain activities on the servient land cannot normally be imposed (*Phipps v Pears* [1965] 1 QB 76). For example, a New Zealand easement cannot lead to a duty to *refrain* from polluting a river, for instance by prohibiting the use of pesticides. This means that also New Zealand easements are not very well suited to protecting waters. Also, under New Zealand law, easement rights cannot oblige the owner of the servient land to undertake positive action.

Qualitative duties and conservation covenants

Under Dutch law, an alternative to an easement right is a so-called qualitative duty (*kwalitatieve verplichting*; Art. 6:252 DCC) connected to the servient land. An advantage of a qualitative duty over a Dutch easement right is that the party interested in vesting the duty does not need to own land that benefits from the qualitative duty (Asser et al., 2017; Reehuis & Heisterkamp, 2012; Van Oostrom-Streep, 2006). Like a Dutch easement, a qualitative duty can impose a negative duty on the owner and users of a (servient) land to tolerate something or refrain from doing something (Roelofs, 1991). The negative duty can include a factual act (similar to easements), but (unlike easements) also a legal act, e.g., a prohibition of giving third parties a contractual right to use waters for fishing purposes. Furthermore, qualitative duties pass on to subsequent owners, making them useful for long-term nature conservation.

According to Erp and Akkermans (2012), Dutch qualitative duties can be compared to common law covenants. 'A covenant is a legally binding agreement, "a promise contained in a deed"' (Saunders, 1996, p. 325; see also Hinde & McMorland, 2013). The type of covenant that is used most in New Zealand for the purpose of nature conservation on private lands is the so-called statutory covenant (Saunders, 1996), often referred to as a conservation covenant (Adams & Moon, 2013; Merenlender et al., 2004; Law Commission, 2014). The best-known example in New Zealand (the Queen Elizabeth II National Trust) will be discussed later.

Conservation covenants can be negotiated upon with private landowners by an authorized body. It can be tailored to individual circumstances, making it a rather flexible instrument (Adams & Moon, 2013). It can include passive duties for the owner, such as a duty to refrain from fishing in a river. It may also include maintenance duties (S. 21 (2c)). A land in proximity that benefits from the covenant is not required.

Furthermore, statutory covenants 'may exist in perpetuity or for a specified period of time' (Edwards & Sharp, 1990, p. 318). Therefore, 'depending on their duration, such agreements are binding on the current landholder and all future owners' (Iftekhar, Tisdell, & Gilfedder, 2014, p. 176). Of all property rights discussed, this makes conservation covenants the most suitable for protecting waters (insofar as the water can be owned, as discussed earlier).

Examples from practice

Now that we are familiar with the legal possibilities, let us consider whether in practice property rights are indeed used to protect the aquatic environment. The two examples below are chosen because they are very successful scale-wise. The first relates to the biggest private landowner and private nature conservator in the Netherlands (Kuindersma et al., 2002). The second relates to a key actor in the field of private nature conservation in New Zealand (Saunders, 1996; Scrimgeour & Vijay, 2017).

Nature monuments

In the Netherlands, the biggest private player in the field of nature conservation is the Nature Monuments Society (Vereniging Natuurmonumenten). Nature Monuments owns more than 100,000 hectares of nature (https://www.natuurmonumenten.nl/visie); only the Dutch state itself owns more (Kuindersma et al., 2002). Nature Monuments has contributed to a rapid increase in the amount of land that is reserved for nature and has been an important actor for the establishment of the Natuurwerk Nederland, a national network of interconnected natural areas (Friedman, 1997; Kuindersma et al., 2002).

The very existence of Nature Monuments is linked to protecting bodies of water. The society was established in 1905 to protect the Naardermeer (Lake of Naarden) from plans to start using it as a landfill (Coesèl, 2016). Nature Monuments now owns many valuable waters and wetlands; for example, it owns much of the Oisterwijkse Vennen (Lakes of Oisterwijk).[2] These lakes were acquired by Nature Monuments in response to government plans to drain and sell the area (Natuurmonumenten redde 100 jaar geleden de bossen in Oisterwijk, 2013). Together with the local authorities, Nature Monuments now takes care of the water quality of the lakes (Schmit, 1995; http://www.natuurmonumenten.nl/projecten/de-natte-parel). In wetlands where Nature Monuments is not the sole private owner, it has been cooperating with (smaller) private owners in attempts to restore water quality and nature. A nice example is the nature reserve of the Kleine Meer and Groote Meer (Small Lake and Big Lake).[3]

With respect to public waterways, which cannot be privately owned, the role of private property rights is limited. Nonetheless, being an important and well-known actor in nature conservation, Nature Monuments has joined several private–public partnerships with a view to protecting state-owned waters. One of its biggest public–private partnerships aims to restore the biodiversity in the Markermeer by artificially creating 10,000 hectares of islands. However, the lake and islands remain property of the Dutch State (Samenwerkingsovereenkomst Eerste Fase Marker Wadden 2014, Art. 7).

An important practical limitation of nature conservation through private ownership is that it is very expensive. All the land needs to be bought and maintained. For this, Nature Monuments is dependent on 700,000 members, volunteers and sponsors

(https://www.natuurmonumenten.nl/visie). These private sponsors have become all the more important now that the government has announced that it will no longer (financially) help Nature Monuments acquire land at the expense of smaller private buyers (Kamerstuk 33 576, no. 6; Interprovinciaal overleg 2014).

The Queen Elizabeth II National Trust

In New Zealand conservation covenants are said to be 'almost the sole policy measure in protecting land under private ownership' (Saunders, 1996, p. 325). The Queen Elizabeth II National Trust (QEII Trust) is a key actor in this field. It was established by the Queen Elizabeth the Second National Trust Act in 1977 to 'encourage and promote … the provision, protection, preservation, and enhancement of open space' (S. 20(1)).

The trust's main task is the negotiation and acquisition of so-called open space covenants with private landowners (S. 22), but it can also purchase (and sell) land (S. 21 (2)). The trust can agree with the landowner to protect (a part of) his land through an open space covenant (S. 22(1)).'Open space' can relate to an area of land *or body of water* (S. 2). The trust's website mentions nature conservation as one of its primary tasks, specifically also referring to wetlands (https://qeiinationaltrust.org.nz/protecting-your-land). A conservation covenant can relate to various duties, such as a prohibition of fishing in a river or a duty to prevent pests. In exchange, the trust offers landowners advice, assistance or financial compensation for maintaining the protected area.

Open space covenants enjoy increased popularity in recent years (QEII Annual Report 2017). They went from 826 covenants covering 'only' 28,529 hectares in 1995 (Saunders, 1996, p. 325), to 4,425 covenants covering more than 180,000 hectares of protected land as of December 2018 (https://qeiinationaltrust.org.nz/about-us). A clear advantage of conservation covenants is that the costs will generally be lower than acquiring full ownership (Maron, Rhodes, & Gibbons, 2013; Iftekhar et al., 2014; Law Commission, 2014; Holligan, 2018). This makes it 'a low-cost option for governments to complement public protected areas' (Adams & Moon, 2013). The QEII Trust is estimated to save the government NZD 25 million per year in maintenance costs (Scrimgeour & Vijay, 2017). In 1977–2017, this resulted in an estimated financial commitment by private landowners of NZD 1.1–1.3 billion (Scrimgeour & Vijay, 2017).

Another strong feature of the QEII Trust is that it arranges for two-yearly supervision of all protected areas (https://qeiinationaltrust.org.nz/managing-your-covenant). In 2017, it monitored 1902 covenants for compliance, of which 217 (11%) needed attention (QEII Annual Report 2017). The trust does not shy away from going to court to enforce a covenant if necessary (Briefing to the Primary Production Select Committee, 2015). It follows from a 2018 New Zealand Supreme Court ruling that (subsequent) landowners cannot easily avoid their obligations under a covenant (*Green Growth No.2 Ltd v Queen Elizabeth the Second National Trust* [2018] NZSC 115).

On the other hand, the weaknesses of the system have also become visible due to the rapid growth in protected land. Although conservation covenants are cheaper to obtain than full ownership, there are still substantial costs.[4] Assistance in maintenance, supervision and enforcement require a large budget. To progress a covenant costs about NZD 22,000 (Scrimgeour & Vijay, 2017). For this the trust is largely dependent on public funding, and about 50 applications for covenants are refused annually due to a lack of

financial means (Briefing to the Primary Production Select Committee). Furthermore, because the trust is established by statute and financially dependent on the government, it is not fully independent from politics. Another important weakness is that covenants are less popular for protecting wetlands. Just a small portion of the protected land (7500 hectares, 5 %) consists of wetlands (QEII Annual Report 2017).

Limitations of the use of property rights in protecting water bodies

The previous sections have shown that private property rights can provide legal tools in protecting bodies of water, but several legal and practical limitations were also mentioned. For example, in the Netherlands, one cannot impose a main positive duty on an owner by means of a qualitative duty. In New Zealand the law only grants very few organizations the power to progress conservation covenants. This may limit initiatives by other private parties. Moreover, the role of property rights is (obviously) limited with respect to navigable waterways which are fully owned by the State in both jurisdictions. The same applies to waters which are not owned by anyone, such as the water in streaming bodies of water or the high seas. Furthermore, nature protection via property rights requires sufficient funds, since they often have acquisition, maintenance, supervision and enforcement costs. They may also reduce the sales value of the property (Comerford, 2013).

Another major limitation is that private nature conservation depends on the voluntary choice of a landowner (Saunders, 1996). This may make it particularly challenging to protect rivers through property rights: rivers are usually owned by a large number of (willing and unwilling) private owners with various, often conflicting, interests. This means that (unwilling) private owners may stand in the way of protecting rivers. This is particularly so since expropriation of privately owned lands for the purpose of nature conservation is a politically sensitive measure which is little used (Jager, 2012). Moreover, subsequent landowners may not share the eco-friendly vision of the previous owner, which can be a potential obstacle to achieving nature conservation outcomes (Holligan, 2018; Fitszimons & Carr, 2014), particularly if long-term protection is aimed for. In particular, imposing positive duties on smaller landowners, such as conservation management tasks (e.g., pest control), may reduce the effectiveness of private nature conservation. A landowner may be unwilling to participate due to the (financial) burden of such duties or may be unable to fulfil positive duties due to a lack of expertise or skills (see also Moon, 2013).

These limitations mean that for their protection through property rights, water bodies and rivers depend heavily on (present and future) human owners and their priorities. Although attitudes may have become more nature-friendly over the last two centuries, water bodies are still merely an 'object' of property relationships between humans. The question is whether the allocation of property rights to nature itself may help overcome these limitations. This would imply a fundamental shift from inter-human relationships to true legal relationships between humans and nature. For many private lawyers this may sound like science fiction, but assigning ownership to nature itself is exactly what has been done in New Zealand.

Beyond human ownership: the Whanganui River

Largely influenced by Maori culture, the New Zealand legal system embraced the idea that nature, rather than being merely an object of human possession, can itself be a holder of (property) rights. The Te Awa Tupua (Whanganui River Claims Settlement) Act (2017) grants the Whanganui River (in Maori: Te Awa Tupua) legal personhood and establishes that it 'has all the rights, powers, duties, and liabilities of a legal person' (S. 14(1)).[5] The river acts and speaks through a representative body, Te Pou Tupua (S. 19(1)(a)), which consists of a Maori representative and a representative of the Crown (S. 20). Te Pou Tupua protects the status of the river and promotes and protects its health and well-being (S. 19(1)(b)-(c)). Furthermore, Te Pou Tupua exercises the rights, powers, and duties of Te Awa Tupua (S. 19(2)), among which are its rights as an owner.

A key feature of the act is that the river is given ownership over its own riverbed. This is a fundamentally different approach from the Western property concept discussed above, as the river is no longer considered just an object of relationships between humans. This approach connects well to indigenous human–nature perspectives: the Maori do not see nature as a commodity which they possess and which can be traded (Magallanes, 2015). They see themselves as 'users of something controlled and possessed by gods and forebears' (Waitangi Tribunal, 1999, p. 48). They consider the river a spiritual entity and refer to it as 'Te Awa Tupua': 'an indivisible and living whole, comprising the Whanganui River from the mountains to the sea, incorporating all its physical and metaphysical elements' (S. 12 of the Te Awa Tupua Act; see also Argyrou & Chaturvedi, this issue). The Maori have long been involved in conservation management of the Whanganui lands. For example, they have joined various collective management efforts together with the (governmental) Department of Conservation, 'such as Kia Whārite, Mangapāpapa, Te Amo Taiao, the Mountains to Sea Cycle Trail Ngā Ara Tūhono, whio (blue duck) recovery and Tīeke Kāinga' (New Zealand Department of Conservation, 2012, p. 25; see also pp. 15–16, 26).

The Te Awa Tupua Act has been a major step in acknowledging the 'property claims' of the Whanganui Iwi, the Maori living in the lands of the Whanganui River. Such claims may seem to contradict their convictions regarding their position towards nature as explained above, but in Western legal systems conflicts over property rights are difficult to avoid, and claiming ownership was the most appropriate way to regain Maori control over the river. Therefore ownership of the river was said to be 'the heart, the core, and the pith' of the Whanganui Iwi claim (Waitangi Tribunal, 1999, p. 332). Allocating property rights to nature itself has been said to be as close as you can get in Western legal systems to the Moari perception of nature (Magallanes, 2015). However, others claim that the transfer of ownership to the river is in essence a compromise between two parties fighting over ownership (Sanders, 2018).

The Te Awa Tupua Act establishes a major shift in current property rights. All parts of the riverbed previously held by the Crown are now vested in Te Awa Tupua (S. 40–41). In principle, the land owned by the river cannot be sold, given away, mortgaged, charged or otherwise transferred (S. 43). If the riverbed changes, previously transferred land which has ceased to be part of the river is returned to the Crown (S. 54), while Crown-owned newly formed parts of the riverbed are transferred to Te Awa Tupua (S. 53).

With ownership comes responsibility. The river can become liable for damages in its capacity as an owner, for example if a construction it owns collapses and causes damage to

another person's property. But liability for structures, contamination and activities which already existed at the time of the transfer of ownership are excluded (S. 56 and Schedule 5, clause 1). Te Pou Tupua may apply for public funding if it lacks the means to fulfil the landowner functions for the river, e.g., to pay damages (Schedule 5, clause 3).

A major limitation to the new property regime is that already existing private property rights in the river are unaffected unless expressly provided otherwise (S. 16 (a) and 48). Private property rights can only be acquired with full consent of the right holder.[6] In addition, the transfer does not affect the Crown's right to mine for minerals (S. 44(2)). This weakens the ecological protection of the Whanganui River (likewise with respect to the overriding public right to mine and conservation covenants; see Adams & Moon, 2013). Another limitation is that only the riverbed is owned by the river. The transfer of the Crown-owned parts of the bed does not create or transfer any proprietary interest in wildlife, fish, aquatic life, seaweeds or plants (unless attached to the riverbed, S. 46). This obviously conflicts with the Maori notion that the river is an indivisible whole from mountains to the sea, incorporating all its physical and metaphysical elements (see also Magallanes, 2015).

The added value of river-held ownership in comparison to conventional property rights

In property law, water bodies are traditionally merely objects of property: they are not a legally acknowledged actor in the human relationships that are characteristic of private law. The New Zealand Te Awa Tupua Act constitutes a fundamental change in allowing a river to become 'legally relevant'. The Crown-owned parts in the riverbed are now owned by the river itself. If anything, this novel property regime sends out a clear political message: rivers have value and rights, independent from humans (see also Magallanes, 2015).

More cynically, the transfer of ownership to the river is a compromise between the Maori Iwi and the Crown, who both claimed ownership over the river (Sanders, 2018). Assigning property rights to the river implies non-ownership of both parties and a neutral platform for better future cooperation (Sanders, 2018; for a historical overview see Hsiao, 2012). Interestingly, the latter explanation is highly human-centric: the transfer of ownership to the river in this scenario would be no more than a compromise meant to solve a human conflict. A similar political result might have been reached by granting ownership to an independent party, such as an environmental NGO.

Whatever may be the main motivation for granting ownership to the river, it is not merely symbolic: there are some clear legal implications. First, all previously crown-owned parts of the river bed may no longer be alienated, which is normally not the case if a river is privately owned. Second, the Te Pou Tupua board must act in the best interest of the river. Compared to publicly owned rivers, this makes the river less vulnerable to the whims of politicians, provided that new governments respect the Te Awa Tupua Act.

On the other hand, independence from politics could have also been achieved by granting ownership to a well-meaning private party, similar to Nature Monuments or the QEII Trust. By means of a conservation covenant the owner could then be held to its duties to the river in perpetuity. Arguably, such private parties are even more

independent than Te Pou Tupua, since one of the two seats in the board is reserved for a Crown representative.

Furthermore, the transfer of ownership to the river does not eliminate many of the limitations of private nature conservation discussed above. For example, it is not necessarily cheaper. As stated earlier, one of the main disadvantages of water conservation through private property rights is the acquisition and maintenance costs. The Crown-owned parts are given to the river for free, but they could also have been given for free to a private party. Moreover, the nature maintenance costs stay the same. Where Te Pou Tupua lacks the financial means to exercise its function as an owner, it may apply for public funding (Schedule 5, clause 3). Since the Crown-owned parts already led to public expenses anyway, financially the situation has not changed. However, costs may increase with respect to privately owned parts of the riverbed which are voluntarily transferred to the river. Thus, from a financial point of view, passing on ownership to the river itself is not more beneficial for public expenditure than nature management by private owners. Rather the opposite.

Another important disadvantage of private property rights is that a river requires coordinated management, which cannot easily be achieved through multiple (willing and unwilling) private owners. The notion that the river is one living whole is useful in this regard. It requires us to think from the perspective of the river, rather than in terms of (conflicting) private interests. However, the new property regime has not changed the fact that the water in the river cannot be owned, not even by the river itself. Moreover, existing private property rights are unaffected by the new property regime. Apparently, the New Zealand government considered a large expropriation exercise a step too far, which means that coordinated management of the river may still prove challenging.

This means that the innovate property regime in the Te Awa Tupua Act does not overcome some important limitations of private conservation through conservation covenants or (full) ownership, as discussed above. However, in one way the Te Awa Tupua Act may indeed lead to more future-proof protection of the river. As mentioned, the river-owned parts can no longer be transferred to a new owner. And one important weakness of private nature conservation is that new owners may not be willing to carry out the nature conservation duties that come with the property. Future-proof private nature conservation thus calls for continuous monitoring and (where necessary) enforcement of private property rights. For the river-owned parts of the Whanganui River, these (risky) changes of ownership are no longer possible.

Conclusion

This article has argued that private property rights can be an additional tool in protecting bodies of water which is largely independent from politics. The example of Nature Monuments in the Netherlands shows that (big) private owners can protect bodies of water in a two-tier fashion: by acquiring ownership; and by public–private partnerships with a view to protecting waters. In New Zealand, the QEII Trust demonstrates that, collectively, small(er) private landowners can have a considerable positive impact through conservation covenants, although this system has been less successful with respect to wetlands.

A combination of the two systems discussed has even more potential. A large private landowner such as Nature Monuments can establish a coordinated approach to water management, which can be supplemented with limited property rights (conservation covenants or qualitative duties) in relation to smaller landowners (the QEII model). However, there are legal and practical limitations to protecting water bodies via private property rights. Among them are the high costs of acquisition, dependency on the private owner's own volition, and high supervision and enforcement costs.

The Whanganui River is a novel step in acknowledging nature as a holder of rights rather than a mere object of human ownership. Legally, the biggest practical difference is that, compared to conventional property rights held by private individuals or NGOs, the previously Crown-owned parts of the river may no longer be alienated. The new property regime is fixed and may therefore lead to more sustainable nature conservation. In practice, though, most of the other challenges noted with respect to water conservation through private property rights, persist. This is particularly so because private ownership is not affected by the new property regime. This shows how difficult it is for Western legal systems to fully depart from the human-centric nature of property law and to limit private property rights for the sole sake of nature protection.

Nonetheless, the Te Awa Tupua Act and its novel approach to property rights may prove to be an important step in changing human–nature relationships in, and beyond, property law. This novel step was taken even though most of New Zealand property law is, like Dutch property law, highly human-centric. The biggest implications are probably political and psychological, rather than legal. The notion that a river owns itself can motivate us to disentangle the interests of the river from human interests. This may lead to better ecological awareness and policies, although further research into the actual effects is required. If anything, New Zealand sets an interesting example of how a Western country can adopt an alternative perspective on ownership with a view to protecting waters and maybe even nature at large. The Whanganui River can be a source of inspiration for countries seeking alternatives to water conservation and to the inherently human-centric approach to ownership in most Western legal systems.

Notes

1. In this article, the focus is on private ownership (as a relatively unexplored tool in environmental protection) rather than public (state) ownership.
2. A more recent example is the Hostermeerpolder (https://www.natuurmonumenten.nl/natuurgebieden/horstermeerpolder).
3. https://www.natuurmonumenten.nl/natuurgebieden/kleine-meer/nieuws/metamorfose-natuurgebied-kleine-meer-en-groote-meer.
4. See also Hawes and Memon (1998) on the Forest Heritage Fund, another covenanting organization in New Zealand.
5. Similarly, the Te Urewera Forest was granted legal personhood and property rights in 2014 (S. 11-12 of the Te Urewera Act 2014). In 2017 it was decided that Mount Taranaki would also be given legal personhood (Cheng, 2017).
6. A slightly different rule applies to Maori freehold land, a form of community-held land which requires 75% of the owners or freehold beneficiaries to consent to the transfer (S. 49).

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Legal personality and economic livelihood of the Whanganui River: a call for community entrepreneurship

Aikaterini Argyrou[a] and Harry Hummels[b]

[a]Center for Entrepreneurship, Governance & Stewardship, Nyenrode Business University, Breukelen, Netherlands; [b]Utrecht University School of Economics, Netherlands

ABSTRACT

Legislation in New Zealand dictates that the Whanganui River is a living entity and a legal person. Guardians uphold the river's environmental, social, cultural and economic well-being. We provide a conceptual discussion of the river's economic well-being, understood as the mutual enhancement of natural and human elements through community entrepreneurship that is based on human and non-human capabilities. We discuss human economic activity that preserves the right of the river to be free from pollution and form an integral part of the Māori culture and tradition, the improvement of Māori living conditions, and their rights to self-determination and prior consent.

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Introduction: the Te Awa Tupua Act in New Zealand

In 2017, the settlement of claims between indigenous Māori communities and the state of New Zealand led to legislation, the Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 (the Act), which dictates that the Whanganui River is a living entity and a legal person with rights that can be judicially enforced by appointed guardians (Hsiao, 2012; Shelton, 2015). The Act recognized that the Whanganui River is a singular entity that is 'indivisible' from its people, various Māori kinship groupings with historic and religious connections to the river, specifically, the Whanganui Iwi (Morris & Ruru, 2010). Legal personhood was provided to the Whanganui River after the continuous efforts of the Whanganui Iwi to enforce their customary property and fishing rights over the river and its protection from over-exploitation and misuse (Hsiao, 2012; Shelton, 2015; Morris & Ruru, 2010).

A new understanding of the well-being of the river

In Articles 12 and 13, the Act recognizes that the river and the surrounding area is an indivisible and living entity, which is simultaneously 'physical', understood as a living ecosystem, and 'spiritual'. It accordingly comprises 'physical' and 'metaphysical' elements and the surrounding communities, which should work collaboratively for one common purpose: the environmental, social, cultural and economic 'health' and 'well-

CONTACT Aikaterini Argyroua a.argyrou2@nyenrode.nl; Harry Hummels g.j.a.hummels@uu.nl

being' of the river and of its people, its constituents (Youatt, 2017). Those are the Whanganui Iwi, who customarily depend for their living and economic activities on the river and on its well-being.

The interdependence of the river and the Whanganui Iwi is prescribed in the Act in a list of 'intrinsic values'. These values dictate the 'inalienable connection' and the responsibility of the Whanganui Iwi to protect the river for its benefit and for the benefit of future generations. That is, 'Protecting the River is equivalent to protecting the people, and in this case, protecting the (Māori) people could also lead to better protection of the River' (Hsiao, 2012, p. 371). This nexus is reflected in Article 18 of the Act, which establishes the purpose and the power of the river's guardian body, the Te Pou Tupua office, acting in 'full capacity' and having 'all the powers reasonably necessary to achieve its purpose and perform and exercise its functions, powers, and duties'. Article 20 prescribes that the guardian office comprises two appointed officer-guardians: one Māori representative appointed by the Māori communities and one state representative appointed by the government of New Zealand. The duties of the river's guardians include:

(1) to act and speak for and on behalf of the river;
(2) to uphold the river's recognition and values as an indivisible entity and as a legal person;
(3) to promote and protect the environmental, social, cultural, and economic health and well-being of the river;
(4) to take any other action reasonably necessary to achieve its purpose and perform its functions.

In Article 29, identification of the issues related to the environmental, social, cultural and economic health and well-being of the river is assigned to a 'strategy group', the Te Kōpuka, a competent committee of individuals and organizations with interests in the Whanganui River. Te Kōpuka includes Māori community representatives, local authorities, the government, commercial and recreational users and environmental groups, with the purpose 'to act collaboratively to advance the health and well-being of the river'. Those interests are social, cultural and economic but also environmental (Hsiao, 2012). Te Kōpuka has the duty to develop a management strategy, Te Heke Ngahuru, a forum and inclusive processes where the Whanganui River's best interest can be determined and promoted collaboratively. In addition, the guardians administer a fund, Te Korotete, which provides financial support to the well-being of the Whanganui River, understood as a singular entity (Whanganui Iwi [Whanganui River] Deed of Settlement Summary of 5 August 2014, see New Zealand Government, 2014).

The undermined economic activity of the Whanganui Māori communities

For the state of New Zealand, the importance of the Whanganui River area and its local population in the regional and national economy is acknowledged in Article 69(17) of the Act. However, the economic role of the Whanganui Iwi is frequently undermined (Hsiao, 2012). The Māori population of the Whanganui River area is demonstrably less employed and less qualified for employment compared to the non-Māori population in the same area

(Manawatū-Whanganui Growth Study, 2015). Furthermore, the Māori enterprises contribute less to the national economy (5.6%) than the vast contribution of the non-Māori enterprises (94.4%) (Manawatū-Whanganui Māori Economic Development Strategy, see Horizons Regional Council, 2016). Hence, development is expected for the Māori population following the settlement of the Māori claims in the Act, which promotes local Māori economic interests in connection with the economic, social and natural well-being of the river.

Pursuant to the Act, the economic prosperity of the Whanganui River can be understood as the economic well-being of the indivisible Whanganui River community of natural and human elements based on the Māori tradition, religion, culture and identity. Accordingly, in this article, we examine how the economic well-being of the Whanganui River community can contribute to the mutual enhancement of the natural and human elements if it is developed as community and social entrepreneurship (used in this article interchangeably) based on human and non-human capabilities. We consider a framework of human economic activity which can be developed in the form of community and social entrepreneurship that preserves the right of the river to be free from pollution as well as the Māori indigenous identity, culture and tradition, the improvement of their living conditions, and their rights of self-determination and prior consent.

We understand that if the Whanganui River is not perceived as a living entity in its own right, undesirable forms of exploitation and transformation, and/or endangering traditional culture and ways of living, might easily result. Hence, the focus of this article is on finding a harmonious solution for inclusive and sustainable development of the river understood as a community of elements. We aim to contribute to the substance of emerging normative frameworks which are being developed and accommodate this new understanding, such as the Universal Declaration of River Rights and the Earth Charter. We argue in favour of community and social entrepreneurship because we acknowledge the dangers of the economic misuse of the Whanganui River and the pollution that resulted from that misuse.

The legal personhood of the river and guardianship

Stone's (1972) seminal article 'Should Trees Have Standing?' first introduced the idea of humans providing legal personhood to non-human objects and particularly to natural elements, such as trees. According to Stone, legal rights could be used by guardians to claim redress and restitution for environmental damages on behalf of nature and/or nature's non-human objects (see also Chan, 1988, 1989; Hogan, 2007; Morris & Ruru, 2010). Stone instigated the development of scholarship pursuant to the outcome of the US Supreme Court case *Sierra Club v. Morton* (405 [1972] US Supreme Court 727, paras. 742–744; see also Cullinan, 2008).

Stone claims that legal personhood could allow a non-human entity to be part of legal relationships and to seek redress in its own right, represented by guardians. Hence, nature could be represented judicially by guardians who are concerned with nature's well-being and who can initiate legal actions and claim restitution on behalf of nature's non-human objects if nature's interests are violated. In that case, Stone contemplates that courts will be able to assess the actual harm and rehabilitation of nature's non-human objects rather than the individual interests of the guardians (Hogan, 2007; Morris & Ruru, 2010).

Stone's approach differs from the dominant legal approach, which suggests the judicial protection of the environment using claims on the basis of rules in different legal areas, e.g., in property law, in tort law, in environmental laws and in the constitution (Shelton, 1991, 2015). It also differs from the approach of developing market mechanisms for the protection of the environment (Bakker, 2016; Garrick & Svensson, 2016; Shelton, 2015). However, Stone's argument has found ground in the Act in New Zealand and in subsequent constitutional amendments, national laws, case law and legal reforms in various other countries (Bolivian Framework Law of Mother Earth and Integral Development for Living Well, 2012; Daly, 2016; Mohd. Salim v. State of Uttarakhand & others [2017] WPPIL 126/2014, Uttarakhand High Court at Nainital; Lake Erie Bill of Rights (LEBOR), n.d.; Drewes Farm Partnership v. City of Toledo n.d.; O'Donnell & Talbot-Jones, 2018; Shelton, 2015; Tomas, 2011).

The Act dictates that the Whanganui River is a legal person, subject to legal rights and duties dictated by law and introduced into legal relationships (Smith, 1928). In theory, the types of legal persons are discussed in extant literature by three distinct groups of legal scholars. The first group claims that a legal person is humanity's legal concept. Legal personality offers 'formal capacity to bear a legal right and so to participate in legal relations' to anyone or anything, without considering the moral significance of the bearer of legal personhood (Naffine, 2003).

Accordingly, anyone or anything can acquire legal personhood, including non-human objects of nature such as the river, depending on the human will. Humans decide what is to be treated as a subject of rights and duties, within certain legal relationships and based on certain human and societal objectives (Naffine, 2003). Moreover, humans act as the guardians of both the rights and the duties provided to non-human objects. Shelton (2015, paras. 22–23) defines a legal person as an 'artificial' entity 'that is not a human being, but one on which society has decided to confer specific rights and obligations'. Criteria that have been used to define the provision of legal personhood to entities include 'biological life, genetic humanness, brain development, ability to feel pain, consciousness/sentience, ability to communicate, ability to form relationships, higher reasoning ability, and rationality' (paras. 22–23). Therefore, a second group of legal scholars considers that only humans can be legal persons, starting from their birth and for as long as their biological life extends (Naffine, 2003). The third group of legal scholars says that only 'rational' and fully competent humans can have a legal personhood, which is directly related to their capacity to initiate or terminate legal proceedings (Naffine, 2003). According to the first group, a river can be sensibly provided legal personhood. The second and the third groups disagree, because a river does not have biological life or human rationality.

We understand that the foregoing criteria may be sufficient to constitute legal personhood, but they are not necessary to acknowledge legal rights. Obviously, a river does not have higher reasoning ability or rationality, brain development, or consciousness. The legal right of the river is grounded in its being an inseparable element of the preservation of the life and culture of a manifest and discernible group of people. The question therefore is whether a distinction can be made between non-humans that can have legal rights in their own right (like animals) and those that have legal rights conveyed or assigned to them because of their indispensable role in preserving human culture. We believe that a river would fall under this latter category.

Elder (1984) and other scholars provide a different distinction of schools of thought developed in ecology in the early 1970s (Naess, 1973; Stevens, Tait, & Varney, 2018). These are the schools of either deep or shallow ecology (Elder, 1984; Giagnocavo &

Goldstein, 1990; Naess, 1973; Stevens et al., 2018). The distinction relates to either a shallow anthropocentric or a deeply ecocentric view of reality (Giagnocavo & Goldstein, 1990). Shallow ecologists advocate the moral significance of human beings who can only be considered legal persons (Elder, 1984; Giagnocavo & Goldstein, 1990; Naess, 1973) based on their human level of consciousness or capacity to experience reality. Deep ecologists have adopted an ecocentric view that sees an 'inherent' moral value in all entities, including non-human entities (including persons, objects and ecosystems), which could be also considered legal persons.

The anthropocentric moral view of the shallow ecologists also suggests that law itself is a human construct, and thus only human beings can legislate 'any matter of concern', including legal rights and duties to non-human objects of nature (Elder, 1984). Thus, there is a paradox in introducing legal personhood to non-human objects of nature when 'only humans can be actors in the legal system' and 'only human concerns could ever be addressed by it' (p. 291). Consequently, legal scholarship suggests the introduction of policies and legal norms concerning the protection of the environment and of certain objects of nature 'within existing legal and moral paradigms' (p. 291; see also Shelton, 2015) that regulate human behaviour as an 'effective instrument to control' human conduct (Smith, 1928, p. 296). Our position balances the perspectives of deep and shallow ecology. We understand that the river has legal personhood as part of its constitutive role in sustaining Māori culture – equal to the role the Māori have in their mutually directed interactions, and comparable with that of an ancestor. If that culture no longer existed, it would become difficult to convey or assign legal personhood to the river.

Although the approach of shallow ecology is a rational one, it differs from pursuing legal redress on behalf of natural non-human objects for their harm, damage and overexploitation from humans. Giving rights to nature results in a specific responsibility for humans to care for nature and to be accountable for any intervention in nature, which is an approach that goes beyond the established hegemonic attitude of the human race to nature but also differs from notions of environmental stewardship. However, the legal personhood of the Whanganui River comes from its role in contributing to – and preserving – Māori culture and life. Hence, it shows that more is needed (an inalienable right) than just arguing for human and environmental stewardship.

Article 18 in the Act assigns to the Te Pou Tupua (the river's guardians) a legal right to act and speak for and on behalf of the Whanganui River, the duty to uphold the river's status and protect the river's interests as a living entity, and to perform (legal and other) actions. The guardians are appointed directors with fiduciary duties of care in the management of issues pertaining to the governance of the river. These issues should promote the river's 'health' and 'well-being' for the benefit of the river, its community members and future generations.

It is questionable whether modern humans in their guardian role can contemplate the well-being of nature's elements, given the shape of the prevalent human understanding of nature in the modern (particularly) industrialized world, which is based on a value system that allows nature and the environment to be objectified, mainly for human use, and to be subject to property, either public or private (Elder, 1984; Hockstad, 2016; Teubner, 2012). Accordingly, there may be a paradox in introducing legal personhood to non-human elements of nature, which are guarded by modern humans or by modern human institutions (Teubner, 2012). In the industrialized world,

the dominant norm is that nature does not exist 'for its own sake' and that humans are 'inherently superior to other living things' (Hockstad, 2016, p. 122). Obviously, in other legal traditions the legal context allows a different understanding of nature and humans together as a mutually dependent and indivisible relationship in preserving a long-standing culture, as found in various traditional, religious, indigenous and philosophical dogmas, in New Zealand, Bolivia, China, Ecuador and India (Dai, 2015; Daly, 2016; Sachdeva, 2017; Shelton, 2015; Tomas, 2011; Teubner, 2012).

The indigenous community and the guardians of the river must negotiate – time and time again – what is an acceptable balance between preserving the rights of nature (and of the river in particular) and the economic sustainability of the community. In the traditional Māori culture, the river is an entity that itself deserves respect – as part of a dialectic relationship – and so needs to be preserved for future generations. Hence, any change in the economic or other uses of the river can be only accepted with the prior consent of the Māori. In addition, the decision-making procedures that protect the river (and the communities living in harmony with the river) should be constructed in a way that accommodates the traditional way of the Māori appointment of representatives, as well as Māori control over their environment (Teubner, 2012). The principle of prior consent by the Māori in the control and fate of the river allows the Māori to withhold their consent from economic and other activities influencing the natural, community and/or legal conditions of the river (Teubner, 2012). The concept of prior consent is already in use in international law, e.g., in the Convention on Biological Diversity. But even in these indigenous, religious and philosophical dogmas the deification of natural resources and the development of sacred beliefs may lead to limited perception and neglect of risks, which may eventually cause harm to the non-human elements of nature and eventually to humans (Sachdeva, 2017; Tomas, 2011).

Legislative developments analogous and similar to the Māori legislation concerning the Whanganui River manifest the existence of values based on two dominant ontological understandings of the relationship between nature and humanity (Giagnocavo & Goldstein, 1990) and a new ontological approach in the relationship between human and nature.

The first understanding, the ecocentric, dictates that nature is separate from humanity and exists in its own right. The second understanding, the anthropocentric, sees humanity as superior and as capable of using and exploiting nature for its own benefit. However, the Act, as well as constitutional amendments and legislation in various countries, also introduce a third understanding of this relationship between nature and humanity: one of nature being in an inalienable connection with humanity as one living entity.

The latter applies to the Māori communities living in harmony with the Whanganui River. Economic activity can easily lead to disruption of the natural environment, requiring a different conception of economic activity. The basis for such a conception can be found in the work of the American political philosopher Martha Nussbaum (2006, 2013), who develops a *capabilities approach* that encompasses the rights of non-human animals. As Nussbaum (2004, p. 305) explains, 'The basic moral intuition behind the approach concerns the dignity of a form of life that possesses both deep needs and abilities; its basic goal is to address the need for a rich plurality of life activities.' Even though it is not without problems (Barcham, 2012), we believe that a capabilities approach permits the recognition of the river as an entity that should be respected as part of a dialectic relationship to sustain both the river and Māori culture, while at the same time serving the Māoris' need for sustainable economic activities.

The capabilities approach can be seen as a clear operationalization of the third understanding of the relationship between nature and humanity, as an inalienable connection in a single living entity. Particularly when applied to the concept of 'nature', the capabilities approach requires going beyond fulfilling human-centred desires (Kortetmäki, 2017; Schlosberg, 2012; Watene, 2016). It addresses issues of 'ecological injustice' of humans towards ecosystems and the 'wellbeing of non-human life' (Kortetmäki, 2017). Schlosberg (2012, p. 456) confirms 'that the kind of community-based process for determining and prioritizing threats to individual and community capabilities and functioning for human beings would begin to address the status of the functioning of the nonhuman realm as well' and that ecosystems are 'living entities with their own integrity'. He also notes that 'atomizing nature into isolated animals devalues a form of life, and the way that this form of life flourishes' (Schlosberg, 2007, p. 148). There is no reason that Nussbaum's capabilities theory could not be extended to the realm of nature as conceived in Māori culture, an indivisible community of living human and non-human elements. At the time, there was no reason for Nussbaum to go beyond the aspect of humans and animals and to extend the capabilities approach to other forms of living. But when confronted with a culture in which a river potentially comprises 'the dignity of a form of life that possesses both deep needs and abilities' (Nussbaum, 2004, p. 305), in principle there is no reason to deny it the same status as a human or a non-human animal.

Nature is separate from humanity and it exists in its own right

Humanity depends on nature (McIntosh, 1985). This leads McIntosh (1985) to argue for an ecocentric understanding of nature as existing in its own right and superior to human existence. Natural phenomena happen without any human intervention, and natural disasters or the scarcity of natural resources will always evoke human fear. Accordingly, the normative framework should demonstrate nature's superiority over human existence. Although Article 13 of the Act acknowledges the Māori value *ko te awa te mātāpuna o te ora*, meaning 'the river is the source of spiritual and physical sustenance', this does not constitute an ecocentric justification of the supremacy of nature over human beings. The Whanganui River serves nature and simultaneously maintains the balance of the natural ecosystem. Human and technological interventions in nature to support human life might have either positive or negative effects on nature (McIntosh, 1985). Hence, humanity has the moral obligation to initiate learning, understanding and restoration of nature whenever that is necessary – and for its own preservation. Articles 69 and 70 of the Act provide acknowledgements and an apology from the state of New Zealand to the Māori and to the Whanganui River for 'past wrongs' and promise the beginning of 'the process of healing'. In its apology the state of New Zealand recognizes that the Whanganui River is 'an indivisible whole' and notes the 'inalienable interconnection' between the Māori and the river.

Humans use and exploit nature for their survival and well-being

On the anthropocentric understanding, nature exists to sustain human life and any aspect of it. Accordingly, the normative framework 'primarily protects the peoples' use of the environment – that is, their "common heritage" – but not the environment itself … against human use or abuse' (Daly, 2016, p. 66; see also Burdon, 2012). The

anthropocentric view also endorses the position that nature and its elements – such as a river – can facilitate and provide goods and services of an economic value to humans in different industrial sectors, economic activities or interchangeably economic functions or utilities (Peterson & Hendricks, 2016; Starik, 1995). Economic activities are those of an economic significance (Peterson & Hendricks, 2016; Starik, 1995). In the anthropocentric view, the economic value of nature and its elements – such as a river – will always have a connotation and justification that are directly linked to human needs and interests.

The economic benefits are 'use values': certain advantages and benefits provided to humanity from the use of nature's elements (Peterson & Hendricks, 2016): for instance, the utility of the river (in the form of activities) for the well-being of humanity, the Whanganui Iwi and other divisions and communities of the river in providing food, fresh water, housing and other genetic resources. Article 69(4) of the Act acknowledges the importance of the Whanganui River as a source of 'physical and spiritual sustenance' for the Whanganui Iwi as 'a home' and as a 'food basket and fishery'.

Use values include *consumptive* uses, which entail the disruption of the natural functions of the river to serve human needs (Peterson & Hendricks, 2016). For instance, the economic utility of the river contributes to human activity at a national and local level for the benefit of the people by supporting business activities, and by providing access to energy, transportation and exploitation of the river beyond its natural functions (Peterson & Hendricks, 2016; Starik, 1995). Article 69(4)(b) and (d) acknowledges the use of the Whanganui River as a means of travel and trade for the Whanganui Iwi and as a source of *rongoā*, a traditional Māori healing technique. In the same article (69 (17)), economic value is seen in the river as a transportation 'highway' and a source for gravel extraction and electricity generation.

Use values also include *non-consumptive* uses, which serve human needs without disrupting nature's functions (Peterson & Hendricks, 2016): for instance, the social utility of the river for recreation, ecotourism, aesthetics, education, sense of place, cultural heritage, spirituality and religion. Article 69(4)(b) acknowledges the utility of the river as a means of social and cultural connection for the Whanganui Iwi, and in Article 69(17) the river's 'natural' and 'scenic' value and the value of 'recreation' and 'tourism' are also mentioned.

In contrast to use values, a *non-use value* of nature's elements is the option of preserving nature's elements for future use or by future generations (sometimes called 'option value' or 'bequest value') or just to know that the river exists as part of nature and Māori society and for future consumptive or non-consumptive use (Peterson & Hendricks, 2016). Article 69(17) mentions the 'conservation' value of the Whanganui River, which is 'for the benefit of future generations'.

Based on our previous argument that the relationship between humans and nature – and in particular between the Māori and the Whanganui River – is of a dialectic nature, the anthropocentric view does not suffice to acknowledge the responsibilities of humans to preserve nature, while engaging in economic activity that is in the interest of all people – now and in the future – living in the catchment area of the river. That would risk introducing a utilitarian calculus, allowing economic activities that lead to the greatest benefit for the greatest number in the present.[1] Since the Māori communities

control less than 5% of all economic activity in the area, their culture will likely be endangered by an anthropocentric economic policy.

Humans and nature in an intertwined economy

Based on the Māori historic, cultural and religious background, humans and nature (particularly the river) are intertwined (Chan, 1988, 1989; Mathews, 2018; Morris & Ruru, 2010; Tomas, 2011). The Act recognizes the close relationship of the Māori to the river by acknowledging the principle of *ko au te awa, ko te awa ko au* (I am the river and the river is me), as well as their aspiration to be actively involved in the management and protection of the river. In the Māori tradition, humans are *kaitiaki* – caretakers, guardians and protectors of nature (Tomas, 2011). The legal framework given in Articles 12 and 13 uses the indigenous concept of the Whanganui River, which is not perceived in a functional way as a resource provider. On the contrary, the Whanganui River is a 'living' entity of a major significance due to its physical and metaphysical role which is 'indivisible' from human life and its economic and social development, expressed in the concept of 'health and well-being of the iwi, hapū, and other communities of the River' but also for future generations. The Whanganui River is proclaimed to have an existence which is inevitably connected with the physical (natural), social and economic environment of human life, and consequently it relates to all the related constructs and concepts, including law and legal personality but also any organization of social and economic human activity. Respect for nature is inalienably connected with respect for human life in a value system which requires human societies, economies and legal systems to equally serve nature's and humans' well-being, which should be 'mutually enhanced' in a 'social contract with nature' (Daly, 2016, t.o. 64; see also Burdon, 2010; 2012; Teubner, 2006; Chan, 1988; 1989). Such 'mutually enhancing relationships' reject a normative framework which 'posits "abstract" categories or doctrines as the highest authority in human society', which are human 'self-validating', and the idea of 'private property as a mechanism that authorizes human exploitation of nature and the non-recognition of rights outside of the human community' (Burdon, 2012, p. 31; see also Cullinan, 2008; Chan, 1988; 1989). This reciprocity does not constitute moral superiority on either side – that is of nature or humans – although it recognizes that nature preceded human life and humans have grown and developed to become part of a living system. It does constitute a responsibility for humans to behave as caretakers and guardians because they possess the will and the power to deploy (and destroy) nature. Nature does not have such a will to deliberately prioritize the interests of itself over others.

In addition, according to Morris and Ruru (2010, p. 50), this approach regards the river as having its own standing within an mutually recognizing and reinforcing relationship, 'as a holistic being rather than a fragmented entity of flowing water, river bed and river bank', putting 'the health and wellbeing of the river at the forefront of decision-making'.

However, this view should not be understood as preordaining only the Māori communities to serve, guard, promote and protect the river's health and well-being due to their cultural or religious ties to it. The guardianship of natural elements should not be awarded only to the state, nor only to those who respect or care for nature the most. Such an approach risks perpetual dispute between the government, industry and public interest groups to determine guardianship and the substantive content of the legal rights provided to non-human objects of nature (Elder, 1984; see also Kenneth

Kang, 2019, this issue). Establishing 'who best knows' the well-being and health of the natural environment will be a challenging and unorthodox process to understanding that nature and human are intertwined. On the contrary, it should be all humans' responsibility and duty to protect, respect, defend and care for the non-human objects of nature. Though there is a trade-off that if all humans have the right and duty to actively and mutually guard, promote and respect the interests of nature and its elements it might result in their 'human domestication'. Burdon (2010, p. 81) warns of the consequences of 'human domestication' of nature if legal rights are provided horizontally to various natural objects. According to him, the 'domestication' of nature will ultimately result in the 'humanization' of all the natural relationships between humans and natural elements. The 'human domestication of nature' will eventually lead to nature's submission 'into the human political apparatus' (p. 81; see also Teubner, 2006) and market subordination for the benefit of humans (Bakker, 2016). Thus, Elder (1984) also poses another valid question that is reflected in the sections that follow. That is the questions of how the guardians can know better what is nature's health and well-being, using their own human preconceptions and values. We believe that the guardians do not necessarily know better than anyone else what is in nature's and humans' interest, but they have been given this power of governance based on procedural limitations, restrictions and requirements, for which they are accountable. The guardians can use information that is brought to their attention and wisdom to assess the relevance and quality of the information in coming to a decision that is in the best interest of the Māori communities, the river and other stakeholders that have an interest in the use and well-being of the river.

The health and well-being of the river as a living indivisible entity

Article 7 of the Act defines the health and well-being of the Te Awa Tupua as having environmental, social, cultural and economic dimensions. In Article 13, Te Awa Tupua is presented as a spiritual and physical entity that supports and sustains both the life and the natural resources in the Whanganui River, as well as the physical health and well-being of the communities surrounding it. The Māori communities of the river also have an inalienable connection with, and responsibility to, Te Awa Tupua and its health and well-being. This reciprocal relationship between nature and humans results in the development of a system where Te Awa Tupua is a singular entity comprising many elements and communities, working collaboratively for the common purpose of the benefit of Te Awa Tupua, upholding and protecting the vitality of the Whanganui River and its health and well-being for the benefit of future generations. The maintenance and continuity of the relationship between the unlimited lifespan of nature with the limited lifespan of humans' present and future generations also comprises part of the Māori responsibility to nature (Chan, 1988, 1989; Tomas, 2011).

Accordingly, the Māori tradition requires that each of the Māori is a *kaitiaki* who is responsible for maintaining the vitality of the Whanganui River and its people collectively without interfering in the natural balance, which might eventually be detrimental (Tomas, 2011). This overarching duty is a responsibility of the appointed guardians, the Māori and the state of New Zealand, to maintain the environmental, social, cultural and

economic benefit and well-being of the Te Awa Tupua, understood as a community of natural, human, physical and meta-physical elements.

First, it includes the duty of maintaining the environmental health and well-being of the Te Awa Tupua's community of human and non-human elements. This is a responsibility for all, including the appointed guardians, the Māori and the state of New Zealand, to care for the benefit of the environment in all actions pertaining to the use or possession of the river (Tomas, 2011). Any use or possession of the Whanganui River or any of its components must be exercised only in a way that avoids harm to the environment and that 'upholds the physical and spiritual connections between humans and natural systems across generations' (Tomas, 2011). Hence, Article 64 of the Act establishes collaborative processes between the Māori communities, the local and the central government and Maritime New Zealand to consider and consult the guardians on the activities and the regulatory framework of the surface of the Whanganui River, among other things, such as fisheries and customary food gathering. Article 66 establishes coordination groups between the Māori communities and the local and the central governments for the 'protection, management, and sustainable utilization of fisheries and fish habitat managed in the Whanganui River'.

Second, it includes the duty of maintaining the social health and well-being of the Te Awa Tupua's community. This is a responsibility for all, including the appointed guardians, the Māori and the state of New Zealand, to care for the Whanganui River's surrounding society in all actions pertaining to the use or possession of the Whanganui River. The use of the Whanganui River and of its components should be exercised in a way that maintains and respects the Māori as part of the Whanganui River's indivisible community and their societal values, ideals, principles and rules.

Third, it comprises the duty of maintaining the cultural health and well-being of Te Awa Tupua's community. This is a responsibility for all, including the appointed guardians, the Māori and for the state of New Zealand, to care for the Whanganui River's cultural heritage, with activities (as described in Article 75) which are ceremonial, customary, recreational, educational and sporting, as well as customary activities related to the spiritual and physical health of the Māori, e.g., fishing, bathing, cleansing and baptizing.

Finally, it includes the duty of maintaining the economic health and well-being of Te Awa Tupua's community. This is a responsibility for all, including the appointed guardians, the Māori and the state of New Zealand, to care for the Whanganui River's use and economic development of the surrounding Māori communities.

The river's guardians have the power to exercise reasonable activity in the name and for economic benefit of the river and of its community constituents (Article 19). Article 19 authorizes the guardians 'to take any other action reasonably necessary to achieve its purpose and perform its functions', which are to promote and protect the economic health and well-being of the Te Awa Tupua's community of physical and metaphysical elements. The activities of the guardians regarding the administration of the economic well-being of the Whanganui River are demarcated by the Māori principles, values, cultural heritage and tradition, as well as the established collaborative processes and strategy in decision-making and advisory bodies between the Māori communities, the appointed guardians, local and central administration and the industry actors. Their task is a difficult one which requires (local) wisdom. One of the potential dilemmas that

guardians are required to solve relates to economic development and the use of the river and its surroundings while conserving its values for future generations. Others could also learn from the Māori culture, for instance from the intrinsic and relational value of the river and its role in preserving the Māori community (and vice versa). We can learn from the Māori community's structure, institutionalized dialogue, guardianship and respect for future generations. Finally, we argue for the introduction of the principle of prior consent, because that would actually allow the Māori to override – when necessary – economic interests to the benefit of the river and of the environment. The concept of social or community entrepreneurship might prove very useful.

Social and community entrepreneurship for the benefit, health and well-being of the river

The legal personhood of the river introduced into the national legal framework permits the application of a sustainable model of economic development in the area which simultaneously considers the environmental, cultural, social and economic benefit of the Te Awa Tupua community as an entirety of physical and metaphysical but also natural and human elements. Recognizing the need of the Whanganui Iwi to create economic benefits for the preservation of the present and future generations, the legal right of the river can contribute to truly sustainable regional economic development. This calls for individual and collaborative endeavours of indigenous, social (community) entrepreneurship for the benefit of the Te Awa Tupua community of nature and humans. Types of enterprises with community, social and environmental objectives have already been identified in the domestic economy of New Zealand (Internal Affairs, 2013; Strategic Group on Social Enterprise and Social Finance, 2016a, 2016b). The government of New Zealand is rapidly developing a national social entrepreneurship policy. However, Māori and/or Māori-influenced social and community entrepreneurship is still a growing and underdeveloped phenomenon. In 2013, a mapping study by the Ministry of Internal Affairs demonstrated that few social enterprises have mainly Māori beneficiaries or are affiliated with Māori organizations or authorities, and even fewer were social enterprises operating in the region of Manawatu, where the Whanganui area is extended (Internal Affairs, 2013). Later cabinet papers commissioned by the Ministry of Internal Affairs demonstrate that there is great potential in the growth of local Māori social entrepreneurship activity and substantial support by New Zealand's government for growing Māori social entrepreneurial activity.

The concept of social entrepreneurship is multifaceted and means different things to different scholars (Dees, 1998). Choi and Majumdar (2014) even argue that the concept is 'essentially contested'. Nevertheless, there appears to be general agreement about social entrepreneurship being aimed, at its core, at creating societal value while producing economic benefits (Dees, 1998; Nicholls & Cho, 2006; Peredo & McLean, 2006; Seelos & Mair, 2005). Economic development, for instance in terms of sustainable tourism, aquaculture and agriculture, sustainable forestry, and other activities that may impact the river and its surroundings, can be legitimate and add value to current and future Te Awa Tupua communities. Practically speaking, most operationalizations of social entrepreneurship are anthropocentric (Mair & Marti, 2006; Nicholls, 2010; Zahra, Gedajlovic, Neubaum, & Schulman, 2009). Santos (2012, p. 336) goes as far to suggest that 'social entrepreneurship'

is a tautology – economic value creation is 'inherently social' in 'improving society's welfare through a better allocation of resources' (p. 337) – but this view is contentious.

Against the background of the Act, with the recognition of the river as a legal entity aimed at the preservation of the respectful dialectic between nature and human beings, a generic conception of simultaneous societal and economic value creation appears to be too vague to protect and 'conserve' the Whanganui River, now and in the future. We therefore argue for a more targeted and restricted conceptualization of *te piringa whanau* (family shelter) in line with the capabilities approach. This approach requires, *inter alia*, the application of practical reason (in line with the letter and the spirit of the Act), and control by the Māori over their environment, integrity and health, imagination, and the ability to engage in various forms of socio-cultural and natural interaction – and thus economic activities related to, or in the immediate surroundings of, the Whanganui River (Tapsell & Woods, 2008, 2010). Surroundings are 'immediate' to the extent that the consequences of an activity directly affect or can affect the pursuit of the community's objectives and interests. Activities should

- fundamentally respect and sustain the social, environmental and cultural interests of the Te Awa Tupua's community, and the river as an integral part of the community, by means of an *ex ante* (*a priori*) assessment;
- actively involve Māori representation in determining which economic activities sufficiently respect and help sustain the community and the river by means of an advisory committee and the implementation of the principle of prior consent;
- assess the long-term potential impact of economic activities on future generations by means of an *ex ante* (*a priori*) environmental and social impact assessment. Inspiration can be drawn from the Great Law of the Iroquois and its Seventh Generation Principle. This principle is particularly relevant for the relation between humans and nature, in particular regarding issues of water, energy or forestry. The principle is that current generations should think seven generations ahead to consider the potential consequences of our present decision-making. In line with the World Commission on Environment and Development (1987) it would be reasonable in particular to address to what extent current decisions affect the ability of future generations to meet their needs;
- increase Māori human and natural potential and capabilities in terms of well-being, health, prosperity and fulfilment in life by means of training and learning;
- use monitoring to ensure fair and substantial financial-economic contributions to the Te Awa Tupua's community to preserve the environment and their life, culture, traditions and activities.

We acknowledge that there are already a structure, guardians and advisory committees to be used in the implementation of these elements. But what is also needed is the implementation of the principle of prior consent from the Māori. If Māori leadership withholds consent, a development should not take place. This principle of consent also applies to the deliberations of the guardians in case they have dissenting views.

The development of such community and social entrepreneurial initiatives can be aided by the Te Korotete Fund, which is dictated in Articles 57–59 to promote the health and well-being of the Te Awa Tupua and which is administered by the appointed guardians.

Entrepreneurial individual and/or collaborative local (public–private) initiatives in the form of social and community entrepreneurship with the objective to safeguard the environmental, social, cultural and economic benefit of rivers and of the surrounding areas and communities are emerging types of anthropocentric business initiatives. However, a more systemic conception of the river as a living entity with legal personhood which requires the 'mutual enhancement' of both its natural and human elements can promote the establishment in domestic legislation of both more inclusive management systems for rivers, e.g., the Te Pou Tupua, and more sustainable models of economic and entrepreneurial development in the surrounding area, e.g., economic development which simultaneously pursues the environmental, cultural, social and economic benefits of the river community as an indivisible entity.

Conclusions

This article has introduced a discussion on the indigenous values and rules presented in New Zealand's Te Awa Tupua Act. The Act prescribes that the Whanganui River is a legal person with legal rights that is represented by human guardians. The guardians are appointed fiduciaries with the duty to care for the economic, environmental, social and cultural well-being of the Whanganui River. Guardianship is exercised in a framework of collaborative processes which involve the government, society and representatives of the Māori communities to determine what the economic, environmental, social and cultural well-being of the Whanganui River is. Such a model of administration requires a different understanding of the ontological relationship between human and nature. In particular, It requires a mutual agreement that humans are an indispensable part of nature, and as such their existence is interdependent. Accordingly, the interests of both humanity and nature should be mutually served and enhanced. From this point of view, guardianship should not be considered a privilege of those who care the most for nature but a fiduciary duty of all humans to mutually uphold the interests of both humanity and nature; but not in a way that allows domestication and subordination of nature to human needs. Such a model of administration, which mutually serves the needs of nature and humanity, determines the economic health and well-being of a river based on values which consider among others increasing human capability, attaining a successful, inclusive and healthy society, and protecting the natural environment for future generations. It also requires the application of economic activity which is established for the benefit of the river and the community, understood as a singular indivisible entity. Then, assigning rights to the river contributes to the development of social and community entrepreneurial models for the benefit of the river, developed to mutually enhance humanity and the natural environment.

Note

1. A risk of the utilitarian calculus is that it discounts the interests of future generations. As Scruton (2012, p. 189) clarifies: 'Normal practical reasoning concerning the future exhibits "time preference", according to which future benefits are discounted in line with their distance in time. Economists employ a discount rate even when considering the costs and benefits of people who do not yet exist, discounting the interests of future people according to their distance from us in time.' There is no justification for such a

discount when it comes to objects or to states of being that are intrinsically valuable to the Māori – now and in the future – even though these objects may represent an economic opportunity for someone else that ultimately may change the nature of the object or state of being. Mass tourism is a case in point. It can have a significant impact on the river and may have a lasting negative effect on the function of the river as perceived by the Māori.

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The changing face of river management in Victoria: The Yarra River Protection (Wilip-gin Birrarung murron) Act 2017 (Vic)

Katie O'Bryan

Faculty of Law, Monash University, Melbourne, Australia

ABSTRACT

This article outlines the Yarra River Protection Act and the establishment of a statutory independent voice for the Yarra River, the Birrarung Council, in light of the historical legislative neglect of indigenous water management rights in the Australian state of Victoria. It then seeks to clarify the distinction between the Yarra River's independent voice and the granting of legal personhood to the Whanganui River in Aotearoa New Zealand's Te Awa Tupua Act. It concludes that the grant of legal personhood to a river, represented by a river guardian, will not necessarily meet the river management aspirations of Victoria's Indigenous people.

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Introduction

For many thousands of years, Indigenous Australians have been successfully managing inland waters. Historically, however, the Indigenous peoples (the Traditional Owners) of the Australian state of Victoria have had no legal recognition of their important role in managing and protecting Victoria's waterways.[1] That is, until the enactment by the Victorian Parliament in September 2017 of the Yarra River Protection (Wilip-gin Birrarung murron) Act 2017 (Vic) ('Yarra River Protection Act').

The Yarra is one of Victoria's most iconic rivers. Two hundred and forty-two kilometres in length, its headwaters flow from near-pristine forested areas in the east of the state, through the Yarra Valley, the suburbs and the centre of Melbourne, and finally out into Port Phillip Bay. Its catchment is home to 2 million people and contains around 2450 hectares of parkland and public open space. It supplies 70% of Melbourne's drinking water. It was used in the early years of colonial settlement as a drain by industry and as a suburban sewer (Otto, 2005). More recent problems have involved poor planning, resulting in inappropriate development along its corridor.

The Yarra River Protection Act is significant because it treats the Yarra River as one living and integrated natural entity to be protected. It also gives an independent voice to the river by way of a statutory advisory body containing Aboriginal representatives, called the Birrarung Council, and is the first time that Victorian legislation has used Aboriginal language.

CONTACT Katie O'Bryan katie.obryan@monash.edu

Giving a statutory independent voice to a river has also been done recently in Aotearoa/New Zealand, in the Te Awa Tupua (Whanganui River Settlement) Act 2017 (Te Awa Tupua Act). But the independent voice given in this legislation is in the nature of a river guardian (an entity containing Māori representation), and unlike in Victoria, the river itself is given legal status (legal personhood).

This article will outline the new Victorian Act in light of the historical legislative neglect of indigenous water management rights in Victoria and this recent international development. It will then seek to clarify the distinction between giving a voice to a river, as embodied in the Yarra River Protection Act, and granting legal personhood to a river, as embodied in the Te Awa Tupua Act. It is important to understand this distinction so that indigenous groups who may be looking for new and innovative ways to be involved in river management are aware of the implications of some of the differing ways that an independent voice for a river can be legally constituted and whether this is something they should pursue.

To achieve this aim, this article first sets out the historic and current statutory and policy framework for water management that developed out of the common law in Australia, focussing on Victoria. This is followed by a section describing the influence (or lack thereof) of Aboriginal Victorians on Victoria's water management regime. The federal nature of Australia's political system necessitates an explanation of the role of the Commonwealth of Australia in water management. The article then moves on to a discussion of the Yarra River Protection Act, outlining its development and key features as it pertains to Aboriginal people, with a focus on the Birrarung Council, the independent voice of the Yarra River. The article then undertakes a comparative analysis of the Yarra River Protection Act and the Te Awa Tupua Act, identifying the strengths and weaknesses of each insofar as they relate to Indigenous participation in river management, concluding that the granting of legal personhood to a river may not meet the river management aspirations of Victoria's Traditional Owners.

Although there is now a growing body of literature on the Te Awa Tupua Act and in particular on the legal personhood aspect (e.g., Rodgers, 2017; O'Bryan, 2017; Charpleix, 2018; Sanders, 2018; and other articles in this special issue), there is little scholarly material on the Yarra River Protection Act or how it compares with the Te Awa Tupua Act.[2] This article aims to fill that gap and provide both indigenous groups and policy makers who are seeking to implement a larger role for indigenous people in river management with the information necessary to make informed decisions about whether either model, or elements thereof, might suit their own aspirations and policy agendas.

Background and historical development of water law in Australia and Victoria

To understand how far Victoria has come in facilitating Traditional Owners to participate in river management, we need to look back briefly to the development of Victoria's water management regime in the context of the establishment of the Commonwealth of Australia.

Australia was colonized by England in the late eighteenth century, on the basis that it was 'desert and uncultivated' in common law terms (*terra nullius* being the equivalent term in international law). This colonization was an act of dispossession of Australia's Indigenous peoples, who had been managing their water resources for thousands of years.

With the arrival of the colonists and the assertion of British sovereignty came the British common law, including rules relating to water, known as riparian rights. This doctrine did not transplant well to the driest inhabited continent on earth, with its extreme spatial and temporal variability in rainfall and runoff (Smith, 1998). While the common law 'served a well-watered intensively developed England quite well' (Godden, 2005, p. 186), a series of droughts in the 1880s underscored its limitations as a foundation for water law in the expanding colonies in Australia (Godden, 2005).

Established in 1786, New South Wales, on the east coast of Australia, was the first of the six colonies (Carney, 2006). Victoria was initially part of NSW, but separated from it in 1851 (Carney, 2006). It was not until 1901 that all six colonies joined together under a federal constitution to form the Commonwealth of Australia (the Commonwealth). By that time, each of the new states had already commenced developing its own water management regime. Among them, Victoria was at the forefront of modern water management (Powell, 1989; Clark & Renard, 1972; Fisher, 2000), whose 'development has been typical, though perhaps more dramatic' than most of the states (Clark & Renard, 1972, p. 141).

Pressure on Victoria's water resources first emerged during the gold rushes of the 1850s. In the 1860s, when the gold ran out, the need for water for mining evolved into a need for water for agriculture. A severe drought from 1871 to 1881 led to mounting political pressure on the colonial government to do something to ensure a more stable water supply. This eventually led to the enactment of the Irrigation Act 1886 (Vic).

One of the most significant aspects of the Irrigation Act 1886 was the effect it had on common law riparian rights; it vested the right to the use of all water in the Crown (i.e., the government), thus effectively nationalizing Victoria's water resources (Powell, 1976). But it was not until the enactment of the Water Act 1989 (Vic) (Water Act), which is still in effect today, that common law rights to water were finally abolished (s. 8(7); see also Gardner, Bartlett, and Gray 2009).

Aboriginal Victorians and the development of Victoria's water management regime

So where were Victoria's Aboriginal peoples during this time? In 1886, during the same sitting of Parliament in which the Irrigation Act was passed, the Parliament also passed the Aborigines Protection Act 1886, arguably 'the most draconian Aboriginal legislation of its time in Australia' (Broome, 2010, p. 181).[3]

The Aborigines Protection Act 1886 has been described as 'a deliberate policy of absorption' whereby 'the Aboriginal race would vanish as the "full bloods" died out and the "half-castes" were blended to whiteness' (Broome, 2010, p. 94). The view that Aboriginal people were a dying race was based on the theory of social Darwinism, which had been gaining popularity in the latter half of the nineteenth century.[4]

Victoria's Aboriginal people did not remain silent, however. Although they were considered by the colonists to be a 'dying race', many Aboriginal Victorians lobbied for greater recognition of their rights during this time, the protests to protect the Coranderrk Aboriginal station from encroachment by settlers and to improve the residents' living conditions being a prime example (Barwick, 1998; see also Broome, 2005, Chapter 9; Attwood, 2003, Chapter 1; Wiencke, 1984).

Nonetheless, the ability of Aboriginal people to influence the development of Victoria's water management regime and have their rights recognized was very limited. Lobbying only got them so far; their views were easily ignored. In later years, when it became clear that they were not a 'dying race', their voices still failed to gain traction in the sphere of water management.

One reason for this marginalization was that common law water rights were linked to possession of land. As Indigenous people were not recognized as being in possession of land, they were excluded from the common law water rights regimes. Emerging in the late nineteenth and early twentieth centuries were various statutory innovations which vested the use, flow and control of water in the state and converted common law rights into statutory rights. Yet regulatory mechanisms were designed to facilitate irrigation and agriculture, not Indigenous uses. In the 1960s and 1970s came the recognition of environmental concerns and the treatment of water as a unified resource. The 1990s were characterized by reforms of a micro-economic nature.

But all these approaches to water management ignored Indigenous interests. There were, however, a number of significant steps forward for Australia's Indigenous peoples over the last half century. These included a 1967 referendum to amend the Constitution,[5] the seminal 1992 High Court decision in *Mabo v Queensland [No 2]* (1992, 1 CLR 175), which finally put to rest the notion that Australia was 'desert and uncultivated' (or *terra nullius*) and recognized the existence of Indigenous title (called native title), and the subsequent enactment of the Native Title Act 1993 (Cth) ('Native Title Act'). But despite these developments, it is only in the new millennium that this situation has started to change.

Commonwealth involvement in water management

As noted earlier, each of the colonies, later states, developed its own water management regime. What, therefore, is the Commonwealth's role in water management?

The Australian Constitution delineates the respective roles and responsibilities of the states *vis-à-vis* the Commonwealth. Responsibility for water management is held by the states; the Commonwealth Parliament has no specific power to enact legislation.[6] The Commonwealth has a limited role to play, based primarily on a 2004 intergovernmental agreement with the states, the Intergovernmental Agreement on a National Water Initiative (2004, 'National Water Initiative') (and on the Water Act 2007 (Cth), which is not relevant to the Yarra River). Implementation of the National Water Initiative is intended to 'result in a nationally-compatible, market, regulatory and planning based system of managing surface and groundwater resources for rural and urban use that optimizes economic, social and environmental outcomes' (National Water Initiative, cl 23).

The National Water Initiative (cls 52–54) was the first national policy document following *Mabo v Queensland* and the Native Title Act to explicitly recognize Indigenous water rights. Despite its limitations – such as a lack of enforceability, as it is a policy rather than legislative instrument (Gardner et al., 2009), the aspirational nature of its terms,[7] and difficulties identified with its implementation (National Water Commission, 2011) – the National Water Initiative is the leading national policy document on water management in Australia and is intended to guide the states in the development and application of their water management regimes. The states retain

the responsibility of enacting, administering and enforcing water laws within their respective jurisdictions. We focus here on one of these states, Victoria.

Recent developments in Victoria

In 2004, the same year that the National Water Initiative came into existence, significant amendments were made to Victoria's Water Act of 1989, yet Aboriginal people had little influence on those amendments. Not surprisingly, there was therefore no statutory recognition of their right to participate in the management of water resources.

In 2010, however, as a consequence of the enactment of the Traditional Owner Settlement Act 2010 (Vic) ('TOS Act'), Victoria's alternative to the Commonwealth's Native Title Act, the Water Act was amended to insert s. 8A, which recognizes the existence of those rights that have been recognized in an agreement made pursuant to the TOS Act. This was the first time that Indigenous water rights were recognized in Victoria's water laws. These rights, however, are limited to rights to take and use water for personal, domestic or non-commercial communal needs, and are similar to rights that Traditional Owners already had (and continue to have) under s. 8 as ordinary members of the public (O'Bryan, 2016). Further, those rights do not include the right to participate in the management of water.

Nonetheless, Victoria has moved to facilitate Indigenous participation in water management despite the lack of formal legislative recognition. Following the enactment of the Water Act in 1989, various policy developments in the national sphere, particularly the 2004 National Water Initiative noted above, have influenced the recognition of Indigenous interests in Victoria to some degree. Implementation of the objectives of the National Water Initiative requires states to take steps to provide Indigenous access to water resources by, among other things, ensuring the inclusion of Indigenous representation in water planning wherever possible and by taking into account native title rights and interests in water (cls 52–54). In addition, one of the outcomes of the water access entitlements and planning framework element of the National Water Initiative is that the parties to it will 'recognize indigenous needs in relation to water access and management' (cl (ix)).

In Victoria, steps to implement these objectives and achieve this outcome have included the preparation of various strategies relating to water management, all of which specifically refer to or have sections relating to Indigenous water issues (Department of Environment and Primary Industries, 2013; Department of Natural Resources and Environment, 2002; Department of Sustainability and Environment, 2006, 2009, 2011a, 2011b). Various catchment management authorities and government departments have established Indigenous reference or advisory groups to provide input and advice into their decision-making processes (DSE, 2011a). Indigenous representation on catchment management authorities, non-existent in the past, has been encouraged, resulting in a number of Indigenous people being appointed to authority boards in recent years (Neville, 2015). More recently, in 2016 the Victorian government produced a wide-ranging strategic plan for the management of Victoria's water resources. Called Water for Victoria (Victorian Government, 20162016), it was developed with the input of Traditional Owners (Department of Environment, Land, Water

and Planning, 2016) and has a dedicated chapter on recognizing and providing for Aboriginal values (Chapter 6).

Occurring in parallel with the preparation of the Water Plan was the development of the Yarra River Protection Bill.[8] This bill was important because none of the documents noted above are legally enforceable, being merely policies and strategies ('soft law').

Development of the Yarra River Protection Act

Mounting pressure from the Yarra Riverkeeper Association[9] and Environmental Justice Australia (EJA)[10] to protect the Yarra River and to give it an independent voice led the state Labor Party opposition prior to the 2014 state election to make an election commitment to introduce a new Act. The purpose of this new Act would be to protect the Yarra River from inappropriate development and to set up a trust to promote the river's amenities and significance (Andrews, 2014). But the impetus to protect the Yarra had begun well before then, with local community groups having advocated for many years to improve and care for the Yarra. There were also a number of reports produced dating back to the 1970s relating to its planning and management (YRA & EJA, 2015).

After winning the election, the new Labor government honoured its promise by appointing a Ministerial Advisory Committee (MAC) in December 2015. The committee was to 'provide assistance in engaging with the community, and other stakeholders, and to provide advice and a recommended action plan for the improved management, promotion and protection of the entire length of the Yarra River' (MAC, 2016, p. 3).

Following the release of a discussion paper and after a series of public consultations, the committee released its final report, containing 30 recommendations, at the end of 2016. The Victorian government then provided its response to the report in February 2017 in the form of an action plan, in which the government adopted all 30 of the report's recommendations (28 in whole and 2 in part), including a bill which, on 26 September 2017, became the Yarra River Protection Act.

When the bill was introduced into the Victorian Parliament it was described as 'a landmark in the history of our state' (Victoria, 2017). Significantly, just prior to its introduction, Wurundjeri elders (Traditional Owners of much of the Yarra catchment) spoke in support of the legislation on the floor of the Parliament. This was the first time in Victoria's parliamentary history that Wurundjeri people had spoken from the floor of the Parliament in their capacity as Traditional Owners of the land on which Parliament House is built.

Key features of the Yarra River Protection Act

The Yarra River Protection Act contains a number of significant and innovative features (in Victoria at least), of which five are of particular relevance for Aboriginal Victorians.

First, the act treats the Yarra River as one living and integrated natural entity (s. 1 (a)). This holistic approach is meant to facilitate the coordination and management by more than 14 public entities with responsibilities along its length for the many parcels of public land in which it is situated. It is also a reflection of the Indigenous conception

of the Yarra as noted in the preamble: that it is alive, has a heart and a spirit, and is part of their Dreaming.[11]

Second, to reflect the Yarra as a single entity and facilitate its coordinated management, the Act provides for the development and implementation of an overarching policy and planning framework: a strategic plan to guide the future use and development of the Yarra River (s. 1(b)). The strategic plan will be developed by a lead agency appointed by the minister (ss. 3, 4).[12]

Prior to preparing the strategic plan, the lead agency must develop a long-term (50-year) community vision (s. 17). The community vision must identify the unique characteristics of the Yarra River, and the community values, priorities and preferences related to the Yarra River (s. 17(2)). In developing the community vision, there must be 'active community participation and co-design' (s. 17(3)).[13]

To further enhance community involvement, the strategic plan itself must be developed 'in accordance with best practice regarding public participation' (s. 18(2)(d)) and through 'an open and collaborative process involving responsible public entities, local community reference forums and the [Birrarung] Council' (s. 18(2)(a)), about which more is said below.

The strategic plan will also be informed by the Yarra protection principles, the third feature of significance in the Act (ss. 7–13). These are principles to which 'decision-makers' (responsible public entities) along the Yarra River must have regard when performing their functions or exercising their powers in relation to the river (s. 1(d)). These principles are grouped into various categories, commencing with a number of general principles relating to climate change, intergenerational equity, sustainability and public health and well-being (s. 8). The Act then delves more specifically into environmental, social, cultural, recreational and management principles (ss. 9–13). These principles, and in particular the cultural ones, highlight Aboriginal cultural values, heritage and knowledge, and the importance of involving Traditional Owners in policy planning and decision making.

Unlike most other strategic documents made pursuant to Victoria's water laws, the strategic plan is to be binding in part on responsible public entities,[14] while other parts are 'are in the nature of recommendations, to which responsible public entities are only required to have regard' (s. 20(2)(h)). The strategic plan is still being developed, so it is not yet known which parts will be binding. There is also no legislative mechanism for enforcing the binding parts of the strategic plan. So although having parts of the plan be binding is a positive step, the lack of enforceability removes any advantage that their binding nature would otherwise have provided, as there are no sanctions or penalties for non-compliance.

The Yarra River Protection Act also establishes the Birrarung Council, described as the 'centrepiece' of the act (Victoria, 2017). The council is an independent entity comprising up to 12 members appointed by the minister, at least two of which must be chosen by the Yarra's Traditional Owners (s. 49(1)(a)). This is the first time in Victoria that Aboriginal people have been given a legislatively mandated voice in river management. The remaining membership must include at least one representative from an environment group, an agriculture industry group and a local community group, respectively, along with two skill-based members. The council is precluded from having any government representatives as members (s. 49(3)), thus ensuring that its

deliberations are independent and not unduly influenced by government. Members are appointed for up to four years (s. 51(1)(a)) and can only be removed prior to the expiry of their appointment if they are unfit to hold office, for example for misconduct or neglect of duty (s. 52(2)), further enhancing its independence.

Having only two mandated positions on a council of 12 does not give Traditional Owners a particularly strong voice. But two is better than none, and there is scope for more Traditional Owners to be appointed, given that four of the positions are not specifically designated to any particular group.[15]

The role of the council is twofold. The first is to provide advice to the minister generally on the administration of the act, and more particularly on the protection of the Yarra River and on the development, implementation, operation and effectiveness of the strategic plan (s. 48(1)(a)). Its functions do not, however, include the provision of advice to the lead agency. Although this could be seen as a deficiency in the legislation, in practice it is likely that the lead agency will work closely with the Birrarung Council, given the council's role in advising the minister on the strategic plan.

Its second role is to advocate for the protection and preservation of the Yarra River (ss. 5(d), 48(1)(b)). In that regard, it has been described as the 'independent voice of the river' (Andrews, 2017), a point to which we will return. And as noted earlier, the Birrarung Council is also involved in the development of the strategic plan.

An important point to note about the role of the council, however, is that it does not have any decision-making authority; that authority remains with the various responsible public entities operating along the length of the Yarra River.

Finally, and of particular significance for Aboriginal Victorians, is the inclusion of Aboriginal language, here the Woi-wurrung language, in the Act's title and preamble.[16] Birrarung, first referred to in the Act's title, is the Woi-wurrung term for the Yarra (literally, 'river of mists and shadows'), and 'Wilip-gin Birrarung murron' means 'keep the Yarra alive'.[17] The preamble, written in both Woi-wurrung and English, highlights the significance of the Yarra River to the Traditional Owners and their obligation to keep the Yarra alive and healthy for future generations. This is the first time in Victoria that Aboriginal language has been used in legislation.

The independent voice of the river and the Te Awa Tupua Act

As mentioned, the Birrarung Council is intended to be the independent voice of the Yarra River, able to advocate for its protection and preservation. This concept of nature being given an independent voice has come to prominence recently, the most noteworthy example being in Aotearoa New Zealand, where legislation has been enacted giving the Whanganui River legal personality, with a guardian (referred to in the Act as Te Pou Tupua, 'the human face of the river') to represent its interests.[18]

By way of background, on 30 August 2012 the Aotearoa New Zealand government announced that it had reached a framework agreement with the Whanganui Iwi for the settlement of their long-running claim to the Whanganui River (Finlayson, 2012). In what was seen as an innovative development in river management, not only in Aotearoa New Zealand but internationally, this framework included an in-principle agreement to grant legal personhood to the Whanganui River (Te Awa Tupua), with the associated river guardian (Te Pou Tupua) as the independent voice of the river (Finlayson, 2012).

That agreement has now been transformed into the Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 (NZ) ('Te Awa Tupua Act'), which was passed by the New Zealand Parliament in March 2017 and is discussed in more detail in other articles in this special issue.

The concept of giving legal personality to a natural object has existed in theory since Christopher Stone's seminal article of 1972, 'Should Trees Have Standing? Toward Legal Rights for Natural Objects' (see also Grear, 2012; Stone, 1985, 2010). In the context of improving environmental protection, the basic idea behind Stone's concept is that many inanimate entities, such as corporations and trusts, and even ships, have legal personality, which gives them legal rights (Stone, 1972), and therefore, why not extend this to natural objects, such as trees and rivers? He suggests that those rights can be protected by the appointment of a guardian, who can then represent the natural object in court proceedings (standing).

Stone's concept has started to gain traction in recent years; in 2008 the rights of nature, or Pacha Mama (Mother Earth), were recognized in Ecuador's constitution (Constitución de la República del Ecuador 2008, arts 10, 71–74). In 2010 the World People's Conference on Climate Change and the Rights of Mother Earth adopted the Universal Declaration of the Rights of Mother Earth. That same year Bolivia enacted the *Ley de Derechos de la Madre Tierra* [Law of the Rights of Mother Earth], 2010). And in 2012 the International Union for the Conservation of Nature adopted a resolution which noted the declaration from the World People's Conference and called for the development of a Universal Declaration of the Rights of Nature (IUCN, 2012, res. 100, cls 3, 4). There have also been a number of recent court rulings which have recognized the rights of rivers and have ordered that a guardian be appointed to protect those rights, namely the Atrato River in Colombia and the Ganges and Yamuna Rivers in India.[19]

But Aotearoa New Zealand was the first country to enact legislation giving legal personality to a specific natural object.[20] This has ostensibly introduced a new type of governance structure for natural objects in Aotearoa New Zealand, one which is clearly focussed on the environment, but an environment which is shaped by and reflective of Māori concepts and values. In that respect, this particular version of Stone's original concept takes a much more holistic approach to environmental protection, one which acknowledges and accommodates the intrinsic relationship which Indigenous people have with the environment. This acknowledgement and accommodation of Indigenous interests by non-Indigenous legal systems has been described as a form of legal pluralism, a concept which was important in mediating the concerns of Māori into the Te Awa Tupua Act (Charpliex, 2018; Macpherson and Clavigo Ospina, 2018).

The Yarra River Protection Act, the Te Awa Tupua Act and the independent voice of the river

So how does the Aotearoa New Zealand legislation differ from the Victorian legislation, given that both profess to give an independent voice to the river, and both emphasize Indigenous relationships with the river? Understanding the differences is crucial for Indigenous peoples to be able to assess whether either of these models is appropriate and could be adapted for their own river management aspirations.

A major difference lies in the status of the river itself. Although the Yarra River Protection Act provides for the declaration of the Yarra River and public land in its vicinity for the purpose of protecting it as one living and integrated natural entity (s. 1 (a), s 14)), it does not give the Yarra River independent legal status, with all of the rights and liabilities that come with that status. Accordingly, the Birrarung Council, although able to advocate on behalf of the river, is not its legal guardian. It is not given any legislative power to exercise the rights, or take responsibility for any liabilities, of the Yarra River, which means it is not automatically entitled to initiate legal proceedings to protect the Yarra River. The Te Awa Tupua Act, on the other hand, specifically provides for the Whanganui River to have 'all the rights, powers, duties, and liabilities of a legal person', which are exercised on behalf of the river by Te Pou Tupua, the human face of the Whanganui River (s. 14). This means that unlike the Birrarung Council, Te Pou Tupua does have the ability to initiate legal proceedings to protect the Whanganui River if the river is damaged in any way, or if any of its values are compromised.

That leads to another distinction between the Yarra River Protection Act and the Te Awa Tupua Act. Both statutes effectively recognize the river as a single living and integrated natural entity requiring protection.[21] However, the river values (called Tupua te Kawa) to be protected in the Te Awa Tupua Act, of which there are four, are intrinsically Māori-oriented in their conceptions of the river (s. 13). They appear in Māori, prior to the English translation. On the other hand, the river values to be protected in the Yarra River Protection Act, as reflected in the Yarra protection principles, are wider-ranging, encompassing not just Aboriginal cultural values but also post-settlement cultural diversity and heritage, and the values embodied in environmental, social, recreational, management and general protection principles.

The use of Aboriginal language in the Victorian Act is confined to the Act's title (in parentheses) and preamble. The placement of the Aboriginal language in parentheses in the title is also indicative of a subtle yet symbolically important difference from the New Zealand Act, in which it is the English-language title that is in parentheses, which suggests whose interests in the legislation are paramount.

Finally, the Birrarung Council was established to ensure that different community interests are involved in protecting and promoting the Yarra River. This is reflected in the fact that only two out of 12 of its members are required to be Indigenous, as noted earlier. On the other hand, Te Pou Tupua was established to represent the Whanganui River itself, not community interests.

This is no doubt largely a reflection of the underlying bases for the legislation. Although the degradation and poor health of the two rivers were clearly motivating factors behind both statutes, the Te Awa Tupua Act occurred as a result of treaty settlement negotiations with the Whanganui Iwi (tribe) involving a political compromise to resolve the question of ownership of the river (Sanders, 2018), whereas the Yarra River Protection Act was a product of many factors, only one of which was to promote the protection and preservation of Aboriginal cultural values, knowledge and uses in relation to the Yarra River. It was not the result of settlement negotiations with Aboriginal Victorians under the Native Title Act or the TOS Act.

The Birrarung Council arguably has more in common with Te Kōpuka, a separate entity established under the Te Awa Tupua Act. Both entities are involved in developing river strategy, have relatively large membership numbers (12 and 17 respectively)

and require Indigenous representation (at least two on the Birrarung Council and up to six on Te Kōpuka). Te Pou Tupua, on the other hand, has only two members, one nominated by *iwi* with interests in the Whanganui River, the other by the government (s. 20(2)). It is also not involved in developing the river strategy, an important management tool.

Although the Whanganui River model has much to commend it, as indicated above, giving the Yarra River legal personhood and an independent voice in the nature of that model is not necessarily the best way forward for the Yarra's Traditional Owners. To date no Traditional Owner group in Victoria has shown any inclination to seek legal personhood to achieve its water management aspirations.[22]

Legal personhood on its own only provides access to the courts. It does not guarantee that any action brought will be successful. Further, while legal persons have the right to sue, they also can be sued. Stone himself noted back in 1972 that 'rivers drown people and flood over and destroy crops' (p. 481), so this potential may be a significant disincentive to the Yarra River's Traditional Owners to pursuing the legal personhood model for the Yarra. The Te Awa Tupua Act shields the appointees to Te Pou Tupua from personal liability if they are acting in good faith and in relation to their functions and duties under the Act (s. 21(1)), but Te Pou Tupua retains responsibility for meeting any liabilities arising from Te Awa Tupua's status as a landowner.[23]

In addition, the Whanganui River legal personhood model does not necessarily give Traditional Owners an ongoing management (i.e., decision-making) role. Te Pou Tupua has only limited involvement in decisions about the management of the Whanganui River. Its only mandated role is to administer Te Korotete, the fund established to support the health and well-being of Te Awa Tupua (ss. 19(1)(e), 57–59). Although Te Awa Tupua has ownership of itself and is therefore a landowner with the functions that come with that status (s. 19(d)), it is not a decision-making authority under the Act.[24] However, it is deemed to be a public authority (s. 17(e)) which means that it *can* be involved in the management of the Whanganui River via various provisions of the Resource Management Act 1991 (NZ). These roles are not as of right, however, requiring either agreement with local authorities or approval by the relevant minister (O'Bryan, 2017). Victoria's Traditional Owners have consistently advocated for a legally mandated role in water management, not one that is dependent on agreement (O'Bryan, 2019), so the Whanganui River model does not satisfy their aspirations in that regard.

Another issue with granting legal personhood to Te Awa Tupua is that the Whanganui Iwi are a step removed from direct involvement in matters related to Te Awa Tupua. *Iwi* with interests in the Whanganui River nominate one of the two members appointed to Te Pou Tupua, but once appointed they act on behalf of Te Awa Tupua. In other words, Te Pou Tupua represents the interests of the river, not of the Whanganui Iwi. The Yarra's Traditional Owners, on the other hand, have direct representation of their interests on the Birrarung Council.

There are also other mechanisms in Victoria for giving Traditional Owners a direct voice in managing their traditional country, including rivers, such as via the (albeit imperfect) future act regime under the Native Title Act or its equivalent under the TOS Act. These regimes require various levels of consultation with Traditional Owners over proposed activities on the Traditional Owners' land and waters, depending on the impact

of the activity (O'Bryan, 2016). Aboriginal heritage protection legislation also provides an avenue for Traditional Owners in Victoria to have a role in managing areas of cultural heritage significance, including rivers (Aboriginal Heritage Act 2006 (Vic)). Therefore, the creation of an additional legal entity to speak on behalf of the Yarra River (or of any other rivers in Victoria) would add an extra layer of complexity to an already complex regulatory landscape and create the potential for confusion and conflict (O'Bryan, 2017).

These deficiencies suggest that granting legal personhood to a river may not meet the aspirations of Traditional Owners for river management; a better option may be to build on and improve the Yarra River Protection Act.

Improving the Yarra River Protection Act

The Yarra River Protection Act is still in its infancy, so its effectiveness has yet to be tested. A number of amendments could be made to strengthen the role of the Birrarung Council.

The council's input into the development of the strategic plan could be enhanced to include endorsement of the draft plan for public consultation and for final approval by the minister. This would merely be an extension of the current requirement for it to be endorsed by responsible public entities (ss. 23(1) and 36(1)) and would enable both Traditional Owners and the community, via the Birrarung Council, to feel that they have more of a stake in the strategic plan. This should also apply to any new strategic plan required under s. 42 of the Act.

The strategic plan is also required to identify projects for the protection and improvement of the Yarra River (s. 20(2)(e)) and set out a decision-making framework against which individual projects and proposals may be assessed or evaluated (s. 20(2)(g)). The Birrarung Council could be given the role of assessing or evaluating such projects, a role similar to that of Te Pou Tupua in administering the fund established to support the health and well-being of Te Awa Tupua.

A further improvement could be the conversion of the Birrarung Council into a trust, a suggestion initially proposed by the government. As described by EJA and YKA (2016), the trust would be an independent statutory body corporate with a board of trustees to administer, implement and enforce the Act. This could include those parts of the strategic plan (once it is finalized) that are intended to be binding on responsible public entities. A trust, as a statutory body corporate, would have the capacity to sue and be sued, much like Te Pou Tupua.

And finally, the Birrarung Council could be designated as a referral authority for relevant planning decisions (e.g., the granting of permits affecting the Yarra River) made under planning schemes by those municipal councils which are responsible public entities (Environmental Justice Australia, 2016). A benefit of being a referral authority is that a municipal council must deny a permit if a referral authority objects to it.[25] This would give the Birrarung Council a direct role in any decision making by responsible public entities involving the Yarra River, a deficiency of the legislation noted earlier.

Conclusion

Given the historical neglect of legislative recognition of Indigenous participation in river management in Victoria, the Yarra River Protection Act is a milestone for the

extent to which it recognizes the value of Traditional Owner knowledge and participation in river management. It does this by taking a more holistic approach, treating the Yarra River as one living and integrated natural entity to be protected, reflecting an Indigenous perspective of the Yarra River and its environs. Aboriginal cultural values, heritage and knowledge are specifically acknowledged in the protection principles as important to be protected and promoted. The Birrarung Council, the Yarra River's independent voice and contributor to the preparation of the overarching strategic plan, is required to have at least two Aboriginal members. It is also the first time that Victorian legislation has included Aboriginal language.

Although the Yarra River Protection Act does not give independent legal status to the Yarra River or give the Birrarung Council legal capacity to seek redress in court for any damage to the Yarra River in failing to adhere to the protection principles, it does represent a genuine shift in the future of river management in Victoria towards a more inclusive role for Traditional Owners, a role which may be more consistent with their aspirations than a grant of legal personhood.

Notes

1. In Australia, the term 'Indigenous people' is generally used to refer to both Aboriginal and Torres Strait Islander Australians collectively, and indigenous people more generally. 'Aboriginal people' refers to Indigenous people from the Australian mainland. When referring to Victoria's Indigenous people, the local self-identification term is used where appropriate; otherwise the term 'Aboriginal people' or 'Traditional Owner' is used. Traditional Owners in particular refers to those Indigenous people with a traditional connection to the land and waters based on their traditional laws and customs who are entitled by virtue of those laws and customs to 'speak for country' and should therefore be participating in decision making about their country. It also encompasses various ways in which Indigenous people have been recognized by the Australian legal system as having the right to 'speak for country', including as native title holders under the Native Title Act, as Traditional Owners under the Traditional Owner Settlement Act 2010 (Vic) and under the Aboriginal Heritage Act 2006 (Vic). The term in this context also includes those who have asserted that they are the Traditional Owners but have not yet had formal recognition by the Australian legal system.
2. There is some recent comparative work on indigenous legal rights for rivers (and water generally) in Australia and New Zealand in *Indigenous Rights and Water Resource Management: Not Just Another Stakeholder* (O'Bryan, 2019).
3. For more detail on why this legislation 'was the most draconian … of its time', see Broome (2010), chapter 10; see also Attwood (1989), chapter 4.
4. Social Darwinism: 'the theory that societies, classes, and races are subject to and a product of Darwinian laws of natural selection. Often used to justify political conservatism, imperialism, and racism' (Oxford English Dictionary, n.d.).
5. The effect of the amendments was to allow the Commonwealth Parliament to make laws with respect to Aboriginal people, and for Aboriginal people to be counted in the Australian population. To date it remains the most successful referendum in Australia's history of constitutional amendments, with over 90% of eligible voters voting yes to the proposed amendments.
6. In certain circumstances, it can use other powers enumerated in the Constitution to enact water management legislation, but this can be difficult.
7. For example, cl 52(i), regarding the inclusion of Indigenous representation in water planning, contains the qualifier 'whenever possible'.

8. From the Water Plan emerged proposals for amending Victoria's water laws to specifically acknowledge the role of Indigenous knowledge in water management, resulting in the Water and Catchment Legislation Amendment Bill. Unfortunately, the government is no longer promoting this bill.
9. A not-for-profit community group which advocates on behalf of the Yarra River, monitors its health and runs educational activities (http://yarrariver.org.au/).
10. A not-for-profit Victorian legal practice dedicated to protecting the environment (https://envirojustice.org.au/), formerly known as the Environment Defenders Office (Vic).
11. The Dreaming is a term used to describe Aboriginal creation stories which link them to their land and spiritual ancestors. It informs and regulates Aboriginal society. There is no direct English equivalent. See, e.g., Christine Judith Nicholls, '"Dreamtime" and "The Dreaming" – an Introduction', The Conversation, 23 January 2014, https://theconversation.com/dreamtime-and-the-dreaming-an-introduction-20833; Common Ground, 'The Dreaming', <https://www.commonground.org.au/learn/the-dreaming> .
12. The Act does not specify which minister appoints the lead agency. There are three ministers which are involved in administering the act: the planning minister, the water minister and the environment minister. It was the planning minister who was the minister administering the Act at the time the lead agency was appointed.
13. The community vision was released by the Victorian Government on 31 May 2018 (Neville, 2018).
14. For example, Sustainable Water Strategies and Regional Waterway Strategies made pursuant to the Water Act 1989 (Vic).
15. There are currently three Traditional Owners on the Birrarung Council (Melbourne Water, 2018).
16. Woi-wurrung is the language of the Wurundjeri people and other Traditional Owners with traditional cultural links to the Yarra River.
17. Yarra and Birrarung are not synonymous, though. 'Yarra' came from a misunderstanding by an early surveyor, who pointed to cascading falls in the lower reaches of the river and asked the local Aboriginal people what it was, to which they replied 'yarro yarro' meaning 'it flows'. The surveyor erroneously took this to be the name of the river (EJA and YRA, 2016; see also Otto, 2005; Melbourne Water Corporation, 2017).
18. This section draws on my article in the *Australian Indigenous Law Review* (O'Bryan, 2017).
19. In November 2016, the Colombian Constitutional Court recognized the Atrato River as having rights (http://www.harmonywithnatureun.org/rightsOfNature/). And on 22 March 2017, the Uttarakhand High Court in India recognized the Ganga and Yamuna Rivers as living entities (Trivedi & Jagati, 2017). This decision, however, was stayed by India's Supreme Court on 7 July 2017 pending an appeal (see also O'Donnell, 2017).
20. The potential application in Aotearoa New Zealand of the concept had been advocated in the 1990s by Alex Frame (1999); see also Morris & Ruru (2010). The concept has also appeared in relation to Te Urewera National Park in the settlement of the historical treaty claims of the Tūhoe, Te Urewera Act 2014 (NZ).
21. The Te Awa Tupua Act s. 12 uses the phrase 'indivisible and living whole'.
22. However, the Traditional Owners of the Fitzroy River region in Western Australia are contemplating a legal personhood model for the Fitzroy River: Jane Gleeson-White, 'It's Only Natural: The Push to Give Rivers, Mountains and Forests Legal Rights', The Guardian online (1 April 2018).
23. There are some exceptions (s. 56). Te Pou Tupua can also ask for assistance from the Crown to meet its liabilities (sch 5 cl 3).
24. These are called consent authorities in the Resource Management Act 1991 (NZ), the primary statute in Aotearoa New Zealand governing water management, and are regional councils or territorial authorities whose permission is required to carry out any activity for which a resource consent is required under the Resource Management Act.

25. This is when the referral authority is a 'determining' referral authority. If the referral authority is a 'recommending' referral authority, the responsible authority is not obliged to deny the permit (Planning and Environment Act 1987 (Vic), ss. 61(2), (2A)).

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RESEARCH ARTICLE

A case for granting legal personality to the Dutch part of the Wadden Sea

Tineke Lambooy[a,b,c], Jan van de Venis[d] and Christiaan Stokkermans[e]

[a]Center for Entrepreneurship, Governance & Stewardship, Nyenrode Business University, Breukelen, Netherlands; [b]Utrecht Centre for Water, Oceans and Sustainability Law, Utrecht University, Utrecht, Netherlands; [c]Faculty of Law, Airlangga University, Surabaya, Indonesia; [d]JustLaw in Corporate Law and Human Rights, Amsterdam, Netherlands; [e]Amsterdam Court of Appeals, Amsterdam, Netherlands

ABSTRACT

This article proposes that the Dutch Wadden Sea, a tidal wetland, can be protected by recognizing that it can own itself, in keeping with the emerging international trend of granting rights and legal personality to important ecosystems. Under Dutch law, legal personality could be granted to the Wadden Sea in the form of a 'natureship' (*natuurschap*), a legal form that perfectly fits into the Dutch legal system. The legal objective of the Wadden Sea Natureship could be to focus on maintaining the ecosystem in a healthy condition.

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Introduction

The Wadden Sea is the largest unbroken system of intertidal sand and mud flats in the world, with natural processes undisturbed throughout most of the area. It is rich in biological diversity. This World Heritage area encompasses over a million hectares and covers a multitude of transitional zones between land, sea and freshwater environments (UNESCO.org, n.d.). The Wadden Sea is shared between the Netherlands, Germany and Denmark. Below, any reference to the Wadden Sea is to the Dutch part of it only (except where the contrary is evident).

The people of the Netherlands highly value the Wadden Sea. It was voted the most beautiful nature area of the Netherlands (UNESCO, 2016; NRC, 2016b). The Dutch Wadden Islands, the Wadden coast and the Wadden Sea draw millions of tourists every year, who enjoy its vastness and tremendous biodiversity. The Wadden island of Texel made it into the Lonely Planet 2016 Top 10 Europe Destinations List (NRC, 2016a; NL Times NL 2016) for its 'unspoiled dune landscapes', 'wildlife reserves', 'gloriously deserted white-sand beaches' and 'pine forests'. A natural area that is both beautiful and unique, the Wadden Sea is alive. Twice a day it breathes in and out, with high and low tide.

Dangers such as economic activity and splintered governance are threatening the area. In response, two of us were involved in a proposal made last year to grant legal personality to the Dutch Wadden Sea (Van de Venis, Lambooy, & Berkhuysen, 2018). The objective of that proposal was to maintain the ecosystem in a healthy condition for future generations.

CONTACT Tineke Lambooy t.lambooy@nyenrode.nl

The proposal was inspired by an emerging international trend of granting rights and legal personality to important ecosystems such as a river or mountainous area.

More recently, on 20 June 2019, the Dutch Government presented an initiative for rapid improvement of Wadden Sea management. It proposes the creation of a Wadden Sea Management Authority (Beheerautoriteit Waddenzee) to enhance cooperation and mutual consultation between various authorities involved with the Wadden Sea. As welcome as this first step may seem, it may not suffice to address the Wadden Sea's challenges in the middle and longer term. On 12 July, the municipality council of Noardeast-Fryslân, which encompasses and borders a large part of the Wadden Sea, adopted a motion calling for more rights for the authority. The motion calls for the Wadden Sea to be granted its own and independent identity and place in the Dutch legal system, similar to a municipality or company (Omrop Fryslan, 12 July 2019).

With all this in mind, the following will be discussed below. First, we provide some more background on the Wadden Sea, its attractions, protection and challenges and highlight some international precedents on the granting of rights to nature. After that, we explore the concept of legal personality under Dutch law and make the case for a novel type of legal person – we call it a 'natureship' (*natuurschap*). This type may be well suited for both the Wadden Sea and other Dutch natural areas deserving a similar level of protection and governance. In the concluding part of the article, we summarize our findings and discuss the opportunity and need for further research on this topic.

World Heritage site, protection and challenges

World Heritage site

The Wadden Sea is in the northern part of the Netherlands, between the coast of the Dutch mainland in the south and the range of low-lying Wadden Islands and the North Sea in the north (Figure 1). A 32-kilometre coastal dike built in the 1930s (the Afsluitdijk) separates the Wadden Sea from the IJsselmeer, a large lake inside the Dutch mainland (until the construction of the Afsluitdijk, the IJsselmeer was an inland sea). The Wadden Sea stretches from the North Sea coastal city of Den Helder in the West to the German border in the East.

The word *wad* is Dutch for 'mud flat'. The landscape of the Wadden Sea has been created for a great part by storm tides, overflowing and carrying away former peat land behind the coastal dunes. On the North Sea side, the Wadden Islands have dunes and wide sandy beaches, and towards the Wadden Sea they have a low, tidal coast. The impact of waves and currents carrying away sediment is slowly changing both land masses and coastlines. Many of the Wadden Islands offer popular seaside recreation facilities and activities. Mudflat hiking (walking on the sandy flats at low tide) has become popular in the Wadden Sea. It is also a popular region for pleasure boating.

As the Wadden Sea comprises wetlands and a large shallow body of water with extensive tidal mud flats divided by deep tidal trenches, the area is rich in biological diversity. It is the home of various species of seals, and very important for migratory birds. Hundreds of thousands of waders, ducks and geese use the area as a migration stopover or wintering site. It is also a rich habitat for gulls and terns. Up to 6.1 million birds can be present at the same time in the Wadden Sea (including its German and

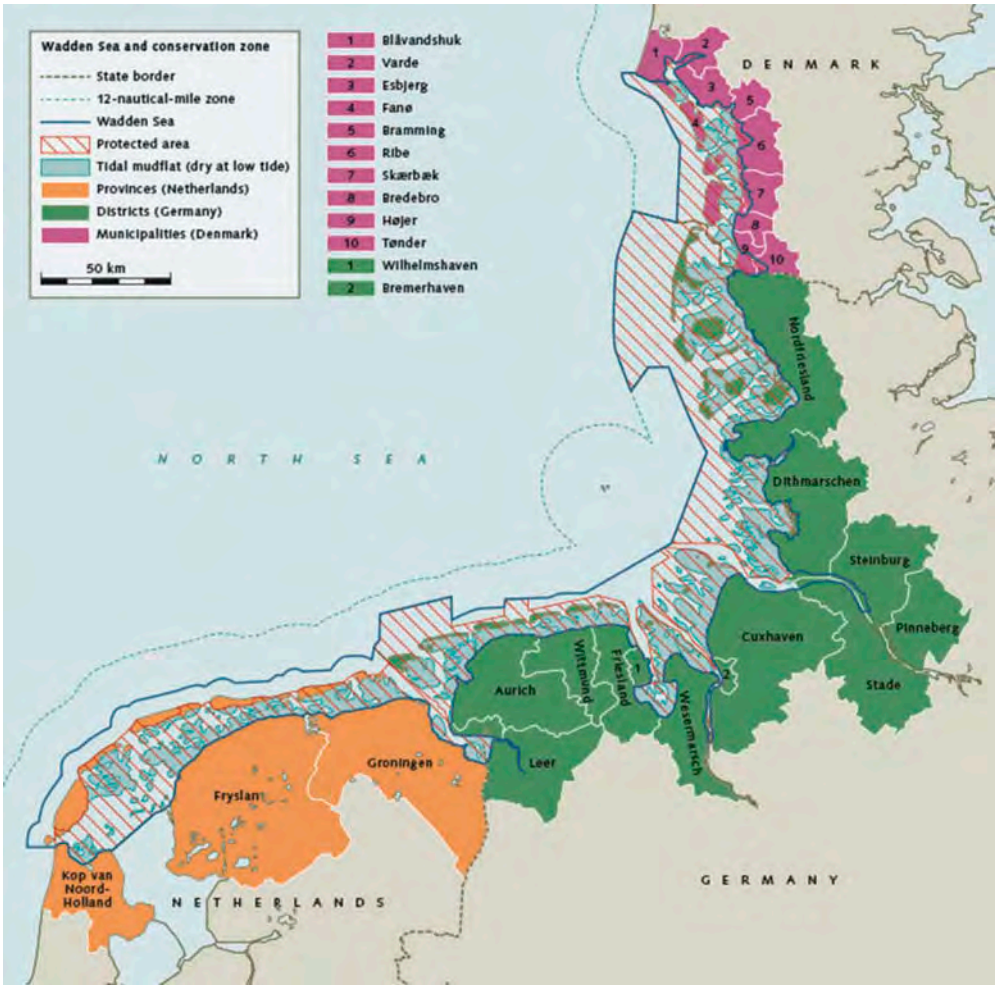

Figure 1. Map of the Wadden Sea in the Netherlands, Germany and Denmark.

Danish parts), and an average of 10–12 million pass through it each year. The area provides a habitat for up to 10,000 species (estimated) in the form of single-cell organisms, plants, fungi and animals.

In 1986, the entire Wadden Sea area was declared a biosphere reserve by UNESCO (n.d.). In 2009, the Dutch and German parts of the Wadden Sea were inscribed on UNESCO's World Heritage list, and the Danish part was added in June 2014. But this World Heritage designation has not changed anything in terms of protective measures.

Protective regulation

Protection of the Wadden Sea's natural values is regulated by various laws, directives, treaties and agreements. They are all interconnected. Worldwide regulation includes the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic, which replaced the earlier treaties of Oslo and Paris, and the 1971 Convention on Wetlands

of International Importance especially as Waterfowl Habitat, which was signed in the Iranian city of Ramsar.

European regulation comes in the form of directives providing guidelines with specific ultimate goals which the member states must meet within an established number of years. The member states of the European Union (EU) make their own laws to accomplish these goals. EU directives relevant to the Wadden Sea are the EU Water Framework Directive (2000), the EU Habitats Directive (1992) and the Birds Directive. The Birds Directive dates back to 1979 and was amended in 2009 and renamed the EU Directive on the Conservation of Wild Birds (2009). The Habitats Directive and the Directive on the Conservation of Wild Birds form the basis for the EU's Natura 2000 ecological network.

The Netherlands, Germany and Denmark cooperate within the framework of the Trilateral Wadden Sea Cooperation. The cooperation is based on the Joint Declaration on the Protection of the Wadden Sea, first signed in 1982 and last amended by the Leeuwarden Declaration in 2018. The Netherlands, Germany and Denmark also entered into the 1990 Agreement on the Conservation of Seals in the Wadden Sea (under the aegis of the Convention on Migratory Species). They meet every four years to discuss the forming or upgrading of the protective policy for the Wadden Sea area. In 1997, the three countries signed the first trilateral Wadden Sea Plan (WSP). Their cooperation is supported by the Common Wadden Sea Secretariat. Its work includes initiating, coordinating and carrying out the activities of the Trilateral Cooperation. It also prepared the UNESCO World Heritage nomination. General management of the Wadden Sea is described in the WSP, which is the common policy and management plan for the protection and sustainable management of the Wadden Sea area, as well as the common management plan for the Wadden Sea World Heritage area. The most recent WSP dates back to 2010. It describes aims such as achieving the full scale of habitats, which belong to a natural and dynamic Wadden Sea, and targets concerning each of these habitats in terms of natural dynamics, absence of anthropogenic disturbance, and absence of pollution. The common policy outlined in the WSP is monitored by the Trilateral Monitoring and Assessment Programme.

On the Dutch national level, protection of the environmental integrity of the Wadden Sea mainly derives from the Wadden Sea zoning framework established by the national government and parliament (Dutch Ministry of Housing, Spatial Planning and the Environment, 2007). The main purpose of this regulatory framework is the sustainable protection and development of the Wadden Sea as a natural area and preservation of the unique open landscape. It also provides that there must be room for co-usage, which in practice means intensive human activity in the form of shipping (including ports), recreation, agriculture, military activity, mining (gas and salt), and fishing. Unlike the Danish and German parts of the Wadden Sea area, the Dutch part does not have national park status under local law. The western and northern dunes on the island of Texel, almost the entire island of Schiermonnikoog, and Lauwersmeer are national parks in the region. The Dutch Wadden Islands are outside the World Heritage area.

Challenges

The recent initiative of the Dutch government to set up a Wadden Sea Management Authority was already mentioned. In acknowledgement of a widely held belief that a step

up in protection is urgently needed, the plan for a management authority was already announced when the current government was formed in 2017. The government has commissioned an advisory report from consultancy firm AT Osborne (2018) to help determine the exact features, duties and powers to be given to such a management authority.

Based on their desktop research, AT Osborne determined that since 1984, in terms of nature quality, preservation goals have been fulfiled, but improvement goals have not. The number of fish has sharply declined, and less migratory birds are being counted. Seal numbers, however, have increased. Other species have seen their numbers remain steady. The number one cause for the failure on nature improvement goals, according to AT Osborne, is policy decisions: the co-usage of the Wadden Sea for human activity in the form of fishing, gas and salt extraction, dredging, recreation, military activity, the extension of ports, passenger transport from and to the Wadden Islands, et cetera. Other causes, according to the report, are some major historic interventions (such as the building of the Afsluitdijk), external factors (such as climate change and rising sea levels), causes which are as yet insufficiently understood (due to the complex dynamics of the ecosystems), and flaws in the current nature management.

After this general analysis of the challenges facing the Wadden Sea, the AT Osborne report zooms in on the issue of current management. It asserts that: (1) the current management efforts are insufficient for reaching the nature improvement goals set out in the national framework regulation; (2) the current Wadden Sea governance in the Netherlands is complex, ineffective and inefficient (a multitude of competent authorities with splintered powers); and (3) the competent authorities lack the culture needed for sound cooperation. The problems in effective governance (with respect to the management issues at stake) particularly relate to nature, the report explains. There is clear central management from the Ministry of Infrastructure and Waterworks on water-related issues (water quality, water safety, shipping and accessibility). The Ministry of Agriculture, Nature and Food Quality offers clear central management with respect to the interests of the fishing industry. But with respect to protecting and improving nature, management duties and powers are splintered, with no clear central steering. At the highest level, it is mainly the responsibility of the two ministries just mentioned to jointly provide such central steering.

To address these management issues, AT Osborne proposes six alternative ways in which a management authority could be set up. And having considered these alternatives, the government has chosen a rather 'light' version. In it, the management authority will be a unit in which the most relevant authorities will cooperate. Within this unit, an integrated management plan is to be agreed (covering nature, water and fishing). The unit will have two directors, but no legal personality and no budget or powers of its own. It is intended that the management authority will start before the end of 2019 (Dutch Government, 2019).

As the new set-up will leave the current duties and powers of management unaffected, splintered as they are, one may doubt that it will be effective. We should also reiterate that this management authority is focused on management only. Therefore, it will not be concerned with wider policy making on issues of prioritizing nature protection and nature improvement or the co-usage of the Wadden Sea for fishing, shipping, mining, recreation, military activity, etc.

We expect that the newly proposed Wadden Sea Management Authority will offer only limited, short-term improvements, as the two Dutch ministries remain the 'captains of the Wadden Sea ship', implying that they will continue to prioritize the interests of their stakeholders, including the gas and salt extractors, dredging companies, the Dutch military, the recreation industry, the ports and shipping industry, and the fishery sector. As the AT Osborne report revealed, Wadden Sea governance has failed to protect nature values or to achieve ecological goals as defined in the various international treaties and declarations and Dutch policy goals. We therefore need to think about new solutions and approach the challenges in an innovative way. As the proposed management authority will be a unit without legal personality and without budget or powers of its own, it can be expected to serve only as a coordination tool for the two ministries. Our proposal – as developed below – has a further-reaching middle-and-long-term ambition, to safeguard the Wadden Sea and ensure a healthy ecosystem for future generations. Basically, we propose that the Wadden Sea be granted its own rights and the ability to act as a legal person with a well-defined purpose stipulated in its articles of incorporation (articles of association or bylaws), rather than being managed by two ministries and a management authority. The statutory purpose of the legal person will provide clear direction to the board of the legal entity when it has to make decisions regarding the Wadden Sea. Of course, it will have to take the concerns of the two ministries into account and cooperate with them, but ultimately it will make its own decisions and bring into the governance equation its own interests, in a legally enforceable way. The motivation for adding legal personhood to the current spectrum of governance is to give rights to a wetland in the interest of nature and future generations, as apparently such interests are not fully taken into account in the current set-up, nor will they be fully taken into account by introducing a management authority as now proposed by the Dutch government.

The concept of granting rights to nature

Christopher Stone's idea

Christopher D. Stone's seminal article, 'Should Trees Have Standing? Toward Legal Rights for Natural Objects,' was published back in 1972. Yet, it is perhaps more provocative and relevant today than it has ever been. It suggested that pieces of nature could be granted legal standing, and that the rising public concern for the protection of nature should lead to the recognition of rights of nature. The idea got some traction. The question 'Is it time to give our river rights?' was displayed on banners at a March 2018 community rally near the Margaret River in Australia. The article about this protest in the *Guardian* was headed 'It's Only Natural: The Push to Give Rivers, Mountains and Forests Legal Rights' (Gleeson, 2018). This and more recent articles (Guardian, 2018) herald new and inspiring thinking on giving rights to nature.

Giving rights to groups of people, creatures or constructs that had no rights always sparks debate. Just think about women, children, people of colour, slaves and prisoners. Society and law progress, and such groups now have rights they were once deprived of. More recently, even our future generations obtained constitutional rights. According to Article 112 of the Norwegian Constitution, 'Every person has the right to an environment that is conducive to health and to a natural environment whose productivity and

diversity are maintained. Natural resources shall be managed on the basis of comprehensive long-term considerations which will safeguard this right for future generations as well.'

Non-human living beings, like animals, have been granted constitutional rights. For example, Paragraph 20a of the German Constitution states that animals, like humans, have the right to be respected by the state and to have their dignity protected (German Constitution, n.d.). Via the legal construct of 'legal personality', society has also given rights to non-living entities and bodies such as states, provinces, business corporations and charities. Legal personality is generally understood as the capability to be 'the bearer of legal rights and obligations' (Brölmann & Nijman, 2017, p. 16). New perspectives have opened the legal imagination to the possibility of giving legal personality to rivers and ecosystems for their protection.

The idea of nature, rivers, ecosystems or trees having rights or legal personality may be hard to grasp. Many will hestitate to extend rights to anything non-human. As Stone put it, 'There will be resistance to giving the thing "rights" until it can be seen and valued for itself; yet, it is hard to see it and value it for itself until we can bring ourselves to give it "rights" – which is almost inevitably going to sound inconceivable to a large group of people' (Stone, 1972, p. 3). Granting rights to a 'thing' goes with recognizing its intrinsic value, with respecting it as having value in its own right. Just like underage children, nature needs human representatives empowered to stand up for its rights when they are violated.

Recognition from international organizations

Today, no global treaty recognizes rights of nature, but the 2016 UN General Assembly Resolution, 'Sustainable Development: Harmony with Nature' (Resolution 71/266, 1 August 2016, A/71/266), affirms that

- Some countries do recognize the rights of nature, referring to New Zealand, the US (municipal ordinances), Ecuador and Bolivia (paras. 1, 44–46).
- A first step in recognizing the rights of nature took place in June 2012 at the UN Conference on Sustainable Development. Heads of state and government adopted the outcome document 'The Future We Want', which affirms that the Earth and its ecosystems are our home and that some countries recognize the rights of nature in the context of the promotion of sustainable development. They also agreed that, to achieve a just balance among the needs of present and future generations, it is necessary to promote harmony with nature (para. 2).
- Experts from around the world are making recommendations for Earth-centred law and policy to ensure a flourishing Earth, expanding on the current Sustainable Development Goal strategies. They say that a first step is to include the rights of nature in our governance systems, not by advancing its interests within the capital system as resources to be exploited, but by recognizing the fundamental legal rights of ecosystems and species to exist, thrive and regenerate. These rights are not in opposition to human rights: as part of nature, our rights are derived from those same rights. The human right to life is meaningless if the ecosystems that sustain us do not have the legal right to exist (paras. 35–37).

In 2012, the International Union for Conservation of Nature (IUCN) adopted a resolution on the rights of nature. This non-governmental organization with thousands of expert partners offering scientific, legal and other expertise has observer and consultative status at the United Nations. Its 2012 resolution referred to existing national frameworks which recognize the rights of nature. It also recommended that the 'Rights of Nature' be considered by the IUCN at 'all levels and in all areas of intervention'; that a 'strategy for dissemination, communication and advocacy concerning the Rights of Nature' be created; and that a Universal Declaration of the Rights of Nature be developed as a 'first step towards reconciliation between human beings and the Earth as the basis of our lives, as well as the foundations of a new civilizing pact'.

Another example of international recognition of the rights of nature, resembling the structure of the Universal Declaration of Human Rights, is the Universal Declaration of Rights of Mother Earth. It was adopted in 2010 at the World People's Conference on Climate Change and the Rights of Mother Earth, in Bolivia. It acknowledges the 'inherent rights of Mother Earth' to the natural world's 'life, liberty and security of person'. These include the rights of the Earth and of all beings to 'life and to exist', to 'integral health' and to 'identity and integrity'. The declaration added that those rights, like human rights, 'arise from the same source as existence'. It was endorsed by the Sami Parliament of Sweden on 25 May 2018 (Intercontinentalcry, 2018; Rights of Mother Earth, n.d.). It has been signed by almost one million people around the world (Rights of Mother Earth, n.d.).

Indigenous people

Indigenous peoples have inspired the basic thinking and the realization of many of the practical examples and new laws, because they often regard themselves as part of nature. In their customs and culture, they have sets of unwritten rules that confirm the reciprocal relation with and responsibilities towards nature. An example of that is giving thanks to nature – to water, springs, lakes, maize, fruits, medicinal herbs, forest trees, animals (which serve as food and give their pelts for clothing), and to the winds, the sun and the moon (Constitution of the Iroquois Nations, para. 7 (Indigenouspeople.net, n.d.)) – before starting a council meeting.

As another example we refer to the 'seven generation' stewardship principle. It requires people to consider the impact on the seventh generation ahead in every deliberation. According to Oren R. Lyons Jr., chief of the Onondaga Nation, 'We are looking ahead, as is one of the first mandates given us as chiefs, to make sure and to make every decision that we make relate to the welfare and well-being of the seventh generation to come... But you must consider in the process and in choosing the direction of your life: how will this affect the seventh generation?' (qtd. in Vecsey & Venables, 1980, pp. 173–174; Erikson & Vecsey, 1980).

For many indigenous people it is a non-indigenous concept to have rights in relation to nature (such as property rights on land), but also to give rights to nature. They are, however, increasingly adapting to the non-indigenous legal systems they are subject to. An example is the Ponca tribe in Oklahoma. In October 2017 this tribe, which had been severely affected by pollution caused by fracking, introduced 'rights of nature' into tribal law. Casey Camp Horinek, an elder and tribal councilwoman of the tribe, commented: 'To restore Mother Earth – her nature's balance, the world needs to shift from a philosophy of

control and dominion over nature, and its legal system of property rights regimes, to a relationship of understanding and respect for the Natural Laws and love for the beauty of the creative female energy of Mother Earth' (Rights of Nature Ethics Tribunal, 2014).

In the case of the Wadden Sea, the initiative for legal action to give the sea rights came from the people and representatives of the Noardeast-Fryslân Municipality. This community may be considered indigenous, when defined as 'naturally existing in a place or country rather than arriving from another place'.

Granting rights to nature in some specified cases

South America: Ecuador, Bolivia and Colombia

Ecuador was the first country to add rights of nature to its constitution. Since 2008, its constitution proclaims nature 'to exist, persist, maintain and regenerate its vital cycles' (Constitución Política de la República del Ecuador, n.d.). Nature is given its rights by analogy to people (art. 71).

Bolivia followed suit in 2010. In the Act of the Rights of Mother Earth, it imputed certain rights to Mother Earth, ensuring protection for her and her life-systems. The act defines nature as a legal entity that 'takes on the character of collective public interest' (Ley de Derechos de la Madre Tierra, ch. II, art. 5, Dec. 2010).

An important judgement in this field came from the Supreme Court of Colombia on 6 April 2018 (STC4360-2018). In this case, a group of 25 young plaintiffs, some as young as seven years old, charged that the government's failure to stop the destruction of the Amazon jeopardized their futures and violated their constitutional rights to a healthy environment, life, food and water. In its ruling, the court confirmed the importance of protecting the rights of future generations and recognized Colombia's Amazon area as an 'entity subject of rights', with the same legal rights as a human being (Reuters, 2018).

India

In India, there is no written law on the rights of nature. But that did not stop the High Court of the state of Uttarakhand from ruling that the rivers Yamuna and Ganga (Ganges), the glaciers that provide the water, and the adjoining ecosystems have the same rights as humans (Judgements India, 2017). In both cases the court invoked *parens patriae* (Hayden, 2014), the principle that authority carries with it the responsibility to protect citizens unable to protect themselves. In its judgement of 20 March 2017, the court wrote:

> Accordingly, while exercising the parens patrie jurisdiction, the Rivers Ganga and Yamuna, all their tributaries, streams, every natural water flowing with flow continuously or intermittently of these rivers, are declared as juristic/legal persons/living entities having the status of a legal person with all corresponding rights, duties and liabilities of a living person in order to preserve and conserve river Ganga and [river] Yamuna.

A second judgement, of 30 March 2017, considered that the Ganga originates from the Gangotri Glacier and the Yamuna from the Yamunotri Glacier. Both glaciers are receding at an alarming rate due to pollution and climate change. The court argued that urgent remedial steps were required to stop the recession of these glaciers. It also stated that the

Ganga and Yamuna are revered by Hindus as deities and that glacial ice is the largest reservoir of freshwater on earth. Furthermore, the court referred to many international commitments to safeguard the earth for future generations, including the Stockholm Declaration of the UN Conference on the Human Environment (5–16 June 1972), Principle 2 of which stipulates: 'The natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems, must be safeguarded for the benefit of present and future generations through careful planning or management, as appropriate.'

Hence, the court expanded the legal personhood of the two rivers to the glaciers and all other related ecosystems: 'the Glaciers including Gangotri & Yamunotri, rivers, streams, rivulets, lakes, air, meadows, dales, jungles, forests wetlands, grasslands, springs and waterfalls' in the Himalayan state are legal persons ('legal entity/legal person/juristic person/juridical person/moral person/artificial person having the status of a legal person, with all corresponding rights, duties and liabilities of a living person, in order to preserve and conserve them. They are also accorded the rights akin to fundamental rights/legal rights') (Judgements India, 2017; Writ Petition (PIL) No. 140 of 2015, p. 64). The granting of legal rights entails that polluting or damaging the rivers is just as bad from a legal point of view as harming a person. And as legal entities, the rivers themselves could be party to legal disputes. Similar wordings were used in another order from the same High Court (Judgements India, 2017; Writ Petition (PIL) No. 126 of 2014, para. 19).

However, after an appeal by the State of Uttarakhand to the Indian Supreme Court, the latter subsequently ruled in July 2017 that, no matter how important these rivers are, it is not up to judges to designate them as legal persons (BBC, 2017). The Supreme Court then issued a stay of the High Court's order. No final Supreme Court judgement in the appeal procedure has been issued yet.

Meanwhile, in July 2018, in another case, the Uttarakhand High Court accorded the status of legal personhood to animals as well: 'The Corporations, Hindu idols, holy scriptures, rivers have been declared legal entities and thus, in order to protect and promote greater welfare of animals including avian and aquatic, animals are required to be conferred with the status of legal entity/legal person' (Judgements India, 2018; Writ Petition (PIL) No. 43 of 2014, para. 99, p. 50).

New Zealand

In New Zealand, three natural areas have been granted legal personality. Most recently, in December 2017, this status was given to the volcanic Mount Taranaki (also known as Mount Egmont). It had already been granted to the Whanganui River (earlier in 2017) and to Te Urewera National Park (in 2014). All three cases originate from settlements of disputes between the Crown and the Māori (Boyd, 2017). The acknowledgement of legal rights for nature served as a mechanism for balancing conflicting interests (Solimeo, 2018). The Whanganui River Claim Settlement Act marked the end of a long conflict between the government and the indigenous people of Whanganui Iwi over the ownership of the river. Based on their customary laws, they consider themselves an integral part of the river biotope (Solimeo, 2018, p. 19).

Although the Crown and Māori had different legal starting points, the resolution of these disputes – attributing legal personality to parts of nature – fits both very well. The

Western legal system focuses on rights and responsibilities. That is essential to healthy relationships between people. For Māori that is true too, but for them there is more. There must be healthy relationships between humans and nature as well. As Boyd (2017) observed, this notion of binding responsibilities to the natural world could turn centuries of human exploitation of 'natural resources' on its head. It requires us to place nature, rather than only humans, at the heart of sustainability.

The Whanganui Act recognizes 'an indivisible and living whole entity, comprising the Whanganui River from the mountains to the sea, incorporating all its physical and metaphysical elements' (art. 12). The river 'is a legal person and has all the rights, powers, duties, and liabilities of a legal person' (art. 14). But nothing in the act limits any existing private property rights in the river, unless provided otherwise (art. 16).

Humans will have to act and speak on behalf of the river, promote and protect its health and well-being, and claim its rights or stand up against violations of its rights. Hence, the river is represented through the office of Te Pou Tupua, the 'human face' of the river (art. 18.2). The office is two people, one representative of the indigenous community (directly nominated by the Whanganui Iwi) and one of the government (following nomination by the Crown), to represent the River's interests (art. 20). As a result, this river is the first on Earth that can go to court if its interests are violated, just like a qualifying public body, a private company or a charitable foundation can in most countries, including the Netherlands.

Legal personality under Dutch law

Legal rights versus legal personality

In response to the observation that many people find it difficult to consider granting rights to non-humans (mentioned earlier), we point out that most corporate law systems in the world recognize legal persons in the form of companies, corporations, limited liability companies, foundations, et cetera. They too are non-human but are usually governed and represented by human beings. Corporations can manage themselves, and their legal personality allows them to own assets and have bank accounts, to enter into contracts, to file lawsuits, to appoint directors and other legal representatives, and to hire employees. Corporations must also file tax returns and pay taxes, obey the law, and fulfil their contractual obligations.

Under Dutch law, humans and legal persons are not the only entities recognized by law as holders of rights and obligations. For example, although private partnerships do not have legal personality, in many jurisdictions, including England and the Netherlands, they are acknowledged as collective entities which are capable of entering into contracts, to sue and to be sued, and to enjoy certain human rights (e.g., the right to a fair trial). Partnerships can also hold certain public licences (e.g., a building permit) and be taxpayers (Blackett-Ord & Haren, 2015; Mathey-Bal, 2016; Stokkermans, 2017). Boards of corporations and works councils are deprived of legal personality but can enter into certain contracts and have standing in certain court proceedings. The same goes for many public entities. Dutch law vests certain regulatory powers in municipality councils, though such councils do not qualify as legal persons.

Where Dutch law confers the status of 'legal person' on an entity, it means that this entity is deemed legally capable of holding property (in a broad sense, including assets and liabilities). As section 2:5 of the Dutch Civil Code puts it: for the purposes of property laws, legal persons are on the same footing as natural persons. Legal persons have or may have standing in many other respects. They can act in court, be held criminally liable, and enjoy human rights. But they have this extra capacity of property rights.

Legal persons in public and private law

Section 2:5 of the Dutch Civil Code applies whether a legal person derives its status from public or private law. Public law legal persons include the State, provinces, municipalities and waterships. Private law legal persons include associations (clubs), companies and foundations (sections 2:26, 2:64, 2:175, 2:285). Most public powers are exercised through public law entities and their bodies, there are exceptions. The Dutch Authority for the Financial Markets (AFM) is a foundation, which is a private law legal person, though with (public) regulatory powers. One of the reasons for the AFM being formed under private law is procedural. Setting up a private law legal entity and establishing its articles of association (which include its purpose and governing rules) is easy. Doing the same for a public entity involves a complicated legislative process. Legislation and policies have been put in place to discourage public authorities from exercising public powers through private law entities, unless the public interest clearly requires otherwise (sections 29 and 34 of the Dutch Government Accounts Act; section 160 of the Dutch Municipalities Act; section 158 of the Dutch Provinces Act (2014); Scheltema & Scheltema, 2013).

A public law legal person combines the powers of a public institution, such as imposing regulation (and in the event of infringements, levying fines), with private powers such as owning assets, and claiming reparation for damages from a party that acted wrongfully.

Certain public law legal persons have broad responsibilities and are geographically defined, such as municipalities. Others have been given a specific function without being confined to a certain territory, e.g., the Authority for Consumers and Markets. It is a public law legal person charged with supervising businesses operating in consumer markets in the Netherlands.

Waterships (*waterschappen*)

Yet another category of public law legal persons under Dutch law is defined both geographically and functionally. This category includes *waterschappen* (waterships). The main regulatory framework of waterships is contained in the Dutch Waterships Act (Waterschapswet).

Waterschap is often translated as 'water board', which puts the focus on the body governing the entity (the board). To preserve the Dutch emphasis on the underlying entity itself, we prefer 'watership' as a translation. A linguistic note: the suffix *-schap* (-ship) refers to something existing, something created. It is common in both the English and Dutch languages (maat*schap* means partner*ship*).

Waterships are among the oldest public institutions in the Netherlands, the first watership having been created in the thirteenth century. The oldest, and still very important, functions of a watership are to protect a certain territory from flooding and to determine and preserve suitable groundwater level in its territory. It does these things by building and maintaining dikes and drainage systems. These two functions (water security and water quantity) are still the core business of waterships. A third function nowadays is about water quality: waterships are charged with water treatment and impose and enforce anti-pollution regulations. Currently, the territory of the Netherlands is divided into 21 waterships.

Waterships deal with politically sensitive issues, such as groundwater levels. Farmers, homeowners and environmentalists may have different priorities. Watership governance reflects this. The board members are elected by the landowners, land users and inhabitants of the watership's territory. Private environmental organizations may also be given the power to appoint one or more board members (sections 12 and 14, Dutch Waterships Act). Specifics per watership are set out in lower-level regulations. Watership board elections occur every four years. A watership has independent powers to grant certain permits and to levy taxes on the landowners, land users and inhabitants in its territory. Each watership has operating agreements with other public institutions (such as municipalities) within or adjoining its territory. These provide a framework for aligning policies.

Towards the natureship: a novel type of legal entity suited for the Wadden Sea

A legal framework for the Wadden Sea could build on the waterships precedent created in Dutch culture and codified in Dutch law. This line of thinking was already hinted at by an advisory committee in 1976 (Commissie Toekomstige Bestuursstructuur Waddengebied, 1976), but it was never explored in detail.

The Wadden Sea Natureship: building on the waterships precedent

We suggest introducing a new type of public law legal person, to be called a natureship (Dutch: *natuurschap*). Like a watership, it would be a public institution as well as a legal person. These features are needed for an appropriate level of independence from outside interests. Like a watership, a natureship can be geographically and functionally defined. The statutory purpose of a natureship would be to protect and support the ecological integrity of a specified geographical area, in our case the Wadden Sea, and to regulate human activity in it so that the area's ecological integrity is not jeopardized. This would be in line with the Dutch state's duties pursuant to international treaties and European law, as mentioned earlier. As a consequence, this statutory purpose will be central to the natureship's interests. The board members are charged with pursuing those interests. The act in which the Wadden Sea Natureship is to be created can also set out that the Wadden Sea has the right to see its natural environment preserved and protected.

The public powers to be vested in a natureship can be determined on a case-by-case basis. The Wadden Sea Natureship could hold powers (under both public and private laws) to protect and support the ecological integrity of its territory. It would not be a new

political layer in the Wadden Sea governance but a new actor that represents the interests of the Wadden Sea itself and that takes part in deciding its future.

In recognition of the national interest, the Wadden Sea Natureship could cooperate with the national government, and after consultation with other bodies within the Natureship, it could be charged with determining the Natureship's main policy framework. The national government could be represented in the Natureship through for instance a Wadden Council composed of the cabinet ministers most involved. As mentioned, these are the Minister of Infrastructure and Waterworks and the Minister of Agriculture, Nature and Food Quality. Their ministries can be involved at other levels as well. Thus, their current involvement with nature, water and fishing management could be continued to a large extent, albeit within a new governance framework.

Other bodies within the Natureship, including its board, could be charged with lower level policy making and other powers and duties. This includes the provision of nature management through a management organization of its own and/or by outsourcing the same. In addition to the national government's involvement in the natureship, regional authorities, such as the provinces concerned, and certain non-governmental organizations can be given appropriate roles. The provinces of Noord-Holland, Friesland and Groningen each have part of the Wadden Sea in their territory. Some element of direct involvement of citizens can be explored, too, if deemed appropriate.

In terms of financing, because of the national interest in the Wadden Sea, funding should mainly come from the national government, with possible additions from provinces and other public bodies directly involved. TheWadden Sea Natureship could also levy taxes of its own. It has no inhabitants to charge, but it could charge its users. Moreover, the natureship could charge fees for the granting of licences. It could impose penalties for regulatory infringements, and it could claim damages for pollution suffered within its territory and other irregularities.

Protecting the natureship's interests

A balance must be struck between the ministries' powers and the natureship's independence. This is key to ensure that policy making at the natureship level is solely based on the natureship's own interests and not unduly tainted by wider policy concerns the ministries or the larger government may have. Several precedents for ways to deal with this type of dilemma exist.

One example is presented by the AFM. As mentioned, the AFM has legal personality pursuant to private law, not public law. But that is not relevant here, as an appropriate level of independence can be created under public and private law alike. Under the AFM's governing rules, its board will not take instructions from the ministry concerned (in this case, Finance). Also, the AFM has a dual board structure: a supervisory board and an executive board. Executive members are appointed by the minister of finance; supervisory board members are appointed by royal decree (on a nomination by the minister of finance). The royal decree requirement means that the appointment is taken out of the narrow context of ministerial policy making. The main governance rules of the AFM are set out in its articles of association (*statuten*), which are published on the AFM website (www.afm.nl). Nomination processes are guided by composition profiles for the executive and supervisory boards. These include independence and other criteria.

Similar arrangements can be provided with respect to the Wadden Sea Natureship, and any other natureships for that matter. In addition to board seats reserved for appointment by ministers concerned with nature and environment, some can be reserved for provinces and municipalities involved with the Wadden Sea and for certain ecological organizations and citizens.

Conclusions and suggestions for further research

The Dutch government rightfully intends to set up a governing entity for the Wadden Sea. As set out in our introduction, it is intended that this entity be set up later this year, in the form of a 'management authority'. That may alleviate some of the current flaws in nature management, but seems devoid of potential to reach the stated goals in nature quality. Therefore, with an eye on the middle and long term, we suggest a path to actually reach those goals. It involves the creation of a novel form of legal personality under Dutch law. We call it a natureship and have built the idea on innovative thinking about granting rights and legal personality to nature, as well as on the precedent of waterships, which have been legal persons under Dutch public law for over 800 years.

A natureship could be set up for the Wadden Sea (the Wadden Sea Natureship) and for any other piece of nature in the Netherlands deserving the same level of protection. The statutory purpose of a natureship would be to prioritize the ecological integrity of a specified geographical area, in line with the Dutch state's obligations pursuant to international treaties and European law. The natureship would also provide a clear and robust framework in which human activity can be allowed and facilitated without that ecological integrity being jeopardized. Conferring legal personality on a natureship will, *inter alia*, allow it to claim damages for itself in the event any damage (e.g., pollution) is unlawfully inflicted on it (*Northern Times*, 2019; Stenden, n.d.). The relevance of this was demonstrated in 2019 by the accident of the container ship *MSC Zoe*, which caused enormous ecological damage to the Wadden Sea.

The public powers and duties of the natureship, as well as its governance, its financing structure and the manner in which it organizes nature management, can be adjusted to need. Exactly how those features should best be set up in the specific case of the Wadden Sea Natureship deserves further research and consideration. In addition to further desktop research, various governance ideas could be tested with relevant stakeholders in an action research project (qualitative study).

We also recommend further international research. Representatives of Germany and Denmark could be invited to investigate whether these countries would be interested in joining cooperative research on the idea of granting legal personality to the Wadden Sea. Various NGOs involved in the governance of the Wadden Sea and in addressing current ecological issues have indicated their interest in participating. The research department of the EU Commission has also expressed interest in further research on this topic. Another opportunity is to conduct a comparative legal study concerning the New Zealand model and similar developments elsewhere. It could provide Dutch policy makers valuable information on how those governance models are set up and work, and what challenges have been experienced in those contexts.

This article should be considered a think piece. It offers innovative ideas aimed at ensuring that the natural treasures of the Wadden Sea are preserved and developed for

the joy and well-being of nature itself and, as part thereof, current and future generations of humans. As stated in the Earth Charter (p. 6), 'Let ours be a time remembered for the awakening of a new reverence for life, the firm resolve to achieve sustainability, the quickening of the struggle for justice and peace, and the joyful celebration of life' (Earth Charter, n.d.).

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FORUM

Conferring legal personality on the world's rivers: A brief intellectual assessment

Gabriel Eckstein, Ariella D'Andrea, Virginia Marshall, Erin O'Donnell, Julia Talbot-Jones, Deborah Curran and Katie O'Bryan

Introduction to the series

Gabriel Eckstein

Texas A&M University School of Law; International Water Resources Association; International Association for Water Law

The following compilation is substantially reproduced and adapted from a series of essays that appeared in the blog of the International Water Law Project (www.internationalwaterlaw.org). The series was solicited in response to the unique recent phenomenon in which a number of courts and legislatures around the world have conferred legal personality on particular rivers. What resulted is a fantastic, thought-provoking and timely compilation.

In effect, various water bodies around the world have been accorded legal rights – some though legislative actions and others via judicial decisions – that in some jurisdictions, equate with those recognized in human beings. Although there may be interesting parallels in rights accorded to corporations, children and the intellectually challenged, the practical implications of these particular actions are still not well recognized or understood.

Harkening back to Christopher Stone's remarkable 1972 article 'Should Trees Have Standing? Toward Legal Rights for Natural Objects', the series pursued some of the most fascinating and perplexing issues surrounding legal personality in rivers. What actual rights might such legal personality provide? How does a river represent itself in court and before other societal institutions? If a river can suffer harm and sue alleged perpetrators of that harm, might it be subject to lawsuits for damages it might inflict as a result of flooding? What resources might a river have at its disposal to protect its rights? Does the recognition of such rights comport with the rights, interests and perspective of indigenous peoples? These are just some of the unique issues considered in these provocative essays.

The legislative and judicial actions discussed in this series are a novel legal approach to the management of critical freshwater resources. These mechanisms, however, have yet to be fully evaluated, scrutinized and tested. The essays that follow constitute a thought-provoking effort to contribute to that assessment. Moreover, they were written

CONTACT Gabriel Eckstein gabrieleckstein@law.tamu.edu

with the sincere objective of ensuring the sustainability of unique freshwater resources around the world.

The International Water Law Project is itself a unique institution. Existing solely on the Internet, the website is one of the premier resources and clearinghouses for information on international water law and policy. Its purpose is to educate and provide relevant resources to researchers and the public and to facilitate cooperation over the world's freshwater resources.

Can the river spirit be a person in the eye of the law?

Ariella D'Andrea

Coastal Fisheries and Aquaculture Legal Adviser, Pacific Community-SPC; International Association for Water Law

In the last decade, the environment and a number of water bodies have been granted rights and legal personality either through legislation or through court decisions. The personification of nature is not new. Humans have long considered their environment or some of its main components – the sun, the moon, the earth, the ocean, the rain, the river, the lake – as living entities or even gods. These beings, however, were outside or above the law. Now that our environment is deterioriating despite all the laws and treaties adopted to protect it, we feel that we ought to defend its existence, not just for our sake but also for its own survival. Just as oppressed minorities throughout history have become right-holders to defend their identity, nature is now being granted rights of its own. It is becoming a legal person like corporations, public agencies or civil associations.

Formalizing the rights of nature through legislation

In the United States, municipal ordinances recognizing the right of nature to exist, thrive and evolve have been adopted since 2006 in several states through grass-roots initiatives spearheaded by the Community Environmental Legal Defense Fund. Rights are conferred on 'natural communities and ecosystems', including the right to water, and residents are established as legal representatives to enforce nature's rights, as found, for example, in sections 618.03(a) and (b) of the Pittsburgh anti-fracking ordinance adopted in 2010 (City of Pittsburgh Code of Ordinances, 2019).

Latin America was next to adopt legislation on the rights of nature. In 2008, Ecuador recognized the constitutional right of Mother Earth to exist and evolve (Constitution of the Republic of Ecuador, 2008, Section 71), which was successfully tested in the Provincial Court of Justice of Loja in 2011 for the protection of the Vilcabamba River (R.F. Wheeler & E.G. Huddle v. Attorney General of the State of Jola, Dr. P. Carrion, 2011). In 2010, Bolivia adopted Law No. 071 on the Rights of Mother Earth, which gives legal standing to nature by recognizing it as a legal person of public interest ('*sujeto colectivo de interés público*', Art. 5) and establishes an ombudsman for the protection of its rights (Defensoría de la Madre Tierra, Art. 10) (Bolivia, 2010). The guiding principles of environmental governance are further specified in Framework Law No. 300 of Mother Earth and Integral Development for Living Well 2012 (Bolivia, 2012). Both

countries recognize the right of nature to the protection of its waters (Bolivia, 2010, Art. 7(I)(3); Ecuador, 2014, Art. 64).

More recently, New Zealand adopted national-level legislation granting legal personality to specific areas of cultural and environmental significance: Te Urewera, comprising Lake Waikaremoana and surrounding land and forests, as can be inferred from the Te Urewera Act (New Zealand, 2014); and Te Awa Tupua, which encompasses 'the Whanganui River from the mountains to the sea, incorporating all its physical and metaphysical elements' (New Zealand, 2017, Section 12). The new legal entities are represented by the Te Urewera Board and two guardians known as Te Pou Tupua, respectively. Both acts implement the deeds of settlement of historical claims by the Māori people.

Formalizing the rights of nature through judicial process

A number of courts around the world have also taken steps to recognize the rights of nature in the absence of enabling legislation. In 2016, the Constitutional Court of Colombia recognized the Atrato River as a legal person ('*entidad sujeto de derechos*') to be legally represented by a commission of guardians (T-622/16, 2016). In 2017, the High Court of Uttarakhand, India, declared the Ganga and Yamuna Rivers and all their tributaries legal persons and appointed two legal representatives *in loco parentis* (Mohd. Salim v. State of Uttarakhand & others, 2017). A few days later, the same court declared 'the Glaciers including Gangotri & Yamunotri, rivers, streams, rivulets, lakes, air, meadows, dales, jungles, forests, wetlands, grasslands, springs and waterfalls' in the State of Uttarakhand legal persons and appointed four legal representatives *in loco parentis* (Lalit Miglani v. State of Uttarakhand & others, 2017). In July 2017, the Supreme Court of India stayed the operation of the first order based on a petition by the State of Uttarakhand reporting a number of legal and administrative issues, e.g., a single state cannot be responsible for a river that flows beyond its borders (Mandhani, 2017; State of Uttarakhand & Ors. v. Mohd. Salim & Ors., 2017).

Most recently, in September 2017, the *Colorado River Ecosystem/Deep Green Resistance et al. v. State of Colorado* case was filed in the Federal District Court for the recognition of personhood of the Colorado River. It was withdrawn by the plaintiff following serious threats of sanctions from the Colorado Attorney General's Office on the grounds that the case is unlawful and frivolous (Walker, 2017).

Future opportunities

Other countries are also exploring the possibility of granting rights and legal personality to certain components of their environment. Canada is looking into granting legal personality to Lake Winnipeg (Walker, 2014) and Australia has now recognized the Yarra River (Victoria) as 'one living and integrated natural entity' although not (yet?) as a legal person (Yarra River Protection (Wilip-gin Birrarung murron) Act, 2017). A Universal Declaration on the Rights of Mother Earth – which includes the right to water – was also proclaimed by a number of countries at the World People's Conference on Climate Change and the Rights of Mother Earth (2010) in Cochabamba, Bolivia, in 2010.

Critical questions remain

The debate on whether nature should have legal standing has been ongoing at least since 1972 (see the dissenting opinion of US Justice William O. Douglas in Sierra Club v. Morton, 1972), but many questions remain open. The diversity of approaches adopted in different countries does not help in bringing clarity to the topic. Is granting rights to rivers a case of codification of customary law or practices? Are we moving from an anthropocentric viewpoint to an eco-centric one, or are nature's rights only a way to ensure that our biosphere remains inhabitable for future human generations?

Further questions include: Who or what is being granted legal personality: the river, the river basin, the freshwater ecosystem, or the environment as a whole? Does the single fish or weed in the water have legal standing, or are we protecting aquatic biodiversity? What about the riverbanks and the surrounding trees and bushes? Humans are also undoubtedly part of the ecosystem as generally recognized. Does this mean that sustainable use is acceptable as long as the functioning of an ecosystem is maintained (relations between its components), or do we need to protect the integrity of the natural object (the river) or process (the ecosystem)?

If nature has a bundle of substantive and procedural rights (to exist, thrive and evolve; to have water; to sue and be sued; to enter into contracts; to hold property; to be compensated for damages; and so on), doesn't it have duties too (to pay taxes, to be liable for damages such as floods, to maintain water quality and quantity)? What is the difference between a national park or protected area managed by a special-purpose body and a natural area declared to be a legal person? Does the ownership of the natural object or of the land where it lies have to be transferred to the new legal person (as in the Whanganui River Act) or does the state retain ownership (as in the South American examples)? What type of law applies to the relations involving the new legal person: public (constitutional, administrative, criminal) or private law? Would it be meaningful to introduce the crime of ecocide?

Most importantly, the new legal person needs to be made operational by clearly setting its defining features. What type of body is it? Is it a public authority, a charity, a body corporate? Or is it treated differently under different laws (e.g., Whanganui River Act, Section 17)? What are its exact scope and mandate? Are its boundaries clearly delimitated? What are the powers of its legal representatives or guardians? Who are its members? How do we make sure that decisions are made in the best interest of nature itself or of a given ecosystem? Is there a dissolution procedure? Finally, if a transboundary water body is granted legal personality, the repercussions on the right of states to regulate the flow of international rivers will need to be explored.

Overturning *aqua nullius*: an aboriginal perspective on personhood

Virginia Marshall

School of Regulation and Global Governance and Fenner School of Environment and Society, Australian National University

The proposed push by some individuals and groups to apply legal personhood to rivers, and potentially extend this to other living things, is counterintuitive from an Aboriginal perspective, and essentially counterproductive.

Australia is in Western terms a nation-state. If we measure Australia's short history against the thousands of years of Indigenous heritage, bound as it is by birthright in a familial connection and relationship with everything on, above and below the land and waters since time immemorial, the latter far outweighs any value flowing from propositions of legal personhood.

Water landscapes hold meaning and purpose under Aboriginal laws. The inherent relationships of Aboriginal peoples with water are evidenced by Aboriginal creation stories, with Aboriginal identity defined through Aboriginal ontologies (Aboriginal normative values and beliefs, laws and knowledge). From an Aboriginal perspective, water is inseparable from the land; in many Aboriginal creation stories (not myths) water came first, then the land. Water is sacred and underpins Aboriginal kinship connection in birth, life and death. These traits are exemplified in Aboriginal obligations to maintain waterholes, ensure fire management (burning) practices, and monitor the health of all things within traditional boundaries and care for country. Aboriginal communities continue to seek to exercise their inherent rights and obligations as sovereign peoples, in spite of continual efforts in contemporary Australia to undermine Aboriginal property relationships, ownership of resources and ancient knowledge.

Why do aboriginal peoples continue to fight for rights to protect country?

In *Mabo v. Queensland (No. 2)* (1992), a majority of Australia's High Court determined that the doctrine of *terra nullius* (in simple terms, land belonging to no one) was not based on truth; that Aboriginal peoples did have settled laws, were sovereign, and had exercised continuing ancient traditions, customs and practices. In 2004, when Australia's federal government legally separated water from the land, creating a market-based water regime, Indigenous peoples were not consulted. Aboriginal communities, throughout over 200 years of colonization, have been invisible in colonial constitutions and federalism (federation of Australia's colonial states occurred in 1901). Australia's Constitution affirms the invisibility of the First Peoples. Social activism (people's movements) still run cold on restoring Aboriginal peoples' leadership role on land, water and resource management. My book, *Overturning Aqua Nullius* (Marshall, 2017), conceptualizes the ongoing challenges as the various stakeholders, vested interests and governments in Australia continue to regard Indigenous First Peoples in Australia as merely another stakeholder or a 'special interest group' – a minority group.

The First Peoples of Australia have experienced waves of Western policies and laws to remove, alienate and assimilate communities and individuals, and this Western legal construct is complicit in decoupling the oldest living and continuing Indigenous culture in the world.

Why is the proposed UN declaration of the rights of Mother Earth misguided?

The proposed declaration fails to identify the unique position of Indigenous peoples, for example within the gendered environment of land, water and living things, which informs and connects Aboriginal identity (freshwater peoples, saltwater peoples, etc.) in 'a web of relationships' balance. The assumption in the 'rights of nature' paradigm is that all 'beings' seek to 'exploit, destroy and abuse' the earth. The concept of Mother

Earth is described as hierarchical in the order of all things (Art. 1), above 'beings'; separating 'each being' in 'relationships' with the Mother Earth.

The preamble, which refers to 'recognition and to defend the rights of Mother Earth' appears oppositional to the inherent role of Aboriginal peoples to manage and protect their country, including the lands, the waters, and totemic relationships with plants and animals. The preamble uses language that imposes restrictions on Aboriginal laws, limiting and regulating inherent Indigenous rights and obligations (Art. 1(7)). Notably, Article 3 presupposes that Aboriginal communities' values, beliefs, customs and laws are not adequate to maintain obligations to care for country. Article 3(e) seeks 'effective norms and laws' to defend the earth, effectively dismissing existing Aboriginal norms, laws and practices. It has been stated that 'a new generation of lawyers are searching for ways to transform the legal systems of industrialised nations to nurture a harmonious relationship between people and the non-human world' (Australian Earth Laws Alliance, n.d.), for example through legal personhood theory. This proposition is antithetical to Aboriginal peoples' inherent rights and obligations as First Peoples, which have operated effectively for tens of thousands of years in Australia.

Should we be persuaded by Salim v. State of Uttarakh *and High Court decision?*

A reading of the judgement of Sharma J. (and Alok Singh J.) in mandatory directions to the central government and state governments (Uttar Pradesh and Uttarakhand) to cooperate to 'preserve and conserve the Ganga and Yamuna rivers' makes certain things clear. This is an unusual role for the courts, in view of Australia's separation of powers. Sharma J. refers to a decision whereby the Indian Supreme Court held that a Hindu idol was a juristic entity (of legal personality) capable of holding property and of being taxed under a trust arrangement, and that this entity must have human guardians (Yogendra Nath Naskar v. Commission of Income-Tax, 1969). Juristic persons were said to be developed due to human need, as in the construction of corporate entities, with rights and duties, to sue or be sued (Shriomani Gurudwara Prabandhak v. Shri Som Nath Dass & Ors., 2000). The High Court's order to give legal status (to be read with Arts. 48A and 51A(g) on 'protection of the environment' in the Constitution of India) accords the significance of the Ganga and Yamuna Rivers to all Hindus, and the continued supply of water to industry, communities, power generation and navigation (Mohd. Salim v. State of Uttarakhand & others, 2017).

The concept of a legal entity is not of itself trailblazing territory. In relation to introducing and advocating for the legal personality of a river, advocating for the rights of nature on the grounds that all humans over-exploit, abuse and contaminate the environment is misleading. The Indigenous peoples of Australia have a primary, unique and inherent obligation to exercise the ownership, protection and management of the Australian environment, but Australian domestic laws and policies do not fully support Indigenous Australians in the exercise of such obligations. For example, in Australia's blueprint for water resource use, the National Water Initiative, Indigenous peoples do not have legal certainty and only three discretionary clauses (52, 53 and 54) to represent thousands of years of actively maintaining pristine waters, lands and respect for all living things (Council of Australian Governments, 2004). Indigenous peoples in Australia have been, and continue to be, impacted by the untruths of the doctrine of discovery – *terra nullius* and *aqua nullius* – and they continue to be invisible to those

seeking to exercise proprietary rights over Australia's rivers. For decades, Aboriginal people have struggled for land rights and native title, for truth and reconciliation and for constitutional recognition. We are not willing to see the door shut in our face when it comes to our rights and obligations to our rivers.

When a river becomes a person: polarizing environmental protection

Erin O'Donnell

Melbourne Law School, University of Melbourne

In 2017, mainstream environmental law experienced a seismic shift. Over 40 years after Christopher Stone's (1972) provocative article, and seven years after the most recent experiments in giving nature legal rights in Ecuador and Bolivia, courts and legislatures around the world began to recognize rivers and other natural objects as legal persons (O'Donnell & Talbot-Jones, 2017a). The impact of these radical legal reforms should not be overstated: Stone's original concept was the subject of open mockery (in verse, no less; see Burdon, 2010), and despite ongoing grass-roots campaigns run tirelessly by environmental NGOs, prior to 2017, the concept of legal rights for nature remained well outside the legal mainstream. Since March 2017, legal rights have been extended to forests, glaciers, animals, mountains, and of course more rivers, and are now considered integral for future environmental law reform, even in countries such as Australia, where legal rights for nature have not been formally created (Australian Panel of Experts on Environmental Law, 2017).

But in all the excitement, there is emerging evidence that granting legal rights and legal personality to rivers can actually lead to people being less willing to protect those rivers (O'Donnell, 2018). This outcome can undermine the potential benefits of granting rights to rivers in the first place.

What does it mean when a river is a person?

Rivers have been recognized as *legal persons*, which are not the same as human persons. A legal person is the recognition of a specific entity as being capable of bearing rights and duties in law, and although it is a profound statement about who matters *to the law*, it does not necessarily confer any moral worth (Naffine, 2009).

Moreover, legal rights are not the same as human rights. Legal personhood typically confers three specific rights:

- the right to enter into and enforce contracts;
- the right to own and deal with property; and
- the right to sue (and be sued) in court, commonly referred to as legal standing (O'Donnell & Talbot-Jones, 2017a).

Other rights may be conferred in specific circumstances, including the right to exist. Legal standing is typically seen as the most important new legal right, as it enables the river to take legal action to protect itself, without having to demonstrate harm to human users of the river (O'Donnell & Talbot-Jones, 2018).

Why would a river need rights?

Granting legal rights to rivers is frequently portrayed as a clear victory for environmental protection. However, the evidence indicates that there are at least four specific reasons for giving rivers rights:

- to give effect to First Nations' laws, values and relationship to country, particularly in colonial contexts;
- to elevate the river to equal status in the law with human beings (eco-centrism);
- to enable the river to participate in water and ecosystem services markets (market environmentalism); and
- to enable the river to advocate for its own interests in policy debates (private interest regulatory theory).

Table 1 compares three jurisdictions in which rivers have received legal rights, as well as the environmental water managers of Australia and the United States (which extend legal rights to rivers by proxy, as a combination of their legal form and function; see O'Donnell, 2017). In all cases, multiple reasons have been used to justify granting legal personality to rivers.

But these varied reasons can be uncomfortable bedfellows. Eco-centrism recognizes that we are all part of the one system, emphasizing the collective good, whereas market environmentalism emphasizes private property rights and commoditizes nature. First Nations' values will not always align with environmental protection.

Most fundamentally, all these rivers have been given legal rights and legal personality to enable them (via their guardians or other responsible organization) to have a 'voice' in policy debates. This presupposes that the creation of public policy and regulation requires all interested parties to participate in that process, and that the eventual regulation is merely the outcome of multiple, competing voices (Morgan & Yeung, 2007). Giving rivers a voice takes the focus away from the collective good and the need for policy makers to specifically protect the vulnerable (Sunstein, 1990), and shifts responsibility for their own protection to the rivers themselves.

This shift in responsibility has two important corollaries. First, to adequately protect its own interests, a river's voice must be powerful enough to be heard (Croley, 1998).

Table 1. Reasons for giving rivers legal personality and legal rights.

Reasons for rights	Aotearoa New Zealand *Whanganui River*	Colombia *Río Atrato*	Uttarakhand (India) *Ganges and Yamuna Rivers; all of nature*	Environmental water managers (US and Australia)
First Nations laws	X	X	Partial (Hindu religion)	
Eco-centrism		X	X	Partial (not explicitly eco-centric)
Market environmentalism				X
Private interest regulatory theory	X	X	X	X

This requires a guardian with sufficient funding, organizational identity, and independence from government.

Second, a river must promote its own interests ahead of those who rely on the river, which emphasizes conflict and competition. Relying on the river to protect itself not only enables us to be complacent, it also entrenches humanity in an adversarial relationship with the environment.

River rights can polarize communities (but they don't have to)

On 26 February 2019, citizens of the Ohio city of Toledo voted to approve a proposal to give Lake Erie legal rights (Javorsky, 2019). The campaign, run by the community group Toledoans for Safe Water, emphasized the importance of the lake in providing safe water supplies. In the summer of 2014, Lake Erie had experienced an extreme pollution event, which cut off drinking water supply for the city for three days. Despite this very recent reminder that environmental health underpins the city's access to safe, secure water supplies, the measure has polarized the community. Farmers acknowledge that most of the pollution is caused by agricultural runoff, but (understandably) saw the proposal as an attempt to give environmental NGOs the means to sue them on the lake's behalf (Williams, 2019). Rather than building a consensus around the need for clean water, legal rights for the lake may make it harder to address polluting activities.

However, this kind of conflict is not a foregone conclusion. River rights in Colombia and Aotearoa New Zealand have been the focus of renewed collaboration between multiple stakeholders, and in Australia, environmental water managers are enhancing their legitimacy with a broad cross-section of the community, even as the Murray-Darling Basin conflicts intensify (O'Donnell & MacPherson, 2018). Early lessons from these experiences include:

- Building and maintaining community support for why rivers need protecting, and the benefits of healthy rivers to all of us;
- Centring First Nations' perspectives and values, which encompass millennia of learning how to live sustainably with rivers; and
- If we do expect rivers to compete for outcomes, ensuring they have adequate funding and organizational support.

Flowing from fiction to fact: the challenges of implementing legal rights for rivers

Julia Talbot-Jones

Victoria University of Wellington

Granting a river legal standing may sound like the stuff of fiction, but in 2017 four rivers were granted legal rights in rapid succession: the Whanganui River in New Zealand (Roy, 2017), the Ganges and Yamuna Rivers in India (Chandran, 2017), and the Rio Atrato in Colombia (Mount, 2017). Although these recent events washed away the fictional narrative, questions remain about how the approach will work in practice.

This essay engages with the practicalities of effective governance, drawing comparisons between the Whanganui River case and the India examples to understand the circumstances under which the approach may be a useful governance tool. It will also shine light on some of the social costs of granting rivers legal rights that may be otherwise unanticipated by policy makers.

What determines the effectiveness of legal rights for rivers?

The effectiveness of using the granting of legal rights to rivers as an alternative water governance approach is likely to depend on how the change is enacted and the broader framework in which it is embedded.

In the case of the Whanganui River, eight years were taken to develop an institutional framework that incorporated the Māori worldview into legislation in a way that could work with existing laws and social norms (Salmond, 2014). Granting the Whanganui River and its catchment legal rights through legislation was a pragmatic way of achieving this (Radio New Zealand, 2017).

Motivation for the change came from needing to resolve ownership issues, which had been long-standing and costly for Whanganui Iwi (the local Māori tribe) and the Crown (New Zealand government), as well as other river users (Waitangi Tribunal Report, 1999). As a result, in designing the new framework the actors involved (the Iwi and the Crown) were economically and socially invested in reaching a successful resolution. Further, those involved in designing the institutional arrangement were those most likely to be affected by the changes. This gave the actors a feeling of ownership over the end result and allowed local knowledge to be incorporated into the decision-making process and legislation.

The resulting institutional framework, Te Pā Auroa nā Te Awa Tupua (New Zealand, 2017, Part 2), also includes rules designed to control some of the more obvious risks and costs of granting rivers legal rights, such as rent-seeking by the guardians and processes for managing conflict over competing uses. It defines a boundary around the affected area (the catchment) and specifies who retains what responsibilities over decision making. Further, the new framework was designed to be implemented in two stages to smooth the transition and provide the opportunity for adaptation, as needed.

In contrast, the Uttarakhand court in northern India instated legal rights for the Ganges and Yamuna Rivers in a surprise ruling (Mohd. Salim v. State of Uttarakhand & others, 2017) two days after the Whanganui River legislation was announced. The designation of legal rights was designed to trigger a substantive shift in how the rivers were managed and protected in law, but there seems to have been little thought to how the change would work in practice.

For instance, the Ganges and Yamuna Rivers are transboundary rivers that stretch across several states in India, as well as into Bangladesh. This means that a state ruling from northern India may struggle to be enforced in other jurisdictions. Further, the absence of an integrated institutional framework means that there is little guidance for the guardians on how they are supposed to behave or where the limits of discretion lie. The conflation of legal person and living person in the court decision complicates this further by failing to properly define (or codify) the rights' breadth (O'Donnell & Talbot-Jones, 2018).

Unintended consequences of granting legal rights to rivers

For policy makers or judicial experts interested in granting rights to rivers, the elements of the broader Te Awa Tupua framework are important to note, particularly because, in the absence of an integrated framework, granting a river legal rights could have unintended consequences for society as a whole.

For example, recognizing a river as a person will require the political system to find ways and means to deliver and uphold a river's new legal rights, sometimes at the direction of the courts. Because judges do not typically have the discretion to make decisions based on the potential consequences of their decrees, this means that upholding the rights of the river may impose unexpected costs on other sections or scales of society.

Further, although granting legal rights to rivers has the potential to benefit some industries and professionals, who stand to gain by providing court-mandated goods and services, it also carries the risk of forcing the court to become politicized. This could compromise moral authority and public confidence in the system. The series of events following the Uttarakhand decision provides evidence of how this can, and has, occurred (BBC News Service, 2017).

Granting legal rights to rivers also places the responsibility of looking after, and representing, the environmental good or resource in the appointed guardians, rather than elected officials. Without broader institutional and financial support, this means that only wealthy or well-endowed representatives will be able to challenge decisions and enter costly litigation, should a river wish to sue or find itself the subject of an individual or class action.

Given the financial burden of engaging in judicial process, perhaps it is not surprising that Ecuador – a country that granted all of nature legal rights in 2008 (Constitution of the Republic of Ecuador, 2008; Revkin, 2008) – has had only three cases of the rights of nature being successfully brought to court by civil society (Kauffman & Martin, 2017). In the first case, two American residents who live part-time in Ecuador brought a case against the provincial government of Loja on behalf of the Vilcabamba River. The plaintiffs owned property downstream of a road that was to be widened and that runs past the river. The couple argued on behalf of nature that the new construction was adding debris to the river and thus increasing the likelihood of floods that affected the riverside populations that use the river's resources (Daly, 2012).

Admittedly, in the case of the rivers discussed here, nominated guardians have been appointed to speak on behalf of the rivers, and in the case of the Whanganui River, a NZ$ 30 million contestable fund has been created for the purposes of improving Te Awa Tupua's health and well-being, as well as litigation purposes. However, in the case of the Ganges and Yamuna Rivers, no financial support has been provided, which limits the legitimacy and power of their legal rights, and that of the guardians who represent them.

Conclusions

Overall, granting the Whanganui River and its catchment legal rights set a new precedent for water governance globally. It was one of the most significant changes in

water management in the past decade and demonstrates that granting rights to rivers is now more fact than fiction.

However, comparing the case of the Whanganui River with the examples of the Ganges and Yamuna also draws attention to the fact that the reason why granting legal rights to rivers may be an effective water governance tool is because the broader institutional framework embeds the new system into existing legislative structures.

For policy makers interested in using legal rights as an approach to the governance of rivers, considerations of institutional design and the potential effects on wider societal outcomes are important to note. With any luck this will reduce the risk of additional costs arising when rivers are granted legal standing in the future.

Independent legal personhood of rivers or relational stewardship? A perspective from 20% of the world's freshwater (Canada) and the Indigenous–colonial legal tensions that govern it

Deborah Curran

Faculty of Law and School of Environmental Studies and Environmental Law Centre, University of Victoria

In Canada, the country with 20% of the world's freshwater, our colonial legal history and the current expression of both colonial and Indigenous laws make for a unique context that does not necessarily lend itself to the application of independent legal status or personhood for natural features such as rivers and mountains. While amendments to colonial law could grant legal status to rivers, many Indigenous legal orders place Indigenous peoples in a stewardship or caretaking relationship with water that they view as fundamental to their laws and culture. Devolving authority to an independent representative or tribunal and separating Indigenous people from direct responsibility for their environment is viewed as harmful to both people and ecosystem. Indigenous communities are responsible for maintaining relationships as part of their legal and cultural duties. Creating a third-party structure, even with representation, may not adequately adhere to Indigenous law. In addition, once communities agree to devolve decision-making authority to a third-party representative of a river, there is always the danger that the Crown – federal and provincial governments – may take the position that Indigenous communities then have less say in proposed development and impacts on the river. How independent structures representing a river could limit or change evolving Aboriginal rights and title is a significant risk for Indigenous communities.

There is considerable energy going into revitalizing and expressing Indigenous laws in Canada, including entering into government-to-government agreements that amend colonial law. These acts of Indigenous law could result in protections for the natural environment and specific features such as rivers that are similar to those promised by granting independent legal status to rivers and the natural environment. At least in the medium term, the focus in Canada is on revitalizing Indigenous laws to be an effective

articulation of Indigenous authority and counterpoint to colonial environmental governance.

Environmental protection and Aboriginal rights and title in context

There is no right to a healthy environment in Canada under current state or colonial law (Boyd, 2012). The environment, except for fish, is largely the responsibility of provincial and territorial governments, which have created a patchwork of different laws regulating the extraction of natural resources, parks and pollution. All water law in Canada focuses on permitting the extraction of water rather than planning for watershed health, and none acknowledges Aboriginal rights to water as part of the water balance in a region.

Since 1982, the federal Constitution Act affirms and acknowledges Aboriginal and treaty rights. Colonial courts have interpreted the scope of these rights to include the right to harvest for food, social and ceremonial purposes and carry out cultural practices in one's historic territory (R. E. Sparrow v. The National Indian Brotherhood/Assembly of First Nations et al., 1990). Beyond this bare right to harvest for a moderate livelihood and undertake activities that are 'distinctive to the culture' of an Indigenous community (R. v. Van der Peet v. The Attorney General of Quebec et al., 1996), most court cases exploring Aboriginal rights focus on the Crown's requirement to consult and accommodate First Nations when the provincial or federal governments make decisions about applications to use resources in the traditional territory of an Indigenous community (Haida Nation v. British Columbia (Minister of Forests), 2004). This duty is a procedural right and does not a guarantee a substantive outcome of a healthy environment, intact ecological relationships, or the ability to exercise one's Indigenous laws.

Recently, however, First Nations and colonial courts have turned to Indigenous laws and Aboriginal rights, as well as their expression in government-to-government agreements, as legitimate limitations on the decision-making authority of the federal and provincial governments, and as a way to challenge the natural resource regimes, including for water, under colonial law.

Indigenous law

As a multi-juridical society, there is a resurgence in the expression of Indigenous law in Canada, the foundation of which are the relationships and responsibilities between land, plants, animals, fish, marine ecosystems and humans. Colonial law stands in contrast to Indigenous law, which encompasses the existing and evolving laws of each Indigenous society. Indigenous groups and communities in Canada continue to define and use their own laws. The land- and water-based origin of many Indigenous laws establish relationships and rules for protection, harvesting, cultivation and trade of ecosystem elements. The origins of Indigenous laws flowing from ecosystem-based relationships also create the overarching governance processes through which entitlements to use, harvesting practices and sharing with adjacent communities are mediated (Napoleon & Overstall, 2007).

The Tsleil-Waututh Nation conducted their own environmental assessment of the Trans Mountain Pipeline expansion proposal using their stewardship policy, derived from their Indigenous laws, as the assessment framework (Tsleil-Waututh Nation,

2015). Tsleil-Waututh and Coast Salish legal principles include the 'sacred obligation to protect, defend, and steward the water, land, air, and resources of our territory … the responsibility to maintain and restore conditions in our territory that provide the environmental, cultural, spiritual, and economic foundation our nation requires to thrive'. The stewardship policy requires the Nation to evaluate the potential negative effects of proposed development, and if those effects do not exceed 'Tsleil-Waututh legal limits', to assess the benefits of the project for the community. As part of the assessment process, the Tsleil-Waututh First Nation revealed their stewardship obligations in their territory, based on their Indigenous laws and operationalized through their Burrard Inlet Action Plan, which includes regulatory action and habitat restoration by the Tsleil-Waututh (Tsleil-Waututh Nation, n.d.).

Likewise, the Stk'emlúpsemc te Secwépemc Nation (2017) undertook a community assessment of the proposed Ajax mine near Kamloops, British Columbia. Concluding that the Nation would not give its free, prior and informed consent to the project, the process included the Nation exercising its own Indigenous environmental governance to strike an assessment panel. The decision document underscores the importance of the ethics of stewardship embedded in socio-ecological relationships and expressed in Secwépemc lands and resource laws (Asch, Broadhead, Lloyd-Smith, & Owen, 2018).

Other examples of expressions of Indigenous laws that challenge colonial administrative and legal processes abound in Canada, particularly on the west coast, in British Columbia. Many of these expressions involve water as the basis of life. The Nadleh Wut'en and Stellat'en First Nations (Carrier Sekani Tribal Council, n.d.), as well as the Okanagan Nation Alliance (n.d.), have made declarations of water law and are developing programmes and policies flowing from these declarations. A central tenet of these expressions of law is the relationship of these communities to their lands and waters, and their ongoing responsibility to take care of the ecosystem's health.

Cautionary approach to legal personhood

Currently in Canada, there is a movement to revitalize Indigenous laws and to enable those laws to express jurisdiction and sovereignty and interact with colonial law as one of the long-term results of reconciliation. Permitting the full expression of Indigenous laws may mean granting legal status to some rivers as part of government-to-government agreements, but such an approach would follow first the concrete expression of Indigenous legal orders and long-term discussions about the appropriate ways to enliven those orders in conversation with colonial law.

A legitimate concern is that colonial legal processes or governments could weaken the intent of legal status for rivers *vis-à-vis* evolving claims to Aboriginal rights and title. While Indigenous communities would sign on to such an approach as a way to secure better protection for the natural environment, and thus the underlying conditions of their Aboriginal rights such as fishing, hunting, gathering and ceremonial practices, the Crown may argue that First Nations' interest in applications for development or extraction of natural resources is diminished because the river had independent representation. Indigenous influence on potential projects could be limited to direct impacts to Indigenous people and not the environmental health of the river as an ancestor, spiritual entity or condition of life.

There may be opportunities in the medium-to-long term where expression of Indigenous laws include government-to-government agreements that point to legal personhood, as in New Zealand. Several productive government-to-government agreements exist in Canada. For example, the Haida Nation entered into the 2009 Kunst'aa guu–Kunst'aayaa Reconciliation Protocol (2009) with the Province of British Columbia to create the Haida Gwaii Management Council. The council makes decisions on forestry and heritage sites, and is composed equally of appointees of the provincial government and the Haida Nation, with decisions made by consensus.

Another example is the (2016) Great Bear Rainforest Agreements between the seven First Nations in the Central Coast of British Columbia and the provincial government, which agreed to return 80% of the landscape to old-growth forest over a 250-year timeframe and to support a conservation economy. While the legal mechanisms in colonial law for realizing these agreements are complex (Curran, 2017), the provincial government operationalized the forestry commitments through the Great Bear Rainforest (Forest Management) Act (2016), which establishes the annual allowable cut for the area, as agreed to pursuant to ecosystem-based management. Much of the landscape is designated in a new type of park, called conservancies, that permit the exercise of Aboriginal rights.

Finally, granting independent legal status and a voice to a river might make sense in unique areas where there are many overlapping claims and legal structures affecting a body of water, and where decision-making authority and priorities require clarity. An example is the Peace Athabasca Delta, a UNESCO World Heritage site and part of the larger Peace-Athabasca-MacKenzie River system. Flowing through three provinces, two territories, and dozens of treaty and non-treaty Indigenous traditional territories, it is affected by some of the largest industrial tar sands and hydroelectric projects in Canada. While colonial legal processes have failed to provide effective governance for one of the world's most important rivers (CBC/Radio Canada, 2017), perhaps an independent governance body for the river itself could force reparations.

The Yarra River Protection (Wilip-gin Birrarung murron) Act, 2017 (vic), independent voices, indigenous rights and river rights

Katie O'Bryan

Monash University

Historically, Victoria's water laws have not recognized Aboriginal people as having a role in managing and protecting Victoria's waterways. That changed with the enactment of the Yarra River Protection (Wilip-gin Birrarung murron) Act, 2017 (Vic). This act is significant because not only does it recognize a role for Aboriginal people in the management and protection of the Yarra, it is also said to give an 'independent voice' to the river (Premier of Victoria, 2017).

The independent voice of the river and international developments

Giving legal personhood to a natural object, with a voice (in the form of a guardian) to protect its interests, is an idea that has existed in theory since 1972, when Christopher Stone wrote his famous article, 'Should Trees Have Standing? Toward Legal Rights for Natural Objects'. With Stone's idea gaining momentum over the last few years, in 2017

Aotearoa New Zealand became the first country to enact legislation giving legal personhood and an independent voice to a river (Finlayson, 2014). Shortly thereafter, several court rulings gave legal rights to rivers elsewhere, namely the Atrato River in Colombia (Bardeen, 2017) and the Ganges and Yamuna Rivers in India (O'Donnell & Talbot-Jones, 2017b). And now Bangladesh has followed suit: in January 2019 the High Court of Bangladesh gave the status of 'legal person' to the Turag River (bdnews24.com, 2019).

But how do these developments compare with the Yarra River Protection Act, and what does it mean for the role of Indigenous people in river management?

Key features of the Yarra River Protection (Wilip-gin Birrarung murron) Act

The key features of relevance to Aboriginal Victorians in the Act include the following. First, the act treats the Yarra River as one living and integrated natural entity, an approach that reflects Aboriginal conceptions of the Yarra. Second, to reflect the Yarra as a single entity, the act provides for the development and implementation of an overarching strategic plan to guide the future use and development of the Yarra (Melbourne Water, n.d.).

While that plan is currently under development (Melbourne Water, n.d.), it will be informed by the Yarra protection principles. Statutory decision makers along the Yarra must have regard to these principles when performing their functions or exercising their powers in relation to the Yarra. Importantly, the principles highlight Aboriginal cultural values, heritage and knowledge, and the importance of involving traditional owners in policy planning and decision making.

The act also establishes the Birrarung Council, the 'independent voice for the river' (Minister of Planning, 2017). The council comprises 12 community and skill-based members, two of whom must be chosen by the Wurundjeri community, the traditional owners of much of the land through which the river flows. Significantly, the council is precluded from having any government representatives as members.

The council has two main roles. The first is to provide advice to the minister on the administration of the act. The second is to advocate for the protection and preservation of the Yarra. This role, along with the prohibition of government representation on the council, forms the basis for its depiction as the independent voice for the river.

Comparing the Yarra River Protection Act 2017 and the Te Awa Tupua Act 2017

So how does the New Zealand legislation differ from the Victorian legislation, given that both are said to give an independent voice to the river?

A major difference lies in the status of the river itself. Although the Yarra River Protection Act declares the Yarra one living and integrated natural entity, it does not give the Yarra independent legal standing, with all of the rights and liabilities that come with that status. The Birrarung Council, although able to advocate on behalf of the Yarra, is not its legal guardian and cannot initiate legal proceedings on its behalf. It is essentially an advisory body only. The Te Awa Tupua Act, on the other hand, specifically provides for the Whanganui River to have 'all the rights, powers, duties, and liabilities of a legal person', which are exercised on behalf of the river by Te Pou Tupua, the human face of the Whanganui River. This means that, unlike the Birrarung Council, Te Pou Tupua can initiate legal proceedings to protect the Whanganui River.

Another distinction is that the river values to be protected in the Te Awa Tupua Act (called Tupua te Kawa) are intrinsically Māori-oriented in their conceptions of the river. In contrast, the river values to be protected in the Yarra River Protection Act, as reflected in the Yarra protection principles, are more wide-ranging, encompassing not just Aboriginal cultural values but also post-settlement cultural diversity and heritage, and values embodied in environmental, social, recreational, management and general protection principles.

Finally, the Birrarung Council was established to ensure that diverse community interests are involved in protecting and promoting the Yarra River, hence the need for it to have 12 members. Te Pou Tupua, with only two members (one nominated by the government and one by the *iwi* (Māori tribes) with interests in the Whanganui River (Finlayson, 2017), was established to represent the Whanganui River, not community interests – that role is given to a different entity, Te Kōpuka, which has 17 members, including up to six Māori members.

What does this mean for indigenous river management?

The granting of independent legal status to the Whanganui River as part of the treaty settlement in the Te Awa Tupua Act does not give the Whanganui Iwi a direct say in the management of the Whanganui River. The members of Te Pou Tupua act on behalf of the river, not on behalf of their respective nominator. In that regard, it is not necessarily of benefit to the Māori. However, the river values to be upheld by Te Pou Tupua are intrinsically Māori in orientation, and other aspects of the settlement, such as Te Kōpuka, and the role of the Whanganui Iwi's post-settlement governance entity, do provide for Māori participation in the river's management.

The Yarra River Protection Act does not extend as far as the Te Awa Tupua Act in giving independent legal status to the Yarra. Nor does it create legal capacity in the Birrarung Council to seek redress in court for damage done to the Yarra. It does, however, give a direct, albeit advisory, voice to Aboriginal Victorians in the management of the Yarra. This signals a shift in the future of river management in Victoria towards one that is more inclusive of Aboriginal people. Accordingly, there are now calls for similar legislation in rivers west of Melbourne (Environmental Justice Australia, n.d.), and a Ministerial Advisory Committee has been established to engage communities and Aboriginal people to produce an action plan for the government to consider (Victoria State Government, n.d.).

That is not to say that the legal personhood model will not find favour elsewhere in Australia. The Aboriginal people of the Fitzroy River in the Kimberly region of Western Australia also are contemplating granting legal personhood to the Fitzroy River (Gleeson-White, 2018). And the local community of Margaret River, also in Western Australia, are seeking to provide legal rights for that river and appoint a local council as custodian (Lynch, 2018). So, it seems that the legal personhood concept is starting to gain some traction in Australia.

So how do the Victorian and New Zealand models compare with the court cases in India, Colombia and Bangladesh?

A clear difference among the approaches is the mode of recognition. In both the Victorian and New Zealand examples, recognition of an independent voice for the

river arose through legislation, whereas in India, Colombia and Bangladesh, recognition of rivers as legal persons occurred by way of judicial determination.

Another difference is the nature of the voice given to the river. Where government representatives are appointed as guardians, there is the potential for a conflict of interest should economic imperatives clash with the river's rights. This has been addressed in the Whanganui River legislation because the guardian, although including a government representative, was established as an independent legal entity with a statutory obligation to act in the best interests of the river. And in the Victorian legislation, the Birrarung Council specifically prohibits the appointment of government representatives to avoid any conflict of interest in its provision of advice.

However, in the Ganga and Yamuna River court case, the High Court of Uttarakhand appointed senior public officials collectively to serve as the guardian of those rivers. Senior public officials already have numerous obligations, some of which are likely to conflict with these newly imposed responsibilities to look after the interests of these rivers. In addition, as the obligation was imposed by court order rather than initiated by the state, the state is required to source additional funding to enable the court-ordered guardians to fulfil their new tasks. Given this, as well as concerns about the legal implications of rivers causing harm through flooding and the interstate nature of the two rivers, it is not surprising that the High Court decision was stayed pending an appeal by the Indian Supreme Court (State of Uttarakhand & Ors. v. Mohd. Salim & Ors., 2017).

In contrast, the High Court of Bangladesh ordered the National River Protection Commission to be the guardian of the Turag River. Established in 2013 by the National River Protection Commission Act, its functions, however, are limited to making recommendations on the protection of Bangladesh's rivers. Accordingly, much like the Birrarung Council, it has only advisory authority and no powers of enforcement, a point that was acknowledged by the High Court (The Daily Star, 2019).

Finally, in Colombia, the Constitutional Court ordered the creation of a commission of guardians comprising representatives of both the government and the claimant communities. It also created an advisory group that includes the Humboldt Institute and the WWF Colombia, and an expert panel to monitor compliance with the court's orders (Vila, 2017).

Conclusion

The above brief discussion suggests that the independent voice of a river can take different forms depending on the circumstances in which it arose. Thus, what may work in one context may not work in another. In addition, it is important to consider how having an independent voice can affect Indigenous relationships with a river, something that did not feature in either the Indian or Bangladeshi cases. Finally, there are many other factors that can influence the implementation and recognition of a river's legal rights. The relative recency of these developments makes it difficult to judge how effective any of them will be. Accordingly, there are still many questions for which we do not yet have the answers.

Of rivers, deities and legal persons: a new approach to managing freshwater resources?

Gabriel Eckstein

Texas A&M University School of Law; International Water Resources Association; International Association for Water Law

Today, at least five rivers around the world – Whanganui in New Zealand (New Zealand, 2017), Yarra in Australia (Yarra River Protection (Wilip-gin Birrarung murron) Act, 2017), Atrato in Colombia (T-622/16, 2016), Narmada in India (Ghatwai, 2017; Times of India, 2017), and Vilcabamba in Ecuador (La Alianza Global por los Derechos de la Naturaleza, n.d.) – enjoy some measure of independent legal recognition under national law. Efforts to afford similar legal respect to the Ganges and Yamuna Rivers in India (LiveLaw News Network, 2017) and the Colorado River in the United States (Turkewitz, 2017) have also been made. The following is the last in a series of essays exploring this unique phenomenon. The purpose of the series was to engage in a dialogue and assess the merits and extent of such recognition, and to consider the possible ramifications for people and communities, and of course, the rivers protected under such actions. What emerged is an insightful and diverse conversation that offered critical and constructive analyses, and which furthered the conversation over this novel legal approach to the management of critical freshwater resources.

Questions abound

As a foundational issue, in her essay Erin O'Donnell asked the quite fundamental question of why a river might need to protect itself. In modern societies, people and communities have traditionally sought to protect natural resources through environmental laws and regulation, with varying results. Thus, it is unclear whether affording legal personality to rivers is intended to plug gaps that environmental regulations have failed to fill, is an evolutionary step in environmental protection, or possibly is some more fundamentally progressive approach to relating people with their surroundings. In any case, O'Donnell noted that affording a river a legal right to protect itself creates a paradox whereby the human obligation and burden to ensure that protection is lessened and possibly expunged.

Further scrutinizing such legal recognition, Ariella D'Andrea asserted in her essay that the diversity of mechanisms and components used to afford such legal recognition leaves much unclear in terms of the practicalities, implementation, efficacy and enforcement of these actions. Given the novelty of this approach for the management of rivers, D'Andrea raised a host of queries, ranging from whether the recognition applies to the river, its basin, or even the aquatic and surrounding biodiversity, to whether a river, recognized as a legal person (possibly like a corporation), can now be liable for taxes, harm from flooding, and ensuring its own water quality and quantity. In her essay, Julia Talbot-Jones further critiqued the phenomenon and questioned the mechanics of how the granting of legal personality to rivers could be operationalized. She also highlighted the reality that the new rights of these water bodies could only be protected through institutional mechanisms acting on their behalf, as well as adequate

resources to support such responsibilities. As Talbot-Jones rightly suggested, legal rights without the means to protect them could simply become irrelevant.

The practicalities of implementation, however, are only some of the challenges facing the realization and appreciation of such action. Both Virginia Marshall and Deborah Curran in their essays pointed out that while some of these efforts are couched in terms of values ascribed to indigenous communities, the steps taken may not necessarily comport with those values. Both authors suggested that because of the unique relationship that indigenous communities enjoy with their natural surroundings, including rivers and other freshwater resources (Marshall focusing on Australia's Aboriginal Peoples, and Curran focusing on Canada's First Nations), indigenous peoples could actually find the notion of a river holding legal personality completely antithetical to their cultural beliefs and norms.

In a similar vein, it may be reasonable to question whether the approach and mechanisms used to instal legal personality for a river is actually based on the values of the local indigenous community or rather on a broader perspective that encompasses the ideals of both the Indigenous and the broader citizenry's perspective of sustainability and environmental protection. While the former could manifest in mechanisms that emphasize individual and communal stewardship, prioritizing of indigenous and environmental concerns, and the installation of decisional authority in the collective citizenry or an appointed public body, the latter could result in regulation-based restrictions, priorities for human health, and decision-making authority assigned to a governmental agency. Of course, the resulting mechanisms could also be a combination of both. However, whether a particular approach is appropriate for a distinct locale will likely have to be determined case by case, since conduct that is justified in one set of natural, cultural and political circumstances may not be supportable in a different scenario.

Commonalities

Despite the distinct differences in approach shown in the various examples explored in these essays, it is worth noting that in all of them, one of the chief motivations behind the decisions taken was the sincere desire to ensure the existence and sustainability of an invaluable freshwater resource. While some may debate the necessity of protecting a particular river or watershed, it seems reasonable to acknowledge that such a conservation justification is generally both rational and defensible. The resulting question that must be considered is whether the mechanisms used to achieve the particular objectives are appropriate and reasonable. Again, this can only be understood and undertaken on an ad hoc basis.

Nevertheless, altruistic environmental priorities are not the only or sole influences that have resulted in the recognitions of rivers as legal persons. In some instances, religious and cultural values may have helped inspire such outcomes. As Julia Talbot-Jones explained in her essay, in the case of the Whanganui River, the justification also included the desire to resolve long-standing ownership claims by the Māori indigenous community. In contrast, the decision by the High Court of the Indian state of Uttarakhand (Mohd. Salim v. State of Uttarakhand & others, 2017) to recognize the Ganga and Yamuna Rivers as living entities, as well as the resolution adopted by the Madhya Pradesh state legislature recognizing the Narmada River as a living entity

(Ghatwai, 2017; Times of India, 2017), appear to be grounded, at least partially, in the Hindu faith. While such objectives do not negate the sustainability rationale, in the case of the Whanganui River it injected an additional distinct element that provided a critical impetus for legal recognition of the river, but also complicated and lengthened the process, resulting in a quite unparalleled institutional and legal framework (New Zealand, 2017). In the case of the Ganga and Yamuna Rivers, the religious justification may have actually hastened the courts' ruling, although questions about implementing that judgment then led India's Supreme Court to stay that decision (Mandhani, 2017).

A further common factor that should be considered when examining the various examples is the assignment of guardianship or trusteeship for the river to a body whose responsibility is to represent the interests of the water body. Such an action is clearly based on the need to operationalize the legal standing criteria, which apply to all persons under law, whether human, corporate, or otherwise. However, as Katie O'Bryan indicated in her essay, there is a considerable range among the bodies discussed in the examples in terms of their structure and authority, and the resources allotted to support their responsibilities. Nevertheless, similar distinctions and disparities can be identified in terms of representational capacity for corporations, as well as children and the intellectually challenged, operating before the law. Accordingly, the institutional mechanism created to protect the interests of rivers that have been afforded individual legal recognition, and especially legal personality, should serve as a basis for further comparison and analyses.

Conclusion

Whether rights of personhood recognized in rivers will lead to cleaner and more bountiful water for people and the nature is still unknown. The judicial and legislative actions discussed in these essays are both novel and recent, and the complete range of outcomes, implications and repercussions have yet to be fully ascertained. One particular question not raised in this series is how this approach, in the face of a serious water deficiency, might balance the rights of people or a community to secure adequate supply of water against the sustainable needs of nature. Considering the recent debilitating crisis in Cape Town, South Africa, and ongoing parched conditions in Afghanistan, Australia, Bolivia, Iran, Jordan, Mongolia, Morocco, Uruguay, western Canada and other parts of the world, it may be that recognizing individual rights in rivers may not be appropriate in all corners of the globe.

Nevertheless, the steps taken in Australia, Colombia, India and New Zealand have not gone unnoticed. Efforts to duplicate these decisions and outcomes have been explored in Chile (Benöhr & Lynch, 2018), Nigeria (Breyer, 2018), the United States (Benson, 2017) and other countries. Moreover, they have become fodder for multiple legal and policy analyses, which are critically necessary to explore the viability and practicalities of such efforts.

This series of essays on legislative and judicial actions taken to recognize some measure of independent legal personality for rivers under national law was undertaken precisely with the objective of furthering the assessment and discussion of this distinct new approach to the management of the world's critical freshwater resources. With this in mind, we welcome further commentary, analyses and opinions in response to these essays.

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ORCID

Gabriel Eckstein http://orcid.org/0000-0002-9393-2362
Virginia Marshall http://orcid.org/0000-0003-4487-4730
Erin O'Donnell http://orcid.org/0000-0002-2615-8012
Julia Talbot-Jones http://orcid.org/0000-0002-8425-1792
Deborah Curran http://orcid.org/0000-0002-6014-0553
Katie O'Bryan http://orcid.org/0000-0003-3203-7839

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