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## **Rights and Relationality: A Review of the Role of Law in the Human/ Water Relationship**

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**ABSTRACT:** In this review, we use legal scholarship to explore the way that the law constructs and maintains discourses on both water rights and water relationality. Water rights and water relationality can be constructed as opposite ends of a spectrum of legal modalities for defining and regulating the human/water relationship. However, when considered through the lens of law, rights and relationality can also be seen as intertwined. The legal instruments that create individual rights to take and use water situate those rights within frameworks that regulate the relationship between humans (both collectively and individually) and between humans and the water ecosystem. We begin with an identification and exploration of three water rights discourses in legal scholarship: water as a private right (to take and use), the human right to water, and the rights of rivers. We then consider emerging legal scholarship on the more complex reality of water relationality, focusing on the role of law in water commoning, Indigenous laws, and environmental restorative justice. In doing so, we identify points of intersection between these discourses as mediated through law. We also identify critiques of both water rights and water relationality discourses in law and the ways in which they shape our ability to respond to water crises.

**KEYWORDS:** Water law, water market, water rights, human right to water, rights of Nature, water commons, Indigenous water rights, relationality, environmental restorative justice, water justice

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### **INTRODUCTION**

In the midst of the International Decade for Action for Water for Sustainable Development (2018-2028), global discourses on water give 'rights' a central place, ranging from private use rights to human rights, to the emerging rights of rivers (see, e.g. Tarlock, 2008; Sultana and Loftus, 2020; Boelens et al., 2023). Law plays a central role in defining water itself (as a resource and/or a commodity or a rights holder) and the specific rights that individuals have to take and use water in various ways (Scott and Coustalin, 2008). We can also observe a growing discourse emphasising the relationship between people and water, particularly as mediated through law (Macpherson, 2022).

Water rights can take many forms, and these have been extensively explored by legal scholars. Private property rights to water are constitutionally protected in Chile (Bauer, 2015) and have a long history in the water law of the western United States (Rose, 1990). Since 1992, there has been a push to recognise water as an economic good, partly to address sustainability concerns (ICWE, 1992) but also as part of the growing influence of neoliberal competition policy and a shift towards market mechanisms for water resource management (Rosegrant and Binswanger, 1994). These trends have resulted in states like

Australia creating new, more transferrable, statutory rights to water and investing in the legal frameworks needed for water markets (McKay, 2008; Wheeler et al., 2017). The human right to water has a long history (Sultana and Loftus, 2012), including acting as a counterbalance to the push towards water's commodification and privatisation (Bakker, 2012). The rapidly accelerating transnational movement to recognise the legal rights of rivers has created another 'fighter in the ring' as rivers compete for access to water rights (O'Donnell, 2023: 115). Scholars have argued that, although intended to create a framework for balancing and facilitating trade-offs between diverse uses, water rights emphasise individuality, and individual rights holders then seek to defend their personal rights, undermining communities' abilities to come together and develop collective action responses to water crises (Boelens et al., 2012). This has raised concerns that the world will become trapped in a tragedy of the private interest, where debates become entrenched on the issue of whose rights trump others' (Dworkin, 2009) rather than how we can work together.

Alternatives to water rights discourses have always been present. For thousands of years, water was considered as commons, available to all to use and belonging to no single individual but rather to the community at large. Ostrom's work on common pool resources (although still grounded in individualism) demonstrated that social norms can, and do, provide a framework for the management of water as well as sustainable economic development (Ostrom and Gardner, 1993). The work of Indigenous water scholars is also demonstrating the sophistication of Indigenous ontologies, laws, and water governance traditions of knowing and caring for water in ways that centre mutual obligation and support thriving more-than-human communities (Chief et al., 2016; Ruru, 2018; Curley, 2019; Martuwarra RiverOfLife et al., 2021; Parsons et al., 2021; Viane, 2021; Leonard et al., 2023). This literature reveals that a shared feature of these diverse ways of knowing and regulating water is relationality, rather than individual rights. Each of these alternatives to rights emphasises participants' relationships with each other, with water, and with the world around them. Rather than regulating water as a form of rights conflict, these relational approaches reveal the web of interdependence and obligation in which we all exist.

Water rights and water relationality can be constructed as opposite ends of a spectrum of legal modalities for defining and regulating the human/water relationship. However, legal scholars have demonstrated that, when considered through the lens of law, rights and relationality can also be seen as intertwined. The legal instruments that create individual rights to take and use water situate those rights within frameworks that regulate the relationship between humans (both collectively and individually) and between humans and the water ecosystem. The literature on this topic explores the way that the law creates relationships that vary in multiple dimensions: transactional to reciprocal relations, collectivist to individualist relations, and how multiple rights/relational modes are frequently created and maintained within the same system. For example, urban water frameworks reflect both the human right to water (an individual right) as well as collective obligations on water service providers to supply that right, whilst also (in some cases) enabling private providers to compete to deliver that service. In circumstances where water service provision is patchy and legal frameworks less well-defined, individuals can also act as small-scale water entrepreneurs. But relationality remains present in such cases, as such individuals frequently do so as a "form of informal social insurance [and to solidify] embeddedness in social relationships" (Zuin et al., 2014).

In this review, we focus on how legal scholarship explores the way that the law constructs and maintains discourses on both water rights and water relationality. We begin with a review of literature that identifies and explores the role of law in three distinct water rights discourses: water as a private right (to take and use), the human right to water, and the rights of rivers. We then consider the literature on alternatives to water rights, which we term water relationality discourses, focusing on the role of law in water commoning, Indigenous laws, and environmental restorative justice. In doing so, we identify points of intersection between these discourses as mediated through law. We also identify some critiques of both water rights and water relationality discourses and the ways in which they shape our ability to respond to water crises.

Although water rights discourses remain prevalent, in a climate change world, there is a growing focus in the literature on the need for alternatives that no longer pit individual rights holders against one another. Emerging scholarship identifies water relationality as a hopeful pathway that expands humanity's understanding of, and relationship with, water, and emphasises the role of law in creating space for both water rights and water relationality.

## METHODOLOGY

In covering both water rights and water relationality, the first methodological challenge for this paper was to contain the scope of the review so that it engages with this enormous body of literature in a meaningful way. To do so, we focus on the legal literature, as this remains an under-examined field of water scholarship. Water law and related legal frameworks (which we interpret as formal laws at the national or state level) are frequently portrayed as a neutral background against which technocratic water policy making and management occurs. Yet the law is the mechanism by which we define and regulate the relationship between humans and water (Clark and O'Donnell, 2022), and this relationship underpins and permeates all other forms of water scholarship. In doing so, we predominantly focus on the analysis of water law in the literature, rather than attempting a doctrinal analysis of case law.

We undertook a formal literature review across three categories of water rights: (a) water as a private use right; (b) the human right to water; and (c) the rights of rivers. This literature review was first conducted by the University of Melbourne Academic Research Service as a structured literature search, with the key terms for each of these three aspects detailed in Table 1.

Table 1. Search terms for structured literature search: Water rights.

Water as a private use right	Human right to water	River rights
Water right	Water rights	Water right
Water rights	Water governance	Water rights
Water governance	Drinking water	Water governance
Water market	Sanitation water	River
Water license	Water supply	Legal person
Water use right	Water services	Living entity
Water entitlement	Right to water	Living being
Water share	Water/s affordab* (affordable, affordability)	Legal rights
Water trade	Water/s access* (access, accessibility, etc)	Legal subjects
Water transfer	Water distribution	Rights of rivers
Economic value		Guardian* (guardianship, etc)
Subsistence		
Farm* (farm, farming, farmer)		
Hydropower		
Irrigation		
Industry		

The search focused on the databases that contain law journal articles and were accessible to the Research Service. The following platforms were searched: AustLII, EBSCO, HeinOnline Law Journal Library, INFORMIT, LegalTrac, Lexis Advance, and Westlaw (Australia, Canada, and the United Kingdom).

Within the legal literature, over 2000 papers were identified. The search was structured to focus on identifying papers where the key terms appeared in the title, abstract or introduction. Where an article abstract or introduction did not relate to one of the themes, the article was excluded. The results of the structured literature search were then supplemented using citation tracing and mapping to draw in other relevant papers from broader water scholarship. We acknowledge that the databases used are biased towards the Global North, so we made efforts to include papers written by Indigenous scholars, written by scholars from the Global South, or which focused on Global South examples. We have also included some technical reports and other grey literature where an important debate took place outside academic journals. The processes of exclusion and additional supplementation resulted in 197 unique scholarly references for water as a private right, 151 for the human right to water, and 104 for the rights of rivers.

A similar process was conducted for the second field of interest (water relationality), however the search techniques employed were broader. The search terms used are identified in Table 2, and they yielded 2310 papers before the relevance check reduced this number. Following additional citation tracing in the same manner as above, we identified 20 unique scholarly references for commoning and relationality, 50 scholarly references for Indigenous relations with water, and 27 for restorative environmental justice. The disparity in the numbers of papers considered within each major theme reflects the relative novelty of 'water relationality', especially in the legal scholarship (see, for example, Macpherson, 2022).

Table 2. Search terms for structured literature search: Water relationality.

Environmental Restorative Justice	Commoning and relationality	Indigenous relations with water
Water	Water	Indigenous
River	River	First Nations
Environmental restorative justice	Commons	Aboriginal
Water justice	Commoning	Water law
River justice	Common pool resource	Water relation* (relationship, relationality, etc)
Water restoration	Public good	River
River restoration	Hydro-social cycle or hydro social cycle	Ancestral person
Guardianship	Public trust	Settler colon* (colony, coloniality, etc)
Stewardship		Water back
		Water is life
		Sacred water
		Mni Wiconi
		First Law
		Obligation
		Reciprocal relation* (relationship, relationality, etc)

All papers and other materials were added to a shared library in Zotero. In total, after removing duplicate papers, 595 unique papers, reports, and other primary legal sources were reviewed across the two fields of focus.

## WATER RIGHTS IN LEGAL FRAMEWORKS

From a legal perspective, the language of 'rights' has come to define water regulation, although these rights also exist within a web of obligations and limitations. Early Roman law constructed water within the doctrine of *res communes* (a 'common good'), to be regulated as "a communal natural resource held in common" (Morgan, 2004: 14). In common law jurisdictions, water use rights emerged in law as land-based rights, associated with the owner of 'riparian' land adjacent to a waterway. However, this proximity only granted a usufructuary right to the flowing water itself (MacGrady, 1975), which was itself limited by the need to ensure that the flow in the waterway remained largely unchanged. Over time, in many places, law reform has led to this use right being re-conceived as a form of *private property right*, although water rights have also remained use-rights, with corresponding limitations and obligations (Gupta and Dellapenna, 2021).

A second category of rights discourse has become apparent in law with the recognition of the *human right to water* (UNGA, 2010). This is a form of human environmental right, and the human right to water prioritises domestic human uses of water, such as drinking water and sanitation. More recently, a third category of rights discourse in law has emerged, which can be described as the *rights of rivers* (Cano Pecharroman, 2018). Here, the water ecosystems themselves (we focus on rivers but this also includes aquifers, wetlands, and lakes) are recognised in law as legal subjects, capable of bearing legal rights and duties of their own. This emerging but rapidly accelerating new category of rights complicates but also entrenches rights discourses in water law. The literature exploring these three water rights discourses is discussed in turn.

### Water as a private right

The transition to water as a private right has been in response to increases in, and diversification of, water use demands. Scott and Coustalin (2008) chart the ebb and flow of water law in English common law from land-based riparian rights, through to a form of prior use rights, in which tort law established seniority of use as the critical element in determining water use priorities, to the natural flow doctrine (in which riparian rights holders had a right to the flow of the river in its natural state), and then the reasonable use doctrine of the 1850s, which modified the natural flow doctrine to enable water extraction and flow alteration. They argue that these shifts have been in response to changing demand and increasing competition for water due to industrialisation and the need to provide greater certainty to landholders to support economic growth and development. The reasonable use doctrine also solidified a private right to water for domestic and stock use as an inherently reasonable use of water by riparian landholders. In addition to clarifying individual rights to use water, the law also codified that these rights come with the obligation not to harm one's neighbour by one's actions in using water, thus embedding private rights to water within a relational framework of tort law (Getzler, 2004).

Others have noted how, as the UK colonised other countries, these laws found their way into the common law of the USA, Canada, Australia, and other former or settler colonies. In the USA, while the reasonable use doctrine continues to shape water rights in the eastern states (Dellapenna, 2011), water rights in the more variable river systems of the west have emphasised prior appropriation, now codified through permit systems and relying on later statutory reforms to maintain flows in the river (Tarlock, 2008). In Australia, riparian rights were largely replaced by statutory rights to use water by the early 1900s, and further reforms in the early 21<sup>st</sup> century saw these rights becoming increasingly exclusive and transferrable in water markets, especially in the case of the southern Murray-Darling River (Tan, 2005; Musgrave, 2008).

Civil law jurisdictions also classified water for public use (requiring government authorisation) or private use, subject to statutory limits (Caponera and Nanni, 2007). In many European jurisdictions this distinction has largely collapsed, and all water is considered to be within the public domain with licences or permits required in order to use the water, although groundwater remains a contested space (Bosch

and Gupta, 2023). As former European colonies gained independence, rights to water in post-colonial civil law jurisdictions were sometimes re-classified. In Chile, water rights have the status of private property and receive constitutional protection (Bauer, 2015), although issues surrounding definition and enforcement persist (Bauer, 2004; Budds, 2020).

Customary legal systems include rights to water, although these are often defined as collective or communal rights rather than individual use rights (Bosch and Gupta, 2023). Indigenous Peoples' legal frameworks tend to avoid concepts of ownership, instead focusing on stewardship and relational obligations to maintain water resources (Leonard et al., 2023).

In the following sections, we explore the legal scholarship of, and thereby the role of law in (1) constructing and maintaining water as a form of property right; and (2) imposing obligations and limitations on the individual rights, particularly for environmental protection.

### *Water as a property right*

Legal scholarship details how, in some jurisdictions, the right to use water has become a 'quasi-property' right (Bosch and Gupta, 2023). This shift in the legal nature of water rights has typically been portrayed as a response to scarcity (Rose, 1990) and water insecurity (Alexandra and Rickards, 2021) but also reflects shifts in water use (Musgrave, 2008), colonialism (Berry and Jackson, 2018), and neoliberal state policies that emphasise individual rights (McKay, 2008; Carruthers and Mascher, 2011). Water 'property' rights are still usufructuary and may depend on the state for the issue of a permit or entitlement to use the water (Barton, 2010). They may not even be formally classified as property in law, although they may have many of the features associated with property rights (we emphasise legal rather than economic definitions of property, cf Schlager and Ostrom, 1992).

Private property rights to water include water as a physical product (such as sachet water or bottled water; see Hawkins, 2017; Stoler, 2017), household delivery services (Venkatachalam, 2015; Wutich et al., 2016), access rights (such as irrigation water; see Wheeler and Xu, 2021), and agricultural water delivery services (such as access to groundwater pumps; see Shah et al., 2008). Private property rights also tend to give rise to water trading, although this is not universal (Wheeler, 2021).

In Chile, water use rights have been separated from land (enabling them to be transferred via water trading), have the status of private property, and receive constitutional protection (Prieto et al., 2019). However, even here, water is vested in the state under the *Water Code 1981*. The question then becomes: given water's status as both flowing and (to some extent) under state control, how does the law define property rights in water? Fisher (2004: 18) described the indicia of private property rights in water law as:

- Enforceable by the legal system
- Identifiable and definable
- Exclusive
- "[S]ufficiently permanent and stable to attract a sufficient degree of security", and
- Transferable.

The USA and Australia are two jurisdictions in which water rights meet all these criteria, although to varying extents. In the USA, Sax (1990) argues that water rights are a constitutionally protected property right, although subject to limitations. The biggest stumbling block is defining the substance of the right. Although there is a long history of extractive water use, in many water catchments there has not been a formal determination of precisely how much water each user has been extracting, how much water has returned to the stream or aquifer, and therefore how much they legally own. Making these determinations can take decades (Donohew, 2009), with major implications for Indigenous Peoples, who frequently have some of the oldest (and legally therefore the highest priority) water rights in the system and require this determination to access their water (Stern, 2023). This uncertainty has also undermined

water markets by slowing down water trades until the precise historical use by the vendor can be determined (Hansen et al., 2012).

In Australia, the source of uncertainty is legal security. Determination as to whether water rights are property has been avoided by the courts (Fisher, 2010; Hepburn, 2010). The statutory basis of water rights in Australia enables governments to alter the nature of these rights through water planning and management processes, including volume of water (Tan, 1999). However, Australian governments have tended to act as though water rights are in fact private property, choosing to use market mechanisms to recover water for the environment rather than exercising their legislative powers to alter statutory water entitlements (Gray and Lee, 2016; Holley and Sinclair, 2016; Owens, 2016). As a result, this uncertainty has not affected water market activity significantly in the southern Murray-Darling Basin, where water rights meet the substantive indicia of property. This is not the case in the northern Basin, where water rights enable the user to capture and store available surface water flows at specific locations, so their rights are much less identifiable and transferable (Wheeler and Garrick, 2020).

In both Australia and the USA, the legitimacy of the institutional arrangements in which water is defined as property also rests on the legal authority of the state (or the Crown) to control water use (Marshall, 2017). In settler colonial jurisdictions, this has been consistently contested by Indigenous Peoples, undermining the apparent legal security of private property rights in water (Phare, 2009; Marshall, 2017; Jackson, 2018; Curley, 2019; Macpherson, 2019).

Commoditisation of water as a species of property right has also driven growing interest in the securitisation of water rights from the financial sector (Neilson, 2003; Morgan, 2010) and the increasing sophistication of water markets (Seidl et al., 2020). This is most apparent in Australia but can also be observed at smaller scales in the USA (Bruno and Schweizer, 2021) and Chile (Donoso et al., 2021; see also Reis et al., this issue).

Private water rights and water markets exist along a spectrum of formality (Ranganathan, 2016). At the formal end, there are legally defined property rights in water, held separately to land, which can be transferred by following specific, legally defined processes (Fisher, 2006; Wheeler et al., 2017). Enforcement of rules regarding water use and water transfer is undertaken by agencies empowered by law. At the informal end of the spectrum, water rights are defined by community rules or norms which specify who can take water, where, when, and under what circumstances (sometimes including volumetric limits), with enforcement relying on community responses (Ostrom and Gardner, 1993; Jaghdani and Brümmer, 2016; Garrick et al., 2019).

### *Limitations on water property rights*

The commoditisation of water as private property is intended to support individual decision-making, enabling the 'invisible hand' of the market (Smith, 1950) to move water to its highest value use (Freebairn, 2005). However, legal scholars have observed an inherent tension between the individualism of private property and the necessarily collective and/or government action required to create and maintain private property rights in water as well as to facilitate transfers (Polanyi, 1957; Ostrom, 1990; Jaghdani and Brümmer, 2016; Wheeler et al., 2017). Defining private property in flowing common pool resources like surface and ground water is inherently dependent on legal and institutional arrangements (Scott and Coustalin, 2008; Cosens, 2016; Loch et al., 2018; Hosseini and Yadav, 2024). Although these arrangements do not have to be formally legal in nature (Ostrom, 1990), there must be a robust "institutional, and regulatory framework that is able to monitor, enforce, and provide the necessary infrastructure for transfers" (Marston and Cai, 2016: 664).

Legal scholars have highlighted that any purported private property or 'free-market' system for water management (Puckett, 2010: 1001) is thus contingent on institutional arrangements to enable the creation of, enforcement of, and compliance with private property rights. The experience of Chile underscores the importance of these legal institutions, as failing to adequately invest in them undermines

both property rights and water markets (Bauer, 2004, 2015; Donoso et al., 2021). Many scholars note that transferrable property rights in water and water markets are better understood as a form of regulation, not an alternative to regulation (Gardner, 2003; Tan, 2005; Gardner et al., 2006; Alford, 2007; Garry, 2007; Loch et al., 2018). Carruthers and Mascher (2011: 97), in considering the enormous role of government regulation in defining and maintaining private access to water in Australia, as well as government's ability to modify the nature of those rights (at least in law, even though there would undoubtedly be political consequences), ask "whether, in effect, Australia has come full circle and returned water rights to the commons".

In addition to creating private property rights in water and the necessary institutions to enable their transfer, the state also imposes limits on the use of these rights (Sax, 1990). As highlighted above, this can be to protect the interests of other water users, enabling the law to provide a framework for balancing competing rights to water use. Scholars have also explored the growing efforts to impose conditions on water use to protect the health of the riverine environment (Le Quesne et al., 2010; O'Donnell, 2013; Harwood et al., 2017).

In the case of water management, scholars have noted that private property rights in water alone are no guarantee of environmental sustainability and can tend to drive over-exploitation. In the western USA, it is lawful for private water rights holders to extract all the available water from the stream, drying up the riverbed during times of low flow (Garrick et al., 2009). This practice has left large systems such as the Colorado River on the brink of collapse (Comte et al., 2022).

In water law, environmental sustainability is addressed through commitments to providing 'environmental flows' (water retained in the river at the right quantity, quality, duration, and frequency to maintain ecosystem health; see Brisbane Declaration, 2007; Le Quesne et al., 2010; Harwood et al., 2017; Alexandra et al., 2023). Horne et al. (2017) argue that in constructing water as a private property right, the law has created opportunities to allocate 'private' water rights to the water ecosystem, enabling the environment to become a holder of rights and a potential participant in the water market (Gilson and Garrick, 2021). Thus, private property water rights for the environment can be a mechanism to protect and even improve environmental health (Neuman, 2004; Arthington, 2012; Horne et al., 2018).

Meeting environmental flow targets often requires significant re-allocation of water away from existing users to the environment, which Kosovac et al. (2023) observe further entrenches the perceived competition for access to water between humans and the environment. When the environment becomes a holder of water rights, it can be seen as the "largest irrigator in the basin" (O'Donnell, 2018) rather than as the foundation on which all uses of water depend (Anderson et al., 2019).

However, in many parts of the world, environmental flows are still largely provided by placing obligations on the rights of other water users (Horne et al., 2017), either as a cap on total extraction or as the maintenance of minimum flows in the river, requiring extraction to cease once flows drop to a certain level (which requires significant investment in compliance and enforcement, see Loch et al., 2020). These constraints embed individual property-like rights to water within a more relational legal framework in which the needs of the environment can be protected. In doing so, they can also protect the rights of other water users. As Connell (2007) notes, for example, the first cap on water extraction imposed in Australia's Murray-Darling River Basin in 1997 was intended to protect both the existing reliability of supply for existing irrigators and the future health of the river system.

The literature demonstrates that water as a form of private property right has emerged in many jurisdictions, with varying degrees of legal formality. Wheeler (2021) argues that this construction of water, with its emphasis on exclusivity and transferability, has enabled global growth and diversification of water markets. An important counter to this trend has emerged in legal scholarship, with the explicit acknowledgement in law of a human right to water, primarily for basic household use.



## Human right to water

In 2002, the UN Committee on Economic, Social and Cultural Rights (CESCR 2003) released General Comment No 15 ('GC15'), declaring that a human right to water can be implied from articles 11(1) and 12(1) of the International Covenant on Economic, Social and Cultural Rights (ICESCR) and that it guarantees access for everyone to "sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses". Although a human right to water had been recognised (and debated) in a range of domestic, regional, and global fora (albeit often in selective or implicit ways) since the 1929 *Geneva Convention Relative to the Treatment of Prisoners of War*, GC15 marked a turning point in the international recognition of the human right to water. While the status of the right remained unsettled, the focus in both legal research and legal debates began to shift toward questions around the scope and normative content of the right (Knight et al., 2003; Bluemel, 2004; Salman and McInerney-Lankford, 2004; Astle, 2005; Langford, 2005; HRC, 2006).

In this section, we focus on four key themes in the literature: (1) the development of the content of the human right to water at the international level, including the obligations it imposes on states and third parties; (2) early domestic jurisprudence, which provided lessons around implementation and were perceived as confirming concerns around the limitations of a human rights-based approach to water; (3) more recent scholarship focused on the right to water in the Global North, highlighting the global nature of structural barriers to the realisation of the human right to water; and (4) the specific issues facing Indigenous Peoples and how these have influenced the legal development of the right to water.

### *International discourse and development of the right*

While there had been some academic consideration of the human right to water (Gleick, 1998) prior to the publication of GC15 (CESCR, 2003), its release prompted a notable increase in scholarship on the subject. Early scholarship focused particularly on the status, legal basis, and normative content of the human right to water (Debreuil, 2006; Smets, 2006; OHCHR, 2007; Gupta et al., 2010). Tully (2005, 2006) and Langford (2006a, 2006b), for example, engaged in an extended debate around the soundness of the Committee's legal reasoning and the GC15's conclusions. Other scholars argued that the right to water, like other socio-economic rights, was merely aspirational (Dennis and Stewart, 2004; Whelan, 2007), prompting a wider discussion about justiciability (Nolan et al., 2007).

Beyond these questions of legitimacy, the issues that dominated this early legal scholarship around the human right to water were the normative content of the right and the question of what kind of obligations it imposed on states (see e.g. Filmer-Wilson, 2005; Hale, 2006; Bulto, 2011; Winkler, 2012) and on third parties, particularly private providers of urban water and sanitation services (Cernic, 2011; Russell, 2011). According to GC15 (CESCR, 2003: 2), the right to water includes a right to a "sufficient, safe, physically accessible and affordable water for personal and domestic uses". However, the interpretation of the words 'sufficient', 'physically accessible', and 'affordable' proved to be highly contextual, particularly in relation to the standard of progressive realisation (under which states are obliged to take steps to the maximum of their available resources to fully realise the right to water over time), and all raise complex governance questions around how to best balance policy goals around allocating water in a manner that is both economically efficient and equitable (Sultana and Loftus, 2012; Prieto, 2022).

On the question of obligations, several scholars have explored the controversial role of third-party providers or 'private sector participation' (PSP) in the provision of water and sanitation services and the related issues of cost recovery and commodification (Astle, 2005; Bond, 2006; Hale, 2006; Barrett and Jaichand, 2007; Davidson-Harden et al., 2007; Rutherford, 2010; Murthy, 2013). Central to this debate was the question of whether the recognition of a human right to water precluded PSP, the meaning and implications of the criteria of 'affordability', and whether framing water as a human right adequately protected its environmental and social values (see e.g. Savenije and Zaag, 2009; Bond, 2012; Langford,

2017). For example, some scholars have claimed that the right to water was incompatible with PSP (Barlow, 2007), while others have argued that human rights were inherently individualistic and would only serve to reinforce neoliberal water governance policies, thereby exacerbating inequality and ecological protection (Bakker, 2007; Roithmayr, 2010). Complicating this picture were those who acknowledged the incompatibility, while arguing that the human right to water could still promote equity and community participation (Albuquerque, 2009: 15) and even be compatible with a commons-based approach (Weston and Bollier, 2014; Clark, 2017; Ohdedar, 2019).

### *Early domestic jurisprudence*

Over this period, the jurisprudence of those countries that already recognised the right to water (either explicitly or implicitly in their constitutions or legislation) drew increasing attention, including for the lessons they could offer the international debates around justiciability, state obligations, and PSP. Scholars, for example, reviewed jurisprudence from South Africa, Argentina, and India to both emphasise the justiciability of the right in practice (Winkler, 2008; Rutherford, 2010) and to identify some key challenges with implementation (Bluemel, 2004).

South Africa drew particular interest (Magaziner, 2007; Bond and Dugard, 2008; Williams, 2009) due to its early constitutional recognition of the human right to water and to the *Mazibuko* case (*Mazibuko v City of Johannesburg*, 2009). In *Mazibuko*, following more expansive judgments in the High Court and Supreme Court of Appeal, the Constitutional Court of South Africa adopted a restrictive interpretation of the obligations imposed under the right to water by prioritising the financial imperatives of the City of Johannesburg and upholding the government's policy of providing (just) 25 litres of free water per person per day and the installation of prepaid water meters in Phiri, a suburb of Soweto (Dugard, 2010a; Couzens, 2015). This judgment fuelled a growing debate around the merits and limitations of adopting a human rights-based approach to water (introduced above), with some scholars arguing that a commons-based approach would provide better protection from commercialisation and commodification (see e.g. Roithmayr, 2010; Bond, 2012; Cooper, 2017). Kotze and Bates (2012: 268) responded to these debates by comparing the legal regimes regulating water service provision in Australia and South Africa and concluding that South Africa's experience underscores the intertwined nature of rights and relationality, as it "shows that rights can be meaningless if they are not accompanied by comprehensive legislation and other measures stating which and in what way rights should be enforced, applied, and operationalized".

Despite this superficial dichotomy of positions, most scholarship reached nuanced conclusions, with many pointing out that the community had turned to litigation only when alternative pathways for change had been exhausted and that *Mazibuko* had resulted in a wide range of positive outcomes despite the judgment (Dugard, 2010b; Dugard and Langford, 2011; Clark, 2017). On a broader level, scholars have highlighted evidence that the constitutional recognition of the right to water has given communities a sense of entitlement to access sufficient and affordable water services, which has created political pressure on the government to adopt policies in line with these expectations (Alexander, 2010; Dugard, 2013).

### *The right to water in the Global North*

Although early literature focused largely on the right to water in the Global South, similar issues and debates have been occurring in the countries of the Global North, and these have drawn increasing scholarly attention. The implications of the right to water for Australia, for example, have been considered by Good (2011), who focuses on environmental issues and the principle of intergenerational equity, but the country's lack of national rights framework means this has been a largely theoretical intervention. Scholars have also explored the potential enforceability of the right to water in Europe, with the Netherlands being used as a case study (van Rijswick and Keesen, 2012; van Rijswick, 2015).

The implications of the right to water for the USA has attracted significant attention from legal scholars, perhaps because of the USA's historic reluctance to recognise most socioeconomic rights. Early scholarship explored whether the UN Resolution (UNGA, 2010) meant it was now time for Congress to recognise the human right to water (Finkelman, 2010; Howard, 2011; Minda, 2011). The twin crises in Detroit and Flint, Michigan – where austerity measures led to the mass disconnection of water services for low-income (and predominantly Black) households in Detroit and to the contamination of Flint's water supply with both lead and deadly pathogens – also led to a renewed wave of scholarly interest in the historical treatment, recognition, and status of the human right to water in the USA (Murthy, 2016; Mette, 2018; Gaber, 2019; Kozikis and Winkler, 2020, 2021). This literature particularly highlighted themes around power distribution, structural racial inequality, and the impacts of financialisation and other neoliberal policies, in addition to the significance of social movements, with some emphasising the similarities between the situations in Michigan and Johannesburg (Clark, 2020).

### *Indigenous Peoples and the human right to water*

These issues of power distribution and structural racial inequality have also been raised in the legal scholarship around the human right to water for Indigenous Peoples, which has explored diverse conceptions of water and issues of relationality (Misiedjan and Gupta, 2014; Marin, 2016; Macpherson et al., 2023). In the Aotearoa New Zealand context, Ruru (2012) highlighted that water and identity are inextricably tied for Māori Peoples and that rights are important for protecting their reciprocal relationships with water. In Latin America, scholars have applied GC15, the jurisprudence of the Inter-American Human Rights System, as well as ILO 169 and UNDRIP, to critique the discrimination experienced by Indigenous Peoples in relation to water access (Barbera-Hernandez, 2005) and to emphasise the potential value of the right to water if it can properly reflect the collective nature of Indigenous Peoples' right to water and fundamental links to self-determination (Parriciatu and Sindico, 2012; Radonic, 2017). Finally, these issues of discrimination and self-determination have also been explored in relation to the unique water access challenges facing Palestinian peoples under Israeli occupation (Giglioli, 2012; Kornfeld, 2013; Beshtawi, 2020).

Across the literature, scholars have explored the value of a human rights approach in highlighting and challenging structural inequalities in access to safe and affordable water, particularly for historically marginalised communities. Critical scholars have highlighted the potential limitations of human rights in addressing the root causes of this inequality due to their historically individualistic nature and related compatibility with neoliberal governance. In addressing these limitations and responding to the issues raised by Indigenous water struggles, emerging scholarship has focused on the potential of the right to move beyond the individualism of liberal human rights frameworks and respond more comprehensively to our interdependence with each other and water, including via the inclusion of communal rights and concepts of relationality (Macpherson, 2022; Macpherson et al., 2023).

### **Rights of rivers**

As the literature reviewed above demonstrates, private 'property' rights to water and the human right to water rely on the recognition of defensible, individualised rights to and over water. In response, there has been growing recognition that water (and Nature more broadly) needs legal rights of its own (Stone, 1972).

Over the last fifteen years, interest in Nature as a subject of legally enforceable rights has grown at a remarkable rate in both scholarship and environmental activism. As outlined in mapping articles by Kauffman (2020) and Putzer et al. (2022), rights of Nature initiatives encompass constitutional amendments, legislation, court judgments, municipal ordinances, and legally unenforceable community-led declarations. Legal scholars have argued that this expansion of rights discourse can be understood alongside increased recognition of the right to water and the right to a healthy environment, but it also

signals a shift away from protecting solely human interests and towards protecting Nature for its own sake (Gilbert et al., 2023).

In this section, we explore the literature on the development of the rights of Nature more broadly, and then focus on two main themes: (1) the application of rights of Nature concepts to rivers; and (2) case studies that show how rights of rivers are being created and implemented.

Although the growth of rights of Nature initiatives over the last few years can seem rapid, the emergence of this discourse can be traced to the 1970s, to the work of Christopher Stone in the USA and Godofredo Stutzin in Chile (Tănăsescu, 2022). This academic work sparked theoretical developments in 'earth jurisprudence' (principles to better recognise Nature as a subject of law, see Burdon, 2014) and 'wild law' (laws to implement earth jurisprudence principles, Cullinan, 2011). The literature tracing the evolution of rights of Nature has noted that practical developments have gained significant momentum since 2006, when an organisation known as the Community Environment Legal Defense Fund began pushing for rights of Nature at a community level in the USA (Burdon, 2010). The same organisation went on to support Ecuador in drafting its ground-breaking 2008 constitution – the first to recognise Nature as a constitutionally enshrined legal subject (Kauffman and Martin, 2023). Since then, over 400 rights of nature initiatives have been mapped in a variety of jurisdictions around the world (Putzer et al., 2022). These initiatives differ in their definitions and understandings of 'Nature', both in their initial conceptualisations and subsequent implementation (Wolf, 2019), with some seeking to protect the rights of a broad 'Nature' in general terms, and others recognising more specific ecosystems as legal persons (Gilbert et al., 2023: 64). The significant diversity of legal pathways is still somewhat under-theorised (Tănăsescu, 2022), yet two key points are emerging in the legal scholarship: that Nature is a legally constructed term that can vary across different contexts, and that the legal crafting of Nature as a rights holder has the potential to impact and transform legal relations between people and places (Gilbert et al., 2023: 65).

As Rawnsdon and Mansfield (2018) observe, the reframing of Nature as a holder of legally enforceable rights has often been led by environmental activists from the Global North. However, there is now a well-developed scholarship that draws attention to the influential role of diverse Indigenous worldviews, where notions of guardianship and responsibility towards Nature date back thousands of years (Morris and Ruru, 2010; Fox et al., 2017; Martuwarra RiverofLife et al., 2020; O'Donnell et al., 2020; Boulot and Sterlin, 2022). Some Indigenous communities continue to have reservations about rights-based approaches and their connections to colonial legal frameworks (see below). Nonetheless, rights of Nature movements have also benefited from the strategic activism of Indigenous and other communities who understand the movement as being one avenue to redressing colonial resource dispossession (Macpherson et al., 2020: 522). To date, successful legal initiatives to recognise the rights of Nature have occurred predominantly at the level of domestic law. As Gilbert and others have noted, while there have been some limited references to Nature as a rights holder in international law, for the most part, this body of law continues to conceptualise Nature as a resource to be owned, used, and protected for human benefit (Gilbert, 2023; Gilbert et al., 2023). The following subsections therefore focus on domestic developments.

### *Rivers as rights holders*

Scholars have observed that rivers appear to occupy a 'special place' within the rights of Nature narrative (Clark et al., 2019: 829), finding themselves "cast as the main protagonists in a rapidly emerging [...] legal discourse" (Page and Pelizzon, 2022: 4). Their centrality to rights of Nature discourse has been attributed, at least in part, to their being "somewhat more easily identifiable" than other natural entities or ecosystems (Clark et al., 2019: 791), making them more amenable to legal personhood, for example. Others have argued that this centrality arises from the fact that rivers occupy a "special place in the lived geography of humanity", supporting the lives of many human and other-than-human species (Page

and Pelizzon, 2022: 5). As acknowledged in Justice Douglas's famous dissenting judgment in the 1972 USA *Sierra Club v. Morton* case (742):

The river, for example, is the living symbol of all the life it sustains or nourishes – fish, aquatic insects, water ouzels, otter, fisher, deer, elk, bear, and all other animals, including man, who are dependent on it or who enjoy it for its sight, its sound, or its life. The river as plaintiff speaks for the ecological unit of life that is part of it.

In a relatively short amount of time, moves to recognise rivers as 'legal persons', 'legal subjects', 'living entities' and/or combinations of the three have proliferated (O'Donnell, 2020). These categories of 'riverine rights' offer subtly different forms of legal recognition (Macpherson et al., 2021). The framing of rivers as legal persons or legal subjects presents a way of extending legal recognition and protection (Blake, 2017: 197), granting rivers rights similar to those held by natural persons and certain categories of non-human entity (e.g. corporations) (Healy, 2019). These are not the same as human rights, which include civil and political rights, but can include both procedural and substantive rights (Wuijts et al., 2019: 648), which can extend to the right to sue, own property, and enter into and enforce contracts (O'Donnell and Talbot-Jones, 2018). Recognising rivers as 'living entities' presents a somewhat lesser form of recognition, while nonetheless increasing the "visibility of the river to the law" (O'Donnell, 2020: 651).

These diverse expressions of rights for rivers and legal pathways to their creation have been understood as reflecting the different contexts in which these rights have been pursued (O'Donnell and Talbot-Jones, 2018; Macpherson et al., 2021). As Kauffman and Martin (2018) explore, contextual factors such as the openness of national political opportunity structures, the adaptability of the legal regime and possibilities for reform, the types of organisations and alliances that have driven the process, and the cultural framing used to mobilise support, have each played a role in this regard. As such, much of the literature on this topic adopts a case-study approach. High profile examples of rivers as legal entities (legal persons or legal subjects) with rights of their own are found in Colombia, New Zealand, and India.

#### *River rights and constitutional law in Colombia*

In 2016, the Colombian Constitutional Court recognised the Atrato River as a "legal entity and a subject of rights" represented by a "commission of guardians" comprised of a government representative and a representative nominated by the local Indigenous and Afro-Colombian communities (Calzadilla, 2019; Chaves et al., 2020). The case has been highlighted as important recognition of the connection between protecting rivers and respecting the cultural, spiritual, and physical wellbeing of the communities who depend upon them (Macpherson and Clavijo Ospina, 2018; Clark et al., 2019). This found expression in the court's recognition that that rights of Nature are included in 'biocultural rights' (Kauffman and Martin, 2019).

Several other courts and tribunals in Colombia have since handed down decisions recognising rivers and ecosystems as legal subjects, including the Colombian Amazon, Río Cauca, Páramo de Pisba, Río de la Plata, Río Coello, Río Combeima and Río Cocora (the Tolima Rivers), Río Otún, and the Río Magdalena (Macpherson et al., 2020: 523; Ciesielski et al., 2024). Macpherson and Clavijo Ospino (2018) argue that the success of such initiatives can be "culturally located" in the broad environmental and natural resource protections contained in the Colombian Constitution and in the activism of Indigenous, Afro-descendent and peasant populations. The particularly active role of the Colombian Constitutional Court in resisting "unbridled development" (Macpherson et al., 2020: 529) has been contrasted with the relative inaction of the Colombian Congress, who have been critiqued for failing to legally address water conflict (Páez and Vallejo Piedrahíta, 2021). However, despite the connections drawn between the rights of rivers and Indigenous and community rights, the latter decisions have also been critiqued for lacking adequate recognition of the role that those communities might have in managing river systems (Macpherson et al., 2020: 539; Melo-Ascencio, 2024).

### *Indigenous leadership and river rights in Aotearoa New Zealand*

In Aotearoa New Zealand, river rights have come from legislation rather than case law. The *Te Awa Tupua (Whanganui River Claims Settlement) Act 2017* recognises the river as a "living and indivisible whole" (s 12) and confers full legal personality on the Whanganui River system, with all the rights, powers, duties, and liabilities of a legal person (s 14). Academic commentary has praised the *Te Awa Tupua Act* for giving legal effect to Māori cosmologies and worldviews in settler law (Magallanes, 2015; Collins and Esterling, 2019; Cribb et al., 2022) by "acknowledging the river as a living whole that stretches from the mountains to the sea, including both its physical and metaphysical elements" (O'Donnell and Talbot-Jones, 2018: 4). It also creates a multilayered governance structure, with two individuals tasked with acting as the "human face" of the river (*Te Pou Tupua*), supported by an advisory group and a "collaboration of persons with interests" in the river (Clark et al., 2019: 803; Tănăsescu, 2022: 88).

As Rogers (2017: 279) notes, this legislative extension of standing must be situated in the context of New Zealand's unique "internal legal culture" and status as a settler colony. The recognition came after nearly half a century of "progressive integration of [I]ndigenous Māori beliefs into New Zealand jurisprudence" (Healy, 2019: 333) and intergenerational advocacy by Māori groups (Te Aho, 2010). The Act itself responds to historical Māori claims to restitution for breaches by the Crown of the Treaty of Waitangi, by which New Zealand was annexed to the British Crown in 1840 (Collins and Esterling, 2019: 199-200). The *Te Awa Tupua Act* follows the *Te Urewera Act 2014*, which extended legal personality to the forest, lakes, and rivers that make up the Te Urewera area, and similarly established trustees to protect and oversee the area. In each case, the specifics of the Acts were shaped by the beliefs and customs of the relevant Māori communities (Rodgers, 2017: 272) and are reflective of Māori perspectives on the responsibility to take care of natural resources and to and protect the integrity of water (Muru-Lanning, 2016; Te Aho, 2019).

While described as a "radically different vision for the sustainable management of the natural environment" (Rodgers, 2017: 279), private rights to water in the Whanganui river remain intact (Blake, 2017: 200) and the Act does not recognise Te Awa Tupua ownership of water (O'Bryan, 2017). As Clark et al. (2019: 802) explain, this means that the river's rights must be understood as co-existing with the rights of others, "the nitty-gritty of existing fishing and navigation rights, the rights of state-owned enterprises, and existing resource consents". How these competing interests will be resolved is unclear. Notably in this regard, the river can not only sue but be sued (O'Donnell and Talbot-Jones, 2018: 4), raising questions as to the circumstances in which Nature can sue people, and people, in turn, can sue Nature (O'Donnell, 2018a: 143).

### *Environmental protection litigation in India*

In March 2017, the High Court of Uttarakhand in India issued two rulings granting legal rights to Nature, following public-interest litigation brought in the face of decades of government inaction (Kauffman and Martin, 2019). The first declared two rivers – the Ganges and the Yamuna – to be "juristic/legal persons/living entities having the status of a legal person" (*Mohd Salim v State of Uttarakhand & others*, WPPIL 126/2014, 2017, [19]). The second recognised the legal personhood of "all other natural objects in the State of Uttarakhand, including the Gangotri and Yamunotri glaciers that provide headwaters for the Ganges and Yamuna rivers" (O'Donnell, 2018a: 136). The court relied on a guardianship model to frame the natural objects as legal minors, meaning they acknowledged their legal status while also acknowledging their inability to speak for themselves (O'Donnell and Talbot-Jones, 2018: 4). The court cited the New Zealand precedent (Kauffman and Martin, 2019: 283) and drew from both constitutional duties and moral duties towards the environment to justify a "substantive shift in the way that the rivers are managed and protected in law" (O'Donnell and Talbot-Jones, 2018: 6).

Several elements of these decisions have been flagged in the literature as contentious. Concerns have been raised that the court's framing of the rivers as sacred and revered risks elevating Hindu belief

systems above others (O'Donnell, 2018a: 140), which may play into the hands of rising right-wing Hindu nationalism (Clark et al., 2019: 816-817). The court's use of 'legal personhood' and 'living person', while offering more 'holistic protections' (O'Donnell, 2020: 651), has been critiqued as potentially challenging to implement, and has been perceived by detractors as "diminishing what it means to be an actual person" (Clark et al., 2019). The transboundary status of the rivers has also caused concerns about the responsibilities being placed on the proposed guardians (O'Donnell and Talbot-Jones, 2018: 6). Indeed, the Court's appointment of specific government officials as guardians – without their involvement in this decision – sparked resistance and has been cited as one of the motivations behind the state's ongoing appeal (O'Donnell, 2018a; Clark et al., 2019; Jahan and O'Donnell, 2023).

### **Limitations of water rights discourses**

Water rights discourse(s) remain dominant in water law and policy throughout the world. Creating, maintaining and enforcing private rights to water in law requires complex institutional arrangements and robust compliance and enforcement mechanisms (Loch et al., 2020; Schmidt et al., 2020). As the rights discourses have proliferated and diversified, the scholarship displays a growing array of individualised rights that come into conflict with increasing frequency.

Scholars have argued that this 'rights as trumps' (Dworkin, 2009) approach to water management entrenches an adversarial approach (O'Donnell, 2018b). Each holder of a private right to water is encouraged to defend their rights against other water users, any policy action by the relevant government, and the environment itself. Individual human rights, although they may provide a justification for government policy that prioritises water for human drinking and sanitation, reinforce this individualistic approach (Bakker, 2007). This can also create perverse outcomes, where household water supplies maintain the gardens of the wealthy when water restrictions cut into the ability of primary producers to earn a living.

The individualised nature of water rights can lead to, as Graham (2008: 186) puts it, each "discrete individual [having] to arm itself not just literally against other discrete individuals, but against its environment". Some scholars contend that extending rights to the rivers themselves creates a widening sense of community (Cullinan, 2011; Schillmoller and Pelizzon, 2013; Maloney and Burdon, 2014). Others have noted that the use of law as a means of protecting the rights of rivers can be understood as an attempt to give rivers the ability to fight back on a (more) level playing field (Stone, 2010). O'Donnell (2023: 113-4) cautions, in emphasising water rights, "[Western] water law isolates humanity from water, as well as separating humans from each other: rather than a community, we become merely individual rights holders, in conflict with each other as much as the world around us."

### **A MORE COMPLEX LEGAL REALITY: RELATIONALITY AND MUTUAL OBLIGATIONS**

There is a growing chorus of voices joining the emergent discourse on water relationality. In part this comes from critiques of water rights discourses, but equally (and crucially) from long-established systems of governing human-water relations that in some cases have continued to operate alongside legally constructed water rights. In this section, we consider the scholarship on water relationality across three aspects: (1) water commons; (2) Indigenous laws; and (3) environmental restorative justice.

#### **Water commons: Responding to water rights discourses**

Underlying the early debates in legal scholarship around commodification and the human right to water were fundamental contestations around the meaning of both water and human rights. The critique of private rights to water and commodification is based on the idea that water is "a communal natural resource held in common, as a human right and fundamental need" (Morgan, 2004). In arguing for the adoption of a commons approach to water regulation (rather than a right-based approach), Bakker (2007:

441) emphasised water's relational qualities as being "tightly bound to communities and ecosystems through the hydrological cycle". When the law treats water as a commons, it shifts both the regulatory focus and legal control away from the state towards the community (Ingold, 2018), deepening local democracy in the process. This approach recognises that, contrary to the now-debunked 'tragedy of the commons' narrative, cooperative institutions that manage local common property resources have a longstanding history of success in diverse locations – including in managing the sustainable use of water for economic development (Ostrom 1990). Ingold (2018), for example, illustrates the long history of commons research and advocacy in Europe with a history of the struggle of 18<sup>th</sup> century French irrigation communities to defend their customary rights, and the regulatory role of local water management boards, against the attempted legal interventions of the new administrative state. Reflecting on the implications of these struggles, she notes: "[i]n contrast to the liberal concept of property, which was entirely constructed on the concept of availability, the commons gave a new positive value to *unavailability*, favorable [sic] to commons practices and cooperation and to environmental preservation" (Ingold, 2018: 456). Nonetheless, Ingold (2018: 438) acknowledges that commons have played their own role in dispossession in colonial contexts where the legal declaration of open-access commons have operated to deny existing Indigenous territorial rights.

Moving to more recent debates, scholars have particularly explored turning to a commons approach as a mechanism for emphasising community control and relationality in response to the perceived and realised challenges associated with the legal adoption of the human right to water (Roithmayr, 2010; Linton, 2011; Bakker, 2012; Bond, 2012). Whether the legal protection of a human right to water can help to facilitate this commons-based, relational understanding of water or is more appropriately understood as a barrier depends on the meaning ascribed to human rights themselves. Here, there is a tension between critiques of human rights as being not only compatible but complicit with individualism and neoliberal economic policies (and the related commodification of water) (Bakker, 2007; Goldman, 2007) and those who espouse a more optimistic view of the capacity for human rights to both evolve and to provide important legal protection for procedural and equality rights in the interim (see e.g. Barlow, 2007; Miroso and Harris, 2012; Sultana and Loftus, 2012; Baer and Gerlak, 2015; Carrozza and Fantini, 2016; Clark, 2017; Koumparou, 2018; Ohdedar, 2019). Writing about water in Yanque, Peru, Brandshaug (2019) is one of many scholars who seeks to challenge the water as commodity/commons dichotomy by emphasising relationality. Here, Brandshaug (2019: 547) highlights the way water management practices in Yanque create and maintain a more-than-human community, based on mutual obligations "where water users, water beings, Apus, and local water leaders negotiate water access through sustained interactions".

These debates have continued to influence the evolution of the human right to water in law and wider debates around water governance and water justice. In recent years, for example, the UN Special Rapporteur on the human right to safe drinking water and sanitation has declared his intention to focus on the impact of commodification and on the right to water for Indigenous Peoples, in addition to the importance of democratic water governance (Arrojo-Agudo, 2021; Arrojo Agudo, 2022).

### **Indigenous laws for the care of water**

In this section, we discuss the laws of Indigenous Peoples in relation to water and related scholarship. We note at the outset that there is no such thing as 'Indigenous laws', as each Indigenous nation or collective will establish their own laws, and these will be specific to the relationship between people and place (Graham, 2008). We cite specific examples where possible or refer to reviews in which multiple examples of Indigenous laws are described.

In international law, Indigenous Peoples hold both a human right to water and a collective right to "maintain and strengthen their distinctive spiritual relationship" with their traditional waters (UNGA, 2007: art 25). Leonard et al. (2023: 3) argue that within Indigenous water scholarship, 'water is life' means



"not only the sacred essentiality of Water, but that Water itself is a living relation". Under Indigenous Peoples' own laws for the care and management of water, "the use of water is integrated with respect for the water as a living entity that gives life and supports the health, integrity, and character of an individual" (Chief et al., 2016: 2). In Guatemala, for example, the laws of the Maya Q'eqchi' governing water require specific ceremonies to greet the water and ask the water for "permission to use it" (Maya Q'eqchi' elder, cited in Viane, 2021: 14).

The Indigenous concept of 'living waters' underpins a water law and governance framework that is diametrically opposed to the extractive, often commoditised, individual private rights of Western (and particularly settler colonial) water laws (Martuwarra RiverOfLife et al., 2021; Laborde and Jackson, 2022; Prieto, 2022). Understanding water sources and waterscapes as alive makes it difficult to reconcile with a settler legal framework that depends on the construction of water as a resource to be exploited (Wilson and Inkster, 2018; Viane, 2021). Indigenous Peoples' water laws and governance promote 'reciprocal responsibility' and recognise "that water is a living life force that humans have an obligation to care for in a respectful manner" (Martuwarra RiverOfLife et al., 2021: 44).

Writing about the legal strategies of indigenous Yaqui (Yoemem) leadership in Mexico, Radonic shows that Indigenous Peoples also "strategically access and use the state apparatus as a resource for claiming their water rights and sovereignty" (2017: 152). In the USA, Tribes hold approximately 25% of the water in the Colorado River and are continuing to fight for the recognition of their irrigation water rights (Tarlock, 2010; Stern, 2023), even as they challenge the limited nature of those rights within the settler legal frameworks (Curley, 2019). In Chile, Indigenous advocacy has led to the legal recognition of 'ancestral' rights to water as a form of property in water, and creation of an additional mechanism to acquire water rights on the water market for Indigenous commercial use (Macpherson, 2019).

In doing so, these claims to water are an expression of Indigenous self-determination and an assertion of their collective rights and responsibilities to care for, manage, and know water under their own laws (Robison et al., 2018; Ruru, 2018). Leonard et al. (2023: 5) frame Indigenous water scholarship around the core theme of 'water back', acknowledging the explicitly political dimension of Indigenous water scholarship and supporting the "reclamation and repatriation of Indigenous Water Knowledges", in which water is kin and the interdependence between healthy water, healthy Country, and healthy people is acknowledged (see also Moggridge and Thompson, 2021).

In this way, Indigenous legal frameworks that centre relational reciprocity as well as an obligation to care for and communal rights to water are operating alongside legal claims to private rights to water within settler legal frameworks. This extends to the rights of rivers. Te Awa Tupua (the Whanganui River) is recognised in law as a "living and indivisible whole" because for the Whanganui iwi (the Māori tribe belonging to the river), it was crucial to recognise the emotional and spiritual connection between people and the river (Takacs, 2021). For the people of the Martuwarra/Fitzroy River in northwestern Australia, the river is an ancestral being with a right to life (Martuwarra RiverOfLife et al., 2020). Although the language of rights is invoked here, what is centred is the power of relationality and obligation. Ancestral beings are "alive, sacred, emotional and vibrant" and "become active participants in the very process of legal creation" (RiverOfLife et al., 2021: 523).

### **Environmental restorative justice**

It is evident in both the legal scholarship and practice that individuals, communities, and the environment itself can have conflicting interests in the use, management, and treatment of water (Hamilton, 2021; O'Donnell, 2023; White, 2023). Environmental restorative justice has been posited as one pathway to resolving conflicts concerning natural resources while retaining a focus on relationality and interconnection (Pali et al., 2022). Grounded in "the need to respect and listen to different perspectives; and on an understanding of the need to value and support connections between humans, between humans and more-than-humans, and between humans and Nature" (Forsyth et al., 2022: 4),

environmental restorative justice has been described as both attempts to apply restorative justice principles to environmental harm, and to 'infuse' restorative justice principles with greater recognition of eco-centrism (Forsyth et al., 2021: 18).

There is a growing literature which explores environmental restorative justice's applicability to, for example, environmental regulation (Forsyth, 2022), participatory governance (Vasilescu, 2022), Indigenous justice (Hydle and Henriksen, 2022; Killean, 2022; Haluska, 2023), trusteeship and rights of Nature (Bosselmann, 2022; Wessels, 2022), and conservation and restoration (Pali and Aertsen, 2021; Bosselmann, 2022; Tepper, 2022, 2023). While some of its proponents have noted its potential to look beyond legally enforceable rights to consider a wider range of concerns and perspectives (Stark, 2016; Minguet, 2021), there is also emerging practice that suggests environmental restorative justice principles can be brought to bear on responses to rights violations (Varona, 2020). For example, in Aotearoa New Zealand, restorative justice practices have been applied to acts of river pollution by city councils and corporate entities, leading to outcomes such as remediation, measures to prevent recurrence, and recognition of wrongdoing (Jenkins, 2018). More broadly, environmental restorative justice practices have been applied to an increasing number of offences, including planning breaches and the discharge of pollution to air and land, as well as water (Hamilton, 2021). Facilitated through the application of ordinary legislation on sentencing and victims' rights to environmental offending contexts, the use of restorative justice in Aotearoa has been praised for pursuing accountability and repair while granting victims of harm greater recognition and voice (Hamilton, 2021). As Haluska (2023) notes, this restorative turn may offer possible pathways towards a more relational approach to addressing environmental conflicts.

### Limitations of relationality in water law

When rights to water (and even rights of water) are established in law, it is very difficult to shift away from a conflict and enforcement mindset. As a result, scholars have observed that relational approaches to water management appear incompatible with entrenched rights-based frameworks (Macpherson, 2022). Transitioning from rights-based water management laws and policy to a more relational approach requires significant investment in both defining the new arrangements and charting a pathway between current and future states. It also requires buy-in from those concerned, otherwise the transition risks being unlikely to succeed. Macpherson et al. (2023) argue that this need for buy-in was reflected in recent debates around constitutional reform in Chile, with the failure of the first draft at popular referendum indicating that these issues remain highly contested.

However, water law relies on relational (at least to some extent) institutional arrangements that sit behind and alongside water rights. One pathway to transition towards relationality can be to explicitly acknowledge these frameworks and seek to enhance them. O'Bryan (2017, 2019) notes that an example of this transition in operation is the changing status of the Birrarung (the Yarra River), in Victoria, Australia. In 2017, the *Yarra River Protection (Wilip-gin Birrarung Murron) Act* (hereafter the *Wilip-gin Birrarung Murron Act*) formally recognised the river and its lands in settler state law as a single, living, and integrated natural entity (s 1). As a living entity, the Birrarung does not have legal rights in the same way as a legal subject or legal person: it does not have standing (unless granted explicitly by other legislation) and it cannot own property or enter contracts. Instead, the legislation establishes collaborative governance arrangements for the river, drawing all government agencies and local governments into relation with one another (as collective care-givers for the river) and with the river itself. There are limits to this approach: the *Wilip-gin Birrarung Murron Act* interfaces with the relevant local planning schemes in a modest manner and cannot affect the use of water in the river, which remains rights-based (O'Donnell, 2020). Nonetheless, the *Wilip-gin Birrarung Murron Act* is one example of how law can facilitate a transition towards a relational governance model for the river.

## CONCLUSION: A MORE NUANCED RELATIONSHIP WITH WATER

In this review, we explored the literature on the role of law in shaping two major water discourses: water rights and water relationality. Our analysis of this literature reveals that neither discourse operates in isolation of the other. As Boelens and Doornbos put it, "water rights are a relationship of power among subjects, more than just a relationship between the subject 'user' and the object 'water'" (2001: 345).

One of the key insights from this review is that viewing water rights and water relationality through the lens of water law makes explicit the interdependence of rights, obligations, institutions and effective regulation and enforcement. However, the emphasis of water law can and does shift markedly. Increasingly 'property-like' private rights are relied on to support water markets and water trading in countries like Australia, the USA, Chile, Spain, and China. The human right to water individualises water service provision and can obscure the collective rights we share. As rivers gain rights, this can be a way to merely insert them into existing rights-based water law frameworks, rather than challenging the foundation of those frameworks. Law is both a reflection of societal norms and values and a shaper of them. This review is a reminder that we need to see not just the water rights that law creates and maintains but also the systems of governance that enable those rights to exist.

In focusing on the role of law, this review has sought to provide an accessible overview of the literature that both addresses dominant water rights frameworks and highlights their limitations as a way of managing human relationships with and access to water. We have highlighted the scholarly debates around the tensions that arise between individualistic approaches to water use and the sustainability of water systems; the risks that accompany water's privatisation; the limits of rights regimes without appropriate implementation; how rights frameworks can exclude Indigenous Peoples from their lands and waters; and the challenges of managing competing rights. The literature clearly highlights that the realities of interdependence and human-water relationality significantly complicates a picture of a community of rights-bearing entities. Indeed, there appears to be an increasingly common argument that emphasis on 'rights' is failing to meaningfully protect the needs of waterways and the communities that rely upon them, while limiting efforts for more collective action.

In recognising this more complex reality, this review highlights a growing argument that seeing the interconnection of rights and relationality can be a pathway to building a 'good relationship' with water, an especially urgent task in the climate crisis. Commons approaches, it has been argued, can strengthen relationships between people and the relationships between people and water *without* sacrificing the sustainable use of water for development. Growing research into the value of environmental restorative justice also suggests alternative forms of dispute resolution, including methods that move away from notions of competing rights and towards engagement with multiple perspectives, diverse systems of knowledge, and more relational understandings of justice.

Reflecting on the themes in the literature covered in this review, we observe that it can be difficult to challenge rights-based approaches once they are entrenched. Moves towards relationality may face strong political resistance, and law reform is often both slow and messy. However, we hope that this review demonstrates the range of hopeful possibilities that already exist, as well as the undeniable challenges ahead.

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