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Viewpoint - From shallow to transformative water justice.

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***Viewpoint* - From Shallow to Transformative Water Justice**

Benji Reade-Malagueño¹

Department of Environmental Science, Policy, & Management, University of California, Berkeley, CA, USA;
benjirm@berkeley.edu

Kieren Rudge¹

Department of Environmental Science, Policy, & Management, University of California, Berkeley, CA, USA;
kieren.rudge@berkeley.edu

Sydney Moss

Department of Environmental Science, Policy, & Management, University of California, Berkeley, CA, USA;
snmoss@berkeley.edu

Paolo D'Odorico

Department of Environmental Science, Policy, & Management, University of California, Berkeley, CA, USA;
paolododo@berkeley.edu

ABSTRACT: Water systems across the world are being disrupted, and marginalised communities face compounding harms. In recognising inequities, policy-makers and prominent intergovernmental institutions increasingly draw on environmental justice frameworks to guide their priorities and decision-making. However, much of the discourse, planning and policy-making that targets inequitable relationships to water fails to address the underlying processes and structures that reproduce injustice; rather, they solely target inequitable conditions using status quo mechanisms. We introduce the concept of 'shallow water justice' to explain and critique such phenomena, which are not only insufficient for achieving water justice but also reinforce the power of marginalising structures. We demonstrate how shallow water justice has been furthered through multiple processes in international water policy spheres and we propose that, instead, transformative water justice be prioritised by challenging dominant structures, primarily legal and economic systems. Transitioning from shallow to transformative water justice enables policy-makers, researchers and communities to foster more equitable, diverse and sustainable relationships with water.

KEYWORDS: Shallow water justice, transformative justice, colonialism, market economies, water access

INTRODUCTION

As climate change, global natural resource intensive economic growth, and local environmental degradation intensify, water systems are being disrupted and marginalised communities are facing compounding harms. In addressing water inequities, frameworks of environmental justice are increasingly being drawn on to guide priorities and decision-making. This trend aims to address the globally ubiquitous, but unevenly distributed, disruption of water availability, access and quality.

¹ Co-first authors with equal contribution

Environmental justice frameworks used by powerful international institutions often emphasise distributive and procedural justice (Table 1). Equitable distribution is a central consideration with regard to how different communities relate to water. Researchers and policy-makers frequently grapple with distributive justice issues including water allocation quantities, distribution of safe versus contaminated water, and legal rights to divert water (Lukasiewicz et al., 2013; Yalew et al., 2021). Distributive justice is particularly complex when international and transboundary water access must be addressed despite conflicts between and within states (Nagheeb et al., 2019; Yalew et al., 2021).

Procedural justice also depends on democratic and fair decision-making processes (Rudge, 2021; Schlosberg, 2007). Effectively engaging marginalised community members and supporting their agency in decision-making can be difficult and time intensive. However, implementing institutions that communicate proposed interventions to alleviate water scarcity and build collaborative relationships can better meet their goals (Grillos et al., 2021; Larcom and van Gevelt, 2017).

Concepts of distributive and procedural justice are increasingly prevalent in international water policy discourse. There is a heightened focus on themes such as equitable distribution of water access and partnerships to broaden decision-making, and there is explicit mention of these terms by entities such as the World Bank (2017a) and the Global Commission on the Economics of Water (2024). An important framework that is often lacking, however, is that of transformative justice. Transformative justice critiques dominant sociopolitical structures including economic and legal systems, which are the two areas on which we primarily focus our analysis. According to the transformative justice framework, economic and legal systems are inherently predisposed to reproduce unjust relationships; it thus emphasises shifts in governance paradigms and working towards solutions outside of dominant structures (Forsyth and McDermott, 2022; Newell et al., 2021). Legal scholars, in particular, have studied the need to leverage transformative justice frameworks that are built on a cohesive theory, while also enabling locally driven and contextual approaches to effecting change (Gready and Robins, 2014).

The conceptualisations and critiques of distributive, procedural and transformative justice provide needed perspectives for understanding the unique challenges of water justice. Harris et al. (2017) articulate how water justice relates to water quantity, quality, risk, and governance processes, as well as how it connects to many social and spatial forms of difference such as gender, indigeneity, income, race and environmental conditions. Sultana (2018) further identifies components related to water justice, that is, water education, investigation, ethics, advocacy and democracy. Across diverse epistemologies and traditions water is revered as fundamental to human life, with some communities knowing that water is life and others incorporating ideas of more-than-human justice (Leonard et al., 2023; Viaene, 2021).

This *Viewpoint* builds upon these aspects of achieving water justice. It applies a critical lens to international water policy and discourse in order to understand whether and how actions are being articulated and implemented. Previous research has examined knowledge – action gaps in other environmental contexts, but such work is sparse in the context of water. Multiple studies on climate action plans have found that often – even when justice-oriented goals are incorporated into plans – meaningful action is not taken (Anguelovski et al., 2016; Schrock et al., 2015). We apply this lens to water justice because fostering discourse on justice without operationalising actions is ineffective and may entrench powerful institutions through ineffective (or even counterproductive) shallow water justice 'lip service', thereby reinforcing inequitable structures (Rudge, 2023). Indeed, the water sector is in danger of mainstreaming shallow understandings and conceptualisations of water justice that do not aim at removing such structures.

We introduce the concept of 'shallow water justice' as a way to investigate this knowledge – action gap; we use it further to examine the limited policy engagement of prominent international water justice frameworks with structures of marginalisation. We argue that a critical lens should be taken towards shallow water justice, which we describe as practices that ostensibly value justice but do not translate into tangible changes to unjust sociopolitical structures. 'structures' are defined here as the systems in

Table 1. Justice-related concepts, definitions and examples

Concept	Definition	Examples relating to water
Distributive justice	The fair and equitable allocation of resources, benefits and harms among and within communities across geographic and temporal scales	Ameliorating patterns where industrial water pollution in a region has disproportionately impacted communities of colour
Procedural justice	Decision-making processes are democratic and fair to all participants, and impacted stakeholders have agency to engage in these processes	Incorporating planning processes where local communities can use participatory mapping of freshwater sites to identify priorities for environmental remediation
Shallow water justice	Practices including discourse, plans and policies that ostensibly value water justice but do not result in tangible changes to the processes that reproduce injustice	Policies that mention water justice, but rely on a profit-driven efficiency model for water allocation processes rather than considering alternative community-based customs of managing and relating to water
Transformative water justice	Dismantling the structures /systems (social, political, legal, economic or otherwise) that reproduce marginalisation and injustice; creating solutions using methods beyond those structures; transformative justice can include other forms such as distributive and procedural justice, but this becomes transformative when it contributes towards a larger arc of dismantling unjust systems	Restructuring water rights that were based on prior-appropriation legal systems that excluded Indigenous communities, and instead empowering individuals and families who do not own land under existing property regimes by prioritising Indigenous land stewardship customs over Western private rights to land and other environmental resources
Water sovereignty	Local communities actively exert control and decision-making power over their relationships with local water systems	Transferring control of ancestral rivers and fisheries back to Indigenous communities who previously were stripped of decision-making power over water management in that area
Water security	Adequate water quantity and quality are available for uses that a community deems necessary	Instituting sustainable freshwater management practices in communities that are threatened by water scarcity, in order to enable long-term equitable use by all community members
More-than-human justice	Non-human entities such as water bodies, animals, plants and other forms of nature are respected, and their interdependent relationships are honoured without centring humans	Granting protections and legal personhood to a river, not to enable long-term extraction by humans but rather to support the river as its own entity

Note: This table provides a non-comprehensive selection of concepts related to water justice. Concepts were included due to their prominence in dominant international water policy and related discourse, or because we aimed to emphasise concepts that are lacking in current policy and discourse. Source: Authors' elaboration.

which any action takes place, such as legal, economic and epistemological systems. We describe 'processes' as the mechanisms operating within dominant structures that reinforce the power of those structures (Figure 1). Taking this perspective, we investigate the prevalence of shallow water justice across prominent water policy and international development discourse, and we demonstrate how this phenomenon can be harmful to the attainment of water justice. We advocate for deeper engagement with the ways in which transformative water justice can be achieved. In the following sections, we outline the historical context of water justice, then discuss the prevalence of shallow water justice and, finally, articulate solutions for achieving transformative water justice.

HISTORICAL CONTEXT OF WATER JUSTICE

Achieving water justice requires coordinated governance at the local, regional and global scales. Water justice at the local level empowers communities to draw on diverse epistemologies and exercise agency over how they relate to water within their lands. While local water sovereignty is central to water justice, water security is simultaneously determined at the regional and even global scales. Distant land use changes can also impact the quantity and quality of water available to communities throughout a region (Keys et al., 2017; Runyan et al., 2012; Swann et al., 2012). Upstream mining activity, for example, can impact water quality and often redirects water sources away from downstream communities (Dethier et al., 2023; Diaz, 2021); likewise, deforestation for grazing in a distant section of a watershed can increase river turbidity, impeding water access for downstream communities and urban centres (Ochoa-Tocachi et al., 2016). Through global trade, consumer decisions in one region of the world are driving land and water degradation in other regions (Geist and Lambin, 2002; Hartman et al., 2021; Meyfroidt et al., 2013; O'Bannon et al., 2014). On this global scale, the anthropogenic activities of wealthier nations fuel climate change, reducing water security in many regions through drought intensification, melting glaciers, and increased water-related natural disasters (Martínez et al., 2020). Water justice must thus engage a complex ecosystem of actors, land uses and landscapes across a multitude of spatial scales.

Our historical contextualisation of shallow water justice starts with the Western colonial era's violent dispossession of Indigenous and other marginalised communities and civilisations from their land and water (Manning, 2018). During this time, political and economic powers that controlled land and water were concentrated in far off metropolises and settler colonial outposts that marginalised Indigenous peoples (Shiva, 2016). While formal government control has returned to many local peoples, the 'post'-colonial era is fraught with inequitable power dynamics where 'former' colonisers wield immense power through their imposition of Western sociopolitical structures and economic dependencies in both former colonies and current settler nations. These dynamics can be further reproduced when local elites maintain hierarchies introduced during colonial rule to hold on to power and follow externally imposed environmental management practices (Toivonen and Seremani, 2021).

In the 1970s, many of these former-coloniser nation-states collaborated to form the development apparatus and there were subsequently a slew of international agendas that were ostensibly aimed at addressing global disparities. These efforts, however, which were often subscribed to by international organisations, were shallow in practice and have been critiqued for furthering colonial power dynamics rather than reducing injustice. Over the following decades, numerous international development efforts described actions aimed at improving water justice. In 1977, the first-ever United Nations (UN) Water Conference in Argentina resulted in an action plan which stated that, "All peoples, whatever their stage of development and social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs" (United Nations, 1977). The conference also declared 1981 to 1990 to be the International Drinking Water Supply and Sanitation Decade. In 1992, 100 nations came together for the International Conference on Water and the Environment and prepared the Dublin Statement which reiterated the human right to clean water and extended procedural justice to women (United Nations Environment Programme and World Meteorological Organization, 1992). The

UN declared another water-focused decade called 'Water for Life' from 2005 to 2015. In 2007, the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) was adopted by 144 member nations. Article 25 of the Declaration secures the rights of Indigenous peoples to, "maintain and strengthen their distinctive spiritual relationship" with water (United Nations, 2007). Three years later, the UN formalised the human right to water and sanitation through Resolution 64/292. Water justice is also centred in Sustainable Development Goal 6 which outlines pathways to ensure water for all humans and more-than-humans.

Despite over half a century of international efforts aimed at ameliorating water injustices, however, inequities remain ubiquitous on a global level due to the persistence of unbalanced power relations that are rooted in histories of race and class disparity, violence, or extractive politics (Sultana, 2018). While the intergovernmental efforts improved access to clean water across different communities, their policies and discourses demonstrate the failure of shallow water justice to transform structures of injustice.

SHALLOW WATER JUSTICE MANIFESTATIONS IN INTERNATIONAL WATER POLICY AND DISCOURSE

Here, we examine three manifestations of shallow water justice that are prevalent in international water policy and discourse: (1) water as a global common good, (2) investments and partnerships, and (3) efficiency and equity.

Water as a global common good

A notable example of shallow water justice is the recent emphasis on rethinking water as a "global common good" (UN General Assembly, 2023). The common good concept typically represents a contrast to private enclosures, however proposals have recently utilised the concept of a global commons to present water as a global commodity. Recent proposals argue, for instance, that, "to manage both blue and green water as a global common good, governments need to reshape water markets (...) and value these flows as natural capital" (Rockström et al., 2023).

Scholars have previously drawn attention to how powerful interests have co-opted the discourse concerning the human right to water (Bond and Dugard, 2008; Loftus and Sultana, 2011), water stewardship (Hepworth and Orr, 2013), and the commons (Federici, 2012). In the process, they have removed the critical edge of the discourse and are instead using it to justify consolidating power and opening up new fields for capital accumulation (Bieler and Moore, 2023; Harvey, 2005). Rhetoric around water as a 'global common good' presents similar possibilities; it generates a perception of inclusion and agency within water governance frameworks, but this framing obscures major inequities regarding who has access to, and control over, water (Heller et al., 2023). Globalising water systems without combating these underlying power dynamics further cedes power to the institutions that control the global economy (Sojamo et al., 2012; Vos and Boelens, 2018).

This current framing of water as a common good in international policy discourse largely stems from a neoclassical economic perspective that erases other knowledge systems and relationships to water. The economic globalisation of the water commons – alongside calls for increased multilateral governance (Global Water Partnership, 2024) – thus concentrates power at the national and international scales. Local actors such as Indigenous communities and peasant organisations do not experience an amplification of their decision-making power; rather, they are included via calls for "capacity development" (Economic Commission for Latin America and the Caribbean, 2023; Stockholm International Water Institute, 2023). Prior literature has characterised this phenomenon as "forced integration" (Boelens and Zwartveen, 2005) into a system that is designed by those in power at the expense of local communities (Bockstael, 2017; Tuba, 2023); in the process, their agency is further stripped away (Arrojo Agudo, 2023; Jambadu et al., 2024; Siurua, 2006).

Similarly, presenting water as a common good that seemingly belongs to everyone obscures the root causes of water crises and instead generates a perception that we are all collectively at fault. To illustrate this, recent reports can be cited that include phrases such as (adding our own emphasis), "*We* are heading for massive collective failure", "*our* mismanagement of water" (Global Commission on the Economics of Water, 2023a: 9), and "*we're* changing the climate" (World Resources Institute, 2017). Wrapped in the language of inclusivity, this framing obscures major differences in who is responsible for water scarcity (Davis and Todd, 2017; Kallis, 2019). The idea of collective responsibility also serves to justify solutions that emphasise individual actions, for example, shaping consumer preferences through water footprints and water stewardship initiatives (Global Commission on the Economics of Water, 2023a; Water Footprint Network, n.d.; Enel, 2022). Through these tools, extractive entities such as agribusiness corporations make consumers "accomplices" rather than being themselves held accountable for their disproportionate role in contributing to water-related issues (Li, 2011; Vos and Boelens, 2018).

In summary, proposals that characterise water as a global common good exemplify shallow water justice because, despite rhetoric around equity and the commons, these proposals actually entrench global power imbalances. They cement the control of powerful multinational actors such as private capital while obscuring their responsibility for the current water crises.

Investments and partnerships

Another manifestation of shallow water justice is the emphasis on expanding partnerships and investments in the Global South so as to ostensibly contribute to the 'global common good'. Private sector finance and capital were key themes of the 2023 UN Water Conference as actors advocated for scaling up investments in the water sector (UN General Assembly, 2023; World Economic Forum, 2023). This is presented as a progressive agenda since private investment can supposedly free up public resources to help vulnerable households, thereby helping achieve universal water access (World Bank, 2017b). Proponents also indicate that "mission-oriented finance" is an important tool for eliminating barriers to sustainable investment in countries with less available funding (OECD, 2023b; UN DESA, 2023). In this scenario, such investments are spurred on by 'Just Water Partnerships' (JWPs) between development banks, finance institutions and public sector entities (Global Commission on the Economics of Water, 2023a).

Importantly, these proposals are not a new phenomenon. They date back to development groups in the 2000s that advocated for public – private partnerships as a tool to provide water for marginalised communities (Goldman, 2007; Mirafab, 2004). More recently, they have been further packaged in the language of justice, but they continue to encase an agenda of commodification. As with water as a global common good, international collaborations are presented solely through a neoclassical economic lens. Emphasis is on strengthening environments for investment and on financialising water through economic instruments such as water footprint loans (Global Commission on the Economics of Water, 2023a; Water Footprint Implementation, 2023); this ignores long-standing evidence that viewing water as an economic good can endanger both the human right to water (Arrojo Agudo, 2021; Bayliss, 2014; Couret Branco and Damião Henriques, 2010) and the rights of nature (Boyd, 2017; Jenkins et al., 2021). Prior work has also found that water-related socio-environmental and health benefits have principally stemmed from public rather than private investments (Budds and McGranahan, 2003; Hall and Lobina, 2006, 2012; Heller et al., 2023).

Removing trade barriers such as food export restrictions and 'wasteful water subsidies' have been proposed as strategies for achieving equitable global distributions of water (OECD, 2023a; World Trade Organization, 2023); substantial evidence suggests, however, that these actions have resulted in the export of water-intensive crops from water-scarce countries in the Global South to water-abundant countries in the Global North (Gladstone et al., 2021; Vos and Boelens, 2016). The resulting socio-environmental issues, such as groundwater depletion, disproportionately impact communities that

already have diminished water rights and are more likely to rely on water for their livelihoods (GRAIN, 2012; Mehta et al., 2012).

To that end, there is no mention of JWPs including social movements, community organisations, or Indigenous groups; the JWP's sole focus on the private and public sector thus calls into question the procedural justice component of these partnerships. Overall, recent calls for investments and partnerships appear to advance water justice in name only, with equity rhetoric again acting as a guise for the continuation of processes and structures that have historically harmed marginalised groups.

Efficiency and equity

Our final example of shallow water justice is the repeated claim that improving the efficiency of water allocation and use is central to water justice. This claim rests on the idea that distributing and using water more efficiently will reduce overall consumption, leaving more water available for vulnerable communities (Global Commission on the Economics of Water, 2023a; OECD, 2023a). Equity motivations thus become a key justification for implementing policies designed to improve efficiency; these include pricing water closer to its 'true value' for domestic users (UN General Assembly, 2023), introducing price signals in agricultural settings (OECD, 2023a), and relying on regulated markets to reallocate water rights (OECD, 2018).

To ensure greater water affordability and access, various groups then propose accompanying efficiency-oriented instruments with targeted subsidies or transfers to vulnerable communities (Global Commission on the Economics of Water, 2023a; IMF, 2015; OECD, 2016). While targeted subsidies are often more progressive than other pricing instruments such as increasing block tariffs (IBTs), they generate significant administrative challenges, hold private utilities less accountable (Baer, 2014), and face major issues in reaching low-income households (Barde and Lehmann, 2014; Contreras et al., 2018; Wodon et al., 2006). More broadly, rather than moving towards universal provision, these proposals continue to operate within a framework of commodified water. Instead of organising price structures around affordability as the core objective, subsidies become an after-the-fact adjustment, following efficiency instruments and thus placing equity as a secondary goal (Bayliss, 2016). 'Efficiency for equity' proposals also frequently include technocratic elements such as natural capital accounting, ecosystem services valuation, and balance sheets that emphasise quantification of water through economic activity and financial transactions, without addressing water justice outcomes (World Bank, 2016, 2017b). This narrow view of water as an economic resource often depoliticises water flow data, thereby masking the underlying injustices that shape water access under the guise of neutrality through numbers (Leonard et al., 2023).

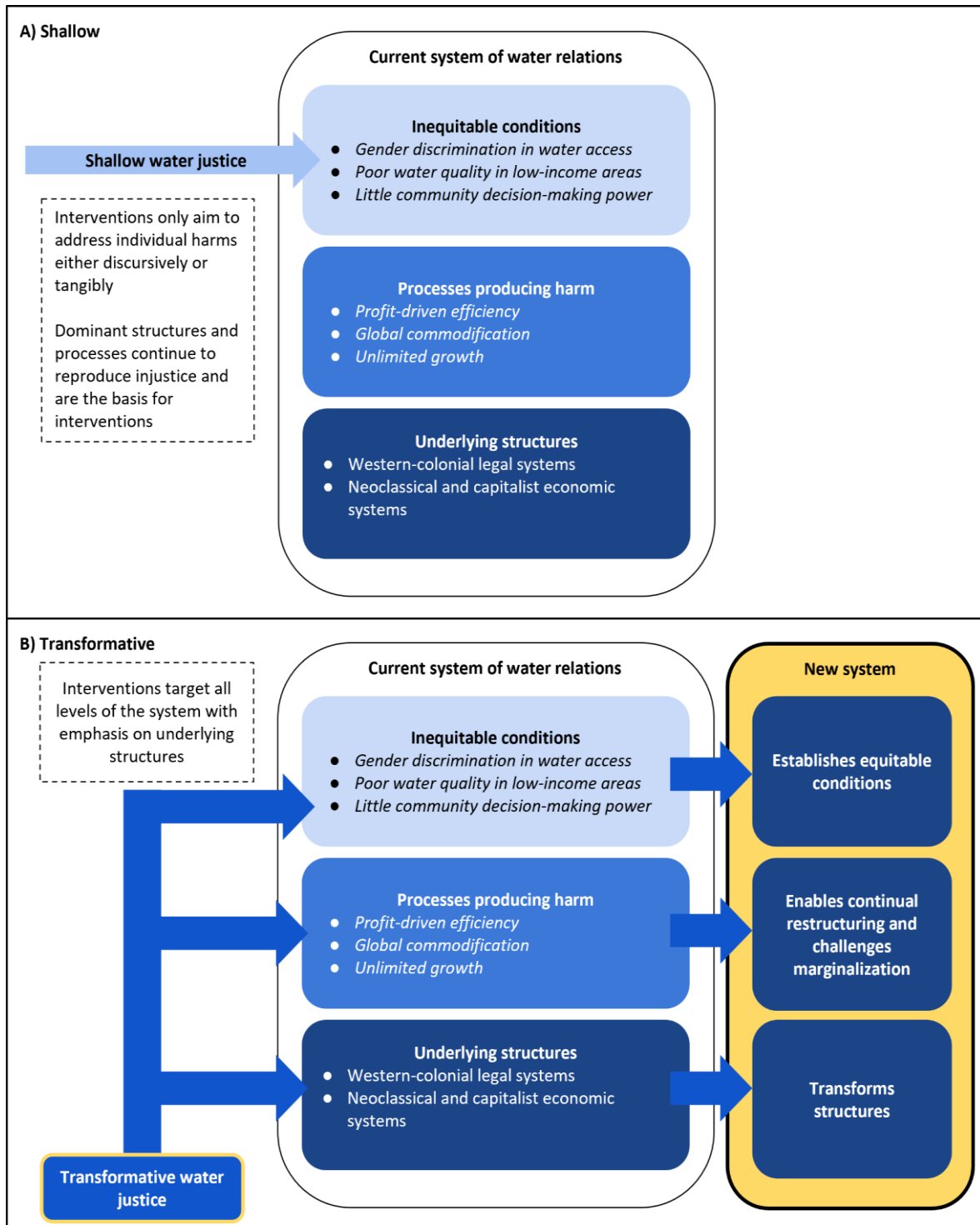
Proposals regarding the use of markets to distribute water rights more equitably display similar themes. In the buildup to COP28, proponents called for a move from a "reactive market-fixing approach" to a "proactive market-shaping one" (Global Commission on the Economics of Water, 2023c); this rested on the claim that, with adequate institutional support, water markets can benefit both buyers and sellers of water rights (Global Commission on the Economics of Water, 2023b). Others acknowledged significant evidence of market concentration and inequities arising in market settings (Correa-Parra et al., 2020; Waldman et al., 2023); they called instead for consideration of justice in water market design (Global Commission on the Economics of Water, 2023b) or adjustment policies to compensate vulnerable farmers (OECD, 2016). Again, these water justice efforts operate as a secondary goal within the framework of commodified water; they avoid root issues while justifying the expansion of markets and privatisation.

TRANSFORMATIVE WATER JUSTICE

In contrast to shallow water justice, we advocate for transformative water justice, which challenges structures that enable the production of injustice and seeks systemic change rather than valuing

discourse alone. Figure 1 demonstrates connections between structures, processes and inequitable conditions. While shallow justice primarily or solely targets conditions, transformative justice addresses all layers and emphasises structures. Without structural transformation, injustice will be continually reproduced, as processes and the resulting conditions are functions of their underlying dominant

Figure 1. Shallow water justice versus transformative water justice.



Note: Italicised text indicates examples, not a comprehensive list; legal and economic systems are the focus of this *Viewpoint* but they are not the only underlying structures.

structures. We emphasise two structures whose transformations should be prioritised due to their influence on society – water relations: legal systems and economic systems. Notably, these structures are interconnected and deeply political, both in terms of their reproduction and the interventions that are needed to challenge them. Both legal and economic systems exist within the domains of states that are concerned with reproducing themselves and the structures to which they are connected. As we focus on these two structures, it is important to note that the transformation of either one requires a challenge to the hegemony of the state that has imposed it through the monopolisation of violence and the marginalisation of alternative ways of relating to water within their territories (Boelens, 2009).

Legal system transformations

Transformative water justice can address the reproduction of injustices through legal systems by: (1) changing principles within existing legal systems to such an extent that the system is fundamentally altered; (2) reproducing more equitable water relationships through informal methods, despite the dominant legal system; or (3) dismantling unjust legal systems entirely. While transformative water justice primarily works outside of dominant unjust systems, organised reforms may lay the foundations for transformation. Notably, legal scholars have demonstrated how some reforms may even empower unjust systems, while others may build towards transformative justice (Crenshaw, 1988). It is necessary, but difficult, to distinguish between reforms that reinforce dominant systems and reforms that enable transformation by reshaping fundamental legal principles. Importantly, a transformative justice framework requires historicisation of the state-driven mechanisms that have produced harm, place-based understandings of the contexts in which injustice is reproduced, and critical engagement with power structures that legitimate or marginalise different perspectives (Crenshaw, 1988; Newell et al., 2021). Recent moves to extend greater rights to nature-entities demonstrate potential processes of transformative water justice that align with these components while operating, at least at first, within dominant legal paradigms (West, 2011).

A prominent example is the Aotearoa/New Zealand government's granting of personhood to the Whanganui River (Hsiao, 2012). This demonstrates one of few examples where a river has been granted personhood in any modern Western legal system. Such events can chart a framework for extending rights to water as its own agent, rather than just extending rights to humans to exploit water. This differentiation forces us to rethink the concept of 'water rights'. Extending rights to water forces critical thinking about water as not something one has the right to access but, rather, an entity whose own rights should be honoured. This case shows the potential value that legal pluralism has for building transformative reforms. The Whanganui River's new status and rights are not only an extension of Western law; they also represent parallel rules where Indigenous relationships with water have gained more power (Charpleix, 2018). Legal pluralism may be an avenue towards transformative water justice and the empowerment of Indigenous communities like the Māori in Aotearoa/New Zealand; however, some scholars and activists writing on similar 'post'-colonial geographies demonstrate the incommensurability of Indigenous and coloniser legal and ontological structures (Manuel and Derrickson, 2021).

Beyond reforming dominant legal systems, communities have taken transformative water justice into their own hands by operating more accessible local water relationships that are detached from the states in which they are situated. Multiple communities living in informal settlements have been denied access rights to government-managed water infrastructure when states aim to discourage the existence of such settlements (Alves et al., 2021; Robina Ramírez et al., 2019). In São Paulo, Brazil, for example, and in multiple municipalities across South Africa, researchers have discussed the relationships that exist between residents of informal settlements and water (Gutberlet and Hunter, 2008; Morole et al., 2023). Informal settlements are often excluded from municipal drinking water and sewage systems and, within that context, residents have taken extra-legal measures to tap into adjacent communities' water supplies (Gutberlet and Hunter, 2008).

Actions to access potable water and manage waste beyond, or in-and-against, state-sanctioned governance, and could contribute to transformative justice, but they can be undermined by state intervention against them, and relations between informal settlement residents and water are often inequitable in terms of age, gender, and more (Angel and Loftus, 2019; Oskam et al., 2021). To combat these inequities, a government that seeks to support transformative justice should remove systemic barriers such as segregationist and anti-migrant policies that push marginalised communities to live in informal settlements with few resources (Gutberlet and Hunter, 2008; Oskam et al., 2021). Informal settlement residents also require greater negotiating power if they are to access water resources without being subject to the full force of marginalising formal laws that hinder distributive justice (Alves et al., 2021). These examples of informal settlements (1) taking action, and (2) developing means towards transformative justice through state-sanctioned mechanisms, illustrate what Angel and Loftus (2019) describe as working in-and-against the state. We argue that this tension of working in-and-against the state needs to be considered in the arc towards transformative water justice to identify and leverage opportunities to intervene and alter relations that constitute the state and limit water rights.

The final method that acts to transform formal legal systems is dismantling those systems entirely. While these processes are mired in logistical and ethical barriers, transformative water justice requires consideration of radical changes. Scholars and activists have advocated for decolonisation in places where Indigenous communities and their systems of relating to water were supplanted by colonially imposed Western legal systems that were based on individual property rights. In Hawaii, Indigenous scholar Noenoe Silva writes on how colonial water rights are reproduced by the modern American legal system, and how they are at odds with Kānaka Maoli/Native Hawaiian practices that emphasise equitable and sustainable forms of water – nature – society relations (Silva, 2004). These practices were exercised through *ahupuaʻa* systems and other traditions that are not commensurate with individual, patriarchal and static claims to water as private property (ibid). Traditional Hawaiian principles such as *aloha ʻāina* emphasise love for environments (ibid), sustainability and reciprocal relations, rather than extractivism. Silva demonstrates how transformative justice would entail restoration of long-standing systems and the empowerment and self-determination of Indigenous peoples.

Economic system transformations

The tendency to meet the growing demand for agricultural products – and for the associated water inputs – by increasing production and human appropriation of water has often resulted in the depletion of water bodies and habitat destruction, which comes at the expense of nature, marginalised communities and future generations. In areas where water has become scarce because of an imbalance between agricultural demand and water availability, water limits (either actual or perceived) have been used to create property rights, enclosures and markets, the argument being that water pricing and trading will prevent this limited resource from going to waste (Bakker, 2002; Kallis, 2019). Markets, it is claimed, favour efficiency through the redistribution of water to its most profitable use (Debaere et al., 2014). But... profitable for whom? In the absence of safeguards, market economies give preferential water access to wealthy and powerful individuals, corporations or market sectors (Reade Malagueño and D'Odorico, 2024). Water scarcity may also be used to advocate for technological advances, fuelling technological optimism and investments in new profitable businesses. Water limits are often presented as biophysical constraints, which depoliticises them and overlooks their connection with unlimited growth models. Limits are indeed political and are "essential for capitalism", which cannot function in conditions of abundance (Hickel, 2019; Kallis, 2019: 66). When a resource is scarce, lifeboat ethics (Hardin, 1974; Lucas and Ogletree, 1976) may prevail, justifying distributive injustices that leave marginalised communities without water.

Alternative economic approaches inspired by degrowth and deceleration paradigms could provide pathways for transformative water justice (Kallis et al., 2020), though they are by no means the only possible pathways. Reducing pressure on water resources could allow for more equitable access to water

by all, provided that the criteria for water allocation and governance are radically transformed. Policies could, for example, prioritise allocating water away from extractive industries and large-scale livestock production while ensuring sufficient water for food production; in such a scenario, water would be equitably distributed to meet human needs and rights and would not leave responsibility for these systemic changes to individual consumer choices. Ultimately, as scholars from ecological and Marxian economics have argued, the economy should be organised around provisioning for long-term human and non-human needs (use value), rather than prices (exchange value) and 'green growth', which are rooted in capitalist and colonial logics (Daly, 1994; Hickel, 2021; Martinez-Alier, 2003). This concurs with calls from activists and scholars to conceive of water as a public trust that is accessible to all regardless of ability to pay (Barlow, 2008; Barlow and Clarke, 2002; Shiva, 2016; Sultana and Loftus, 2015). This work to move beyond current dominant capitalist systems also involves the illumination of historical processes through which economic and environmental exploitation have occurred via the imposition of state-driven violence (Nichols, 2020). Economic system transformations to support water justice must therefore recognise and challenge the ways in which dominant economic systems reinforce their violent roots. Movements seeking to implement transformative change need to be conscious of and challenge co-optation by vested interests (Horowitz, 2023).

Perspectives beyond Western economics seek radical transformations of economic systems around water. Preceding the 2023 UN Water Conference, social movements and Indigenous peoples posited that, rather than the latest manifestations of public – private partnerships, we need 'public – community partnerships' that move away from a state that is dominated by private interests and complicit in commodification and dispossession; that is to say, Indigenous and community-based knowledge and traditions should be foregrounded. New mechanisms at higher levels of international governance should form the enabling environment for autonomy at the local level in order to secure inclusive and equitable public stewardship over water and ensure that each local community gets its fair share (International Indian Treaty Council, 2023; People's Water Forum, 2023).

These diverse movements towards transformative justice seek to reclaim water justice, water stewardship, and water as a global common good from the powerful interests who are seeking to script these narratives (Loftus and Sultana, 2011). Members of these movements recognise that transformative justice principles are fundamentally at odds with commodification, privatisation and financialisation (World People's Conference on Climate Change and the Rights of Mother Earth, 2010; The Transformative Water Pact, 2023; D'Odorico et al., 2024). Rather than incorporating progressive language and equity adjustments into existing structures, transformative water justice delves deep into the roots of dominant unjust systems to make water truly accessible for all beings.

CONCLUSION

This *Viewpoint* demonstrates the dangerous prevalence of shallow water justice and its significance in reinforcing structures of marginalisation, particularly concerning international water policy and discourse. Across scales of governance, shallow water justice relies on status quo processes such as market-based water allocation mechanisms and Western sociopolitical structures such as legal systems that are dependent on private property and individual rights. These dominant economic and legal systems are foundational to the reproduction of water injustice, and challenges to them can thus develop more equitable processes and conditions. Isolated instances of challenging these systems may not be able to subvert entrenched powerful institutions, but building coalitions and strengthening long-term movements that aim to foster social change can build towards transformative justice. Action towards transformative water justice is critical for the amelioration of global inequities in a warming, developing and drying world. Without deep engagement with the structures that reproduce marginalisation and water injustice, policies will support the status quo and will obfuscate harmful ongoing processes.

This requires genuine engagement with diverse perspectives and elevation of marginalised perspectives over dominant ones that are rooted in colonial or neoliberal relationships. Any work towards water justice must integrate the visions of Indigenous scholars and communities and land-connected people; it must also engage with more transformative research methods and think critically about the underlying assumptions and biases of Western science. We stress the importance of transformative, rather than shallow, water justice, particularly as water justice terminology has been appropriated and often weakened by private sector actors, international development institutions, and governments that consider some elements of justice while maintaining structures of marginalisation. By moving from shallow to transformative water justice, policy-makers, researchers and myriad communities stand a better chance of creating more equitable, diverse and sustainable relationships with water. Our intervention here aims to call scholarly attention to the ways in which shallow water justice is being reproduced in policy and discourse. We recognise, however, that to develop truly transformative water justice – as opposed to shallow water justice – we must look to, and support, the communities and activists who have been working continuously to critique and transform unjust systems across the world.

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REFERENCES

- Alves, E.M.; Geere, J.-A.; Gutierrez Arteiro da Paz, M.; Jacobi, P.R.; Grandisoli, E.A. de C. and Sulaiman, S.N. 2021. Water security in two megacities: Observations on public actions during 2020 in São Paulo and London. *Water International* 46(6): 883-899, <https://doi.org/10.1080/02508060.2021.1970376>
- Angel, J. and Loftus, A. 2019. With-against-and-beyond the human right to water. *Geoforum* 98: 206-213, <https://doi.org/10.1016/j.geoforum.2017.05.002>
- Anguelovski, I.; Shi, L.; Chu, E.; Gallagher, D.; Goh, K.; Lamb, Z.; Reeve, K. and Teicher, H. 2016. Equity impacts of urban land use planning for climate adaptation: Critical perspectives from the Global North and South. *Journal of Planning Education and Research* 36(3): 333-348, <https://doi.org/10.1177/0739456X16645166>
- Arrojo Agudo, P. 2021. Risks and impacts of the commodification and financialization of water on the human rights to safe drinking water and sanitation. *OHCHR*. <https://www.ohchr.org/en/documents/thematic-reports/a76159-risks-and-impacts-commodification-and-financialization-water> (accessed 21 February 2024)
- Arrojo Agudo, P. 2023. What's next: the legacy of the UN Water Conference. *Rural Water Supply Network – blog*, <https://rwsn.blog/2023/04/06/un-special-rapporteur-whats-next-the-legacy-of-the-un-water-conference/> (accessed 21 February 2024)
- Baer, M. 2014. Private water, public good: Water privatization and state capacity in Chile. *Studies in Comparative International Development* 49(2): 141-167, <https://doi.org/10.1007/s12116-014-9154-2>
- Bakker, K. 2002. From state to market? Water mercantilización in Spain. *Environment and Planning A: Economy and Space* 34(5): 767-790, <https://doi.org/10.1068/a3425>
- Barde, J.A. and Lehmann, P. 2014. Distributional effects of water tariff reforms – An empirical study for Lima, Peru. *Water Resources and Economics* 6: 30-57, <https://doi.org/10.1016/j.wre.2014.05.003>
- Barlow, M. 2008. Monthly Review | Blue Covenant: The alternative water future. *Monthly Review*, <https://monthlyreview.org/2008/07/01/blue-covenant-the-alternative-water-future/> (accessed 21 February 2024)
- Barlow, M. and Clarke, T. 2002. Who owns water?, <https://www.thenation.com/article/archive/who-owns-water/> (accessed 21 February 2024)
- Bayliss, K. 2014. The financialization of water. *Review of Radical Political Economics* 46(3): 292-307, <https://doi.org/10.1177/0486613413506076>

- Bayliss, K. 2016. Neoliberalised Water in South Africa. https://fessud.org/wp-content/uploads/2015/03/FESSUD_WP204_Neoliberalised-Water-in-South-Africa.pdf (accessed 21 February 2024)
- Bieler, A. and Moore, M. 2023. Water grabbing, capitalist accumulation and resistance: Conceptualising the multiple dimensions of class struggle. *Global Labour Journal* 14(1), <https://doi.org/10.15173/glj.v14i1.5074>
- Bockstael, E. 2017. Critical capacity development: An action research approach in coastal Brazil. *World Development* 94: 336-345, <https://doi.org/10.1016/j.worlddev.2017.01.017>
- Boelens, R. 2009. The politics of disciplining water rights. *Development and Change* 40(2): 307-331, <https://doi.org/10.1111/j.1467-7660.2009.01516.x>
- Boelens, R. and Zwarteveen, M. 2005. 5. Anomalous water rights and the politics of normalization: Collective water control and privatization policies in the Andean Region. In Roth, D.; Boelens, R. and Zwarteveen, M. (Eds), *Liquid relations: Contested water rights and legal complexity*, pp. 97-123. Rutgers University Press, <https://doi.org/10.36019/9780813537849-007>
- Bond, P. and Dugard, J. 2008. Water, human rights and social conflict: South African experiences. *Law Social Justice and Global Development Journal* 1(2008): 1-21.
- Boyd, D.R. 2017. *The rights of nature: A legal revolution that could save the world*. ECW Press.
- Budds, J. and McGranahan, G. 2003. Are the debates on water privatization missing the point? Experiences from Africa, Asia and Latin America. *Environment and Urbanization* 15(2): 87-114, <https://doi.org/10.1177/095624780301500222>
- Charleix, L. 2018. The Whanganui River as Te Awa Tupua: Place-based law in a legally pluralistic society. *The Geographical Journal* 184(1): 19-30, <https://doi.org/10.1111/geoj.12238>
- Contreras, D.; Gómez-Lobo, A. and Palma, I. 2018. Revisiting the distributional impacts of water subsidy policy in Chile: a historical analysis from 1998-2015. *Water Policy* 20(6): 1208-1226, <https://doi.org/10.2166/wp.2018.073>
- Correa-Parra, J.; Vergara-Perucich, J.F. and Aguirre-Nuñez, C. 2020. Water privatization and inequality: Gini coefficient for water resources in Chile. *Water* 12(12): 3369, <https://doi.org/10.3390/w12123369>
- Couret Branco, M. and Damião Henriques, P. 2010. The political economy of the human right to water. *Review of Radical Political Economics* 42(2): 142-155, <https://doi.org/10.1177/0486613410368390>
- Crenshaw, K.W. 1988. Race, reform and retrenchment: Transformation and legitimation in antidiscrimination law. In *Law and Social Movements*. Routledge.
- Daly, H.E. 1994. *For the common good: Redirecting the economy toward community, the environment, and a sustainable future*. Beacon Press.
- Davis, H. and Todd, Z. 2017. On the Importance of a date, or, decolonizing the Anthropocene. *ACME: An International Journal for Critical Geographies* 16(4): 761-780.
- Debaere, P.; Richter, B.D.; Davis, K.F.; Duvall, M.S.; Gephart, J.A.; O'Bannon, C.E.; Pelnik, C.; Powell, E.M. and Smith, T.W. 2014. Water markets as a response to scarcity. *Water Policy* 16(4): 625-649, <https://doi.org/10.2166/wp.2014.165>
- Dethier, E.N.; Silman, M.; Leiva, J.D.; Alqahtani, S.; Fernandez, L.E.; Pauca, P.; Çamalan, S.; Tomhave, P.; Magilligan, F.J.; Renshaw, C.E. and Lutz, D.A. 2023. A global rise in alluvial mining increases sediment load in tropical rivers. *Nature* 620(7975): 787-793, <https://doi.org/10.1038/s41586-023-06309-9>
- Diaz, J. 2021. *Ecologies of gold: Understanding the social, political, and ecological impacts of mercury use in informal, small-scale gold mining in Madre de Dios, Peru*. PhD. Ann Arbor, United States, <https://www.proquest.com/docview/2640279769/abstract/6DC43B195CFC4E6EPQ/1> (accessed 27 February 2024)
- D'Odorico, P.; Dell'Angelo, J. and Rulli, M.C. 2024. Appropriation pathways of water grabbing. *World Development* 181: 106650, <https://doi.org/10.1016/j.worlddev.2024.106650>
- Economic Commission for Latin America and the Caribbean. 2023. 2023 Regional Water Dialogues for Latin America and the Caribbean: Towards the United Nations Water Conference. Regional Water Dialogues 2023. Santiago, Chile.

- Enel. 2022. The water footprint: how to safeguard the most precious resource. <https://www.enel.com/company/stories/articles/2022/10/water-footprint> (accessed 21 February 2024)
- Federici, S. 2012. Feminism and the politics of the commons. *The Commoner*, <https://thecommoner.org/wp-content/uploads/2020/06/federici-feminism-and-the-politics-of-commons.pdf>.
- Forsyth, T. and McDermott, C.L. 2022. When climate justice goes wrong: Maladaptation and deep co-production in transformative environmental science and policy. *Political Geography* 98: 102691, <https://doi.org/10.1016/j.polgeo.2022.102691>
- Geist, H.J. and Lambin, E.F. 2002. Proximate causes and underlying driving forces of tropical deforestation: Tropical forests are disappearing as the result of many pressures, both local and regional, acting in various combinations in different geographical locations. *BioScience* 52(2): 143-150, [https://doi.org/10.1641/0006-3568\(2002\)052](https://doi.org/10.1641/0006-3568(2002)052)
- General Assembly. 2023. Summary of Proceedings – UN 2023 Water Conference. *UN-Water*. <https://www.unwater.org/news/summary-proceedings-un-2023-water-conference> (accessed 21 February 2024)
- Gladstone, F.; Liverman, D.; Sánchez Rodríguez, R.A. and Morales Santos, A.E. 2021. NAFTA and environment after 25 years: A retrospective analysis of the US-Mexico border. *Environmental Science & Policy* 119: 18-33, <https://doi.org/10.1016/j.envsci.2020.10.017>
- Global Commission on the Economics of Water. 2023a. Turning the tide: A call to collective action, <https://watercommission.org/publication/turning-the-tide-a-call-to-collective-action/> (accessed 21 February 2024)
- Global Commission on the Economics of Water. 2023b. Water and the high price of bad economics. *Project Syndicate*. <https://www.project-syndicate.org/commentary/global-water-crisis-bad-economics-ignores-externalities-rewards-pillaging-by-mariana-mazzucato-et-al-2023-12> (accessed 21 February 2024)
- Global Commission on the Economics of Water. 2023c. The what, why and how of the world water crisis: Global Commission on the Economics of Water Phase 1 Review and Findings, <https://watercommission.org/publication/phase-1-review-and-findings/> (accessed 21 February 2024)
- Global Commission on the Economics of Water. 2024. Chapter 4: Pushing the economics: The case for shaping markets. *The Economics of Water*, <https://economicsofwater.watercommission.org/chapter-04/> (accessed 12 December 2024)
- Global Water Partnership. 2024. Placing water within World Economic Forum's 'Future of Growth' Framework. *Global Water Partnership*. <https://www.gwp.org/en/About/more/news/2024/placing-water-within-world-economic-forums-future-of-growth-framework/> (accessed 21 February 2024)
- Goldman, M. 2007. How "Water for All!" policy became hegemonic: The power of the World Bank and its transnational policy networks. *Geoforum* 38(5): 786-800, <https://doi.org/10.1016/j.geoforum.2005.10.008>
- GRAIN. 2012. Squeezing Africa dry: behind every land grab is a water grab. <https://grain.org/article/entries/4516-squeezing-africa-dry-behind-every-land-grab-is-a-water-grab> (accessed 23 November 2022)
- Gready, P. and Robins, S. 2014. From transitional to transformative justice: A new agenda for practice. *International Journal of Transitional Justice* 8(3): 339-361, <https://doi.org/10.1093/ijtj/iju013>
- Grillos, T.; Zarychta, A. and Nelson Nuñez, J. 2021. Water scarcity & procedural justice in Honduras: Community-based management meets market-based policy. *World Development* 142: 105451, <https://doi.org/10.1016/j.worlddev.2021.105451>
- Gutberlet, J. and Hunter, A. 2008. Social and environmental exclusion at the edge of São Paulo, Brazil. *URBAN DESIGN International* 13(1): 3-20, <https://doi.org/10.1057/udi.2008.2>
- Hall, D. and Lobina, E. 2006. Pipe Dreams – failure of the private sector to invest in water. www.psuru.org/reports/pipe-dreams-failure-private-sector-invest-water.html (accessed 21 February 2024)
- Hall, D. and Lobina, E. 2012. Financing water and sanitation: public realities.
- Hardin, G. 1974. Commentary: Living on a Lifeboat. *BioScience* 24(10): 561-568, <https://doi.org/10.2307/1296629>
- Harris, L.; McKenzie, S.; Rodina, L.; Shah, S. and Wilson, N. 2017. Water justice: Key concepts, debates and research agendas. In *The Routledge Handbook of Environmental Justice*, Routledge.
- Hartman, S.; Farfán, M.; Hoogesteger, J. and D'Odorico, P. 2021. The irrigation frontline – Examining land use change and resource rights fueling the Michoacan Berry Boom. *Earth and Space Science Open Archive*.

- <https://doi.org/10.1002/essoar.10509628.1> (accessed 24 April 2022)
- Harvey, D. 2005. *A brief history of neoliberalism*. Oxford University Press, <https://doi.org/10.1093/oso/9780199283262.001.0001>
- Heller, L.; Karunanathan, M.; Zwartveen, M.; Hall, D.; Manahan, M.A. and Diouf, F. 2023. What water will the UN Conference carry forward: A fundamental human right or a commodity? *The Lancet* 402(10404): 757-759, [https://doi.org/10.1016/S0140-6736\(23\)01430-7](https://doi.org/10.1016/S0140-6736(23)01430-7)
- Hickel, J. 2019. Degrowth: A theory of radical abundance. *Real-world economics review* 87, <https://www.paecon.net/PAEReview/issue87/whole87.pdf#page=54>.
- Hickel, J. 2021. The anti-colonial politics of degrowth. *Political Geography* 88: 102404, <https://doi.org/10.1016/j.polgeo.2021.102404>
- Horowitz, L.S. 2023. The double movement and the triple-helix: Divestment, decommodification, and the Dakota Access Pipeline. *Environment and Planning A: Economy and Space* 55(6): 1337-1354, <https://doi.org/10.1177/0308518X221147299>
- Hsiao, E.C. 2012. Whanganui River Agreement – Indigenous Rights and Rights of Nature National Affairs: New Zealand. *Environmental Policy and Law* 42(6): 371-375.
- IMF. 2015. Is the glass half empty or half full? Issues in managing water challenges and policy instruments. *Staff Discussion Notes* 15(11): 1, <https://doi.org/10.5089/9781484391198.006>
- International Indian Treaty Council. 2023. Indigenous Peoples’ Declaration For The 2023 United Nations Water Conference. *International Indian Treaty Council*. <https://www.iitc.org/indigenous-peoples-declaration-for-the-2023-united-nations-water-conference/> (accessed 21 February 2024)
- Jambadu, L.; Monstadt, J. and Pilo, F. 2024. The politics of tied aid: Technology transfer and the maintenance and repair of water infrastructure. *World Development* 175: 106476, <https://doi.org/10.1016/j.worlddev.2023.106476>
- Jenkins, W.; Rosa, L.; Schmidt, J.; Band, L.; Beltran-Peña, A.; Clarens, A.; Doney, S.; Emanuel, R.E.; Glassie, A.; Quinn, J.; Rulli, M.C.; Shobe, W.; Szeptycki, L. and D’Odorico, P. 2021. Values-based scenarios of water security: Rights to water, rights of waters, and commercial water rights. *BioScience* 71(11): 1157-1170, <https://doi.org/10.1093/biosci/biab088>
- Kallis, G. 2019. *Limits: Why Malthus was wrong and why environmentalists should care*. Stanford University Press.
- Kallis, G.; Paulson, S.; D’Alisa, G. and Demaria, F. 2020. *The case for degrowth*. John Wiley & Sons.
- Keys, P.W.; Wang-Erlandsson, L.; Gordon, L.J.; Galaz, V. and Ebbesson, J. 2017. Approaching moisture recycling governance. *Global Environmental Change* 45: 15-23, <https://doi.org/10.1016/j.gloenvcha.2017.04.007>
- Larcom, S. and van Gevelt, T. 2017. Regulating the water-energy-food nexus: Interdependencies, transaction costs and procedural justice. *Environmental Science & Policy* 72: 55-64, <https://doi.org/10.1016/j.envsci.2017.03.003>
- Leonard, K.; David-Chavez, D.; Smiles, D.; Jennings, L.; Alegado, R. ‘Anolani; Maniowabi, J.; Arsenault, R.; Begay, R.L. and Davis, D.D. 2023. Water back: A review centering repatriation and indigenous water research sovereignty. *Water Alternatives* 16(2): 374-428.
- Li, T.M. 2011. Rendering society technical: Government through community and the ethnographic turn at the World Bank in Indonesia. In *Chapter 3 Rendering Society Technical: Government through Community and the Ethnographic Turn at the World Bank in Indonesia*, pp. 57-80. Berghahn Books, <https://doi.org/10.1515/9780857451118-004>
- Loftus, A. and Sultana, F. 2011. The right to water: Prospects and possibilities. In Sultana, F. and Loftus, A. (Eds), *The right to water*. Routledge.
- Lucas, G.R. and Ogletree, T.W. 1976. Lifeboat ethics: The moral dilemmas of world hunger. *Eweb*: 14411. <https://repository.library.georgetown.edu/handle/10822/772261> (accessed 21 February 2024)
- Lukasiewicz, A.; Bowmer, K.; Syme, G.J. and Davidson, P. 2013. Assessing government intentions for Australian water reform using a social justice framework. *Society & Natural Resources* 26(11): 1314-1329, <https://doi.org/10.1080/08941920.2013.791903>
- Manning, B.R.M. 2018. *Upstream: Trust lands and power on the Feather River*. University of Arizona Press.
- Manuel, A. and Derrickson, G.C.R.M. 2021. *Unsettling Canada: A national wake-up call*. Between the Lines.

- Martínez, E.; Drenkhan, F.; Zogheib, C.; Ochoa-Tocachi, B. and Buytaert, W. 2020. Emerging water scarcity risks in Peruvian glacier-fed river basins. SSRN Scholarly Paper, Rochester, NY, 12 October 2020, <https://doi.org/10.2139/ssrn.3696758> (accessed 27 February 2024)
- Martinez-Alier, J. 2003. *The environmentalism of the poor: A study of ecological conflicts and valuation*. Cheltenham, UK Northampton, MA: Edward Elgar Pub.
- Mehta, L.; Veldwisch, G.J. and Franco, J. 2012. Introduction to the Special Issue: Water grabbing? Focus on the (re)appropriation of finite water resources. *Water Alternatives* 5(2): 15.
- Meyfroidt, P.; Lambin, E.F.; Erb, K.-H. and Hertel, T.W. 2013. Globalization of land use: distant drivers of land change and geographic displacement of land use. *Current Opinion in Environmental Sustainability* 5(5): 438-444, <https://doi.org/10.1016/j.cosust.2013.04.003>
- Miraftab, F. 2004. Public-private partnerships: The trojan horse of neoliberal development? *Journal of Planning Education and Research* 24(1): 89-101, <https://doi.org/10.1177/0739456X04267173>
- Morole, M.; Yessoufou, K.; Bufo, S.; Rampedí, I. and Modley, L. 2023. The impact of informal settlements on the surface water quality: A baseline analysis of the Kaalspruit in Tembisa township, South Africa. *Urban Water Journal* 20(10): 1756-1765, <https://doi.org/10.1080/1573062X.2022.2099289>
- Nagheeby, M.; Mehdi Piri, D. and Faure, M. 2019. The legitimacy of dam development in international watercourses: A Case study of the Harirud River Basin. *Transnational Environmental Law* 8(2): 247-278, <https://doi.org/10.1017/S2047102519000128>
- Newell, P.; Srivastava, S.; Naess, L.O.; Torres Contreras, G.A. and Price, R. 2021. Toward transformative climate justice: An emerging research agenda. *WIREs Climate Change* 12(6): e733, <https://doi.org/10.1002/wcc.733>
- Nichols, R. 2020. *Theft is property!: Dispossession and critical theory*. Duke University Press, <https://doi.org/10.1215/9781478090250>
- O'Bannon, C.; Carr, J.; Seekell, D.A. and D'Odorico, P. 2014. Globalization of agricultural pollution due to international trade. *Hydrology and Earth System Sciences* 18(2): 503-510, <https://doi.org/10.5194/hess-18-503-2014>
- Ochoa-Tocachi, B.F.; Buytaert, W.; De Bièvre, B.; Célleri, R.; Crespo, P.; Villacís, M.; Llerena, C.A.; Acosta, L.; Villazón, M.; Guallpa, M.; Gil-Ríos, J.; Fuentes, P.; Olaya, D.; Viñas, P.; Rojas, G. and Arias, S. 2016. Impacts of land use on the hydrological response of tropical Andean catchments. *Hydrological Processes* 30(22): 4074-4089, <https://doi.org/10.1002/hyp.10980>
- OECD. 2016. *Water, growth and finance. Policy Perspectives*. Paris: OECD.
- OECD. 2018. *Water and Agriculture*. https://issuu.com/oecd.publishing/docs/water_and_agriculture (accessed 21 February 2024)
- OECD. 2023a. *Global Outlook on Financing for Sustainable Development 2023*. <https://www.oecd.org/finance/global-outlook-on-financing-for-sustainable-development-2023-fcbe6ce9-en.htm> (accessed 21 February 2024)
- OECD. 2023b. 9th meeting of the Roundtable on Financing Water.
- Hepworth, N. and Orr, S. 2013. Corporate water stewardship: Exploring private sector engagement in water security. In Lankford, B.; Bakker, K.; Zeitoun, M. and Conway, D. (Eds), *Water Security*, Routledge.
- Oskam, M.J.; Pavlova, M.; Hongoro, C. and Groot, W. 2021. Socio-economic inequalities in access to drinking water among inhabitants of informal settlements in South Africa. *International Journal of Environmental Research and Public Health* 18(19): 10528, <https://doi.org/10.3390/ijerph181910528>
- People's Agreement of Cochabamba. 2010. *World People's Conference on Climate Change and the Rights of Mother Earth*, <https://pwccc.wordpress.com/2010/04/24/peoples-agreement/> (accessed 21 February 2024)
- People's Water Forum. 2023. *The Water Justice Manifesto*. <https://thepeopleswaterforum.org/2023/02/28/water-justice-manifesto/> (accessed 21 February 2024)
- Reade Malagueño, B. and D'Odorico, P. 2024. ¿Libre de la maleza estatista? Assessing neoliberal promises and water markets in Chile. *Earth's Future* 12(10): e2024EF004963, <https://doi.org/10.1029/2024EF004963>
- Robina Ramírez, R.; De Clercq, W. and Jackson, M.N. 2019. Human water governance: A social innovation model to reduce the inequalities of water services in South African informal settlements. In Cagica Carvalho, L.; Rego, C.; Lucas, M.R.; Sánchez-Hernández, M.I. and Backx Noronha Viana, A. (Eds), *New paths of entrepreneurship*

- development: The role of education, smart cities, and social factors*. Studies on Entrepreneurship, Structural Change and Industrial Dynamics, pp. 231-255. Cham: Springer International Publishing, https://doi.org/10.1007/978-3-319-96032-6_12
- Rockström, J.; Mazzucato, M., Andersen, L.S.; Fahrländer, S.F. and Gerten, D. 2023. Why we need a new economics of water as a common good. *Nature* 615(7954): 794-797, <https://doi.org/10.1038/d41586-023-00800-z>
- Rudge, K. 2021. Participatory climate adaptation planning in New York City: Analyzing the role of community-based organizations. *Urban Climate* 40: 101018, <https://doi.org/10.1016/j.uclim.2021.101018>
- Rudge, K. 2023. Leveraging critical race theory to produce equitable climate change adaptation. *Nature Climate Change* 13(7): 623-631, <https://doi.org/10.1038/s41558-023-01690-9>
- Runyan, C.W.; D'Odorico, P. and Lawrence, D. 2012. Physical and biological feedbacks of deforestation. *Reviews of Geophysics* 50(4), <https://doi.org/10.1029/2012RG000394>
- Schlosberg, D. 2007. *Defining environmental justice: Theories, movements, and nature*. OUP Oxford.
- Schrock, G.; Bassett, E.M. and Green, J. 2015. Pursuing equity and justice in a changing climate: Assessing equity in local climate and sustainability plans in U.S. Cities. *Journal of Planning Education and Research* 35(3): 282-295, <https://doi.org/10.1177/0739456X15580022>
- Shiva, V. 2016. *Water wars: Privatization, pollution, and profit*. North Atlantic Books.
- Silva, N.K. 2004. *Aloha betrayed: Native Hawaiian resistance to American colonialism*. Duke University Press.
- Siurua, H. 2006. Nature above people: Rolston and "fortress" conservation in the South. *Ethics and the Environment* 11(1): 71-96.
- Sojamo, S.; Keulertz, M.; Warner, J. and Allan, J.A. 2012. Virtual water hegemony: The role of agribusiness in global water governance. *Water International* 37(2): 169-182, <https://doi.org/10.1080/02508060.2012.662734>
- Stockholm International Water Institute. 2023. Capacity Development for Water. *SIWI – Leading expert in water governance*. <https://siwi.org/publications/capacity-development-for-water/> (accessed 21 February 2024)
- Sultana, F. 2018. Water justice: why it matters and how to achieve it. *Water International* 43(4): 483-493, <https://doi.org/10.1080/02508060.2018.1458272>
- Sultana, F. and Loftus, A. 2015. The human right to water: Critiques and condition of possibility. *WIREs Water* 2(2): 97-105, <https://doi.org/10.1002/wat2.1067>
- Swann, A.L.S.; Fung, I.Y. and Chiang, J.C.H. 2012. Mid-latitude afforestation shifts general circulation and tropical precipitation. *Proceedings of the National Academy of Sciences* 109(3): 712-716, <https://doi.org/10.1073/pnas.1116706108>
- The Transformative Water Pact. 2023. <https://transformativewaterpact.org/> (accessed 21 February 2024)
- Toivonen, A. and Seremani, T. 2021. The enemy within: The legitimating role of local managerial elites in the global managerial colonization of the Global South. *Organization* 28(5): 798-816, <https://doi.org/10.1177/13505084211015373>
- Tuba, O. 2023. A postcolonial exploration of Finnish engagement in North-South higher education capacity development partnerships, <https://jyx.jyu.fi/handle/123456789/92969>
- UN DESA. 2023. Financing the Sustainable Development Goals through mission-oriented development banks. <https://www.un.org/development/desa/dpad/publication/un-desa-policy-brief-special-issue-financing-the-sustainable-development-goals-through-mission-oriented-development-banks/> (accessed 21 February 2024)
- United Nations. 1977. Report of the United Nations Water Conference, Mar del Plata, 14-25 March 1977. In UN Water Conference (1977: Mar del Plata, Argentina), UN, <https://digitallibrary.un.org/record/724642> (accessed 27 February 2024)
- United Nations. 2007. Declaration on the Rights of Indigenous People.
- United Nations Environment Programme and World Meteorological Organization. 1992. International Conference on Water and the Environment: Development Issues for the 21st century, <https://wedocs.unep.org/xmlui/handle/20.500.11822/30961>
- Viaene, L. 2021. Indigenous water ontologies, hydro-development and the human/more-than-human right to water: A call for critical engagement with plurilegal water realities. *Water* 13(12): 1660, <https://doi.org/10.3390/w13121660>

- Vos, J. and Boelens, R. 2016. The politics and consequences of virtual water export. In Jackson, P.; Spiess, W.E.L. and Sultana, F. (Eds), *Eating, drinking: Surviving*, pp. 31-41, https://doi.org/10.1007/978-3-319-42468-2_4
- Vos, J. and Boelens, R. 2018. Neoliberal water governmentalities, virtual water trade, and contestations. In Boelens, R.; Perreault, T. and Vos, J. (Eds), *Water Justice*, pp. 283-301, <https://doi.org/10.1017/9781316831847.019>
- Waldman, P.; Rangarajan, S.; Whitley, A. and Gross, S. 2023. Investors are getting rich off a trade that's sucking a continent dry. *Bloomberg.com*. 2023, <https://www.bloomberg.com/graphics/2023-australia-water-trade-drought/> (accessed 21 February 2024)
- Water Footprint Implementation. 2023. WFI launches Water Footprint Compensation during UN Water Conference. *Water Footprint Implementation*, <https://waterfootprintimplementation.com/news/wfi-launches-water-footprint-compensation-during-un-water-conference/> (accessed 21 February 2024)
- Water Footprint Network. n.d. What can consumers do?, <https://www.waterfootprint.org/time-for-action/what-can-consumers-do/> (accessed 21 February 2024)
- West, R.L. 2011. Tragic rights: The rights critique in the age of Obama constitutional transformations: the state, the citizen, and the changing role of government symposium: individual rights. *William and Mary Law Review* 53(2): 713-746.
- Wodon, Q.; Komives, K.; Foster, V.; Abdullah, R. and Halpern, J. 2006. *The distributional incidence of residential water and electricity subsidies*. Policy Research Working Papers. The World Bank, <https://doi.org/10.1596/1813-9450-3878>
- World Bank. 2016. Natural capital accounting : Water. *World Bank*. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/244001568726449073/Natural-Capital-Accounting-Water> (accessed 2 December 2024)
- World Bank. 2017a. Uncharted waters: The new economics of water scarcity and variability. *World Bank*. <https://openknowledge.worldbank.org/entities/publication/8d489f9a-09e3-5db9-859a-2d2144650fad> (accessed 19 December 2024)
- World Bank. 2017b, August 30. *Leveraging commercial finance for water: Will it hurt the poor?* <https://blogs.worldbank.org/water/leveraging-commercial-finance-water-will-it-hurt-poor>
- World Economic Forum. 2023. Beyond the UN Water Conference: Leaders on what's next, <https://open.spotify.com/episode/0bblydilXzxXZZwJl44a7t> (accessed 21 February 2024)
- World Resources Institute. 2017. 7 Reasons we're facing a global water crisis, <https://www.wri.org/insights/7-reasons-were-facing-global-water-crisis>
- World Trade Organization. 2023. *WTO's contribution to attaining UN Sustainable Development Goals: 2023 update to the High-Level Political Forum*. WTO, <https://doi.org/10.30875/9789287072153>
- Yalew, S.G.; Kwakkal, J. and Doorn, N. 2021. Distributive justice and sustainability goals in transboundary rivers: Case of the Nile Basin. *Frontiers in Environmental Science* 8, <https://www.frontiersin.org/articles/10.3389/fenvs.2020.590954>

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