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## Rural–urban water struggles: urbanizing hydrosocial territories and evolving connections, discourses and identities

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### Introduction

In 2007, for the first time in human history, the world's population became more urban than rural – a trend that is expected to increase in the coming decades, reaching 66% by 2030. While being 'powerhouses of economic growth and catalysts for inclusion and innovation', cities face severe challenges to provide adequate services, including drinking water and sanitation (UN-Habitat, 2016, p. iii). Correspondingly, one of the Sustainable Development Goals is focused on cities and achieving access to affordable housing and basic services for all by 2030 (United Nations, 2017, p. SDG11). This directly links with other goals, such as SDG 6, which focuses on universal access to safe drinking water and adequate sanitation.

Despite all the international attention on urban development, and the changing character of urban life and infrastructure, critical analyses of the entanglement of cities and their surrounds are often missing. Further, the rural–urban binary that scholarly and policy discussions often highlight can be misleading, as the concurrent rise of peri-urban development and the periodic and cyclical migration of people between urban, extra-urban and rural areas challenge such a neat dichotomy. The central focus of this special issue is on water-related analysis that explicitly links urban locales to the broader surrounds. The authors herein examine a range of urban–rural and peri-urban linkages in terms of the flows, pathways and governance of water, and the ways in which urban processes trigger political, technological, economic and cultural shifts in rural / peri-urban / urban linkages.

It is clear that the development of cities and urban conglomerations closely relates to the dynamics and relations in rural areas, and centrally depends on the appropriation and transformation of diverse rural socio-environments. In the past, such linkages have been largely theorized through concepts such as 'water, ecological, or urban footprints', with geographic concepts such as the urban hinterland, or with perspectives that examine 'the rural' as extraction zones for city wealth and the dumping grounds for urban waste disposal. Here, we build on and enrich the range of discussions and analytics to further theorize urban–rural water connections. To do so, we particularly call attention to the

interrelatedness of material, political, social and discursive aspects of rural–urban water (dis)connections. As we outline below, hydraulic infrastructure projects, policies, laws and water-related imaginaries and discourses all connect rural and urban spaces – and thus attendant hydrosocial designs and configurations. This also includes attention to intersecting flows of water, knowledge, money, ideas and people, as processes that all require analytics that link rural and urban hydrogeographies (or, engaging other terminology, waterscapes [Swyngedouw, 1997], hydrosocial cycles [Linton & Budds, 2014], or hydrosocial territories [Boelens, Hoogesteger, Swyngedouw, Vos, & Wester, 2016]). While some of the earlier concepts and approaches invite attention to rural–urban connections and linkages through quantitative analysis of resource requirements (as with the footprints approach), this special issue combines a range of analyses that further political ecology and hydrosocial approaches to illustrate and consider such connections. As such, our contributions help clarify that urban-rural changes in the water realm relate not only to important biophysical, climatological and material dynamics and linkages (as with the ecological footprint concept) but also rely on ideological, economic and political connections and linkages. We discuss how urban and rural livelihoods and lifeways are constructed relationally. Given our reliance on political ecology and associated socio-natural, techno-political and cultural-discursive frameworks, our contribution similarly advances approaches related to disputes over socio-ecological interventions, distribution and governance, as well as equity and justice considerations important for urban-rural water transformations. We also relate these concepts to issues of (disputed) water culture(s) and identities, examining the ways in which cultural politics often importantly shape urban-rural relations and mutual (mis)recognition. This combination of themes has only begun to be explored to date (it is most prevalent in earlier work on ‘extraction’ or ‘sacrifice’ zones, as noted above).

Water provides a particularly useful and interesting lens through which to understand and think through urban/rural and urban/extra-urban dynamics and pathways. As a flow resource, water moves from rural spaces, through cities, and out again. On the way, water literally takes on characteristics and ‘imprints’ from the diverse locales it passes through. It also links people and places in ways that make the connections between sites clear – often in ways that are hidden in analyses that take the urban–rural boundary to be fixed or distinct. Thus, upstream pollution (e.g., from a mining site) affects the suitability of the water source for use in an urban area, or can affect the specific treatment processes that are required (or urban and peri-urban pollution can pose particular risks for agricultural water uses; see Wessels, Veldwisch, Kujawa, & Delcarme, 2019, this issue). Similarly, urban residents benefit from forested and protected catchments upstream, and there has been increasing recognition of these connections with programmes such as payment for ecosystem services (PES) to protect water sources that serve urban populations – i.e., payments to upstream farmers to avoid practices that pollute shared waters or to reward them for pursuing practices that conserve and protect water sources. In a similar way, after water leaves urban areas, there is a clear and indelible imprint of the features of cities, from industrial pollution to storm runoff that might be associated with urban soil sealing. In all of these ways, water links and connects urban, rural and peri-urban areas, transcends such divides and also defies the characterization of these very categories. In this volume, we explore such dynamics to explicitly consider the interfaces and complex movements, flows and dynamics that connect and disrupt locales and the boundaries between them. We are also interested

in exploring the ‘boundary work’ or boundary-making processes that performatively serve to cast and entrench rural / urban / peri-urban distinctions as fixed, or meaningful (Jones, 2009), despite the range of considerations (including water flows) that undermine and disrupt such categorization.

There are other important examples of how water illustrates, embodies and underscores these linkages and connections. For example, water from rural areas is extracted and piped to supply urban houses and industrial sites; irrigated food crops are imported to cities from rural areas (as ‘virtual water’); and watersheds are reshaped through the construction of hydropower plants for energy production to serve urban and industrial growth (Heynen, Kaika, & Swyngedouw, 2006; Kaika, 2006). Even though the exact pathways through which nature is transformed to become part of urban accumulation and consumption differ across contexts, all cities are embedded in broader socio-natural and political systems, flows and territories that extend far beyond their geographical boundaries (Swyngedouw, 1997). It is clear that urbanization is not a territorially discrete and self-contained phenomenon but involves the constant making and remaking of multiscalar networks and interactions (Harris, 2015). In this way, city and countryside are at once connected, but at the same time the ‘rural’ also remains importantly differentiated from the ‘urban’ (Angelo & Wachsmuth, 2014). For example, municipal drinking water utilities might extend territorial claims over highland water resources, thus (technologically and political-administratively) interlinking urban water demands with rural territories and livelihoods; and, at the same time, producing particular and very differentiated water access and control patterns between ‘the rural’ and ‘the urban’ (Hommes & Boelens, 2017). To provide a very different example of the ways that the urban is consolidated in relation to the rural, urban dwellers often insist on particular imaginaries of what it means to be an ‘urban citizen’, at times invoking distinct relationships with water as key to distinguishing what it means (or should mean) to live in urban spaces. For instance, residents in Buenos Aires, Argentina, insist that appropriate sanitation is important for them, as they now live in urban areas and left behind the low-tech toilets they associate with rural life (Morales, Harris, & Öberg, 2014), while residents in townships around Cape Town similarly distinguish between life in the townships and their earlier rural lifeways in relation to various modes of water access (with linked implications for willingness to pay for water; see Rodina & Harris, 2016). In a similar manner, as various articles in this volume show, in many cases, urban-biased identity politics and modernity discourses legitimize transferring water from the countryside to provide water services to advanced city life (see e.g. Duarte-Abadía & Boelens 2019; Hoogendam, 2019; Wessels et al., 2019).

The contributions to this special issue aim to critically analyze these water-related connections between city and countryside, including peri-urban areas as the interstitial zones between them. Doing so allows us to explore the ways urbanization reconfigures adjacent rural territories and power relationships (and vice versa), the broader hydro-social dynamics at play, or the changing scales and pathways of water in these interlinked systems. We also ask whether, how and with what consequences rural water resources become affected and water-based rural livelihoods and identities transformed because of measures taken to meet growing urban water (or food and energy) demands. Likewise, we explore how power dynamics have differentiated effects both within and between rural and urban

settings, which go beyond uniform concentrations of water in the direction of cities. Finally, we explore the potential for inclusive and democratic urban–rural relations and water governance, and related equity dimensions of shifting dynamics, based on case studies from around the world. For example, Bleeker and Vos (2019, this issue) show the necessity to take into consideration the complex social, economic and historical contexts and water realities, to not reinforce rural–urban inequalities through new urban water security projects in Peru. Wessels et al. (2019, this issue) call attention to drawbacks in decentralization and democratization efforts in South Africa.

Inspiration for this issue came from discussions between researchers of the International WaTERS Network ([www.international-waters.org](http://www.international-waters.org)) and the Water Justice Alliance (*Justicia Hídrica*, [www.justiciahidrica.org](http://www.justiciahidrica.org)), held in 2016 in Wageningen, the Netherlands, in conjunction with the international PE-3C Conference (Political Ecologies of Conflict, Capitalism and Contestation). The outcome was an understanding that it was time to bring rapidly changing rural–urban relations and the linked, newly emerging socio-environmental justice issues to the agenda. In this introduction to the special issue we discuss the importance of a political-ecology approach to exploring the rural–urban interface and evolving hydro-social relations and propose some conceptual building blocks. In a separate, concluding contribution, we draw together the specific insights offered by the articles in this special issue.

## **Towards a political ecology of rural–urban hydrosocial relations**

Using a political-ecology perspective for engaging with hydro-social transformations in urbanization processes and rural-urban metabolisms, this special issue builds on, and extends, scholarly work on urban water development and resource governance more broadly. Various authors have pointed to the importance of studying rural–urban linkages and how we can understand urban development and expansion, fundamentally, as a reconfiguration of adjacent rural territories. Essential groundwork was laid by William Cronon (1991), who showed in *Nature's Metropolis* how the urban growth of Chicago transformed surrounding areas, imposing on the land 'a new geography of second nature in which the market relations of capital reproduced themselves in an elaborate urban-rural hierarchy that would henceforth frame all human life in the region' (p. 378). Urbanization is a driving force behind environmental change, reconfiguring rural and rural-urban socio-economic, political and ecological realities in important ways (Heynen et al., 2006). Likewise, scholars such as Blackbourn (2006), Kaika (2006), Mumford (1961, 1971) and Swyngedouw (1997) suggest that pursuits of urban modernity are based on the conquest and disciplining of nature, with connections across diverse geographies.

These insights compel us to study hydro-social dynamics in the context of the interlinkages and interdependence between rural and urban spaces, repoliticizing transformations of rural–urban interfaces and scrutinizing what they mean, and for whom. As political ecology entails an analytical focus on power relations and inequalities, an urban-rural political-ecological focus invites attention precisely to the processes that produce inequalities in resource access, representation, cultural-political recognition, and hierarchization of knowledges among rural and urban subjects (see the analysis of the rural–urban equity nexus in Metropolitan Manila by Torio, Harris, & Angeles, 2019; as well as Goldman &

Narayan, 2019; Hidalgo-Bastidas & Boelens, 2019; and Hoogendam, 2019, all in this volume). Such an approach examines how inequities emerge in relation to territorial (re) configurations and relationships (Forsyth, 2003; Fraser, 2000; Heynen et al., 2006; Neumann, 2005). In that way, supply-side responses to urban water requirements, such as mega-hydraulic water transfers, PES schemes and ‘water for all’ discourses, need careful and critical analysis to uncover the inequalities and environmental injustices that are often inscribed in such projects (see e.g. Goldman, 2007, 2011; Joy, Kulkarni, Roth, & Zwarteveen, 2014; Radonic, 2017; Veldwisch, Franco, & Mehta, 2018). This could provide information to policy makers to help make urban water supply approaches more sustainable and equitable, and for civil society organizations and grass-roots federations to advocate needed shifts in understandings and policy approaches.

A helpful conceptual notion for understanding hydro-geographical and technopolitical transformations is that of ‘hydrosocial territories’ (Boelens et al., 2016), understood as contested imaginary and dynamically materializing networks that entwine biophysical, technological, social and political structures, practices, actors, meanings, discourses and knowledges in which water is a central constituent. In this notion, territories are understood as disputed socio-natural arrangements, consisting of interlaced material, social and symbolic components. As such, hydrosocial territories are not a value-free, neutral construct shaped through an open-ended democratic process but imbued with power politics: ‘politically speaking, territory is the socio-materially constituted and geographically delineated organization and expression of and for the exercise of political power’ (Swyngedouw & Boelens, 2018, p. 117; see also Harris, 2012). This approach does not see territories as spaces delimited by fixed physical boundaries but focuses on how people continuously engage in boundary-making practices. These may be rooted, for example, in culturally embedded, place-based social practices or identities (Escobar, 2001), or equally in globally promoted paradigms. An example is the construction and framing of the river basin as the appropriate water governance boundary (Budds & Hinojosa-Valencia, 2012; Cohen & Harris, 2013; Warner, Wester, & Bolding, 2008). In hydrosocial territories, constructing water infrastructure is an example of both boundary making and connection making, channelling water flows to link (or disrupt) places, people and practices (Hommes, Boelens, Duarte-Abadía, Hidalgo, & Hoogesteger, 2018).

In the process of hydro-territorial (re)configuration, a multiplicity of actors compete to realize territorial orderings according to their interests and worldviews. Given the large diversity of actors within one and the same space, this is a highly contested and ongoing process: Territories are never entirely and forever consolidated, but are constantly renegotiated. One important cause of the struggles are contested imaginaries of what territory is and what it should be, as well as the contestation over the actual materialization of these territorial components and compositions. Thus, on the one hand, the socio-territorial imaginaries have symbolic and social components that envision certain types of development and modernity, sustained by moral judgments and normative statements, for instance about good governance, responsible and irresponsible citizens, and efficient and inefficient water uses (Goldman, 2007; Harris, 2012; Hommes, Boelens, & Maat, 2016). On the other hand, imaginaries turn into important geographical forces that change the environment once materialized (Swyngedouw, 2015). Because of the divergent views and

interests, in everyday reality multiple territorial projects coexist and interact. ‘Territorial pluralism’, therefore, is the dynamic outcome of diverse overlapping, interacting and conflicting ideas and territories in one and the same geographical-political space (Hoogesteger, Boelens, & Baud, 2016).

This way, massive hydraulic engineering projects transferring water to cities are often surrounded and justified by discourses of progress and development, contrasting modern, ‘enlightened’ cities and urban citizens with corollaries of rural backwardness (Harvey & Knox, 2012; Hommes & Boelens, 2018). In effect, local ways of living, rural knowledge and identities, as well as the possible contestations by affected rural populations of water transfer plans, are often delegitimized (Hidalgo-Bastidas, Boelens, & Isch, 2018). For instance, in his impressive historical study about the making of modern Germany, David Blackbourn (2006) shows how conquering and taming nature through reclaiming marshes, straightening rivers and constructing large dams went hand in hand with the modernist designs of the twentieth century, and was linked to racist ideologies and imperial projects in ways that fostered urbanization and the ordering of rural ‘ungoverned territories’.<sup>1</sup>

To realize territorial imaginaries and projects, actors or actor alliances mobilize a variety of resources, ranging from financial and political resources to discursive strategies and truth claims. For example, as Hidalgo-Bastidas and Boelens observe in their article (2019, this issue), in the case of the Ecuadorian Chone mega-dam project, truth claims about flood risk are an integral part of the realization of the territorial project, which is imagined by an urban-political elite to safeguard urban modernity. Thus, territorial struggles are not only about natural resources but also – and not less importantly – about ‘meanings, norms, knowledge, decision-making authority, and discourses’ (Boelens et al., 2016, p. 8; cf. Baviskar, 2007; Swyngedouw, 2009). While other concepts are also useful to highlight complex social, political, ecological and hydrologic processes and their dynamic interplay (e.g., waterscapes and the hydrosocial cycle – see Linton & Budds, 2014 – or multiscalar analysis of water and conflict geographies, see Harris, 2002), the key is to highlight shifting configurations, economies, agro-ecologies, power dynamics and outcomes linked to ongoing changes and networked configurations across urban and rural geographies (e.g., Damonte & Boelens, 2019; Goldman & Narayan, 2019; Hoogendam, 2019, all in this volume).

## **Evolving rural–urban connections, technologies and social mobilization**

So what kind of socio-territorial interlinkages evolve from urbanization processes taking place in globalizing, political and economically stratified societies that are competing over water resources that are becoming increasingly scarce? In the following, we identify several dynamics that play an essential role in transforming rural–urban hydrosocial relations. These dynamics are not isolated from each other, but interconnected and at times overlapping. It is also not our aim to enumerate *all* rural–urban water-related dynamics, but to highlight key themes of interest for the case studies in this issue.

First, there are water transfers that reallocate water from rural to urban areas via massive hydraulic systems, composed of dams, tunnels and canals that are literally cast in concrete or made of other sturdy, immobilizing materials. Gupta and van der Zaag (2008, p. 30) determine that in the year 2000, inter-basin water transfers contributed 14% of all water withdrawals worldwide. Even though these numbers might not be

entirely up to date, rural–urban infrastructure-based water transfers have remained a popular option for politicians faced with water supply challenges for urban populations. This is not necessarily because they are the most cost-efficient or the only possible solution, but also because they are connected to powerful underlying imaginaries, utopian visions and expected political gains (Hommes & Boelens, 2017). Growing urban populations, ongoing hydrologic changes associated with climate change, and other shifts suggest that these large-scale water transfers are likely to remain important into the future (witness the recent issues in Cape Town).

The development of water transfers and other infrastructure is not only a material intervention but is simultaneously a deeply social and often highly political matter. Both the technical design and the construction process are informed by designers' and sponsors' interests, identities, particular knowledges and worldviews, meaning that infrastructural designs tend to reflect dominant governance and political positions (Mollinga & Veldwisch, 2016; Oberborbeck Andersen, 2016; Winner, 1980). Far from being an outcome of objective technical evaluation, technological projects reveal forms of rationality and governmentality (Hommes et al., 2016; Larkin, 2013). Accordingly, their effects are social and symbolic as well as material. As Jensen and Morita (2017, p. 6) find, infrastructure holds 'the potential capacity to do such diverse things as making new forms of sociality, remaking landscapes, defining novel forms of politics, reorienting agency, and reconfiguring subjects and objects, possibly all at once'. In other words, 'infrastructure reconfigures relations between people and states, spirits, forms of knowledge and nature' (p. 4; see also Morales et al., 2014).

Numerous studies in political geography and the philosophy of technology have made inquiries into these dimensions. They have analyzed, for example, how technology mediates politics by shaping interactions, power relations, self-consciousness and social awareness (Kaika, 2006; Meehan, 2013; Mollinga & Veldwisch, 2016); how water infrastructure serves as conduit of power that cultivates or delimits state power (Boelens, 2015; Harris, 2012; Meehan, 2014); how citizenship is mediated and claimed through water supply systems (Illich, 1986; Kooy & Bakker, 2008; Rodina & Harris, 2016); how water rights, property relations and governance arrangements are embedded in hydraulic infrastructure (Boelens & Vos, 2014); and how inequality is reproduced through structures, rules and practices related to that infrastructure (Anand, 2015; Redfield & Robins, 2016; Sanchis-Ibor, Boelens, & García-Mollá, 2017).

Similarly, the social contents and positioning of infrastructure and technologies in hydro-social territory-making should be understood as being appropriated, changed and negotiated in their day-to-day use and according to their physical and social surroundings. For example, water flows may not behave as envisaged by engineers, and affected water users may change how technologies are used in unforeseen ways (Sanchis-Ibor et al., 2017; Veldwisch, Bolding, & Wester, 2009). These insights, in consequence, require rural-urban political ecology to study infrastructure-based water transfers in detail, asking what changes and for whom as water moves from rural to urban areas. The dynamics at play in forging and enabling these transfers are also subject to analysis and consideration, from their planning and surrounding imaginaries, through the construction process, to their effects and appropriation in everyday lives over time.

Besides the 'traditional', infrastructure-based water transfers, a new approach for ensuring water supply to cities is PES. Global players such as the US-based Nature Conservancy



and the World Wildlife Fund are promoting PES schemes in different forms as potential win-win approaches in urbanizing regions in Latin America, as well as in Europe and elsewhere (Bennett, Carroll, & Hamilton, 2013). These schemes and their advocates propose that upstream communities be rewarded in some way (usually financial or in-kind) for conserving areas in the upper watershed and changing their land- and water-based activities to presumably more sustainable models, so that water availability for downstream urban areas is secured (Goldman, Benitez, Calvache, & Ramos, 2010; Gutman, 2006). Critics caution that these new mechanisms are based on market principles, regarding them as yet another form of accumulation by dispossession ('accumulation by conservation' – Büscher & Fletcher, 2015, p. 273 – see also Cavanagh, 2018) or as overriding local land and water institutions and management relationships (Boelens, Hoogesteger, & Rodriguez de Francisco, 2014).

In any case, what is notable is that new mechanisms for ensuring water supply, such as PES schemes, do not simply rely on laws, regulations and governmental force but are based on the assumption that each individual is acting out of a self-interested rationality and that the right incentives are enough to motivate appropriate behaviour (Fletcher, 2010). In that regard, PES approaches can be understood as neoliberal governmentality endeavours that establish incentive structures motivating water users to behave according to neoliberal worldviews and market-environmentalist ideas about watershed conservation and natural resources management (Duarte-Abadía & Boelens, 2016). Institutions and discourses help establish such incentive structures, which, at the same time, also sanction non-participation and brand non-participating water users as abnormal and backward – often coinciding with the label 'rural' (Rodríguez de Francisco & Boelens, 2016; see also Bleeker & Vos, 2019, this volume).

Connected to that is the question whether there are newly evolving discourses surrounding the expansion of cities' claims on resources. Has the content of discourses supporting water supply projects moved from references to modernity and the need to overcome nature to 'develop', to references to the human right to water, Sustainable Development Goals, and environmental concerns? With increasing attention and focus on the human right to water, the earlier millennium development goals, and now the SDGs, we have seen a concurrent shift from water available for agriculture and rural areas to prioritization of urban needs (Harris, Rodina, & Morinville, 2015; Miroso, & Harris, 2011; Torio et al., 2019, this volume). This is linked to discursive shifts that support drinking water and domestic needs, as well as ecological needs, over food crops or other productive uses, with clear implications for food security, livelihoods and other dimensions of urban–rural water linkages (Birkenholtz, 2016; Goff & Crow, 2014; Molle & Berkoff, 2006; Shah & Zerriffi, 2017). Even with a growing number of examples along these lines, from India, Peru, the Philippines, and elsewhere, there is still much to be known about how discourses around urban water supply or flood protection projects reconfigure rural areas and create potentially unequal water management arrangements. This is a problem especially for those negatively affected by urban projects, who are often also people with lesser economic, political and social power, as their concerns and queries remain unheard. This said, there are, of course, important equity considerations within urban and rural areas as well. As Torio et al. (2019, this volume) make clear, the considerable inequities in water access in the Metro Manila area appear to be worsened by ongoing inefficiencies in the urban water system. In a similar manner, Wessels et al.

(2019, this volume) point to the fact that labourers working in the agro-export industry are living in precarious housing and sanitation conditions in the city of Grabouw, South Africa, as the municipality cannot keep up with urban expansion. These disadvantaged populations are also at times blamed for the deteriorating water quality affecting agricultural production in the nearby Elgin Valley. Equity considerations become linked to rural areas in other ways as well. As Hoogendam (2019, this volume) shows in his analysis of how diverse and changing ruralities in the Cochabamba area have been differently affected by the city's search for new water resources, while valley peasants have succeeded in defending their water access and limiting municipal groundwater exploitation, highland peasants have not managed to avert negative impacts of urban water supply infrastructure in their territories.

The variety of rural–urban territorial transformations is enormous. They may be triggered by growing urban claims on local water resources, by global agro-product market demands, by calls for ecological conservation or by specific ideologies, as the contributions to this volume make clear. In all these transformations, the interests and socio-territorial projects and imaginaries of different water user groups compete within the same space and time. Each actor is striving to realize a certain kind of territorial project that contains hydraulic-physical as well as socio-economic and cultural aspects – and that is not easily reconcilable with other actors' projects. In consequence, the transformation of rural-urban hydrosocial territories is a process of continuous (re)negotiations and struggles that go far beyond technical questions about where water should flow to or not. These struggles are also about equity in participation and decision making, representation and recognition of identities, values, beliefs and knowledges (Fraser, 2000; Schlosberg, 2004; cf. Jackson, 2018). At the same time, the place-bound particularity of these struggles, and correspondingly the importance of territory and space in negotiating socio-economic positions, is central. In the words of Harvey (1990, p. 419): 'To challenge what the place might be, physically as well as socially, is to challenge something fundamental in the social order.' At the same time, the territorial imaginaries and projects of different actor groups might clash, or contain fierce environmental injustices, but nevertheless may not lead to struggles or contestations. Cleaver (2018), for example, points to the need for more attention to everyday relations of water injustice that are characterized by acceptance, compromise and adjustment.

## Concluding remarks

In this introduction we have pointed out the relevance of studying changing relations of water use and access in the context of rural–urban (dis)connections. We have laid out a conceptual foundation for studying cases and have pointed out core themes of interest, drawing from both long-standing and more recent literatures. We have emphasized the importance of studying water relations and dynamics in the interconnections between resources, rules and regulations, discourses, identities and authority. We are particularly interested in how materiality and power dynamics interact in the constitution and change of social-material networks around water. The contributions to this issue are diverse in their geographical location (including case studies from the Philippines, South Africa, India, Spain and Latin America), as well as in their specific themes within

the field of rural–urban water struggles. In our concluding discussion (pages 243–253), we draw together the insights that we have gained from these contributions. We have learned a lot in working with these authors and bringing together this special issue, and hope that a careful reading offers all of our audiences reason for pause and reflection, and opportunities for critical insight.

## Note

1. Phalangist/Francoist urbanization projects in Spain (e.g., Boelens & Post Uiterweer, 2013; Swyngedouw, 2015; Duarte-Abadía & Boelens, 2019, in this volume), apartheid-driven territorial planning in Southern Africa (Rodina & Harris, 2016. Mahlanya, Ziervogel, & Scott, 2016; cf. Wessels et al., 2019, in this volume), and racial-neocolonial hydropolitics prevailing in many Latin American cases (e.g., Boelens, 2015) show similar ideologies and practices. Nazi Germany took it to historical extremes. Blackbourn (2006) shows how modern-versus-backward identity dichotomies were actively ‘inscribed in’, and presumably could be ‘read off from’, the German land/waterscape. ‘Ordered’ and ‘rational’ white-Aryan urbanistic land and waterscapes were distinguished from wastelands populated by ‘parasitic’ Jews and ‘lazy’ Slavs, and once the Nazi regime had ‘cleansed’ the landscape (massively deporting ‘inferior races’), ethnic Germans were resettled on their territories.

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