Overview

Transboundary 'hydro-hegemony': 10 years later

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This article places the theorization and analysis of hydro-hegemony in the context of the scholarship on transboundary water conflict and cooperation. We discuss critiques, developments, and debates in this domain over the past 10 years, focusing particularly on the contributions of the London Water Research Group, showing how thinking on the theorization and analysis of hydro-hegemony—and hydropolitics—has moved beyond the state-centricity, the tendency to see hegemony as solely negative, and the conceptually hegemonic potential of hydro-hegemony itself. Various strands of international relations theory (realism, neo-institutionalism, critical theory) have left their mark on the London School. Intense interaction between analysts and pragmatic practitioners is found to invite (or incite) eclecticism as well as promote vibrancy.

How to cite this article:
WIREs Water 2017, e01242. doi: 10.1002/wat2.1242

INTRODUCTION: THE EVOLUTION OF HYDRO-HEGEMONY ANALYSIS AND ITS CRITICISMS

Ever since Naff and Matson,[1] and Starr and Stoll[2] issued warnings over international 'water wars,' violent open conflict over water has preoccupied politicians, journalists, and academics. Amidst researchers and scholars, the potential for transboundary water conflict quickly turned into a 'numbers game,'[3] seeking to predict war over water with the help of increasingly sophisticated datasets.[4–6] As evidence grew, Allan's early claim—that the water wars thesis was alarmist and unfounded—gained grudging acceptance.[7] Wolf[8] showed that there has not been a conflict over water alone since Nebuchadnezar sought control over the Mesopotamian Tigris and Euphrates and pointed to the overriding evidence of thousands of water treaties concluded since then. The 1990s saw a shift within the scholarship from fears of water wars to upbeat expectations of cooperation between states over water, a 'reflexive modernization' narrative epitomized by Ohlsson and Turton.[9] This article examines scholarly trends in the theorization and analysis of hydro-hegemony against this backdrop.

The London Water Research Group (LWRG or London Group) originated in the University of London's School of Oriental and African Studies at the turn of the millennium. The core group was largely composed of students and colleagues of Professor John Anthony (Tony) Allan, a key advocate for recognizing the central role of politics in water issues, particularly in arid regions. 'Politics,' the London Group argued, was not 'the problem' standing in the way of proper water management[10]; rather, ignoring the politics unduly put some actors at a disadvantage. The framework of hydro-hegemony extended and refined these critiques, emphasizing the importance of power in transboundary river basin relations.

The present contribution sketches developments, critiques, and ways forward beyond hegemonic concepts as seen by representatives from the London Group that launched it. To structure an overview of the debate and to point at next steps in this

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Conflict of interest: The authors have declared no conflicts of interest for this article.

new domain, the article addresses and accommodates criticism leveled at the theoretical framework and analysis of hydro-hegemony. The article considers three main areas of critique: state-centricity and territorial traps (including the role of institutions and the agency of nonhegemons and nonstate actors), assumptions of negativity and the immutability of (hydro-)hegemony, and the potential for hydro-hegemony itself to be a hegemonic concept. The development of the theoretical framework was significant as it challenged the ideologically dominant school of thought in water resources governance focusing on management.

The LWRG argued that the trending confidence in 'cooperation,' even if well intended, did not necessarily warrant or lead to peaceful and benign outcomes.[11] Cooperation may be forced rather than voluntary, sabres may be rattled but not used, and treaties may never go beyond exchange of technical data. Moreover, conflictive relations between states are often not about merely water but are instead compounded with other issues, such as state legitimacy, personality clashes, access to other resources, and historic grievances (the 'shadow of the past').[12] Water can act as a convenient, highly visible arena for escalating these issues. Perhaps the most challenging argument put forward by the London Group was that the presence of international organizations and of signatures under a treaty do not guarantee cooperative behavior[13] and so are not accurately counted as 'cooperative events' in quantitative studies. Structural conflict may well underlie these relations and may sporadically come to the surface.

The preliminary conceptual framework, laid down by Zeitoun and Warner,[14] and its companion piece on counter-hegemony[15] sought to uncover the political context in which water is contested as well as the various strategies and tactics used to secure and control water allocation. Subsequent work utilized power analysis (primarily that of Lukes,[16] a topic we will return to) in order to develop a framework focusing on how conflict and cooperation coexist, rejecting static dichotomies of conflict or cooperation occurring in river basins (Ref 17, see also Ref 18).

These studies brought transboundary water interaction center stage in analysis, offering an alternative understanding to work simplifying hydropolitical realities as embodying either conflict or cooperation.[11,19,20] This alternative approach enables a better understanding of transboundary water interactions by moving from simplistic, dichotomous claims assuming that 'the next war will be about water' or 'water scarcity leads to peace' to more fully examining situations characterized by neither militarized conflict nor friendly relations. This does not hold for all basins: some are not conflictive, and even when there is (potential) conflict, water resources may not become politicized.[21] But there are plenty of shared watercourses where conflict is seen and simplifications of causal water management outcomes cannot be made. These basins, the London Group asserts, are best-served by analysis that places power asymmetry and hegemony at its core.

Hydro-hegemony analysis did not appear out of thin air. The role of power asymmetries and resistance to power play in transboundary basins had been dealt with before (by Lowi[22] and Shapland,[23] among others). However, its more hidden, discreet operation, including at the discursive level, was relatively new. Applying different theoretical forms of power to transboundary water analysis was first performed by Daoudy.[24] Building on this, hydro-hegemony analyzes looked into the effects of 'hard' and 'soft' power in maintaining the *status quo* of water allocation, frequently referring to Lukes'[16] three faces of power: decision-making power (the power to 'win the game'), nondecision-making power (the power to set the agenda), and ideological power (control over discourse, interpreted as a naturalized 'common sense'). The starting point of defining hydro-hegemony inevitably focuses on power and could be elucidated as the success of a basin riparian in sedimenting a particular discourse, which preserves its interests and impedes changes to the *status quo*.[21a] However, as it will be further explained in later sections, this definition of hydro-hegemony is not fixed, and as critical, action- and research-oriented scholars, we also problematize the application and use of the term itself.

For the purpose of this article, we address critiques of the theorization and analysis of hydro-hegemony from a variety of sources. The LWRG purposefully borrows from and builds on multiple scholarly traditions and understandings of hegemony, considering both radical and neo-institutional perspectives. Rather than rejecting various critiques out of hand, and all too aware of the problems arising from unquestioned adherence to any school of thought, the London Group has constructively engaged with the critiques while also holding to the crucial belief that power and politics is key to understanding transboundary water arrangements. In showing the hard (infrastructural) and soft power associated with such prescriptions in transboundary water management, hydro-hegemony analysts open up hegemonic concepts for closer scrutiny to see what they *do*. The London Group has continually benefited from dialog between academics and practitioners in its conferences, adopting and engaging

with the same discourses it seeks to critique. The Group, then, is no exception to the policy and practitioner groups under analysis: we ourselves continuously risk getting caught up in hegemonic discourse and practice (see Ref 26). However, our intent is to continue providing alternative perspectives and seek ways of reflecting on and engaging with water management practices in a way that is sensitive to the implications of power asymmetries.

Building on a discussion article prepared for one of the London Group's semiannual international meetings,[26] this section considers three primary challenges for the LWRG and the framework of hydro-hegemony: issues of state-centricity and the territorial trap of the river basin as the scalar unit; the prevailing conceptualization of hydro-hegemony as immutable and inherently negative; and the possibility that hydro-hegemony itself can become hegemonic as a concept, drowning out other issues of, and approaches to, transboundary water interactions. These issues challenge the analysis of hydro-hegemony, and by extension much hydropolitical analysis, to be more explicit about its theoretical assumptions and understandings of hegemony. They have helped the notion of power-laden transboundary water interaction advance several steps by addressing common issues in hydropolitics literature, including narrow understandings of territorial space and simplistic approaches to international political economy.

ISSUE 1: STATE-CENTRICITY AND THE TERRITORIAL TRAP

As Furlong[27] has noted, much hydropolitical, and indeed hydro-hegemony, analysis has fallen prey to the territorial trap—'the reification of sovereignty as complete state control over a fixed unit of territorial space; the severing of domestic and foreign politics; and the state as prior to and a container of society.'[28] In early scholarship on water wars, 'conflict' was tantamount to conflict over (1) river basins, meted out between (2) sovereign states and that was inherently (3) zero-sum. As we will see below, these critiques have been addressed through the development of the hydro-hegemony scholarship.

Most hydro-hegemony analyzes have concerned contested river basins, shared by neighboring states. This ontology easily reinforces the dominant role of the state as a main and monolithic actor, responsible for and in control of the territorial space of the river. Such an assumption risks missing out the fact that the state's decision does not necessarily represent the interests of all within it[27] and that state control may well be contested. The framework of hydro-hegemony has fallen into this trap, with the river basin as the hegemonic, taken-for-granted scale of analysis. It is coupled in this assumption with scholarship on water governance on Integrated Water Resources Management (IWRM) and stakeholder participation, both generally bound by these same units.[29] The usual suspects for hydropolitical analysis have been the transboundary rivers Jordan, Euphrates, and Nile, as well as the Orange-Senqu and Mekong basins. Authors like Lebel et al.,[30] however, demonstrated that the Mekong has many ungoverned spaces and counterhegemonic practices, while South Sudan on the Nile and Syria and Iraq on the Euphrates and Tigris are obviously ill-fitting examples of undivided, water-controlling states representing the population along neatly delineated geographical borders.

Before the theorization of hydro-hegemony, there had been attempts to break through river centricity of the water conflict literature by focusing on transboundary aquifers.[23] Since then, there have been notable exceptions to the river basin focus dominating hydro-hegemony analysis: Ferragina and Greco's[31] work on the politics of the Disi aquifer, shared by Jordan and Saudi Arabia; Messerschmid[32] on the aquifers shared by Israel and Palestine; and Gomez[33] on the Guarani aquifer shared by Brazil and its neighbors. Menga[21] focused on the hegemonic politics of the Aral Sea in Central Asia. However, much of these literature revert to viewing the role of the state and the analysis is bound up with how the state legitimizes its action. While the study of aquifers has opened up scope for analysis, these studies have yet to completely change the fundamental treatment of space and state agency.

Given its focus on the river basin as its original unit of analysis, and its origins in international relations theory, it is no surprise that hydro-hegemony too has been critiqued as state-centric. However, while its origins have contributed to the problem, they may also present part of the solution. Hydro-hegemony has, from the start, been an eclectic theoretical mix, in which different (meta)theoretical strands can easily be identified—and perhaps leveraged to move beyond simplistic understandings of the state or a particular territory. Realism and neo-institutionalism are important directions that are, to a degree, mixed and matched. In realist thought, hegemonic power is tied to a particular state calling the shots or acting as a 'balancer' in a region or in the world. Neo-institutionalism sees institutional engineering and complex interdependence as ways to overcome hegemony. Critical theory sees a global, neoliberal elite calling the shots, although the debate

on whether states are handmaidens of business is still unresolved.[34] Hydro-hegemony analysis has evolved along several lines and also sought to take on board critiques of myopic hydropolitics. Varying interpretations of hydro-hegemony, rather than being a limitation to the body of work given the corresponding lack of a universally used definition, demonstrate disciplinary assumptions in how order, structure, and agency are understood. Embracing the interdisciplinarity of hydro-hegemony analysis provides a way forward, if not without its tensions.

Within international relations, the theory of hegemonic stability[35] bestows hegemonic power 'with leadership responsibilities and privileges.'[36] Nonhegemons may seek to counterbalance, rather than fight, hegemonic power to make sure no power becomes overweening. The resulting *de facto* 'arrangement' between hegemons and nonhegemons brings order and stability. From a realist perspective, hegemons set the rules of *international relations and maintain the status quo in their constellation*, *while disgruntled actors may oppose the rules or the status quo*; Turton and Funke[37] and Daoudy[38] have most clearly represented this realist strand. While realism is mostly focused on military power and violent conflict, some realists consider soft (especially economic) power as well as hard power necessary to be hegemonic. While classical realists would argue that hegemony is not at work on a basin or regional level but only on the global level, neorealist scholars identified regional hegemony in *regional security complexes*,[39] a lead notably followed by Turton and Funke[37] after Schulz.[40]

By treating states as unitary actors, the state-centric approach is 'underpopulated': it risks failing to identify key actors. 'Blackboxing' the state 'takes preferences for granted' and negates the way 'domestic elites' are enmeshed in transnational networks to realize their ambitions.[34,41] The role of narratives in transboundary networks in cementing or resisting hegemony is a developing area in hydro-hegemony. While the London Group has incorporated critical theory from the start, its rather loose adaptation of neo-Marxist thought has exposed hydro-hegemony to its most trenchant criticism in papers by Selby,[42] Davidson-Harden et al.,[43] and Atkins.[44] Selby has even claimed that Zeitoun and Warner[14] 'exclusively' conceptualize hydro-hegemony at the interstate level. While Selby is justified in noting that hydro-hegemony analysis is essentially realist in crucial aspects of its London School conception, we contend that it has moved quite a bit beyond that. With hydro-hegemony analysis taken up and expanded by multiple scholars, state-centricity is by no means its key feature.

The state-oriented bias in hydropolitical analysis was further broadened when Sadoff and Grey[45] highlighted direct and indirect environmental services related to rivers. The concept of 'benefit sharing'[46] was reflected in the late David Phillips' Transboundary Water Opportunity analytical model.[47] Recent policy and academic debates feature the water–food–energy(–climate change) nexus,[48] which addresses the connections and relative interchangeability of environmental services. The development of these analyzes is largely policy-driven, seeking 'improved' water management and averting situations of water scarcity. While such policy debates are indeed part of global hegemonic discourses as mentioned above, they also open up opportunities for scholarship to demonstrate how water is embedded in tradeable (agro-)commodities as virtual water or how kinetic hydro energy can likewise be commoditized and exchanged. These insights from scholarship, in turn, demonstrate that these policy debates all too frequently disregard the politics of the water, its services as a commodity, and the disbenefits and externalities of collaboration. These debates would thus benefit from any form of politically-sensitive analysis, hydro-hegemonic or otherwise.[49] While moving away from zero-sum calculations in water claims is helpful, we caution against depoliticized decision-making and, thus, the value of hydro-hegemony analysis as it scrutinizes discourses and underpinning power structures.

In addition to concerns over the depoliticization of these discourses, Allouche et al.[50] observed that the nexus is framed in security terms—an ever-expanding menu of (state and human) security concerns imperiling the stable access to resources: water security, food security, energy security, and climate security were all considered to be in crisis from 2008. 'Securitisation'[51] bestows special powers on a speaker, bypassing the political process to legitimize extraordinary measures in the name of the greater good. Winslett even claims that the difference in the extent to which riparian states securitize the issue of water informs states' relative bargaining power positions in a basin.[52] At the global level, the 'securitization of everything' may justify preemptive adaptive measures, bypassing deliberation on how to go about multiple perceived crises.[53] However, the water–energy–food nexus privileges the uncritical promotion of large structures such as dams,[50] which the trilateral World Commission on Dams considered questionable just 15 years ago. Big dams are known to displace people, have serious environmental impacts, and have more recently become objects of rampant 'financialization.'[b55,56]

Such issues compel us to move beyond the river basin as the primary unit of analysis in international water issues. The emphasis on global trade and big infrastructure legitimized through the water–energy–food nexus also opens the door to including economic organizations and other actors in analysis.

Hydro-hegemony analysis has incorporated an understanding that transnational companies and INGOs are major actors in the global scene. Cascão,[15] for one, shows how nonstate actors are instrumentalized by domestic elites to further development goals. Warner[57] and Conker[41] highlighted the importance (but have not claimed the dominance) of transboundary private and civil-society actors when examining the hegemonic politics of the Ilisu Dam on the river Tigris, to which Turkey is upstream. Mirumachi[17] uncovers how the political economy of basin states propels bilateral and multilateral developments.

States in this view remain prime movers, but not as sole or even unified actors. They can seize on the proliferation of Multi-national Companies (MNCs) and International Non-Governmental Organizations (INGOs), as Hensengerth[34] argues, to increase their power and actively steer systems, leveraging transboundary networks. The logic of government has, in this sense, changed substantially. The construction industry, banks, and also global activists are key players in understanding the transboundary politics of dams, while the international political economy of virtual water put relations between states and markets in agricultural trade center stage.

While 'mainstream' neorealists and neoinstitutionalists have likewise 'populated' their analytical world with transnational actors, issue regimes, business networks, transnational advocacy groups, and terrorist organizations, all of whom have become part of decisional authority,[35] HH scholarship has also been shifting on who is the driving force here. While rarely taking on 'neoliberalism,' Sojamo et al. identified public–private elite collusion identified at multiple scales in global virtual water hydro-hegemony—only five transnational companies (Archer Daniels Midland, Bunge, Cargill, Louis Dreyfus and Glencore, or 'ABCDG') control 80% of global agricultural trade—and thus the water contained therein.[58] Their operations are actively supported and facilitated by national governments. From a recognition that 'issues of power and privilege also dictate communities' access to river basin resources beyond and within states,' a distinct scholarship is being built up within the London Group that explores virtual water hegemony (see, e.g., Refs 58–60). 'Virtual water' is subject to capture through large traders, further juxtaposing a divide between those who benefit from the global trade system and those who merely deal with its disbenefits, detached from access to recourse within this global system. This line of analysis has flirted with a systemic (Wallerstein's 'world systems') approach to hegemony, placing core-periphery economic relations as its central consideration[59,60] while avoiding the trap of seeing hegemony only as economic in nature.

The focus on the role of transnational actors has enabled a more intense engagement with political ecologists[61] to look at the politicized environment (see also Ref 27 as an early forerunner to Ref 62). Zeitoun et al.[63] engage with current ontological debates in the social sciences that explore how the social and the natural coproduce each other in the 'waterscape,' drawing on the case of the upper Jordan basin. The waterscapes approach helps to 'explore the ways in which flows of water, power and capital converge to produce uneven socio-ecological arrangements over space and time, the particular characteristics of which reflect the power relations that shaped their production.'[54] Moreover, while (environmental) justice issues due to power asymmetry has been a concern from the start, the interface between political ecology and hydro-hegemony analysis has incited a greater emphasis on dealing with concerns such as the process and outcomes of structural inequality.[64]

ISSUE 2: ASSUMPTIONS OF NEGATIVITY AND IMMUTABILITY OF HEGEMONIC POWER RELATIONS

Negativity

Hydro-hegemony scholarship generally presents hegemony as a fact of life[65], in which actors can only seek to change its nature. This may be more of a problem in some languages and cultures than in others, especially in those where 'hegemony' has a negative connotation. After all, linguistically, hegemony denotes positive leadership qualities, that of a vanguard and guide (*hegemon*). In the original framework of hydro-hegemony, Zeitoun and Warner[14] expressed a reformist rather than revolutionary belief in the possibility of positive forms of hegemony, reflecting realist (*Realpolitik*) leanings. In a realist scenario, benign hegemons promote transboundary cooperation, taking on the burdens of a hegemon in contributing disproportionately to infrastructure and diplomacy that maintain the stability of a mostly uncontested transboundary water arrangement. In contrast, empirical insights on hydro-hegemony are

very limited on positive cases[26]: critical scholarship tends to focus on hegemony when it has gone wrong—'bad' leaders and destructive uses of hegemonic power (bullying). There is ample scope to research more 'positive' case studies—of visionary leadership, but also of plus-sum rather than zero- or negative-sum outcomes (see also Ref 66). Students of hydropolitics have expended rather less energy on the question of why some, if not most, nonhegemons choose to follow the pattern set by the hydro-hegemon, whether inspired by opportunism or defeatism. Positive hegemony would be a hegemonic order from which all riparians would benefit. In this context, Haugaard and Lentner[67] point at the mutual, if unequal, benefits of 'strategic cooperation.' In that context, Menga[21] reminds us that counting 'quanta of power' to show asymmetry, the placeholder method suggested in Zeitoun and Warner,[14] may not be as important as understanding how this asymmetry gets to be accepted as the way it is (acquiescence) or even should be. Past work of the London School sheds light on how compliance is often a resultant outcome in situations of power asymmetry.[19] Integrative strategies can be seen in the endeavors to demonstrate a normative role of leadership in international forums, cementing compliance.[19] States such Egypt, Turkey, South Africa, and Brazil have taken on such a role, reflected in their presence in multilateral bodies.

Assessments of the salutary effects of such leadership may vary. An example is the role of the Republic of South Africa in its hydropolitical constellation. While Turton and Funke[37] identified South Africa as a benign hegemon, promoting the 'common good,' Furlong[27] arrived at the opposite conclusion from a political ecology perspective, claiming South Africa is promoting harmful neoliberalism. Sebastian and Warner[68] would not go that far, but claim South Africa may well be involved in a 'water grabbing' strategy. The question *cui bono*? ('good for whom'), as well as who puts the label, remains crucial to any hydro-hegemonic analysis.

Present authors experienced the contradictions of hegemony first-hand when a Stockholm Water Week Session, organized in 2006 by the London Group, found that neither hegemons nor nonhegemons (seen from the Israeli or Jordanian perspectives, respectively) are necessarily pleased with their label. Their self-image or preferred public image may be quite different. While the object of the study does not need to identify with how analysts see them, it should give the analyst a pause for thought about options for more sophisticated labeling. This issue also reinforces and legitimizes the multiplicity of definitions of 'hegemon' and 'hydro-hegemon.' There is not one approach to, or understanding of, hegemony. Within international relations, different schools of thought (realism, neoinstitutionalism, critical international political economy) conceptualize it very differently. Moving past the bounds of IR scholarship, other disciplines and nonacademics also use the idea in a variety of ways. Rather than advocating for one particular approach as 'correct,' the London Group seeks to call attention to these different uses and learn from each. This includes properly analyzing the negative impacts of hydro-hegemony, but also giving appropriate attention to its many other forms and considerations. This will be further explored in the *Issue 3* section.

Immutability

Given the remarkable durability of power relations on rivers over time, the potential of counterhegemonic agency of nonhegemons has perhaps not been given enough credence, as Tawfik[69] points out in the case of Ethiopia on the Nile. Rather than assuming fixity and determinism, hydro-hegemony analysis has, however, from its early days attempted to explain how nonhegemons may resist hegemons (see, e.g., Refs 15 and 70). Developments in the Nile River Basin amply demonstrate how the downstream hegemonic position of a country like Egypt can change after attempts at resisting and challenging the *status quo*. When Egypt's leadership imploded in 2011, Ethiopia seized the opportunity to capitalize on its growing clout. In cases where the tables were not turned, such as Turkish predominance in the Tigris–Euphrates river basin, its hydro-hegemony is far from complete and subject to what Sumer[71] calls 'corrosive forces.' While the Government of Turkey also did not resort to systematic coercion and capture (see also Ref 41), Turkey's hegemonic project, if at all consistent, was systematically contested and as such, he implies, may not be seen as a 'perfect' hegemony.

This is useful reminder that material power dynamics may change over time even as at the discursive level states actively choose to redefine their status through a new set of strategies and tactics. Cooperation may be intentionally declared as a strategic alternative to open conflict, or a state may choose to develop cooperation in parallel with conflict, in which case 'the different sides' divergent interests—their respective goals, intentions, and guiding principles—are not laid to rest, but merely change their form.'[32] Turkey and Syria have been in a process of appeasement since 2001, with Syria even declaring in 2008 that 'we have always been friends.' This signified a move opposite to the Nilotic turn of events, where the negation of any conflict used to be

the norm set by Egypt, and veiled consent became open standoff.[20]

Hydro-hegemony is thus not and should not be considered inevitable or unchangeable. The potential of hydro-hegemony to be intentionally impacted by various actors was discussed further in the most recent of the London Group's publications. 'Transboundary water interaction III: contest and compliance' examines and theorizes counterhegemonic strategies in what may otherwise be stagnant relations.[20]

ISSUE 3: HYDRO-HEGEMONY AND HEGEMONIC CONCEPTS

Analysis of hydro-hegemony aims to shed light on seemingly common sense, partially fixed meanings, and antagonisms. This is highly relevant to the scholarship on hydropolitics that is often tied up with policy debates on water governance. These debates can demonstrate how hegemonic concepts in the water sector come and go.[c] A hegemonic project (i.e., a project that seeks to bring a change into a hegemonic order) will 'attempt to weave together different strands of discourse in an effort to dominate or structure a field of meaning, thus fixing the identities of objects and practices in a particular way' (Ref 73, p. 102). As neo-Gramscians argue, hegemony is different from dominance. Crucial to this is the manufacture of 'common sense' and its spread in key positions in society—or, at a basin scale, in the political constellation governing shared waters. This notion has roots in the thinking of Italian power theorists such as Mosca and Gramsci. While Mosca,[74] in his doctrine of the 'political class,' explained how a small minority can maintain power, Gramsci[25] turned this question on its head, asking how a regime can be overturned. Davidsen's[75] analysis on hydro-hegemony of southern Africa drew on post-Marxist interpretations of hegemony along the lines of Laclau and Mouffe.[76] In Laclau and Mouffe's argument, the vitality of fundamental antagonisms becomes the driver of politics. In this approach, hegemony is strongly bound with the fixing of meaning. All social life consists of meaning, and as meaning can never be fully fixed, it must be constantly reproduced and reconstituted[77]—this then gives space for resistance and change, promoting a 'logic of difference' that hardens friend–enemy antagonisms.

The critical perspective tends to see a hegemony of values linked to a ruling elite pursuing a particular global hegemonic project. This elite may create common sense, a dominating political and ideological force that results from a broader geopolitical order in which the action or interest of a hegemon may not be required at all: 'where issues have achieved a certain international discursive hegemony, the propensity of state actors, be they hegemons or subordinates, to act beyond them can be limited.'[27] Here, the London Group has adopted a reflexive approach to understanding these élite actors and their discourses. While the initial starting point of hydro-hegemony analysis focused on basin riparians, as the London Group's analysis matured and diversified, the object of analysis has also necessarily been called to question. In other words, from a critical perspective, the ruling elite need not be a particular state and thus demands the analyst to scrutinize the nodes of agency exercising power so as to call out these seemingly common-sense ideas.

To this end, the London Group has privileged discourse analysis as discourse plays a key role in devising 'empty signifiers,' like screens onto which actors can project their hopes and fears, around which coalitions converge. These empty signifiers are significant not because of their content but due to their effects in bringing actors together.[78,79] Policy narratives tend to acquire a life of their own and are not easily debunked by contradicting empirical evidence: 'they continue to underwrite and stabilize the assumptions' for policymaking 'in the face of high uncertainty, complexity, and polarization.'[79] Even if scientific analysis may indicate otherwise, narratives tend to be persistent and resilient because they are appealing, simple, and draw on common sense.[72] The scholarship on hydro-hegemony attempts to examine and moreover challenge these narratives and supposed common-sense approaches to water management.

From a critical perspective, counterhegemonies may be identified as challenging to the 'common sense' wrested in international academic and trade forums, a global counterhegemonic movement briefly alluded to by Zeitoun and Warner.[d] While Mukhtarov and Cherp[84] focus on the rise of IWRM as a hegemonic discourse, Atkins[44] argues that water 'neoliberalism'—the idea that water is an economic rather than a social good—is the hegemonic idea at the global level. 'Water as an economic good' brings individuation and legalization of water rights, seen as a commons by its opponents.[81] In Palestine, for example, the hegemony of 'water as an economic good' supported the Palestinian Authority (PA)'s trial of prepaid water meters in the West Bank, even as the 2002 Palestine Water Law defined water as a public good. The resultant system stabilized the water supply for some but worsened the most

vulnerable groups' insecurity.[82] Such conditions create overlapping hydro-hegemonies as the water security of marginalized Palestinians is threatened by both Israeli occupation and the Palestinian Authority's interest in World Bank investments and international trade development—a stranglehold well described by Selby.[83] This example usefully highlights that hydro-hegemony analysis cannot be limited to what riparians do at an interstate level, and needs to extend to the context whereby hegemonic ideas are enabled and repelled. Moreover, this example points to the fact that the narrative of 'water as an economic good' needs to be challenged if hydro-hegemony in the Jordan basin is to be tackled.

Alliances may organize for or against hegemonic order and sediment into institutions. From neoinstitutionalist literature, hydro-hegemonic analysis accepts the importance of organizational factors such as procedural rules and the creation of specialized institutions that can correct for (but also reinforce) power asymmetries. However, participation and organization are not limited to the planned and designed types preferred in the neoinstitutional literature. A coherent alliance and agenda surely help to reinforce or upset the ruling common sense as they allow or negate alternative norms and discourse becoming sanctioned. There is a need for hydro-hegemony analysis to be attentive to the unplanned movements and actions that attempt to change and transform the current order. After Newell[80] and Mukhtarov and Cherp,[84] we can see organization (institutional power) as a third key factor next to discursive and material power in upholding or eroding hegemony. The organizational factors shed light on the ways an alternative norm could become accepted. Social movements, such as water protest movements, based on an alternative identity can push open doors.[81] Hence, hydro-hegemony as a term also encompasses elite forces not restricted to a basin riparian and is exercised through agents that effectively combine material, discursive, and institutional power.

A key arena of contested global hydro-hegemony that comes to mind, in line with Atkins, are World Water Forums, such as that of 2006 (Mexico) and 2009 (Istanbul). These bazaar-like triennial megagatherings bring together public, private, multilateral, and civil-society actors from all over the world and are primary loci for cementing new catchwords and orthodoxies.[57] The fourth World Water Forum in Mexico was shaken by assertive voices from Andean countries denouncing the promotion of privatization and deregulation. In doing so, they juxtaposed Andean Identity versus neoliberalism, promoting indigenous values. The potential for Andean identity to be an alternative political force was spearheaded by Bolivian President Evo Morales, previously hailed by the United Nations as protector of the Andes. It promoted a wholly different ontology (a conception of 'what is'), postulating a symmetry between human and nonhuman actors. This resonated with a western obsession with looking for authentic values and created an unexpected counter-hegemonic alliance.[85] Alternative 'memes' such as *buen vivir* and *Pachamama*, and the claim that water is sacred, were bandied about with scant regard for the finer points of the Andean cosmology or the rather contradictory practice in Bolivia and Ecuador, where traditional collective use and rapacious water resource development go hand in hand. Many researchers, consultants, and policymakers present at the Forum probably found it hard to identify with the neoliberal values they were associated with. Still, the image stuck and made the global headlines, to the palpable annoyance of World Water Council dignitaries. They found themselves in the 'wrong' corner of the arena in what Laclau and Mouff have termed an agonic 'friend–enemy' pairing. Since then, the Andean counterhegemonic coalition has remained a force to be reckoned with. At the subsequent World Water Forum in Istanbul, a widely varied Turkish and international coalition contesting water liberalization gathered in an alternative Water Forum to discuss issues and their strategy, in part drawing on the London Group. Hydro-hegemony scholars can learn from these examples to continue pushing against dominant discourses and widen the scope of work. However, hegemony and counterhegemony cannot merely be about ideology and discourse. The 'material substructure' undergirding the ideology continues to matter; the importance of normalizing ideology, framing, and perception in times of 'fact-free politics' does not absolve us from the duty to uncover the complexities of 'hard power' and 'hard facts' on the ground.

As discussed in the *Introduction* section, the 'water wars' rationale for many years was a hegemonic 'common-sense' concept.[3] This rationale was successfully countered by another 'common-sense' idea of water peace and cooperation. Hydro-hegemony has, in turn, countered the cooperation claim. There are certainly numerous examples where water is not conflictive and politicized because there is plenty for all, or where it is not clear-cut who the hegemon is (Central Asia is one such place, see Ref 86). The absence of a hegemon, after all, is not the same as 'absence of hegemony.' A hegemonic order can be maintained despite a decline of overt

hegemony,[35] and hegemony can be decoupled from specific hegemons. The reverse of that coin implies that it does not take the emergence of a new hegemon for a hegemonic order to change. Where water relations and allocative arrangements are disputed, this liberal-institutionalist body of work sees potential for 'breaking hegemony.' A situation with no hegemony, 'a-hegemony' (a situation of power-free 'authentic deliberation' realized by bracketing differences, see Ref 86), remains a theoretical possibility the London Group has so far not displayed much affinity with. It is certainly helpful to allow for multiple voices, creating a pluralism of knowledge forums and demonstrating a deliberative kind of politics to 'level the playing field.'

We also need to remind ourselves now and then that the mere fact of writing about hegemony risks making it bigger, reifying it, and turning it into a monster. Ironically, hydro-hegemony itself may become a hegemonic concept. Chase-Dunn et al.[66] warned against this type of dynamic in 1994, and now, its application to hydro-hegemony is in danger of 'becoming one of those common academic words that is thrown around too much, used to refer to too many things without clear definition or focus.'[26] Analysts may be tempted to see hegemony everywhere, making the term shorthand for 'power exercise we do not like.'

Is the scholarship on hydro-hegemony too obsessed with hegemony and hegemonic powers? Lopes[87] thinks so and has critiqued the framework of hydro-hegemony for underestimating the power of interdependence, institutions, and integration. Her liberal-institutionalist critique of hydro-hegemony argues that states can work together perfectly well without hegemonic politics. They can decide that it is in their best interests to establish common rules impinging on their sovereignty. She takes relations between Spain and Portugal as an example, where the European Union fostered a greener, IWRM-based value system, enabling collaboration. Nonhegemonic states may try to influence rules through their participation in international institutions (Ref 19 cf. Ref 88). However, this piece of work also draws on the state-centric legacy of hegemonic analysis. A less state–central liberal explanation drawing on the role of institutions beyond state borders is found in the adaptive water governance literature. Pahl-Wostl et al. (Ref 89, p. 422) define global water governance as 'the development and implementation of norms, principles, rules, incentives, informative tools, and infrastructure to promote a change in the behavior of actors at the global level in the area of water governance.' These aspects can be underpinned by empirical observations: even within the durable stability of the European Union, for instance, riparian neighbors can run into intense diplomatic arguments—consider when Belgium, the nonhegemon on the river Scheldt, invoked historic grievances against the Netherlands.[90,91] As normative agreement expands, the coercion aspect becomes less important as hegemons become leaders molding multilateral institutions in their image.

An alternative option would be to 'decenter' hydro-hegemony, to ignore it and focus on alternative spaces. We would argue, however, that there is an elephant in the room that would not go away once we stop obsessing over it.[92] The meaning of hydro-hegemony is not fixed itself—participants in the London Group's International Workshops on Hydro-Hegemony have regularly requested clarification on what is meant by the use of the term hegemony—with no consensus answer given. As argued earlier, hydro-hegemony is about basin riparians, but it is not restricted to one agency of power. It is this point that continues to play a key role in furthering the scholarship, a reminder to analysts to be precise in how we identify and analyze power differences and reflexive in understanding hegemony and hydro-hegemony. Analysis of hydro-hegemony is about being critical and questioning seemingly common sense, partially fixed meanings and antagonisms through and beyond the workings of basin riparians.

CONCLUSION: THE LAST 10 YEARS, THE NEXT 10 YEARS

Ten years of writings on hydro-hegemony have brought fundamental shifts and major expansions in thinking around transboundary water interactions. A microcosm of the progress of hydropolitical literature in general, hydro-hegemony analysis has broadened its scope beyond the river basin, the state and negative connotations of hydro-hegemony. In response to challenges voiced by both 'insiders' and sympathetic 'outsiders,' it has found its place as an alternative conception of transboundary water relations in the water-related literature, somewhere in between the normally optimistic, neo-institutionalist writings on water diplomacy,[93] and the normally pessimistic writings of critical geography. It has successfully contributed to both scholarship and policy debates to moving the perspective from 'water wars' to less visible water conflict and political strife, which may flare up in 'water riots' but often stays latent. Thanks to interdisciplinary dialogs within

and outside the academic and non-academic world, those engaged with hydro-hegemony analysis have not laid doctrines and benefited from the eclecticism brought about by cross-disciplinary and cross-sector fertilization of ideas. This does not rule out that tensions and even contradictions remain between, say, Realists and critical tenets of hydro-hegemonic analysis, on the role of the state, the nature of power and the effect of inequality, forcing the debate onwards.

As a result, hydro-hegemony as an alternative concept of transboundary water relations does not follow a neat or consistent progression from one paradigm to another. The engagement with multiple strands of international relations, (critical) political ecology, and international political economy (particularly, its neo-institutionalist version) has refined the scope and focus of hydro-hegemony analysis, continuing to demonstrate its relevance and contribution to the evolution of hydropolitics literature in general. The issue of scale in hydro-hegemony continues to require attention, as well as analysis on what is and what is not hegemony so as to avoid labeling every power difference hegemonic. Properly taking on challenges to the London Group and extant hydro-hegemony scholarship calls for a wider examination into agency, institutions, and processes. Ten years after the introduction of the framework of hydro-hegemony, considerable progress has been made—and considerably more work is yet to be done. Addressing these issues, and expanding the extent of empirical work directly tied to hydro-hegemony analysis, should be at the forefront of the hydropolitical scholarship agenda for the next 10 years.

NOTES

[a] While rooted in critical analysis, this definition does not rule out institutionalist and Realist readings of hydro-hegemony which emphasize stability of expectations as a common good. For critical analysts, the stable expectation of inequality is obviously not evaluated as positive.

[b] Financialization describes attempts to reduce all value that is exchanged (tangibles or intangibles, future or present promises, etc.) into a financial instrument. According to its critics, financialization reduces any work product or service to an exchangeable financial instrument, like currency, and thus facilitates to trade in these financial instruments, as well as land and water grabbing.[54]

[c] (Regional or global) 'development' is a particularly powerful 'empty signifier.' The currently hegemonic liberal imagination sees human development as an ever upward-pointing arrow of enlightenment. This requires conceptual attractors, which of necessity display asymptotic tendencies towards integration such as with IWRM. IWRM became a globally hegemonic movement, together with multi-stakeholder participation and the river basin level,[29] currently replaced by adaptive management and the nexus. Like any 'empty signifier' or Nirvana concept, as coined by Molle,[72] it is not very clear what IWRM actually entails. Yet, it is translated into prescriptive policies, so that now even authoritarian regimes such as Myanmar now claim to have participatory, integrated river basin plans.

[d] 'There are a number of critical scholars representing this non-hegemonic or counterhegemonic perspective—in the manner of feminists exposing male hegemony; thinkers from developing nations taking issue with 'western' neoliberal hegemony; bottom-up environmental and anti-globalisation activists and others (…) Just as the mainstream discourse defined by the hegemons may go unchallenged, however, discourse that resists hegemony runs the risk of being self-referential, like a mutual back-slapping society' (Ref 14, p. 440).

REFERENCES

1. Naff T, Matson R. *Middle East Water: The Potential For Conflict, (Westview Replica Edition)*. Boulder, CO: Westview Press; 1984.
2. Starr JR, Stoll D. *The Politics of Scarcity: Water in the Middle East, Boulder*. Boulder, CO: Westview Press; 1988.
3. Trottier J. Water wars: the rise of a hegemonic concept. UNESCO=IHE PC-CP Project, Delft; 2000. Available at: http://armspark.msem.univ-montp2.fr/bfpvolta/admin/biblio/Trottier.pdf. (Accessed June 20, 2017)
4. Bernauer T. The effect of international environmental institutions: how we might learn more. *Int Org* 1995, 49:351–377.
5. Tir J, Ackerman JT. Politics of formalized river cooperation. *J Peace Res* 2009, 46:623–640.
6. Beck L, Bernauer T, Siegfried T, Bohmelt T. Implications of hydro-political dependency for international water cooperation and conflict: insights from new data. *Polit Geogr* 2014, 42:23–33.
7. Allan JA. *The Middle East Water Question: Hydropolitics and the Global Economy*. London: IB Tauris; 2001.
8. Wolf AT. *Hydropolitics Along the Jordan River: The Impact of Scarce Water Resources on the Arab-Israeli Conflict*. New York: United Nations University Press; 1995.

9. Ohlsson L, Turton A. The turning of a screw: social resource scarcity as a bottle-neck in adaptation to water scarcity. Occasional Paper 19. London: SOAS Water Issues Study Group, School of Oriental and African Studies/King's College; 1999.
10. World Water Council. Water and politics. Understanding the role of politics in water management, Marseille, February 26–27, 2004.
11. Zeitoun M, Mirumachi N. Transboundary water interaction. I: reconsidering conflict and cooperation. *Int Environ Agreements* 2008, 8:297–316.
12. Sebastian AG. Transboundary water politics: conflict, cooperation, and shadows of the past in the Okavango and Orange river basins of southern Africa. PhD Dissertation, *University of Maryland*, 2009.
13. Kistin Keller EJ. Critiquing cooperation: transboundary water governance and adaptive capacity in the Orange-Senqu basin. *J Contem Water Res Educ* 2012, 49:41–55.
14. Zeitoun M, Warner J. Hydro-hegemony – a framework for analysis of trans-boundary water conflicts. *Water Policy* 2006, 8:435–460.
15. Cascão AE. Ethiopia – challenges to Egyptian hegemony in the Nile basin. *Water Policy* 2008, 10:13–28.
16. Lukes S. *Power: A Radical View (2005)*. London: British Sociological Association, Palgrave Macmillan; 1974.
17. Mirumachi N. *Transboundary Water Politics in the Developing World*. Abingdon, Oxon/New York, NY: Earthscan; 2015.
18. Lee S. Benefit sharing in the Mekong River basin. *Water Int* 2015, 40:139–152.
19. Zeitoun M, Mirumachi N, Warner J. Transboundary water interaction. II: The influence of 'soft' power. *Int Environ Agreements* 2011, 11:159–178.
20. Zeitoun M, Cascão AE, Warner J, Mirumachi N, Matthews N, Menga F, Farnum R. Transboundary water interaction. III: contest and compliance. *Int Environ Agreements* 2017, 17:271–294.
21. Menga F. Reconceptualizing hegemony: the circle of hydro-hegemony. *Water Policy* 2016, 18:401–418.
22. Lowi M. *Water and Power. The Politics of a Scarce Resource in the Jordan Valley*. Cambridge: Cambridge University Press; 1993.
23. Shapland G. *Rivers of Discord: International Water Disputes in the Middle East*. New York: St. Martin's Press; 1997.
24. Daoudy M. *The Water Divide Between Syria, Turkey and Iraq, Negotiation, Security and Power Asymmetry (in French)*. Paris: CNRS Editions; 2005.
25. Gramsci A. *Selections from the Prison Notebooks*, Hoare Q, Nowell-Smith G, eds. London: Lawrence and Wishart; 1999
26. Farnum RL. Creating or contesting hydrohegemony. A critique of the London Water Research Group considering academic hegemony and traps in social justice research. *Discussion paper prepared for the Seventh International Workshop on Hydro-Hegemony*, University of East Anglia, London, 2014.
27. Furlong K. Hidden theories, troubled waters: international relations, the 'territorial trap', and the Southern African Development Community's transboundary waters. *Polit Geogr* 2006, 25:438–458.
28. Agnew J. The territorial trap: the geographical assumptions of international relations theory. *Rev Int Polit Econ* 1994, 1:53–80.
29. Warner J, Wester PH, Bolding A. Going with the flow: river basins as the natural units for water management? *Water Policy* 2008, 10:121–138.
30. Lebel L, Garden P, Imamura M. The politics of scale, position, and place in the governance of water resources in the Mekong region. *Ecol Soc* 2005, 10.
31. Ferragina E, Greco F. The Disi project: an internal/external analysis. *Water Int* 2008, 33:451–463.
32. Messerschmidt C. What price cooperation?–Hydro-hegemony in shared Israeli/Palestinian groundwater resources. In: *Proceedings of the 1st Conference on Hydrohegemony*, London, 2005.
33. Gomez P. Transboundary groundwater and unsustainable practices of water governance in the Guarani Aquifer: the case of the province of Misiones, 2014, 5. Available at: http://ir.library.louisville.edu/cgi/viewcontent.cgi?article=1512&context=etd.
34. Hensengerth O. Where is the power? Transnational networks, authority and the dispute over the Xayaburi Dam on the lower Mekong mainstream. *Water Int* 2015, 40:911–928.
35. Keohane RO. *After Hegemony: Cooperation and Discord in the World Political Economy*. Princeton: Princeton University Press; 1984.
36. Herschinger E. *Constructing Global Enemies: Hegemony and Identity in International Relations*. London/New York: Routledge; 2010.
37. Turton A, Funke N. Hydro-hegemony in the context of the Orange River basin. *Water Policy* 2007, 10:51–69.
38. Daoudy M. Turkey and Syria in water diplomacy 1962–2003. In: Zereini F, Jaeschke W, eds. *Water in the Middle East and in North Africa: Resources, Protection and Management*. New York: Springer; 2004, 319–332.
39. Buzan B, Waever O. *Regions and Powers. The Structure of International Security*. Cambridge: Cambridge University Press; 2002.
40. Schulz M. Turkey, Syria and Iraq: a hydropolitical security complex. In: Ohlsson L, ed. *Hydropolitics: Conflict over Water as a Development*. London: Zed Books; 1995.
41. Conker A. An enhanced notion of power for inter-state and transnational hydro-politics: an analysis of

Turkish–Syrian water relations and the Ilısu Dam conflict between the opponents and proponents of the Dam. Doctoral Dissertation, *University of East Anglia*, 2014.

42. Selby J. Beyond hydro-hegemony: transnational hegemonic structures and national hegemonic projects. In: *Presentation given at the Third International Workshop on Hydro-Hegemony*, 12 and 13 May, London, UK: London School of Economics, London Water Research Group; 2007.
43. Davidson-Harden A, Naidoo A, Harden A. The geopolitics of the water justice movement. *Peace, Conflict Develop* 2007, 11:1–34.
44. Atkins E. Beyond state-fetishism: the case for neoliberalism as a hydro-hegemon, Working paper no. 03-1. Bristol: Politics and International Studies, School of Sociology, University of Bristol, 2014.
45. Sadoff CW, Grey D. Beyond the river: the benefits of cooperation on international rivers. *Water Policy* 2005, 4:389–403.
46. Dombrowsky I. Revisiting the potential for benefit sharing in the management of trans-boundary rivers. *Water Policy* 2009, 11:125–140.
47. Phillips D, Allan A, Claassen M, Granit J, Jägerskog A, Kistin E, Patrick M, Turton A. *The Two Analysis: Introducing a Methodology for the Transboundary Waters Opportunity Analysis. Report No. 23*. Stockholm: SIWI; 2008.
48. Hoff H. Understanding the nexus background paper for the Bonn2011 Nexus conference. "The Water, Energy and Food Security Nexus. Solutions for the Green Economy", November 16–18, 2011.
49. Mapedza E, Tafesse T. 2011. Benefit sharing as a mechanism for improving transboundary water governance: the case of the eastern Nile Sub-basin. Paper presented at the European Science Foundation (ESF) Conference on Water Governance: Meeting the Challenges of Global Change, University of Innsbruck, Obergurgl, Austria, 5–10 June 2011.
50. Allouche J, Middleton C, Gyawali D. *Nexus Nirvana or Nexus Nullity? A Dynamic Approach to Security and Sustainability in the Water–Energy–Food nexus*. Brighton, UK: STEPS Centre, Sussex University; 2012.
51. Buzan B, Waever O, De Wilde J. *Security: An New Framework*. Hampstead Hearth: Harvester Wheatsheaf; 1998.
52. Winslett G. Substitutability, securitisation and hydrohegemony: ontological and strategic sequencing in shared river relations. *Conflict, Security Develop* 2015, 15:283–309. DOI: https://doi.org/10.1080/14678802.2015.1050810.
53. Massumi B. Potential politics and the primacy of preemption. *Theory Event* 2007, 10:2.
54. Budds J, Hinojosa L. Restructuring and rescaling water governance in mining contexts: the co-production of waterscapes in Peru. *Water Alternat* 2012, 5:119–137.
55. Ahlers R, Budds J, Joshi D, Merme V, Zwarteveen M. Framing hydropower as green energy: assessing drivers, risks and tensions in the eastern Himalayas. *Earth Syst Dyn* 2015, 6:195–204. Available at: www.earth-syst-dynam.net/6/195/2015/.
56. Baghel R, Nüsser M. Discussing large dams in Asia after the World Commission on dams: is a political ecology approach the way forward? *Water Alternat* 2010, 3:231–324.
57. Warner J. Hydrohegemonic politics: a crossroads on the Euphrates–Tigris? In: Warner J, Wegerich K, eds. *The Politics of Water: A Survey*. London: Routledge; 2010.
58. Sojamo S, Keulertz M, Warner JF, Allan JA. Virtual water hegemony: the role of agribusiness in global water governance. *Water Int* 2012, 37:169–182.
59. Warner J, Sebastian A, Empinotti V. Claiming (back) the land: the geopolitics of Egyptian and South African land and water grabs. *Ambiente e Sociedade* 2013, 16:1–24.
60. Warner J. South–south cooperation: Brazilian soy diplomacy looking East? *Food Secur* 2015, 7:1175–1185.
61. Swatuk L. Water conflict and cooperation in Southern Africa. *WIREs Water* 2015, 2:215–230.
62. Turton AR. Precipitation, people, pipelines and power: towards a virtual water-based political ecology discourse. MEWREW Occasional paper no. 11. London: School of Oriental and African Studies, 1999.
63. Zeitoun M, Eid-Sabbagh K, Talhami M, Dajani M. Hydro-hegemony in the upper Jordan waterscape: control and use of the flows. *Water Alternat* 2013, 6:86–106.
64. Zeitoun M, Warner J, Mirumachi N, Matthews N, McLaughlin K, Woodhouse M, Cascão A, Allan JA. Transboundary water justice: a combined reading of literature on critical transboundary water interaction and 'justice', for analysis and diplomacy. *Water Policy* 2014, 40:174–193.
65. Moffitt R. Resistance is futile. *J World Intell Property* 2009, 12:75–87. DOI: https://doi.org/10.1111/j.1747-1796.2008.00339.x.
66. Chase-Dunn C, Taylor P, Arrighi G, Cox R, Overbeek H, Gills B, Frank AG, Modelski G, Wilkinson D. Hegemony and social change. Forum. *Mershon Int Stud Rev* 1994, 38:361–376.
67. Haugaard M, Lentner H, eds. *Hegemony and Power: Consensus and Coercion in Contemporary Politics*. New York: Lexington Books; 2006.
68. Sebastian A, Warner J. Geopolitical drivers of foreign investment in African land and water resources. *African Identities* 2013, 12:8–25.

69. Tawfik R. *Revisiting Hydro-hegemony from a Benefit-Sharing Perspective: The Case of the Grand Ethiopian Renaissance Dam. Discussion Paper*. Bonn: Deutsches Institut für Entwicklungspolitik; 2015. ISSN: 1860-0441.
70. Thomas KA. The river-border complex: a border-integrated approach to transboundary river governance illustrated by the Ganges River and Indo-Bangladeshi border. *Water Int* 2017, 42:34–53. DOI: https://doi.org/10.1080/02508060.2016.1247236.
71. Sumer V. 'Revisiting the Turkish 'Hydro-hegemony' in the Euphrates-Tigris: Not a 'Perfect' Hegemon?'. Paper presented at 2014 UCOWR Annual Conference: Water Systems, Science, and Society Under Global Change, Medford, MA, 18–20 June, 2014.
72. Molle F. Nirvana concepts, narratives and policy models: insight from the water sector. *Water Alternat* 2008, 1:131–156.
73. Howarth D, Norval AJ, Stravrakakis Y. *Discourse Theory and Political Analysis*. Manchester: Manchester University Press; 2000.
74. Mosca G. *Elementi di scienza politica*. 2nd ed. Torino: Fratelli Bocca; 1923.
75. Davidsen Pål Arne. The making and unmaking of the politics of exceptionality. Studying processes of securitisation and desecuritisation in the Orange and Okavango river basins. Master of Comparative Politics Thesis, The University of Bergen, Norway, 2006.
76. Laclau E, Mouffe M. *Hegemony and Socialist Strategy. Towards a Radical Democratic Politics*. London: Verso; 1985.
77. Livesey S. The discourse of the middle ground: citizen shell commits to sustainable development. *Manag Commun Quart* 2002, 15:313–349.
78. Torfing J. Discourse theory: achievements, arguments and challenges. In: Howarth DR, Torfing J, eds. *Discourse Theory in European Politics: Identity, Policy and Governance*. Basingstoke: Palgrave; 2004, 1232.
79. Roe E. *Narrative Policy Analysis: Theory and Practice*. Durham/London: Duke University Press; 1994.
80. Newell P. The political economy of global environmental governance. *Rev Int Stud* 2008, 34:507–529. DOI: https://doi.org/10.1017/S0260210508008140.
81. Haufler V. Crossing the boundary between public and private: international regimes and non-state actors. In: Rittberger V, ed. *Regime Theory and International Relations*. Oxford: Oxford University Press; 1994, 94–111.
82. Donahue J, Johnson BR. *Water, Culture and Power: Local Struggles in a Local Context*. Washington, DC: Island Press; 1996.
83. Selby J. Cooperation, domination and colonisation: the Israeli-Palestinian Joint Water Committee. *Water Alternat* 2013, 6:1–24.
84. Mukhtarov F, Cherp A. The hegemony of integrated water resources management. In: Squires VR, Milner HM, Daniell KA, eds. *River Basin Management in the Twenty-First Century*. Boca Raton, FL: CRC Press; 2014.
85. Boelens RA, Vos J. The danger of naturalizing water policy concepts: water productivity and efficiency discourses from field irrigation to virtual water trade. *Agric Water Manag* 2012, 108:16–26.
86. Wegerich K. Hydro-hegemony in the Amu Darya Basin. *Water Policy* 2008, 10:71–88.
87. Lopes PD. Governing Iberian rivers: from bilateral management to common basin governance? *Int Environ Agreements* 2012, 12:251–268. DOI: https://doi.org/10.1007/s10784-012-9175-0.
88. Keck M, Sikkink K. *Activists Beyond Borders*. Ithaca: Cornell University Press; 1998.
89. Pahl-Wostl C, Gupta J, Petry D. Governance and the global water system: towards a theoretical exploration. *Global Governance* 2008, 14:419–436.
90. de Vries J. Breaking the deadlock: lessons from cross-border spatial projects in Flanders and the Netherlands. *DISP* 2008, 172:48–61.
91. Warner J, van Buuren MB. Multi-stakeholder learning and fighting in the river Scheldt. *Int Negotiation* 2009, 14:419–440.
92. Gibson-Graham JK. *The End of Capitalism (as We Knew It): A Feminist Critique of Political Economy*. Minneapolis: University of Minnesota Press; 1996.
93. Islam S, Susskind L. *Water Diplomacy: A Negotiated Approach to Managing Complex Water Networks*. New York, NY: RFF Press; 2012.

