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EDITORIAL
Relaunching International Journal of Water Governance (IJWG 2.0)

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Abstract

We proudly relaunch the *International Journal of Water Governance*. Free to read, free to publish in and peer reviewed as ever, it is now also open to practitioner contributions and commentaries. We (non-exhaustively) lay out some of our key water governance concerns and interests in the interrelationships between nature, society and technology that produce water governance, such as emerging ideas and imaginaries, 'institutional spaghetti', representation, recognition and (re)distribution as well as sociotechnical systems. We invite a range of potential approaches but would encourage power-sensitivity in the analysis. Your contributions are most welcome, whether insightful overviews or groundbreaking ideas, no matter how contrarian, as long as they are well argued and based in fact!

Rebooting *IJWG*

Welcome to the new, yet familiar, *International Journal of Water Governance (IJWG)*. After several much appreciated years under the aegis of Erasmus University's Public Administration Department (Teisman et al., 2013), this publication will run with renewed energy by a consortium composed of Wageningen University, Delft University and Deltares, published by TU Delft OPEN Publishing, using the open journal system platform (OJS) to handle your manuscripts. OJS is a growing alternative publication channel supported by university libraries, which treats knowledge as a public good and avoids

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commercial publisher fees; *IJWG* articles are rigorously peer reviewed, yet free to publish and free to read. We will rely on your generous personal or institutional contributions (and greatly appreciate those already pledged) to cover the inevitable costs as you publish in our journal, with every contribution being ploughed back into the journal.

Substantively, many things have remained the same since we first launched this journal in 2013. Governance is approached as both a normative and an empirical phenomenon (Pierre & Peters, 2000). Both embraced and reviled, water governance is here to stay, with its 'bright' and 'dark' sides: bright as in luminous and beneficial, dark as in obscured ('ungoverned') as well as in 'poorly governed' or '(semi)criminal spaces' (Wegerich et al., 2014). We seek to avoid the trappings of institutional or environmental determinism and water-centric tunnel vision. We recognise that formal water governance actors and knowledge are complemented or challenged by informal action and (counter-)knowledge. The democratisation of technology and information has led to citizen science and countermapping (using maps to rewrite the narrative, recognising that maps reflect power relations; see Peluso, 1995) but also to the proliferation of 'alternative facts'. Many social struggles emerge at the 'science-policy' interface, a more complex and diffuse phenomenon than the term suggests. While definitions of water governance abound, we will go with a broad approach in which *water governance* refers to institutional dimensions (laws, rules, norms, customs) and processes through which goals are identified and decisions made. *Water management* refers to the systematic devising, planning and implementation of *measures* to reach those goals; that is, the practical technical routines related to this – such as modelling, forecasting, construction and staffing (Lautze et al., 2011; Woodhouse & Muller, 2017).

In this new form, *IJWG* opens the door wide to practitioner contributions and comments, next to rigorous academic contributions. The non-academic manuscripts are also peer reviewed, checking for factuality and for obvious biases but not for conformity to a given perspective. Even when discussing conceptual or theoretical issues, we insist on contributions striving for plain, jargon-free English. As an interdisciplinary journal, concepts cannot be assumed to be shared or to have the same meaning across disciplinary fields and schools of thought.

Next, we present some pointers of where we would like to go with this journal, hoping it invites and enthuses you to jump on board.

Deep dive into water governance

Water governance is about the relationship between nature (water) and society. This relation is quite troubled in various spaces. We see over-exploitation of water sources (surface and groundwater), salinisation of large-scale irrigation systems, unequal control and access to water services, climate impacts, floods and drought, controversial water infrastructure projects, pollution and destruction of aquatic ecosystems. Many human activities and life itself depend on water, yet societies struggle to govern water systems and

to provide adequate water services to all. At the same time, hundreds of thousands of people work every day to provide water services, protect water resources and find ways to overcome the many challenges. This journal is about the ideas, imaginaries, practices, successes, failures, experiments, challenges and innovations in our field of water governance.

Many accounts of water governance start with normative notions such as 'good governance', 'integrated water resources management', 'environmental justice' and 'from government to governance'. Alternatively, they start with design and intervention-oriented concepts such as 'building with nature', the 'subsidiarity principle' and 'climate adaptation'. However, to understand the processes at work and to assess the effects on ecosystems and societies, we should not lose sight of actual practices and structural outcomes that result from applying these approaches in different contexts. Moreover, a lot of integration, adaptation or water rights efforts happen outside of the official programmes that claim to foster these approaches. The ostensible informal water system everyday provides services to millions of poor in the Global South, many a time in an exploitative fashion, leading to continuous contestations between the formal-informal water systems and blurring of boundaries (Ahlers et al., 2014). This heterogeneity of water services and power struggle is an essential puzzle of how we understand the current and the future of 'water governance' (Lawhon et al., 2018).

To study and learn from experiences around the world, this Editorial presents four main themes of water governance and some possible analytical approaches to study them. The contributions to the present and future volumes need not be constrained to these themes and approaches; instead, they are meant to inspire and guide contributions to the journal. We distinguish and discuss four interrelated themes of water governance that are emerging around the globe, namely imagination(s); institutional spaghetti; stakeholder representation, recognition and redistribution; and water infrastructure and technology.

Imaginaries

Many vital aspects of the water world are invisible, for instance groundwater, flooding risks, effects of sea level rise in the next century, nanoplastics and micro-pollutants in our water sources, a future rewilded river. Therefore, imagination plays an important role in water governance and envisioning water governance both now and in the future is steered by underlying paradigms. These paradigms are based on ideas about what are pressing problems and what potentially acceptable solutions look like. Their world views come with ideas about what is important in water governance and what their and others' roles should be. Valuing, visualising and imagining steer people's actions. Even when experts make hydrological models or simulation games and innovations are developed, they rely on their imagination of water flows, sedimentation, human impacts and their valuation of the related benefits, costs and risks. Since world views between different groups often differ, communication and reaching consensus on desired practices and planning for the future can become challenging.

Wider political debates on relations between society and nature relate directly to water governance. For example, concepts that steer away from unlimited economic expansion and consumerism, such as 'degrowth' and the 'well-being economy', are now hotly debated. At the same time, the alarmist discourse on water 'scarcity' and 'crisis' is countered – there is still enough water to feed the world's population, but we are doing a poor job of managing it (Woodhouse & Muller, 2016). These new imaginaries might lead to new policies regarding water use and conservation.

Institutional spaghetti

Water governance consists of many different practices: from the policy preparation, advice, brokerage and decision-making in formal policy development processes to the daily routines of building, operating, maintaining and rehabilitating water distribution and flood protection infrastructure, and from the licensing, monitoring, enforcing and sanctioning of water (re)use and waste water discharge to the capture, treatment, distribution and pricing of water. This plays at different scales, both nationally and internationally. These practices and routines come with many problems. Lack of funds, elite capture, poor actionability and enforceability of rules, interference by politicians, short-term appointment of functionaries, working at different scales, cross-border issues and systemic corruption are only some of these. In large, multilevel and sometimes overly complex bureaucracies (*hydrocracies* or 'institutional spaghetti'; Fonseca 2016; Molle et al., 2009) functions might be unclear, and one water organisation might shift responsibilities and blame for deficient performance to another of the water organisations within the *hydrocracy*. In case of deficient performance, the credibility of authority, policy and rules might be questioned. In such complex *hydrocracies*, decision-making around water is at times a 'black box'. Moreover, decentralisation and 'new public management' reforms might frustrate instead of smooth operations. The study of legislation, financing, regulations, decision-making, rights and reforms of the state apparatus needs to look beyond the legal framing and understand the institutional dynamics as contingent and following trajectories that structure, enable and constrain actors.

Stakeholder representation, recognition and redistribution

Different stakeholders are involved in water governance: government organisations, semi-public utilities, community organisations, NGOs, private businesses and water users' organisations. Stakeholders interact in different ways: through negotiation, cooperation, conflict and co-learning. Within government-initiated projects participation may be perceived as beneficiaries or affected people having a say in the construction of an infrastructure. However, the power to influence decision-making, having a voice, being able to access information and hold politicians and functionaries accountable is fundamental to water governance and generates much deeper questions. A set of basic questions to ask are, who participates in whose project? Who can set the goals? And who decides who can participate? Who is excluded, and by whom?

Central to the dynamic interplay between the stakeholders are three interrelated areas of struggle: representation in decision-making; recognition of values and interests; and distribution of costs, benefits and risks (Fraser, 2000; Schlosberg, 2004). Environmental organisations, federated water users' organisations and social movements advocate for a change in water governance. They may strive for paradigm shifts in society's relationship with water or the empowerment of a specific group of deprived citizens like slum dwellers, women, peasants or indigenous people. Recently, environmental groups and indigenous communities have advocated for granting legal personhood to rivers to protect them (O'Donnell & Talbot-Jones, 2018). Private (domestic and multinational) companies are also actively involved in water governance. They may also lobby for certain water policies and have their own water stewardship certification (Vos & Boelens, 2014).

In the interaction between different categories of stakeholders co-learning takes place as stakeholders exchange knowledge and share their world views with each other. They may engage in innovative forms of collaboration in pilot projects (Vreugdenhil et al., 2010), seeking to practise change and change practices (Vreugdenhil, 2012). New stakeholder approaches are being developed to facilitate productive interactions, enhance learning and generate societal value (Vreugdenhil et al., 2022), and citizen science is organised to involve citizens in science projects to raise awareness and gain new insights (REF). Questions of stakeholder representation, recognition and distribution play out at different governance levels. At the international level, conflicts over transboundary rivers may be mediated by hydro-diplomacy, whereas local and regional-level conflicts may involve co-creation and co-learning approaches.

Water infrastructure and technology

Large water infrastructures like hydropower dams and water transfers have transformed river systems and their governing structures. New water technologies include not only advanced irrigation systems, energy neutral waste water treatment and automated soil moisture sensor networks but also blockchain technology for water use rights registration, digital twins of river basins and use of satellite data for groundwater monitoring. Big data and remote surveillance enable better monitoring and planning of water use and conservation but also require new governance structures, including the safeguarding of the privacy of individuals.

Research on water technology should explore the social and ecological impacts of its use and the role of new technologies in structuring institutions. What characteristics of the technology produce these effects? Who uses what water technologies and to what effect? And how are new water technologies developed? Studying governance as a sociotechnical system in which the social shapes the technical and vice versa may help us understand why technically flawless solutions may falter on (or even before) implementation or technologically flawed approaches may work well socially.

Possible analytical approaches

To understand water governance practices and study their effects on ecology and society, many different analytical approaches can be employed. In the following sections we identify three possible approaches to water governance research: the study of framing, power and transition. However *IJWG* is open to other approaches as well that enrich our understanding of water governance.

People frame reality in different ways. Their positionality might depend on their duties, geographic location, ideology, education, gender, culture or economic situation. Their positionality influences their knowledge, their interests and how they interpret reality (Simandan, 2019). In this regard, the study of discourses, framings, narratives and decision-making regarding water governance-related issues is relevant (Feindt & Oels, 2005, Bontje and Slinger, 2017, Aukes et al., 2020).

A power-sensitive approach addresses the different capabilities of people (or organisations, or rules) to control and influence others (Dewulf et al., 2019; Vij et al., 2021). Power enables and restricts actions. This opens doors for both coercive and positive influence of power in water-related policymaking processes, referring to both powering and puzzling (Warner and de Man, 2020). Changes in water governance are often related to changes in power relations. Protest and social movements might struggle for emancipation, empowerment and change of water cultures. Power, at different levels, can take different forms – visible, hard power, or hidden and invisible, soft power. In transboundary river systems, hydro-diplomacy is about power relations shaping conflicts and cooperation (Vij et al., 2020; Wolf et al., 1999; Zeitoun and Warner, 2006). But power relations can be captured in the infrastructure itself. Witness the Lower Sundays River Valley in South Africa, where the increased incidence of interrupted water supply in 2015-16 could be traced to design choices made some thirty years earlier during the apartheid period (Clifford-Holmes et al., 2016). Change in water governance does not take place in a void. The trajectory of a technology or the historical development of a water policy, or government agency, will influence its future development options. Transitions, transformations and trajectories, often with their origins outside the water sector, are critical to understanding the specific conditions that lead to paradigm shifts or slow changes.

Inviting your contributions!

Water governance can be studied in many ways. The broadening of the information base also expands the way we can gain knowledge. To observe and understand actual governance practices, research methodologies can range from ethnography to big data analysis and exploration. Detailed ethnographic *observations* can help identify practices and mechanisms that do not follow policy and intervention-oriented concepts of water governance.

It is useful for researchers to have overviews of current debates and conceptual approaches in science. Therefore, *reviews* of the research literature on particular debates, topics or concepts are welcomed.

Experiences of practitioners provide highly valuable insights into actual practices of water governance. They also provide first-hand accounts of experiences with new water policies, technologies and regulations and revisit tried and tested ones. Their knowledge about the daily practices of water governance and experiences with pilots and trials can contribute to more generalised understandings. Therefore, *IJWG* invites practitioners to publish articles in a special section called 'Practice Outlook'.

Apart from helpful overviews, we welcome articles that lead the way on new, constructive or potentially disruptive analytical approaches to the study of water governance practices, such as hydro-entropy (Smidt et al., 2015). And then, of course, policy reality can catch up with long-standing concerns: in 2019 the *IJWG* published a Special Issue on water as a human right – in the meantime, the Biden administration has finally adopted that right, and several countries have now given legal rights to rivers.

We look forward to stimulating debates and welcome your creative illustrations (of sufficient resolution) as well – a picture paints a thousand words.

We wish you happy reading and look forward to your submissions and comments on articles in *IJWG*.

Note

This is a collective editorial contribution; the order in which author names appear does not necessarily reflect the relative weight of their contributions.

References

Ahlers, R., Cleaver, F., Rusca, M., & Schwartz, K. (2014). Informal space in the urban waterscape: Disaggregation and co-production of water services. *Water Alternatives, 7*(1), 1–14.

Aukes, E., Bontje, L., & Slinger, J. (2020). Narrative and frame analysis: Disentangling and refining two close relatives by means of a large infrastructural technology case. *Forum: Qualitative Social Research, 21*(2), Art. 28. https://doi.org/10.17169/fqs-21.2.3422

Bontje, L., & Slinger, J. H. (2017). A narrative method for learning from innovative coastal projects – biographies of the Sand Engine. *Ocean and Coastal Management, 142*, 186–197. http://dx.doi.org/10.1016/j.ocecoaman.2017.03.008

Clifford-Holmes, J. K., Palmer, C. G., de Wet, C. G., Slinger, J. H. (2016). Operational manifestations of institutional dysfunction in post-apartheid South Africa. *Water Policy, 18*(4), 998–1014. https://doi.org/10.2166/wp.2016.211

Dewulf, A., Karpouzoglou, T., Warner, J., Wesselink, A., Mao, F., Vos, J., Tamas, P., Groot, A., Heijmans, A., Ahmed, F., Hoang, L., Vij, S., & Buytaert, W. (2019). The power to define resilience in social–hydrological systems: Toward a power-sensitive resilience framework. *Wiley Interdisciplinary Reviews: Water, 6*(6), e1377. https://doi.org/10.1002/wat2.1377

Feindt, P. H., & Oels, A. (2005). Does discourse matter? Discourse analysis in environmental policy making. *Journal of Environmental Policy & Planning, 7*(3), 161–173.

Fonseca, C. (2016). *Monitoring SDG6 and the institutional spaghetti*. IRC Blog. Retrieved from 10 December 2021, https://www.ircwash.org/blog/monitoring-sdg-goal-6-and-institutional-family-spaghetti

Fraser, N. (2000). Rethinking recognition. *New Left Review*. May/June, 107–120.

Lautze, J., De Silva, S., Giordano, M., & Sanford, L. (2011, February). Putting the cart before the horse: Water governance and IWRM. *Natural Resources Forum, 35*(1), 1–8. https://doi.org/10.1111/j.1477-8947.2010.01339.x

Lawhon, M., Nilsson, D., Silver, J., Ernstson, H., & Lwasa, S. (2018). Thinking through heterogeneous infrastructure configurations. *Urban Studies, 55*(4), 720–732. https://doi.org/10.1177/0042098017720149

Molle, F., Mollinga, P. P., & Wester, P. (2009). Hydraulic bureaucracies and the hydraulic mission: Flows of water, flows of power. *Water Alternatives, 2*(3), 328–349.

O'Donnell, E. L., & Talbot-Jones, J. (2018). Creating legal rights for rivers. *Ecology and Society, 23*(1). https://doi.org/10.5751/ES-09854-230107

Peluso, N. L. (1995). Whose woods are these? Counter-mapping forest territories in Kalimantan, Indonesia. *Antipode, 27*(4), 383–406. https://doi.org/10.1111/j.1467-8330.1995.tb00286.x

Pierre, J., & Peters, B. G. (2000) *Governance, politics and the state*. Macmillan Press Ltd.

Schlosberg, D. (2004). Reconceiving environmental justice: Global movements and political theories. *Environmental Politics, 13*(3), 517–540. https://doi.org/10.1080/0964401042000229025

Simandan, D. (2019). Revisiting positionality and the thesis of situated knowledge. *Dialogues in Human Geography, 9*(2), 129–149. https://doi.org/10.1177/2043820619850013

Smidt, E., Assaf, K., Tamimi, A., ter Horst, R., & Zayed, O. (2015). The Israeli-Palestinian water distribution revisited: Can hydro-entropy be a useful tool to understand the complexity of hydropolitics? *International Journal of Water Governance*, *2*, 37–58.

Teisman, G., van Buuren, A., Edelenbos, J., Warner, J. (2013) Water governance: Facing the limits of managerialism, determinism, water-centricity, and technocratic problemsolving. *International Journal of Water Governance*, *1*(1). https://doi.org/10.7564/12-IJWG4

Vij, S., Biesbroek, R., Stock, R., Gardezi, M., Ishtiaque, A., Groot, A., & Termeer, K. (2021). Power-sensitive design principles' for climate change adaptation policy-making in South Asia. *Earth System Governance, 9*, 100109. https://doi.org/10.1016/j.esg.2021.100109

Vij, S., Warner, J., & Barua, A. (2020). Power in water diplomacy. *Water International, 45*(4), 249–253. https://doi.org/10.1080/02508060.2020.1778833

Vos, J., & Boelens, R. (2014). Sustainability standards and the water question. *Development and Change, 45*(2), 205–230. https://doi.org/10.1111/dech.12083

Vreugdenhil, H., Slinger, J., Thissen, W., & Rault, P. K. (2010). Pilot projects in water management. *Ecology and Society, 15*(3).

Vreugdenhil, H., Taljaard, S., & Slinger, J. H. (2012). Pilot projects and their diffusion: a case study of integrated coastal management in South Africa. *International Journal of Sustainable Development, 15*(1–2), 148–172.

Vreugdenhil, H., Janssen, S., Hermans, L., & Slinger, J. (2022). Cooperating for added value: Using participatory game theory in implementing nature-based flood defences. *Ecological Engineering, 176,* 106507.

Warner, J., & de Man, R. (2020). Powering hydrodiplomacy: How a broader power palette can deepen our understanding of water conflict dynamics. *Environmental Science & Policy, 114*, 283–294. https://doi.org/10.1016/j.envsci.2020.08.015

Wegerich, K., Warner, J., & Tortajada, C. (2014). The dark side of governance an introduction to the special issue. *International Journal of Water*, *2*, 1–6. https://doi.org/10.7564/XX-IJWGXX

Woodhouse, P., & Muller, M. (2017). Water governance—An historical perspective on current debates. *World Development, 92,* 225–241.

Wolf, A. T., Natharius, J. A., Danielson, J. J., Ward, B. S., & Pender, J. K. (1999). International river basins of the world. *International Journal of Water Resources Development, 15*(4), 387–427. https://doi.org/10.1080/07900629948682

Zeitoun, M., & Warner, J. (2006). Hydro-hegemony–a framework for analysis of trans-boundary water conflicts. *Water Policy*, *8*(5), 435–460. https://doi.org/10.2166/wp.2006.054