LEFT, RIGHT AND CENTRE

Technocratic solutions to complex water issues often ignore social-ecological trade-offs and governance complexities and can lead to tension or conflict between concerned actors. In this edition, we explore mediation as a tool for building common ground between parties in conflict and overcoming common barriers to science and policy implementation.

Keywords: Water governance, peace and conflict, trust, alternative dispute resolution, mediation

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WATER MEDIATION

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1. The limits of technocratic solutions to complex water issues

There remains a common misconception that societies can (or should) engineer their way out of any and every water problem they face. Not enough water? Build more dams! Increase efficiency! Desalinate! While academic scholars have long debunked the myth of technocratic solutionism and have steadily moved towards more inclusive institutional governance approaches (Balasubramanya et al., 2022), policy-makers and practitioners still frequently overlook the limitations inherent to simple engineering fixes. Technocratic solutions, such as supply management, are often considered an easier path compared to necessary normative behavioural changes, such as demand management interventions.

Water issues often present complex or even wicked problems. Wicked problems are characterized by uncertainty, competing values, and no clear-cut solutions. Unlike single, one-dimensional challenges (where engineering is highly effective, such as delivering water from point A to point B) wicked problems involve multiple actors, dynamic interdependencies, and social-ecological trade-offs (Islam and Susskind, 2012). When social dimensions are ignored, proposed solutions are rarely sustainable and may create unintended negative consequences beyond the immediate scope of intervention.

Conflicts and tensions over water resources are widespread, ranging from local disputes to transboundary conflicts. These conflicts can emerge between different water uses (e.g. competing demands from the agricultural and industrial sectors), among water users within the same sector, or even between generations (i.e. balancing present water use with future demands). Such tensions often stem from or result in failures in policy implementation (top-down) or collective action (bottom-up). It is important to note, however, that these governance dimensions (i.e. top-down versus bottom-up) are not distinct but part of interwoven polycentric arrangements (Ostrom, 1990). In other words, the state is not necessarily antithetical to collective action; rather, Ostrom's work refutes the rigid dichotomy between public and private governance. The notion that state intervention inherently undermines local knowledge or community management is misleading (Mansbridge, 2014) – however, state intervention can easily fail if it does not consider local characteristics and needs (Scott, 2000). While institutional rules do not always need to be imposed from above, the state plays a crucial role in addressing complex common-pool resource (CPR) problems within nested polycentric systems (McGinnis, 2000).

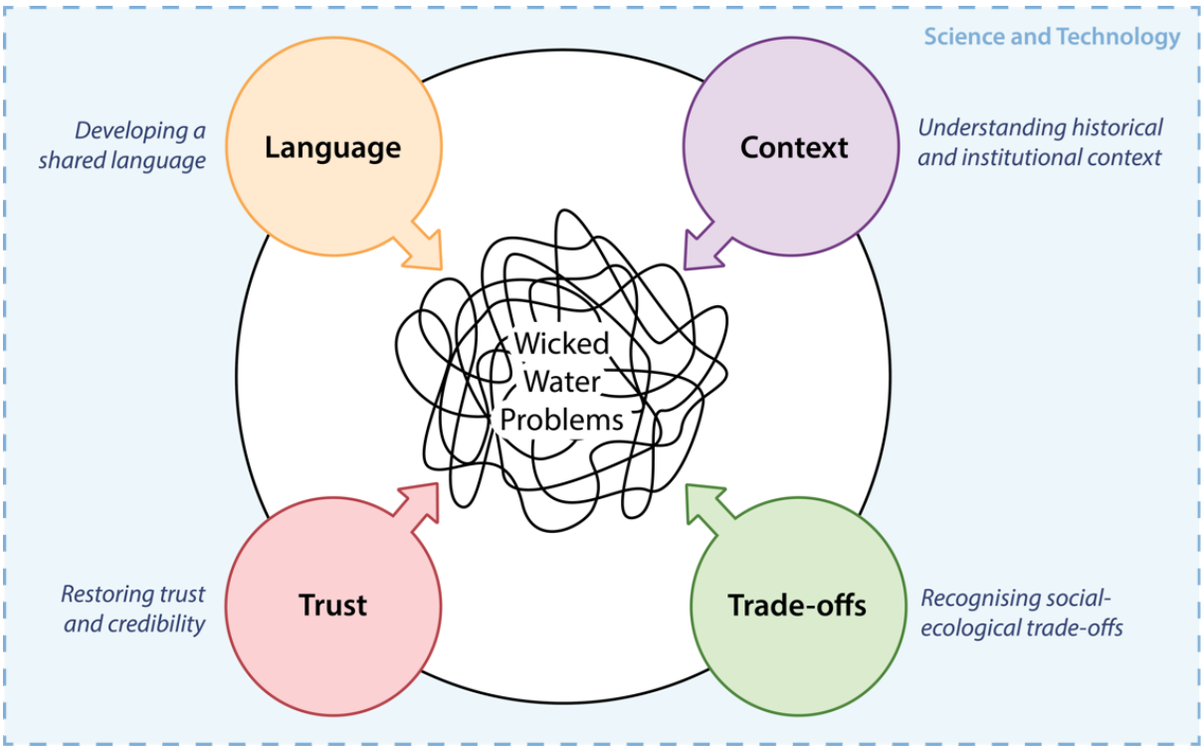
2. Overcoming barriers in science and policy implementation

The governance challenge of effective water demand management exemplifies the interplay of multilateral failures in communication and (apparent) ideological divides. Demand management policies, such as regulatory limits to water withdrawals, often trigger resistance from affected actors, who see regulation as a threat to their livelihoods. As such, failures in demand management can thus be understood as an example of water conflict. The question then arises: How can policy- and decision-makers foster dialogue and engagement on crucial water policies despite conflicting or competing interests? And perhaps how can water users better communicate local needs and priorities?

- **Developing a Shared Language** – Parties in conflict often frame water issues differently, frequently leading to miscommunication – standing in the way of effective conflict resolution. For example, one group may see regulation as a threat, while another perceives deregulation as the true risk. Establishing a common ground for dialogue is crucial.
- **Understanding Historical and Institutional Context** – Legacy barriers to science and policy implementation are commonly shaped by entrenched perspectives, past policy agendas, and institutional path dependence (Bhalla, 2024). If we understand why systems function as they do, as well as the forces that forged these systems, we can craft more effective, ambitious yet realistic strategies for improved water management.
- **Recognising Social-Ecological Trade-offs** – Water management involves imperfect solutions. Being transparent and openly discussing potential trade-offs between economic, social, and environmental goals is essential to crafting realistic policies, while building institutional trust and buy-in from concerned actors.
- **Restoring Trust and Credibility** – Conflicts can be tied to the erosion of trust in established governance structures (Bhalla et al., 2025). Addressing credibility concerns and ensuring transparent decision-making processes can help bridge divides. However, re-building once broken trust represents the key challenge in water conflict resolution and requires substantial time and effort from all involved parties.

Ultimately, addressing water conflicts demands more than just technical expertise. It requires open and safe spaces for dialogue, and a recognition of the socio-political complexities that shape decision-making, i.e. the human dimensions of science. Moving beyond technocratic solutionism means embracing the reality that no perfect solution exists, but that a commitment towards reflexive, non-judgemental dialogue can serve as a first step towards re-building institutional trust and henceforth more resilient water governance systems.

Figure 1: Overcoming barriers to evidence-based science and policy implementation



3. Mediation as a way forward

Mediation and other forms of dialogue have proven to be highly effective in resolving conflicts. Over the past 30 years, mediation approaches have helped resolve 75% of global conflicts while requiring only a fraction of the resources spent on military or large-scale development aid efforts (Wadley, 2017). In water conflicts, mediation provides an opportunity to move beyond adversarial approaches and foster trust, communication, and collaboration among actors.

At its core, mediation relies on the principle that people are experts in their own stories. This equalisation of expertise legitimises different voices and can help in building common ground. Mediation is not about imposing external solutions but about creating an environment where parties can listen, express concerns, and collaboratively design agreements that work for them. Mediation is not about establishing a single objective truth; it is about building trust and conviction among the parties involved. Solutions tend to be more durable when designed by those directly affected, as ownership and commitment are key to successful implementation.

A mediator acts as a trusted intermediary, guiding conversations in a neutral and confidential setting. Their role is not to decide outcomes but to facilitate a structured dialogue, ensuring that all perspectives are acknowledged and respected. By using techniques such as active listening, reflection, and validation, mediators help clarify priorities and create a space where deeper multilateral understanding can emerge. Trust plays a crucial role in mediation - without it, collaborative solutions remain elusive.

Water conflicts, like many governance issues, are not purely technical problems but involve social, economic, and political dimensions. Farmers and groundwater users, for example, may be aware of and care about aquifer depletion but continue extraction due to economic pressures, policy constraints, or uncertainty about alternative solutions (Zwarteveen et al., 2024). Mediation allows for a deeper understanding of these

competing interests and ensures that policy responses align with the lived realities of water users rather than being dictated solely by technical assessments (which when implemented in isolation can lead to unintended consequences). While purely quantitative data and knowledge have their place, it is crucial to complement these with qualitative insights that capture the underlying drivers of conflict (ideologies, collective memories, and emotions). Mediation serves as a tool to uncover underlying drivers by prioritising narratives, context, and dialogue.

A critical first step in the mediation process is conducting a thorough historical and contextual analysis. Understanding past grievances, institutional frameworks, and existing power dynamics is essential for designing processes that do not inadvertently exacerbate tensions. Mediation does not instantly rebuild trust, but it can create the conditions necessary for it to develop over time. Trust and collective action are often treated as non-descript nebulous concepts, and restoring them requires a sustained, context-sensitive effort rather than quick-fix solutions.

Despite its effectiveness, mediation is not without challenges. Who gets included in the process? How are actors identified, and whose voices are prioritised? What is the appropriate timing of mediation efforts? There is also the risk that, if poorly managed, mediation can unintentionally intensify divisions or reinforce existing power imbalances. A careful, inclusive approach is necessary to ensure that mediation remains a constructive tool rather than an exacerbating force.

Even when immediate resolutions are not achieved, mediation provides significant value by fostering communication, clarifying concerns, and drafting a shared understanding of the conflict. The process itself can lay the foundation for long-term cooperation, making mediation a crucial mechanism for addressing complex and dynamic water governance challenges.

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