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### A bridge over troubled waters

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In a recent (August 2021) Editorial<sup>1</sup>, the editors of *Nature Sustainability* argue that little innovative research seems to emerge in water studies. They invite the community to reinvent what they see as a ‘stagnant’ field. Central to their argument is the statement that “water studies as a field may have largely given up on historical context and institutional change ... as [it] has become more quantified and technically driven, it has also become less grounded”.

While we — a too homogeneous subset of critical water researchers — agree that much water science still has a functionalist orientation and a distinct preference for quantification, we find this statement rather surprising as there is actually plenty of research, to use the editors’ terms, on “the messy institutions, norms and processes that underlie our relationship ... with water”. We would like to offer the view that this research is not reflected in *Nature Sustainability* submissions — hence publications — because of a mismatch between what we perceive to be the journal’s paradigmatic orientation and the nature of that research.

Rather than attempting to circumscribe ‘the water question’ to make it amenable to prescriptive policy recommendations, often on the basis of ever-more-sophisticated ‘cutting edge’ modelling tools and decision support systems, this research resists any form of commensuration. Instead, it sets out to investigate the ways in which politics and water are entangled and analyse how researchers themselves are part of such entanglements.

Drawing from a long research tradition and interdisciplinary fields such as political ecology and critical geography, many scholars investigated extensively the politics and historicity of water and infrastructure, and their connectedness to social and epistemic hierarchies<sup>2</sup>. More recently, some

also engaged with science and technology studies and Indigenous scholarship and thought to stress the multiplicity of water worlds<sup>3</sup>. They proposed concepts such as the hydrosocial cycle<sup>4</sup> and hydrosocial territories<sup>5</sup> in an attempt to bring together natural and social science approaches with vernacular knowledge systems in transdisciplinary approaches. Such research nurtures suspicion of irrigation technologies<sup>6</sup> and development pathways<sup>7</sup> or of water policy models and institutions<sup>8</sup> that are presented as universal solutions or panaceas. It unravels the multiple dimensions and diverse consequences of the search for water efficiency<sup>9</sup> and water security<sup>10</sup>, and investigates everyday water governance practices in relation to community water management<sup>11</sup> and urban water services<sup>12</sup>, including in their gendered dimensions. Finally, it foregrounds practices of bricolage and social mobilization as holding transformative potential for — among others — irrigation development in sub-Saharan Africa<sup>13</sup>, groundwater governance<sup>14</sup> and water justice<sup>15</sup>. Beyond this diversity in topics and approaches, this research is grounded in a common understanding that knowledge is contingent on and related to cultural constructs and power relations, and it pays specific attention to the unequal material and socio-economic effects of discursive and methodological framings. Researchers resist and challenge the pressures of commensuration and universalization (still commonly attached to much water-related science) because they have learned how the hegemony of some forms of knowledge has eclipsed or even violently erased others, in the process also disqualifying their bearers and allowing or justifying water dispossession. Next to exposing the politics and power relations shaping water technologies and policy-making, this research hence also actively seeks to expand the ways in which to understand water. We therefore welcome the call of the editors to expand the breadth of water sciences and further invite scholars to reflect on (the effects of) their methodological choices and framings, and to reveal more explicitly their foundational assumptions. We believe this attention to the politics and plurality of water is important if we are to contribute to just and sustainable water transformations.

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