

Forum

Race, Ethnicity, and the Case for Intersectional Water Security

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Abstract

This Forum article reports on a meta-review of more than 19,000 published works on water security, of which less than 1 percent explicitly focus on race or ethnicity. This is deeply concerning, because it indicates that race and ethnicity—crucial factors that affect the provision of safe, reliable water—continue to be ignored in academic and policy literatures. In response to this finding the Forum calls for building intersectional water security frameworks that recognize how empirical drivers of social and environmental inequality vary both within and across groups. Intersectional frameworks of water security can retain policy focus on the key material concerns regarding access, safety, and the distribution of water-related risks. They can also explicitly incorporate issues of race and ethnicity alongside other vectors of inequality to address key, overlooked concerns of water security.

Water security scholarship almost uniformly excludes an explicit treatment of race or ethnicity. This is a critical issue, because without an adequate account of water security's relationships to race and ethnicity, crucial factors affecting the provision of safe, reliable water will continue to go unaddressed. In response to this exclusion, we call for intersectional analyses of water security as an anti-oppressive approach that can orient academic and policy analysis to multiple dimensions of inequality and insecurity, including ones dependent on ethnic and racial discrimination.

This Forum article proceeds in two steps. First, it highlights the limited attention given to race and ethnicity within water security scholarship. It does so by reporting and discussing the findings from a meta-review of water security scholarship, where less than 1 percent of that scholarship explicitly references

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factors of race or ethnicity. Second, it makes the case for an intersectional framing of water security. A core concern of an intersectional approach is an understanding that differences of race, gender, class, ethnicity, and other aspects of inequality vary *within* groups and *among* them (Crenshaw 1991). To treat categories of race, ethnicity, gender, or class as singular or homogenous is inadequate to the task of empirically specifying water inequalities. We argue for an intersectional framing that combines the strength of wider studies on race, ethnicity, gender, poverty, and vulnerability in ways that enhance accounts of, and policy responses to, water security. In so doing, we follow and support the small number of water scholars calling for greater attention to the multiple and interacting vulnerabilities that shape experiences of water insecurity (e.g., Sultana 2020; Gerlak et al. 2022).

A Meta-review of the Water Security Literature

Water security is a contested but dominant concept (Pahl-Wostl et al. 2016). In its initial public-facing use around the 1980s and 1990s, it was closely tied to the specter of wars over dwindling water resources (Starr 1991; Kaplan 1994). The concept has since evolved, cutting across different scales, metrics, and disciplines (Octavianti and Staddon 2021). Consequently, there have been several English language meta-reviews of water security (e.g., Cook and Bakker 2012; Garrick and Hall 2014; Lankford et al. 2013; Pahl-Wostl et al. 2016; Zeitoun et al. 2016; Gerlak et al. 2018; Hoekstra et al. 2018). These meta-reviews make reference to the commonly cited definitions from Grey and Sadoff (2007) and the Global Water Partnership (2000). Two of the most influential reviews have systematically organized the water security literature through binary framings: narrow and broad or reductive versus integrative (Cook and Bakker 2012; Zeitoun et al. 2016). What is common among all reviews, however, is the literature's silence on race and ethnicity. Likewise, the gray literatures produced in the water sector—reports, policy assessments, and strategic guidance produced by international organizations—are noted as key contributors shaping the discourse of water governance (Varady et al. 2009). As our results show, they, too, frame water security largely without reference to race or ethnicity.

Our review employed a comparable method to Cook and Bakker's (2012) to find relevant water security publications. We first undertook a quantitative review of the Web of Science database, searching for the exact phrase "water security" for all available years up until February 2022. This yielded 3,001 articles. We cross-referenced these articles with searches on "race" and cognate terms (racism, racist, racial, racialization) and "ethnic" and "ethnicity," eliminating incidental occurrences (e.g., "the race for water security"). We allowed publications to count in different categories, for example, if they covered issues of both race and ethnicity. Using the exact phrase "water security" returned only fourteen unique results on race and ten on ethnicity. We then relaxed the search parameters to capture "water AND security" and repeated the exercise. We cross-referenced results to avoid duplicate counting, and as Table 1 shows, the

Table 1

Results: "Water Security," Race, and Ethnicity

<i>Key Words (February 2022)</i>	<i>Number</i>
"Water security"	3,001
Water security	19,568
"Water security" and race, racial, racism, racialization	14
"Water security" and ethnic, ethnicity	10
Water security and race, racial, racism, racialization	55
Water security and ethnicity, ethnicity	77
Total articles	132

Source: Web of Science Database.

expanded pool ($n = 19,568$) increased the overall number of publications to 132, of which 55 were on race and 77 on ethnicity. In each respective search, fewer than 1 percent of the articles on water security explicitly address race or ethnicity. The qualitative review of the resulting articles showed no clear emergence of race, ethnicity, and water security issues. Unsurprisingly, the high-profile case of Flint, Michigan, where systemic environmental racism factored into water security outcomes, was prominent in the search (Pauli 2019, 2020). Other articles focused on shifting conceptual understandings of water security to incorporate racial and ethnic concerns. These included articles advocating for understanding water through Indigenous forms of relationality (Wilson et al. 2019) or "embodied urban political ecology" (Truelove 2019).

We extended our search to examine critical studies of water security that frame similar material concerns through water *insecurity* (results shown in Table 2).

Table 2

Results: "Water Insecurity," Race, and Ethnicity

<i>Key Words (February 2022)</i>	<i>Number</i>
"Water insecurity"	425
Water insecurity	1,565
"Water insecurity" and race, racial, racism, racialization	7
"Water insecurity" and ethnic, ethnicity	6
Water insecurity and race, racial, racism, racialization	12
Water insecurity and ethnic, ethnicity	22
Total articles	34

Source: Web of Science Database.

This was designed to capture two things. The first, as Zeitoun et al. (2016) have argued, is that the proliferation of water security discourse has coincided with the emergence of competing policy, governance, and disciplinary frames that seek to accommodate multiple perspectives. These frames may include, exclude, or occlude different water security concerns, and this raises critical ethical issues for policy and governance (Schmidt and Peppard 2014). The second is that the limited number of studies regarding race, ethnicity, and cognate concerns is not evidence that such considerations are not influencing water security. Rather, it is evidence that they are not *explicitly* factoring into most studies identified in the large Web of Science database. We therefore recognized the adjacent framing of water *insecurity* in studies critical of prevailing politics regarding “water security” but concerned with similar material concerns of water access and risk. The results show that race and ethnicity are similarly excluded from water insecurity studies. Many of the same articles appear across both Tables 1 and 2. One prominent article argued that US household water insecurity was highly racialized by examining the geographic inequality of “plumbing poverty” (Deitz and Meehan 2019).

Finally, as reported in Table 3, we repeated our earlier search with both exact (i.e., “water security”) and relaxed terms (i.e., “water AND security”). To identify other areas of concern regarding inequalities, we also searched placeholder categories relevant to water security, such as gender and justice. As Table 3 shows, notions of marginalization, poverty, gender, vulnerability, Indigeneity, and justice are more common categories than race or ethnicity. Although these still form a small fraction of water security research, they are potential pathways through which race or ethnicity may be indirectly addressed. Despite this potential, it is difficult to gauge how issues of racial or ethnic inequality are addressed through indirect means. The turn to water *insecurity*, while not a precise contronym to water security, does not alleviate these concerns. However, critical appraisals of water *insecurity* have begun to identify intersecting issues of race,

Table 3

Results: “Water Security” and Placeholder Categories

<i>Key Words (February 2022)</i>	<i>Number</i>
“Water security”	3,001
“Water security” and marginalized	20
“Water security” and poor, poverty, impoverished	266
“Water security” and inequality	46
“Water security” and justice	41
“Water security” and gender	53
“Water security” and Indigenous	61

Source: Web of Science Database.

class, and gender (e.g., Jepson et al. 2017a, 2017b; Wutich et al. 2016; Meehan et al. 2020) in ways that elude the water *security* literature. For instance, Wutich et al. (2016) found race critical to ascertaining whether the human right to water can be met through informal water networks. Similarly, adjacent literature on water and environmental justice contains examples of explicitly intersectional approaches to inequalities (e.g., Pulido 2016; Switzer and Teodoro 2018; Sze 2020; Gerlak et al. 2022), though not always with respect to water security specifically. Without explicit attention to race and ethnicity in the framing of water (in)security itself, the extent to which indirect categories address water security challenges that are specific to these issues is indeterminate.

It is important to note that, by design, our method and analysis are not comprehensive. We cannot offer a definitive account of, nor fully trace, the various disciplinary, empirical, and conceptual directions of the literature and how they could tangentially address themes of race and ethnicity. For instance, some of the pioneering work of Wendy Jepson is absent from our review data despite its findings—demonstrating how US household water insecurity intersects with systems of exclusion—resonating with our own analysis (Jepson 2014). However, closer examination of the work shows that, though it deals with systemic exclusion, it avoids explicit mention of race and ethnicity. Despite limitations, we believe that our findings indicate something clear and compelling: race and ethnicity do not factor explicitly into the water security literature.

These findings suggest three main points of discussion. First, although neither race nor ethnicity is *explicitly* acknowledged in the vast majority of water security studies, they may be *implicitly* addressed through other categories, such as poverty. Second, the rise of water *insecurity* literature is important, though it does not explicitly take up issues of race or ethnicity in a significant manner. Finally, the proliferation of studies on poverty and water justice demonstrates concerns that are germane to intersecting issues of class, race, gender, and so on; they therefore provide further warrant to examine the shape that an intersectional approach to water security might take.

Given these results, we call for scholars and practitioners to extend frames of water (in)security to develop an explicitly intersectional approach. The final section explains our rationale and details what intersectional water security might entail.

Intersectional Water Security

We propose an explicitly intersectional framing of water security. In her original formulation of intersectionality, Crenshaw (1991) details how Black women experience compounded forms of discrimination by virtue of being both Black *and* female. For scholars of intersectionality, concepts like “discrimination” can be too rigid when they depend on the homogenizing function of a single class or category (King 1988; Yuval-Davis 2006). Single-axis frameworks overlook how individuals may be vulnerable to multiple, often compounding forms of

oppression, which may work together or apart, depending on the context, but nevertheless produce something distinct from any single type of discrimination (Cho et al. 2013).

An intersectional framing of water security provides two interrelated strengths. First, it can overcome the tendency to reduce explanations of people and their environment to singular and/or homogenous categories of analysis. The corollary is a treatment of social positions as inherently fluid, plural, and relational that provides points of engagement for water security studies. Second, an intersectional approach avoids negatively framing water security (i.e., as water insecurity) in ways that require “holistic” changes to policy. By positively reframing water security, intersectionality produces a greater focus on the empirical drivers of inequality. Many of these drivers are already recognized indirectly, yet intersectionality frames these and other excluded concerns for explicit policy engagement. The aim is not to prioritize any particular aspect of discrimination but to understand how inequalities operate empirically. Understanding how inequality operates empirically, intersectionality orients attention to race, class, gender, ethnicity, nation, ability, colonialism, and so on not as mutually exclusive but as co-constituted phenomena (Collins 2015). Indeed, intersectionality does not simply “add” issues of race or ethnicity to concerns regarding poor, marginalized, or vulnerable communities. It recognizes that individuals and groups experience inequality through multiple, asymmetric power relations and that those inequalities are interpreted through categories that are not a direct match to existing categories framing water security (Yates et al. 2017).

Intersectional water security counters dominant binary framings of water security as “reductionist” versus “integrative” or “broad” versus “narrow,” which fail to explicitly address race and ethnicity. It also acknowledges how the empirical effects of this omission have historically limited and continue to limit how frames of water security overlook issues of race and ethnicity and misdiagnose important issues that intersect with them, such as gender, colonialism, class, and caste. In this context, intersectional water security identifies shortcomings of current water security framings and provides a way to address them by reframing shared material concerns that add necessary context to the empirical drivers of inequality. For instance, an intersectional approach recognizes how social differences are refracted through conflicts affecting water access, use, and the distribution of risk. Instead of turning to negative framings of water insecurity, however, an intersectional approach retools water security to more accurately reflect the empirical reality of how inequalities manifest differentially owing to factors of race, ethnicity, gender, class, and colonialism. Finally, in all cases, intersectional water security must be an explicitly antioppressive framework.

Conclusions

Water security has come close to achieving conceptual hegemony in water governance literature, yet it largely excludes explicit treatment of race and ethnicity.

This, despite numerous scholars cited herein, as well as the consistent findings of the influential World Water Development Reports, which highlight the need to address intersecting forms of inequality (UN Water 2006, 2020). We deliberately avoid the question of *why* this exclusion exists or whether other paradigms, such as water justice, are better equipped for questions of race and ethnicity. Instead, we argue that, without specifically addressing how race and ethnicity intersect with other dimensions of inequality, using the existing water security paradigm intrinsically limits policy responses intended to enhance social well-being. We thus call for a reframing of water security in intersectional terms. This provides a substantive alternative to the influential, binary framings of water security as narrow/reductionist or broad/integrative.

Policy uses of water security that do not address inequality through anti-oppressive approaches tolerate moral harms against individuals, societies, and the environment. In this context, one can abandon the policy frame or seek a new one. We have argued for the latter—a reframing of water security that orients water security toward intersectional justice.

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References

- Cho, S., K. W. Crenshaw, and L. McCall. 2013. Toward a Field of Intersectionality Studies: Theory, Applications, and Praxis. *Signs* 38 (4): 785–810. <https://doi.org/10.1086/669608>

- Collins, P. 2015. Intersectionality's Definitional Dilemmas. *Annual Review of Sociology* 41: 1–20. <https://doi.org/10.1146/annurev-soc-073014-112142>
- Cook, C., and K. Bakker. 2012. Water Security: Debating an Emerging Paradigm. *Global Environmental Change* 22 (1): 94–102. <https://doi.org/10.1016/j.gloenvcha.2011.10.011>
- Crenshaw, K. 1991. Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color. *Stanford Law Review* 43 (6): 1241–1299. <https://doi.org/10.2307/1229039>
- Deitz, S., and K. Meehan. 2019. Plumbing Poverty: Mapping Hot Spots of Racial and Geographic Inequality in US Household Water Insecurity. *Annals of the Association of American Geographers* 109 (4): 1092–1109. <https://doi.org/10.1080/24694452.2018.1530587>
- Garrick, D., and J. Hall. 2014. Water Security and Society: Risks, Metrics, and Pathways. *Annual Review of Environment and Resources* 39: 611–639. <https://doi.org/10.1146/annurev-environ-013012-093817>
- Gerlak, A. K., L. House-Peters, R. G. Varady, T. Albrecht, A. Zúñiga-Terán, R. Routson de Grenade, C. Cook, and C. A. Scott. 2018. Water Security: A Review of Place-Based Research. *Environmental Science and Policy* 82: 79–89. <https://doi.org/10.1016/j.envsci.2018.01.009>
- Gerlak, A., E. Louder, and H. Ingram. 2022. Viewpoint: An Intersectional Approach to Water Equity in the US. *Water Alternatives* 15 (1): 1–12.
- Global Water Partnership. 2000. *Towards Water Security: A Framework for Action*. Stockholm, Sweden: Global Water Partnership.
- Grey, D., and C. W. Sadoff. 2007. Sink or Swim? Water Security for Growth and Development. *Water Policy* 9: 545–571. <https://doi.org/10.2166/wp.2007.021>
- Hoekstra, A., J. Buurman, and K. van Ginkel. 2018. Urban Water Security: A Review. *Environmental Research Letters* 13 (5): 053002. <https://doi.org/10.1088/1748-9326/aaba52>
- Jepson, W. 2014. Measuring “No-Win” Waterscapes: Experience-Based Scales and Classification Approaches to Assess Household Water Security in *Colonias* on the US–Mexico Border. *Geoforum* 51: 107–120. <https://doi.org/10.1016/j.geoforum.2013.10.002>
- Jepson, W., J. Budds, L. Eichelberger, L. Harris, E. Norman, K. O'Reilly, A. Pearson, S. Shah, J. Shinn, C. Staddon, J. Stoler, A. Wutich, and S. Young. 2017a. Advancing Human Capabilities for Water Security: A Relational Approach. *Water Security* 1: 146–152. <https://doi.org/10.1016/j.wasec.2017.07.001>
- Jepson, W., A. Wutich, S. M. Collins, G. O. Boateng, and S. L. Young. 2017b. Progress in Household Water Insecurity Metrics: A Cross-Disciplinary Approach. *WIREs Water* 4 (3): e1214. <https://doi.org/10.1002/wat2.1214>
- Kaplan, R. 1994. The Coming Anarchy. *The Atlantic Monthly* 273 (2): 44–76.
- King, D. 1988. Multiple Jeopardy, Multiple Consciousness: The Context of a Black Feminist Ideology. *Signs* 14 (1): 42–72. <https://doi.org/10.1086/494491>
- Lankford, B., K. Bakker, M. Zeitoun, and D. Conway, editors. 2013. *Water Security: Principles, Perspectives, Practice*. London, UK: Routledge. <https://doi.org/10.4324/9780203113202>
- Meehan, K., W. Jepson, L. M. Harris, A. Wutich, M. Beresford, A. Fencel, J. London, G. Pierce, L. Radonic, C. Wells, N. J. Wilson, E. A. Adams, R. Arsenault, A. Brewis, V. Harrington, Y. Lambrinidou, D. McGregor, R. Patrick, B. Pauli, A. L. Pearson,

- S. Shah, D. Splichalova, C. Workman, and S. Young. 2020. Exposing Myths of Household Water Insecurity in the Global North: A Critical Review. *WIREs Water* 7 (6): e1486. <https://doi.org/10.1002/wat2.1486>
- Octavianti, T., and C. Staddon. 2021. A Review of 80 Assessment Tools Measuring Water Security. *WIREs Water* 8 (3): e1516. <https://doi.org/10.1002/wat2.1516>
- Pauli, B. J. 2019. *Flint Fights Back: Environmental Justice and Democracy in the Flint Water Crisis*. Cambridge, MA: MIT Press. <https://doi.org/10.7551/mitpress/11363.001.0001>
- Pauli, Benjamin J. 2020. The Flint Water Crisis. *Wiley Interdisciplinary Reviews: Water* 7 (3): e1420. <https://doi.org/10.1002/wat2.1420>
- Pahl-Wostl, C., A. Bhaduri, and J. Gupta, editors. 2016. *Handbook on Water Security*. Cheltenham, UK: Edward Elgar. <https://doi.org/10.4337/9781782548010>
- Pulido, L. 2016. Flint, Environmental Racism, and Racial Capitalism. *Capitalism, Nature, Socialism* 27 (3): 1–16. <https://doi.org/10.1080/10455752.2016.1213013>
- Schmidt, J., and C. Peppard. 2014. Water Ethics on a Human Dominated Planet: Rationality, Context and Values in Global Governance. *WIREs Water* 1 (6): 533–547. <https://doi.org/10.1002/wat2.1043>
- Starr, J. R. 1991. Water Wars. *Foreign Policy* 82 (1): 17–36. <https://doi.org/10.2307/1148639>
- Sultana, F. 2020. Embodied Intersectionalities of Urban Citizenship: Water, Infrastructure, and Gender in the Global South. *Annals of the American Association of Geographers* 110 (5): 1407–1424. <https://doi.org/10.1080/24694452.2020.1715193>
- Switzer, D., and M. Teodoro. 2018. Class, Race, Ethnicity and Justice in Safe Drinking Water Compliance. *Social Science Quarterly* 99 (2): 524–535. <https://doi.org/10.1111/ssqu.12397>
- Sze, J. 2020. *Environmental Justice in a Moment of Danger*. Oakland: University of California Press. <https://doi.org/10.1525/9780520971981>
- Truelove, Y. 2019. Rethinking Water Insecurity, Inequality and Infrastructure Through an Embodied Urban Political Ecology. *WIREs Water* 6 (3): e1342. <https://doi.org/10.1002/wat2.1342>
- UN Water. 2006. *Water: A Shared Responsibility—The United Nations World Water Development Report 2*. Paris, France: UNESCO.
- UN Water. 2020. *Water and Climate Change: United Nations World Water Development Report 2020*. Paris, France: UNESCO.
- Varady, R., K. Meehan, and E. McGovern. 2009. Charting the Emergence of “Global Water Initiatives” in World Water Governance. *Physics and Chemistry of the Earth, Parts A/B/C* 34 (9): 150–155. <https://doi.org/10.1016/j.pce.2008.06.004>
- Wilson, N. J., L. M. Harris, A. Joseph-Rear, J. Beaumont, and T. Satterfield. 2019. Water Is Medicine: Reimagining Water Security Through Tr’ondëk Hwëch’in Relationships to Treated and Traditional Water Sources in Yukon, Canada. *Water* 11 (3): 624. <https://doi.org/10.3390/w11030624>
- Wutich, A., M. Beresford, and C. Carvajal. 2016. Can Informal Water Vendors Deliver on the Promise of a Human Right to Water? Results from Cochabamba, Bolivia. *World Development* 79: 14–24. <https://doi.org/10.1016/j.worlddev.2015.10.043>
- Yates, J. S., L. M. Harris, and N. J. Wilson. 2017. Multiple Ontologies of Water: Politics, Conflict and Implications for Governance. *Environment and Planning D, Society & Space* 35 (5): 797–815. <https://doi.org/10.1177/0263775817700395>

- Yuval-Davis, N. 2006. Intersectionality and Feminist Politics. *European Journal of Women's Studies* 13 (3): 79–84. <https://doi.org/10.1177/1350506806065752>
- Zeitoun, M., B. Lankford, T. Krueger, T. Forsyth, R. Carter, A. Y. Hoekstra, R. Taylor, O. Varis, F. Cleaver, R. Boelens, L. Swatuk, D. Tickner, C. A. Scott, N. Mirumachi, and N. Matthews. 2016. Reductionist and Integrative Research Approaches to Complex Water Security Policy Challenges. *Global Environmental Change* 39: 143–154. <https://doi.org/10.1016/j.gloenvcha.2016.04.010>