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A critical environmental justice framework for the illegal wildlife trade

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Rapidly, scholars and practitioners are recognizing the need for the radical incorporation of justice into conservation interventions. Critical environmental justice is an attractive avenue for integrating justice and wildlife crime prevention within the illegal wildlife trade. As coined by David Pellow, critical environmental justice delineates dynamics of inequality related to intersecting social categories, multi-scalarity, racial expendability, and state power. Within IWT, these pillars of critical environmental justice offer opportunities to contend with futures otherwise and to pursue IWT intervention with a grounded understanding of communities, wildlife, and each other. This article demystifies the critical EJ literature and analyzes IWT through a critical EJ lens. Grounding IWT prevention and study in a critical EJ approach can facilitate a more seamless, radical, and transformative integration of justice principles into IWT intervention.

KEYWORDS

environmental justice (EJ), conservation social science, wildlife crime, wildlife trade, imagination, social inequalities

1 Introduction

> "If you ask me, 'What is the most important, enduring success of the environmental justice movement?' I would say it's not some law, it's not some policy that we got passed…
>
> It is, in fact, a change in the way we think about the environment and its relationship to human beings, and the question of inequality – and it's a change in the way we even define the environment."
>
> – David Pellow in Dean's Lecture Series at the Stanford Doerr School of Sustainability

Illegal wildlife trade (IWT) is one of the fastest-growing criminal markets despite pro-conservation rhetoric (Keskin et al., 2023) and poses considerable risks to both biodiversity (e.g., Garber et al., 2024; Wyatt et al., 2022) and local communities (e.g., Arroyave et al., 2023;

Rush et al., 2021). IWT's implications reflect contextual dynamics regarding gendered (Seager et al., 2021; Agu and Gore, 2020), socioeconomic (Tolbert et al., 2023; Prasad et al., 2022), and cultural (Feddema et al., 2020; Donovan, 2004) underpinnings—all of which can contribute to the systemic marginalization of local communities through conservation. IWT, when considered a form of wildlife or conservation crime, delineates the complexities associated with people's care for the environment and the preexisting social conditions that push them to engage with IWT in the first place (Duffy, 2022, p. 43). Indeed, Duffy (2022) proceeds to argue that IWT can shape and impact livelihoods in two ways: (1) by depriving communities of food and income sources and (2) by serving as an income-generating endeavor (p. 43–44). IWT is thus complicated by broader conceptions of identity, space, and environmental relations, requiring approaches grounded in a justice model that accounts for these dynamics. Given its application within other conservation practice sects (e.g., Ciornei, 2023; Guibrunet et al., 2021; He et al., 2021), environmental justice (EJ) posits a suitable method of integrating such principles into IWT.

There is a gap in our understanding of applying EJ to IWT analysis, critique, and solutions. Defined by Bullard (1996), EJ "embraces the principle that all people and communities are entitled to equal protection of environmental and public health laws and regulations" (p. 493). Rooted in the experiences of African Americans protesting against hazardous waste sitings in Warren County, NC, in the 1980s (Eady, 2007; McGurty, 2000), EJ has evolved as a social movement to more adequately reflect global realities of environmental racism and environmental inequality (Sze and London, 2008). Environmental inequality pertains to environmental conditions that further preexisting social disparities, such as the magnification of systemic violence experienced by houseless people forcibly relocated into toxic neighborhoods (Goodling, 2020). Environmental racism, as defined by Bullard (1993), "refers to any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities based on race or color" (p. 1037). One example of environmental racism is policies that site toxic waste sites in predominantly racially marginalized communities (Mascarenhas et al., 2021). As a theoretical praxis, EJ lends itself to understanding the dynamics between environmentally-induced social inequality and environmental racism (Steady, 2009), influencing how an individual will be impacted by environmental injustice.

However, in application, EJ is often divorced from deeper understandings of racialized production of spatial-induced social inequality (Pulido, 2000). Some argue that EJ is limited by a purely Western scope (e.g., Roy and Hanaček, 2023; Álvarez and Coolsaet, 2020), thereby restricting the theory's application in non-Western contexts. Within conservation, EJ has been deployed as a tool to unsettle dichotomies of conservation projects in perpetuating and alleviating environmental injustices (Bontempi et al., 2023; Domínguez and Luoma, 2020); modes of organized resistance against social injustices in areas of conservation interest) (Fanari, 2022; Wang and Lo, 2022); and evaluating distributions of conservation harms and benefits (Gurney et al., 2021; Martin et al., 2015). Applying an EJ framework to IWT requires more critical integration that accounts for the interlocked roles of the state, security, and criminalization as they relate to human-environment relationships.

Critical environmental justice (critical EJ) studies posit an evolution of environmental justice theory to account for a deeper understanding of the entrenched and embedded character of social inequality as it is reinforced by state power (Pellow, 2017). As opposed to EJ, which aids in our collective understanding of how environmental injustice develops and impacts communities, critical EJ pushes us further by linking theory and practice to pursue an environmentally just society (Pellow and Brulle, 2005). Critical EJ argues that inequalities are sustained through intersecting social categories, multi-scalarity, racial expendability, and state power (Carrillo and Pellow, 2021). Given the global expansion of IWT and global biodiversity decline, a critical EJ approach is necessary if solutions to IWT are to be long-term and sustainable. A critical EJ perspective of IWT can allow interventions to address the drivers of social marginalization and illicit natural resources through broader geopolitical understandings of conservation-induced inequality. In this way, critical EJ enables a more holistic solution to IWT grounded in respect for globalized local contexts, species, and communities. This paper seeks to guide IWT scholars and practitioners in implementing critical EJ principles within their research. I first provide an overview of the critical EJ framework. Second, I disentangle the elements of IWT according to the four pillars of critical EJ. I then suggest avenues for scholars and practitioners wishing to implement a critical EJ perspective.

2 A critical environmental justice framework

Critical environmental justice (EJ) studies is interdisciplinary, multi-methodological, and scholar-activist inspired within a praxis-oriented EJ approach (Pellow, 2016). Critical EJ studies attest to how intersecting and overlapping social categories of difference work to position individuals at increased risk of exclusion, marginalization, erasure, discrimination, violence, and stigmatizing social differences (or Othering) (Pellow, 2016). Resting on four pillars, critical EJ draws attention to intersectionality, multiscalarity, horizontality (anarchism), and indispensability (Murphy et al., 2021). These pillars constitute a commitment to understanding the social and geopolitical dimensions of environmental (in)justice, with emphasis on how IWT prevention has the potential to both alleviate or exacerbate preexisting environmental inequities. Critical EJ refocuses the conception of human–environment relationships by paying attention to individuals and scales through an awareness of intersecting modes of difference.

Critical EJ allows for assessing the intersecting modes of difference that make an individual more likely to engage in IWT and be affected by IWT interventions. For instance, a common wildlife crime intervention is increased militarized security or policing, which has the potential to further marginalize communities that were participating in IWT or other wildlife crimes for subsistence motives (e.g., Lynch and Turner, 2022;

Peterson et al., 2017). Through this perspective, critical EJ can lend itself to the evaluation of IWT study and intervention in ways that account for the varied motivations for why a person chooses to engage in the industry and to develop solutions that are reflective of the spatiotemporal and identify dynamics that undergird conservation crimes. The integration of EJ to IWT and other conservation crimes has faltered, and perhaps the reason for its limited uptake is how we consider when justice for biodiversity can take precedence over justice for communities (see Davies, 2014). For example, expanding protected areas may be a massive success for species protection. Still, it could undermine local communities if they are denied access to natural resources or are displaced. Integrating EJ principles within criminology has proven successful throughout the green and critical criminology literature, such as through studies evaluating the siting of correctional institutions (Opsal et al., 2022; Bradshaw, 2019); murders of environmental defenders (Hasler et al., 2020; Lynch et al., 2018); and victims of environmental crimes (Natali et al., 2023; Hall, 2016), among others. In symmetry with conservation criminology, critical EJ makes it feasible to mitigate or adapt to global events and their impacts across varied groups of people and geopolitical contexts (Gore, 2011, p. 659).

From a conservation criminology perspective, a critical EJ analysis of IWT aids in understanding the victimology of IWT offenders, given that environmental harms disproportionately impact many offenders from underprivileged social backgrounds (see Wolf, 2011). In countries with high biodiversity and social inequality, IWT motivators are often influenced by the local socio-economic characteristics (Regueira and Bernard, 2012). Dynamics related to conservation-induced social disparities, such as dispossession (e.g., Gurung, 2023; Hoefle, 2020) or criminalization of traditional hunting or foraging practices (Molnár et al., 2023; Snook et al., 2020) are dynamics that are also correlated to environmental injustices such as resource extraction (Dunlap, 2022; Youdelis et al., 2021) or food insecurity (Safari et al., 2022; Kamat, 2014). Within the mix of IWT, we see how anti-IWT measures and some conservation measures result in the persecution of already marginalized communities despite their limited authority within the IWT industry. Understanding IWT from a critical EJ perspective requires us to reorient how we view struggles of race, class, and gender in their grounded socio-political and socio-ecological contexts. In the proceeding section, I examine IWT through a critical environmental justice lens and organize the section according to the four pillars of critical EJ:

I. Attention to social categories of difference in (re)producing environmental injustice
II. The role of the state in perpetuating environmental racism
III. The spatial and temporal dynamics of environmental injustice
IV. Identifying and countering indispensability

In doing so, I show how critical EJ framework has much to offer to the unique challenges posed by IWT. Applying a critical EJ lens can allow scholars and practitioners to better account for the intimacies between sociocultural, geopolitical, and environmental factors shaping IWT and demonstrate overlooked forms of (in)justice related to the IWT. While I illuminate how IWT prevention strategies have integrated justice principles, I deepen the conversation by engaging with the critical EJ literature and its capacity to expand our understanding of IWT and conservation justice. By considering the pillars of critical EJ, my analysis reveals the potential for IWT solutions to support an agenda of justice while supporting biodiversity protection.

3 Critical EJ applications and principles for IWT

3.1 Pillar 1: Attention to social categories of difference in (re)producing environmental injustice

Today, much of conservation's application and use of intersecting social categories comes from the Black feminist theory of intersectionality (e.g., Ruano-Chamorro et al., 2024; Pandya, 2023; Lau, 2020). The deviation of intersectionality from Black feminism, and specifically the theory's uptake in non-Black feminist disciplines, has often resulted in a narrow deployment of the theory into a strict gender/race binary (Nash, 2011). In this regard, the first pillar of critical EJ challenges us to focus beyond multiple forms of inequality and question the degree of emphasis one should place on one or more social categories of difference (Pellow, 2016). EJ and IWT scholars often focus only on singular forms of inequality rather than how multiple systems of identity and inequality overlap (e.g., Olunusi, 2024; Massé et al., 2021). Here, we understand the social interventions determining whether a person is more likely to participate in IWT and receive disproportionate harm from conservation interventions such as through the expansion of protected areas (Mahalwal and Kabra, 2023; Bathija and Sylvander, 2023) or increased conservation security efforts (Millner et al., 2024; Massé and Lunstrum, 2016). This facilitates our understanding of the intersectional dynamics of multiple social differences that (re)produce environmental injustice and enable IWT participation.

These dynamics in IWT policies and interventions also tend to perpetuate existing inequalities. Indeed, Indigenous peoples' environmental rights have often been criminalized or challenged by Western environmental justice perspectives (Nurse, 2020). Critical EJ avenues thus force conservation practitioners to reckon with the degree of flexibility of legal wildlife use and trade per the rights of Indigenous peoples and local communities. Expanding the categories of differences between IWT offenders, victims, and associates allows for a more comprehensive view of the intersectional processes that (re)produce and maintain oppression. van Uhm (2020) notes the geopolitical and socioeconomic factors that facilitate IWT asymmetries, where powerful Western actors exploit poverty and inequality to encourage the IWT. Indeed, the people most vulnerable to the social and ecological ramifications of the illegal wildlife trade are most likely to be prosecuted for these crimes. For instance, Paudel et al. (2019) found that, of the individuals incarcerated for IWT in Nepal, 56% were poor, and 75% were from Indigenous communities.

Racialized enforcement dynamics and recognition of these biases are necessary to consider if enforcement will be used equitably. Thus, a partial component of understanding the critical EJ dimensions of the IWT is understanding the mechanisms of IWT, through both engagement and enforcement, that take advantage of discriminatory social conditions. Many IWT laws and policies lack coordination across sectors, such as between wildlife conservation and rural development, whereby sectors lack continuity (Osorio and Bernaz, 2024). Ensuring consistency will aid in modes of enforcement that are accessible and just, as well as increase compliance with policies (Osorio and Bernaz, 2024).

Here, we must understand the way that anti-IWT policies and practices reproduce inequalities based on the social identities of Indigenous and local communities. These socio-economic implications of environmental injustice and IWT prevention require a commitment to valuing socio-cultural livelihoods (see Peterson, 2015). The matrix of social identities that individuals involved in IWT possess is often exacerbated by the environmental injustices that they face, such as having to live in proximity to dangerous predators (Doubleday and Adams, 2020; Chowdhurym et al., 2016); rights violations (Mujetahid et al., 2023; Ndoinyo, 2021); or conservation-induced displacement (Kokunda et al., 2023; Shahabuddin and Bhamidipati, 2014), among others. For example, women mangrove harvesters receive limited recognition as stakeholders in environmental governance as they are denied the right to practice their traditional livelihoods, which are a result of broader systemic issues of patriarchy, imperialism, and neo-liberalism (Cormier-Salem, 2017). Within the context of IWT, the expansiveness of environmental injustice reverberates through socio-systemic processes that marginalize those most at risk in society and position them to engage in illicit industries such as the IWT.

3.2 Pillar 2: The role of the state in perpetuating environmental racism

The state, particularly in conservation interest areas, has a considerable geopolitical and social influence on adjacent communities (e.g., LaRocco, 2024; Ramutsindela, 2017; Peluso, 1993). The state's role in furthering divisions along social categories of difference (Marx, 1996) is reflected within protected areas and other areas of conservation interest (Moulton, 2024; Loperena, 2016; Kepe, 2009). Environmental racism is a form of structural violence where the systems creating, perpetuating, and allowing environmental harm are also bolstered and supporting white supremacy (Sample, 2020). The perpetuation of environmental racism within areas of conservation interest significantly impacts the success of IWT interventions and individuals' categorization within the IWT industry. Understanding these complexities can aid in identifying more targeted and race-aware approaches to IWT prevention by delineating how the state (re)produces the conditions that allow for environmental racism to ensue.

Drawing upon preexisting biases related to local and Indigenous peoples' social identities, environmental racism aids in the creation of a conservation enemy, thus justifying the use of violence as a conservation strategy (e.g., Day et al., 2023; Duffy, 2016). This dual process of criminalization and dehumanization aids in the reproduction of marginalizing social systems that force communities to participate in the IWT in the first place. The state plays a pivotal role in combining racial ideology and anti-environmental rhetoric (Carrillo, 2022), processes that perpetuate environmental racism within the conservation sector. Environmental racism in conservation indicates that some conservation acts distribute harms and benefits in ways that validate racial dynamics (Torres, 1992, p. 840). The linkages between environmental harms and environmental racism are sensitive to the racial orderings produced by the state and the perceived acceptability of anti-IWT or conservation policies. Environmental harms, such as through retalitory illegal wildlife hunting, therefore, will continue to increase as the legitimacy of conservation policies declines (Witter, 2021). This relationship is shaped by the cultural, political, and socioeconomic aspects of local communities (van Uhm and Moreto, 2018) and their perception of the justness of conservation policies.

Furthermore, the state also directly influences the accessibility of the legal wildlife trade. This lack of accessibility to legal markets thus makes it easier for people to engage in IWT and be at further risk of persecution for these illicit activities. Although there is considerable critique of the legal wildlife trade as an IWT prevention strategy due to the difficulty of LWT regulation enforcement and corruption (Rizzolo, 2021), the legal wildlife trade is also a livelihood potential for many local communities (Obasi and Vivan, 2016). Indeed, mischaracterizing IWT threats can cast assumptions that a species' use or legal trade harms wild populations when that might not be the case (Challender et al., 2021). The blanket characterization of the wildlife trade thereby threatens to continue the global legacies of Western ideologies of wildlife use, with some arguing that a ban on all wildlife trade may further exacerbate localized inequalities (e.g., Zhu and Zhu, 2024). Indeed, altering consumer behavior is difficult to achieve, with interventions having adverse consequences if they fail to address systemic, cultural, and environmental drivers (Thomas-Walters et al., 2020). Curbing the legal and illegal wildlife trade requires understanding the historical and systemic roots of biases related to people's relationships with the environment.

To responsibly address environmental racism in IWT policies and interventions, an equity lens must be prominent and guide implementation (Bullard, 2019, p. 241). Equity, in this case, involves merging the interests of marginalized communities into mainstream IWT policy and intervention (Willard, 1992). Vu (2023) argues that anti-IWT campaigns can overlook positive cultural attributes related to non-Western environmental relations and instead resort to negative perceptions of non-Western consumers guided by racial biases. The use of problematic historical stereotypes in some anti-IWT campaigns, therefore, aids in reproducing and reinforcing the stereotypes (Marguiles et al., 2019) in ways that perpetuate environmental racism. For instance, Asian consumers are typically the target for IWT demand reduction, despite the consumption rates of illegal wildlife products in North America and Europe and those continents' roles in IWT transit. This also involves creating legal cooperation between countries to better manage the legal trade of wildlife (e.g., Jiao

et al., 2021). Acknowledging and addressing environmental racism in the IWT requires constant negotiation with the state and its social and environmental governance structure.

3.3 Pillar 3: The spatial and temporal dynamics of environmental injustice

With the rise of environmental conflicts, the contest of unjust political and scientific structures and practices is infiltrating broader spatial and symbolic spaces (Temper et al., 2015). Specifically, communities subject to environmental injustice are also shaped by historical trajectories of oppression, colonialism, and disempowerment, shaped by evolving geographies (see Karmakar, 2023). Inequalities can form and operate simultaneously in the same location (Ahmed and Eklund, 2021), which can aid in creating the conditions necessary for environmental injustice and IWT participation. These patterns are illuminated through the processes that have facilitated the global expansion of IWT, which are predicated on extractive legacies of injustice and affirmation of violent, militarized state power (see Marguiles et al., 2023). Attention to the spatiotemporal dynamics of environmental injustice, as seen through IWT, requires a multiscalar consideration of how environmental (in)justice and space are co-constituted (Ducre, 2018; Walker, 2009).

The creation of conservation space, such as through protected areas, has also served as a site of creation for environmental injustice at the expense of biodiversity and local communities (Domínguez and Luoma, 2020). For instance, the legal frameworks of the US *Endangered Species Act* (ESA) and the Canadian *Species at Risk Act* (SARA) infringe on the environmental rights of Native American and First Nation tribal lands partly because of the distribution of benefits and burdens (Olive and Rabe, 2016). With the expansion of the global IWT market, dynamics of power that are highly sensitive to global–local geographies are introduced. Liew et al. (2021) cite the economic advantage of wealth importers contributing to their control over poor exporting nations and territories, drawing connections between IWT and international wealth inequality. In conjunction with geographic characteristics and biodiversity distribution, Ni et al. (2022) argue that these socioeconomic disparities may be the reason for spatial variations in wildlife crime patterns. These variations require regional and group-specific prevention strategies (Ni et al., 2022). The metrics of vulnerability that shape environmental (in)justice and the conditions where these vulnerabilities arise can aid in understanding how IWT is sensitive to and permeates the expansion of IWT globally.

Broadening understanding of IWT geographies, which more adequately accounts for social difference and the spatiotemporal mechanisms contributing to environmental (in)justice, can allow for a deeper integration of critical EJ in IWT prevention. IWT is a global issue, and some of the shortcomings related to its prevention's long-term implementation can be linked to a lack of congruency between IWT policy and local communities' multifaceted interests. The cultivation of critical EJ geographies for IWT here borrows from Black geographies, whereby the production of space and the assessment of violence are shaped by the interconnections of race, domination practices, and geography (McKittrick, 2011). Within IWT, this process translates to the connections of social differences (i.e., race, economic status, gender), domination practices, geography, and human–environment relationships that dictate the social spatiotemporal impacts of IWT. Indigenous geographies, too, offer an understanding that breaks away from the conflation of Indigenous and local by rooting the work in modern and future politics, which recognize the continuation of settler colonialism in the present day (dee Leeuw and Hunt, 2018). Drawing parallels between histories of colonial extraction and juxtaposing those histories with the modern expansion of IWT can allow for a more critical integration of justice into IWT prevention and study. These dynamics of affirming the social, cultural, and historical geographies have been achieved through scholars' pursuit of work that (re)affirms concepts of embodiment (Gay-Antaki, 2023; Seamon, 2013); activism (Apostolopoulou et al., 2022; Pulido and De Lara, 2018); and human–environment relationships (Wolverton et al., 2023; Brown et al., 2019), to facilitate a grounded practice of addressing socio-spatial and temporal dynamics of environmental inequality.

3.4 Pillar 4: Identifying and countering indispensability

Indispensability involves grappling with how entire populations are deemed expendable and what strategies these populations use to resist. Metrics of indispensability within critical EJ scholarship are drawn along the perceived expendability of marginalized social identities, which aim to justify a group's exposure to environmental harms (e.g., Privitera et al., 2024; Rice et al., 2022). Expendability is thus intimately rooted in the principles that guide environmental racism (Kolers, 2024). Within conservation, the expendability of local and Indigenous populations is related to the justification of violence as a conservation strategy (de Jong and Butt, 2023). Specifically, the processes that make communities expendable also make them invisible (e.g., Rubis and Theriault, 2020; Massé, 2019; Andersson et al., 2017), ultimately increasing a community's risk of environmental harm and IWT engagement. Techniques to counter IWT, particularly aligned with the dynamics of conservation security, is the most notable space wherein indispensability is visible. The use of enforcement-heavy or militarized security as an IWT prevention measure, such as through the use of drones (Sauls et al., 2023; Sanbrook, 2015) or heightened policing (Mushonga, 2021; Chaudhuri, 2013), can undermine conservation efforts while furthering local communities' social expendability.

The politics of recognition has become a necessary component of environmental justice within conservation policy and practice (Martin et al., 2013). Attention to avenues of recognition justice, which requires interventions to meet standards that fairly consider and represent the cultures, values, and lived experiences of all affected parties (Whyte, 2011), involves framing conservation interventions within the context of histories, communities, and ecosystems influenced by broader social and political processes (Asiyanbi and Massarella, 2020). Positioning conservation within this frame allows for an understanding of how social conditions can enable or serve to remedy environmental harm and conflict (Lunstrum et al, 2023). The conditions that make a community indispensable to IWT can aid in dismantling oppressive

institutions by co-creating forms of research and praxis. The process of co-creation involves bringing together affected parties, including people who commit IWT offenses and community members, to foster collaboration that addresses the synergies and differentials related to power, privilege, knowledge, and resource access which have the potential to undermine IWT interventions if they are not addressed (Jolles et al., 2022). Critical EJ concepts of indispensability thus are premised on a practice that brings those from the "margins to center" (Hooks, 2000) by grounding diverse lived experiences within conservation governance and IWT prevention.

4 A framework for applying critical environmental justice by IWT practitioners

I propose a framework for IWT practitioners to foreground critical EJ. This framework builds upon Pellow (2016) and works to reject the boundaries of what justice *should* look like. This framework emphasizes what environmental justice *could* look like when emboldened by the lived realities and experiences of the affected communities through recognition of our differences and symmetries. EJ sits at a crossroads wherein the spillover of research into praxis and advocacy is evolving (Sze and London, 2008). IWT interventions, in light of an expansion of justice within the conservation sector, are positioned to answer the call by critical EJ scholars and conservation practitioners to pursue models rooted in the interconnected futures of biodiversity, local communities, and Indigenous peoples. Integrating critical EJ in IWT policies and interventions requires a commitment to multiscalar justice, whereby the systems and structures that permit social inequality *and* IWT participation are challenged.

Importantly, Indigenous peoples and local communities can only determine the contours of what is truly a just IWT or critical EJ intervention. As IWT scholars and practitioners, we are challenged to consider how IWT solutions can be positioned to safeguard Indigenous and local peoples' livelihoods while also facilitating processes that aid in restoring traditional models of EJ (Rodriguez, 2022). Reorienting our thinking towards IWT intervention that recognizes local communities and Indigenous peoples' indispensability to conservation efforts involves an account of the histories, processes, and relationships that make specific communities expendable. Recognition also involves a commitment to reducing socioecological harm (Hübschle and Marguiles, 2024), whereby IWT researchers are tasked with cultivating meaningful collaborations and expanding definitions of harm. Guibrunet et al. (2021) remind us that just because communities are engaged does not mean that the interventions are just if communities' value systems are not incorporated within conservation governance. Committing to a mode of justice that builds upon and celebrates the inherent value of communities is necessary for long-term, sustainable, and equitable IWT solutions. This process involves going beyond the boundaries of environmental justice and instead embracing the integrative nature of environmentally just solutions (Sze and London, 2008) while still working towards addressing the sources and impacts of IWT.

Critical EJ application within IWT thus begins with a commitment to recognizing and minimizing harm. Environmental harms that stem from IWT, as perpetuated against wildlife and communities, threaten to absolve any conversation of justice. Here, conceptions of environmental harm, as shaped by environmental values and ecological sciences, arise (see White, 2008). The effort here lies within IWT interventions grounded in the realities of the individuals who are most likely to engage in IWT out of need *and* are most likely to harbor a disproportionate degree of environmental harm. A more fluid integration of justice into IWT prevention also necessitates respect for Indigenous sovereignty, right to self-determination, and consent (Domínguez and Luoma, 2020). To begin taking steps toward the weaving of critical EJ and IWT intervention, you must challenge yourself, your research teams, and your collaborators to pay attention to the multiple systems of oppression and axes of social difference that encompass your study system. Which systems are/are not being accounted for? Why are they absent? What steps can be taken to bring these systems forward?

5 Discussion

IWT is an arena that is ripe for a critical EJ intervention. Justice, particularly regarding anti-IWT interventions, necessitates a commitment to political representation that reflects social and environmental justice (see Arroyo-Quiroz et al., 2022). Grounding IWT interventions in local communities' lived realities without sacrificing our unique identities as IWT scholars and practitioners can provide the tools to uncover alternative and potentially transformative understandings of just intervention (Massarella et al., 2020). Critical EJ as a framework for IWT prevention thus requires deliberate engagement with transformative processes by imagining, creating, and working towards alternative conservation futures (see Moore and Molkoreit, 2020). As such, I urge IWT scholars and practitioners to delve deeper into collaborations, studies, and interventions that serve as places of radical thinking and justice (Gutierrez et al., 2021). In this, I ask to what extent critical EJ may enhance IWT interventions in cultivating a conservation future cognizant of care, relationships, and empowerment while simultaneously dismantling global oppressive forces.

This article serves as a starting point for integrating a critical EJ perspective into IWT intervention and study. Pursuing EJ in IWT can only be achieved if we broaden our scope of what it means to be EJ researchers. Here, critical EJ challenges us to examine how we can integrate the framework into our field of study and practice and how we show up within our own lives and communities. Princeton professor Ruha Benjamin (2024) encourages her readers to think through the creation of a world in which everyone can thrive, for "radical imagination can inspire us to push beyond the constraints of what we think, and are told, is politically possible" (p. 22). Thinking and creating anti-IWT futures require a reorientation towards justice and care for wildlife, communities, and each other. To tackle the IWT, we must explore alternatives and pursue justice that reflects our vision of the future.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material. Further inquiries can be directed to the corresponding author.

Author contributions

AG: Conceptualization, Writing – original draft, Writing – review & editing.

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Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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