

Coral reef protection is fundamental to human rights

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Abstract

The intensifying loss of coral reefs from global climate change and local stressors has seen international commitments targeted at conservation and repair, for example the Kunming–Montreal Global Biodiversity Framework. Fulfilling these targets requires decisions to be made on where, when, and how to act, ultimately dictating where limited resources will be deployed. Every choice on action or inaction toward our ocean has direct and indivisible consequences not only for the health of marine ecosystems but also for the health of humans, particularly those who directly depend on marine habitats, both culturally and economically. The well-being of the environment, humans, and animals is interlinked, co-dependent, and even co-produced, as has already been acknowledged by One Health approaches, which endorse a cross- and trans-disciplinary view to health. Coral reefs epitomise how tightly intertwined ecosystem health and the fate of the human and nonhuman communities that depend on them are. A field that thus far remains poorly considered is a human rights-based approach to coral reef protection. A human rights-based approach implements human rights obligations, including the recently affirmed right to a clean, healthy, and sustainable environment, while embedding principles of accountability, nondiscrimination, participation, and empowerment for local and Indigenous communities that ensure effectiveness and meaningful stakeholder engagement. Tying the protection of coral reef ecosystems to human rights emphasises the importance of healthy ecosystems to human well-being and thus the inevitable connection between nonhuman and human life. The general failure to consider coral reef protection through a human rights-based approach is a missed opportunity to expedite reef protection while simultaneously advancing climate justice for both humans and nonhumans.

KEY WORDS

climate change, climate justice, coral reefs, human rights, rights-based approach

Human rights are fundamental rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status (UN General Assembly, 2022). The loss of healthy environments can impact human rights and inaction on climate change has led to a rise in the number of legal petitions to the

Human Rights Committee, the United Nations treaty-making body overseeing implementation of the International Covenant on Civil and Political Rights (ICCPR). The 2019 case of *Billy v. Australia* was the first successful climate litigation framed through the language of rights before this body. The case was submitted by a group of eight

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Torres Strait Islanders, Australian nationals, and six of their children and demonstrates how climate change threatens the human rights of low-lying reef nation inhabitants who rely on healthy coral reefs to ensure their way of life. Coral bleaching and its damaging impact on crayfish habitats were specifically identified as a harmful climate change impact by the Human Rights Committee, which determined in 2022 that inaction on climate change adaptation by the Australian Government violated the Torres Strait Islander inhabitants' rights to culture and family life, contrary to the ICCPR. Given that an estimated one billion people directly or indirectly rely on healthy coral reefs (Sing Wong et al., 2022), with many more deeply connected to reef systems, if reefs and their associated ecosystem services are lost, the impact on human health and economic well-being will be catastrophic. Nonetheless, anthropogenic drivers, particularly climate change, continue to degrade coral reefs globally. Accordingly, a 2022 Intergovernmental Panel on Climate Change report stated with high confidence that even at 1.5°C warming, a mark which we might have already missed, the majority (70–90%) of warm-water coral-dominated systems will disappear (Hoegh-Guldberg et al., 2022), and 2024 marks the fourth global coral bleaching event impacting over 50% of the world's coral reefs (Reimer et al., 2024). Alongside the impacts of climate change, coral reefs face other anthropogenic stressors such as pollution, resulting in extreme decreases in biodiversity (Hoegh-Guldberg et al., 2022). The triple planetary crisis of climate change, biodiversity loss, and pollution has been described by the United Nations' High Commissioner for Human Rights as the greatest future challenge facing human rights globally (OHCHR, 2024).

We are witnessing a proliferation of legal petitions seeking action to address climate change and environmental issues in national and international courts. As of December 2022, 2,180 climate-related cases were being considered in 65 jurisdictions. Yet, few of these cases directly consider the right to a clean, healthy, and sustainable environment with a direct mention of coral reefs (United Nations Environment Programme, 2023). Petitions to date have typically been led by women's groups, youth, local communities, and Indigenous Peoples (United Nations Environment Programme, 2023). This reflects the social and economic inequity of climate change, whereby it is often the communities who are most impacted by its effects that have contributed least to the problem, compounding discrimination frequently experienced by vulnerable populations. Specifically, the loss of coral reef cover is likely to disproportionately impact lower socio-economic communities, communities of color, poor coastal states, and small island states' communities (OHCHR, 2024; Whittingham et al., 2003). These communities typically have little visibility, lobby, or economic power to affect the political process, underscoring the triple climate injustice they undergo and stressing the urgency of radically changing future policy decisions in this context (Whittingham et al., 2003). Litigation should not be the only available avenue for participation and empowerment of vulnerable rightsholders: states must be accountable to obligations to protect these human rights and find just solutions that address inherent discrimination.

We propose a human rights-based approach to coral reef protection that facilitates legality, accountability, nondiscrimination, empowerment, and participation (Figure 1). This approach recognises that improving environmental health is integral to protecting diverse human rights. Within this framework, legality refers to the recognition that reef protection must be consistent with relevant environmental and human rights principles and with international and national laws; accountability requires effective monitoring of reef protection efforts to ensure that they comply with such principles and laws; participation means that individuals, groups, and communities have the right to participate freely, actively, and meaningfully in decision making processes about their coral reef rights and, centrally, regarding their right to a healthy, clean, and sustainable reef environment (UN General Assembly, 2022); discrimination is prohibited throughout; and empowerment is gained in the process of understanding, claiming, and exercising these reef related rights. Through their involvement in the rights-based framework, individuals and communities better understand their rights in relation to reef protection and become increasingly engaged in shaping policies and practices that impact their lives (Figure 1).

Existing rights-based frameworks and principles developed by the Special Rapporteur on Human Rights and the Environment should form the basis for a human rights-based approach to coral reef protection. These principles establish substantive and procedural elements of the right to a healthy environment, reminding us of the positive obligation of states to protect the environment and diverse human rights. In his Framework Principles on Human Rights and the Environment, Special Rapporteur Knox has given weight to the obligations of states towards Indigenous Peoples and members of traditional and local communities, "recognizing and protecting their rights to the lands, territories, and resources that they have traditionally owned, occupied, or used." Such obligations require appropriate consultation and informed consent and a recognition and active effort to address the colonial legacies in marine governance. In addition, the potential severity of coral loss (Hoegh-Guldberg et al., 2022) creates an issue of intergenerational inequity and risks the rights of children (UN Environment Programme, 2023). Looking at other scenarios such as international development (Broberg & Sano, 2018), where rights-based approaches have supported policy changes, potential benefits of a human rights-based approach to coral reef protection would ensure access by the most vulnerable communities to clean, healthy, and sustainable coral reefs and strengthen the capacity of marginalized groups to better promote policy change (Broberg & Sano, 2018).

The application of human rights to coral reef protection frames their guardianship as a human rights issue. This framework does not, however, exclude or undermine additional protections for coral reefs that are based in the corals' own right to life or that do not use the rights framework altogether. There may be competing human rights to consider, that states and other entities would need to balance when employing a human rights-based approach,

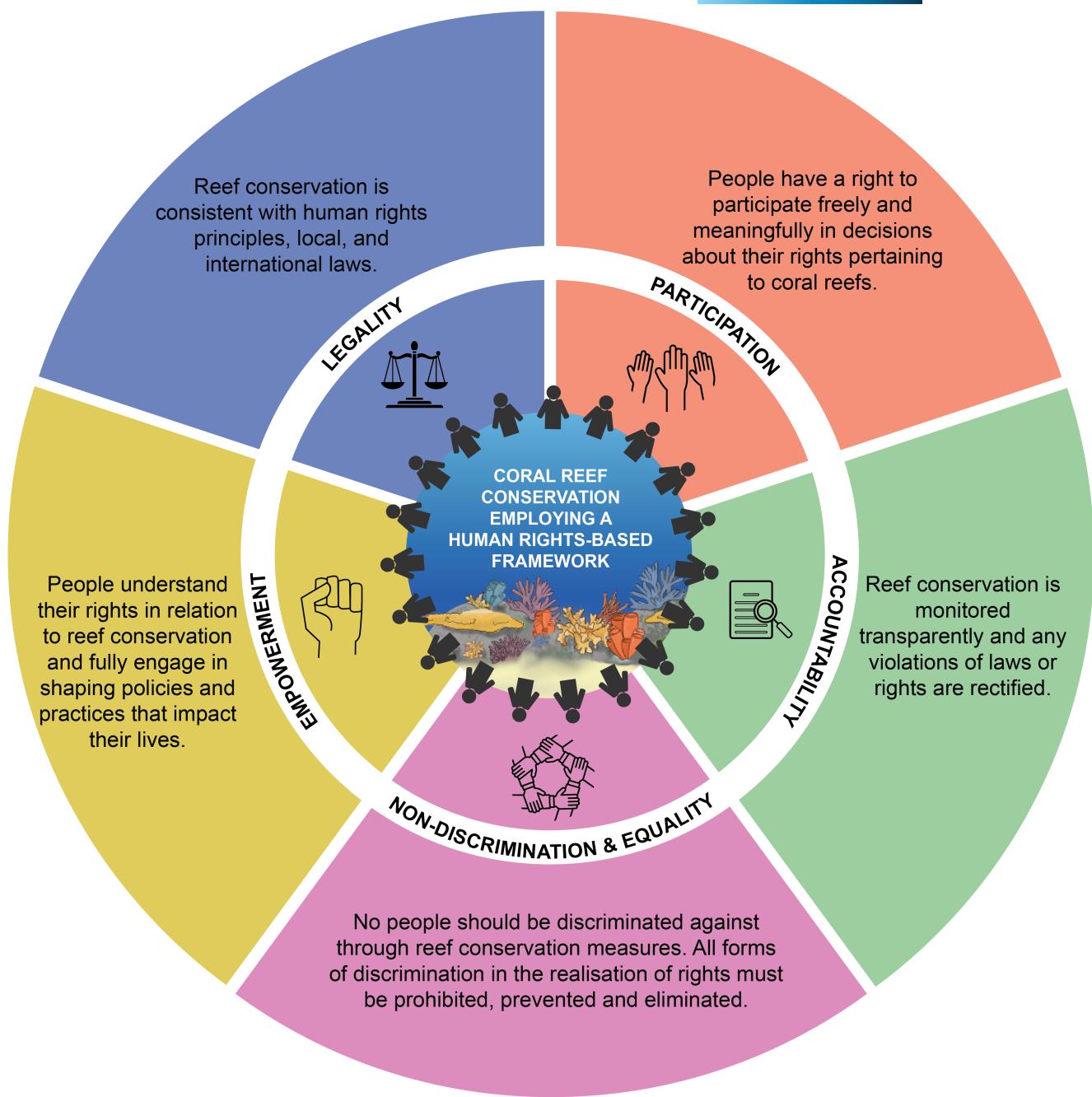


FIGURE 1 Human rights-based framework for coral reef conservation. The five key principles are legality, accountability, non-discrimination and equality, empowerment, and participation. A summary of each principle within the framing of reef conservation is provided. Linking the protection of coral reef ecosystems to human rights highlights how crucial healthy ecosystems are for human well-being and underscores the inherent connection between human and nonhuman life.

creating risks that must be acknowledged and carefully considered, such as the risk that an individual or certain collective rights are put ahead of others (Broberg & Sano, 2018). Furthermore, there are contextual circumstances such as political regimes and cultural factors that will influence human rights-based approaches (Broberg & Sano, 2018) and continued humanitarian disasters can call into question their effectiveness. Discussions around the rights of nonhumans (e.g., animal rights and the rights of nature) as separate from or as part of human rights, as well as debates

about the effectiveness of the liberal rights discourse altogether are part of the broader debates that are increasingly emerging as environments degrade and technologies advance (Alvarez-Nakagawa, 2024). Yet, international recognition of a human right to a clean, healthy, and sustainable environment affirms that environmental protection and the right and responsibilities of humans are inherently intertwined.

Ultimately, the window of opportunity to conserve coral reefs is rapidly closing and despite a plethora of current protective

measures, coral reefs around the world continue to degrade (Hoegh-Guldberg et al., 2022). We suggest, therefore, that implementing coral reef conservation through a human rights-based approach will provide a practical path toward a much-needed transformation of local, national, and international governance, while also putting a face to coral loss. This is an urgent reminder that the loss of coral ecosystems negatively impacts both humans and nonhumans.

AUTHOR CONTRIBUTIONS

Emma F. Camp: Writing – original draft; writing – review and editing. **Irus Braverman:** Writing – review and editing. **Genevieve Wilkinson:** Writing – original draft. **Christian R. Voolstra:** Writing – original draft.

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There are no conflicts of interest to declare.

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Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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