

<https://doi.org/10.1038/s44183-024-00057-7>

The human right to a clean, healthy and sustainable ocean

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The United Nations General Assembly adopted a resolution in 2022 that formally recognizes that there is a universal human right to a clean, healthy and sustainable environment. Yet there is evidence that human rights impacts associated with the degradation of the ocean environment are accelerating. In this perspective, we highlight how the recognition of the human right to a healthy environment can catalyze ocean action and transform ocean governance. In particular, it can do so through 1) catalyzing marine protection and increasing accountability through clarifying state obligations, 2) improving the inclusiveness of ocean governance, including through prioritizing and empowering groups in situations of vulnerability, and 3) enhancing ocean economy practices through clarifying private sector responsibilities. To those ends, there is an urgent need to move from recognition to implementation in order to protect both current and future generations' human right to a clean, healthy and sustainable ocean.

In 2022, the United Nations General Assembly adopted a resolution that formally recognized the human right to a clean, healthy and sustainable environment¹. This important milestone, drawing on decades of developments in international human rights law and international environmental law, highlights the importance of the environment to the dignity, security and wellbeing of all humans, and the need for society as a whole, and governments and the private sector in particular, to take action to safeguard this fundamental right. Importantly, the obligations and responsibilities associated with the “right to a healthy environment” apply to everyone, everywhere, and in all environments – including the ocean. Yet, despite the evidence of mounting threats to the ocean environment and to associated human rights^{2–5}, there has been insufficient attention to the implications and transformative potential of the recognition of the right to a healthy environment for ocean governance.

In the following section, we briefly introduce human rights law, including in relation to the environment, and discuss how human rights issues related to the ocean environment are on the rise. Then, we explore how the recognition of the human right to a healthy environment has the potential to catalyze ocean action and transform ocean governance.

Human rights, the environment, and the ocean

The right to a healthy environment is part of the set of universal, indivisible and inalienable human rights that are fundamental to human dignity, security, and thriving. The Universal Declaration of Human Rights

(UDHR) encompasses both civil and political rights (which include rights to life, liberty and security of the person, freedom from slavery and torture, freedom from discrimination, freedom of movement, property and nationality, freedom of thought, religion, opinion, expression, association and peaceful assembly); and, economic, social and cultural rights (which include the rights to health, education, housing, freedom from hunger, an adequate standard of living, science and culture)⁶. Subsequent treaties and declarations have clarified the responsibility to further safeguard the rights of persons belonging to groups subject to discrimination (e.g. ethnic, religious and minority groups), potentially vulnerable groups (e.g. women, children, older persons, persons with disabilities, displaced persons), and the unique rights of Indigenous Peoples and traditional communities due to their historical and continued connections to places and direct reliance on natural resources (see Table 1 for details). International human rights treaties are legally binding on State parties and provide broadly accepted guidance to non-parties and other entities.

The human right to a healthy environment includes the right to clean air, a safe climate, healthy ecosystems and biodiversity, safe and sufficient water, non-toxic environments, and healthy and sustainable food, as well as access to information, public participation in decision-making and access to justice⁷ (Fig. 1). When environmental health is undermined, this can affect other human rights such as the rights to life, health, food, water, livelihoods, security, and dignity, and have distinctive impacts on Indigenous Peoples' rights, cultural rights, and children's rights⁸. In other words, globally, the

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Table 1 | Brief overview of international human rights instruments – including those pertaining to the right to a healthy environment

	Year	Document
International Bill of Human Rights	1948	Universal Declaration of Human Rights
	1966	International Covenant on Civil and Political Rights
	1966	International Covenant on Economic, Social and Cultural Rights
Additional Human Rights Instruments	1965	International Convention on the Elimination of All Forms of Racial Discrimination
	1979	Convention on the Elimination of All Forms of Discrimination Against Women
	1989	Convention on the Rights of the Child
	2007	Convention on the Rights of Persons with Disabilities
	2007	United Nations Declaration on the Rights of Indigenous Peoples
	2018	United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas
Instruments Related to the Human Right to a Healthy Environment	1981-Present	African Charter on Human and Peoples’ Rights; San Salvador Protocol to the American Convention on Human Rights; Aarhus Convention on Access to Information, Public Participation and Access to Justice in Environmental Matters; Arab Charter on Human Rights; ASEAN Human Rights Declaration; Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement)
	2022	United Nations General Assembly Resolution A/RES/76/300 – “The human right to a clean, healthy and sustainable environment”



Fig. 1 | The human right to a clean, healthy and sustainable ocean

burden of pollution, declines in biodiversity and ecosystem services, and climate change threaten the environmental foundations required for the enjoyment of all human rights. For example, polluted air causes millions of premature deaths and millions of illnesses annually, affecting rights to life and health^{9,10}. The climate crisis is affecting agricultural productivity and the availability of water, affecting rights to food, water and health^{11,12}. Though international human rights treaties do not explicitly recognize the right to a healthy environment, they have provided some protection for it indirectly¹³. In addition, this right has long been recognized in regional human rights instruments (for example, the *Aarhus Convention*¹⁴ and the *Escazú Agreement*¹⁵) and in domestic law of the vast majority of states (as of 2023, 161 out of 193 UN member States recognize the right to a healthy environment in law through constitutions, legislation, or ratification of regional treaties⁷, updated to include recent developments in Antigua and Barbuda, Belize, Canada, Grenada, and Saint Lucia). While not legally binding, in 2021 and 2022, resolutions were adopted by the United Nations Human Rights Council and the UN General Assembly recognizing the human right

to a clean, healthy and sustainable environment^{1,16}. The UN resolutions clarify the universal nature of this right and are expected to catalyze further legal developments at the global, regional, national and sub-national levels and accelerate actions to respect, protect and fulfill this right.

Despite this legal and normative progress, there is worrying evidence that the scope and scale of global and local threats to the full enjoyment of human rights, and in particular the right to a healthy environment associated with the ocean, are on the rise. Marine pollutants emanating from point and non-point sources both on land and at sea are continually contaminating the ocean, impacting ecosystems and accumulating in species, with implications for food security, livelihoods, and human health⁴. Plastics are a major concern, with ~4.8–12.7 million tonnes discharged into the ocean annually^{17,18}. Globally, overfishing is affecting the cultural rights, food security, health, and livelihoods of small-scale fishers and other populations that depend on fish and seafood around the world^{19,20}. Climate change impacts related to the climate crisis—ocean warming, acidification, changing weather patterns, extreme events, sea level rise, inundation, saltwater

contamination, and storm surges – are undermining the food security, livelihoods, housing, infrastructure and physical security of coastal communities^{3,21}. Some populations living in island nations and low-lying coastal areas have already been physically displaced by the effects of climate change – which threatens rights to security of the person and self-determination – a trend which is projected to increase²². Global declines in habitats and biodiversity – caused by climate change, pollution, and various forms of ocean and coastal development – are affecting marine ecosystem services that are important for climate regulation, human security, cultural continuity and quality of life^{3,23}. Emerging activities in the ocean – such as industrial aquaculture and deep-sea mining – have adverse impacts on biodiversity, and undermine climate change mitigation, thereby threatening the human rights of current and future generations^{24,25}.

Some groups – including women, children, older persons, persons with disabilities, Indigenous Peoples, small-scale fishers, coastal communities, and small-island developing states – routinely bear a disproportionate burden of the impacts of environmental degradation and hazards on human rights due to higher levels of vulnerability or high dependence on fisheries and seafood^{18,26,27}. This is often compounded by ongoing structural marginalization of and historic dispossession of marine territories from Indigenous Peoples, small-scale fishers, and other traditional users^{28,29}. Ocean-related environmental injustices and human rights issues often emerge from, or are reinforced by the lack of inclusion of local people in decisions that will affect their lives². Furthermore, the steady degradation of the ocean and its resources due to unsustainable development and climate change threatens the rights of future generations.

Threats to the ocean environment and risks to human rights will likely increase due to growing demand for resources and accelerating ocean-based industrialization^{30,31}. Yet we contend that insufficient attention has been given to human rights related to the ocean environment. However, this is rapidly changing – especially in the international realm (Box 1).

The transformative potential of the right to a healthy environment for ocean governance

While there is growing recognition among international human rights experts of the need to protect the human right to a healthy environment in ocean governance, there is still insufficient engagement of ocean advocates, practitioners, policy-makers and managers with the implications of the human right to a healthy environment for enhancing ocean governance. Below, we explore three specific ways that the recognition of the human right to a healthy environment has the potential to catalyze ocean action and transform ocean governance.

Catalyzing marine protection and increasing accountability through clarifying state obligations

Under international human rights law, states have specific obligations to promote, respect, protect and fulfill human rights³². The recognition of the human right to a healthy environment clarifies the minimum content of State obligations to take effective action for the ocean environment, which tend to be framed as open-ended provisions in international biodiversity and climate change law, as well as in the law of the sea³³. Protecting the human right to a healthy environment requires States to establish substantive, proportional and non-retrogressive laws, policies, institutions and management regimes to protect the marine environment and human rights, as well as effective monitoring, investigation, and enforcement mechanisms to maintain environmental and human rights standards¹³ and to prevent “unjustified, foreseeable infringements of human rights” arising from environmental degradation or conservation³⁴. The right clarifies the necessity of protecting and restoring marine biodiversity, sustainably managing fisheries, curtailing marine pollution, and mitigating climate change, including from a precautionary perspective in the absence of full scientific certainty. This is crucial in the case of deep-sea mining, for example, as our knowledge of potential impacts on both ecosystems and human rights is still limited^{25,35}. The human right to a healthy environment also clarifies that the state has obligations to prevent discrimination. This is of particular

importance to ensure the protection of the human rights of Indigenous Peoples and small-scale fishers^{36,37}.

The human right to a healthy environment also clarifies that the states must prevent regression from current levels of environmental protection, make polluters pay, and mobilize the maximum available resources for fulfilling its human right obligations related to the environment¹³. State obligations to protect the human right to a healthy environment also apply in the context of international cooperation, including international funding for sustainable development³⁸. Thus, the recognition of the relevance of the human right to a healthy environment in the context of ocean governance clarifies that States need to provide additional financial resources, including through climate finance³³, to address the chronic under-funding of ocean protection measures, such as those contained in SDG14 (Life Below Water) and the Kunming-Montreal Global Biodiversity Framework^{39,40}.

The human right to a healthy environment also clarifies that States must ensure access to justice and effective remedies in situations where their action or inaction results in significant climate, environmental, and human rights harm¹³. This can allow national courts to catalyze more ambitious ocean action when governments (or sectors of governments) are unwilling to do so. In the Supreme Court of Costa Rica, for example, civil society have used their right to a healthy ocean environment to win cases that have protected habitat for sea turtles, stopped the bycatch of hammerhead sharks, and overturned the approval of bottom trawling⁴¹. Court cases arguing for the right to a healthy environment have been used in Kenya to stop a major coal port^{42,43}, in South Africa to stop offshore oil and gas exploration⁴⁴, and in the Philippines to overturn regulations that allowed destructive fishing practices⁴⁵ and to mandate marine clean-up and restoration⁴⁶. State recognition of the right has also been a catalyst for the creation of marine protected areas in a diverse range of countries including Portugal, Croatia and Papua New Guinea. While human rights and civil society organizations are starting to participate in new areas of ocean governance, such as marine spatial planning, the blue economy, or fisheries management, there remains significant scope to involve national human rights institutions in ocean governance.

It also remains to be clarified how questions of human rights accountability can be ensured in the context of regional and global ocean governance processes, which have a bearing on critical questions related to fisheries and other ocean resources management at the national level. The 2023 High Seas Treaty provides entry points for the consideration of human rights and new levels of transparency that can have an influence on other global and regional ocean instruments⁴⁷.

Enhancing the inclusiveness of ocean governance, including through prioritizing and empowering groups in situations of vulnerability and marginalization

The recognition of a human right to a healthy environment clarifies specific minimum standards to ensure the inclusiveness of ocean governance processes. The procedural obligations stemming from this right require states to: ensure that all rights-holders have access to information regarding the environmental and human rights impacts of marine and coastal development and conservation activities, enable the full participation of all affected parties in decision-making related to the marine environment, and provide access to justice and effective remedies for violations^{13–15}. In particular, States have a responsibility to promote early, meaningful and equitable participation in ocean governance – which necessitates representation of all affected parties, equal access to spaces of engagement (which might be physical or online), contextually appropriate processes and supports to enable participation, adequate opportunities to engage in dialog and provide inputs, and the ability to influence decisions and outcomes^{48–50}. States are also obligated to ensure that groups with unique rights to the ocean environment and marine resources based on historical connections and continued reliance for food, livelihoods, and cultural continuity (including Indigenous Peoples and small-scale fishers) are granted Free, Prior and Informed Consent or comparable standards before activities occur that might affect the environment and their rights^{36,51,52}. Finally, States have a

Box 1 | Recent examples of how there is increasing attention to ocean governance in international human rights processes

There has been a rapid increase of references to human rights issues in ocean governance in international human rights processes, with increasing references to the human right to a clean, healthy and sustainable environment. Examples include:

- 2020 report by the UN Special Rapporteur on Environment and Human Rights on biodiversity included a recommendation to ensure that the proposed agreement on the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction includes appropriate consideration of human rights (UN Doc A/75/161, para 90(j))
- 2022 report by the UN Special Rapporteur on Cultural Rights on principles for sustainable development refers to blue economy projects that have marginalized Indigenous Peoples and small-scale fishers (UN Doc A/77/290, para 68)
- 2022 report of the UN Special Rapporteur on Human Rights and the Environment on gender recommended promoting equal rights and opportunities for women in fisheries (UN Doc A/HRC/52/33, para 94(c))
- 2022 report of the UN Special Rapporteur on Climate Change on loss and damage referred to the permanent loss of ocean territories, ecosystems, livelihoods, culture and heritage (UN Doc A/77/226, para 92(f))
- 2022 joint policy brief by the UN Office of the High Commissioner for Human Rights, the Food and Agriculture Organization of the UN and One Ocean Hub “Applying coherently the human rights-based approach to small-scale fisheries for achieving multiple Sustainable Development Goals”⁷⁵
- 2022 Kunming-Montreal Global Biodiversity Framework indicates that its implementation should follow a human rights-based approach,

acknowledging the human right to a healthy environment, and contains targets on marine protected areas, fisheries and marine spatial planning³⁹

- 2023 UN General Comment No 26 on children’s rights and a healthy environment, with a special focus on climate change, indicates that to protect children’s right to a healthy environment, States should take immediate action to prevent marine pollution, and transform industrial fisheries (UN Doc CRC/C/GC/26, para 65(c) and (f))
- 2023 report of the UN Special Rapporteur on Human Rights and the Environment on investor-state disputes refers to marine ecosystems being jeopardized by claims related to ocean-based industrial activities (UN Doc A/78/168, para 56)
- 2023 report of the UN Working Group on Human Rights and Business on extractives and just transition pointed to the human rights and environmental impacts of the blue economy, including offshore energy and seabed mining projects (UN Doc A/78/155, para 44)
- 2023 UN Secretary-General’s Report on “Adverse impact of climate change on the full realization of the right to food” refers to the negative impacts of climate change on the right to food of fisheries-dependent communities (UN Doc A/HRC/53/47, para 12)
- 2023 Report by UN Special Rapporteur on Toxics is devoted to the impact of the shipping sector on human rights and the environment (UN Doc A/78/169)
- The UN High Commissioner for Human Rights called upon States not to proceed with plans for deep-sea mining without adequate safeguards, including sufficient scientific knowledge to ensure the protection of the human right to a healthy environment³⁵

responsibility to maintain safe civic spaces where environmental human rights defenders, who increasingly include “ocean defenders” (individuals and groups advocating for the marine environment and associated human rights), are guaranteed freedom of expression, association, assembly and protest, and are safeguarded from threats, harassment, intimidation or violence^{53,54}.

These procedural obligations should also apply to international ocean fora where traditionally there has not been acknowledgement of the relevance of human rights, including with regard to marine areas beyond national jurisdiction^{55,56}. The pending advisory opinion of the International Tribunal on the Law of the Sea on climate change and the oceans may clarify this area of law. Furthermore, the participation of Indigenous Peoples and other knowledge holders, and the respectful integration of their knowledge and cultural heritage, in both national and international ocean fora is required as a matter of preventing discrimination and protecting everyone’s human right to science to the benefit of the human right to a healthy environment^{36,55}. Yet, as it currently stands, there are significant challenges and impediments to the meaningful participation of civil society and representative organizations in international ocean governance fora. Before the International Tribunal on the Law of the Sea, for instance, CSOs and NGOs have no right to be a party to a case, but they can send written submissions, which while not being part of the official case file, are considered by the Tribunal⁵⁷. Similar restrictions apply to other international judicial bodies that are relevant for ocean governance, such as the International Court of Justice. In the context of the International Seabed Authority, there are concerns about restrictions to the participation and freedom of expression of NGOs and the media, and increasing stigmatization of their contributions^{55,58}. Other international and regional ocean governance fora have various degrees of openness to civil society, but generally do not uphold the full range of applicable procedural human rights^{48,59}.

Thanks to the growing recognition of the inter-linkages between the ocean and human rights, current limitations in meaningful participation in international ocean governance fora can be raised by civil society before international, regional and national human rights monitoring bodies, which could formulate recommendations on how to improve current practices⁵⁵.

Human rights law, including the right to a healthy environment, also requires States to prioritize the needs of the most vulnerable, including those who are more vulnerable to environmental hazards and harms^{13,26}, such as women, children, persons with disabilities, older persons, and displaced persons, as well as Indigenous Peoples and small-scale fishers³⁶. Thus, the recognition of a right to a healthy environment clarifies the obligations of public authorities in ocean governance to shift away from current technical and stakeholder oriented decision-making processes that formally treat all groups (including large-scale business) equally despite power imbalances, and differentiated vulnerabilities to environmental impacts. Fulfilling these human rights obligations rests on the collection and analysis of disaggregated data, and the consideration of differentiated impacts in impact and strategic assessments¹³. It also requires rethinking ocean literacy to include human rights education⁶⁰.

The recognition of a right to a healthy environment also provides a clear legal basis upon which human rights holders can advocate for the protection of the marine environment. There is a growing number of cases of small-scale fishers, Indigenous Peoples, women, and youth using human rights arguments to campaign against destructive or polluting marine and coastal development or to underpin court cases against governments or the private sector. For example, youth activists have called for a moratorium on deep-seabed mining⁵⁵ and children’s human rights allies are calling for sustainable and inclusive ocean-based climate action⁶¹. Small-scale fishers and coastal Indigenous Peoples are increasingly self-identifying as environmental human rights defenders (or “ocean defenders”) in their advocacy

and actions against unsustainable and exclusionary ocean management⁵³. Importantly, all civil society actors that engage in peaceful protest - whether on land or at sea^{62,63} - have a right to do so, as codified in international human rights treaties.

Improving ocean economy practices through clarifying private sector responsibilities

As part of the obligations stemming from the right to a healthy environment, States are obligated to effectively regulate and monitor the activities of the private sector working in the marine and coastal environment to prevent human rights abuses. In addition, under international human rights law, the private sector - regardless of size, sector, location, ownership, structure and level of complexity - has a responsibility to respect human rights, including the right to a healthy environment^{1,13,64}. Pursuant to the UN Guiding Principles on Business and Human Rights, businesses operating in the ocean economy have a responsibility to ensure that they are preventing, mitigating and remediating impacts on human rights related to ocean environments through clear human rights policies, human rights and environmental due diligence procedures, and grievance and remediation mechanisms⁶⁴. Human rights and environmental due diligence procedures include: ongoing assessments of the potential and actual environmental and human rights impacts of their own activities, business relationships and supply chains, integration of the findings of impact assessments into internal decision-making and taking appropriate actions, tracking the effectiveness of their actions to ensure adequate responses to identified impacts, and transparently communicating assessments, actions and results externally⁶⁴. Non-judicial grievance processes that are accessible and transparent should be established by businesses or industry associations across sectors of the ocean economy⁶⁴. When adverse impacts on human rights related to the ocean environment have been identified, businesses have a responsibility to proactively arrange or willingly engage in legitimate remediation processes.

Impact assessments, safeguards and accountability mechanisms must also be adopted by financial institutions - including private firms and international institutions - to ensure their investments in ocean development are not contributing to or worsening impacts on environmental human rights⁶⁴. This is also true for private sector and financial institutions' involvement in ocean conservation measures, and ocean-based climate change measures such as carbon sequestration and capture initiatives.

Importantly, all private sector entities are subject to and required to comply with all applicable environmental and human rights laws and agreements of the countries where they operate and are domiciled, even when their activities are occurring in the exclusive economic zones of other nations or in the high seas. International companies also need to respect international human rights above and beyond what is required of them by applicable national laws⁶⁴, which is particularly important if States are lagging behind in developing their national frameworks on ocean-related human rights or on Indigenous Peoples' human rights. So for instance, businesses should assess their impacts on human rights arising from ocean-based activities, even if their activities are not subject to national requirements for environmental impact assessments, which is often the case for large-scale fisheries⁶⁵.

While the understanding of business and human rights in the ocean context is still nascent^{66,67}, there has been some uptake of human rights in guidance and principles related to development of and investment in the ocean economy⁶⁸⁻⁷⁰. However, other than a growing number of corporate signatories to these documents⁷¹, it is difficult to determine whether there has been substantial progress by the private sector on taking action to protect the human right to a healthy ocean. On the one hand, national and regional legislation is being adopted to make human rights and environmental due diligence mandatory for larger businesses (see France, Law of Vigilance; Germany, Supply Chain Due Diligence Act; EU Corporate Sustainability Due Diligence Directive). On the other hand, international guidance documents on business and human rights do not yet specifically reference the right to a healthy environment. It is still unclear whether a

legally binding instrument on business and human rights, which is currently under development, will refer to the human right to a healthy environment. Meanwhile, multinational corporations are still able to benefit from significant protection under international investment law⁷², which limits the possibilities for States to protect the marine environment, take effective climate action and protect ocean-dependent human rights⁷³. Against this alarming backdrop, drawing on the human right to a healthy environment to raise the ambition and clarify the scope of current initiatives on business due diligence, is imperative. And effective national regulation of ocean-related business, as well as the development of relevant provisions in international investment and trade agreements that are protective of the human right to a healthy environment is essential.

Conclusion: From recognition to implementation of the human right to a healthy ocean

Humans depend on the ocean for food, health, livelihoods, security, cultural continuity, and a good standard of life. Yet, a myriad of ocean issues - including pollution, plastics, climate change, overfishing, industrialization, ecosystem degradation, and loss of biodiversity - are undermining human rights related to the ocean environment. In this perspective, we draw attention to the transformative potential of the United Nations resolutions on "The human right to a clean, healthy and sustainable environment" to enhance ocean protection and governance. In particular, we highlight how the recognition of the human right to a healthy environment can: catalyze marine protection and increase accountability through clarifying state obligations; enhance the inclusiveness of ocean governance, including through prioritizing and empowering groups in situations of vulnerability and marginalization; and improve ocean economy practices through clarifying private sector responsibilities.

While there is emerging evidence that the human right to a healthy environment is already catalyzing marine protection and transforming ocean governance, there is still an urgent need to take steps to move faster and more strategically from recognition to uptake and implementation. Priority actions to make this happen include:

- raising awareness about the potential of the human right to a healthy environment to catalyze urgent, effective and equitable marine protection and sustainable ocean use;
- strengthening national and international legal frameworks and institutional capacity for ocean conservation, management and restoration, to effectively prevent infringements of the human right to a healthy environment by states and the business sector;
- ensuring sufficient funding for ocean conservation and management, to protect everyone's human right to a healthy environment;
- improving alignment and coordination between human rights and ocean governance organizations, institutions and policies;
- enhancing environmental democracy in ocean governance and maintaining safe civic spaces for ocean advocates and defenders;
- increasing knowledge, capacity and legal empowerment of structurally marginalized and potentially vulnerable groups to advocate for their right to a healthy ocean;
- encouraging environmental and civil society organizations to collaborate and work in solidarity with marginalized and vulnerable groups who are advocating for their right to a healthy ocean; and,
- strengthening regulation, monitoring and accountability mechanisms that require the private sector to fulfill its responsibilities related to the right to a healthy environment.

The human right to a healthy environment offers a beacon of hope for communities and constituencies struggling to ensure the just and sustainable conservation, restoration and use of the oceans. Governments have clear obligations, not options, pursuant to international human rights law to enact, implement and enforce laws that will improve ocean health and the well-being of people who depend on marine ecosystems. The private sector also has responsibilities and can be held to account for actions that infringe on human right to a healthy ocean. While some communities are more

obviously dependent on the oceans, the fact that these vast ecosystems cover more than 70% of the planet and have absorbed approximately 93% of the excess heat caused by greenhouse gas emissions⁷⁴ means that all of humanity depends on this global marine life-support system. The human right to a healthy environment helps to ensure that no-one is left behind in ocean governance, and that transformative changes to protect the ocean are effective and equitable, drawing on diverse life experiences, worldviews, values and knowledge systems.

Received: 13 December 2023; Accepted: 8 March 2024;

Published online: 08 April 2024

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Acknowledgements

Aspects of the research that led to this paper was supported in part by a grant from the Packard Foundation to Coastal Renewal Society for The Ocean Defenders Project (<https://oceandefendersproject.org/>). EM was supported by the One Ocean Hub (<https://oneoceanhub.org/>), which is a collaborative research programme for sustainable development funded by

UK Research and Innovation (UKRI) through the Global Challenges Research Fund (GCRF) (Grant Ref: NE/S008950/1). All authors acknowledge institutional support from their respective organizational affiliations.

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Conceptualization: N.J.B.; Research & Literature Review – N.J.B., E.M. & D.B.; Writing – Original Draft: N.J.B., E.M. & D.B.; Writing – Revising & Editing: N.J.B., E.M. & D.B.; Funding Acquisition: N.J.B. & E.M.

Competing interests

The authors declare no competing interests.

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