

The Human Right to Sustainable Environment: The Conceptual Framework

Biosphere Defenders Leveraging the Human Right to Healthy Environment for Transformative Change

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Abstract. Earth’s life support systems depend on biodiversity and healthy ecosystems. Without radical transformations, staying within safe planetary boundaries becomes impossible. While the inequalities between Global North and Global South are increasingly acknowledged, the agency and rights of people often placed in the category of “vulnerable” -women, youth, indigenous peoples and local communities- are not sufficiently recognized. This article discusses the role of biosphere defenders in the context of the 2022–2030 Kunming-Montreal Global Biodiversity Framework and the right to a healthy environment. Through dissecting judicial cases, the article investigates promising examples of ways in which biosphere defenders use the law to trigger societal change. This article finds that biosphere defenders contribute to unleashing values of responsibility by various actors, translating biocultural values of ecosystems into evidence in judicial processes impacting bureaucratic and financial systems. Supporting the work of biosphere defenders and placing the right to a sustainable environment at the heart of biodiversity and human rights law will be vital in confronting head-on the planetary crises.

Keywords: Human right to a healthy environment, sustainability transformations, environmental human rights defenders, biodiversity, environmental law, human rights, Kunming-Montreal Global Biodiversity Framework, Convention on Biological Diversity

1. Introduction

The human right to a clean, healthy and sustainable environment (right to a healthy environment) is recognized by the UN General Assembly in 2022 in a time when Earth’ systems are increasingly affected by human actions.¹ Climate change results in ecosystems breakdown, further exacerbating social problems, and global health problems, such as an increase in heat-related human mortality.² Profoundly changing the water cycle

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1 UNGA (2022), *The human right to a clean, healthy and sustainable environment*, A/RES/76/300 (28 July 2022); available at <https://digitallibrary.un.org/record/3983329?ln=en>.

2 IPCC (2022), *Climate Change 2022: Impacts, Adaptation, and Vulnerability*, Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge University Press, England.

-the bloodstream of the biosphere- is affecting the health of the entire planet.³ These interconnected hazards and risks have important consequences for the realization of the right to a healthy environment. The substantive **elements of the right to a healthy environment** include “a safe climate, clean air, clean water and adequate sanitation, healthy and sustainably produced food, non-toxic environments in which to live, work, study and play, and **healthy biodiversity and ecosystems**”, and the procedural elements include access to information, public participation and access to justice (emphasis added).⁴

Earth’s life support systems that enable people’s good quality of life are at risk by biodiversity loss, climate change and other human-induced changes such as land use changes, urbanization, industrial agriculture and aquaculture expansion.⁵ Approximately one million of animal and plant species are threatened with extinction, a situation that is unprecedented in human history.⁶ A healthy biosphere and the associated nature contributions to people depend on biodiversity and healthy ecosystems.

2. Quest for a Transformative Change

The IPBES global assessment⁷ found that: “Except in scenarios that include **transformative change**, negative trends in nature, ecosystem functions and in many of nature’s contributions to people are projected to continue to 2050 and beyond, due to the projected impacts of increasing land/and sea-use change, exploitation of organisms and climate change.”(emphasis added). The IPCC Special Report on Extreme Events defines transformation as “the altering of fundamental attributes of a system (including **value systems; regulatory, legislative, or bureaucratic regimes; financial institutions**; and technological or biological systems)”.⁸ Like the call for transformations within biodiversity and climate science-policy bodies, the 2030 Agenda for Sustainable Development describes its vision and the Sustainable Development Goals (SDGs) and targets as ‘transformative’.⁹ The process as well as the end result by 2030 is also characterised as transformative: “We are determined to take the bold and *transformative steps* which are urgently needed to shift the world on to a sustainable and resilient path”¹⁰ and “We reaffirm our unwavering commitment to achieving this Agenda and utilizing it to the full to *transform our world for the better* by 2030.”¹¹

Looking beyond Stockholm+50, Rockstrom et al.¹² argue that evidence has increased on the systemic nature of social-ecological problems with various feedbacks between biophysical and social domains and conclude that without radical transformation, staying within safe planetary boundaries that leaves no one behind becomes impossible. The focus on transformations to address structural and systemic social-ecological challenges

3 Wang-Erlandsson, L., Tobian, A., van der Ent, R.J. et al (2022) ‘A planetary boundary for green water’, *Nat Rev Earth Environ* 3, 380–392 (2022).

4 Boyd, D. (2019), Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment. UN General Assembly. Report number: (15 July 2019) A/74/161, para 43.; available at <https://digitalibrary.un.org/record/3814570?ln=en>. See also UNDP, UNEP, and OHCHR (2022) What is the right to a healthy environment? Information note; available at <https://www.undp.org/sites/g/files/zskgke326/files/2023-01/UNDP-UNEP-UNHCHR-What-is-the-Right-to-a-Healthy-Environment.pdf>.

5 IPBES (2019), *Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. Diaz et al (eds) Secretariat of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Bonn, Germany.

6 *Ibid.*

7 For example, the term transform (incl. other related terms such as transformative) is mentioned 34 times in the summary for policy makers of the IPBES (2019) Global Assessment, *ibidem*.

8 IPCC (2012), *Summary for Policymakers. Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* in CB. Field, V. Barros, TF Stocker, Q. Dahe (eds) Special Report of the Intergovernmental Panel (IPCC) on Climate Change, (Cambridge University Press: Cambridge, NY 2012), p. 5.

9 UNGA (2015), Transforming our world: the 2030 Agenda for Sustainable Development, UN Doc A/RES/70/1, (25 September 2015) paras 2 & 7, available at: <https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A.RES.70.1.E.pdf>.

10 UNGA (2015) preamble, *ibidem*.

11 UNGA (2015), para 91, *ibidem*.

12 Rockström, J., Gupta, J., Qin, D., Pedde, S., et al (2021), *Stockholm to Stockholm: Achieving a safe Earth requires goals that incorporate a just approach*, 4 (9) *One Earth*, 1209-1211 (2021).

converges with the academic literature on the Anthropocene, sustainability and equity.¹³ However, the scholarly debate on sustainability transformations in biodiversity legal and policy processes and the associated connections with the right to a healthy environment and environmental human rights defenders has been limited. While there is relatively more awareness of the tensions between human rights and biodiversity law¹⁴, the conceptual and normative advances under the Convention on Biological Diversity and its connections with the right to a healthy environment and the rights of environmental human rights defenders are understudied.

While the inequalities within people in various countries and between Global North and Global South are increasingly recognized¹⁵, the agency and rights of people often placed in the category of “vulnerable” -women, children, indigenous peoples, local communities, migrants- are not sufficiently recognized. Specifically, it is not well understood whether and under which conditions **environmental human rights defenders** in vulnerable situations can help trigger these sustainability transformations.

The research questions in this article are: a) What is the content of State’s obligations concerning the biodiversity element of the right to a healthy environment? b) How might advances and innovations triggered by women and youth defenders on the right to a healthy environment contribute to societal transformations?

The article draws insights from socio-ecological systems research and feeds them into understanding of the content of the right to a healthy environment. It uses a legal interpretation method, and a systemic interpretation approach¹⁶ to address these questions. As both the Convention on Biological Diversity (CBD)¹⁷ and human rights law include relatively open-ended provisions, CBD Conference of the Parties (COPs) UN Human Rights Council resolutions, and UN Human Rights Special Rapporteurs’ thematic reports are used to clarify the interpretation of obligations and rights that States have agreed upon. It also builds on the IBPES Conceptual Framework and IBPES Assessments because they are helpful tools for the implementation of the CBD building on transdisciplinary and contemporary insights on the state of biodiversity and ecosystems.¹⁸

In this paper, I propose the term “biosphere defenders” as an alternative to “environmental human rights defenders”. People form part of the biosphere -the biosphere being the whole intertwined network of life on Earth. Using access to information, public information, and access to justice to achieve the substantive elements of the right to a healthy environment not only benefits humans but also other living beings. While there are biosphere defenders in the Global North and Global South, the focus of this paper is on biosphere defenders in the Global South whose contributions are often overlooked. When discussing the role of biosphere defenders in litigation, the article uses the right to a healthy environment-based litigation concept as an umbrella category bridging distinct bodies of literature: the more developed literature on climate litigation¹⁹ and the emerging literature on biodiversity litigation.²⁰

13 Leach, M., et al (2018) *Equity and sustainability in the Anthropocene: a social–ecological systems perspective on their intertwined futures’ 1(3) Global Sustainability*, 1–13 (2018); Patterson, J. et al (2017) *Exploring the governance and politics of transformations towards sustainability 24 Environmental Innovation and Societal Transitions*, 1-16 (2017).

14 Morgera, E. (2015), *Fair and Equitable Benefit-Sharing at the Cross-Roads of the Human Right to Science and International Biodiversity Law 4 Laws*, 803–83 (2015).

15 Rockström, J., Gupta, J., Qin, D., Pedde, S., et al (2021), *Stockholm to Stockholm: Achieving a safe Earth requires goals that incorporate a just approach*, 4 (9) *One Earth*, 1209-1211 (2021); M. Leach et al. (2018) *Equity and sustainability in the Anthropocene: a social–ecological systems perspective on their intertwined futures’ 1(3) Global Sustainability*, 1–13 (2018).

16 McLachlan, C. (2005), ‘The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention’, 54 *International and Comparative Law Quarterly* 279–320 (2005).

17 There are other treaties relevant to biodiversity such as the Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, among others. The focus on this article is on the CBD for being the most overarching treaty on biological diversity covering diverse ecosystems.

18 For instance, this is acknowledged in UN CBD-COP (2016), *Global Biodiversity Outlook and Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* (CBD/COP/DEC/XIII/29); available at <https://www.cbd.int/doc/decisions/cop-13/cop-13-dec-29-en.pdf>.

19 Savaresi, A. et al (2019), ‘Climate Change Litigation and Human Rights: Pushing the Boundaries’, 9 (3), *Climate Law*, 244-262 (2019).

20 Futhazar, G., Maljean-Dubois, S., Razzaque, J. (2022) *Biodiversity Litigation: Review of Trends and Challenges in Futhazar, G., Maljean-Dubois, S., Razzaque, J. (eds), Biodiversity Litigation*, Oxford University Press (2022) at pp. 359-400.

3. The Right to a Healthy Environment and the Convention on Biological Diversity

States have overlapping human rights and biodiversity obligations which help identify the contours of the right to a healthy environment in the context of biodiversity and ecosystems.

3.1. Human rights law

The UN Special Rapporteur on human rights and the environment, David Boyd reaffirms that there is global agreement that human rights norms apply to a broad range of environmental issues, including biodiversity²¹. The 2023 UN Human Rights Council (2023) calls upon all States to conserve and sustainably manage biodiversity and ecosystems applying a human rights-based approach that emphasizes participation and accountability; and promote a safe and enabling environment in which individuals, civil society organizations, including environmental human right defenders working on climate change, biodiversity and pollution, can operate free from threats, hindrance and insecurity.²²

The international treaties on human rights are among the most widely ratified such as International Covenant on Civil and Political Rights (ICCPR)²³, and the International Covenant on Economic, Social and Cultural Rights (ICESCR)²⁴. Other international human right treaties also overlap with CBD obligations, and include treaties specifying States' heightened obligations towards people in vulnerable situations such as the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)²⁵, Convention on the Rights of the Child (CRC)²⁶; International Convention on the Elimination of All Forms of Racial Discrimination (CERD)²⁷, and the Indigenous and Tribal Peoples International Labour Organization Convention²⁸ (ILO Convention No 169).

In terms of children's right to a healthy environment, UNICEF²⁹ acknowledges that the Convention on the Rights of the Child "articulates the fundamentally interdependent nature of the relationship between environmental and child rights protection – a relationship that has been overlooked for too long by both States and other actors, but which is at last the subject of increasing recognition at both international and national levels". It highlights that the UN Convention on the Rights of the Child is one of the few human rights instruments to explicitly recognize the importance of a healthy environment and places specific obligations on States in this respect, specifically Article 24(2) on the right of the child to the enjoyment of the highest attainable standard of health provides that:

"States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures: [. . .] to combat disease and malnutrition [. . .] taking into consideration the dangers and risks of environmental pollution."

Article 29(1) on the aims of education states that: "States Parties agree that the education of the child shall be directed to: [. . .] the development of respect for the natural environment.

21 Boyd, D. (2020), *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment D. Boyd*, UN Doc A/75/161, 15 July 2020.

22 UNHRC (2023) *The human right to a clean, healthy and sustainable environment* (23 March 2023) A/HRC/52/L.7 available at <https://undocs.org/Home/Mobile?FinalSymbol=A%2FHRC%2F52%2FL.7&Language=E&DeviceType=Desktop&LangRequested=False>.

23 International Covenant on Civil and Political Rights, 16 December 1966, into force 23 March 1976, 999 UNTS 171.

24 International Covenant on Economic, Social and Cultural Rights, 16 December 1966, into force 3 January 1976, 993 UNTS 3.

25 Convention on the Elimination of All Forms of Discrimination against Women, 18 December 1979, into force 3 September 1981, 1249 UNTS 13.

26 Convention on the Rights of the Child, 20 November 1989, entered into force 2 September 1990, 1577 UNTS 3.

27 International Convention on the Elimination of All Forms of Racial Discrimination, 21 December 1965, into force 4 January 1969, 660 UNTS 195.

28 International Labour Organization Convention Concerning Indigenous and Tribal Peoples in Independent Countries, 27 June 1989, into force 5 September 1991, 28 ILM 1382.

29 UNICEF (2018), *Amicus Curiae Brief submitted by UNICEF to the Honourable Commission on Human Rights of the Philippines regarding the National Inquiry on the Impact of Climate Change on the Human Rights of the Filipino People and the Responsibility therefore, if any, of the "Carbon Majors"* 5 November 2018 available at <https://www.business-humanrights.org/es/%C3%BAltimas-noticias/amicus-curiae-brief-by-unicef-philippines/>.

As for women's and girl's right to a healthy environment, Article 14 of the Convention on the Elimination of All Forms of Discrimination against Women's concerns women working in rural areas where their activities are largely based on ecosystems. This Article while recognising the problems also highlights women's significant roles:

“States Parties shall take into account the particular problems faced by rural women and the **significant roles** which rural women play in the economic survival of their families, including their work in the non-monetized sectors of the economy, and shall take all appropriate measures to ensure the application of the provisions of the present Convention to women in rural areas.”

The women rights in this provision include “(a) To participate in the elaboration and implementation of development planning at all levels; . . . (e) To organise self-help groups and co-operatives in order to obtain equal access to economic opportunities through employment or self-employment; (f) To participate in all community activities.”³⁰ The UN Human Rights Council has urged states to strengthen and implement policies that take gender-sensitive climate change actions (A/HRC/RES/38/4) and organised a panel discussion on women's rights and climate change at its 41st session in 2019. This kind of spaces emerge as opportunities where the courageous roles of women as guardians of the Earth's life support systems can be visualized in high level international *fora*.

The principle that all human rights are indivisible and interdependent, which has been reiterated for more than 60 years in international instruments, including the Universal Declaration of Human Rights³¹, is useful in clarifying the content of the right to a healthy environment and associated State obligations concerning biodiversity conservation, sustainable use and benefit sharing in connection with other instruments. The UN Declaration on the Rights of Indigenous Peoples³², Article 29 and the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas³³, Article 18 converge with the conservation, sustainable use, and access and benefit sharing objectives of the CBD. These two declarations were adopted by the UN General Assembly in 2007 and 2018 respectively.

The UN Human Rights Council 34/20³⁴ explicitly acknowledges the connections between the CBD strategic plan and human rights: “recalling the provisions of the Cancun Declaration . . . sustainable development requires healthy ecosystems . . . recognizing that sustainable development and the protection of . . . ecosystems contribute . . . to the enjoyment of human rights . . . encourages States to strengthen their efforts to protect biodiversity . . . [and] the achievement of the Strategic Plan for Biodiversity 2011–2020 and its associated Aichi Biodiversity Targets”.

UN Human Rights Council Resolutions -adopted by States- build on the legal and technical expertise provided by Special Rapporteurs, who write thematic reports contributing to clarify the human rights obligations of States and responsibilities of businesses. The 2017 thematic report on human rights and biodiversity by Mr. John Knox -former UN Special Rapporteur on Human Rights and Environment-acknowledges that “Biodiversity is necessary for ecosystem services that support the full enjoyment of a wide range of human rights, including the rights to life, health, food, water and culture. In order to protect human rights, States have a general obligation to protect ecosystems and biodiversity.”³⁵ This report also explains that sustainable development requires healthy ecosystems and climate stability and hence in order to support the continued enjoyment of human rights, development must be sustainable.

30 The Committee on the Convention on the Elimination of All Forms of Discrimination against Women also adopted General Recommendation No. 34 that does a thorough review and interpretation of the Convention regarding the rights of rural women.

31 UN (1948) Universal Declaration of Human Rights, UNGA Res 217A (III), 10 December 1948; available at [https://undocs.org/Home/Mobile?FinalSymbol=A%2FRES%2F217\(III\)&Language=E&DeviceType=Desktop&LangRequested=False](https://undocs.org/Home/Mobile?FinalSymbol=A%2FRES%2F217(III)&Language=E&DeviceType=Desktop&LangRequested=False)

32 UN (2007), United Nations Declaration on the Rights of Indigenous Peoples, UNGA Res 61/295, 13 September 2007; available at https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf.

33 UN (2018), United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas, HRC Res 39/12, 28 September 2018; available at <https://digitallibrary.un.org/record/1650694?ln=es>.

34 UNHRC (2017), Human rights and the environment (6 April 2017) A/HRC/RES/34/20 available at <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G17/085/99/PDF/G1708599.pdf?OpenElement>.

35 Knox, J. (2017) Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment J. Knox, UN Doc A/HRC/34/49, 19 January 2017.

In 2020, UN Special Rapporteur on human rights and environment, Mr. David Boyd, presented his report “human rights depend on a healthy biosphere” to the UN General Assembly. In this report, he highlights that human rights have a track record in history of catalyzing transformative societal change.³⁶ From the end of slavery and Apartheid to contributing to building world peace in turbulent times, human rights have played a vital role in systemic transformations challenging assumptions, values, government regimes, development paradigms, and power relations. Mr. Boyd as well as other UN Special Rapporteurs including Ms. Hilal Elver, Special Rapporteur on the Right to Food; Mr. Léo Heller, Special Rapporteur on the human rights to safe drinking water and sanitation, have warned that failing to protect biodiversity can be a human rights violation, and have urged for a transformative approach:

“The IPBES’s report should be setting off alarm bells about the urgency of **transforming economies and societies** in cleaner, greener directions . . . Failing to protect biodiversity can constitute a violation of the right to a healthy environment, a right that is legally recognised by 155 States...” (emphasis added).³⁷

3.2. Convention on Biological Diversity

The CBD, a multilateral environmental agreement ratified by 195 States and the European Union, has the conservation, sustainable use and equitable sharing of benefits from the utilization of genetic resources as its core objectives. The Kunming Montreal global diversity framework (GBF) adopted in 2022³⁸, and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) global assessment released in 2019, have intensified debates on transformations for safeguarding biodiversity and healthy ecosystems in biodiversity law.

Understanding the right to a healthy environment in the context of biodiversity implies recognizing a two-way process in which biodiversity and healthy ecosystems considerations are included in interpreting the right to a healthy environment and also the CBD is implemented with a rights-based approach. Although recognition of the relationship between human rights and biodiversity has been at times controversial, there is a progressive recognition of these relationships within the CBD.³⁹

State’s obligations concerning a healthy environment apply to the three CBD objectives of conservation, sustainable use and access and benefit sharing of biodiversity. CBD parties have obligations to integrate biodiversity in cross-sectoral plans, programmes and policies (CBD, Article 6d) and national decision-making (CBD, Article 10a). In line with these obligations, CBD Parties adopted the 2016 *Cancun Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity for Well-Being* in which they commit to work at all levels of government, and across all sectors to mainstream biodiversity, by establishing effective institutional, legislative and regulatory frameworks incorporating full respect for nature and human rights.⁴⁰

36 Boyd, D. (2020), *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment D. Boyd*, UN Doc A/75/161, 15 July 2020.

37 See full list of UN experts at OHCHR news ‘Failing to protect biodiversity can be a human rights violation – UN experts’ 25 June 2019. <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=24738&LangID=E>

38 UN CBD-COP (2022), Kunming-Montreal Global Biodiversity Framework, CBD/COP/15/L25, 22 December 2022; available at <https://www.cbd.int/article/cop15-final-text-kunming-montreal-gbf-221222>.

39 Under the CBD, human rights language often includes significant qualifications such as “as appropriate”, “in accordance with national legislation”. See e.g. UN CBD-COP (2015) Convention on Biological Diversity Voluntary Guidelines on Safeguards in Biodiversity Financing Mechanisms, Resource mobilization and respective annex III. UNEP/CBD/COP/DEC/XII/3. See also Ituarte-Lima, C (2017) *Transformative biodiversity law and 2030 Agenda: mainstreaming biodiversity and justice through human rights in Butter, B. Risk, Resilience, Inequality and Environmental Law*, Edward Elgar Publishing 2017 at pp. 84–107.

40 UN CBD-COP (2016), The Cancun Declaration on Mainstreaming the Conservation and Sustainable Use of Biodiversity for Well-Being, Can Cun, Mexico (6 December 2016) UNEP/CBD/COP/XIII/24; available at <https://www.cbd.int/doc/c/edd1/7e90/76ccae323fc6c2286ceba9a2/cop-13-24-en.pdf>.

There is also other CBD guidance relevant for the right to a healthy environment⁴¹ which ranges from general guidance such as the 2004 *Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity* (Addis Ababa Principles) which recognise the need for a governing framework in which users of biodiversity are empowered and supported by rights. The 2014 *Voluntary Guidelines for Safeguards in Biodiversity Financing Mechanisms* (BFMs) (CBD Safeguards Guidelines), specifically guideline (c) makes explicit reference to grounding safeguards in local circumstances and taking into account international human rights treaties.⁴² The Akwé: Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment regarding Developments Proposed to Take Place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities (Akwé: Kon Guidelines) connect procedural law on how to assess impacts, mechanisms for public participation, management and monitoring plans, review and appeal processes with substantive law such as highlighting the values of sacred sites and forested lands occupied or used by indigenous peoples or local communities, gender, generational, health and social cohesion considerations. Other guidelines such as the 2002 Bonn Guidelines on Access to Genetic Resources and Benefit Sharing and CBD-COP Decisions concerning article 8(j) and 10(c) are also relevant for understanding the knowledge and tenure rights of indigenous peoples and local communities.⁴³ CBD guidelines have legal value as interpretative tools that help clarify CBD provisions that have an obligatory nature, and also have legitimacy value as CBD guidance is adopted by consensus of the 196 parties through CBD-COP Decisions.⁴⁴

Before the GBF was adopted, various actors, for example authors of the Handbook for Weaving Human Rights, SDGs, and the post-2020 global biodiversity framework,⁴⁵ and the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) submission to the development of the GBF, called for using the transformative power of human rights. The UN Women submission highlights that systemic cultural and policy changes are required, and that robust mechanisms are needed to alter discriminatory customs and norms to increase women's participation and leadership in biodiversity decision-making. This submission acknowledges that "Gender equality and women's empowerment has not been adequately addressed in the current Strategic Plan as there is little focus in the Plan or the Aichi Biodiversity Targets on these issues, despite women's valuable contributions to both driving and addressing biodiversity loss...It is thus imperative that the post-2020 global biodiversity framework to enhance women's agency and promote their effective participation and leadership in biodiversity conservation".⁴⁶ Together with an increased focus on women's agency, the submission by UN Women identifies the rights-based approach as a key approach for transformative change.

In contrast to the Aichi Targets omission on access to justice and environmental human rights defenders, the GBF has a specific operational target 22: "Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders." The GBF also makes

41 See Ituarte-Lima, C. Dupraz-Ardiot, A. and McDermott, C. (2019), *Incorporating international biodiversity law principles and rights perspective into the European Union Timber Regulation 19 International Environmental Agreements: Politics, Law and Economics* 255–272 (2019).

42 Ituarte-Lima, C. et al., (2018), *CBD Voluntary Guidelines for Safeguards: Implementation Pathways* (CBD Secretariat, 2018).

43 See CBD principles and guidelines at <https://www.cbd.int/guidelines/>.

44 Morgera, E. (2020), *Biodiversity as a Human Right and its Implications for the EU's External Action, Report to the European Parliament*; available at [https://www.europarl.europa.eu/RegData/etudes/STUD/2020/603491/EXPO_STU\(2020\)603491_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2020/603491/EXPO_STU(2020)603491_EN.pdf).

45 Ituarte-Lima, C. and M. Schultz, M., (eds.) (2019) *Human right to a healthy environment for a thriving Earth: Handbook for weaving human rights, SDGs, and the post-2020 global biodiversity framework*, SwedBio/Stockholm Resilience Centre, International Development Law Organization, Office of the High Commission of Human Rights-Special Procedures, UN Environment and Natural Justice; available at https://www.researchgate.net/publication/333648168_Human_right_to_a_healthy_environment_for_a_thriving_Earth_Handbook_for_weaving_human_rights_SDGs_and_the_post-2020_global_biodiversity_framework_SwedBioStockholm_Resilience_Centre_International_Develo

46 UN-Women (2019), 'Towards a gender-responsive post-2020 global biodiversity framework: imperatives and key components', A submission by the UN-Women as an input to the development of the post-2020 global biodiversity framework (1 May 2019); available at <https://www.cbd.int/api/v2013/documents/22969EF8-52C8-9BE5-26A7-9D306C2FBEEA/attachments/208266/UNWomen.pdf>.

reference to the 2022 UNGA Resolution on the right to a healthy environment. These advances provide a fertile ground for elaborating the content of the right to a healthy environment in biodiversity law.

Clarifying the content of the right to a healthy environment, through examining biodiversity and human rights in international relevant instruments - specifically CBD COP Decisions⁴⁷ and UN Human Rights Council Resolutions - is important. Yet, it is only a first step in the legal and scholarly dialogue needed to unpack the right to a healthy environment in the light of contemporary social-ecological challenges and to investigate the role of biosphere defenders in contributing to transformative change. The myriad of socio-ecological, political and legal challenges in the Anthropocene, which identify humans as a central cause for the social-ecological crises, require more than incremental change. Transformative change requires an understanding that social-ecological systems including biodiversity, law and governance are intertwined. As Kotze puts it, human rights in the Anthropocene would need to “exude some transformative force that would also lead to transformative change”.⁴⁸

4. Biosphere Defenders: Transformative Agency in Vulnerability

This section takes the discussion on the right to a healthy environment to the next level, specifically it discusses the work of biosphere defenders who work individually and collectively to protect healthy ecosystems using the law in practice. While recognizing vulnerable situations faced by certain groups such as women, children, indigenous peoples and migrants is relevant, just highlighting this dimension can contribute to make invisible these groups’ embodied and multifaceted realities.

The connections between the right to a healthy environment, biodiversity, and ecosystems may be most dramatically apparent in the situation of people around the world. Biosphere defenders using the law to trigger social change, play a vital role towards a safe climate and healthy biodiversity and ecosystems upon which present and future generations depend. However, they are increasingly at risk of being threatened or even killed.⁴⁹ Yet, the future of the our planet and those who defend it is not already written. Recent legal and policy developments as well as media coverage have provided much needed attention to the challenges faced by biosphere defenders. In 2020, the UN General Secretary Global Call for Action on Human Rights⁵⁰, called for protecting the rights and supporting the work of environmental human rights defenders. The Escazu Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean is the first treaty to specify the rights of human rights defenders in environmental matters (Art 9).⁵¹

Despite these advances in the law and policy fora, there has been little scholarly debate and systematic analysis of the dynamics at multiple scales that affect biosphere defenders. Emerging literature has assessed repression of environmental defenders across various geographical scales and groups. For example, Le Billon *et al.*⁵² show country-level determinants of killings of environmental defenders, which include income level, foreign direct investment, dependency on mineral extraction, and frequency of protest movements. Over the 2002–2018 period, there have been 150 reported killings of women environmental defenders, with a growing proportion of women defenders killed since 2010. The number of youth environmental defenders reported killed between 2014 and 2015 is ten times higher than that the number of elders environmental defenders killed in the same period.

47 See CBD guidelines discussed earlier. These guidelines were adopted through CBD-COP Decisions.

48 Kotze, L. (2014), *Human Rights and the Environment in the Anthropocene 1(3) The Anthropocene Review*, 252-275, pp. 269 (2014).

49 Global Witness (2020), *Defending tomorrow* (July 29, 2020); available at <https://www.globalwitness.org/en/campaigns/environmental-activists/defending-tomorrow/>.

50 UNSG (2020), UNSG António Guterres’ remarks to the UN Human Rights Council: “The Highest Aspiration: A Call to Action for Human Rights”; Geneva, Switzerland (24 February 2020); available at: <https://www.un.org/sg/en/content/sg/statement/2020-02-24/secretary-generals-remarks-the-un-human-rights-council-%E2%80%99Cthe-highest-aspiration-call-action-for-human-rights-delivered-scroll-down-for-all-english>.

51 See more at ECLAC (2022), *Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean. Implementation guide*, Economic Commission for Latin America and the Caribbean (LC/TS.2021/221/Rev.1), Santiago, Chile (2022).

52 Le Billon, P., and Lujala, P. (2020), ‘Environmental and land defenders: Global patterns and determinants of repression, *Global Environmental Change*’, 65 *Global Environ. Change* (February 2020); available at 10.1016/j.gloenvcha.2020.102163

While building on this emerging literature on environmental defenders, the approach of this section is distinct. The emphasis is not on violence against individual defenders. Instead, it focuses on understanding how individuals and groups of women, and youth have used laws concerning the right to a healthy environment to catalyze change for sustainability transformations. While women, youth and children are often in vulnerable situations, they are also courageous agents of change. Not only do they actively participate in public manifestations but they have also triggered landmark climate and biodiversity lawsuits and participated in environmental impact assessments public hearings.⁵³ Youth, and future generations will have to live with the success or failure of current responses to these crises so it is timely to use the law to prevent damage to ecosystems.

5. Humanizing Biodiversity

Humanizing biodiversity through the right to a healthy environment provides a human face to the biodiversity and healthy ecosystems' crises by making visible the courageous role of biosphere defenders who are "risking their today for our tomorrow"⁵⁴ and the tomorrow of generations of people and other non-human beings yet to be born. Furthermore, recognising agency is a crucial dimension of the inherent dignity of every human being. In low-income countries, there are many catastrophes that afflict groups in vulnerable situations more strongly. Yet, there are also positive initiatives emerging from these people and places to address biodiversity loss and the degradation of ecosystems. It is just as important to engage in dialogue about these initiatives as to highlighting catastrophic events because a single narrative of catastrophe associated with certain regions or countries risks to creating distance rather than bringing people together, emphasising differences rather than our equal human dignity.⁵⁵ Placing a spotlight in the agency of biosphere defenders also shows that the right to a healthy environment has both individual and collective dimensions.

Analysing Court cases concerning the right to a healthy environment is a good way both to identify the content of the right to a healthy environment and to investigate the role of biosphere defenders. As part of using law to enact change, biosphere defenders use progressive jurisprudence concerning the right to a healthy environment. For example, Colombia's Constitutional court⁵⁶ uses the concept of "ecological constitution" and elaborates the content of the right to a healthy environment with reference to biocultural rights, weaving together national law and the CBD, among other multilateral environmental agreements. In *Tierra Digna y otros vs Presidencia de la Republica y otros*, Colombia's Constitutional Court recognised that "... now is the moment to take the first decisions to protect the planet and its resources efficiently before it is too late, or before the ecological damage became irreversible, not only for future generations, but for the human species".⁵⁷ The relatively vague concept of sustainability transformations can become more inclusive and infused with innovative meaning by building on legal advances from across the world, not least from the "Global South".

The content of State's obligations concerning a healthy environment has been advanced by the Interamerican Court of Human Rights. The Advisory opinion OC-23/17 by the Interamerican Court of Human Rights⁵⁸ states that "it must take international law on environmental protection into consideration when defining the meaning and scope of the obligations assumed by the States under the American Convention in particular, when specifying the measures that the States must take" (par 44). The court refers to the precautionary principle as well as the

53 See e.g. Rodríguez Peña et al vs Presidencia de la República de Colombia (2018), Tribunal Superior del Distrito Judicial de Bogotá – Sala Civil; available at <https://www.dejusticia.org/wp-content/uploads/2018/01/TutelaCambioClim%C3%A1tico.pdf?x54537&x54537&x54537&x54537>.

54 Knox, J. (2017), *Environmental Human Rights Defenders: A global crisis, Policy Brief* (Universal Rights Group, 2017).

55 Chimamanda Adichie highlights the dangers of focusing only in catastrophic events at *The Danger of a Single Story*, presentation available at: https://scholar.google.ca/scholar?cluster=13538856377907929604&hl=en&as_sdt=0,5

56 Corte Constitucional de Colombia. Sentencia T-622/16. Principio de precaución ambiental y su aplicación para proteger el derecho a la salud de las personas: Caso de comunidades étnicas que habitan la cuenca del río Atrato y manifiestan afectaciones a la salud como consecuencia de las actividades mineras ilegales. Available at <https://www.corteconstitucional.gov.co/relatoria/2016/t-622-16.htm>.

57 Villiavicencio Calzadilla, P. (2019), *A Paradigm Shift in Courts' View on Nature: The Atrato River and Amazon Basin Cases in Colombia*, 15(1), *Law Environment and Development, Case note* (2019); available at <https://doi.org/10.25501/SOAS.00033081>.

58 *Advisory Opinion OC-23/17 of November 15, 2017 Requested by the Republic of Colombia: The Environment and Human Rights, Inter-American Court of Human Rights* (15 November 2017); available at: www.refworld.org/cases,IACRTHR,5e67c7744.html.

obligation to prevent significant adverse effects on biological diversity included in the CBD. Likewise, this court used the CBD to clarify the groups that are particularly vulnerable to environmental degradation including communities that, essentially, depend for their survival or economically from marine ecosystems, forested areas and river basins. A new Advisory Opinion has been requested by Chile and Colombia on human rights and the climate emergency which includes specific questions for the Court on environmental human rights defenders. Advisory Opinions of Courts have no binding force yet biosphere defenders can use them in litigation because they provide an authoritative interpretation on questions of international law.⁵⁹

Youth are among those courageously defending biodiversity and healthy ecosystems taking practical and innovative steps needed to respect, protect and fulfil the right to a healthy environment. UN Secretary General, Mr. Antonio Guterres, issued the UN Global Call for Action on Human Rights. Under the “rights of future generations” theme, he calls for increasing the focus on protecting the rights and supporting the work of environmental human rights defenders. An example of jurisprudence referring to future generations is a court case in the Philippines where the Supreme Court of the Philippines ruled in favour of a group of 14 young Filipinos, directing the government to clean the bay and protect it for the benefit of future generations, including by not issuing any further permits for activities that would pollute the bay.⁶⁰

Another example of youth initiatives is the initiative spearheaded by youth from Pacific Island Students Fighting Climate Change⁶¹ which is a campaign by young leaders from Pacific Island States seeking an Advisory Opinion by the International Court of Justice. Vanuatu Government responded to the youth call and the process has resulted in a UN General Assembly Resolution adopted by consensus in 2023⁶² that seeks an Advisory Opinion from the International Court of Justice (ICJ), on the obligations of states on climate change. The UNFCCC, the Paris Agreement and Convention on Biological Diversity are among the Multilateral Environmental Agreements mentioned in this UNGA Resolution. The transformative potential of this initiative lies both in its legal relevance and in the fact that this initiative became a global movement led by the World’s Youth for Climate Justice and then supported by various other constituencies.

Many women around the world are also acting as biosphere defenders.⁶³ An example is a coalition’s lawsuit led by Mayan beekeeper Leydy Pech. In this case, the Mexico’s Supreme Court unanimously ruled that the government must consult indigenous communities before planting GM soybeans, canceled Monsanto’s permits and prohibited the planting of GM soybeans in Campeche and Yucatán-southern states in Mexico rich in biocultural diversity. In September 2017, Mexico’s Food and Agricultural Service revoked Monsanto’s permit to grow genetically modified soybeans in seven states.⁶⁴ For Mayan communities living in the highly biodiverse tropical forests in Campeche, beekeeping in a sustainable manner is part of a millennial tradition. Synergies between Mayan beekeepers, in particular women, Mexico’s Universidad Autonoma and the UN Development Programme helped provide evidence of the impacts of GM soy cultivation not only on the honey. Traces of the glyphosate herbicide used in GM soy cultivation were found in the water supply of Hopelchén, and in the urine of the town’s residents. Pech calls on “all governments and world leaders to rethink more comprehensive development models that respect and recognise human rights, autonomy, self-determination of indigenous peoples and ancestral heritage”.⁶⁵

59 Maljean-Dubois, S. and Morguera, E. (2022), *International Biodiversity Litigation: The Increasing Emphasis on Biodiversity Law Before International Courts and Tribunals* in Futhazar, G., Maljean-Dubois, S., Razzaque, J. (eds), *Biodiversity Litigation*, Oxford University Press (2022); available at <https://doi.org/10.1093/oso/9780192865465.003.0012>.

60 Ituarte-Lima, C. et al (2020), *Prosperous and Green in the Anthropocene: The human right to a healthy environment in Southeast Asia* (The Raoul Wallenberg Institute of Human Rights and Humanitarian Law 2020); available at <https://rwi.lu.se/wp-content/uploads/2020/11/Prosperous-and-green-in-the-Anthropocene-Report.pdf>.

61 For more on this initiative, see <https://www.pisfcc.org/>.

62 UN (2023), *Request for an advisory opinion of the International Court of Justice on the obligations of States in respect of climate change* UNGA 2023, A/77/L.58 (1st March 2023); available at <https://undocs.org/Home/Mobile?FinalSymbol=A%2F77%2FL.58&Language=E&DeviceType=Desktop&LangRequested=False>.

63 See UN-Women (2019), *Towards a gender-responsive post-2020 global biodiversity framework: Imperatives and key components, A submission by the United Nations Entity for Gender Equality and the Empowerment of Women (UN-Women) as an input to the development of the post-2020 global biodiversity framework* (1 May 2019); available at www.cbd.int/conferences/post2020.

64 See more at The Goldman Prize webpage at <https://www.goldmanprize.org/recipient/leydy-pech/>.

65 See www.lifegate.com/leydy-pech-beekeeping-monsanto.

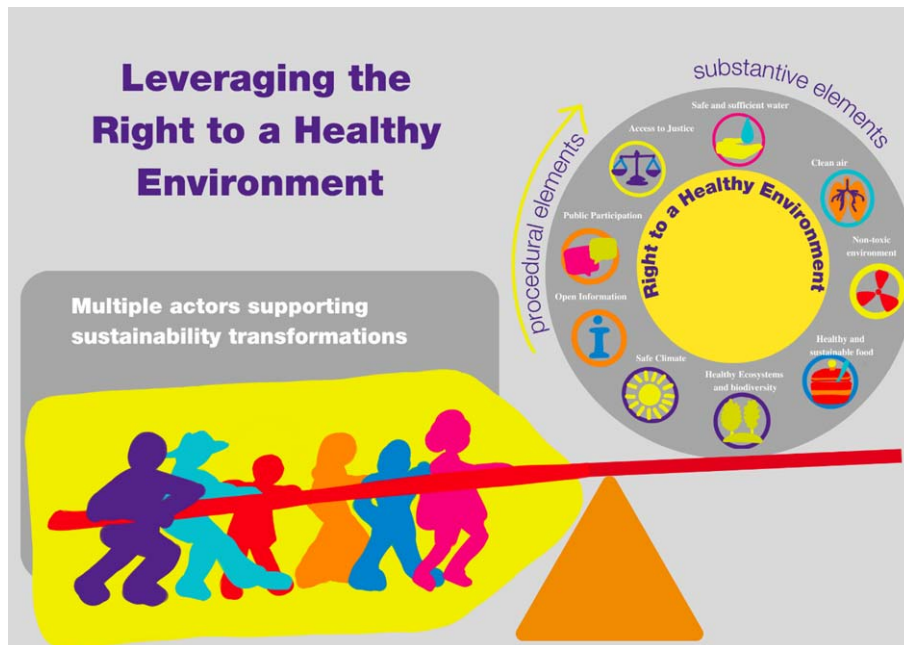


Fig. 1. Leveraging the right to a healthy environment. Source: author's elaboration building on Chan et al 2019; Boyd 2019; UNDP et al 2022.⁶⁶ Illustration: C. Geijer af Ekström.

Sustainability science studies have identified coordination across jurisdictions, and unleashing values of responsibility as key for sustainability transformations.⁶⁷ The collective action involved on what Pech frames as “lucha de la vida” (a struggle for life) included coordination across jurisdictions and impacted bureaucratic decision-making with concrete results specifically Monsanto’s permits cancelation. The process leading to the litigation unleashed values of responsibility by various actors who contributed to visualize the biocultural values of agrobiodiversity and translate these values into evidence for judicial decision-making. This case also illustrates the interdependency of the right to a healthy environment with the right to health, and the right to water and sanitation. It also shows how law can be used to question development paradigms and unequal power relations in practice.

Biosphere defenders are also active in the biocultural rich Amazon in cases concerning the right to a healthy environment. Strategies used by certain indigenous peoples involve using the law together with other strategies to enact changes that transform power relations and development paradigms. For example, Nemonte Nequimo, the first female leader of the Waorani Nation, and cofounder of the Ceibo Alliance (a confederation of Amazonian Indigenous nations) led a legal action claiming a violation of Waorani’s right to prior consultation. The case resulted in a court ruling protecting 500,000 acres of Amazonian biocultural diverse rainforest and Waorani territory from oil extraction.⁶⁸ Nequimo also led an international campaign to petition to the Ecuadorian government in defense of indigenous peoples’ rights. Certain indigenous peoples and local

66 Chan, et al. (2020), ‘Levers and leverage points for pathways to sustainability’ 2, *People Nat.*, 693– 717 (2020)

67 Chan, K. et al (2019) Chapter 5. Pathways towards a Sustainable Future. In: Global assessment report of the Inter governmental Science-Policy Platform on Biodiversity and Ecosystem Services. Brondízio, E. S., Settele, J., Díaz, S., Ngo, H. T.(eds). IPBES secretariat, Bonn, Germany; Boyd, D. (2019) Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment. UN General Assembly. Report number: (15 July 2019) A/74/161; available at <https://digitallibrary.un.org/record/3814570?ln=en>; UNDP, UNEP, and OHCHR (2022) *What is the right to a healthy environment?* Information note; available at <https://www.undp.org/sites/g/files/zskgke326/files/2023-01/UNDP-UNEP-UNHCHR-What-is-the-Right-to-a-Healthy-Environment.pdf>.

68 Ituarte-Lima, C (2021), *Is COVID-19 frustrating or facilitating sustainability transformations? An assessment from a human rights law perspective in Human rights and COVID-19*, Kjaerum, M, Davis, M., Lyons, A., (eds), Routledge (2021) at pp. 274-289.

communities in the Amazon who engage in litigation hold alternative views of nature values and social relations⁶⁹ which can contribute to rethinking the right to a healthy environment both in the present and in reshaping our future.

Biosphere defenders have also used the law to safeguard biocultural marine heritage.⁷⁰ For example, local civil society groups won a court case against the backers of a coal project in Lamu, Kenya. This project was the largest in eastern and central Africa, and largely Chinese-financed.⁷¹ Lamu is a marine biodiversity hotspot with a rich cultural heritage. Lamu was declared a UNESCO biosphere reserve in 1980, and is the home of rare marine species such as sea turtles, sharks, and dugongs.⁷² If the coal plant had been developed, the water pollution derived from the project would have had a devastating impact on marine wildlife and local fishing communities. Since the cancellation of the project's license, various investors who were cited as possible supporters of the coal plant have withdrawn their possible financing including the African Development Bank in 2019. In 2020, Save Lamu⁷³ reported that the Industrial and Commercial Bank of China (ICBC) had also decided not to finance the Lamu coal plant due to environmental and social risks of the project. Like the case on agrobiodiversity in Mexico and the case on the Amazonian rainforest in Ecuador, this case on marine ecosystems also unleashed values of responsibility by various actors who contributed to account for biocultural values in judicial decision-making. Their collective action impacted bureaucratic and financial decision-making with tangible results specifically divestment from what would have been a polluting coal-power plant.

The examples above show that biosphere defenders play a vital role in multi-actor initiatives for sustainability transformations through leveraging the right to a healthy environment. The figure below shows how the right to a healthy environment provides an umbrella category to conceptualize the means that biosphere defenders use -open information, public participation and access justice- to achieve societal change that enables the substantive elements of the right to a healthy environment including safe and sufficient water, safe climate and healthy ecosystems and biodiversity.

6. Conclusion

For transformative change towards sustainability, weaving human rights law and CBD obligations is important but not sufficient. If the right to a healthy environment is to exercise its transformative potential, it needs to be informed by a deeper understanding of not only legal provisions but also on the ways in which biosphere defenders use the law in practice to alter fundamental attributes of value systems, regulatory and bureaucratic regimes as well as financial institutions. Hence, findings of the first and second research question are intertwined.

On the first research question on State obligations concerning the biodiversity and ecosystems element of the right to a healthy environment, the article finds that UN Human Rights Council Resolutions and CBD Conference of the Parties Decisions serve to specify the content of the right to a healthy environment and State's obligations grounding them in interpretations of human rights instruments and the Convention on Biological Diversity agreed by States. While the right to a healthy environment has a humanizing role to play within the CBD, bringing an ecosystems approach embedded in CBD guidance to the right to a healthy environment can help recognise the magnitude of the biodiversity crises and the vulnerable state of nature's contributions to people as well as recognize the intrinsic values of biodiversity. Yet, progressive developments are not sufficient. Instead, transformative change is needed as identified by international science policy bodies and Agenda 2030.

69 Castro, F, Lopes, GR, & Brondizio, E (2020), 'The Brazilian Amazon in Times of COVID-19: From Crisis to Transformation?', 23 *Ambiente & Sociedade*; available at <https://www.scielo.br/j/asoc/a/3g5ndNDxcFjzZsdJMjYQDbQ/?lang=en>.

70 Bennett, N.J., Le Billon, P., Belhabib, D. et al. (2022) *Local marine stewardship and ocean defenders 1(3) Ocean Sustain* (2022). <https://doi.org/10.1038/s44183-022-00002-6>.

71 Waruru, M. (2019) *Backers of Lamu coal project lose court case, China Dialogue* (4 July 4 2019); available at <https://chinadialogue.net/en/energy/11355-backers-of-lamu-coal-project-lose-court-case/>.

72 See more at UNESCO (nd) Lamu-Kiunga Archipelago; available at <http://www.vliz.be/projects/marineworldheritage/sites/3.1%20Lamu-Kiunga%20Archipelago.php?item=The%20Indian%20Ocean>.

73 Save Lamu (2020), ICBC withdraws financing from the Lamu Coal Plant, Save Lamu press release (16 November 2020); available at <https://www.savelamu.org/icbc-dumps-the-lamu-coal-plant/>

The article finds that recognising and supporting the transformative agency of groups in vulnerable situations such as women, youth, indigenous peoples in safeguarding nature, rather than framing these group as passive victims, is at the core of transformative societal action towards sustainability. The concept of biosphere defenders and the concrete cases discussed in this article contribute to change the narrative that these groups need to be “saved” because they are weak and powerless. While these cases on the way biosphere defenders use the law to enact change are by no means exhaustive, they do show the powerful agency of these groups and also how the right to a healthy environment recognized by the United Nations, Constitutions and secondary legislation is not only an abstract concept but a means to achieve real-life change. These examples span different countries: from women beekeepers in Mexico and indigenous peoples in the Ecuadorian Amazon to fisherfolk communities in Kenya, and young students from the Philippines and the Pacific Islands States. Evidence of their impacts show the very concrete possibilities of societal action for change.

More research is needed analyzing empirically whether the biosphere defender concept can help overcome the divide between people and nature and also in bringing natural allies together such as those advocating for human right to a healthy environment and those advocating for the rights of nature. The urgency of the biodiversity and climate crises requires catalyzing the right to a healthy environment by a diversity of groups and revealing the existing courage in vulnerability with all subjects and agents of change recognized and supported. This is not to inflict more burden or responsibility in people in already vulnerable situations, but to recognize the contribution that biosphere defenders have already done and may chose to continue to do so.

Similar to other authors (e.g. Chan et al (2020)), we find that coordination across jurisdictions and unleashing values of responsibility by various actors are key to sustainability transformations. We find that biosphere defenders create bridges across various jurisdictional scales and actors, contribute to visualize biocultural values of biodiversity and ecosystems and, together with other groups, translate these values into evidence for judicial decision-making. Duty-bearers can synergise with biodiversity defenders’ led initiatives for innovative ways of complying with State’s overlapping human rights and biodiversity obligations. Understanding the role of biosphere defenders fostering transformations with positive social-ecological outcomes at national, regional and international levels are vitally important because these practices demonstrate the feasibility of effective actions on the right to a healthy environment addressing systemic challenges. Furthermore, recognising agency is a crucial dimension of the inherent dignity of every human being.

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