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Strengthening Intergenerational Equity at the Ocean-Climate Nexus: Reflections on the UNCRC General Comment No.26[+]

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Abstract: After nearly thirty years of UNFCCC negotiations, the 2022 Glasgow Climate Pact has brought the ocean into the international climate fold. But much remains to be clarified about how ocean-based mitigation, adaptation, finance and technology will contribute to climate justice. To shed light on these issues, this article starts from the premise that the ocean is an essential but little-understood component of the interdependency between climate change and human rights. The article then explores the importance of a healthy ocean for children's human rights as a way to advance inter-generational equity under the UNFCCC through systemic interpretation. The upcoming General Comment on children's rights and the environment with a special focus on climate change (General Comment No. 26) by the UN Committee on the Rights of the Child (UN-CRC) presents an opportunity to clarify the role of existing international human rights obligations in strengthening intergenerational equity at the climate-ocean interface. This appears vital to ensure coordination across intergovernmental bodies and national government departments to safeguard ocean-dependent children's human rights through climate policy and action at different levels, while strengthening intergenerational equity on the basis of the UN Convention on the Rights of the Child (CRC).

Keywords: UNFCCC, Glasgow Climate Pact, ocean-climate nexus, ocean-dependent children's human rights, inter-generational equity

1. Introduction

The global ocean is an essential but little-understood component of the interdependency between climate change and human rights. Threats to the ocean from climate change are indeed threats to human rights, and to achieving climate justice and intergenerational equity. Climate impacts have been outlined by successive reports by the Intergovernmental Panel on Climate Change (IPCC),[1] and the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES),[2] and include for example, ocean warming, acidification, and deoxygenation which can negatively affect the material conditions necessary for satisfying everyone's human right to life, food, water, health, culture and the right to a healthy and sustainable environment. These impacts have been recognised by the UN Human Rights Council (HRC) who have acknowledged that rising ocean temperatures and sea levels have adverse impacts on human rights.[3] The impacts of climate change, biodiversity loss and

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[1] Intergovernmental Panel on Climate Change (2019), *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* edited by Hans-Otto Pörtner *et al*., (Cambridge Uni. Press, Cambridge: 2019), Chapter 5.
[2] IPBES, *Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* Eduardo S Brondizio (eds.) (IPBES secretariat, Bonn, Germany).
[3] Human Rights Council (2019), *Human rights and climate change*, 12 July 2019; UN Doc. A/HRC/RES/41/21.

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pollution limit the opportunity for children to engage with a healthy environment. This may have negative impacts on basic needs including oxygen and clean water; maintaining or improving mental health and wellbeing; the role of the environment in cultural practices, traditions, ceremonies and spiritual beliefs and practices.[4] For example, the IPCC have reported an increase in extreme weather events due to climate change,[5] this directly threatens the lives of children.[6] Children within marginalised communities and Global South countries are often worst affected, including indigenous children, and children with disabilities are most affected but by these impacts but with little to no say in their own future.[7] However, there is a marked gap in attention paid to the interrelationship between children's human rights and a healthy ocean, as well as youth involvement in climate justice movements within an ocean context.[8]

The principle of intergenerational equity, defined as justice for past, present and future generations,[9] is integral to sustainable development and environmental protection,[10] and is embedded in several international legal instruments which relate to the regulation of the environment. This includes, for example, in the 1992 United Nations Framework Convention on Climate Change (UNFCCC),[11] the overarching theme of this special issue. The principle has been central to constitutional claims in climate litigation, with the principle being linked to the rights of children and unborn generations.[12] For example, a claim brought against the government of Colombia by a group of young people on the basis that rapid and sustained deforestation of the Amazon and the consequential harms from climate change violates the material conditions for their rights to health, life, water and food both in adult life and in old age, as well as those of future generations.[13] As well as the outcome of the important *Urgenda* case, which obliged the Dutch government to change to substantially reduce emissions through

[4] Elisa Morgera, Mia Strand and Angeliki Papantoniou, *Compiled Answers to the Centre for Educational Research and Innovation (CERI) Questionnaire on General Comment 26* (2022) On file with authors.
[5] Sonia I Seneviratne *et al*., 'Changes in climate extremes and their impacts on the natural physical environment' in Chris B Field *et al*., (eds.) *A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC)* (Cambridge University Press, Cambridge: 2012) 109–230.
[6] Morgera, Strand and Papantoniou (n 4).
[7] Ibid.
[8] Mitchell Lennan and Elisa Morgera, 'The Glasgow Climate Conference (COP26)' *The International Journal of Marine and Coastal Law* 37 (2022) 137–151, at 150-151; See also Michael Sweeney and Elisa Morgera 'Don't forget a healthy ocean as part of children's right to a healthy environment', One Ocean Hub Blog Post (2021) available at <https://oneoceanhub .org/publications/policy-brief-dont-forget-a-healthy-ocean-as-part-of-childrens-right-to -a-healthy-environment/>; Senia Febrica, 'Advancing children and young peoples' rights to a healthy ocean in the context of climate change', One Ocean Hub Blog Post (2021) available at <https://oneoceanhub.org/advancing-children-and-young-people-rights-to-a-healthy -ocean-in-the-context-of-climate-change/>.
[9] Edith Brown-Weiss, 'Our Rights and Obligations to Future Generations for the Environment' 84 *American Journal of International Law* 198–207, at 198–199.
[10] Stockholm Declaration on The Human Environment, in UN, *Report of the United Nations Conference on the Human Environment (Stockholm 5–16 June 1972)*A/CONF.48/14/Rev1, Principle 2; United Nations General Assembly (UNGA), *Report of the United Nations Conference on Environment and Development (Rio de Janeiro, 3–14 June 1992)* A/CONF.151/26 (Vol. I), Principle 2; 1993 Vienna Declaration on Human Rights, UNGA Res 41/128; See Otto Spijkers, 'Intergenerational Equity and the Sustainable Development Goals' 10 *Sustainability* (2018) 3836; UNGA, *Millennium Declaration*, Resolution 55/2 (Adopted 8 September 2000) A/RES/55/2, Section IV, para. 21.
[11] United Nations Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994, 31 ILM 849 (UNFCCC), Art. 3(1); Paris Agreement to the UNFCCC, Paris, 12 December 2015, in force 4 November 2016, 55 ILM 740 (Paris Agreement), Preamble.
[12] See, for example, Danai Spentzou, 'Climate change litigation as a means to address intergenerational equity and climate change' *Queen Mary Law Journal* 2 (2021)153–183; Lydia Slobodian, 'Defending the Future: Intergenerational Equity in Climate Litigation' *The Georgetown Environmental Law Review* 32 (2020) 569–589.
[13] Corte Suprema de Justicia, Sala Civ. Abril 5. 2018, M.P: Luis Armando Tolosa Villabona, STC4360-2018, Radiación no. 11001-22-03-000-2018-00319-01. p. 18-19.

regulatory changes to comply with its human rights obligations under Articles 2 and 8 of the European Convention on Human Rights, and Dutch constitutional and civil law.[14]

Importantly for the purposes of this article, the principle is also found in several international legal instruments which regulate marine biodiversity, including the 1992 Convention on Biological Diversity (CBD),[15] as well as in the preambles of the 1946 International Convention on the Regulation of Whaling,[16] the 1973 Convention on International Trade in Endangered Species of Wild Fauna and Flora,[17] and the 1976 Convention on Migratory Species,[18] all of which stress the importance of cooperation in safeguarding populations of the species they regulate for future generations. This provides important context to interpret and analyse the operative provisions of these treaties.[19] Although not explicitly referred to in the treaty text, the environmental and fisheries provisions of the 1982 UN Convention on the Law of the Sea (UNCLOS),[20] or "constitution of the oceans", promote intergenerational equity through references to generally agreed or accepted rules and standards and other rules of international law.[21] This effectively calls for a systemic interpretation of other relevant international treaties and soft law instruments on climate, biodiversity and human rights which include – explicitly or implicitly – the principle of intergenerational equity.[22] The principle is also alluded to in the objective of the 1995 UN Fish Stocks Agreement concerning long-term conservation and sustainable use of straddling and highly migratory fish stocks through effective implementation of the relevant provisions of UNCLOS,[23] in order to safeguard them for use by future generations.[24] The strongest example of the principle however concerns the use of the seabed (the Area) in areas beyond national jurisdiction (ABNJ).[25] UNCLOS declares the Area as the "common heritage of [hu]mankind",[26] and entrusts the International Seabed Authority (ISA) to administer the exploitation of, and fairly and equitably distribute the benefits from, mineral exploitation from the international seabed area (the Area).[27] Despite the presence of the principle in the international governance framework for the ocean, at the time of writing there have been no incidents of national or international climate

[14] *Urgenda Foundation* v *The Netherlands*, [2015] HAZA C/09/00456689 (24 June 2015); appeal decision October 2018 and decision of the Supreme Court, 19/00135, 20 December 2019.
[15] Rio de Janeiro, June 5, 1992, in force December 29, 1993, 760 UNTS 79, Preamble and Article 2.
[16] Washington D.C., December 2, 1946, in force November 10, 1948; 161 UNTS 17, Preamble.
[17] Washington D.C., March 3, 1973, in force July 1, 1975, 993 UNTS 243.
[18] Bonn, June 23, 1979, in force November 1, 1983, 19 ILM 15, Preamble.
[19] Vienna Convention on the Law of Treaties (VCLT), Vienna, May 23, 1969, in force January 27 1980, 1155 UNTS 331, Art. 31.
[20] Montego Bay, December 10, 1982, in force November 16, 1994, 21 ILM 1261 (UNCLOS).
[21] For example, ibid., Art. 61(3), 119(1)(a), and 207, 211, 212.
[22] On systemic interpretation, see VCLT, (n 19), Art. 31(3)(c); Campbell McLachlan, 'The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention' 54 *International & Comparative Law Quarterly* (2005) 279–320; Richard Barnes, 'Alternative Histories and Futures in International Fisheries Law' in Richard Caddell and Erik J Molenaar (eds.) *Strengthening International Fisheries Law in an Era of Changing Oceans* (Hart, 2019) 25–50.
[23] Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York, August 4, 1995, in force 11 December 2001, 2167 UNTS 3, Art. 2. See also Alan Boyle and Catherine Redgwell, *International Law and the Environment* (4th ed.) (Oxford University Press, Oxford: 2022) at 121–123.
[24] See Ichiro Nomura, *Background, Negotiation History and Article-by-Article Analysis of the United Nations Agreement on Fish Stocks and the FAO Compliance Agreement* (NextPublishing Authors Press. 2020), at 25.
[25] UNCLOS, Part XI; Malgosia Fitzmaurice, 'Intergenerational Equity, Ocean Governance, and the United Nations' in David J Attard, Malgosia Fitzmaurice and Alexandros XM Ntovas (Eds.) *The IMLI Treatise on Global Ocean Governance: Volume II: UN Specialized Agencies and Global Ocean Governance* (Oxford University Press, Oxford: 2018), 357–375.
[26] UNCLOS Arts. 136–137.
[27] Ibid., Arts. 140; 143–145.

litigation applications citing law of the sea obligations (for example the general obligations found in Part XII, Section 1, of UNCLOS) or ocean-based human rights.[28]

This article argues that creating the material conditions to achieve intergenerational equity requires not only full and inclusive implementation of the above treaties using a rights-based approach, but also inclusion and prioritisation of the ocean in rights-based decisions at all levels. To that end, the upcoming General Comment on children's rights and the environment with a special focus on climate change (General Comment No. 26) by the UN Committee on the Rights of the Child,[29] presents a chance to clarify the role of existing international human rights obligations under the Convention on the Rights of the Child (CRC),[30] in strengthening intergenerational equity at the climate-ocean interface. However, at the outset of the process of developing this document, the comment's concept note made no direct reference to the ocean.[31] As the UNFCCC's history has shown us, lack of explicit reference to the ocean has led to limited attention paid to the ocean in climate policies, mitigation and adaptation action, and finance.[32] Indeed, it is concerning the same may happen in the context of children's human rights. In effect, other formative UN reports on children's human rights and the environment have consistently emphasized the threats arising from climate change, without referring to the ocean, [33] and there is limited consideration of a healthy ocean in research on children's rights.[34]

However, after the ocean being embedded at all levels of UNFCCC climate-related action as a result of the negotiation and adoption of the Glasgow Climate Pact in November 2021,[35] it is clear any climate-related developments must fully consider the ocean.[36] In addition, youth representatives at the Glasgow Climate COP and at the 2022 UN Ocean Conference were very vocal about the ocean-climate nexus, expressing deep concerns about the potential impacts of deep-seabed mining in particular.[37] Therefore, inclusion of the relevance of the ocean for children's human rights generally, as well as for climate change, in General Comment No. 26 is vital to ensure co-ordination between intergovernmental bodies and national government departments and agencies to safeguard ocean–dependent children's human rights in the context of climate policy, action and finances. In turn, the inclusion of the ocean in General Comment

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[28] See Elise Johansen, 'The Role of the Law of the Sea in Climate Change Litigation' *The Yearbook of Polar Law* XI (2019) 141–169.

[29] UN Human Rights Office of the High Commissioner (OHCHR), 'Draft general comment No. 26 on children's rights and the environment with a special focus on climate change' (2021) available at <www.ohchr.org/en/documents/general-comments-and-recommendations/draft-general-comment-no-26-childrens-rights-and>; OHCHR, 'The UN Committee on the Rights of the Child commits to a new General Comment on Children's Rights and the Environment with a Special Focus on Climate Change' (2021) available at <www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=27139&LangID=E>.

[30] New York, November 20, 1989, in force September 2, 1990, 1577 UNTS 3 (CRC).

[31] OHCHR (n 29).

[32] Mitchell Lennan and Elisa Morgera, 'The Glasgow Climate Conference (COP26)' *The International Journal of Marine and Coastal Law* 37 (2022) 137–151.

[33] See, for example, Report of the UN High Commissioner for Human Rights, *Realizing the right of the child through a healthy environment* 3 January 2020, UN Doc. A/HRC/43/30; Human Rights Council, *Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment* 24 January 20218, UN Doc. A/HRC/37/58; Human Rights Council, *Protection of the rights of the child in the implementation of the 2030 Agenda for Sustainable Development*, 15 December 2016, UN Doc. A/HRC34/27.

[34] Michael Sweeney and Elisa Morgera 'Don't forget a healthy ocean as part of children's right to a healthy environment', One Ocean Hub Policy Brief (12 July 2021) available at <https://oneoceanhub .org/publications/policy-brief-dont-forget-a-healthy-ocean-as-part-of-childrens-right-to -a-healthy-environment/>.

[35] UNFCCC Decisions 1/CP.26 and 1/CMA.3

[36] Lennan and Morgera (n 8).

[37] One Ocean Hub Roundtable on 'Children and Young Peoples' Human Rights to a Healthy Ocean: Their Importance for Climate Change Adaptation and mitigation', Virtual Ocean Pavilion for the Climate Glasgow COP (12 November 2021) <https://www.youtube.com/watch?v=TVoF8hmSpEE&t=414s>; and S Álvarez Peña et al, 'Youths Call for a Deep-Sea Mining Moratorium' (Youth Policy Advisory Council of the Sustainable Ocean Alliance, 22 September 2022)

No. 26 can provide a timely interpretative basis to strengthen intergenerational equity under the UNFCCC: it can provide a basis for the development of new international guidance on ocean-based mitigation, adaptation, finance and capacity so that they duly take into account the standards of the CRC to the benefit of present and future generations.

The authors begin with the premise that the ocean is an essential but little-understood component of the interdependence between climate change and human rights (section 2). We then focus on the importance of a healthy ocean for children's human rights as a way to advance inter-generational equity under the UNFCCC through systemic interpretation of applicable provisions of international law (section 3). We then argue for the inclusion of a healthy ocean in General Comment No. 26 to safeguard ocean–dependent children's human rights in a climate context (section 4) and draw conclusions.

2. The Ocean-Climate Nexus: Relevance for Children's Human Rights

The ocean is an essential but little-understood component of the interdependence between climate change and human rights. The climate emergency threatens a range of human rights including the rights to life, health, food, water and sanitation, freedom from discrimination, education, cultural rights, development, children's rights, and the right to a healthy and sustainable environment.[38] Considering the fact that the ocean is an integral part of the climate system and is recognised as such in the UNFCCC,[39] actual and potential threats to the ocean from climate change are indeed threats to human rights, including children's human rights, and to climate justice.

UNICEF has highlighted that 850 million children live in countries which are at an extremely high risk of the adverse impacts of climate change, primarily in Africa and Asia.[40] Children are particularly vulnerable to environmental damage and degradation since they are still developing and less resilient than adults. The effects of climate change and biodiversity loss prevent children from enjoying their human rights today and in the future, as their long-term physical and mental health and overall quality of life.[41] It is now widely understood that climate change will harm the poorest and most vulnerable children first, hardest and longest.[42] Negative impacts of the marine environment, including marine biodiversity, as well as on marine ecosystems' contributions to climate change mitigation through their roles as natural carbon sinks,[43] can therefore lead to negative impacts on children's rights. Water shortages, which may be worsened by loss of marine ecosystem services that contribute to the global water cycle,[44] will also affect children most and for the longest time. Cheap and accessible fish

[38] UN Special Rapporteur on Human Rights and Environment, *Report of the Special Rapporteur on the Issue of Human Rights Obligations relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, July 15, 2020, UN Doc. A/74/161.

[39] UNFCCC, Art. 1(3) defines the climate system as 'the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions' (own emphasis).

[40] United Nations Children's Fund (UNICEF) (2021), *The Climate Crisis is a Child Rights Crisis: Introducing the Children's Climate Risk Index*. New York, New York. UNICEF.

[41] World Health Organization (WHO), 'Inheriting a Sustainable World? Atlas on Children's Health and the Environment' (WHO 2017).

[42] UNICEF, 'Unless We Act Now: The Impact of Climate Change on Children' (UNICEF 2015). See also HRC 'Analytical Study on the Relationship between Climate Change and the Full and Effective Enjoyment of the Rights of the Child' UN Doc A/HRC/35/13 (4 May 2017).

[43] This includes storage of 'blue' carbon in coastal ecosystems, such as mangroves and saltmarshes, as well as by fish and whales in pelagic ecosystems. See, for example Jean-Pierre Gattuso and others, 'Ocean Solutions to Address Climate Change and Its Effects on Marine Ecosystems' (2018) 5 Frontiers in Marine Science <https://www.frontiersin.org/articles/10.3389/fmars.2018.00337> accessed 9 November 2022; Matthew S Savoca and others, 'Baleen Whale Prey Consumption Based on High-Resolution Foraging Measurements' (2021) 599 Nature 85; Daniele Bianchi and others, 'Estimating Global Biomass and Biogeochemical Cycling of Marine Fish with and without Fishing' (2021) 7 Science Advances eabd7554.

[44] Edward B Barbier, 'Marine Ecosystem Services' (2017) 27 Current Biology R507; Domenico D'Alelio and others, 'Intersecting Ecosystem Services Across the Aquatic Continuum: From Global Change Impacts to Local,

and seafood, which is nutrient dense and contains high-quality, readily digestible protein and essential amino acids (i.e., Omega-3), as well as micronutrients are very important for the health and development in children.[45] Loss of access to fish and seafood through the impacts of pollution, climate change or overfishing negatively impacts children's right to the highest attainable standard of health through the provision of adequate food. In addition, current or future loss access to fishing and traditional foods also negatively impacts children's cultural rights.

This short subsection has demonstrated the important but poorly understood component of the ocean-climate nexus in relation to children's human rights. The next subsection argues how the inclusion of the ocean in the Glasgow Climate Pact and subsequent work under the UNFCCC provides an opportunity to rely on the UNCRC to address equity issues at the ocean-climate nexus.

2.1 The Glasgow Climate Pact: Ocean-Dependent Children's Human Rights

There are opportunities for protecting ocean-dependent children's human rights within the climate regime, however it is unfortunate that these are marred by the limited participation of children and youth in the climate process at the UN. This section first argues that since the ocean is included in the UN climate treaties, ocean-based climate action is essential for securing intergenerational equity. It then discusses how the Glasgow Climate Pact adopted at COP26 in November 2021 can advance ocean-based climate action for children's rights. Finally, it unveils the specific barriers to harness these opportunities due to the limited participation of youth within the climate process.

Explicit references to the ocean in the international climate legal framework are few and far between. The ocean is included in the definition of the climate system as "the totally of the atmosphere, hydrosphere, biosphere and geosphere and their interactions",[46] this definition applies to the UNFCCC's objective to protect the climate system in Article 2, as well as the Kyoto Protocol,[47] and the Paris Agreement.[48] Importantly for the context of this article, this ocean-inclusive definition also applies to the UNFCCC's principle that Parties should "protect the climate system for the benefit of future generations of humankind".[49] Moreover, the ocean is given as an example of natural sinks in Article 4(1)(d) UNFCCC, and while the Kyoto Protocol makes no mention of the ocean but obliges Parties to the conserve sinks of greenhouse gases, while taking in to account their obligations under relevant international agreements.[50] On top of mentioning intergenerational equity in its preamble, the Paris Agreement mentions the ocean, noting the importance of "ensuring the integrity of all ecosystems, including oceans",[51] this provides important context to interpret and analyse the object and purpose of the Agreement.[52] The reference to ecosystems in the preamble is also a recognition of the goods and services that marine ecosystems provide to secure the rights of children, as discussed above. In line with its objective to strike a balance between "emissions from sources and removals by sinks",[53] the Paris Agreement creates a binding obligation to "conserve and

and Biologically Driven, Synergies and Trade-Offs' (2021) 9 Frontiers in Ecology and Evolution <https://www.frontiersin.org/articles/10.3389/fevo.2021.628658> accessed 10 November 2022.

[45] Sahya Maulu and others, 'Fish Nutritional Value as an Approach to Children's Nutrition' (2021) 8 Frontiers in Nutrition 780844.

[46] UNFCCC, Art. 1(3).

[47] Kyoto Protocol, Art. 1.

[48] Paris Agreement, Art. 1.

[49] UNFCCC, Art. 3(1)

[50] Kyoto Protocol, Art. 2(a)(ii), see section 3.3 of this chapter.

[51] Paris Agreement, preambular para. 13.

[52] VCLT, Art. 31.

[53] Paris Agreement, Art. 4(1).

enhance" sinks and reservoirs, which references the UNFCCC examples of sinks.[54] This obligation, in light of the preamble, should be interpreted to include the ocean, however the ocean has only been recently integrated into the work and processes of the UNFCCC with the adoption of the Glasgow Climate Pact.

The Glasgow Climate Pact integrates for the first time the ocean at all levels of UNFCCC bodies, processes and decision-making structures.[55] It does this though direct references to the importance of "ocean-based action" in the various work programmes of the UNFCCC and Paris Agreement on climate mitigation, adaptation and finance. The Pact's preamble refers directly to ensuring the integrity of ocean ecosystems when taking action to address climate change,[56] making the connection with climate adaptation and mitigation to the restoration of marine ecosystem has the potential to facilitate the protection of several human rights as well as climate action.[57] Moreover, since 2021–2030 is the UN Decade for Action on Ecosystem Restoration, which aims to 'prevent, halt and reverse he degradation of ecosystems worldwide',[58] the relevant international efforts should be connected with the Pact recognising the importance of marine ecosystems for improved human well-being and the coexistence of humankind with nature.[59] The UN Decade Strategy developed through a global, open and inclusive consultation process, is strongly aligned with realising the human rights of all people, and advocates, adhering to human rights within ecosystem restoration initiatives, laws and policies, children's rights, and restorative justice.[60] In terms of mitigation, this point is emphasised in the main text of the Pact on the importance of protecting, conserving and restoring marine ecosystems acting as carbon sinks to achieve the long-term goal of the convention,[61] which strengthens the links made above. The Glasgow Climate Pact secured two key achievements for integrating the ocean into the UNFCCC system:

i. The Pact mandated relevant work programmes and constituted bodies under the UNFCCC to consider how to strengthen and integrate ocean-based action in their existing mandates and workplans and report on these activities;[62] and
ii. The Pact mandated the chair of the Subsidiary Body for Scientific and Technological Advice to hold an annual dialogue starting at the 56th session (June 2022) on strengthening ocean-based action, and prepare an informal summary report for UNFCCC Parties ahead of COP27 in Sharm el-Sheikh in November 2022.[63]

The Pact implicitly refers to intergenerational equity by recognising the important role of *inter alia* youth and children in addressing and responding to climate change.[64] That said, it is disappointing that the new 10-year Glasgow work programme on Action for Climate Empowerment did not include references to human rights standards of public participation.[65] Parties and non-party stakeholders are merely:

[54] Ibid., Art. 5
[55] See Lennan and Morgera (n 8).
[56] 1/CP.26, preambular para. 7; 1/CMA.3, preambular para. 7.
[57] Lennan and Morgera (n 8) at 141.
[58] United Nations General Assembly (UNGA) Res 73/284 (1 March 2019) United Nations Decade on Ecosystem Restoration (2021–2030), UN Doc A/RES/73/28, para. 1.
[59] Ibid.
[60] Unesco (2021), *United Nations Decade on Ecosystem Restoration;* United Nations Decade on Ecosystem Restoration (unesco.org); Also see United Nations Environment Programme and Food and Agriculture Organization of the United Nations, *The UN Decade on Ecosystem Restoration* (no date); ERDStrat.pdf (unep.org)
[61] 1/CP.26, para 21; 1/CMA.3, para. 38.
[62] 1/CP.26, para. 60.
[63] 1/CP.26, para. 61.
[64] 1/CP.26, para. 55.
[65] 22/CMA.3; 18/CP.26.

> [E]ncouraged to promote public participation in addressing climate change and its effects and in developing adequate responses by facilitating feedback, debate and partnership in relation to climate change activities and relevant governance, noting the important role that social media platforms and strategies can play in this context.[66]

This is ultimately disappointing since it provides no mandated system or process in which youth can have their voices heard on climate change in a way that can influence decision makers. The Glasgow Climate Pact sought to compensate this limitation in three ways. First, it recognised the important role of Indigenous peoples, local communities, youth and children, in addressing and responding to climate change.[67] Second, it called for promoting and considering respective obligations on human rights in implementing the Glasgow work programme on Action for Climate Empowerment.[68] Third, it called for an annual youth-led climate forum with a view to contributing to the implementation of the Glasgow work programme on Action for Climate Empowerment.[69]

One can argue that the general reference to "respective obligations on human rights" in the Glasgow Climate Pact, however, may not be sufficient to elicit the necessary institutional adjustments to effectively enable relevant human rights-holders to effectively participate in decisions on the ocean-climate nexus that may undermine their rights to life and health, notably children and youth. In addition, the decision to hold an annual youth-led climate forum in the Glasgow Climate Pact does not respond to the specific calls made repeatedly by youth representatives at COP 26 to be included in the negotiations, not only in separate, youth-focused events.[70] The UN Special Rapporteur on Freedom of Association closely followed the practices at COP26, lamenting how limitations for civil society and representatives of human rights-holders in accessing the negotiations were a major barrier to realizing climate justice and to the protection of children's rights in particular.[71] This is indeed a crucial aspect for the protection of children's human rights to healthy environment,[72] which also hinges upon the ocean-climate nexus.

These developments should be understood in the broader debate on limited public participation in the UN climate processes. In 2022, the Special Rapporteur on Climate Change and Human Rights did not mince his words in this regard: "It is a regretful indictment of the current decision-making process that those who are most affected and suffering the greatest losses are the least able to participate in current decision-making. New participatory processes need to be found urgently."[73] The report goes on to discuss the "participation disconnect" which, among other things highlights that those who benefit most from fossil fuel and carbon-intensive industries have "disproportionate access to decision-makers" and must be "held accountable for the human rights abuses they are underwriting".[74] The disconnect is also apparent between "those who are most vulnerable to climate change impacts and those who actually participate and are represented in political and decision-making processes".[75] According to the Rapporteur, Indigenous peoples, youth and civil society organisations have

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[66] Ibid., para. 22.
[67] 1/CP.26 and 1/CMA.3, para. 55.
[68] Ibid., para. 62.
[69] Ibid., para. 64–65.
[70] Senia Febrica, 'Advancing Children and Young People's Rights to a Healthy Ocean in the Context of Climate Change', One Ocean Hub, 22 November 2021 <
[71] Clement Voule, 'UN Special Rapporteur on Freedom of Association', Twitter, 12 November 2021 <https://twitter.com/cvoule/status/1459181595697594371?s=20>.
[72] Sweeney and Morgera (n 9).
[73] UNGA, 'Promotion and protection of human rights in the context of climate change mitigation, loss and damage and participation' *Report of the Special Rapporteur on the promotion and protection of human rights in the context of climate change* 26 July 2022 UN Doc. A/77/226, para. 73.
[74] Ibid., para. 74.
[75] Ibid., para. 75.

virtually no say in the negotiations or input into their outcomes "apart from brief interventions in the opening plenary meetings".[76] The report compares this issue with the fact that the meetings of the Convention on Biological Diversity are considerably less restrictive, and allow textual input from civil society organisations and meaningful participation of indigenous peoples and local communities.[77] A coalition of UN bodies, civil society and researchers has thus developed a whole series of recommendations to include procedurally and substantively children's rights into the UN climate process.[78] These recommendations are also relevant for the leaders of UN bodies and organizations, who issued a joint commitment on ensuring the promotion and recognition of the right of children, youth and future generations to a healthy environment and their meaningful participation in decision-making at all levels, in relation to climate action and climate justice in June 2021.[79] These concerns have been consolidated in a joint statement made by several UN Special Rapporteurs and UN independent experts in November 2022, who called for States to fully integrate human rights standards into climate change action ahead of COP27.[80]

3. The Importance of a Healthy Ocean for Children's Human Rights

Against the background of the brief scientific overview of the links between the ocean-climate nexus and children, and of the openings created by the Glasgow Climate Pact to address the protection of ocean-dependent children's human rights, this section deepens the understanding of state obligations to protect children's ocean-dependent human rights. It also highlights key areas of the ocean-climate nexus that require consideration of children's human rights.

Even before the adoption of the UN General Comment, UNFCCC Parties and others can rely on the interpretative work by former UN Special Rapporteur on Human Rights and the Environment John Knox, who clarified States' obligations *vis-à-vis* children's human rights in terms of intergenerational equity: the "discussions of future generations [must] take into account the rights of the children who are constantly arriving, or have already arrived, on this planet".[81] This section will therefore relate the key interpretative clarifications provided by Knox on the basis of the UNCRC to the ocean-climate nexus, based on the understanding highlighted earlier in this article that:

1. Children's right to life,[82] development and survival,[83] depend on the ocean's generation of 50–70% of the Earth's oxygen;
2. Children's right to health may be negative impacted by exposure to chemicals and microplastic pollution in the ocean;[84]
3. Children's right to food, health, and culture depends on the availability of fish;[85] and

[76] Ibid., para. 77.
[77] Ibid.
[78] Save the Children, 'A COP Fit For Children: How to Support Children's Participation' (Save the Children, 2022) <https://resourcecentre.savethechildren.net/document/cop-fit-children-how-support-childrens-participation/>; Children's Environmental Rights Initiative (CERI), 'Incorporating Child Rights Into Climate Action' (CERI, 2022) <https://ceri-coalition.org/child-rights-into-climate-action/>.
[79] UN, 'Step Up! A Joint Commitment by Heads of UN Entities' (UN, 2021) <https://www.sparkblue.org/system/files/2021-06/210615%20STEP%20UP%20-%20Joint%20Commitment%20by%20Heads%20of%20UN%20Entities.pdf>.
[80] OHCHR, 'COP27: Urgent need to respect human rights in all climate change action, say UN experts' 4 November 2022, < https://www.ohchr.org/en/statements/2022/11/cop27-urgent-need-respect-human-rights-all-climate-change-action-say-un-experts>.
[81] John Knox, '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 Doc A/HRC/37/58 (24 January 2018).
[82] CRC, Art. 6(1).
[83] CRC, Art. 6(2).
[84] CRC, Art. 24.
[85] CRC, Art. 24(c); 29(c); 30; 31.

4. Children's right to culture and play may be negatively affected in communities where the ocean is an intimate component of ways of life.[86]

As indicated in sections 1 and 2 of this article, all these inter-dependencies are currently affected by climate change. As a result of these interactions, the following obligations arising from the UNCRC are relevant at the ocean-climate nexus. First, preventing environmental harm to fully protect children's rights, including by requiring effective regulation and enforcement mechanisms on the ocean-climate nexus, including injunctive relief.[87] The latter may apply, for instance, to the increasing calls for a moratorium on deep-seabed mining.[88] Second, considering the best interests of the child as a matter of primary consideration when designing, implementing and monitoring regulation at the ocean-climate nexus. Third, establishing and maintaining substantive non-regressive and precautionary standards at the ocean-climate nexus, that take into account the ideas of children as expressed by children themselves and that contribute to minimize the future negative impacts of climate change on children to the greatest extent possible.[89]

The last obligation clearly relates to the participation barriers identified above in the context of the UN climate processes. Once again, Knox's interpretative clarifications based on the UNCRC shed light on the specific modalities to consider children's views on 'long-term environmental challenges that will shape the world in which they will spend their lives'.[90] Considering the wide membership of the UNCRC,[91] the following interconnected obligations are applicable to UNFCCC and Paris Agreement Parties that are party to the UNCRC:

i. To collect and make publicly accessible information about the ocean-climate nexus and how it may harm children;
ii. To ensure the effects of proposed measures on the ocean-climate nexus on children's rights, specifically those children most at risk, are assessed before the measures are taken or approved; and
iii. To integrate the rights of children in international discussions on future generations on the ocean-climate nexus.

On the whole, the UNCRC serves to identify a clear group of existing human rightsholders to whom the UNFCCC and Paris Agreement State parties are accountable as part of inter-generational equity. Thus, the UNCRC provides specific legal standards for participatory decision-making processes to ensure that the substantive children's human rights at stake are duly taken into account with a view to preventing foreseeable and unjustifiable negative impacts on them arising from ocean-based climate action. From this perspective, the UNCRC set binding legal parameters for the global policy commitment not to leave anyone behind under Agenda 2030,[92] and its SDG 16 on 'responsive, inclusive, participatory and

[86] CRC, Art. 31.
[87] OHCHR 'Realizing the Rights of the Child through a Healthy Environment' UN Doc A/HRC/43/30 (3 January 2020) para 62.
[88] Deepsea Conservation Coalition, 'Press Release: France calls for Ban on Deep-Sea Mining at COP27' (7 November 2022) <https://www.savethehighseas.org/isa-tracker/2022/11/07/press-release-france-calls-for-ban-on-deep-sea-mining-at-cop27/>.
[89] HRC (n 42).
[90] Knox (n 81).
[91] Often identified as 'the most widely-ratified international human rights treaty in history'; see, e.g., <https://www.unicef.org/child-rights-convention>.
[92] The HRC has clarified that Agenda 2030 needs to be interpreted in light of international human rights law; see n **Error! Bookmark not defined.**.

representative decision-making at all levels'[93] in the context of the international climate change regime, as well as in national and regional actions at the ocean-climate nexus.[94]

3.1 The Ocean-Climate Nexus and Children's Human Rights

Going more into the specifics, there is a need to comprehensively map out the ocean-climate nexus, to apply the above-discussed obligations to protect children's human rights. The calls for the UNFCCC SBSTA to request the IPCC to produce a special report on climate change and children,[95] where children's rights to a safe climate is considered fully in the ocean-climate nexus, would be a critical step forward in this direction.

Meanwhile, this section identifies various areas of the ocean-climate nexus that deserve further research and consideration from a children's rights perspective. Some may be less obvious areas of relevance to climate and human rights experts, such as ocean acidification, shifting fish stocks, and ocean plastics, in addition to ocean-based adaptation and finance.

3.1.1 Ocean Acidification

The Glasgow Climate Pact made an explicit reference to the need for 'limiting global warming to 1.5°C, which requires rapid, deep and sustained reductions in greenhouse gas emissions, including global carbon dioxide by 45% by 2030 and net-zero by 2050.'[96] The explicit reference to carbon dioxide is very important to curb ocean acidification**,** which arises from excess CO_2 emissions dissolving in sea water. Since 1980, the ocean has absorbed between 20–30% of CO_2 released into the atmosphere resulting in further acidification. While ocean acidification and climate change are distinct issues, they share a common cause in CO_2 emissions. As a result, the fight against ocean acidification can benefit from climate change mitigation efforts.

Ocean acidification has numerous impacts on marine ecosystems, including limiting the ability of species to form shells and skeletons. This is particularly problematic for coral reef species, who are unable to form their calcified shell structure which supports rich biodiversity on the reef. The effects of ocean acidification will increase and persist in marine ecosystems for hundreds of years if CO_2 emissions continue unabated beyond the agreed 1.5°C temperature goal under the Paris Agreement. Since plankton and coral reefs – key species in marine food chains – are especially vulnerable to ocean acidification, this has a considerable impact on children's rights to food, health and culture due to the long-term potential for the ocean to act as a source of food being threatened by ocean acidification. If marine food chains suffer the loss of key species due to ocean acidification, fish species which are valuable for their nutrition content may decline or disappear.

The 2022 report of the UN Special Rapporteur on Climate Change and Human Rights did not mention specifically ocean acidification but it did identify the fact that higher ocean temperatures causes coral reef bleaching,[97] which impacts the human right to food for those

[93] UNGA 'Transforming Our World: The 2030 Agenda for Sustainable Development' UN Doc A/RES/70/1 (21 October 2015) Goal 16.

[94] This reasoning was first developed in Elisa Morgera and Hannah Lily, 'Public Participation, rather than Stakeholder Engagement, at the International Seabed Authority – an international human rights analysis' (2022) RECIEL.

[95] SOAS, University of London, 'We need an IPCC Special Report centred on children and climate change' (8 March, 2022) <https://study.soas.ac.uk/we-need-ipcc-special-report-centred-children-climate-change/>; Alana M S N Lancaster, Mitchell Lennan and Elisa Morgera 'The One Ocean Hub's Written Submission to the UN Special Rapporteur on Climate Change and Human Rights' (23 June 2022) <https://www.ohchr.org/en/calls-for-input/2022/call-input-promotion-and-protection-human-rights-context-mitigation-adaptation>; CERI (n 79).

[96] 1/CP.26, para. 17.

[97] One Ocean Hub, 'Oceans and Climate Change: Impact and Adaptation' (30 November 2020) <https://www.youtube.com/watch?v=fzR9cHUQ9WE>.

dependent on coral reef ecosystems as a food source.[98] It also highlighted the impacts of increased carbon dioxide concentrations,[99] which ultimately have far-reaching implications for the most vulnerable in society. While the report signals that crop growth and yields can increase, this is to be countered by the impacts of slow onset events, such as rising rates of drought, desertification and saltwater intrusion impacting arable land, and ocean acidification on coral reefs, which impact many small-scale fisheries. Food and nutrition insecurity have therefore become a way of life for large swathes of the populations of SIDS – women, children, the indigenous and Afro-descendant peoples – as fish and seafood is often the most utilised and available protein.[100]

We thus argue that it is imperative that States establish and implement non-discriminatory and non-retrogressive policies and laws on limiting global carbon dioxide emissions. These must include additional measures to protect the human rights of the most vulnerable, such as children that have a close relationship with corals and marine living resources that are affected by ocean acidification and on which they depend for their material needs and cultural life. In addition, we argue that States should support CO_2 emission reductions and the creation of marine protected areas that prevent unjustified, foreseeable infringements of children's human rights.

3.1.2 Shifting Fish Stocks

The response of some marine species to the warming and acidification of the ocean is to shift their range poleward, or into deeper waters, to their preferred environmental conditions.[101] This results in redistribution of species from their historical locations causing jurisdictional issues, and complications for the management and conservation of fish populations as they move across traditionally static boundaries.[102] For example, fish populations may leave dedicated conservation areas limiting their effectiveness. This phenomenon can cause the exacerbation of fisheries conflicts, and the creation of new ones, as cooperation breaks down between States over quota allocations.[103] These shifts and result conflicts can lead to mismanagement and overexploitation of stocks as well damage to marine biodiversity, as the case of the recent mackerel dispute in the North-Atlantic Ocean illustrates.[104]

The Intergovernmental Panel on Climate Change Special Report on Oceans and the Cryosphere has indicted that: 'future shifts in fish distribution and decreases in their abundance and fisheries catch potential due to climate change are projected to affect income, livelihoods, and food security of marine resource-dependent communities'.[105] In addition the 2022 report of the UN Special Rapporteur on Climate Change and Human Rights also underscored the economic losses felt by fishery-dependent coastal States caused by migrating fish stocks (particularly tuna) due to climate change were also identified.[106]

Fish catches decreasing in the Tropics due to shifting stocks, where populations are more dependent on seafood, and increasing in higher latitudes in regions with economies less dependent on fisheries is particularly concerning for several reasons. It impedes the

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[98] A/77/226 (n 74), para. 49.
[99] A/77/226 (n 74), paras. 40–41.
[100] World Ocean Review, 'The goodness in fish' (2013) <https://worldoceanreview.com/en/wor-2/fish-and-folk/fish-as-food/#:~:text=Fish%20is%20the%20most%20important,sold%20fresh%20in%20developing%20countries.>.
[101] IPCC, *Special Report on Oceans and the Cryosphere in a Changing Climate* (IPCC, 2019), at 12.
[102] Malin Pinsky *et al.,* 'Preparing ocean governance for species on the move' 360 *Science* 1189 (2018).
[103] For a comprehensive analysis of fisheries conflicts, see: Jessica Spijkers et al., 'Marine fisheries and future ocean conflict' 19 *Fish and Fisheries* 789 (2018).
[104] See Andreas Østhagen et al., 'Collapse of cooperation? The North-Atlantic The North-Atlantic mackerel dispute and lessons for international cooperation on transboundary fish stocks' 19 *Maritime Studies* 155 (2020).
[105] IPCC SROCC (2019) supra n. 3, at 30–31.
[106] A/77/226 (n74), para. 57.

successful implementation of the UN Sustainable Development Goals (SDGs),[107] and is a complex fishery, food security, biodiversity, human rights, and climate justice issue. Addressing the challenges of shifting fish stocks across geopolitical boundaries goes beyond the regulatory capacity of international fisheries law, requiring an integrated approach of the relevant legal frameworks.[108]

Children are often forgotten within this complexity, and must be concluded in any adaptation measures concerning fisheries. Importantly, the UN Children's Fund (UNICEF) connects Target 14.3 with two provisions in the Convention on the Rights of the Child.[109] The first is Article 23(2)(c), which requires that in fulfilling their obligations arising from the child's right to the highest attainable standard of health**,** States should take appropriate steps to address disease and malnutrition through measures such as the provision of nutritious food and clean drinking-water, and in the process, have an awareness and appreciation of the risks and harms of environmental pollution. Plankton and coral reefs, key species in marine food chains, are especially vulnerable to ocean acidification.[110] The long-term potential for the ocean to act as a source of food and therefore aid the attainment of the child's right to health is clearly threatened by acidification. If marine food chains suffer loss of key species due to ocean acidification, fish species which are valuable for their nutrition content may decline or disappear.

3.1.3 Ocean Plastic

Ocean plastic[111] pollution is a sub-set of marine pollution that is persistent and accumulates. Plastic makes up as much as 95% of total marine litter,[112] and emissions of plastic waste into aquatic ecosystems are projected to nearly triple by 2040 without meaningful action.[113] Marine pollution, in the form of ocean plastics, impacts children's right to play, leisure and recreation and access to clean beaches, which significantly impacts physical and mental health.[114]

Marine micro and macro-plastic pollution have a clear impact on children's right to life, survival, health, physical integrity and development.[115] Considering the close dependencies human health has on biodiversity,[116] marine plastics negatively impact marine biodiversity and therefore human health in several ways. As mentioned already, marine biodiversity is important as an essential source of macro- and micro nutrients including

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[107] United Nations Sustainable Development Goals (SDGs), especially goals 1 (no poverty), 2 (zero hunger), 8 (decent work and economic growth), 13 (climate action, esp. Target 13.2 "Integrate climate change measures into national policies, strategies and planning") and 14 (life below water); <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

[108] See Lennan supra n. 6.

[109] UNICEF (2016), '*Mapping the Global Goals for Sustainable Development and the Convention on the Rights of the Child* '(2016) at 39 <https://www.unicef.org/media/60231/file>

[110] UN Environnent Programme (n 41) at 26.

[111] This sub-sections draws on E. Morgera and S Shields (2022), *Info-Sheet No 6 - Children's Human Rights and Ocean Plastics*; info-sheet: Children's human rights & ocean plastics | One Ocean Hub (accessed on 14 November 2022).

[112] Thevenon, F., Carroll C., Sousa J. (Eds). (2014). Plastic Debris in the Ocean: The Characterization of Marine Plastics and their Environmental Impacts, Situation Analysis Report. Gland, Switzerland: IUCN.

[113] UNEP (2021). From Pollution to Solution – A global assessment of marine litter and plastic pollution. Synthesis.

[114] Ibid *32-37.*

[115] CRC, Art. 6.

[116]

protein, omega-3 fatty acids, iron, and vitamins;[117] a source of biomedical discovery,[118] and as a determinant of mental and physical health in respect of access to clean beaches.[119] Microplastics can cause harm to human beings from physical and chemical means. For example, an alarming study has revealed that for the first time microplastics were found in sections of human placenta which has generated concern on the potential impact on the health and development of the foetus.[120] Microplastics in the marine environment accumulate persistent organic pollutants (POPs) such as polychlorinated biphenyls (PCBs) from the water, which then travel through the marine food web and can be ingested by humans.[121] Exposure to PCBs can cause developmental defects in children, and hormonal disruption, thyroid issues, and cancer in children and adults.[122]

Ocean plastics also undermines children's rights to a safe climate: ocean plastics 'aggravate the climate emergency, [by] limit[ing] the ability of oceans to remove greenhouse gases from the atmosphere,[123] and climate change harms the poorest and most vulnerable children first (poor children, minorities, migrant children, and children with disabilities),[124] hardest and longest as, during childhood, alterations to the social and physical environment can have far-reaching implications for children's long-term physical and mental health and overall quality of life.[125]

While COP26 did not make a commitment on phasing out oil and gas production, the *Glasgow Climate Pact* does include a reference to "phasing-out of inefficient fossil fuel subsidies." This is relevant for the ocean, as the production of fossil fuel is linked to the production of plastic, much of which ends up contributing to ocean plastic pollution, as recently highlighted by the UN Special Rapporteur on Toxics. The Rapporteur emphasized that because plastics recycling is only available for less than 10% of plastics produced, and plastics landfilling and incineration further contribute to pollution and negative health impacts, efforts need to prioritize limiting the production of plastic, much of which is made from oil and gas. Preventing plastic from being produced and entering into the ocean would also have additional benefits for climate change mitigation, as ocean plastics negatively impact on marine systems (mangroves, seagrasses, corals and salt marshes) that sequester carbon.

We thus argue that in consideration of the impacts of ocean plastics on children's rights, States must:

i. Make a firm and urgent commitment to phasing out fossil fuel extraction and plastic production, to effectively prevent children's exposure to ocean plastics,[126] as well as to protect marine biodiversity from marine plastics,[127] as part of states' obligation to prevent public and practice

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[117] Hauke Kite-Powell et al., 'Linking the oceans to public health: current efforts and future directions' 7 *Environmental health* (2008) S6, 9; Michael N Moore et al., *Linking Oceans and Human Health: A Strategic Research Priority for Europe*, European Marine Board Position Paper 19, (2013), 49; Josep Lloret et al., 'Challenging the links between seafood and human health in the context of global change' 96 Journal of the Marine Biological Association of the United Kingdom (2016) 29.

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[119] Marine I Severin et al., '

[120] Antonio Ragusa et al., 'Plasticenta: First Evidence of Microplastics in Human Placenta' 146 *Environment International* 106274; See also Sweeney and Morgera (n 34).

[121] Madeline Smith et al., 'Microplastics in Seafood and the Implications for human health' 5 *Current Environmental Health Reports* 375–386.

[122] Ibid.; Okunola A Alabi et al., 'Public and environmental health effects of plastic wastes disposal: A review' 5 *Journal of Toxicology and Risk Assessment* (2019) 21.

[123] A/76/207, para 10.

[124] UN Doc A/HRC/35/13.

[125] UNICEF, *Unless we act now: The impact of climate change on children* (UNICEF, 2015).

[126] Drawing on UN Doc A/HRC/48/61, para 10.

[127] Graham Hamley, "An overview of State obligations towards Marine Biodiversity under the Right to Health", One Ocean Hub blog post, 27 January 2021, https://oneoceanhub.org/an-overview-of-state-obligations-towards-marine-biodiversity-under-the-right-to-health/

actors from diminishing the natural resources available to children (and other human rights holders) who depend on them for the protection of their basic human rights,[128]

ii. phase out all fossil fuel subsidies, which can contribute to mobilize financial resources for the next recommendation;

iii. use "maximum available resources,"[129] including not only financial resources, but also human, technological, organisational, natural and information resources, to prevent the negative impacts of ocean plastics on children's human rights.

3.1.4 Climate adaptation and finance

Perhaps the greatest area of potential transformative change in the international climate change regime for the ocean and children's human rights is climate finance, which could also support the integration of ocean-based adaptation for children's rights as part of the Glasgow-Sharm el-Sheikh work programme for the Global Goal on Adaptation, which was adopted at COP26 to help improve over the 2022-2024 assessment of progress in adaptation through regular workshops and work on methodologies. In that connection, the Children's Environmental Rights Initiative has underscored that:

> "consideration should be given to opportunities to quantify the financial needs for and measure existing financial flows going to the protection and promotion of children's rights in climate action. This includes consideration of the significant adaptation costs of social sectors on which children depend and which are not currently factored into estimates of adaptation costs."[130]

At COP26 (2021), States committed to: doubling adaptation finance; keeping the $100 billion goal on the agenda until 2027 (bearing in mind this was supposed to be reached in 2020); and establishing a work programme to deliberate on the new finance goal.[131] No explicit reference was made to the ocean, and it remains unclear whether climate finance efforts will remain focused preponderantly on land. In theory, the climate-ocean nexus can be addressed on the basis of the more generic reference to ensuring co-benefits for climate finance, but the COP26 decision on "matters related to the Committee on Finance" (para 69) notes that: "Overall, the needs identified by developing countries touch on all SDGs, with 75 per cent of NDCs having linkages to SDGs 2, 6, 7, 8, 9, 11, 12, 13, 15 and 17." It is thus notable that SDG 14 is not listed there. This is particularly worrying because at the moment only 2% of Green Climate Fund investments are directed to ocean-related activities and less than 20% of ODA is addressed to ocean-related issues.

The 2022 report by the UN Special Rapporteur on Climate Change and Human Rights indicated the 'funding gap' on loss and damage, noting that while some States had pledged funding for loss and damage, these simply do not go far enough (paras. 67–72). At COP26, the lowest level of financing for SDG14 (life below water) among all SDGs was underscored several times, with many within the ocean science and policy community arguing for linking climate finance and ocean finance.

Based on the current understanding of the gaps in ocean science and their relevance for the protection of ocean-dependent children's rights discussed above, we have argued that climate finance should prioritize:

i. scaled-up research to the ocean-basin and regional scale, to develop and design monitoring tools, as well as appropriate mitigation and adaptation strategies that give due consideration to children's' rights;

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[128] E. Robertson Robert, 'Measuring State Compliance with the Obligation to Devote the "Maximum Available Resources" to Realizing Economic, Social, and Cultural Rights' (1994) 16 Human rights quarterly 693, p. 708

[129] ICESCR, Article 2(1)

[130] Children Environmental Rights Initiative, "Incorporating Child Rights into Climate Action: Developing climate action that protects children's rights will ensure a safe future for all" (November 2022).

[131] See Earth Negotiations Bulletin, *Glasgow Climate Change Conference: 31 October – 13 November 2021* (IISD, 2021) available at: https://enb.iisd.org/sites/default/files/2021-11/enb12793e_1.pdf.

ii. transdisciplinary ocean research (across the marine and social sciences and the arts) which respectfully includes indigenous and local knowledge holders, and children in the co-identification of ocean-based action; and
iii. ocean-based action that supports the protection of children's human rights (referring to the forthcoming UN Committee on the Rights of the Child's forthcoming General Comment on children's rights to a healthy environment, with a special focus on climate change).[132]

How to fill the finance gap can take several forms. UN Secretary General António Guterres called for a windfall tax on fossil fuel companies and the diverting of these monies to predominantly developing countries suffering loss and damage to be invested in early warning systems, mopping up from disasters and other initiatives to build resilience.[133] UN Special Rapporteur on Human Rights and the Environment David Boyd has advocated for phasing out all environmentally harmful subsidies, with a view to reinvesting them in the least-funded SDG, as a matter of international human rights obligations including those arising from the human right to a healthy environment.[134] The implementation of the recent WTO Agreement on Fisheries Subsidies clearly provide an immediate opportunity to divest towards human rights-based (including children's rights based) ocean-climate action.[135]

4. Conclusion

Since it will serve as an authoritative guide on how children's human rights are impacted by multiple environmental crises (climate, biodiversity, toxics), the initiative taken by the UN Committee on the Rights of the Child to develop General Comment No. 26 presents a golden opportunity to clarify the relevance and applicability of the existing international obligations on children's human rights at the climate-ocean nexus, thereby illustrating the detailed legal content of intergenerational equity under the international climate change legal framework.

Based on the scientific and legal arguments discussed in this article, the General Comment No 26 should be used to guide decisions on climate change mitigation, adaptation and finance, as well as on the sustainable use and the protection of the ocean, with a view to preventing potential negative impacts on the human rights of children, including by ensuring children's participation in the decision-making processes.[136] The General Comment No 26 could thus support UNFCCC and Paris Agreement State parties by providing specific legal standards for participatory decision-making processes for inter-generational equity, as well as substantive standards to protect children's human rights at stake. Both procedural and substantive dimensions of inter-generational equity are clearly needed for the imminent decisions on ocean-based climate action.

[132] Morgera, E. and Lennan, M (2022), 'Ocean-Based Climate Action and Human Rights", One Ocean Hub poster for the Bonn Climate Conference, May 2022; and Children Environmental Rights Initiative, "Incorporating Child Rights into Climate Action: Developing climate action that protects children's rights will ensure a safe future for all" (November 2022).

[133] https://www.theguardian.com/world/2022/sep/20/un-secretary-general-tax-fossil-fuel-companies-climate-crisis.

[134] Boyd, David (2022), 'The Human Right to a Clean, Healthy and Sustainable Environment: A Catalyst for Accelerated Action to Achieve the Sustainable Development Goals' UN Doc A/77/284 (10 August 2022).

[135] Switzer, Morgera and Webster, "Casting the net wider? The transformative potential of integrating human rights into the implementation of the WTO Agreement on Fisheries Subsidies" (2022) RECIEL

[136] Morgera and Strand (n 4).