

**International Court of Justice
Obligations of States in respect of Climate Change (Request
for Advisory Opinion)**

Legal note by the One Ocean Hub

(22 March 2024)

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Introduction

Scope and Content of the Submission

1. The One Ocean Hub¹ (the Hub) is an international programme of research for sustainable development, working to promote fair and inclusive decision-making for a healthy ocean whereby people and planet flourish. The One Ocean Hub aims to transform our response to the urgent challenges facing our ocean and influence decisions and practices that shape the future of the ocean by promoting sustainability and justice. Our research seeks to bridge current disconnections in law, science and policy and integrate governance frameworks to balance multiple ocean uses with conservation. We strive to empower communities – especially women and children – most reliant upon the oceans to inform decisions based on multiple values and knowledge systems. The Hub brings together ocean-dependent people and communities, researchers, decisionmakers, civil society, and international organisations to value, and learn from, different knowledge systems and voices. The Hub comprises over 100 researchers who specifically address challenges and opportunities in South Africa, Namibia, Ghana, Fiji and Solomon Islands, and includes researchers from those States as well as researchers from universities in the United Kingdom, and the two regional universities of the West Indies and the South Pacific. The Hub also includes 19 project partners, among which are various UN bodies, such as the UN Division on Ocean Affairs and the Law of the Sea, the UN Environment Programme, the Food and Agriculture Organization, and the Intergovernmental Oceanographic Commission of UNESCO. Our legal research is grounded in mutually supportive interpretation of international biodiversity law and international human rights law, the law of the sea and international climate change law.

¹ The One Ocean Hub is a collaborative research programme for sustainable development project funded by UK Research and Innovation (UKRI) through the Global Challenges Research Fund (GCRF) (Grant Ref: NE/S008950/1). <https://oneoceanhub.org/>. All links in this document were last accessed on 15/03/2024.

2. In its Resolution 77/276 of 29th March 2023,² the United Nations General Assembly (UNGA) submitted a Request for an Advisory Opinion (Request) to the International Court of Justice (ICJ). The Request is as follows:

“Having particular regard to the Charter of the United Nations, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, the United Nations Framework Convention on Climate Change, the Paris Agreement, the United Nations Convention on the Law of the Sea, the duty of due diligence, the rights recognized in the Universal Declaration of Human Rights, the principle of prevention of significant harm to the environment and the duty to protect and preserve the marine environment,

(a) What are the obligations of States under international law to ensure the protection of the climate system and other parts of the environment from anthropogenic emissions of greenhouse gases for States and for present and future generations?

(b) What are the legal consequences under these obligations for States where they, by their acts and omissions, have caused significant harm to the climate system and other parts of the environment, with respect to:

- (i) States, including, in particular, small island developing States, which due to their geographical circumstances and level of development, are injured or specially affected by or are particularly vulnerable to the adverse effects of climate change?
- (ii) Peoples and individuals of the present and future generations affected by the adverse effects of climate change?”

The present legal note addresses question (a) of the Request. In doing so, the note will also refer to some of the concepts mentioned in Question (b), notably: “people

² United Nations General Assembly (UNGA) Resolution 77/276, “Request for an advisory Opinion of the International Court of Justice on the obligations of States in respect of climate change”, A/RES/77/276 (29 March 2023).

and individuals of the present and future generations”³ and Small Island Developing States.⁴

3. States’ obligations to ensure the protection of the “climate system and other parts of the environment from anthropogenic emissions of greenhouse gases” must be understood in the light of the interconnectivity of the climate system, which comprises “the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions”.⁵ This explains, as we will discuss in this note, the need to interpret and apply States’ obligations through systemic integration across different areas of international environmental law, the law of the sea and international human rights law.⁶ This interpretive approach finds confirmation in the numerous international law instruments expressly mentioned in both the UNGA Resolution recitals,⁷ and in the text of the Request.⁸
4. Against this background, the present legal note is structured as follows. Section I introduces the concept of the ‘ocean-climate nexus’ and presents the scientific evidence which supports our legal arguments. It then explains the relevance of a range of treaties to be interpreted in a mutually supportive manner to answer the Request. Section II argues that international biodiversity law already gives due consideration to the interconnectivity between the climate system and other parts of the environment. It highlights the interlinkages between the treaties introduced in

³ Ibid., Question b), letter (ii) of the Request.

⁴ Ibid., Question b), letter (i) of the Request.

⁵ Article 1(3) of the United Nations Framework Convention on Climate Change [UNFCCC], adopted in New York on 9 May 1992 and entered into force on 21 March 1994, 1771 United Nations Treaty Series, at 107.

⁶ In this regard, see International Law Commission (ILC) Guideline 9 on the 2021 Draft Guidelines on the Protection of Atmosphere, adopted by the International Law Commission at its seventy-second session (A/76/10, para. 39): “The rules of international law relating to the protection of the atmosphere and other relevant rules of international law, including, inter alia, the rules of international trade and investment law, of the law of the sea and of international human rights law, should, to the extent possible, be identified, interpreted and applied in order to give rise to a single set of compatible obligations, in line with the principles of harmonization and systemic integration, and with a view to avoiding conflicts. This should be done in accordance with the relevant rules set forth in the Vienna Convention on the Law of Treaties, including articles 30 and 31, paragraph 3 (c), and the principles and rules of customary international law.”

⁷ UNGA Resolution (n 2), recitals no. 5 and 6, at 1-2.

⁸ Ibid., at 3.

An artistic illustration of an underwater scene. In the upper left, a shark swims towards the right. In the upper right, a large whale with a spotted pattern on its side swims towards the left. In the center and lower right, a school of small fish swims. The background is a deep blue with some lighter blue patches, suggesting an underwater environment. The text 'ONE OCEAN HUB' is overlaid on the top left in white, bold, sans-serif font.

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Section I, underscores progress already made under international biodiversity law to clarify State obligations on climate change and the law of the sea. This section specifically provides guidance on the obligations under each regime (biodiversity, climate change, the law of the sea) and on the specific measures to be implemented to ensure compliance with them. Section III clarifies the interdependencies of the “climate system and of other parts of the environment” with human rights, clarifying which obligations under international human rights law are relevant to protecting the climate system and the environment.

Section 1. The Interconnected Nature of the Climate System and the Need for a Mutually Supportive Interpretation of States' Obligations to Ensure its Protection

A) Science on the ocean-climate nexus

5. The 'ocean-climate nexus' is understood as the role that the ocean and its biodiversity play in regulating the global climate through the absorption of excess heat, carbon dioxide (CO₂) and other GHGs from the atmosphere. This illustrates, from a physical science basis, the interdependence and interconnectivity between the climate system and the global ocean since the ocean and its biodiversity cycle and store carbon. As above, the ocean itself is recognised under the UN Climate treaties as a component of the climate system. The following scientific findings from the Intergovernmental Panel on Climate Change (IPCC), who have been assessing the relevant science on the ocean-climate nexus since the 1990s,⁹ and other sources, should be kept in mind:

- The ocean has warmed unabated since 1970 and absorbed over 90% of the excess heat in the climate system. The rate of ocean warming has more than doubled since 1993;¹⁰
- The top few metres of the ocean store as much heat as the Earth's entire atmosphere;¹¹
- If the lower 10 kilometres of the atmosphere had taken up the same amount of heat as the ocean from 1971–2010, the planet would have warmed by 36°C;¹²
- The ocean is a sink for approximately a quarter of anthropogenic CO₂¹³ with dissolved organic carbon equating to approximately 200 times that of marine

⁹ Intergovernmental Panel on Climate Change (IPCC), 'Potential Impact of Climate Change' Policymaker Summary of Working Group II (IPCC, 1990) 8, available at https://www.ipcc.ch/site/assets/uploads/2018/05/ipcc_90_92_assessments_far_wg_ii_spm.pdf.

¹⁰ Intergovernmental Panel on Climate Change (IPCC), The Ocean and Cryosphere in a Changing Climate: Special Report of the Intergovernmental Panel on Climate Change (CUP, 2022) Summary for Policymakers A2.

¹¹ NASA, 'Ocean Warming', Global Climate Change – Vital Signs of the Planet (December 2022), available at <https://climate.nasa.gov/vital-signs/ocean-warming/>.

¹² F Whitmarsh et al., "Ocean Heat Uptake and the Global Surface Temperature Record" (2015) Grantham Institute Briefing Paper No 14, Imperial College London (September 2015), available at <https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/Ocean-heat-uptake---Grantham-BP-15.pdf>.

¹³ IPCC (n 10) 19, 450–455.

biomass,¹⁴ and phytoplankton being responsible for approximately 50% of global primary production of organic matter;¹⁵

- Fish and other marine organisms are key players in the global carbon cycle, because they sequester organic carbon as they die, sink and decompose at depth.¹⁶
- Carbon stored in bottom waters or sediments of the deep sea is considered to be removed from the atmosphere for millions of years,¹⁷ so activities that disturb the deep seabed could release significant amounts of carbon.

6. Therefore, protecting and restoring ocean habitats has the potential to sequester huge volumes of CO₂ from the atmosphere. Coastal marine environments are of crucial importance in this context and are understood as “blue carbon” ecosystems which absorb and store CO₂. Examples of blue carbon ecosystems include tidal marshes, seagrass beds, and mangroves. These take up CO₂ at a rate up to two times faster and store it for longer periods than terrestrial forests per unit area, both in the plants themselves but also in the sediments below them.¹⁸ These ecosystems contribute to over 50% of all the blue carbon on Earth, despite covering a tiny fraction (0.2%) of the ocean and coastal area.¹⁹ The role of blue carbon ecosystems in climate mitigation is a growing area of interest for both researchers and states.²⁰ Crucially, it is both the physical ocean as a body of water *and* its biodiversity that play vital roles in the regulation of the climate.²¹

¹⁴ A Worden et al., “Rethinking the Marine Carbon Cycle: Factoring in the Multifarious Lifestyles of Microbes” (2015) 347 *Science* 735.

¹⁵ N Hilmi et al., “The Role of Blue Carbon in Climate Change Mitigation and Carbon Stock Conservation” (2021) 3 *Frontiers in Climate* 710546.

¹⁶ G Mariani et al., “Let More Big Fish Sink: Fisheries Prevent Blue Carbon Sequestration—Half in Unprofitable Areas” (2020) 6 *Science Advances* eabb4848.

¹⁷ Synchronicity Earth – Insight: “High and Deep Seas” (February 2018), available at <https://www.synchronicityearth.org/wp-content/uploads/2018/02/Synchronicity-Earth-High-Deep-Seas-Insight.pdf>.

¹⁸ United Nations, *The Second World Ocean Assessment Volume I* (UN 2021) at 360.

¹⁹ *Ibid.*

²⁰ See UNGA Resolution 72/75, “Oceans and the law of the sea” UN Doc A/RES/72/73 (5 December 2017), para. 197; S Lutz, “Why Protect Ocean Biodiversity”, presentation for the webinar series ‘Policy Lates’ 2021, Royal Society of Biology (2021) available at <https://www.youtube.com/watch?v=aZG5butO7CM&t=3s>.

²¹ E Morgera and M Lennan, “Ensuring Mutual Supportiveness of the Paris Agreement with other Multilateral Environmental Agreements: A Focus on Ocean-Based Climate Action” in A Zahar (ed.),

7. Despite the vital role the ocean plays in the regulation of the global climate, climate change is modifying the physical and chemical properties of the global ocean through warming, acidification, deoxygenation, and loss of sea ice.²² These climate change-induced impacts are well documented,²³ and are a primary cause of unprecedented biodiversity and habitat loss and, consequentially, a loss in productivity of ecosystems and the essential services they provide.²⁴ For example, climate change is causing changes in the abundance, migratory patterns, and distribution of fish and other marine species, as well as negative effects on their fertility, weight and body size.²⁵ On top of negatively affecting the important role of healthy fish populations as carbon sinks,²⁶ this undermines fisheries conservation and management measures and also limits access to relatively cheap and accessible fish and seafood on which billions of people rely.²⁷ The price and demand of many commercially important fish species are determined in part by weight and body size, and therefore climate change impacts can reduce economic revenues for communities that are reliant economically on seafood.²⁸ In addition,

Research Handbook on the Law of the Paris Agreement (Edward Elgar, forthcoming 2024); currently available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4482946.

²² IPCC (n 10) chapter 5 “Changing Ocean, Marine Ecosystems, and Dependent Communities”, 447, at 456.

²³ *Ibid.*

²⁴ S Diaz et al., (eds.), *Summary for policy-makers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services* (IPBES, 2019).

²⁵ M Barange et al., “Impacts of Climate Change on Fisheries and Aquaculture: Synthesis of Current Knowledge, Adaptation and Mitigation Options”, *Food and Agricultural Organisation – Fisheries and Aquaculture Technical Paper* 627 (2018).

²⁶ D Bianchi et al., “Estimating Global Biomass and Biogeochemical Cycling of Marine Fish with and without Fishing” (2021) 7 *Science Advances* eabd7554.

²⁷ Food and Agriculture Organization of the United Nations (FAO), *The State of World Fisheries and Agriculture 2022* (2022), available at <https://www.fao.org/publications/home/fao-flagship-publications/the-state-of-world-fisheries-and-aquaculture/2022/en>; See also Morgera and Lennan (n 21) at 3.

²⁸ See for example M Erauskin-Extramiana et al., “Implications for the Global Tuna Fishing Industry of Climate Change-Driven Alterations in Productivity and Body Sizes” (2023) 222 *Global and Planetary Change* 104055.

loss of current or future access to traditional food negatively impacts the rights to health, food and culture.²⁹

8. It is therefore essential to consider the full interconnected range of marine ecosystem services (including deep-sea ecosystem services) that are negatively impacted by climate change (food and water supply, renewable energy, benefits for health and well-being, cultural values, tourism, trade, and transport). There is sufficient scientific knowledge to identify and avoid “foreseeable negative impacts on human rights”³⁰ that can arise from decisions that may negatively affect marine biodiversity, as marine ecosystem services affected by climate change are essential for various dimensions of human well-being, which are protected as international human rights.³¹

B) The Principle of Systemic Integration and Mutually Supportive Interpretation

10. International legal rules must be interpreted and applied in the context of “the entire legal system prevailing at the time of the interpretation”.³² This fundamental principle of treaty interpretation,³³ is understood as “systemic integration”.³⁴ Mutual

²⁹ This paragraph draws on E Morgera and M Lennan, “Strengthening Intergenerational Equity at the Ocean-Climate Nexus: Reflections on the UNCRC General Comment No. 26” (2022) 52 *Environmental Policy and Law* 445, at 449; and Lennan and Morgera (n 27).

³⁰ Human Rights Council (HRC), “Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Framework Principles on Human Rights and the Environment” [*Framework Principles on Human Rights and the Environment*], A/HRC/37/59 (24 January 2018). See also HRC, “Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment”, A/HRC/34/49 (19 January 2017), para. 34.

³¹ E Morgera et al., “Ocean-based Climate Action and Human Rights Implications under the International Climate Change Regime” (2023) 38 *International Journal of Marine and Coastal Law* 411.

³² *Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970)*, Advisory Opinion, ICJ Reports 1971, at 16, para. 53.

³³ Article 31(3)(c) Vienna Convention on the Law of Treaties [VCLT], adopted in Vienna on 23 May 1969 and entered into force on 27 January 1980, 1155 United Nations Treaty Series, at 331.

³⁴ See, amongst others, C McLachlan, “The Principle of Systemic Integration and Article 31(3)(c) of the Vienna Convention on the Law of Treaties” (2008) 4 *International Comparative Law Quarterly* 279. The principle of systemic integration was reiterated by the ICJ and by other international courts or dispute settlement bodies on several occasions: amongst many, see *Case Concerning Oil Platforms (Islamic Republic of Iran v United States of America)*, Judgment, ICJ Reports 2003, at 161, para. 41. Cfr.

supportiveness directly stems from this principle, and has been characterised as an “interpretative tool”³⁵ to prevent and solve normative conflicts,³⁶ or to foster and strengthen synergies amongst different regimes of international law.³⁷ It has been argued that systemic interpretations can more effectively respond to the complex and multifaceted nature of global challenges such as climate change and biodiversity loss,³⁸ helping fulfil the core objects and purposes of all relevant international regimes.³⁹ For instance, the Human Rights Committee (HRCttee) relied upon mutual supportiveness when establishing Australia’s responsibility for the violation of the applicants’ human rights to private and family life and to culture⁴⁰ in relation to its failure to timely adopt climate change adaptation measures against foreseeable and serious adverse impacts.⁴¹ Accordingly, a mutually supportive interpretation must be given due consideration when it comes to interpreting and applying States’ obligations to ensure the protection of the climate system and of

European Court of Human Rights (ECtHR), *Loizidou v Turkey (Judgement on the Merits)* App. No. 15318/89, 18 December 1996, para. 43; *United States—Import Prohibition of Certain Shrimp and Shrimp Products* [12 October 1998] (WTO Appellate Body) WT/DS58/AB/R paras 130-134; *China—Measures related to the Exportation of Various Raw Materials* [5 July 2011] (WTO Panel) WT/DS394/R WT/DS395/R WT/DS398/R para. 7.364.

³⁵ R Pavoni “Mutual Supportiveness as a Principle of Interpretation and Law-Making: A Watershed for the ‘WTO-and-Competing-Regimes’ Debate?” (2010) 21 *European Journal of International Law* 649, at 650. See also ILC, “Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law” (13 April 2006) UN Doc A/CN.4/L.682, para. 412 [ILC, *Report on Fragmentation*].

³⁶ N Matz-Luck, “Harmonization, Systemic Integration, and Mutual Supportiveness as Conflict-Solution Techniques: Different Modes of Interpretation as a Challenge to Negative Effects of Fragmentation” (2006) 17 *Finnish Yearbook of International Law* 39, at 43.

³⁷ See P-M Dupuy and JE Viñuales, *International Environmental Law* (CUP, 2015), at 393, citing R Pavoni (n 35 **Error! Bookmark not defined.**), at 654-5.

³⁸ MA Young (ed.), *Saving Fish Trading Fish: The Interaction between Regimes in International Law*, (CUP, 2011), at 3-5.

³⁹ ILC, *Report on Fragmentation* (n 35).

⁴⁰ Respectively under Articles 17 and 27 of the International Covenant on Civil and Political Rights [ICCPR], adopted in New York on 16 December 1966 and entered into force on 23 May 1976, 999 United Nations Treaty Series, p. 171. In particular, see Human Rights Committee (HRCttee), Views adopted under article 5 (4) of the Optional Protocol, concerning communication No. 3624/2019, UN Doc CCPR/C/135/D/3624/2019 (2022) [*Torres Strait Islands case*], paras. 8.12 and 8.14.

⁴¹ *Ibid.*, *Torres Strait Islands case*. In addition, in its 2019 General Comment 36 on the right to life, the HRCttee held that “Obligations of States parties under international environmental law should thus inform the content of article 6 of the Covenant, and the obligations of States parties to respect and ensure the right to life should also inform their relevant obligations under international environmental law”. HRCttee, General Comment 36 on Article 6 (the Right to Life), CCPR/C/GC/36 (3 September 2019), para. 62.

other parts of the environment, since it clarifies and reinforces the content and scope of such obligations, especially where States are left with a significant degree of discretion as to the means of implementation.⁴²

11. The reference to “climate system and other parts of the environment” in the UNGA Resolution requesting an Advisory Opinion from the Court does not limit the Court’s identification of the applicable law to the climate change regime, but rather allows consideration also of international biodiversity law, the law of the sea, international human rights law and international environmental law on issues such as desertification and land degradation, which are critical considerations for Small Island Developing States (SIDS). The request refers to multiple international law instruments and principles.⁴³ Significantly, this list has an illustrative character.⁴⁴
12. Since the ocean is recognised as an integral part of the climate system, we submit that the ICJ must give careful considerations, in addition to the United Nations Framework Convention on Climate Change (UNFCCC)⁴⁵ and the Paris Agreement,⁴⁶ to the following instruments and principles:
 - i. the Convention on Biological Diversity (CBD),⁴⁷ the 196 States Parties to which have already agreed on mutually supportive interpretations across international law instruments on climate change, the sea, and human rights, grounded in the ecosystem approach. The CBD is particularly important for

⁴² E Morgera and M Lennan (n 21).

⁴³ See generally UNGA Resolution (n 2).

⁴⁴ The request states “having *particular* regard to”, followed by a list of instruments. UNGA Resolution 77/276 (n 2), at 3.

⁴⁵ UNFCCC (n 5).

⁴⁶ Paris Agreement, adopted in Paris on 12 December 2015 and entered into force on 4 November 2016, 3156 United Nations Treaty Series, p. 79.

⁴⁷ Convention on Biological Diversity [CBD], adopted in Rio de Janeiro on 5 June 1992 and entered into force on 29 December 1993, 1760 United Nations Treaty Series, 79.

- developing and Small Island Developing States,⁴⁸ who host biodiversity hotspots⁴⁹ that are critical to both climate mitigation and adaptation;
- ii. the United Nations Convention on the Law of the Sea (UNCLOS),⁵⁰ and the Agreement on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ Agreement),⁵¹ which – albeit not yet in force – provides evidence of the progressive development of the international law of the sea in a mutually supportive way with international law on biodiversity, climate change and human rights;⁵²
 - iii. the United Nations Convention to Combat Desertification (UNCCD),⁵³ a critical instrument for SIDS because of their small size and interconnected

⁴⁸ For further information, see Conservation International official webpage at <https://www.conservation.org/priorities/biodiversity-hotspots>; see also the Critical Ecosystem Partnership Fund official webpage at <https://www.cepf.net/our-work/biodiversity-hotspots/hotspots-defined>.

⁴⁹ N Myers et al., “Biodiversity Hotspots for Conservation Priorities” (2000) 403 (6772) *Nature* 853; N Myers, “Biodiversity Hotspots Revisited” (2003) 53 *BioScience* 916.

⁵⁰ United Nations Convention on the Law of the Sea [UNCLOS], adopted in Montego Bay on 10 December 1982 and entered into force on 16 November 1994, 1834 United Nations Treaty Series, 397.

⁵¹ Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction [BBNJ Agreement], UN Doc A/CONF.232/2023/4 (19 June 2023, not yet in force).

⁵² The role of the BBNJ Agreement will be especially important within the context of fisheries, an important industry in SIDS, which is threatened by distant water fishing, especially in light of the recent developments under the World Trade Organization (WTO) on harmful fisheries subsidies, the Global Biodiversity Framework (GBF) adopted under the CBD, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the outcomes of the climate COP 26 and COP 27, which have for the first time included references to the ocean. Straddling and highly migratory stocks such as tunas, are critical to the economy of Caribbean and Pacific SIDS, and it has been suggested that the Agreement is a valuable context through which to pursue climate change action. In this regard, see WCG Burns “Potential Causes of Action for Climate Change Impacts Under the United Nations Fish Stocks Agreement” (2007) 2 *Sustainable Development Law and Policy* 34, at 81-82. However, the 1995 Straddling Stocks Agreement which is meant to address conservation of stocks under Articles 63(1), 63(2) and 64 of the UNCLOS, has seen lackluster support by SIDS for a plethora of reasons, which have been underscored by the Review Conference as recently as 2023. See Report of the Resumed Review Conference on the 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, A/CONF.210/2023/6 (20 June 2023).

⁵³ Convention Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa [UNCCD], adopted in Paris on 14 October 1994 and entered into force on 26 December 1996, 1945 United Nations Treaty Series, p. 3.

- ridge-to-reef nature, to address the inextricable links between climate change, desertification, and loss of biodiversity;⁵⁴
- iv. the International Covenant on Civil and Political Rights (ICCPR)⁵⁵ and the International Covenant on Economic, Social and Cultural Rights (ICESCR);⁵⁶
 - v. the UN Convention on the Rights of the Child (UNCRC), which provides obligations on States to effectively protect the substantive and procedural rights of children and future generations, and has recently been authoritatively interpreted with regard to climate change;⁵⁷ and
 - vi. the precautionary principle and the principle of intergenerational equity, which provide further guidance on the protection and empowerment of children and future generations. Both are enshrined in several of the above-mentioned instruments.⁵⁸

13. Mutually supportive interpretation is envisaged under some of the provisions in the above-mentioned instruments and principles. For instance, the UNCLOS contains numerous rules of reference expressly calling for the incorporation of rules and standards from other external instruments into the law of the sea.⁵⁹ Likewise,

⁵⁴ The Convention addresses the twin issues of combatting desertification and mitigating the impacts of drought, and ahead of COP 28, the three Presidents of the COPs have called for a “... a coordinated approach both at international and national levels to tackle these issues in a holistic way...” See the official UNCCD Press Release of November 6th, 2023, available at <https://www.unccd.int/news-stories/press-releases/presidents-three-cops-call-united-approach-climate-change>.

⁵⁵ ICCPR (n 40).

⁵⁶ International Covenant on Economic, Social and Cultural Rights [ICESCR], adopted in New York on 16 December 1966 and entered into force on 23 May 1976, 993 United Nations Treaty Series, p. 3.

⁵⁷ United Nations Convention on the Rights of the Child [UNCRC], adopted in New York on 20 November 1989 and entered into force on 2 September 1990) 1577 United Nations Treaty Series, p. 3; and CteeRC, “General comment No. 26 (2023) on children’s rights and the environment, with a special focus on climate change”, CRC/C/GC/26 (22 August 2023).

⁵⁸ As far as it concerns the precautionary principle, the CBD preamble recalls the wording of Principle 15 of the Rio Declaration, and so does the UNCLOS in its definition of “pollution” under Article 1(1)(4) read in conjunction with Article 192 UNCLOS, as well as in Article 206 on Environmental Impact Assessments. For the latter interpretation, see A Proelss, “The Contribution of the ITLOS to Strengthening the Regime for the Protection of the Marine Environment”, in A Del Vecchio, R Virzo (eds.), *Interpretations of the United Nations Convention on the Law of the Sea by International Courts and Tribunals* (Springer, 2019) 93, at 95-96. See also the multiple references to it in the BBNJ Agreement, including in Article 7(e) on the general principles and approaches underlying the entire Agreement.

⁵⁹ By way of example, UNCLOS Parts V and VII on the conservation of marine living resources in the exclusive economic zone and in the high seas contain references to “generally recommended

UNCLOS also contains rules on coordination with other instruments,⁶⁰ which favour the interpretation of the Convention in a mutually supportive manner with other rules and treaties within the broader system of international law. The Convention's nature as a 'living' instrument is closely linked with its nature as a 'framework' instrument⁶¹ that coordinates with 'all other agreements dealing with particular sources of marine pollution or applicable to specific areas of ocean space'.⁶² This further constitutional aspect of UNCLOS is clearly reflected in the special compatibility clause contained in Article 237,⁶³ which adopts 'an approach of openness and complementarity' to existing and future legal regimes related to the protection and preservation of the marine environment.⁶⁴ On the one hand, Article 237 safeguards the existence of a common standard of marine environmental protection by prioritising the general principles and objectives of the Convention.⁶⁵

international minimum standards" – e.g. Articles 61(3) and 119(1)(a) UNCLOS; also, Part XII on the protection and preservation of the marine environment provides multiple references to "generally accepted international rules and standards" – e.g. Articles 211(2) and 226(1)(a) UNCLOS – or to "internationally agreed rules, standard and recommended practices and procedures" – e.g., Articles 207(1) and 212(1) UNCLOS.

⁶⁰ See the general compatibility clause under Article 311 UNCLOS and the special one applying to Part XII on the protection and preservation of the marine environment laid down in Article 237 UNCLOS.

⁶¹ J Harrison, *Saving the Oceans Through Law: The International Legal Framework for the Protection of the Marine Environment* (CUP, 2011); R Roland Holst, *Change in the Law of the Sea: Context, Mechanisms and Practice* (Brill Nijhoff, 2022); R Churchill, "The 1982 United Nations Convention on the Law of the Sea" in D Rothwell et al., (eds.), *The Oxford Handbook of the Law of the Sea* (OUP, 2016), 26.

⁶² A Yankov, "The Significance of the 1982 Convention on the Law of the Sea for the Protection of the Marine Environment and the Promotion of Marine Science and Technology" in BH Oxman and AW Koers (eds.), *The 1982 Convention on the Law of the Sea* (Law of the Sea Institute, 1984), 73.

⁶³ The general compatibility clause found in Article 311 does, however, remain relevant in the case of subsequent agreements that are not specifically concerned with the marine environment, such as the agreements forming part of the climate change regime: C Redgwell, "Treaty Evolution, Adaptation and Change: Is the LOSC 'Enough' to Address Climate Change Impacts on the Marine Environment?" (2019) 34 *International Journal of Marine and Coastal Law* 440, at 454-455. Such rules could still, however, be incorporated into the legal framework of UNCLOS as generally accepted international rules and standards by way of rules of reference.

⁶⁴ F Romanin Jacur, "Formalism and Law-Making in Treaty-Based Ocean Governance: Limits and Challenges" in S Trevisanut et al., (eds.), *Regime Interaction in Ocean Governance Problems, Theories and Methods* (Brill | Nijhoff, 2020), 171.

⁶⁵ Indeed, there exist numerous multilateral and bilateral environmental agreements that acknowledge that their provisions are to be interpreted and applied consistently with UNCLOS. Examples of the former are: International Maritime Organization (IMO) Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention), adopted in London on 29 December 1972 and entered into force on 30 August 1975, 1046 United Nations Treaty Series p. 120, Article XII; IMO

On the other, it provides a mechanism for normative interaction by allowing the integration of substantive provisions of other special environmental agreements within the overall framework of Part XII of UNCLOS⁶⁶ – a *conditio sine qua non* for the Convention’s continued relevance.

14. Lastly, it is worth clarifying at the outset⁶⁷ that marine biodiversity of areas beyond national jurisdiction also contributes to climate change mitigation.⁶⁸ It is, therefore, important to establish the extent to which the provisions of both the UNFCCC and the Paris Agreement apply to marine areas beyond national jurisdiction (ABNJ), such as the high seas and the Area.⁶⁹ We agree with Bodansky that, “[i]t is incorrectly assumed within the UN climate change community that a State’s [Nationally Determined Contribution] is territorially limited, and that States cannot claim credit under the climate change regime for mitigation and adaptation actions in areas beyond national jurisdiction.”⁷⁰ Further, there is no limitation under the UNFCCC where measures to mitigate climate change can occur,⁷¹ as this general formulation does not restrict this requirement to actions exclusively under national jurisdiction in any way. In addition, Parties are required to cooperate in the

International Convention for the prevention of pollution from ships, as modified by the Protocol of 1978 (MARPOL Convention 73/78), adopted in London on 17 February 1978, entered into force on 2 October 1983, 1340 United Nations Treaty Series p. 61, Article 9(2); Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), adopted in Washington, D.C., on 3 March 1974 and entered into force on 1 July 1975, 993 United Nations Treaty Series p. 243, Convention, Article XIV(6); Convention on the Conservation of Migratory Species of Wild Animals (CMS Convention), adopted in Bonn on 6 November 1979 and entered into force on 1 November 1983, 1651 United Nations Treaty Series p. 333, Article XII(1). See also Article 22(2) CBD.

⁶⁶ S Trevisanut et al., “Introduction: Regime Interaction in Ocean Governance” in S Trevisanut et al., (eds.), *Regime Interaction in Ocean Governance: Problems, Theories and Methods* (Brill | Nijhoff, 2020), 12. See also *South China Sea (Philippines v. China)*, PCA Case No. 2013-19, Award of 12 July 2016, para. 942.

⁶⁷ Morgera and Lennan (n 21 **Error! Bookmark not defined.**).

⁶⁸ E Morgera et al., “Addressing the Ocean-Climate Nexus in the BBNJ Agreement: Strategic Environmental Assessments, Human Rights and Equity in Ocean Science” (2023) 38 *International Journal of Marine and Coastal Law* 447.

⁶⁹ Parts VII and XI UNCLOS. The latter is further regulated by the 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, UNGA Resolution 48/263, A/RES/48/263 (17 August 1994).

⁷⁰ D Bodansky, “The Ocean and Climate Change Law Exploring the Relationships” in R Barnes and R Long (eds.), *Frontiers in International Environmental Law: Oceans and Climate Challenges* (Brill Nijhoff, 2021) 316, at 335.

⁷¹ Article 4.1(b) UNFCCC.

conservation and enhancement of the ocean and other coastal ecosystems.⁷² This point is particularly relevant in the context of blue carbon ecosystems which straddle two or more jurisdictions as a contiguous whole. Since the Paris Agreement does not prohibit extra-territorial mitigation, adaptation, or finance measures,⁷³ and considering the connectivity of the ocean and marine ecosystems,⁷⁴ and the global nature of the goals of the Paris Agreement, actions are not limited to the areas within the jurisdiction of any one Party. That said, it has been argued that clarifying that international climate law extends to ABNJ “might not have much immediate effect, since it is unclear what measures, if any, are feasible”.⁷⁵ However, the Paris Agreement must be read in the context of States’ obligations under other international treaties applicable to the marine environment, and the 2023 BBNJ Agreement creates new obligations and institutions relevant to climate change, as discussed below. In addition, the CBD is applicable to Parties’ “process and activities” in areas beyond national jurisdiction, and includes an obligation to “cooperate, directly or, where appropriate, through competent international organizations, in respect of areas beyond national jurisdiction”, “consistently with the rights and obligations of States under the law of the sea”.⁷⁶ “Process and activities” can be interpreted to include climate change response measures, as well as any other activity “under the jurisdiction of control” of a CBD Party that may interfere with the objectives of the CBD or “cause a serious damage or threat to biological diversity.”⁷⁷

Having presented the scientific evidence on the ‘ocean-climate nexus’ as a basis for a mutually supportive interpretation of the above-mentioned treaties, the next Section focuses on the progress already made under the CBD in advancing such mutually supportive interpretation of State obligations on climate change. The next section also provides guidance on the obligations under international law on biodiversity and

⁷² Article 4.1(e) UNFCCC.

⁷³ Although Parties wishing to implement extra-territorial mitigation measures under Article 6 Paris Agreement must get authorisation from that State, see Article 6(3) Paris Agreement.

⁷⁴ E Popova et al., “So Far, Yet So Close: Ecological Connectivity between ABNJ and Territorial Waters” (2019) International Institute for Environment and Development, Policy Brief available at <https://pubs.iied.org/17500iied>.

⁷⁵ Bodansky (n 70) at 335.

⁷⁶ Articles 4(b), 5 and 22(2) CBD.

⁷⁷ Articles 4(b) and 22(1) CBD.

An artistic illustration of an underwater scene. In the upper left, a shark swims towards the right. In the upper right, a large whale with a spotted pattern on its side swims towards the left. In the center and lower right, a school of small fish swims towards the right. The background is a deep blue with some lighter blue patches, suggesting an underwater environment. The text 'ONE OCEAN HUB' is overlaid on the top left of this illustration.

ONE OCEAN HUB

climate change, and the law of the sea and on the measures to be implemented to ensure compliance with them.

Section 2. International Biodiversity Law Gives due Consideration to the Inter-Connections Between the “Climate System and of Other Parts of the Environment”

15. The links between climate change and biodiversity degradation have long been ascertained.⁷⁸ The 196 Parties to the CBD have pointed out that biodiversity and ecosystem functions and services significantly contribute to climate change adaptation and mitigation, as well as to disaster reduction.⁷⁹ By the same token, climate change has been recognised not only as one of the four drivers of global biodiversity loss,⁸⁰ but also as a factor exacerbating the impact of other drivers, thereby resulting in an unprecedented rate of biodiversity degradation in the past 50 years and undermining the progress towards the achievement of the connected United Nations Sustainable Development Goals.⁸¹
16. The connection between climate change and biodiversity finds support also in the text of the international legal instruments laying down States’ obligations on both climate change adaptation and mitigation and on the conservation and sustainable use of biodiversity. On the one hand, the UNFCCC defines the “climate system” as “the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions”⁸² and considers its protection as its ultimate objective.⁸³ In a similar vein, the Paris Agreement is concerned with “the integrity of all ecosystems, including oceans and the protection of biodiversity”,⁸⁴ expressly recognises the relevance of adaptation measures in protecting livelihoods and ecosystems,⁸⁵ and further includes a reference to resilience of livelihoods, communities and ecosystems in relation to loss and damage.⁸⁶ Notably, the recently adopted BBNJ Agreement also includes a number of key provisions clarifying the link between climate change and the conservation and sustainable use of biodiversity and

⁷⁸ IPBES, (n 19).

⁷⁹ CBD Decision XIV/5, “Biodiversity and climate change”, CBD/COP/DEC/14/5 (30 November 2018), preamble.

⁸⁰ CBD and United Nations Environment Programme-World Conservation Monitoring Centre (UNEP-WCMC), Global Biodiversity Outlook 3, at 22 (2010).

⁸¹ IPBES, (n 19).

⁸² Article 1(3) UNFCCC.

⁸³ Article 2 UNFCCC.

⁸⁴ 13th preambulatory clause, Paris Agreement.

⁸⁵ Article 7 Paris Agreement.

⁸⁶ Article 8 Paris Agreement.

ecosystems.⁸⁷ Notwithstanding these treaty bases, Parties to the UNFCCC and to the Paris Agreement have not yet undertaken any meaningful action addressing the climate-biodiversity nexus.⁸⁸ Since negotiations for the UNFCCC were launched, there has been slow and insufficient consideration of the ocean-climate nexus under the UN climate change regime over the past 30 years. Even over the last three years, despite the inclusion of the ocean in the Glasgow Climate Pact⁸⁹ and in the Sharm el-Sheikh Implementation Plan,⁹⁰ and UAE Consensus,⁹¹ the priority actions identified at the ocean and climate dialogues since 2020 have not yet been operationalised fully through national action or internationally via inclusion in the Conference of the Parties (COP) Decisions.⁹²

17. The objectives of the CBD⁹³ are aligned with those of the UNFCCC and of the Paris Agreement,⁹⁴ insofar as they all address the protection of ecosystems, including marine and deep-sea ecosystems. In this regard, the CBD provides several entry points to address climate change and, more broadly, to advance the protection of the climate system.⁹⁵ For instance, CBD Article 6(a) and (b) may be interpreted as

⁸⁷ BBNJ Agreement, 3rd preambulatory clause. Cfr. Article 7(h) BBNJ Agreement on the general principles.

⁸⁸ In this regard, see E Morgera and M Lennan (n 21) as well as E Morgera et al., “Climate Change and Biodiversity”, in F Perron-Welch et al., (eds.), *Legal Aspects of Implementing the Convention on Biological Diversity* (CUP 2024, forthcoming); currently available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4480824. See also E Morgera et al., “Addressing the Ocean-Climate Nexus in the BBNJ Agreement...” (n 68).

⁸⁹ UNFCCC, “Report of the Conference of the Parties on its twenty-sixth session, held in Glasgow from 31 October to 13 November 2021 - Decision 1/CP.26 Glasgow Climate Pact”, FCCC/CP/2021/12/Add.1 (8 March 2022).

⁹⁰ UNFCCC, “Report of the Conference of the Parties on its twenty-seventh session, held in Sharm el-Sheikh from 6 to 20 November 2022 - Decision 1/CP.27 Sharm el-Sheikh Implementation Plan”, FCCC/CP/2022/10/Add.1 (17 March 2023).

⁹¹ UNFCCC, “Outcome of the first global stocktake’ 4/CMA.5, paras. 35-36, 180.

⁹² M Lennan and E Morgera, “The Glasgow Climate Conference (COP26)” (2022) 37 *International Journal of Marine and Coastal Law* 137.

⁹³ Pursuant to Article 2, the CBD expressly aims to achieve “the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources” Article 2 CBD.

⁹⁴ See Van Asselt with regard to the UNFCCC: H Van Asselt, “Managing the Fragmentation of International Environmental Law: Forests at the Intersection of the Climate and Biodiversity Regimes” (2010) 44 *New York University Journal of International Law and Politics* 1205, at 1229.

⁹⁵ For an in-depth discussion of the proposed CBD interpretation, see E Morgera et al., “Climate Change and Biodiversity” (n 88).

requiring States to develop national strategies, plans or programmes specifically aimed at the conservation and sustainable use of biodiversity, and to integrate such objectives into existing climate change plans or policies.⁹⁶ Likewise, States are arguably required to prevent the introduction of invasive alien species also in the implementation of adaptation and mitigation measures,⁹⁷ as well as to adopt measures to avoid or minimise adverse impacts from the use of biological resources – this can be interpreted to include climate change adaptation and mitigation measures.⁹⁸ Further, CBD Article 14(a) requires States to carry out Environmental Impact Assessments (EIAs) on projects likely to have adverse impacts on biodiversity, which arguably include climate change adaptation and mitigation activities, and allow for public participation in such procedures.⁹⁹ Also, CBD Article 8(j) establishes the State’s obligation to respect and preserve Indigenous peoples’ and local communities’ knowledge, innovations and practices, and promote their wider application, which can be interpreted as applicable also when designing and implementing climate change mitigation and adaptation measures. This, in turn, entails the obligation to ensure the meaningful participation of Indigenous peoples and local communities in decision-making processes, including climate change-related ones,¹⁰⁰ and the free prior informed consent and fair and equitable benefit-sharing for relying on their knowledge.¹⁰¹ Lastly, CBD Article 10(e) requires States to encourage cooperation between governmental authorities and the private sector in developing methods for the sustainable use of biological resources, which can be interpreted to apply also in the context of climate change action.¹⁰²

18. This line of interpretation is confirmed in the 2022 Kunming-Montreal Global Biodiversity Framework (GBF),¹⁰³ which urges action, by 2030, to “minimize the impact of climate change and ocean acidification on biodiversity and increase its

⁹⁶ Articles 6(a) and (b) CBD.

⁹⁷ Article 8(h) CBD.

⁹⁸ Article 10(b) CBD.

⁹⁹ Article 14(a) CBD. Cfr. CBD Decision VI/7, “Identification, monitoring, indicators and assessments”, UNEP/CBD/COP/6/20 (7-19 April 2002), and CBD Decision VIII/28, “Impact assessment: voluntary guidelines on biodiversity-inclusive impact assessment”, UNEP/CBD/COP/DEC/VIII/28 (15 June 2006).

¹⁰⁰ Article 8(j) CBD.

¹⁰¹ Ibid. See also Framework Principles on Human Rights and the Environment (n 30), Principle 15.

¹⁰² Article 10(e) CBD.

¹⁰³ CBD Decision XV/4, Kunming-Montreal Global Biodiversity Framework, CBD/COP/DEC/15/4 (19 December 2022).

resilience through mitigation, adaptation, and disaster risk reduction actions including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity”.¹⁰⁴ The Framework also recognises the importance of restoring, maintaining, and enhancing nature in order secure ecosystem functions and services, including climate regulation.¹⁰⁵ In addition, the Framework articulates agreement by the international community about the need to “substantially and progressively increase the level of financial resources from all sources ... including by ... [o]ptimizing co-benefits and synergies of finance targeting the biodiversity and climate crises”.¹⁰⁶ The Framework also clarifies that its “implementation must ensure that the rights, knowledge, including traditional knowledge associated with biodiversity, innovations, worldviews, values and practices of indigenous peoples and local communities are respected, and documented and preserved with their free, prior and informed consent, including through their full and effective participation in decision-making, in accordance with relevant national legislation, international instruments, including the United Nations Declaration on the Rights of Indigenous Peoples, and human rights law. In this regard, nothing in this framework may be construed as diminishing or extinguishing the rights that indigenous peoples currently have or may acquire in the future.”¹⁰⁷ As discussed immediately below, while the Global Biodiversity Framework is a non-legally binding instrument, it can be understood to provide interpretative guidance for States as subsequent agreement or subsequent practice under the CBD.

19. In addition, the 196 Parties to the CBD have carefully negotiated standards that clarify States’ obligations under the CBD as well as other obligations regarding the protection of the environment, including the marine environment. These standards are contained in the numerous CBD Decisions that, despite not having formal legally-binding force, provide interpretative guidance for States as subsequent agreement or subsequent practice, according to VCLT Article 31(3)(a) and (b).¹⁰⁸

¹⁰⁴ Ibid., Target 11.

¹⁰⁵ Ibid., Target 19.

¹⁰⁶ Ibid., Target 8.

¹⁰⁷ Ibid., para. 7(a).

¹⁰⁸ E Morgera, “The Need for an International Legal Concept of Fair and Equitable Benefit-sharing” (2016) 27 *European Journal of International Law* 353. For a confirmation from CBD Parties, see a *contrario* CBD

The interpretative value of CBD Decisions has also been recognised under international human rights law, to inform the content of legally binding human rights obligations.¹⁰⁹ For States that are not party to the relevant international human rights treaties, standards laid down in CBD Decisions must be, nevertheless, deemed relevant as “best practices”¹¹⁰ for the implementation of the CBD obligations and other environment-related international instruments, so States can hardly justify the adoption of sub-standards or contradictory practices.¹¹¹ Lastly, standards laid down in CBD Decisions can constitute Generally Accepted International Rules and Standards for the purpose of informing the content of States’ duties in relation to the protection of the marine environment and ecosystems under the UNCLOS.¹¹²

20. Against this background, CBD Decisions provide guidance at least on four aspects pertaining the scope of the legal obligations of States as to the protection of the climate system at the ocean-climate nexus: A) the application of the ecosystem approach and precautionary principle to climate change technologies and deep-seabed mining; B) the development and management of Area-Based Management Tools (ABMTs); C) the conduct of Environmental Impact Assessments (EIAs) and

Decision [XII/12F](#) (2014), where CBD Parties felt the need to explicitly exclude the interpretative value of a CBD decision in a particular case: CBD Decision XII/12, “Article 8(j) and related provisions – F. Terminology “indigenous peoples and local communities” UNEP/CBD/COP/DEC/XII/12 (13 October 2014).

¹⁰⁹ See, for instance, the Inter-American Court of Human Rights’ interpretation, on the basis of the CBD, of specific mechanisms that guarantee fair and equitable benefit-sharing from the use of biological resources with Indigenous peoples (IACtHR, *Case of Kaliña and Lokono Peoples v Suriname, Judgment (Merits, Reparations and Costs)*, 25 November 2015, paras. 173, 177, 181 and 197). E Morgera, “Under the Radar: Fair and Equitable Benefit-sharing and the Human Rights of Indigenous Peoples and Local Communities connected to Natural Resources” (2019) 23 *International Journal of Human Rights* 1098.

¹¹⁰ HRC, “Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment” [*Special Rapporteur J Knox 2018*], A/HRC/37/58 (24 January 2018).

¹¹¹ Borrowing from Boyle and Chinkin, consensus under the CBD had a “powerful law-making effect” in “securing widespread support for a text that legitimises and promotes consistent State practice”. See A Boyle and C Chinkin, *The Making of International Law* (OUP, 2007).

¹¹² In this regard, see D Diz, “Marine Biodiversity: Unravelling the Intricacies of Global Frameworks and Applicable Concepts” in E Morgera and J Razzaque (eds.), *Encyclopedia of Environmental Law: Biodiversity and Nature Protection Law* (Edward Elgar, 2017) 123, who argues that CBD Decisions and Recommendations may be well incorporated into the UNCLOS as GAIRS by virtue of the references contained in the provisions under Part XII and Part V UNCLOS.

Strategic Environmental Assessments (SEAs); D) social and ecological resilience to ocean acidification and coral bleaching.

A) The Application of the Ecosystem Approach and Precautionary Principle to Climate Change Technologies and Deep-Seabed Mining

21. CBD Parties agreed to apply the ecosystem approach to the design and implementation of their ocean-climate policies and plans, including climate change adaptation and mitigation measures.¹¹³ The ecosystem approach under the CBD has been interpreted as a strategy for the integrated management of land, water and living resources, and the promotion of their conservation and sustainable use in an equitable manner and through an adaptive approach, further paying consideration to the interested communities through the development of efficient and fair decision-making processes and structures.¹¹⁴ Another key dimension of the ecosystem approach is its emphasis on equity, recognising that human beings, and their cultural diversity are an integral component of many ecosystems.¹¹⁵ From this perspective, the ecosystem approach entails a decentralised, social process.¹¹⁶ It underscores the need to understand and give due consideration to societal choices, and to the human rights and interests of Indigenous peoples and local communities, and to intrinsic as well as tangible and intangible values attached to biodiversity, ultimately calling upon States to seek a balance between local interests and the wider public interest.¹¹⁷ It also requires ensuring appropriate representation of community interests in the decision-making process.¹¹⁸
22. CBD guidance serves to flesh out the references to the ecosystem approach that can be identified in the UNCLOS, the United Nations Fish Stock Agreement

¹¹³ See generally CBD Decision V/6, "Ecosystem Approach", UNEP/CBD/COP/6/20 (7-19 April 2002); CBD Decision VII/11, "Ecosystem Approach", UNEP/CBD/COP/DEC/VII/11 (13 April 2004), and, specifically on ecosystem-based approach to climate adaptation, CBD Dec. XIV/5 (2018) (n 79) and CBD Decision XIII/4, "Biodiversity and climate change", CBD/COP/DEC/XIII/4 (10 December 2016), para. 4.

¹¹⁴ *Ibid.*, CBD Dec. V/6 (2002). Cfr. *Ibid.*, CBD Dec. VII/11 (2004), para. 10, and CBD Decision X/29, "Marine and Coastal Biodiversity", UNEP/CBD/COP/DEC/X/29 (29 October 2010), para. 13(h) and Annex, para. d.

¹¹⁵ *Ibid.*, CBD Dec. V/6 (2002), para. 2.

¹¹⁶ *Ibid.*, para. 10.

¹¹⁷ *Ibid.*, Annex, Principle 1.

¹¹⁸ CBD Dec. VII/11 (2004) (n 113), Annex I, para. 2.5.

(UNFSA),¹¹⁹ and the BBNJ Agreement. Several UNCLOS operative provisions can be read as supporting an ecosystem approach to the management of human activities that may affect the marine environment. UNCLOS Article 192 is “an integrative norm encompassing all aspects of the marine environment and all maritime zones”, and, as such, can be said “to effectively express the key elements of the ecosystem approach”.¹²⁰ It is also an inclusive norm, its formulation broad enough to accommodate environmental principles that emerged after the adoption of UNCLOS, of which the ecosystem approach is one.¹²¹ An ecosystem orientation is also implicit in UNCLOS Article 194, which requires States to take measures to prevent, reduce, and control pollution of the marine environment, including “rare and fragile ecosystems as well as habitat of depleted, threatened or endangered species and other forms of marine life”.¹²² The same applies to UNCLOS provisions dealing with the conservation and management of marine living resources, which require that associations and interdependencies between species be taken into account.¹²³

23. On the basis of the ecosystem approach, CBD Parties have agreed to minimise and, where possible, avoid activities that may increase the vulnerability and reduce the resilience of biodiversity and ecosystems;¹²⁴ to integrate ecosystem-based approaches into their own Nationally Determined Contributions (NDCs) under the Paris Agreement and, more generally, in the pursuance of domestic climate action, with a view to specifically protecting marine biodiversity;¹²⁵ to minimise impacts of climate change and ocean acidification on biodiversity and increase its resilience

¹¹⁹ United Nations 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, adopted on the occasion of the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks [UNFSA], adopted in New York on 4 December 1995 and entered into force on 11 December 2001, 2167 United Nations Treaty Series p. 3.

¹²⁰ V De Lucia, “The Ecosystem Approach and the Negotiations towards a New Agreement on Marine Biodiversity in Areas beyond National Jurisdiction” (2019) 2 *Nordic Environmental Law Journal* 7, at 19.

¹²¹ *Ibid.*

¹²² Article 194(5) UNCLOS.

¹²³ Articles 61(3) and (4), 63 and 119(1) UNCLOS.

¹²⁴ CBD Dec. XIII/4 (2016) (n 113), para. 8 (a-b).

¹²⁵ CBD Dec. XIV/5 (2018) (n 79), para. 5 (a-b).

through mitigation, adaptation and disaster risk reduction actions, through nature-based solutions and ecosystem-based approaches by 2030.¹²⁶

24. The precautionary principle, which is included in the ecosystem approach as developed under the CBD,¹²⁷ should be understood –in accordance with the cross-fertilization of international environmental law and international human rights discussed below in Section III – as follows: “the lack of full scientific certainty should not be used to justify postponing *effective and proportionate* measures to prevent environmental harm, especially when there are threats of serious or irreversible damage”.¹²⁸ Based on the connections between international biodiversity and human rights law and supported by current knowledge on ecosystem services (nature’s benefits to human well-being), we argue for an interpretation of the precautionary principle that sets foreseeable harm to ecosystem services, even if not fully quantified, as a sufficient scientific justification for action to avoid degradation of biodiversity. This interpretation of the precautionary principle entails a transformation of current decision-making practices in three ways:¹²⁹ 1) Uncertain quantification of harm to ecosystem services and human rights does not justify disregard for evidence on ecosystem services; 2) Foreseeability of harm to human rights justifies preventative action to effectively conserve biodiversity and ecosystem services; and 3) Proponents of any activity or policy that poses a foreseeable risk to ecosystem services need to provide evidence of acceptable risk from both an environmental and human rights perspective, beyond reasons of cost-effectiveness.¹³⁰
25. The interpretations of the ecosystem approach and the precautionary principle under the CBD have great importance for identifying and assessing the risks

¹²⁶ CBD Dec. XV/4 (2022) (n 103), Target 8.

¹²⁷ E Morgera, “The Ecosystem Approach and the Precautionary Principle” in E Morgera and J Razzaque (eds.), *Encyclopedia of Environmental Law: Biodiversity and Nature Protection Law* (Edward Elgar, Cheltenham, 2017) 70.

¹²⁸ Framework Principles on Human Rights and the Environment (n 30).

¹²⁹ The following implications build on Wiener’s interpretation of the precautionary principle: JB Wiener, “Precaution” in D Bodansky et al., (eds.), *The Oxford Handbook of International Environmental Law* (OUP, 2008) 597.

¹³⁰ H Niner et al., “Understanding Precaution at the Intersection of Climate Change, Human Rights and Marine Ecosystem Services?” *Ocean Sustainability* (under review).

associated with the use of climate change technologies in the marine environment. With respect to geo-engineering, CBD Parties decided by consensus that, in the absence of science-based, transparent, effective control and regulatory mechanisms over geo-engineering activities, and given the risk of affecting biodiversity, no such activities should take place “until there is an adequate scientific basis on which to justify such activities and appropriate consideration of the associated risks for the environment and biodiversity and associated social, economic and cultural impact”.¹³¹ In addition, CBD Parties agreed that “small-scale scientific research studies” could be, exceptionally, “conducted in a controlled setting in accordance with Article 3 of the Convention, and only if they are justified by the need to gather specific scientific data and are subject to a thorough prior assessment of the potential impacts on the environment.”¹³² The CBD decision was considered an authoritative moratorium by the Advisory Committee of the Human Rights Council in a 2023 Report, in recognition that the reference to “associated social, economic and cultural impact” can support the consideration of applicable intentional human rights.¹³³ Earlier CBD decisions¹³⁴ had also cautioned against ocean fertilization in particular, which led the London Dumping Convention/Protocol regime to ban ocean fertilization and allow associated research as controlled projects only, to increase knowledge without creating significant risks to the marine environment.¹³⁵ As the Advisory Committee reports, “[i]n 2023, the scientific groups reporting to the consultative meetings/meetings of the contracting parties [London Dumping Convention/Protocol regime] agreed that four marine geoengineering techniques had the potential to cause deleterious effects that were widespread, long-lasting or severe”, referring to ocean alkalinity

¹³¹ CBD Decision X/33, “Biodiversity and climate change”, UNEP/CBD/COP/DEC/X/33 (29 October 2010), para. 8(w), which was reiterated in CBD Decision XIII/14, “Decision: Climate-related geoengineering” CBD/COP/DEC/XIII/14 (8 December 2016). For the definition of geo-engineering under the CBD, see CBD Decision XI/20, “Climate-related geoengineering” UNEP/CBD/COP/DEC/XI/20 (5 December 2012), para. 5(a-d).

¹³² *Ibid.*

¹³³ Human Rights Council Advisory Committee, “Impact of new technologies intended for climate protection on the enjoyment of human rights” [*HRC Advisory Committee, Report on the impact of new climate technologies on human rights*], A/HRC/54/47 (10 August 2023), para. 32.

¹³⁴ See, amongst others, CBD Decision IX/16, “Biodiversity and climate change”, UNEP/CBD/COP/DEC/IX/16 (9 October 2008).

¹³⁵ The Thirtieth Meeting of the Contracting Parties to the London Convention and the Third Meeting of the Contracting Parties to the London Protocol, “Resolution LC-LP.1 on the Regulation of Ocean Fertilization”, LC 30/16 (31 October 2008).

enhancement and electrochemical carbon dioxide removal; biomass cultivation for carbon removal; marine cloud brightening; and surface albedo enhancement involving reflective particles and/or other materials.¹³⁶ In other words, the legal value of the CBD COP decision on geo-engineering should be understood also in terms of clarifying international human rights law obligations.

26. With regard to other technologies for the large-scale removal of carbon dioxide, we agree with human rights experts in civil society that these are still speculative technologies that may not be compliant with States' duties under UNCLOS to protect the marine environment¹³⁷ and under the CBD to conserve and sustainably use biodiversity. There are indications that these technologies can have "potential impacts over vast spatial scales, long timelines and the risk of unintended planetary-scale effects" and they are unregulated at the national level.¹³⁸ It has been cautioned that even "field experiments involving these techniques could affect both near and distant marine ecosystems in the same ways as projected for large-scale ocean [carbon dioxide removal] deployment."¹³⁹ Similarly to what the CBD Parties have agreed upon for contained, small-scale experiments for geo-engineering, experiments of other climate technologies should be subject to thorough environmental and socio-cultural impact assessments and to public participation standers (access to information, public participation in decision-making, free prior informed consent if negative impacts are foreseeable on Indigenous peoples and small-scale fishing and other communities, and access to justice and effective remedies).¹⁴⁰ In addition, it has been underscored by the Advisory Committee of the Human Rights Council that the social consequences of these technologies would

¹³⁶ HRC Advisory Committee, *Report on the impact of new climate technologies on human rights* (n 133), para. 33 and fn 29; referring to International Maritime Organization, "Marine geoengineering: assessing the impacts on the marine environment", 24 March 2023), available at <https://www.imo.org/en/MediaCentre/Pages/WhatsNew-1854.aspx>.

¹³⁷ See the joint submission by the Center of International Environmental Law and Greenpeace International to the ITLOS in case No. 31 "Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law" [CIEL and GPI's joint submission to the ITLOS], para. 89(4) at 39.

¹³⁸ R Loomis et al., "A Code of Conduct is Imperative for Ocean Carbon Dioxide Removal Research" (2022) 9 *Frontiers in Marine Science* 872800.

¹³⁹ *Ibid.*, at 2.

¹⁴⁰ HRC Advisory Committee, *Report on the impact of new climate technologies on human rights* (n 133), para. 49 and 6§, 75.

like be “uneven geographically” with “harsher [effects] on poorer States and the Global South”, thereby “strengthen[ing] entrenched inequalities and deepen climate injustice.”¹⁴¹

27. Meanwhile, given the risk that these technologies may divert attention from other State obligations, the precautionary principle¹⁴² should be interpreted as “requiring States to prioritise measures known to be effective at averting continued temperature rise [...] including the phase-out of fossil fuels, transition to available renewable energy sources, and increased energy efficiency,”¹⁴³ and nature-based solutions¹⁴⁴ in light of the potential harm to the enjoyment of human rights that carbon dioxide removal technologies may cause.¹⁴⁵ In other words, States are to “withhold public support (including funding)” towards the development and deployment of carbon dioxide removal techniques.¹⁴⁶
28. Similar concerns have emerged also in relation to deep-seabed mining exploitation activities. As agreed in 2022, prior to starting such activities, CBD Parties have to ensure that “the impacts on the marine environment and biodiversity are sufficiently researched and the risks understood, the technologies and operational practices do not cause harmful effects to the marine environment and biodiversity, and appropriate rules, regulations and procedures are put in place by the International

¹⁴¹ Ibid., para. 18.

¹⁴² HRCtee General Comment 36 (n 41), para. 62; cfr. Inter-American Court of Human Rights (IACtHR), Advisory Opinion OC-23/17 [IACtHR, *Advisory Opinion on the Environment and Human Rights*] (15 November 2017), para. 180.

¹⁴³ CIEL and GPI’s joint submission to the ITLOS (n 137). Cfr. CBD Dec. XI/20 (2012) (n 131), para. 4; and CBD Dec. XIII/14 (2016) (n 131), para. 3; HRC Advisory Committee, *Report on the impact of new climate technologies on human rights* (n 133), para. 71.

¹⁴⁴ Ibid., HRC Advisory Committee, *Report on the impact of new climate technologies on human rights*, para. 71.

¹⁴⁵ CIEL and GPI’s joint submission to the ITLOS (n 137), paras. 70-73, quoting IACtHR Advisory Opinion on Human Rights and the Environment (ibid.), paras. 130, 133, 142 and 180; cfr European Court of Human Rights (ECtHR), *Tătar v Romania*, App. no. 67021/01 (27 January 2009), paras. 108-109. See also the CBD Decisions cited above at n 131. In this regard, we share the concern of the Human Rights Council Advisory Committee with regard to the use of marine geo-engineering technologies: HRC Advisory Committee, *Report on the impact of new climate technologies on human rights* (n 131) paras. 47-56.

¹⁴⁶ HRC Advisory Committee, *Report on the impact of new climate technologies on human rights*, para. 74.

Seabed Authority, in accordance with the best available science and the traditional knowledge of Indigenous peoples and local communities with their free, prior informed consent, and the precautionary and ecosystem approaches”.¹⁴⁷ Thus, the assumptions about the potential of deep-seabed mining to contribute to humanity’s climate change mitigation efforts¹⁴⁸ need to be systematically assessed in the light of growing scientific evidence about the irreparable damage to deep-sea biodiversity that could derive from it, which could also in turn impact negatively on the ocean’s natural contributions to climate change mitigation.¹⁴⁹ In 2022, the UN Special Rapporteur on Climate and Human Rights referred to “the potential environmental and human rights impacts from deep seabed exploration and mining”,¹⁵⁰ and so did in 2023 the UN Working Group on Human Rights and Transnational Corporations and other Business Enterprises.¹⁵¹ These concerns were also shared by the United Nations Office of the High Commissioner for Human Rights in a 2023 note.¹⁵² The protection of marine biodiversity from the negative

¹⁴⁷ CBD Decision XV/24, “Conservation and sustainable use of marine and coastal biodiversity”, CBD/COP/DEC/15/24 (19 December 2022), para. 16; Note also the Parties to the Convention on the Conservation of Migratory Species of Wild Animals, Bonn 23 June 1979, in force 1 November 1983, 1651 United Nations Treaty Series 333 recent Resolution *Deep-Seabed Mineral Exploitation Activities and Migratory Species*, which urges Parties ‘not to engage in, or support, deep-seabed mineral exploitation activities until sufficient and robust scientific information has been obtained to ensure that deep-seabed mineral exploitation activities do not cause harmful effects to migratory species, their prey and their ecosystems’ UNEP/CMS/COP14/Doc.27.2.4/Rev.1, para. 3.

¹⁴⁸ D Paulikas et al., “Deep-sea Nodules Versus Land Ores: A Comparative Systems Analysis of Mining and Processing Wastes for Battery-Metal Supply Chains” (2022) 26 *Journal of Industrial Ecology* 2154.

¹⁴⁹ One Ocean Hub policy brief at <https://oneoceanhub.org/publications/policy-brief-the-need-for-strategic-environmental-assesment-and-regional-environmental-assessment-in-abnj-for-ecologically-meaningful-management/> (2022).

¹⁵⁰ I Fry, “Report of the Special Rapporteur on the Promotion and Protection of Human Rights in the Context of Climate Change: Promotion and Protection of Human Rights in the context of Climate Change Mitigation, Loss and Damage, and Participation”, A/77/226 (26 July 2022), para. 25.

¹⁵¹ UNGA, “Report of the Working Group on the issue of human rights and transnational corporations and other business enterprises - Extractive sector, just transition and human rights”, A/78/155 (11 July 2023), para. 44. See also letter by the UN Working Group, co-signed by the UN Special Rapporteur on Toxics and Human Rights, and the UN Special Rapporteur on the Environment and Human Rights to the International Seabed Authority, dated 15 March 2024, at <https://www.ohchr.org/sites/default/files/documents/issues/business/activities/2024-03-15-open-letter-to-isa.pdf>.

¹⁵² United Nations Office of the High Commissioner for Human Rights, “Key Human Rights Considerations on the Impact of Seabed Mining”, available at

impacts of deep-seabed mining should be seen as an integral component of States' international obligations to protect the marine environment, conserve biodiversity, mitigate climate change and protect human rights.¹⁵³

<https://www.ohchr.org/sites/default/files/documents/issues/climatechange/information-materials/ohchr-seabed-mining-10-july.pdf#:~:text=Current%20scientific%20consensus%20suggests%20that%20deep-sea%20mining%20would,duty%20to%20prevent%20human%20rights%20violations%20and%20harms.>

¹⁵³ E Morgera and H Lily, "Public Participation at the International Seabed Authority – an International Human Rights Analysis" (2022) 31 *Review of European, Comparative and International Environmental Law* 374. As discussed above, geo-engineering may have a devastating impact on the enjoyment of human rights, including both individual and collective rights.

B) The Development and Management of Area-Based Management Tools (ABMTs)

29. CBD Decisions have also contributed to clarify States' obligations to address climate change in respect of area-based management measures, including Marine Protected Areas. CBD Parties agreed to identify key areas for mitigation and adaptation purposes, undertake joint planning of protected area networks and consider climate change when assessing the very management of such protected areas.¹⁵⁴ Also, CBD Parties are expected to integrate protected areas into wider landscapes, seascapes and sectors through the use of connectivity and biodiversity restoration measures, in order to better address climate change adverse impacts and enhance resilience of such areas; and to involve all relevant stakeholders, including Indigenous peoples and local communities, to support the development of adaptive management plans and to reinforce the management effectiveness of protected areas in addressing impacts from climate change on biodiversity.¹⁵⁵
30. These interpretations are reflected to some extent in the BBNJ Agreement, which includes provisions on the ocean-climate nexus.¹⁵⁶ The Agreement sets an objective for ABMTs to "[p]rotect, preserve, restore and maintain biodiversity and ecosystems, including with a view to enhancing their productivity and health, and strengthen resilience to stressors, including those related to climate change, ocean acidification and marine pollution".¹⁵⁷ In particular, with regard to ocean stressors, capacity-building under the BBNJ Agreement also includes activities specifically on those "that affect marine biological diversity of areas beyond national jurisdiction, including the adverse effects of climate change such as warming and deoxygenation, as well as ocean acidification."¹⁵⁸ To support synergies with other international regimes, the BBNJ Agreement includes several provisions specifically on regime interaction,¹⁵⁹ as well as an obligation for its parties to cooperate across

¹⁵⁴ CBD Decision X/31, "Protected Areas" UNEP/CBD/COP/DEC/X/31 (29 October 2010) paras 14(d) and (f) and 19(c).

¹⁵⁵ *Ibid.*, paras. 14(b) and (c).

¹⁵⁶ E Morgera et al., "Addressing the Ocean-Climate Nexus in the BBNJ Agreement..." (n 68).

¹⁵⁷ Article 17(c) BBNJ Agreement.

¹⁵⁸ Annex II, para. b(iv) BBNJ Agreement.

¹⁵⁹ Articles 17(b), 21(2)(b), 24(2), and 29(2) BBNJ Agreement.

different fora,¹⁶⁰ keeping in mind States' different capacities to advance science on the ocean-climate nexus.¹⁶¹

C) The Conduct of Environmental Impact Assessments (EIAs) and Strategic Environmental Assessment (SEAs)

31. CBD Parties have adopted guidance with respect to the conduct of Environmental Impact Assessments (EIAs) and Strategic Environmental Assessments (SEAs),¹⁶² which contain specific standards to minimise negative impacts on biodiversity from climate change-related stressors. For instance, already in the early 2000s, CBD Parties agreed that EIAs could be mandatory for activities that “have direct influence on legally protected areas, for example by *emissions* into the area”,¹⁶³ thereby indirectly addressing also impacts from one of the driving factors of climate change. Eventually, in the revised 2012 guidelines on EIAs and SEAs in marine and coastal areas, CBD Parties referred to the need “to consider the cumulative effect of environmental changes such as climate change and ocean acidification”.¹⁶⁴
32. CBD parties are expected to incorporate marine biodiversity issues into different stages of EIA,¹⁶⁵ making efforts to minimise the specific, as well as cumulative, detrimental impacts of human activities on marine biodiversity both in areas within and beyond national jurisdiction. This is particularly true in areas that are affected by multiple direct and indirect anthropogenic influences originating from the watershed area, and where the biodiversity issues require an integrated holistic approach aiming to improve the water quality and restore the health and functioning of the whole ecosystem.¹⁶⁶ CBD guidelines call for heightened attention to activities affecting deep-sea habitats of importance for threatened, endangered or declining species, and factors that may cause changes to biological or ecological processes that may affect such species, relying on criteria based on “the potential to cause

¹⁶⁰ Articles 8(2) and 43(1) BBNJ Agreement.

¹⁶¹ In this regard, see E Morgera et al., “Addressing the Ocean-Climate Nexus in the BBNJ Agreement...” (n 68).

¹⁶² Article 14(a-c) CBD.

¹⁶³ CBD Dec. VI/7 (2002) (n 99), Annex, Appendix 2, Category A(c), emphasis added. Cfr. CBD Dec. VIII/28 (2006) (n 99), Annex, paras. 17(d), 19(a), and 31(d), as well as Appendix 1.

¹⁶⁴ CBD Dec. XI/23, “Marine and coastal biodiversity: revised voluntary guidelines for the consideration of biodiversity in environmental impact assessments and strategic environmental assessments in marine and coastal areas”, UNEP/CBD/COP/11/23 (21 August 2012), Annex I, para. 31(f).

¹⁶⁵ CBD Decision VIII/30, “Biodiversity and Climate Change: Guidance to Promote Synergy among Activities for Biodiversity Conservation, Mitigating or Adapting to Climate Change and Combating Land Degradation”, UNEP/CBD/COP/DEC/VIII/30 (15 June 2005).

¹⁶⁶ CBD Dec. X/29 (n 114).

significant adverse impacts”.¹⁶⁷ These CBD guidelines emphasise the need for incremental and iterative test-based approaches to permitting activities in the marine environment, such as by allowing a particular activity at a small scale with stringent conditions for monitoring and surveillance. They underline that both the scientific criteria for describing “ecologically or biologically significant marine areas”¹⁶⁸ and the Food and Agriculture Organization of the United Nations (FAO) criteria for Vulnerable Marine Ecosystems provide useful reference frameworks.¹⁶⁹

32. States’ obligations on EIAs and SEA should be considered applicable to the environmental, socio-cultural and human rights impact of large-scale industrial fisheries. Indeed, large-scale fishing vessels and factory fishing ships with powerful propulsion systems and intense high fuel cause significant impacts on the marine environment;¹⁷⁰ further, they potentially emit more than 130 million tonnes of carbon dioxide,¹⁷¹ thereby contributing to ocean acidification and aggravating the impacts of climate change.¹⁷² In addition, the large-scale industrial fisheries sector may also operate, particularly on the high seas, with the support of bunkers or tankers for refuelling of fishing vessels, as well as reefers or refrigerated cargo ships and other transport vessels used for transshipment. All these support facilities are themselves powered by different types of fossil fuels, and in turn complicate the effective flag State’s monitoring and enforcement duties, creating opportunities for industrial fishing vessels to carry out unsustainable and overfishing practices and

¹⁶⁷ CBD Decision XI/18, “Marine and Coastal Biodiversity: Sustainable Fisheries and Addressing Adverse Impacts of Human Activities, Voluntary Guidelines for Environmental Assessment, and Marine Spatial Planning” UNEP/CBD/COP/DEC/XI/18 (5 December 2012); CBD Decision XI/23, “Biological Diversity of Inland Water Ecosystems” UNEP/CBD/COP/DEC/XI/23 (5 December 2012).

¹⁶⁸ CBD Decision IX/20, “Marine and Coastal Biodiversity”, UNEP/CBD/COP/DEC/IX/20 (9 October 2008).

¹⁶⁹ *Ibid.*, para. 8.

¹⁷⁰ J Nakamura et al., “International Legal Requirements for Environmental and Socio-Cultural Assessments for Large-scale Industrial Fisheries” (2022) 31 *Review of European, Comparative and International Environmental Law* 336.

¹⁷¹ PH Tyedmers et al., “Fueling Global Fishing Fleets” (2005) 34 *Ambio* 635. See also RWR Parker and PH Tyedmers, “Fuel Consumption of Global Fishing Fleets: Current Understanding and Knowledge Gaps” (2015) 16 *Fish and Fisheries* 684.

¹⁷² B Haas et al., “Big Fishing: The Role of the Large-scale Commercial Fishing Industry in Achieving Sustainable Development Goal 14” (2019) 29 *Reviews in Fish Biology and Fisheries* 161, at 165–166. Notably, fishing vessels in general have recently accounted for large emissions of black carbon, which contribute to global warming. In this regard, see B McKulin and JE Campbell, “Emissions and Climate Forcing from Global and Arctic Fishing Vessels” (2016) 121 *Journal of Geophysical Research Atmospheres* 1844.

apply inadequate working conditions on board while going unnoticed.¹⁷³ As most States have not legislated on the need for EIAs and SEAs in the fisheries sector,¹⁷⁴ we argue that States' obligations on climate change also include requiring EIAs and SEAs for industrial fishing activities, policies and plans and extend to their socio-cultural and human rights impact under their scope.¹⁷⁵ In addition, States must create binding rules for, and effectively monitor, large-scale industrial fishing operators to contribute to mitigate climate change and respect human rights (particularly those of Indigenous peoples and small-scale fishers whose sacred sites, and traditionally occupied and used territories and waters, are involved or affected by large-scale industrial fisheries).¹⁷⁶

33. In conclusion, although the ICJ previously indicated that the precise content and process of an EIA is a matter left to the State's discretion,¹⁷⁷ the 196 CBD Parties have clarified, by consensus, the content and process of an EIA to a significant degree. Despite the ICJ's interpretation that the wording of the applicable CBD provision is such that it does not give rise to an obligation,¹⁷⁸ we contend that such

¹⁷³ C Ewell et al., "Potential Ecological and Social Benefits of a Moratorium on Transshipment on the High Seas" (2017) 81 *Marine Policy* 293; D Tickler et al., "Modern Slavery and the Race to Fish" (2018) 9 *Nature Communications* 1, at 2; A Longo, "The Human Dimension of Fishing Activities: Towards a Broader Meaning of Illegal Fishing?" (2023) 2 *ASCOMARE Yearbook on the Law of the Sea* 125. See, more generally, International Labour Office report "Caught at Sea: Forced Labour and Trafficking in Fisheries", ILO, Special Action Programme to Combat Forced Labour (DECLARATION/SAP-FL), Sectoral Activities Department (SECTOR). - Geneva: ILO, 2013; cfr. Environmental Justice Foundation, "Thailand's Seafood Slaves. Human Trafficking, Slavery and Murder in Kantang's Fishing Industry", EJF report (2015).

¹⁷⁴ M Barelli, "Free, Prior and Informed Consent in the Aftermath of the UN Declaration on the Rights of Indigenous Peoples: Developments and Challenges Ahead" (2012) 16 *International Journal of Human Rights* 1, at 15. See also HRCtee, *Jouni E. Lämsman et al v Finland*, Communication No. 671/1995, CCPR/C/58/D/671/1995 (22 November 1996), para. 10.7.

¹⁷⁵ On States' duty to conduct EIAs and SEAs in respect of industrial fishing activities, and to the inclusion of socio-cultural and human rights impact within their scope, see J Nakamura et al., (n 170). See also P Duffy, "Agriculture, Forestry and Fisheries: The Orphans of Environmental Impact Assessment" (2004) 22 *Impact Assessment and Project Appraisal* 175, at 176.

¹⁷⁶ *Ibid.*, J Nakamura et al., (n 170).

¹⁷⁷ *Pulp Mills on the River Uruguay (Argentina v. Uruguay)* Judgment [2010] ICJ Rep 14, para. 205.

¹⁷⁸ *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)* and *Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, Judgment, ICJ Reports 2015, at 665, para. 164.

wording¹⁷⁹ only opens up a margin of discretion for different parties to decide how (not whether) to implement such duty.¹⁸⁰ This margin of discretion is further limited by the joint reading of States' obligations to prevent negative impacts on the marine environment under their jurisdiction, pursuant to the law of the sea,¹⁸¹ and on human rights arising from biodiversity degradation under international biodiversity law and international human rights law.¹⁸² This interpretation finds resonance in the BBNJ Agreement, which requires States to carry out EIAs¹⁸³ and to consider conducting SEAs¹⁸⁴ in order to duly consider "consequences of climate change, ocean acidification and related impacts",¹⁸⁵ as well as "economic, social, cultural and human health impacts",¹⁸⁶ as part of the broad notion of "cumulative impacts" within the meaning of Article 1(6) of the BBNJ Agreement.

34. In addition, the provisions of the BBNJ Agreement on marine genetic resources are also relevant at the ocean-climate nexus. Understanding ecological connectivity and its role in climate change regulation is critical for effective climate change mitigation and depends on knowledge of genetic variation between organisms, how they are interrelated and the impact of changing environmental conditions on genetic variation of biodiversity and associated ecosystem processes. Molecular genetic approaches are an increasingly important component of ocean science that provides foundational biodiversity information to guide the use of conservation tools and

¹⁷⁹ The obligation contained in CBD art 14 ('shall') is qualified by the words 'as far as possible and as appropriate' – a qualification common in other international biodiversity-related conventions. The High Court of Australia (*Commonwealth v Tasmania*, 1983) HCA 21 – 158 CLR 1, para. 24, looked at similarly qualified language in Articles 4 and 5 of the World Heritage Convention.

¹⁸⁰ E Morgera, "Biodiversity as a Human Right and its Implications for the EU's External Action" (European Parliament 2020) 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). See also S Maljean-Dubois and E Morgera, "International Biodiversity Litigation: The Increasing Emphasis on Biodiversity Law before International Courts and Tribunals" in G Futhazar, S Maljean-Dubois and J Razzaque (eds.), *Biodiversity Litigation* (OUP, 2022) 331.

¹⁸¹ See Article 206 UNCLOS and the other general provisions under Part XII UNCLOS on the protection and preservation of the marine environment. See also other international law instruments including, amongst others, the UNFSA.

¹⁸² For a summary of relevant international legal bases, see Framework Principles on Human Rights and the Environment (n 30), Principles 8 and 15.

¹⁸³ Article 28 BBNJ Agreement.

¹⁸⁴ Article 39 BBNJ Agreement.

¹⁸⁵ Article 1(6) BBNJ. The obligation to assess the "cumulative impact" is expressly envisaged in the provision regarding, e.g., the scoping of EIAs, namely Article 31(1)(b) BBNJ Agreement. This has further implications with respect to the protection of human rights: E Morgera et al., "Addressing the Ocean-Climate Nexus in the BBNJ Agreement..." (n 68).

¹⁸⁶ Article 31(1)(b) BBNJ Agreement.

actions, including those relating to climate change mitigation and adaptation.¹⁸⁷ In that connection, the provisions of the BBNJ Agreement providing a power for the COP to “conduct [SEAs] of an area or region to collate and synthesize the best available information about the area or region, assess current and potential future impacts and identify data gaps and research priorities”¹⁸⁸ should be considered relevant to advance international cooperation on research on deep-sea genetic resources and ocean-climate science,¹⁸⁹ particularly with a view to benefitting researchers from Small Island Developing States and other developing countries.

D) Supporting Ecological and Social Resilience to Ocean Acidification and Coral Bleaching

35. CBD Parties have further agreed to implement global strategies specifically aimed at enhancing the resilience of marine biodiversity and ecosystems. In particular, ocean acidification is generally recognised as one of the climate change-related global stressors for the marine environment¹⁹⁰ and, accordingly, States committed to integrate relevant policies and planning with emerging knowledge on this issue. In this regard, CBD Parties agreed to strengthen international, national and regional efforts to manage coral reefs as socio-ecological systems by reducing the impact of global and local stressors,¹⁹¹ increasing the capability of local and national managers to forecast and proactively plan for climate risks,¹⁹² and integrating ecological and social resilience factors of coral reefs and closely associated ecosystems into the design and management of Marine Protected Areas

¹⁸⁷ MW Kelly et al., “Limited Potential for Adaptation to Climate Change in a Broadly Distributed Marine Crustacean” (2012) 279 *Proceedings of the Royal Society B* 349.

¹⁸⁸ Article 39(2) BBNJ Agreement.

¹⁸⁹ E Morgera et al., “Addressing the Ocean-Climate Nexus in the BBNJ Agreement...” (n 68).

¹⁹⁰ On the impact of ocean acidification on marine biodiversity, see CBD Subsidiary Body on Scientific, Technical and Technological Advice, “Systematic Review on the Impact of Ocean Acidification and Proposal to Update the Specific Workplan on Coral Bleaching”, UNEP/CBD/SBSTTA/18/INF/6 (19 June 2014).

¹⁹¹ CBD Decision XII/23, “Marine and coastal biodiversity: Impacts on marine and coastal biodiversity of anthropogenic underwater noise and ocean acidification, priority actions to achieve Aichi Biodiversity Target 10 for coral reefs and closely associated ecosystems, and marine spatial planning and training initiatives”, UNEP/CBD/COP/DEC/XII/23 (17 October 2014), para. 14. Cfr. CBD Decision VII/5, “Marine and Coastal Biological Diversity”, UNEP/CBD/COP/DEC/VII/5 (13 April 2004) and CBD Dec. X/29 (2010) (n 114).

¹⁹² *Ibid.*, para. 14(d).

networks.¹⁹³ Likewise, they committed to maintaining sustainable livelihoods and food security in reef-dependent coastal communities¹⁹⁴ and promoting community-based measures to e.g. manage fisheries sustainably and prioritise the recovery of reef species with key ecological functions.¹⁹⁵

36. Finally, CBD Parties also acknowledged the impact of ocean acidification on deep-water corals and other organisms living in the deep-sea,¹⁹⁶ and adopted a specific workplan to address this and other area-specific stressors that affect deep-sea biodiversity and ecosystems.¹⁹⁷ In addition, CBD Parties identified the designation of MPAs as a strategy to address ocean acidification, to help ensure that areas in need of protection facilitate the maximum adaptive capacity of biodiversity.¹⁹⁸ CBD Parties also identified the following actions as relevant to address ocean acidification, to: prevent the further loss and degradation of coastal ecosystems and catalyse their recovery through restoration and management; and implement ecosystem-based fisheries management to limit the impacts of destructive fishing practices (e.g.. bottom-trawling) and other physical pressures and disturbances to ecosystems, and avoid overfishing.¹⁹⁹

Section 3. The Interdependencies of Human Rights with the Protection of the Climate System and of Other Parts of the Environment

36. The full enjoyment of human rights is highly dependent on the protection of the climate system and of other parts of the environment.²⁰⁰ As authoritatively stated in

¹⁹³ Ibid., Annex, para. 8.3(c).

¹⁹⁴ Ibid., para. 14(c).

¹⁹⁵ Ibid., Annex, para. 8.1(a-f). Notably, in its 2017 Advisory Opinion the IACtHR upheld the duty to prepare contingency plans to proactively respond to incidents from pollution and to other forms of environmental disasters, also foreseeing safety measures and procedures to mitigate the impact of such disasters. IACtHR, *Advisory Opinion on the Environment and Human Rights* (n 142), para. 171.

¹⁹⁶ CBD Decision XIII/11, "Voluntary specific workplan on biodiversity in cold-water areas within the jurisdictional scope of the Convention" CBD/COP/DEC/XIII/11 (10 December 2016).

¹⁹⁷ Ibid., Annex II.

¹⁹⁸ CBD Dec. X/29 (2010) (n 114).

¹⁹⁹ CBD Dec. XI/18 (n 167); UNEP/CBD/SBSTTA/16/6 (2012), ANNEX III, para. 5.

²⁰⁰ See multiple HRC Resolutions on Human Rights and Climate Change, including 7/23 A/HRC/RES/7/23 (28 March 2008), 18/22 A/HRC/RES/18/22 (17 October 2011), 26/27 A/HRC/RES/26/27 (15 July 2014), 29/15 A/HRC/RES/29/15 (22 July 2015), 32/33 A/HRC/RES/32/33

several written submissions to the International Tribunal for the Law of the Sea (ITLOS),²⁰¹ the climate crisis impairs the effective enjoyment of a wide range of rights including, amongst others, the right to life,²⁰² the right to health,²⁰³ the right to food and water,²⁰⁴ the cultural rights of impacted communities and Indigenous peoples,²⁰⁵ and the human right to a healthy environment.²⁰⁶

37. This is true especially for people living in Small Island Developing States, as discussed in detail in sub-section III.4 below.²⁰⁷ For instance, climate change adverse effects may expose individuals to a violation of their right to food²⁰⁸ with respect to the impact of temperature rise and ocean acidification on fisheries²⁰⁹ and of extreme weather events on the agriculture and fisheries sectors in small island developing States.²¹⁰

(18 July 2016), 35/20 A/HRC/RES/35/20 (7 July 2017) and 38/4 A/HRC/RES/38/4 (16 July 2018). Cfr. Amicus Brief submitted to the International Tribunal for the Law of the Sea by the UN Special Rapporteurs on Human Rights & Climate Change (Ian Fry), Toxics & Human Rights (Marcos Orellana), and Human Rights & the Environment (David Boyd) - ITLOS Case no. 31, “Request for an advisory opinion submitted by the Commission of Small Island States on climate change and international law” [*Special Rapporteurs’ Amicus Brief to ITLOS*], 30 May 2023.

²⁰¹ Ibid., Special Rapporteurs’ Amicus Brief to ITLOS, paras. 30-64. Cfr. UNEP’s written statement to ITLOS in Case no. 31, para. 76.

²⁰² See, e.g., HRCtee, General Comment No. 36 (n 41).

²⁰³ See, e.g., Report of the Office of the United Nations High Commissioner for Human Rights, A/HRC/32/23 (6 May 2016).

²⁰⁴ See, e.g., Report of the Special Rapporteur on human rights and environment, A/76/179 (19 July 2021); HRC Resolution A/RES/10/4 (25 March 2009); Report of the Special Rapporteur on human rights and environment, A/HRC/46/28 (19 January 2021).

²⁰⁵ United Nations Economic and Social Council, Draft Report of the Permanent Forum on Indigenous Issues, E/C.19/2023/L.2 (24 April 2023).

²⁰⁶ Special Rapporteurs’ Amicus Brief to ITLOS (n 200), paras. 49-52.

²⁰⁷ See amongst others, T Frere et al., “Climate Change and Challenges to Self-Determination: Case Studies from French Polynesia and the Republic of Kiribati” (2020) 129 *Yale Law Journal Forum* 648. See also Nauru’s written submission to the ITLOS in the context of Case no. 31, “Request for an advisory opinion submitted by the Commission of Small Island States on climate change and international law”, paras. 58-66.

²⁰⁸ HRC Resolution, “The right to food”, A/HRC/RES/40/7 (21 March 2019).

²⁰⁹ UNGA, “Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment”, A/74/161 (15 July 2019), para. 64.

²¹⁰ UNGA Resolution 77/245, “Follow-up to and implementation of the SIDS Accelerated Modalities of Action (SAMOA) Pathway and the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States”, A/RES/77/245 (10 January 2023), para. 39.

38. In the Torres Strait Islanders case,²¹¹ the HRCtee held that Australia's failure to timely adopt adaptation measures against climate change resulted in the violation of the human rights to home, privacy and family life, as well as of the cultural rights²¹² – respectively protected under Article 17 and 27 of the ICCPR – of the Indigenous peoples living in the Torres Strait Islands. Also, it observed that the adverse effects of climate change may result in the violation of the right to life under Article 6 ICCPR if States do not take adequate adaptation and mitigation measures.²¹³
39. Further, States' failure to address climate change with adequate measures may constitute a violation of the human right to a healthy environment,²¹⁴ as supported in a growing body of domestic courts' case law.²¹⁵ States have formally recognised the human right to a clean, healthy and sustainable environment in 2022,²¹⁶ and acknowledged that this right "is related to other rights",²¹⁷ so the failure to protect the human right to a healthy environment entails the violation of other fundamental rights depending on it. This recognition builds on decades of converging interpretative guidance under all global human rights treaties,²¹⁸ and this human

²¹¹ HRCtee, *Torres Strait Islands case* (n 40).

²¹² *Ibid.*, paras. 8.12 and 8.14.

²¹³ Para. 8.7. Cfr. HRCtee, *Teitiota v. New Zealand*, CCPR/C/127/D/2728/2016 (7 January 2020), para. 9.9.

²¹⁴ See the Special Rapporteurs' Amicus Brief to ITLOS (n 200), paras. 49-52, and the UNEP written statement to ITLOS (n 201), paras. 74-77.

²¹⁵ See, amongst others, Supreme Court of Colombia, *Demanda Generaciones Futuras v. Minambiente*, Decision of 5 Apr. 2018, and High Court at Lahore, *Leghari v. Federation of Pakistan*, W.P. No. 25501/201, Decision of 4 Apr. 2015. Supreme Court of the Netherlands, *Urgenda Foundation v. State of the Netherlands v. Urgenda*, no. 19/00135, Decision of 20 Dec. 2019, Supreme Court of Brazil, *PSB et al., v. Brazil*, Decision of 1 July 2022, Supreme Court of the State of Hawai'i, *In the Matter of the Application of HA WAI'I ELECTRIC LIGHT COMPANY, INC.*, SCOT -22-0000418, Decision of 13 Mar. 2023, and Commission on Human Rights of the Philippines 2022, *National Inquiry on Climate Change Report*, May 2022, Case No. CHR-NI-2016-0001.

²¹⁶ UNGA Resolution 76/300, "The human right to a clean, healthy and sustainable environment", A/RES/76/300 (1 August 2022); cfr. HRC, 2021, A/HRC/RES/48/13 (18 October 2021).

²¹⁷ *Ibid.*, UNGA Resolution 76/300, para. 2. In this regard see, amongst many, the written Statement of the Federated States of Micronesia to the ITLOS in Case no. 31, para. 64.

²¹⁸ Framework Principles on Human Rights and the Environment (n 30).

right is enshrined in most regional human rights systems.²¹⁹ In addition, the full enjoyment of human rights such as, amongst others, freedom of expression and association, participatory rights and effective remedies, is considered key to the effective protection of the environment and to the very realisation of the human right to a healthy environment.²²⁰

40. Against this background, some of the international law instruments mentioned in paragraph 12 above do recognise the interlinkages between climate change and human rights. For instance, the UNFCCC describes climate change as a “common concern of humankind”,²²¹ specifically envisages the benefit of present and future generations as one of its principles,²²² and links the definition of “adverse effects of climate change” to the harmful consequences on “human health and welfare”.²²³ The Paris Agreement preamble expressly calls for States to “respect, promote and consider their respective obligations on human rights”.²²⁴ In addition, both treaties clarify that the objective of stabilising and reducing greenhouse gas concentration in the atmosphere is meant to, amongst other things, eradicate poverty²²⁵ and “ensure that food production is not threatened”.²²⁶

41. With regard to the protection of the marine environment, the UNCLOS acknowledges that “the problems of ocean space are closely interrelated and need to be considered as a whole”,²²⁷ and specifically aims at “the realization of a just

²¹⁹ See, amongst others, Articles 16 and 24 of the African Charter on Human and Peoples’ Rights (ACHPR), adopted in Nairobi on 27 June 1981, entered into force on 21 October 1986, 1520 *United Nations Treaty Series* p. 217; Article 11 of the Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights (San Salvador Protocol), adopted in San Salvador on 17 November 1988, entered into force on 16 November 1999 (OEA/Ser.A/44, Treaty Series no. 69); Article 38 of the Arab Charter on Human Rights, League of Arab States, ST/HR/JCHR/NONE/2004/40/Rev.1.

²²⁰ Framework Principles on Human Rights and the Environment (n 30), Principle 2, para. 4.

²²¹ 1st preambulatory clause, UNFCCC; cfr. 11th preambulatory clause Paris Agreement.

²²² Article 3(1) UNFCCC.

²²³ Article 1(1) UNFCCC.

²²⁴ 11th preambulatory clause, Paris Agreement.

²²⁵ Article 2(1) Paris Agreement. Cfr. Article 4(7) UNFCCC.

²²⁶ Article 2 UNFCCC. Cfr. Article 2(1)(b) Paris Agreement. See also the Cancun Agreements, whereby UNFCCC parties “should in all climate change related actions, fully respect human rights”, Decision 1/CP.16, Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention.

²²⁷ 3rd preambulatory clause, UNCLOS.

and equitable international economic order which takes into account the interests and needs of mankind as a whole”.²²⁸ As a living treaty, UNCLOS provides several other entry points for the protection of the individual in the law of the sea.²²⁹ The notion of “pollution” under Article 1(1)(4) UNCLOS is relevant from an international human rights law perspective,²³⁰ and so are also the references to the “nutritional needs of the populations”²³¹ in Part V and to “common heritage of [hu]mankind” in Part XI.²³² In a similar vein, the BBNJ Agreement makes both explicit and implicit references to human rights.²³³ For instance, both the preamble and the general principles refer to the respect, promotion and use of “relevant traditional knowledge of Indigenous Peoples and local communities, where available”.²³⁴ Also, the Agreement considers ABMTs as possible measures to “support food security and other socio-economic objectives, including the protection of cultural values”.²³⁵ In addition, EIAs and SEAs under the BBNJ Agreement may involve considerations of the “cumulative impacts”²³⁶ of a given activity, project or policy, on local communities,²³⁷ thereby including human rights implications on women and children,²³⁸ small-scale fishers²³⁹ and Indigenous peoples.

42. The linkages between the climate, ocean and human rights have also been addressed under the CBD. For instance, CBD Decisions recognise the links between

²²⁸ 5th preambulatory clause, UNCLOS.

²²⁹ See, amongst many, the references to safety and working conditions under Article 94 UNCLOS and the very text of article 98 and 99 UNCLOS respectively on the protection of life at sea and on the prohibition of slave trade. Cfr. B Oxman, “Human Rights and the United Nations Convention on the Law of the Sea” (1997) 36 *Columbia Journal of Transnational Law* 399, at 401–402. See also T Treves, “Human rights and the law of the sea” (2010) 28 *Berkeley Journal of International Law* 1; I Papanicolopulu, *International Law and the Protection of People at Sea* (OUP, 2018); T Ndiaye, “Human Rights at Sea and the Law of the Sea” (2019) 10 *Beijing Law Review* 261.

²³⁰ The definition of pollution under UNCLOS contains an express reference to “hazards to human health”.

²³¹ Articles 69(2)(d) and 70(3)(d) UNCLOS.

²³² See, amongst others, Article 136 UNCLOS.

²³³ E Morgera et al., “Addressing the Ocean-Climate Nexus in the BBNJ Agreement...” (n 68).

²³⁴ Article 7(j) BBNJ Agreement.

²³⁵ Article 17(d) BBNJ Agreement.

²³⁶ Article 1(6) BBNJ Agreement.

²³⁷ Cfr. Articles 33-39 BBNJ Agreement.

²³⁸ S Shields et al., “Children’s Human Right to Be Heard at the Ocean-Climate Nexus” (2023) 38 *International Journal of Marine and Coastal Law* 545.

²³⁹ J Nakamura et al., “International Legal Responses for Protecting Fishers’ Fundamental Rights Impacted by a Changing Ocean” (2023) 38 *International Journal of Marine and Coastal Law* 516.

the human right to health and biodiversity, such as food and nutrition security, infectious and non-communicable diseases, as well as the psychological and biocultural dimensions of health.²⁴⁰ These decisions clarify CBD Parties' obligations to integrate knowledge about the interlinkage between biodiversity and human health into relevant national policies, risk analysis and vulnerability assessments;²⁴¹ address unintended negative impacts of biodiversity interventions on health and of health interventions on biodiversity;²⁴² and adopt preventive measures for human health that give due regard to the resilience of socio-ecological systems.²⁴³

43. At the same time, States' human rights obligations require them to refrain from causing or contributing to foreseeable harm, and to take all necessary measures to prevent others from causing or contributing to harm.²⁴⁴ To that end, it is essential to consider the full interconnected range of marine ecosystem services (including deep-sea ecosystem services) that are negatively impacted by climate change (food and water supply, renewable energy, benefits for health and well-being, cultural values, tourism, trade, and transport). The ICJ engaged with the notion of ecosystem services only once in 2018 for the purpose of calculating the environmental damage in respect of Nicaragua's activities in Costa Rica's territory.²⁴⁵ On that occasion, the Court endorsed an overall assessment approach, underscoring the special interconnected nature of the affected ecosystem in the case at hand.²⁴⁶ However, ecosystem services science has developed in the past years, especially revealing the role of marine ecosystems for planetary health (safe climate, global water cycle) and for cultural services.²⁴⁷ This evidence needs to be

²⁴⁰ CBD Decision XIII/6, "Biodiversity and Human Health", CBD/COP/DEC/XIII/6 (14 December 2016). Cfr. CBD Decision XIV/4, "Biodiversity and Human Health", CBD/COP/DEC/14/4 (30 November 2018) and, more recently, CBD Decision XV/29, "Biodiversity and Human Health", CBD/COP/DEC/15/29 (19 December 2022).

²⁴¹ See generally *ibid.*, CBD Dec. XIII/6 (2016).

²⁴² *Ibid.*, para. 4(e).

²⁴³ CBD Dec. XIV/4 (2018) (n 240). See more generally E Morgera, "Biodiversity as a Human Right and its Implications for the EU's External Action", Policy Department for External Relations – Directorate General for External Policies of the Union (April 2020), at 14.

²⁴⁴ CIEL and GPI's joint submission to the ITLOS (n 137), para. 55.

²⁴⁵ *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua), Compensation, Judgment*, ICJ Reports 2018, p. 15.

²⁴⁶ *Ibid.*, paras. 79-81.

²⁴⁷ E Morgera et al., "Addressing the Ocean-Climate Nexus in the BBNJ Agreement..." (n 68).

considered²⁴⁸ as sufficient scientific knowledge to identify and avoid “foreseeable negative impacts on human rights” that are dependent on ecosystem services²⁴⁹ that can arise from decisions that may negatively affect marine biodiversity.

44. These obligations apply also extraterritorially and with respect to conduct contributing to climate change and to forms of environmental harm, as upheld, amongst others, by the Inter-American Court of Human Rights (IACtHR) in its 2017 Advisory Opinion on Human Rights and the Environment.²⁵⁰ Thus, building on the UN Committee on the Rights of the Child’s findings in *Sacchi et al., v Argentina et al.*,²⁵¹ according to which “the potential harm of the State party’s acts or omissions regarding the carbon emissions originating in its territory was reasonably foreseeable” in light of the existing scientific evidence,²⁵² we submit that States have the obligation to mitigate and regulate any conduct contributing to climate change or to any form of environmental harm, and to immediately reduce emissions and phase out fossil fuels.²⁵³
45. A mutually supportive interpretation of the above provisions in light of States’ obligations under both international human rights law and international biodiversity law would not only afford better protection to the climate system, including the marine environment, of the most vulnerable States such as small island developing States; it would also strengthen the rights of the individuals mostly affected by the climate crisis including, amongst others, Indigenous peoples and local communities as well as children and future generations, in addition to furthering the protection of every human being.

²⁴⁸ H Niner et al., (n 130).

²⁴⁹ Framework Principles on Human Rights and the Environment (n 30). See also HRC, “Report of the Special Rapporteur...” 2017 (n 30), para. 34.

²⁵⁰ IACtHR, Advisory Opinion on the Environment and Human Rights (n 142), paras. 141-142, and para. 152.

²⁵¹ Committee on the Rights of the Child (CteeRC), “Decision adopted by the Committee on the Rights of the Child under the Optional Protocol to the Convention on the Rights of the Child on a communications procedure in respect of Communications No. 104/2019” [CteeRC, *Sacchi v. Argentina*], CRC/C/88/D/104/2019 (8 October 2021).

²⁵² *Ibid.*, paras. 10.11 and 10.14.

²⁵³ Our arguments echo CIEL and GPI’s joint submission to the ITLOS (n 137), paras. 57-60 and 61-62.

46. Against this background, below we address the protection of four categories of “peoples and individuals of the present and future generations affected by the adverse effects of climate change”,²⁵⁴ namely: A) Indigenous peoples and local communities, B) children, C) future generations and D) SIDS.

A) Indigenous Peoples and Local Communities

47. The CBD has already been interpreted and applied harmoniously with human rights law in as far as Indigenous peoples and local communities are concerned. For instance, the CBD preamble underscores the “close and traditional dependence of many [I]ndigenous and local communities embodying traditional lifestyles on biological resources”²⁵⁵ and acknowledges “the vital role that women play in the conservation and sustainable use of biological diversity” and the need for their “full participation ... at all levels of policy-making and implementation”.²⁵⁶ The operative text of the CBD includes important references to, e.g., Indigenous peoples’ and local communities’ knowledge and practices in sustainably using biodiversity,²⁵⁷ public participation in the conduct of EIAs,²⁵⁸ and the “risks to human health” associated with the use and release of living modified organisms.²⁵⁹

48. These obligations²⁶⁰ have been clarified through decisions adopted by consensus by 196 CBD Parties²⁶¹ to entail the need to “enhance the integration of climate-change considerations related to biodiversity” with respect to the rights and traditions of Indigenous peoples and local communities.²⁶² For instance, in the

²⁵⁴ UNGA Resolution 77/276 (n 2), p. 3.

²⁵⁵ 12th preambulatory clause, CBD.

²⁵⁶ 13th preambulatory clause, CBD.

²⁵⁷ Articles 8(j) and 10(c) CBD.

²⁵⁸ Article 14(a) CBD.

²⁵⁹ Article 8(g) CBD.

²⁶⁰ Article 8(j) and 10(c) CBD.

²⁶¹ E Morgera, “No Need to Reinvent the Wheel for a Human Rights-Based Approach to Tackling Climate Change: The Contribution of International Biodiversity Law” in E Hollo et al., (eds.), *Climate Change and the Law* (Springer, 2013) 359.

²⁶² CBD Dec IX/16 (2008) (n 134), para. 4(a). Cfr. CBD Decision IX/2, “Agricultural biodiversity: biofuels and biodiversity”, UNEP/CBD/COP/DEC/IX/2 (9 Octobre 2008), para. 2(b) and CBD Decision X/37, “Biofuels and biodiversity”, UNEP/CBD/COP/DEC/X/37 (29 October 2010), paras. 2, 4 and 8-10. For a broader view, see Framework Principles on Human Rights and the Environment (n 30), Principle 15.

implementation of climate change adaptation measures, CBD Parties underscored the relevance of ecosystem restoration for the implementation of the United Nations Declaration on the Rights of Indigenous Peoples²⁶³ and the need to engage women and other relevant stakeholders at all stages.²⁶⁴ By the same token, CBD Parties have committed to promoting community-based measures in reef-dependent coastal communities²⁶⁵ and to applying measures to maintain their sustainable livelihoods and ensure their food security,²⁶⁶ including by providing resources and capacity-building.²⁶⁷ Further, CBD Parties agreed to enhance “coordination and collaboration” with Indigenous peoples and local communities, fishers, civil society and the general public, in the conservation and management of biodiversity in cold-water areas, with a view to integrating traditional knowledge and increasing transparency.²⁶⁸ All of the above, in turn, means genuinely involving Indigenous peoples and local communities in the decision-making and management processes,²⁶⁹ and recognising their role as knowledge- and human rights-holders²⁷⁰ by underscoring the importance of their free prior informed consent²⁷¹ in the context of selecting, implementing, monitoring and reviewing climate change response measures. This evolutive interpretation of the CBD is enshrined in the Framework Principles on Human Rights and the Environment,²⁷² which spell out in a detailed manner how States are to discharge their obligations towards Indigenous peoples and local communities.²⁷³ The Framework Principles were developed by the UN Special Rapporteur on Human Rights and the Environment to synthesize growing “coherence in the interpretation by binding human rights tribunals and authoritative human rights bodies,” thereby providing “strong evidence of the converging trends

²⁶³ CBD Dec. XIV/5 (2018) (n 79), Annex.

²⁶⁴ CBD Decision XIII/5, “Ecosystem restoration: short-term action plan”, CBD/COP/DEC/XIII/5 (10 December 2016), Annex, paras. 9-10.

²⁶⁵ CBD Dec. XII/23 (2014) (n 191), Annex, para. 8.1(b).

²⁶⁶ CBD Dec. XIV/5 (2018) (n 79), para. 9.

²⁶⁷ *Ibid.*, para. 10(f).

²⁶⁸ For instance, in the conservation and management of biodiversity in cold-water areas: cfr. CBD Dec. XIII/11 (n 196) (2016), Annex II, para. 5.5(e).

²⁶⁹ CBD Dec. X/29 (2010) (n 114), para. 13(b) and CBD Dec. X/33 (2010) (n 131), para. 8(u-v). Cfr. *Ibid.*, CBD Dec. XIII/11, Annex, para. 5.5(a).

²⁷⁰ CBD Dec. XIV/5 (2018) (n 79), para. 13(a).

²⁷¹ *Ibid.*, Annex, para. 10. As far as it concerns Indigenous- and Community-Conserved Areas (ICCAs), see *ibid.*, para. 8(j) and *ibid.*, para. 3(a-h).

²⁷² Framework Principles on Human Rights and the Environment (n 30).

²⁷³ *Ibid.*, Principle 15(a-d).

towards greater uniformity and certainty” towards a mutually supportive interpretation that “should be accepted as a reflection of actual or emerging international human rights law;” and even for States that have not formally accepted the international norms upon which this coherent interpretations is based, the Framework Principles should be considered “best practices.”²⁷⁴

49. The CBD Akwé: Kon Guidelines,²⁷⁵ for instance, have been relied upon by several international human rights bodies²⁷⁶ as they provide a step-by-step approach to assessing inter-linked socio-cultural and biodiversity impacts in relation to sacred sites and areas traditionally occupied or used by Indigenous peoples and local communities. The Guidelines specifically relate to: beliefs systems, languages and customs, traditional systems of natural resource use, maintenance of genetic diversity through indigenous customary management, exercise of customary laws regarding land tenure, as well as distribution of resources and benefits from transgenerational aspects, including opportunities for elders to pass on their knowledge to youth.²⁷⁷ The Akwé: Kon Guidelines also call for the integration of fair and equitable benefit-sharing as part of any assessment, which is a requirement for the protection of the human rights of Indigenous peoples.²⁷⁸ This conduct is also expected under the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (Small-Scale Fisheries) Guidelines²⁷⁹ and the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas.²⁸⁰ Such early consideration of fair and equitable benefit-sharing is essential to move away from an exclusive focus on ‘damage

²⁷⁴ Ibid., paras. 7-9.

²⁷⁵ Akwé: Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessments 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; in CBD Decision VII/16, “Article 8(j) and Related Provisions”, UNEP/CBD/COP/DEC/VII/16 (13 April 2004) [Akwé: Kon Voluntary Guidelines].

²⁷⁶ HRC, “Report of the Special Rapporteur...”, 2017 (30) para. 72; Framework Principles on Human Rights and the Environment (n 30), Principles 8 and 15; Committee on the Elimination of Racial Discrimination, “Concluding Observations on the Combined Thirteenth to Fifteenth Periodic Reports of Suriname”, CERD/C/SUR/CO/13-15 (25 September 2015), para. 26.

²⁷⁷ Ibid., para. 46.

²⁷⁸ Various international interpretative guiding documents have clarified this obligation under international human rights treaty law, as summarised in the Framework Principles on Human Rights and the Environment (n 30), Principle 15.

²⁷⁹ Food and Agriculture Organisation, “Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication”, (FAO 2014), Sections 5.1 and 5.10.

²⁸⁰ HRC, “United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas”, UN Doc A/HRC/RES/39/12 (8 October 2018), Article 5.

control' issues.²⁸¹ Carefully thinking about benefits from the viewpoint of Indigenous peoples and other communities, at the early stage of scoping for impacts, in and of itself requires a systematic consideration of both the negative impacts (e.g. potential damage to ways of life, livelihoods, well-being and traditional knowledge) and the positive impacts on food, health, environmental sustainability, together with community well-being, vitality and viability (e.g. employment levels and opportunities, welfare, education and its availability, standards of housing, infrastructure, services).²⁸²

50. This progressive development of international law on biodiversity and human rights is also reflected in the BBNJ Agreement, which includes key obligations on EIAs that entail the identification of “key environmental and any associated impacts, such as economic, social, cultural and human health impacts, including potential cumulative impacts”.²⁸³ Second, the assessment must be carried out “by using the best available science and scientific information and, where available, relevant traditional knowledge of Indigenous peoples and local communities”.²⁸⁴ The recognition of their knowledge opens the way for the protection of cultural rights, as well as related civil and political, and social and economic rights. Third, the obligation to “consider conducting” SEAs²⁸⁵ may be interpreted as requiring States to assess the need for SEAs with local actors, as well as with other States (multilaterally or unilaterally),²⁸⁶ and to provide justifications for any decisions not to conduct one. The power of the COP to mandate SEAs is also relevant here,²⁸⁷ as discussed above in Section II.

²⁸¹ E Morgera (n 109).

²⁸² Akwé: Kon Voluntary Guidelines (n 275) para. 40.

²⁸³ Article 31(1)(b) BBNJ Agreement. For the definition of “cumulative impact”, see Article 1(6) BBNJ Agreement. See more generally the discussion in sub-section II.C, para. 33.

²⁸⁴ Article 31(1)(b) BBNJ Agreement.

²⁸⁵ Article 39(1) BBNJ Agreement.

²⁸⁶ Consider, for instance, opportunities for international collaboration on this as part of bilateral or unilateral development cooperation agreements, or trade and investment agreements that contain environmental protection and sustainable development clauses. For a general background, see G Marin Duran and E Morgera, *Environmental Integration in the EU's External Relations: Beyond Multilateral Dimensions* (Hart, 2012); and S Jinnah and E Morgera, “Environmental Provisions in American and EU Free Trade Agreements: A Preliminary Comparison and Research Agenda” (2013) 22 *Review of European Community and International Environmental Law* 324.

²⁸⁷ E Morgera et al., “Addressing the Ocean-Climate Nexus in the BBNJ Agreement...” (n 68).

B) Children

51. To date, 196 States are party to UNCRC, which makes it the most widely ratified human rights instrument in history.²⁸⁸ Its treaty obligations are all relevant to the “protection of the climate system and of other parts of the environment”, besides playing a key role in ensuring the protection of yet another group of individuals heavily “affected by the adverse effects of climate change”.²⁸⁹ As a matter of fact, there exist critical links between both substantive and procedural rights protected under the UNCRC and the protection of the environment, including the marine environment.²⁹⁰ For instance, more than half of the oxygen on Earth is produced in the ocean by marine plankton and photosynthetic organisms, hence safeguarding a healthy ocean is a key substantive component of children’s right to life.²⁹¹ In addition, children’s right to health is heavily dependent on access to food and clean water, the latter being inherently linked to the degradation of ecosystems and biodiversity.²⁹² Furthermore, children’s right to participate in decisions affecting their lives and be effectively heard is protected under the UNCRC as “every child has the right to express their views, feelings and wishes in all matters affecting them, and to have their views considered and taken seriously”.²⁹³
52. This interpretation is now confirmed by the UN Committee on the Rights of the Child in the General Comment 26 on children’s rights and the environment, with a special focus on climate change,²⁹⁴ with a view to clarifying States obligations under the UNCRC. Notably, the General Comment upholds children’s rights to a healthy

²⁸⁸ As of May 2023, the United States of America is the only State that has so far only signed the UNCRC.

²⁸⁹ UNGA Resolution (n 2), p. 3.

²⁹⁰ S Shields et al., (n 238), at 551-562. See generally, HRC, “Protection of the rights of the child in the implementation of the 2030 Agenda for Sustainable Development”, Report of the United Nations High Commissioner for Human Rights, A/HRC/34/27 (15 December 2016).

²⁹¹ CY Keong, “The Ocean Carbon Sink and Climate Change: A Scientific and Ethical Assessment” (2019) 10 *International Journal of Environmental Science and Development* 246, at 248; E Morgera et al., “SDG14 and children’s human rights” (One Ocean Hub Report, August 2022), at 5, available at https://pure.strath.ac.uk/ws/portalfiles/portal/142898190/Morgera_et_al_OOH_2022_SDG14_and_childrens_human_rights.pdf.

²⁹² World Health Organisation, “The Global Ocean and Marine Resources”, Policy Brief Europe (Copenhagen, 2010), at 109. See also *ibid.*, Morgera et al., at 4.

²⁹³ Article 12 UNCRC. See, more in depth, Shields et al., (n 238).

²⁹⁴ CteeRC, “General comment No. 26 (2023) on children’s rights and the environment, with a special focus on climate change”, CRC/C/GC/26 (22 August 2023).

environment as implicit in the text of the UNCRC, and further provides guidance as to its interpretation and application in such a way as to be consistent with the protection of the marine environment. For instance, the General Comment 26 clarifies that for the realisation of children’s rights to a healthy environment, States have to take immediate action to e.g. conserve, protect and restore biodiversity, including marine biodiversity,²⁹⁵ prevent marine pollution – e.g., amongst others, via the introduction of greenhouse gases into the marine environment²⁹⁶ – and ensure that industrial fisheries are meant to fight malnutrition and promote children’s right to development.²⁹⁷ The extensive provisions of General Comment 26 on State obligations in relation to climate change should also be read in a mutually supportive way with international biodiversity law and the law of the sea, to ensure a holistic approach to the protection of children’s rights in the context of the protection of the marine environment at the ocean-climate nexus.²⁹⁸

53. It is essential to understand State obligations to effectively address climate change as a matter also of human rights obligations of non-discrimination against children. According to the UNCRC, “States Parties shall respect and ensure the rights set forth in the present Convention to each child within their jurisdiction without discrimination of any kind, irrespective of the child’s or his or her parent’s or legal guardian’s race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status”.²⁹⁹ This has been interpreted as an obligation for States to ensure that children are not disproportionately affected by environmental harm, including by considering “possible future risk and harm”, taking precautionary measures, and adopting, implementing, and effectively enforcing non-retrogressive standards.³⁰⁰

54. In addition, the rights and obligations under the UNCRC offer key guidance to substantiate the preventive and precautionary principles.³⁰¹ Children’s human rights

²⁹⁵ Ibid., para. 65(e).

²⁹⁶ Ibid., para. 65(f).

²⁹⁷ Ibid., para. 65(c).

²⁹⁸ Ibid., paras. 5, and 63-64

²⁹⁹ Article 12 UNCRC.

³⁰⁰ HRC, “Realizing the rights of the child through a healthy environment Report of the United Nations High Commissioner for Human Right”, A/HRC/43/30 (3 January 2020), para. 52–55.

³⁰¹ S Shields et al., (n 238).

to life, survival, health and food call for immediate action, whereas their right to development can serve as a basis to assess the long-term effects of environmental impact on children's life and well-being at later stages of their lives.³⁰² Accordingly, applying these principles in the context of the UNCRC means that States have the due diligence obligation "to take appropriate preventive measures to protect children against reasonably foreseeable environmental harm and violations of their rights", which entails "assessing the environmental impacts of policies and projects, identifying and preventing foreseeable harm, mitigating such harm if it is not preventable and providing for timely and effective remedies to redress both foreseeable and actual harm".³⁰³ Also, it requires States to "refrain from any action that would limit children's rights to express their views on matters relating to the environment and from impeding access to accurate environmental information".³⁰⁴ Lastly, it requires States to "take into account the possibility that environmental decisions that seem reasonable individually and on a shorter timescale can become unreasonable in aggregate and when considering the full harm that they will cause to children throughout their life courses."³⁰⁵

C) Future Generations

55. Future generations are the ones who, in spite of their lack of contribution to climate change, will suffer the most from its adverse effects, as recognised, amongst others, by the UNGA and the Human Rights Council.³⁰⁶ In this regard, UN Special Rapporteur on Human Rights and the Environment John Knox clarified that the debate on the rights of future generations must "take into account the rights of the children who are constantly arriving, or have already arrived, on this planet", thus bringing into play the principle of intergenerational equity.³⁰⁷ This principle calls on States to carefully balance the interests of present and future generations, and to pay due regard to the distributive effects of their policies and measures, including environmental ones. Intergenerational equity is expressly mentioned in numerous

³⁰² CtteeRC, "General Comment 26" (n 294), para. 25.

³⁰³ *Ibid.*, para. 69.

³⁰⁴ *Ibid.*, para. 70.

³⁰⁵ *Ibid.*, para. 19.

³⁰⁶ UNGA Resolution 76/300 (n 216); cfr. HRC Resolution A/HRC/RES/52/23 (13 April 2023), preamble.

³⁰⁷ Special Rapporteur J Knox 2018 (n 110), para. 68.

international law instruments.³⁰⁸ It calls on States to safeguard “(t)he natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems ... (for) the benefit of present and future generations”.³⁰⁹ The international definition of ‘sustainable use’ of biological resources, under the CBD, as the “use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations”.³¹⁰ The argument here is that interpretation of inter-generation equity must be based on the respect of children’s human rights, as outlined in the previous section.

56. In addition, the recently adopted Maastricht Principles on the Human Rights of Future Generations³¹¹ clarify the interlinkages between the protection of the environment – including the marine environment – and the human rights of future generations, and highlight numerous violations in respect of, e.g., the enjoyment of natural resources or decision-making.³¹² In this regard, the Principles aim to clarify that States have the obligation to respect, protect and fulfil the human rights of future generations,³¹³ whereby such obligations extend to all State conducts, whether actions or omissions, and whether undertaken individually or collectively,³¹⁴ and further urge States to ensure effective remedies³¹⁵ and the meaningful representation of future generations in decision-making.³¹⁶

57. The mutually supportive interpretations outlined in this submission find resonance in the Montreal-Kunming Global Biodiversity Framework (GBF), the global blueprint aiming to “catalyze, enable and galvanize urgent and transformative action by

³⁰⁸ See, amongst many, Article 3(1) UNFCCC; cfr. Paris Agreement, preamble.

³⁰⁹ Stockholm Declaration on the Human Environment, A/CONF.48/14/Rev. 1 (1973), A/Conf.48/14, 2, Corr. 1 (1972), Principle 2.

³¹⁰ Article 2 CBD.

³¹¹ S Liebenberg et al., “Maastricht Principles on the Human Rights of Future Generations” (July 2023), available at <https://www.rightsoffuturegenerations.org/home>.

³¹² *Ibid.*, see, respectively, para. 17 and para. 22.

³¹³ *Ibid.*, para. 13(a).

³¹⁴ *Ibid.*, para. 13(b).

³¹⁵ *Ibid.*, para. 13(d).

³¹⁶ *Ibid.*, para. 22(a). In this regard, see Shields et al., (n 238).

Governments, and subnational and local authorities with the involvement of all of society, to halt and reverse biodiversity loss”.³¹⁷ In the GBF, CBD Parties agreed on a number of targets minimising “the impact of climate change and ocean acidification on biodiversity and increasing its resilience through nature-based solutions and ecosystem-based approaches”,³¹⁸ thus enhancing “nature’s contribution to people”.³¹⁹ For the first time CBD Parties also expressly endorsed a human rights-based approach to reinforce and effectively implement CBD obligations, to ensure due consideration to the rights of Indigenous peoples and local communities, women and girls,³²⁰ children and youth, persons with disabilities, and environmental human rights defenders.³²¹ For instance, the GBF “acknowledge(d) the important roles and contributions of indigenous peoples and local communities as custodians of biodiversity and as partners in its conservation, restoration and sustainable use”,³²² and specifically called for the fair and equitable sharing of benefits deriving from the utilisation of genetic resources with Indigenous people and local communities.³²³ In this regard, the GBF recognised Indigenous peoples’ and local communities’ rights in several Targets, specifically protecting and encouraging their customary practices³²⁴ and envisaging the mechanism of the free, prior and informed consent for the sharing of traditional knowledge, innovations, practices and technologies.³²⁵ Lastly, the GBF also included a Target ensuring “the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making”,³²⁶ especially underscoring the relevance of gender equality in the implementation of the whole Framework.³²⁷ All these references are helpful to understand how the human right to a healthy environment can inform the interpretation of the CBD in relation to State obligations to protect the climate system and other parts of the environment.

³¹⁷ CBD Dec. XV/4 (2022) (n 103), para. 4.

³¹⁸ *Ibid.*, Target 8.

³¹⁹ *Ibid.*, Target 11.

³²⁰ As for women, *cfr.* CBD Dec. XIII/5 (2016) (n 264), Annex, paras. 8-10.

³²¹ CBD Dec. XV/4 (2022) (n 103), Target 22.

³²² *Ibid.*, para. 7(a).

³²³ *Ibid.*, para. 12, Goal C. *Cfr.* *Ibid.*, Target 13.

³²⁴ *Ibid.*, para. 9.

³²⁵ *Ibid.*, Target 21.

³²⁶ *Ibid.*, Target 22.

³²⁷ *Ibid.*, Target 23.

ONE OCEAN HUB



D) Small Island Developing States

57. Small Island Developing States (SIDS), many of which prefer to be viewed as large ocean states,³²⁸ are a distinct group of 39 States and 18 Associate Members of United Nations regional commissions³²⁹ that “face unique social, economic, and environmental vulnerabilities.”³³⁰ Recognised as a special case both for their environment and development at the Rio Conference,³³¹ SIDS are located across the Caribbean, the Pacific, and the Atlantic, Indian Ocean and South China Sea (AIS) regions, and despite their vulnerabilities.³³² SIDS are exceedingly rich in terrestrial biodiversity.³³³ While SIDS have relied heavily on fisheries for centuries, the richness of their marine biodiversity is largely unknown, but potentially unquantifiable. Overarchingly, the lion-share of their natural resource capital resides in the ocean, since the Exclusive Economic Zones (EEZ) under their control are, on average, 28 times the country’s land mass.³³⁴

³²⁸ N Chan, “Large Ocean States”: Sovereignty, Small Islands, And Marine Protected Areas in Global Oceans Governance” (2018) 24 *Global Governance: A Review of Multilateralism and International Organizations* 537-555; A Hume et al., “Towards An Ocean-Based Large Ocean States Country Classification” (2021) 134 *Marine Policy* 104766; F Santos et al., “A Sustainable Ocean For All” (2022) 1 *npj Ocean Sustainability* 1-2.

³²⁹ Full list with the UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (OHRLLS), available at <https://www.un.org/ohrlls/content/list-sids>.

³³⁰ Taken from the OHRLLS official website, at <https://www.un.org/ohrlls/content/about-small-island-developing-states>.

³³¹ Ibid.

³³² The IACtHR in its 2017 Advisory Opinion highlighted that coastal and small island communities are especially vulnerable to environmental degradation. The Opinion addressed the impact of infrastructure projects on the coastal marine environment in relation to the Regional Seas Programme of the Cartagena Convention, and international obligations concerning prevention, precaution, mitigation of damage, and cooperation between the States potentially affected. Additionally, it noted that small islands and coastal areas are fragile but important ecosystems, prone to combating desertification and drought, with unique features and resources that generally extend beyond national borders. IACtHR, Advisory Opinion on the Environment and Human Rights (n 142), para. 67.

³³³ N Myers et al., (n 49) and N Myers (n 49); cfr. RA Mittermeier et al., “Biodiversity Hotspots and Major Tropical Wilderness Areas: Approaches to Setting Conservation Priorities” (1998) 12 *Conservation Biology* 516.

³³⁴ OHRLLS official website (n 330).

58. The mutual supportiveness of the UNFCCC, the CBD and the UNCCD, along with the regime under UNCLOS and its three Implementing Agreements,³³⁵ is therefore fundamental for addressing the climate conundrum from the perspective of SIDS. Additionally, in the African and Caribbean Regions, this is supported by the Regional Seas Conventions and their associated regimes - notably the Cartagena Convention³³⁶ in the Wider Caribbean Region, the Nairobi Convention³³⁷ for the Eastern Africa Region, and the Abidjan Convention³³⁸ for West and Central Africa - large marine ecosystem (LME) arrangements³³⁹ – e.g. the Benguela Current³⁴⁰ and the CLME+ (Caribbean and North Brazilian Shelf)³⁴¹ – and regional fisheries management organisations (RFMOs) such as the International Commission for the Conservation of Atlantic Tunas in the Caribbean Region, the Indian Ocean Tuna Commission and the Southern Indian Ocean Fisheries Agreement in the Indian Ocean, the Western and Central Pacific Fisheries Commission and the South Pacific Regional Fisheries Management Organisation in the Pacific.
59. Because of their size and geographical characteristics, SIDS are integrated land-sea systems, which require the management of land and sea areas collectively as a single unit, under the concept of the ridge to reef (R2R) approach. This is especially critical where climate change has become a regional and localised threat to hillsides, coral reefs, as well as coastal zones, because of a range of direct impact, leading to, e.g. widescale degradation of the region's coral reefs from increased

³³⁵ These being the 1994 Implementing Agreement on Part XI (n 69Error! Bookmark not defined.), the U N F S A (n 119Error! Bookmark not defined.), the BBNJ Agreement (n 51Error! Bookmark not defined.).

³³⁶ Convention for the protection and development of the marine environment of the wider Caribbean region, with annex and protocol concerning cooperation in combating oil spills in the wider Caribbean region [Cartagena Convention], adopted in Cartagena on 24 March 1983 and entered into force on 11 October 1986, 1506 United Nations Treaty Series 157.

³³⁷ Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African Region [Nairobi Convention], adopted in Nairobi on 21 June 1985 and entered into force on 30 May 1996 Official Journal 1986 C253/10.

³³⁸ Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region [Abidjan Convention], adopted in Abidjan on 23 March 1981 and entered into force on 5 August 1984, 20 International Legal Materials 746.

³³⁹ K Sherman and AM Duda, "Large Marine Ecosystems: an Emerging Paradigm for Fishery Sustainability" (1999) 24 *Fisheries* 15.

³⁴⁰ B Erinoshio et al., "Transformative Governance for Ocean Biodiversity" in IJ Visseren-Hamakers and MTJ Kok (eds.), *Transforming Biodiversity Governance* (CUP, 2022) 313.

³⁴¹ The CLME+ Region consists of the combination of two LMEs, namely the Caribbean Large Marine Ecosystem and the North Brazilian Shelf. Further info available at <https://clmeplus.org/clme-region/>.

and intensified storms, coral bleaching, and acidification.³⁴² Reefs are also impacted by local activities such as overfishing, coastal development, in some cases extractive industries (primarily oil & gas) and watershed pollution. On the landward side, there has been an increase in deforestation, leading to scarred hillsides, desertification, unsustainable agricultural systems, and a decline in freshwater resources.³⁴³ These impacts in turn intensify effects on the coastal zone and the marine environment, including from land-based pollution. Expanding land developments and the threat of sea level rise are also persistent threats on the coast. Given the smallness and concentration of populations on the coastal margins, the ecosystem connectivity between the land-sea margin is therefore greater than the sum of the parts of conservation of land and sea separately.³⁴⁴

60. The R2R approach benefits are particularly suited for SIDS, as their vulnerability to climate change is exacerbated by their location in high-disaster risk zones, narrow resource bases, and limited availability of data.³⁴⁵ This nexus has been long recognised in the customary resource management systems of small island systems,³⁴⁶ many of which transcend both watershed and coastal marine systems.³⁴⁷ Examples include the concept of *vanua* in Fiji,³⁴⁸ *dina* in Mali,³⁴⁹ and local and

³⁴² DK Gledhill et al., "Ocean Acidification of the Greater Caribbean Region 1996–2006" (2008) 113 *Journal of Geophysical Research: Oceans* 31; C Langdon et al., "Two Threatened Caribbean Coral Species Have Contrasting Responses to Combined Temperature and Acidification Stress" (2018) 62 *Limnology and Oceanography* 2450.

³⁴³ AMSN Lancaster, "Between the Devil & The Deep Blue Sea: Can Ridge-to-Reef Initiatives & Man and the Biosphere Reserves Foster Resilience in Small-scale Fisheries for the CARICOM & OECS Caribbean?" (RECIEL forthcoming).

³⁴⁴ RR Carlson et al., "Synergistic Benefits of Conserving Land-Sea Ecosystems" (2021) 28 *Global Ecology and Conservation* e01684.

³⁴⁵ AMSN Lancaster (n 343).

³⁴⁶ JMS Delevaux et al., "A Linked Land-Sea Modeling Framework to Inform Ridge-to-Reef Management in High Oceanic Islands" (2018) 13 *PLoS One* e0193230.

³⁴⁷ IM Vierros, "Communities and Blue Carbon: The Role of Traditional Management Systems in Providing Benefits for Carbon Storage, Biodiversity Conservation and Livelihoods" (2017) 140 *Climatic Change* 89; M Burkett, "Indigenous Environmental Knowledge and Climate Change Adaptation" in R Abate and EA Kronk (eds.), *Climate Change and Indigenous Peoples: The Search for Legal Remedies* (Edward Elgar Publishing, 2013).

³⁴⁸ F Berkes et al., "Rediscovery of Traditional Ecological Knowledge as Adaptive Management" (2000) 10 *Ecological Applications* 1251; RE Johannes, "The Renaissance of Community-based Marine Resource Management in Oceania" (2002) 33 *Annual Review of Ecology and Systematics* 317.

³⁴⁹ R Moorehead, "Changes Taking Place in Common-Property Resource Management in the Inland Niger of Mali" in F Berkes (ed.), *Common Property Resources* (Belhaven, 1989) 256.

Indigenous knowledge solutions in the Caribbean region.³⁵⁰ Most recently, the IACtHR has contemplated the R2R approach in its 2017 Advisory Opinion by addressing communities which are economically dependent for their survival on environmental resources from the marine environment, forested areas and river basins.³⁵¹ The Court observed that biodiversity loss can be exacerbated by the effects of climate change, which may result in saltwater flooding, desertification, hurricanes, erosion and landslides, leading to scarcity of water supplies and affecting food production from agriculture and fishing, as well as destroying land and housing.³⁵²

61. Additionally, rivers and freshwater features (including aquifers), constitute a major pathway for the impact of the human footprint on marine ecosystems.³⁵³ Consequently R2R incorporates forestry and integrated watershed management to assess both the effects of terrestrial drivers (e.g. land-based pollution) and the threats to freshwater and marine resources arising because of climate change and desertification.³⁵⁴ The latter category have become more acute for agrarian-reliant SIDS as a consequence of the ongoing El Niño-induced drought, for States are recording below-normal rainfall standards during the dry and wet seasons. This may lead to drought and/or desertification and, in combination with other extreme weather events such as hurricanes and floods, constitute serious threats to SIDS agriculture and fisheries sectors.³⁵⁵ Similar to agrarian-related impacts, climate-related impacts resulting from temperature rise and ocean acidification have

³⁵⁰ UNESCO, *Workshop Report: Mobilizing Indigenous and Local Knowledge Solutions: Addressing Climate Impacts and Vulnerabilities, A Perspective from the Caribbean Region*, Georgetown, Guyana, 3-5 September 2019 (UNESCO, 2020), available at <https://unesdoc.unesco.org/ark:/48223/pf0000375025>. For a recent analysis of the customary resource management systems and their inherent embedment of the R2R approach, see AMSN Lancaster, "Out of Their Depth & O-fishally At Sea? The Privy Council's Judgement in *Framhein & Mussington*, and the Implications for Customary Users of the Ocean in Post-Colonial Caribbean States' (2024) *International & Comparative Law Quarterly* (forthcoming).

³⁵¹ IACtHR, Advisory Opinion on the Environment and Human Rights (n 142), para. 67.

³⁵² *Ibid.*, as cited in footnotes 125 and 126.

³⁵³ RR Carlson et al., (n 344); SC Doney, "The Growing Human Footprint on Coastal and Open-Ocean Biogeochemistry" (2010) 328 *Science* 1512.

³⁵⁴ RA Abeldaño Zuñiga et al., "Impact of Slow-Onset Events Related to Climate Change on Food Security in Latin America and the Caribbean" (2021) 50 *Current Opinion in Environmental Sustainability* 215; V Johnson Williams, "A Case Study of Desertification in Haiti" (2011) 4 *Journal of Sustainable Development* 20.

³⁵⁵ UNGA Resolution 77/245 (n 210) para. 39.

deleterious effects on fisheries,³⁵⁶ especially reef fisheries, because of coral bleaching and other ecosystem disruptions, which in turn affect the tolerance ranges of reef diversity.³⁵⁷

62. In addition to the above, there are economic and socio-cultural impacts that affect SIDS peoples and the enjoyment of their fundamental rights, including with regard to food and nutrition insecurity, threats to food sovereignty, as well as to their right to culturally accepted food,³⁵⁸ to work, and the increased risk of conflict for coastal and marine resources.³⁵⁹ Further, as demonstrated in the *Teitiota case*,³⁶⁰ the inability of traditional and Indigenous peoples to cultivate their crops and culturally accepted food may become a basis for climate refugeeism. While the value of this jurisprudence is debated,³⁶¹ climate-induced migration continues to loom over coastal States and SIDS, forcing relocation,³⁶² as well as coastal-, land-, and ocean-

³⁵⁶ HRC, "Report of the Special Rapporteur..." 2017 (n 30), para. 42.

³⁵⁷ AE Speers et al., "Impacts of climate change and ocean acidification on coral reef fisheries: an integrated ecological-economic model" (2016) 128 *Ecological economics* 33; MS Pratchett et al., "Changes in biodiversity and functioning of reef fish assemblages following coral bleaching and coral loss" (2011) 3 *Diversity* 424; JE Cinner et al., "Vulnerability of Coastal Communities to Key Impacts of Climate Change on Coral Reef Fisheries" (2012) 22 *Global Environmental Change* 12.

³⁵⁸ HRC Resolution, "The right to food", A/HRC/RES/40/7 (21 March 2019), para. 9.

³⁵⁹ E Mendenhall et al., "Climate change increases the risk of fisheries conflict" (2020) 117 *Marine Policy* 103954.

³⁶⁰ HRCtee, *Teitiota v New Zealand* (n 213 **Error! Bookmark not defined.**).

³⁶¹ E Papadakos, "Case Note: The Lack of Teeth in *Teitiota*: Exploring the Limits of the Groundbreaking UN Human Rights Committee Case" (2023) 63 *Natural Resources Journal* 353; C Derani and P Grazziotin Noschang, "The jurisdiction of the International Court of Justice in cases of territorial damage caused to States by climate change" (2022) 19 *Brazilian Journal of International Law* 47; S Behrman and A Kent, "The *Teitiota* Case and the limitations of the human rights framework" (2020) *Zoom-in 75 Questions of International Law* 25.

³⁶² See, amongst many, Human Rights Watch "The Sea is Eating the Land Below Our Homes – Indigenous Community Facing Lack of Space and Rising Seas Plans Relocation" (2023) available at <https://www.hrw.org/report/2023/07/31/sea-eating-land-below-our-homes/indigenous-community-facing-lack-space-and-rising>.

grabbing.³⁶³ Additionally, the question of the right of self-determination³⁶⁴ as specifically predicated on the colonial histories of SIDS,³⁶⁵ as well as their geographic peculiarities,³⁶⁶ are also key components of the broader economic and socio-cultural impacts on people from SIDS.

63. Among the CBD decisions focused on island biodiversity,³⁶⁷ some have addressed climate change from a SIDS perspective.³⁶⁸ In this regard, the mutually supportive interpretation of the three Rio Conventions for the purpose of addressing climate change was further underscored by the 2023 Joint Statement of the Presidents of the respective COPs.³⁶⁹ The Statement conclusively linked climate finance to multisector projects and programmes addressing land degradation, biodiversity loss and climate change,³⁷⁰ as well as the need for urgent action by uniting land, biodiversity and climate actions,³⁷¹ which cannot be achieved by tackling the issues

³⁶³ KA Wright et al., "Tourism Development from Disaster Capitalism" (2021) 89 *Annals of Tourism Research* 103070; K Rhiney, "Dispossession, Disaster Capitalism and the Post-Hurricane Context in the Caribbean" (2020) 78 *Political Geography* 102171; N Lightfoot, "Disrepair, Distress, and Dispossession: Barbuda after Hurricane Irma" (2020) 24 *Small Axe: A Caribbean Journal of Criticism* 133; C Look et al., "The Resilience of Land Tenure Regimes during Hurricane Irma: How Colonial Legacies Impact Disaster Response and Recovery in Antigua and Barbuda" (2019) 6 *Journal of Extreme Events* 1940004. See case *John Mussington and another (Appellants) v Development Control Authority and 2 others (Respondents) (Antigua and Barbuda)* Judicial Committee of the Privy Council, 2021/0116.

³⁶⁴ See amongst others, T Frere et al., "Climate Change and Challenges to Self-Determination: Case Studies from French Polynesia and the Republic of Kiribati" (2020) 129 *Yale Law Journal Forum* 648. See also Nauru's written submission to the ITLOS in the context of Case no. 31, "Request for an advisory opinion submitted by the Commission of Small Island States on climate change and international law", paras. 58-66.

³⁶⁵ AS Bordner, "Climate Migration & Self-Determination" (2019) 51 *Columbia Human Rights Law Review* 183.

³⁶⁶ N Jones, "Prospects for Invoking the Law of Self-determination in International Climate Litigation" (2023) 32 *Review of European, Comparative & International Environmental Law* 250.

³⁶⁷ See CBD Dec. XIII/4 (2016) (n 113), CBD Dec. XIV/5 (2018) (n 79), para. 11(d).

³⁶⁸ For example, CBD Decision IX/21, "Island biodiversity", UNEP/CBD/COP/DEC/IX/21 (9 October 2008), paras. 6 and 7 and CBD Decision XI/15, "Review of the programme of work on island biodiversity", UNEP/CBD/COP/DEC/XI/15 (5 December 2012), para. 1(c), 2 and 2(b).

³⁶⁹ Conferences of the Parties to the United Nations Convention to Combat Desertification (UNCCD COP15), Convention on Biological Diversity (CBD COP15) and United Nations Framework Convention on Climate Change (UNFCCC COP27), *Joint Statement of the Presidents*, available at <https://www.cbd.int/sites/default/files/2023-11/JointStatement-UNCCDCOP15-CBDCOP15-UNFCCC-COP27-Presidents2023.pdf>.

³⁷⁰ *Ibid.*, para. 2.

³⁷¹ *Ibid.*, para. 5.

individually.³⁷² Consequently, this three-pronged approach³⁷³ is designed to harness the principles and approaches enshrined within the CBD, the Nagoya Protocol³⁷⁴ and the GBF, with a view to halting the loss of biodiversity and to using the GBF Fund.³⁷⁵

64. In addition to the above, the issue of tenure related to food security in both the terrestrial and the marine contexts is yet another key aspect directly linked to the mutual supportiveness of the highlighted regimes and principles. In Decision 26/14,³⁷⁶ UNCCD Parties proposed to allow better access, control and stewardship over land and equitable tenure security³⁷⁷ for vulnerable groups such as Indigenous and Afro-descendant peoples,³⁷⁸ women and girls.³⁷⁹ In this regard, it is worth recalling that gender equality and equity is recognised across the Rio Convention regimes³⁸⁰ as pillar for prudent decision-making for adaptation and mitigation, and will be a fundamental hallmark on intergenerational equity, and a pillar of international human rights law.
65. Additionally, the American Convention on Human Rights as interpreted by the IACtHR has so far afforded the highest degree of protection the management of ecosystems and safeguarding livelihoods, which is particularly important for SIDS. In its 2017 Advisory Opinion, the Court was the first international judicial body to recognise the right to a healthy environment as an autonomous, free-standing

³⁷² Ibid., para. 4.

³⁷³ The Rio Conventions Pavilion Journey 2023 – Linking biodiversity, climate change and sustainable land management. Information available at <http://www.riopavilion.org/>.

³⁷⁴ Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity [Nagoya Protocol], adopted in Nagoya on 29 October 2010 and entered into force on 12 October 2014, 3008 United Nations Treaty Series 3.

³⁷⁵ CBD Decision XV/15, “Financial mechanism”, CBD/COP/DEC/15/15 (19 December 2022).

³⁷⁶ UNCCD Decision 26/COP.14, “Land Tenure”, ICCD/COP(14)/23/Add.1 (2019).

³⁷⁷ Ibid., para. 9.

³⁷⁸ AMSN Lancaster, “Decolonising Tenure Rights in the CARICOM & OECS Caribbean: [Re]-assessing the Role of International Legal Instruments” (2023) 13(3) *Asian Journal of International Law* 1.

³⁷⁹ For more information about the link between gender and land degradation, including the Women, Girls and Land (#HerLand) Campaign, see UNCCD official website at <https://www.unccd.int/land-and-life/gender/overview>.

³⁸⁰ By way of example, see CBD Dec. XV/4 (2022) (n 103), Section C(h) and Target 23; Commission on the Status of Women, Agreed Conclusions of the Sixty-sixth Session, “Achieving Gender Equality and the Empowerment of All Women and Girls in the Context of Climate Change”, Environmental and Disaster Risk Reduction Policies and Programmes, E/CN.6/2022/L.7 (29 March 2022); CteeRC, “General Comment 26” (n 294), para. 102; UNFCCC Decision 3/CP.25 “Enhanced Lima work programme on gender and its gender action plan”, FCCC/CP/2019/13/Add.1 (16 March 2020) and UNFCCC Decision 24/CP.27, “Intermediate review of the implementation of the gender action plan” FCCC/CP/2022/10/Add.3 (17 March 2023).

right.³⁸¹ It further consolidated its interpretation in *Lhaka Honhat v Argentina*,³⁸² where the Respondent State was held liable for violations of the right to a healthy environment – in addition to the associated rights – in relation to an Indigenous community, and ordered reparation measures for restitution of the environment.³⁸³ Reliance on this right is also central in *La Oroya Community v Perú*,³⁸⁴ currently pending before the Court, which will provide the opportunity to assess the responsibility of States for the interference with human rights caused by environmental harm to a non-Indigenous community.

66. Another critical contribution of the 2017 Advisory Opinion is the Court’s finding of the State’s extraterritorial jurisdiction in relation to large-scale transboundary infrastructure projects. State Parties to the American Convention on Human Rights may be found responsible for the violation of human rights of people located outside their territory due to their failure to regulate with due diligence activities taking place within their territory.³⁸⁵ Further, this finding, framed within the context of the Convention Areas of the Regional Seas Programme for the Wider Caribbean Area, has implications for legal standards on prevention of trans-boundary harm and the standard of care required of States in respect of climate change.³⁸⁶ It is expected that the pending Advisory Opinion requested from ITLOS will also provide further guidance with respect to Part XII of the UNCLOS.

67. In light of the foregoing considerations, SIDS are both the “canaries in the coalmine” and important living labs for translating the obligations, principles and

³⁸¹ IACtHR, Advisory Opinion on the Environment and Human Rights (n 142), para. 62. See also, MA Tigre and N Urzola, “The 2017 Inter-American Court’s Advisory Opinion: Changing the Paradigm for International Environmental Law in the Anthropocene” (2021) 12 *Journal of Human Rights and the Environment* 24, at 42; D Giannino, “The Ground-Breaking Advisory Opinion OC-23/17 of the Inter-American Court of Human Rights: Healthy Environment and Human Rights” (2018) *International Journal of Constitutional Law Blog*; ML Banda, “Inter-American Court of Human Rights’ Advisory Opinion on the Environment and Human Rights” (2018) 22 *American Society of International Law INSIGHTS* 6.

³⁸² IACtHR, *Case of the Indigenous Communities of the Lhaka Honhat (Our Land) Association v. Argentina*, (Ser. C) No. 400 (6 February 2020).

³⁸³ See MA Tigre, “Indigenous Communities of the Lhaka Honhat (Our Land) Association v. Argentina” (2021) 115 *American Journal of International Law* 706.

³⁸⁴ Inter-American Commission of Human Rights, *Comunidad de La Oroya, Peru*, Case 12.718, Letter of Submission (Sept. 30, 2021).

³⁸⁵ IACtHR, Advisory Opinion on the Environment and Human Rights (n 142), paras. 102-104. See generally, A Ollino, “Reflections on the Advisory Opinion on Human Rights and the Environment and the Notion of Extraterritorial Jurisdiction” (2020) 93 *Die Friedens-Warte* 56; A Papantoniou, “Advisory Opinion on the Environment and Human Rights” (2018) 112 *American Journal of International Law* 460.

³⁸⁶ S McCluskey, “Calibrating states’ emissions reduction due diligence obligations with reference to the right to life” (2022) 31 *Review of European, Comparative & International Environmental Law* 483.

approaches enshrined within the CBD into tangible climate action. Their existential risks faced by SIDS from climate change have been increasingly understood in the light of the right to self-determination, which is essential for the effective enjoyment of other human rights. SIDS' right to self-determination should be respected by all States in taking action individually and jointly to mitigate climate change, to avoid threats to SIDS populations' human rights.³⁸⁷

68. Further, it is essential to consider that the equity and capacity gap in ocean (particularly deep-sea) research and knowledge production not only affects the opportunities of SIDS to effectively protect their ocean-dependent communities' human rights to life, health, food, livelihoods and culture of their ocean-dependent communities, but also impact rights which are affected by climate change and by ecological connectivity with ABNJ.³⁸⁸ Persisting gaps in scientific capacity undermine the adequacy of past and current approaches to implementing long-standing international commitments, such as those under the UNCLOS on scientific cooperation.³⁸⁹
69. The BBNJ Agreement provides significant progressive development of the law of the sea in relation to international scientific and technological cooperation, shifting towards "country- driven, transparent, effective and iterative process that is participatory, cross-cutting and gender-responsive" with regard to capacity building and technology and "be guided by lessons learned, including those from capacity-building and transfer of marine technology activities under relevant legal instruments and frameworks and relevant global, regional, subregional and sectoral bodies."³⁹⁰ Consequently, the BBNJ Agreement provides the basis for more equitable international scientific and technological cooperation that is driven by SIDS and informed by their needs and lessons learnt³⁹¹ in relation to climate change and the protection of human rights in the context of integrated land-sea systems and the ocean-climate nexus.

³⁸⁷ Special Rapporteurs' Amicus Brief to ITLOS (n 200), paras 92-93.

³⁸⁸ E Morgera et al., "Addressing the Ocean-Climate Nexus in the BBNJ Agreement..." (n 68).

³⁸⁹ Articles 242-244 UNCLOS.

³⁹⁰ Article 42(3) BBNJ Agreement.

³⁹¹ See, generally, E Morgera et al., "Addressing the Ocean-Climate Nexus in the BBNJ Agreement..." (n 68).

Conclusion

The One Ocean Hub respectfully suggests the Court adopt an Opinion grounded in the principle of systemic integration, with a view to clarifying State obligations under international climate change law, international biodiversity law, the law of the sea and international human rights law. Accordingly, as part of their obligations “to ensure the protection of the climate system and other parts of the environment”, **States must:**

1. Apply the ecosystem approach, precautionary principle and human rights to the design, implementation, financing, monitoring and review of climate, biodiversity and ocean policies, plans, and actions, including climate change adaptation and mitigation measures and “just transition” or “blue economy” policies, plans and actions. In particular, they must:
 - a. prioritize: drastically **reducing greenhouse gas emissions**; phasing out **fossil fuels** production and consumption; and implementing **nature-based, including ocean-based, solutions** (including removal of greenhouse gases by sinks, and renewable energy, as long as they do not negatively impact on biodiversity);
 - b. refrain from funding and authorizing large-scale **carbon dioxide removal** actions that do not ensure avoidance of foreseeable harm to biodiversity and human rights;
 - c. regulate and control **contained, small-scale experiments** of carbon dioxide removal technologies so that they are subject to environmental and human rights impact assessments, rigorous justification in terms of the need to gather specific scientific data, and public participation standards (access to information, public participation in decision-making, free prior informed consent if negative impacts are foreseeable on Indigenous peoples and small-scale fishing and other communities, and access to justice and effective remedies);
 - d. refrain from undertaking **marine geo-engineering** activities and **deep-seabed mining** until there is adequate scientific basis to ensure avoiding foreseeable harm to biodiversity and human rights; and
 - e. ensure the meaningful **participation** of human rights holders (including children) in relevant decision-making, including free, prior informed consent

of Indigenous peoples where activities or foreseeable harm may involve sacred or traditionally used territories and waters; and

2. minimise and carefully regulate and monitor activities that increase the vulnerability and reduce the **resilience** of biodiversity and ecosystems, and/or negative impacts on human health or other human rights, such as **large-scale fisheries**;
3. In creating and managing **area-based measures**:
 - a. undertake joint planning of protected area networks (for example, transboundary fisheries management areas and MPAs according to the ecosystem approach), and integrate them into wider landscapes, seascapes and sectors, through the use of connectivity and biodiversity restoration measures;
 - b. integrate ecological and social resilience factors of coral reefs and closely associated ecosystems into the design and management of Marine Protected Areas networks, strengthening international, national and regional efforts to manage coral reefs as socio-ecological systems by reducing the impact of global and local stressors; and
 - c. ensure the genuine participation of all relevant human rights holders, including children, and seeking the free prior informed consent of Indigenous peoples and local communities – in their design, implementation, financing, monitoring and review;
4. With regard to **EIAs and SEAs**, and planning processes:
 - a. assess risks of foreseeable harm to biodiversity and related socio-cultural and economic human rights associated with adaptation, mitigation and disaster risk reduction;
 - b. take into account the status of biodiversity and its vulnerability to current and future climate change adverse impacts, including on the basis of the latest ecosystem services science, when planning and implementing adaptation, mitigation and disaster risk reduction strategies;
 - c. require SEAs and EIAs for **commercial large-scale fisheries** policies, plans and projects;

- d. conduct EIAs with respect to the impact of activities in **marine areas beyond national jurisdiction**, duly considering consequences of climate change, ocean acidification and related impacts;
 - e. support the conduct of **regional SEAs** with respect to the impact of activities in marine areas beyond national jurisdiction, duly considering the consequences of climate change, ocean acidification and related impacts, and the need for marine scientific research at the genetic level; and
 - f. integrate relevant human rights holders, including children, as well as Indigenous peoples and local knowledge holders seeking their free prior informed consent, when sacred or traditionally used territories and waters are at stake, and ensuring fair and equitable benefit-sharing from the use of their knowledge and the use of their territories.
5. Genuinely involve **Indigenous peoples and local communities** in the decision-making, financing, management, monitoring and review processes related to climate change responses, as knowledge- and human rights-holders subject to their free prior informed consent. In particular, States must:
 - a. promote community-based measures in reef-dependent coastal communities, with a view to maintaining sustainable livelihoods and ensuring food security in these communities;
 - b. apply measures to maintain their sustainable livelihoods and ensure their food security, including by providing resources and capacity-building programmes; and
 - c. enhance collaboration with Indigenous peoples and local communities in the conservation and management of biodiversity in cold-water areas;
6. Carefully balance the interests of **present and future generations** when adopting climate change response measures, including by:
 - a. taking appropriate preventive measures to protect children against reasonably foreseeable environmental harm and violations of their rights; and
 - b. ensuring their meaningful representation and participation in climate- and ocean-related decision-making processes at all levels;
7. With regard to **SIDS**, developed States must:

- a. prioritize climate change mitigation approaches that avoid **threats** to SIDS' right to self-determination;
- b. assess potential transboundary environmental impacts and extraterritorial human rights **impacts** on SIDS of proposed climate change mitigation and adaptation measures; and
- c. prioritize international scientific and other forms of **cooperation** (notably country-driven funding, capacity building and technology co-development) towards nature-based solutions to climate change for integrated land-sea systems, with the genuine participation of Indigenous, Afro-descendant, and local communities, women and children, at the bilateral, regional and global level.