

INTERNATIONAL TRIBUNAL FOR THE LAW OF THE SEA

Case No. 31

**REQUEST FOR AN ADVISORY OPINION SUBMITTED BY THE
COMMISSION OF SMALL ISLAND STATES ON CLIMATE CHANGE
AND INTERNATIONAL LAW**

(Request for Advisory Opinion submitted to the Tribunal)

Written Statement of ClientEarth

ClientEarth 

15 June 2023

WRITTEN SUBMISSION FILED ON BEHALF OF CLIENTEARTH

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on Climate Change and International Law**

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I. INTRODUCTION

1. On 12 December 2022, the International Tribunal for the Law of the Sea (ITLOS; the Tribunal) received a request for an advisory opinion from the Commission of Small Island States on Climate Change and International Law (COSIS; the Commission).
2. The Commission was established by the *Agreement for the Establishment of the Commission of Small Island States on Climate Change and International Law* (the Agreement) between the Prime Ministers of Antigua and Barbuda and Tuvalu in Edinburgh, Scotland on 31 October 2021 and deposited with the Secretariat of the United Nations on the same day. Since its establishment the States of Palau (November 2021), Niue (September 2022), Vanuatu (December 2022) and Saint Lucia (December 2022) have joined the Commission.
3. Article 2 of the Agreement provides the Commission with the authority to request an advisory opinion from the ITLOS. In this current request for an advisory opinion, the Commission has asked the Tribunal to address the following questions:
 - “What are the specific obligations of State Parties to the United Nations Convention on the Law of the Sea (‘UNCLOS’), including under Part XII:
 - (a) to prevent, reduce and control pollution of the marine environment in relation to the deleterious effects that result or are likely to result from climate change, including through ocean warming and sea level rise, and ocean acidification, which are caused by anthropogenic greenhouse gas emissions into the atmosphere?
 - (b) to protect and preserve the marine environment in relation to climate change impacts, including ocean warming and sea level rise, and ocean acidification?”
4. By its order of 16 December 2022, the President of the Tribunal fixed 16 May 2023 as the time-limit within which written statements may be presented to the Tribunal. On the basis of Article 133(2) and (3) of the Rules of the Tribunal, intergovernmental organizations “likely to be able to furnish information on the questions submitted”, as well as all States Parties to the United Nations Convention on the Law of the Sea (UNCLOS; the Convention) were invited to submit written statements.
5. By its order of 15 February 2023, the President of the Tribunal extended the list of intergovernmental organizations to include the African Union and extended the time-limit for written submission until 16 June 2023.
6. As detailed in its letter to the President, ClientEarth respectfully seeks admission of its Written Submission to these advisory proceedings.
7. The questions posed to the Tribunal by the Commission seek guidance on State obligations under UNCLOS to prevent, reduce and control pollution to the marine environment caused by the greenhouse gas emissions resulting from human activity –

such as ocean warming, ocean acidification and sea level rise – and the positive steps States have to take to protect and preserve the marine environment from such impacts.¹

8. To answer the question and assess the specific obligations of States Parties under UNCLOS in relation to harms caused to the marine environment by greenhouse gas emissions, the following points have to be considered:
 - The content of the definition of marine pollution under the Convention and whether emissions of greenhouse gasses from States meet this definition;
 - What legal frameworks and principles inform the State obligations to prevent, reduce and control marine pollution under the Convention.
9. To respond to these, this submission will first turn to the legal framework under the United Nations Convention on the Law of the Sea (UNCLOS; the Convention), followed by a brief overview of the science of the effects of climate change on the marine environment before applying the established facts to the framework.

II. THE LEGAL FRAMEWORK

10. The 1982 UNCLOS is a near-universally accepted treaty containing the international legal framework governing the world's oceans.²
11. Its preamble emphasises the establishment of “a legal order for the seas and oceans which will facilitate international communication, and will promote the peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, *and the study, protection and preservation of the marine environment*,” (emphasis added) as one of the Convention's aims.³
12. The latter part of the protection and preservation of the marine environment is covered by Part XII of UNCLOS. Many of Part XII's provisions reflect customary international law.⁴

¹ I-56940, Agreement for the establishment of the Commission of Small Island States on Climate Change and International Law. Edinburgh, 31 October 2021. Available at:

https://itlos.org/fileadmin/itlos/documents/cases/31/COSIS_Agreement_E_Fr_.pdf.

² To date, it has been ratified by 168 parties: 164 UN Member States, the Observer State of Palestine, Niue and Cook Islands, and the European Union.

³ UNCLOS, Preamble.

⁴ Philippe Sands *et al*, “Oceans, Seas and Marine Living Resources,” in *Principles of International Environmental Law* (4th edn Cambridge University Press 2018), pg. 462, citing to: 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic, which in its preamble “*recalls the relevant provisions of customary international law reflected in Part XII of the United Nations Law of the Sea Convention, and in particular, Article 197 on global and regional cooperation for the protection and preservation of the marine environment.*”; Territorial and Maritime Dispute (*Nicaragua/Colombia*), Judgment, I.C.J. Report, paras. 114-118, 138-139, 182; Alan Boyle, “Protecting the Marine Environment from Climate Change: The LOSC Part XII Regime” in Elise Johansen *et al* (eds), *The Law of the Sea and Climate Change: Solutions and Constraints* (Cambridge University Press 2020), pg. 81.

13. The prevention of pollution is understood as central to this obligation on States to protect the marine environment.⁵ Article 1(1)(4) of UNCLOS defines ‘pollution of the marine environment’ as:

“The introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.”

14. The definition under Article 1 covers both *substances* or *energy* that result or are “likely to result” in harmful effects, thereby also covering *potentially* harmful effects to the marine environment.⁶ This means that establishing a clear causal link is not required by the definition, nor is it required by the precautionary principle. The precautionary principle, a principle of risk prevention provides that “[w]here there are threats of irreversible damage” full scientific certainty is not required to prevent such damage.⁷
15. Furthermore, the drafting history of the definition of ‘pollution’ indicates that it is meant to be flexible to account for “*a number of new and hitherto unsuspected pollutants are bound to be brought to light*” (see further at para. 68 below).⁸

A. Part XII UNCLOS: Protection of the Marine Environment and State Obligations

16. The definition of ‘pollution’ under Article 1 informs the obligations under Part XII UNCLOS. Turning to the General Provisions of Part XII (Articles 192-196), Article 192 provides for the obligation on States “to protect and preserve the marine environment”. It is phrased in general terms but informed and further detailed by other provisions under Part XII and applicable rules of international law (see paras. 34-43 below).
17. Article 194 is central to the determination of marine protection and preservation obligations under UNCLOS, as it provides guidance on what States may be required to do to meet these obligations, including as regards pollution. Article 194(1) provides that:

“States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from *any* source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection” (emphasis added).

18. Article 194(2) elaborates that:

“States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other

⁵ UNCLOS, art. 194.

⁶ Yoshifumi Tanaka, *The International Law of the Sea* (2nd ed Cambridge University Press 2015), pg. 269.

⁷ 1992 Rio Declaration on Environment and Development, UN Doc. A/CONF.151/26 (Vol. I) (12 August 1992), Principle 15.

⁸ United Nations, Report of the United Nations Conference on the Human Environment (Stockholm, 5-16 June 1972), A/CONF.48/14/Rev.1, available at: <https://digitallibrary.un.org/record/523249>.

States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.”

19. Article 194(3) expands on the obligation to prevent pollution, as it sets out the different sources of pollution. In the context of climate change, Article 194(3)(a) is of particular relevance, as it requires that measures taken to deal with *all* sources of marine pollution shall include those that minimise (inter alia),

“the release of toxic, harmful or noxious substances, especially those which are persistent, *from land-based sources, from or through the atmosphere* or by dumping” (emphasis added).

20. These State obligations are informed by the duty of due diligence. Due diligence in international law is a duty of conduct on States, defined in literature as “a threshold, indicating the degree of commitment required of the State in relation to certain primary obligations.”⁹ The standard applied, in this regard, is one of ‘responsible government’, taking all reasonable and necessary steps to comply with its obligations. Failure to do meet the due diligence standard results in a violation of the primary norm informed by said obligation, triggering a State’s international responsibility. The exact content of the due diligence duty is informed by applicable rules, practices and norms of international law relevant to the context and the provision(s) from which it emerges.¹⁰

21. The content of this duty of due diligence has previously been considered in the context of the law of the sea. In a 2011 advisory opinion, ITLOS’ Seabed Disputes Chamber confirmed that due diligence, “is not an obligation to achieve, in each and every case” complete compliance with the obligations in question:

“Rather, it is an obligation to deploy adequate means, to exercise best possible efforts, to do the utmost, to obtain this result.”¹¹

22. In further defining due diligence, the Chamber also found that:

“The content of ‘due diligence’ obligations may not easily be described in precise terms. Among the factors that make such a description difficult is the fact that ‘due diligence’ is a variable concept. *It may change over time as measures considered sufficiently diligent at a certain moment may become not diligent enough in light, for instance, of new scientific (...) knowledge*”¹² (emphasis added).

⁹ Own translation. S. Forlati, *L’objet des différentes obligations primaires de diligence : prévention, cessation, répression... ?*, in *Le standard de due diligence et la responsabilité internationale, Journée de étude franco-italienne du Mans*, Paris (2018), p. 40: “un seuil, un *threshold*, indiquant le degré d’engagement demandé à l’Etat par rapport à certaines obligations primaires.”

¹⁰ Timo Koivurova, Kritika Singh, “Due Diligence” (August 2022) in Rüdiger Wolfrum (ed), *Max Planck Encyclopedia of Public International Law* (MPEPIL) (online edn); Irini Papanicolopulu, “Due Diligence in the Law of the Sea” in Heike Krieger *et al*, *Due Diligence in the International Legal Order* (Oxford University Press 2020); Lavanya Rajamani, “Due Diligence in Climate Change Law”, in Krieger *et al*.

¹¹ *Responsibilities and obligations of States with respect to activities in the Area*, Advisory Opinion, 1 February 2011, ITLOS Reports 2011 (Request for Advisory Opinion Submitted to the Seabed Disputes Chamber), para. 110.

¹² *Ibid.*, para. 117.

23. Based on the above, it is our submission that Part XII encompasses obligations on States to address sources of pollution not previously known or considered, i.e. greenhouse gas emissions. States therefore have duties as regards climate change. In informing these obligations the consideration of new scientific knowledge, i.e. the best available science is essential. The evidence considered at paras. 43-64 below will show that not basing State conduct on scientific findings, leads to ‘deleterious effects’ on the marine environment and is therefore in violation of States obligations to protect and preserve the marine environment.
24. These general obligations are expanded on through more detailed provisions, including Articles 207 and 212 UNCLOS, which provide detail on the interpretation of the above requirement to control marine pollution. In the context of anthropogenic climate change, particular attention has to be paid to the provisions on land-based sources, as much of the human activity contributing to climate change is land-based. In addition, much of the pollution that arises from or through the atmosphere, is also generated through land-based activities.¹³
25. Article 207 on pollution from land-based sources provides that:
- “1. States shall adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources, including rivers, estuaries, pipelines and outfall structures, *taking into account internationally agreed rules, standards and recommended practices and procedures* (emphasis added).
 2. States shall take other measures as may be necessary to prevent, reduce and control such pollution.
 3. States shall endeavour to harmonize their policies in this connection at the appropriate regional level.
 4. States, acting especially through competent international organizations or diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources, taking into account characteristic regional features, the economic capacity of developing States and their need for economic development. Such rules, standards and recommended practices and procedures shall be re-examined from time to time as necessary.
 5. Laws, regulations, measures, rules, standards and recommended practices and procedures referred to in paragraphs 1, 2 and 4 shall include those designed to minimize, to the fullest extent possible, the release of toxic, harmful or noxious substances, especially those which are persistent, into the marine environment.”
26. In accordance with these provisions, States must take account of “internationally agreed rules, standards and recommended practices and procedures” when complying with their obligation to “prevent, reduce and control pollution of the marine environment from land-based sources.”

¹³ Sands *et al* (n4), pg. 475.

27. Further, Article 212 is of relevance, as it applies to pollution of the marine environment that arises from or through the atmosphere. It requires States to adopt:

“1. (...) laws and regulations to prevent, reduce and control pollution of the marine environment from or through the atmosphere, applicable to the air space under their sovereignty and to vessels flying their flag or vessels or aircrafts of their registry, taking into account internationally agreed rules, standards and recommended practices and procedures and the safety of air navigation.

2. States shall take other measures as may be necessary to prevent, reduce and control such pollution.”

28. Read together, we submit that the release of greenhouse gases is to be understood as a source of pollution of the marine environment in accordance with Article 194, where it can be established that its effects are deleterious. This ‘pollution’ could include carbon dioxide – the most important greenhouse gas – which is introduced into the marine environment through absorption and dissolution from the atmosphere as part of the carbon cycle.¹⁴ Due diligence informs the State obligations under Part XII and, amongst others, requires State action to be based on the best available science.

B. Enforcement and Liability

29. Part XII of UNCLOS also addresses State responsibility and liability. Article 213 on enforcement provides that States:

“shall enforce their laws and regulations adopted in accordance with article 207 and shall adopt laws and regulations and take other measures necessary to implement applicable international rules and standards established through competent international organizations or diplomatic conference to prevent, reduce and control pollution of the marine environment from land-based sources.”

30. Where States fail to comply with their obligations and the required standard of due diligence, State responsibility is triggered. In the assessment of responsibility and liability, Article 235 UNCLOS provides that:

“1. States are responsible for the fulfilment of their international obligations concerning the protection and preservation of the marine environment. They shall be liable in accordance with international law.”¹⁵

¹⁴ IPCC, ‘2019: Summary for Policymakers’, in *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (IPCC SROCC SPM) (Cambridge University Press 2019), available at: https://www.ipcc.ch/site/assets/uploads/sites/3/2022/03/01_SROCC_SPM_FINAL.pdf; Jamie Shutler and Andy Watson, “The oceans are absorbing more carbon than previously thought”, Carbon Brief (28.09.2020), available at: <https://www.carbonbrief.org/guest-post-the-oceans-are-absorbing-more-carbon-than-previously-thought/>.

¹⁵ Art. 235 continues:

“2. States shall ensure that recourse is available in accordance with their legal systems for prompt and adequate compensation or other relief in respect of damage caused by pollution of the marine environment by natural or juridical persons under their jurisdiction.

3. With the objective of assuring prompt and adequate compensation in respect of all damage caused by pollution of the marine environment, States shall cooperate in the implementation of existing international law and the further development of international law relating to responsibility and liability for the assessment of and

31. Relevant to the determination of State liability under international law are the International Law Commission's Draft Articles on Responsibility of States for Internationally Wrongful Acts (ILC Draft Articles). Forming part of customary international law,¹⁶ they provide that where an internationally wrongful act occurs, States are under the legal obligation to cease the wrongful conduct,¹⁷ make full reparation for the injury,¹⁸ and to cooperate to bring the breach to an end.¹⁹
32. To conclude: we submit that the above provisions of Part XII of UNCLOS are drafted in a manner that requires consideration of new developments. Where the science evidences 'deleterious effects' to the marine environment, the provisions of UNCLOS necessitate State action as a means to preserve and protect the marine environment. Failure to do so entails State responsibility.
33. Finally, the below will demonstrate how the rules of interpretation under UNCLOS as well as customary international law provide that in determining the content of State obligations, other international regimes relevant to the control and reduction of marine pollution from greenhouse gas emissions, including, *inter alia*, the United Nations Framework Convention on Climate Change (UNFCCC) and other applicable international law, including international human rights law, must be consulted. It will be shown that climate change mitigation (that is, the reduction of greenhouse gas emissions) is required of States Parties to comply with the obligations under UNCLOS.

C. Rules of Interpretation and Applicable Law

34. International agreements and norms do not exist in isolation. Many international treaties refer to other international agreements and rules as means for interpretation.²⁰ This provides for the harmonisation of international law and coherence between the different international legal obligations of States.²¹
35. Against this background, Article 237 UNCLOS on 'obligations under other conventions on the protection and preservation of the marine environment' provides that:

"1. The provisions of this Part [Part XII] are without prejudice to the specific obligations assumed by States under special conventions and agreements concluded previously which relate to the protection and preservation of the marine environment

compensation for damage and the settlement of related disputes, as well as, where appropriate, development of criteria and procedures for payment of adequate compensation, such as compulsory insurance or compensation funds."

¹⁶ *Request for Advisory Opinion Submitted to the Seabed Disputes Chamber* (n11), para. 183.

¹⁷ International Law Commission, *Draft articles on Responsibility of States for Internationally Wrongful Acts with commentaries* (2001), art. 30, available at: https://legal.un.org/ilc/texts/instruments/english/commentaries/9_6_2001.pdf.

¹⁸ *Ibid.*, art. 31. The commentary to Article 31 of the Draft Articles provides that the function of reparation is to re-establish "of the situation affected by the breach."

¹⁹ *Ibid.*, arts. 40-41.

²⁰ United Nations, Vienna Convention on the Law of Treaties (1969), art. 31(3)(c); *Reply to State Party's Submissions on Admissibility and Merits dated 29 May 2020 from Authors of Communication No. 3624/2019 (Billy et al v Australia)* submitted under the Optional Protocol to the International Covenant on Civil and Political Rights, counsel advising were Monica Feria-Tinta, Sudhanshu Swaroop KC and Simon Milnes, available at: <https://ourislandsourhome.com.au/wp-content/uploads/sites/92/2021/03/CCPR-Communication-No-3624-of-2019-Billy-et-al-v-Australia-Authors-Reply-29-Sept-2020-Annex.pdf>.

²¹ Matthias Herdegen, "Interpretation in International Law" (November 2020) (MPEPIL online edn).

and to agreements which may be concluded in furtherance of the general principles set forth in this Convention.

2. Specific obligations assumed by States under special conventions, with respect to the protection and preservation of the marine environment, should be carried out in a manner consistent with the general principles and objectives of this Convention.”

36. Together with the above considered Article 207 and 212, the Convention thus makes clear that other applicable rules of international law and specific obligations provided for in other international agreements concerning marine environmental protection inform the State obligations under Part XII UNCLOS.

37. This was confirmed in the South China Sea Arbitration, where the arbitral tribunal provided for a direct link between Article 192 UNCLOS and other international rules and agreements.²²

38. Similarly, Part XII obligations are intrinsically informed by duties of due diligence, which – as discussed – is a standard of conduct frequently invoked to assess States’ environmental obligations.²³ This is supported by the jurisprudence of the International Court of Justice and the ITLOS Seabed Disputes Chamber.²⁴

39. Finally, Article 31(3)(c) of the Vienna Convention on the Law of Treaties confirms that treaties shall not only be interpreted in accordance with the instruments directly related to it, but also in accordance with:

“(c) any relevant rules of international law applicable in relations between the parties.”

40. Read together these findings are significant. They confirm that Part XII of UNCLOS, its constituent elements, such as due diligence and other related State obligations, are informed in their normative content by other international rules and treaty regimes relevant to marine environmental protection and specifically to the regulation of and protection from greenhouse gas emissions, e.g. the Paris Agreement, an agreement made under the UNFCCC. The role of the UNFCCC and agreements made thereunder is therefore directly relevant to the interpretation and scope of the marine environmental provisions under UNCLOS, including when identifying the obligations that arise from the adverse impacts of greenhouse gas emissions on the marine environment.

41. Importantly, these findings also confirm that international human rights law and practice represent a source of interpretation for UNCLOS’ principles and obligations such as the principle of equitable use of the seas and oceans’ resources,²⁵ and the obligation to

²² The South China Sea Arbitration (*Phil. v. China*), PCA Case No. 2013-19, Award (July 12, 2016), paras. 941-942.

²³ Pulp Mills on the River Uruguay (*Argentina v. Uruguay*), Judgment, I.C.J. Reports 2010, paras. 101, 193; ICJ, 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, I.C.J. Reports 2015, para. 104.

²⁴ *Request for Advisory Opinion Submitted to the Seabed Disputes Chamber* (n11), para. 110; Judith Schäli, "Part 2: The Protection of the Marine Environment from Land-based Sources of Plastic Pollution in International Law", In *The Mitigation of Marine Plastic Pollution in International Law* (Brill | Nijhoff 2022), pg. 160.

²⁵ UNCLOS, Preamble.

prevent pollution constituting a hazard to human health or hindrance to human activities such as traditional fishing practices and other legitimate uses of the sea.²⁶

42. To summarise: the obligations on States under UNCLOS are to be read together with other rules of international law applicable to the circumstances. To determine the content of these State obligations in Part IV of this Written Submission, the scientific evidence will be considered next to establish that greenhouse gas emissions amount to ‘pollution’ under UNCLOS, in particular as regards ocean warming, sea level rise, and ocean acidification.

III. THE SCIENCE OF CLIMATE CHANGE AND OCEANS

43. The most significant impacts of global warming on the marine environment – and as emphasised in the question COSIS referred to ITLOS – are ocean warming, ocean acidification and sea level rise. These are substantiated by a significant body of scientific evidence, including reports of the IPCC.²⁷
44. The international response to climate change is regulated by the UNFCCC and its related instruments, including the 2015 Paris Agreement, which makes reference to the importance of ensuring the integrity of oceans in its preamble.
45. “[T]o significantly reduce the risks and impacts of climate change”, including on oceans, Article 2(1)(a) of the Paris Agreement contains the over-arching temperature goal aimed at:
- “holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels”.²⁸
46. At the core of the science on climate change lie the increasing concentrations of greenhouse gases – including the most significant three, i.e. carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) – in the climate system. The climate on Earth has always changed, it is however scientifically proven that the current levels of climate change and warming are unprecedented and indisputably linked to human activity.²⁹
47. Global warming, one aspect of the changing climate, “is the long-term heating of Earth’s surface observed since the pre-industrial period (between 1950 and 1990) due to human activities, primarily fossil fuel burning.”³⁰ This heating of the Earth can be explained through the increase in atmospheric gases linked to human activity that trap “more of the Sun’s energy in the Earth system.”³¹ It is this increase in heat (‘energy’)

²⁶ See e.g. UNCLOS art.1(1)(4) and art. 51. For further discussion see paras. 86-95 of this Written Submission.

²⁷ IPCC, “The Ocean” in *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC WGII AR5 Ch30) (Cambridge University Press 2014), available at: https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap30_FINAL.pdf; see also Shutler and Watson (n14).

²⁸ Paris Agreement to the United Nations Framework Convention on Climate Change, 2015.

²⁹ NASA, “Evidence”, available at: <https://climate.nasa.gov/evidence/>.

³⁰ NASA, “Global Warming vs. Climate Change”, available at: <https://climate.nasa.gov/global-warming-vs-climate-change/>.

³¹ NASA “Evidence” (n29).

that has “warmed the atmosphere, ocean and land” and due to which “widespread and rapid changes in the atmosphere, ocean, cryosphere, and biosphere have occurred.”³²

48. Scientific consensus on global warming and the human impact on Earth’s climate system is unequivocal and “has evolved from theory to established fact”³³ with scientific consensus quantified at around 97 percent or higher.³⁴
49. The Intergovernmental Panel on Climate Change (IPCC) is the UN body tasked with assessing the science on climate change and relaying said scientific knowledge and information to governments, to inform policy development.³⁵ The IPCC does not conduct its own research. Instead, experts systematically review and assess thousands of scientific papers published every year, identifying the ‘strength of scientific agreement’ on different areas related to climate science and global warming, indicating degrees of likelihood and confidence.³⁶
50. The IPCC publishes its Assessment Reports every few years, comprised of three parts by separate working groups and a synthesis report.³⁷ For the IPCC’s Sixth Assessment Report (AR6), the report of Working Group I on the Physical Science Basis³⁸ comprised 234 scientists who reviewed over 14,000 scientific research papers.³⁹ Working Group III on Mitigation of Climate Change entailed 278 authors reviewing over 18,000 scientific papers and almost 60,000 comments from experts and governments.⁴⁰ The IPCC’s work is thus considered the world’s most authoritative assessment of the science on climate change.⁴¹ At the same time, being an intergovernmental organization, the IPCC’s work and findings, also represent political consensus on the science of climate change – including on the world’s oceans.

³² *Ibid.*

³³ IPCC, “Technical Summary”, in *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC AR6 WGI TS) (Cambridge University Press 2021), pg. 44, available at: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_TS.pdf.

³⁴ Krista F Myers *et al*, “Consensus revisited: quantifying scientific agreement on climate change and climate expertise among Earth scientists 10 years later”, *Environmental Research Letters* (20 October 2021), available at: <https://iopscience.iop.org/article/10.1088/1748-9326/ac2774>; John Cook *et al*, “Consensus on consensus: a synthesis of consensus estimates on human-caused global warming”, *Environmental Research Letters* (13 April 2016), available at: <https://iopscience.iop.org/article/10.1088/1748-9326/11/4/048002>; Mark Lynas *et al*, “Greater than 99% consensus on human caused climate change in the peer-reviewed scientific literature”, *Environmental Research Letters* (19 October 2021), available at: <https://iopscience.iop.org/article/10.1088/1748-9326/ac2966>.

³⁵ IPCC: <https://www.ipcc.ch/about/>.

³⁶ *Ibid.*

³⁷ IPCC, “IPCC Factsheet – What is the IPCC”, available at: https://www.ipcc.ch/site/assets/uploads/2021/07/AR6_FS_What_is_IPCC.pdf.

³⁸ IPCC, *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC AR6 WGI), Valerie Masson-Delmotte *et al* (eds) (Cambridge University Press 2021), available at: https://report.ipcc.ch/ar6/wg1/IPCC_AR6_WGI_FullReport.pdf.

³⁹ Stephanie Spera, “234 scientists read 14,000+ research papers to write the IPCC climate report – here’s what you need to know and why it’s a big deal”, *The Conversation* (5 August 2021), available at: <https://theconversation.com/234-scientists-read-14-000-research-papers-to-write-the-ipcc-climate-report-heres-what-you-need-to-know-and-why-its-a-big-deal-165587>.

⁴⁰ UNFCCC, “Everything You Need to Know About the IPCC Report”, (7 April 2022), available at: <https://unfccc.int/blog/everything-you-need-to-know-about-the-ipcc-report>.

⁴¹ IPCC, “About: Structure”, available at: <https://www.ipcc.ch/about/structure/>.

51. Life on earth depends on the oceans and the cryosphere, i.e. “the frozen components of the Earth system.”⁴² 71 percent of the planet’s surface area is covered by oceans, containing about 97 percent of its water, while 10 percent of the planet’s land area is covered by glaciers or ice sheets.⁴³ The oceans and cryosphere “support unique habitats, and are interconnected with other components of the climate system through global exchange of water, energy and carbon.”⁴⁴
52. According to the IPCC, the worlds’ oceans have “absorbed 93% of the extra energy from the enhanced greenhouse effect and approximately 30% of anthropogenic carbon dioxide from the atmosphere.”⁴⁵ It is this increase in extra energy and carbon dioxide that has ‘deleterious effects’ on the marine environment. Some of these are as follows:

A. Ocean Warming and Acidification

53. The absorption of carbon dioxide has increased ocean temperatures. Oceans have warmed considerably since 1955, when modern recordkeeping began, with a particularly strong increase in the past two decades.⁴⁶ 2021 – the most recent year ocean heat was assessed – was the highest on record.⁴⁷ This has significant impacts on the marine environment itself, as the additional heat will “penetrate from the surface to the deep ocean and affect ocean circulation.”⁴⁸
54. The absorption of this additional energy in the form of carbon dioxide has led to increased surface acidification and a loss of oxygen from the ocean’s surface down to 1000 m.⁴⁹ The projected impacts include, for example, harm to cold-water corals, which are essential to marine biodiversity.⁵⁰ At the same time, ocean acidification also inhibits ecosystem recovery.⁵¹
55. Additional ‘deleterious effects’ – as defined by Article 1(1)(4) UNCLOS – of ocean warming include adverse impacts on marine species and their habitats. Examples of these are: a reduction in number of living marine organisms, which has implications for the respective ecosystem as well as human communities who use and depend on marine resources for their income, livelihoods, health and food security.⁵² “Long-term loss and

⁴² IPCC SROCC SPM (n14), pg. 5.

⁴³ *Ibid.*

⁴⁴ *Ibid.*

⁴⁵ IPCC WGII AR5 Ch30 (n27), pg. 1658.

⁴⁶ NASA, “Vital Signs: Ocean Warming”, available at: <https://climate.nasa.gov/vital-signs/ocean-warming/>.

⁴⁷ World Meteorological Organization (WMO), “Eight warmest years on record witness upsurge in climate change impacts” (6 November 2022), available at: <https://public.wmo.int/en/media/press-release/eight-warmest-years-record-witness-upsurge-climate-change-impacts>.

⁴⁸ IPCC, “2013: Summary for Policymakers”, in Thomas Stocker *et al* (eds) *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC WG1 AR5 SPM) (Cambridge University Press 2013), pg. 24, available at:

https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_SPM_FINAL.pdf.

⁴⁹ IPCC SROCC SPM (n14), pg. 9.

⁵⁰ *Ibid.*, pg. 22.

⁵¹ *Ibid.*, pg. 24.

⁵² *Ibid.*, pg. 26. See also: IPCC, ‘2023: Summary for Policymakers’, in *Climate Change 2023: Synthesis Report. A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC AR6 SYR SPM), A.2.4, available at: https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf.

degradation of marine ecosystems” also “compromises the ocean’s role in cultural, recreational, and intrinsic values important for human identity and well-being.”⁵³ Hazards to human health are also part of UNCLOS’ definition of pollution.

56. Further, ocean warming has effects on weather patterns, such as the frequency and strength of rainfalls, as well as on the increase in extreme weather events such as El Niño and La Niña, a circulation pattern that affects weather in the Pacific Ocean.⁵⁴
57. While the adverse impacts outlined above are certain, it has also been scientifically proven that lower emissions increase the ability of organisms and ecosystems to adapt to these changes.⁵⁵

B. Sea level rise

58. Sea levels have risen at twice the rate in the past 30 years. Between January 2020 and November 2022 levels rose by nearly 10mm, accounting for 10 percent of the total rise in sea levels since satellite measuring began 30 years ago.⁵⁶ 75 percent of this can be attributed to glacier mass loss and ocean thermal expansion, i.e. the expansion of water as it absorbs heat.⁵⁷ Since at least 1971, human influence has ‘very likely’ been the main driver behind these developments.⁵⁸
59. Sea level rise has significant impacts on coastal communities. Since the 1960s in many places coastal flooding has almost doubled in frequency.⁵⁹ Coastal ecosystems such as saltmarshes, mangroves or dunes are important habitats whilst also serving as coastal protection. As sea levels rise, these habitats are less and less able to adapt and continue providing ecosystem services.⁶⁰ Expected impacts include habitat contraction, loss of functionality and biodiversity.⁶¹ Depending on the degree of sea level rise, the IPCC projects that 20-90 percent of coastal wetlands, which often act as carbon storage, will be lost.⁶²
60. Beyond these impacts on the environment, sea level rise is also projected to have adverse consequences for global peace and security. The preambular language of UNCLOS emphasises the Convention’s role in strengthening peace, security, cooperation and friendly relations amongst States. With coastal regions at risk, many communities will be forced to relocate as areas become uninhabitable. Intruding salt

⁵³ *Ibid.*; IPCC WG1 AR5 SPM (n48).

⁵⁴ *Ibid.*, pg. 18.

⁵⁵ *Ibid.*, pg. 24.

⁵⁶ WMO (n46); IPCC WG1 AR5 SPM (n48), pgs. 9-10.

⁵⁷ *Ibid.*, pgs. 11-12.

⁵⁸ IPCC AR6 SYR SPM (n52), A.2.1.

⁵⁹ Robert Kopp, “IPCC climate report: Profound changes are underway in Earth’s oceans and ice – a lead author explains what the warnings mean“, *The Conversation* (9 August 2021), available at: <https://theconversation.com/ipcc-climate-report-profound-changes-are-underway-in-earths-oceans-and-ice-a-lead-author-explains-what-the-warnings-mean-165588>.

⁶⁰ IPCC, “2019: Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities” in *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (IPCC SROCC Ch04) (Cambridge University Press 2019), Executive Summary, available at: https://www.ipcc.ch/site/assets/uploads/sites/3/2022/03/06_SROCC_Ch04_FINAL.pdf.

⁶¹ *Ibid.*

⁶² IPCC SROCC SPM (n14), pg. 24.

water contaminates freshwater and land, threatening livelihoods and food security.⁶³ Conflict can arise over access to living space, drinking water and other vital resources. In February 2023, the UN Security Council for the first time ever held a debate about the implications of sea level rise for global peace and security.⁶⁴

61. These effects on global peace and security and impacts on human rights are particularly poignant in vulnerable regions. The IPCC's most recent Synthesis Report found that, "between 2010 and 2020, human mortality from floods, droughts and storms was 15 times higher in vulnerable regions, compared to regions with very low vulnerability."⁶⁵
62. Even if current emissions were to be lowered quickly, sea level rise is irreversible and will continue "due to continuing deep ocean warming and ice sheet melt."⁶⁶ By 2050, sea levels are likely to have risen between 15 to 30 centimetres.⁶⁷ Importantly, however, emissions reductions can still have significant effects. In its most recent report, the IPCC emphasised that "deep, rapid and sustained GHG emissions reductions" would "limit further sea level rise acceleration and projected long-term sea level rise commitment."⁶⁸
63. The IPCC estimates that over the next 2000 years, limiting global temperature increase to 1.5°C would entail global mean sea level rise of about 2-3 m, whereas a 2°C temperature increase would already entail a 2-6 m increase in global mean sea level.⁶⁹ A reduction of "0.1 m in global sea level rise" would expose up to 10 million fewer people to the related risks.⁷⁰
64. The foregoing evidences that the science on the adverse impacts of climate change on the oceans is unequivocal: a clear causal link exists between greenhouse gas emissions and negative effects on the oceans. At the same time, scientific projections have also clearly demonstrated that emissions reductions continue to be important, as they will allow marine organisms and ecosystems to adapt while also slowing down sea level rise.

IV. APPLICATION AND ANALYSIS

A. UNCLOS, Greenhouse Gas Emissions & The Paris Agreement

65. UNCLOS stipulates that the anthropogenic introduction of energy causing harm to the oceans constitutes 'pollution' under Article 1(1)(4). The open nature of the definition under Article 1 suggests that it encompasses both existing as well as new sources of marine pollution.⁷¹

⁶³ United Nations, "Stressing Rising Seas Already Creating Instability, Conflict, Secretary-General Says Security Council Has Critical Role in Addressing Devastating Challenges", Press Release SG/SM/21688 (14 February 2023), available at: <https://press.un.org/en/2023/sgsm21688.doc.htm>.

⁶⁴ *Ibid.*

⁶⁵ IPCC AR6 SYR SPM (n52), A.2.2.

⁶⁶ *Ibid.*, B.3.1..

⁶⁷ IPCC WG1 AR5 SPM (n48), pg. 21.

⁶⁸ IPCC AR6 SYR SPM (n52), B.3.1.

⁶⁹ *Ibid.*

⁷⁰ *Ibid.*, B.2.1.

⁷¹ Tanaka (n6); James Harrison, *Saving the Oceans Through Law: The International Legal Framework for the Protection of the Marine Environment* (Oxford University Press 2017), p. 27: "the definition is highly adaptable

66. Academic debate has included discussions on whether climate change could or would have been on the minds of the negotiators at the time of negotiating.⁷² No such direct reference can be found in either the text of UNCLOS or its *travaux préparatoires*.⁷³ Nonetheless, the provisions of UNCLOS themselves indicate that the Convention is not a static instrument, and is instead open to evolution,⁷⁴ as evidenced by the above-mentioned Articles 207, 212 and 237 that allow for interpretation in line with other international rules and standards.
67. This reference to the applicability of other, non-conflicting, rules of international law in the Convention itself leads to the conclusion that reading UNCLOS obligations together with such rules – including but not limited to recent international environment and climate change agreements such as the Paris Agreement and the international human rights treaties as interpreted by the regional and international human rights courts and tribunals – allows for more progressive interpretation of the obligations under UNCLOS to preserve and protect the marine environment (to the extent those other rules are not already reflected in States’ obligations under UNCLOS).
68. This analysis is further supported by the work of the Intergovernmental Oceanographic Commission of UNESCO and the Group of Experts on the Scientific Aspects of Marine Environmental Protection. The Convention’s definition of ‘pollution’ is based on their work, summarised in the *General Principles for Assessment and Control of Marine Pollution*, which is included in Annex III of the Report on the outcomes of the 1972 Stockholm Conference.⁷⁵ General Principle 14 specifies that the definition of pollution is sufficiently flexible to cover any kind of marine pollution, as “*a number of new and hitherto unsuspected pollutants are bound to be brought to light*” (emphasis added). It is our submission that UNCLOS’ definition of maritime pollution therefore includes more recently recognised threats to marine environments, such as greenhouse gas emissions.
69. Even though not strictly required by UNCLOS (see para. 14), the relevant and globally recognised science establishes a clear causal link between greenhouse gas emissions and harm to the marine environment. Anthropogenic greenhouse gases are absorbed by the oceans causing acidification, ocean warming and sea level rise all three of which ‘result’ or are ‘likely to result’ in ‘deleterious effects.’ To recall, these effects are defined by Article 1(1)(4) as “harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.”
70. Concretely, ocean warming results in the loss of marine species and habitats. The increase in ocean acidification has negative impacts on the marine environment as well

and it can be interpreted in a manner that allows UNCLOS to be applied to new threats to the oceans, such as climate change and ocean acidification”; Alan Boyle, “Law of the Sea Perspectives on Climate Change”, 27(4) *The International Journal of Marine and Coastal Law* (2012), pgs. 831- 832.

⁷² Meinhard Doelle, “Climate Change and the Use of the Dispute Settlement Regime of the Law of the Sea Convention”, 37 *Journal of Ocean Development and International Law* (2006), pg. 321.

⁷³ Seokwoo Lee and Lowell Bautista, “Part XII of the United Nations Convention on the Law of the Sea and the Duty to Mitigate against Climate Change: Making out a Claim, Causation, and Related Issues”, 45 *Ecology Law Quarterly* (2018), pgs. 131-132.

⁷⁴ Boyle (n71), pg. 831; Jill Barrett, The UN Convention on the Law of the Sea: a living treaty?, in Jill Barrett and Richard Barnes (eds), *The Law of the Sea: UNCLOS as a Living Treaty* (British Institute of International and Comparative Law, 2016), pgs. 3-40.

⁷⁵ A/CONF.48/14/Rev.1 (n8).

as coastal ecosystems and communities. Finally, sea level rise and flooding cause existential threats to small island and low-lying States and their communities causing displacement, restrictions on private and family life including health and access to food and water supplies, ultimately impacting global peace and security and internationally recognised and protected human rights.

71. It follows, that the obligation to prevent, reduce and control pollution “from or through the atmosphere” in both Article 194(3)(a) and Article 212 of UNCLOS, is drafted such that it captures emissions of greenhouse gases into the atmosphere, which cause global warming and related impacts.
72. This obligation to prevent, reduce and control pollution has been described as a duty of due diligence, requiring States to take actions required to minimise harmful pollution, including by undertaking EIAs, monitoring, regulating as appropriate, observing the precautionary principle and taking enforcement action.⁷⁶ Accordingly, it has been concluded by several legal scholars that UNCLOS requires States to control and regulate activities causing greenhouse gas emissions using “the best practicable means at their disposal.”⁷⁷
73. The content of this duty of due diligence has previously been considered in the context of the Law of the Sea. It was concluded by the Seabed Disputes Chamber that new scientific knowledge informs the content of due diligence obligations (see paras. 21-22).⁷⁸ State obligations are not stagnant. Instead, they change in light of such developments.
74. Where due diligence obligations and international human rights law require States Parties to UNCLOS to minimise harmful pollution by controlling and regulating activities causing greenhouse gas emissions, we submit this has to be done in accordance with new scientific knowledge, i.e. the best available science.
75. The interpretation of State obligations advanced in this submission – i.e. in line with other applicable rules of international law, such as the Paris Agreement, and relying on scientific development and knowledge to inform State obligations – is supported by academic literature and legal developments at the national and international level.
76. In December 2019, the Dutch Supreme Court upheld the decisions of lower courts, to rely on the best available science and scientific consensus on climate change, the duty of due diligence and international law, including the Paris Agreement, as an interpretative source to inform the content of the State’s human rights obligations.⁷⁹ The duty to

⁷⁶ *Argentina v. Uruguay* (n23), paras. 101, 197, 205.

⁷⁷ Boyle (n71), pgs. 831 – 838; William Burns, “Potential Causes of Action or Climate Change Damages in International Fora: the Law of the Sea Convention” 2(1) *Journal of Sustainable Development Law and Policy* (2006), available at: https://law.scu.edu/wp-content/uploads/UNCLOS_Climate_Litigation_IJSDLP.pdf.

⁷⁸ *Request for Advisory Opinion Submitted to the Seabed Disputes Chamber* (n11), para. 117.

⁷⁹ Supreme Court of the Netherlands, *State of the Netherlands v. Urgenda Foundation*, ECLI:NL:HR:2019:2007, Judgment (20 December 2019); Procurator General of the Supreme Court of the Netherlands, *Advisory Opinion*, ECLI:NL:PHR:2019:1026 (13 September 2019), available at: https://www.urgenda.nl/wp-content/uploads/Advisory-opinion-on-Cassation-ECLI_NL_PHR_2019_1026.pdf.

reduce emissions in line with the Paris Agreement was thus based on obligations arising under a different (international) framework.⁸⁰

77. In January 2020, a Norwegian Court of Appeal held that the Paris Agreement would be able to: “*contribute to clarifying what is an acceptable tolerance limit and appropriate measures*” for State action on environmental protection.⁸¹
78. And in March 2021, the German Constitutional Court accepted that the German legislature had to follow scientific evidence in form of the so-called carbon budget approach – as derived from calculations of the IPCC and considered necessary to stay within the Paris temperature goal – in its determination of whether the law under review violated fundamental rights.⁸²
79. At the international level, the harmonisation or ‘systematic integration’ of international law, i.e. the reliance on other international law norms to inform State obligations across different treaty regimes, is preferred practice.⁸³ This approach has, amongst others, been followed by the European Court of Human Rights – which has established through its case-law that scientific research and generally accepted scientific standards must be

⁸⁰ In this case the European Convention on Human Rights. See also: Christina Eckes, “Separation of Powers in Climate Cases”, *Verfassungsblog* (10 May 2021), available at: <https://verfassungsblog.de/separation-of-powers-in-climate-cases/>; Margaretha Wewerinke-Singh and Ashleigh McCoach, “The State of the Netherlands v Urgenda Foundation: Distilling best practice and lessons learnt for future rights-based climate litigation”, 30(2) *Review of European, Comparative & International Environmental Law: The Amazon Rainforest* (July 2021), available at: <https://onlinelibrary.wiley.com/doi/full/10.1111/reel.12388>; Sophie Marjanac and Sam Hunter Jones, “Staying within Atmospheric and Judicial Limits Core Principles for Assessing Whether State Action on Climate Change Complies with Human Right”, in César Rodríguez-Garavito (ed) *Litigating the Climate Emergency – How Human Rights, Courts, and Legal Mobilization Can Bolster Climate Action* (Cambridge University Press 2022), available at: https://www.cambridge.org/core/services/aop-cambridge-core/content/view/0A64335DA2C6587C19F9AE7C79494C63/9781009098779c7_157-176.pdf/staying-within-atmospheric-and-judicial-limits.pdf.

⁸¹ Borgarting Court of Appeal, *Föreningen Greenpeace Norden v. Norway*, 18-060499ASD-BORG/03, Judgment (23 January 2020), pg. 22, available at: http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2020/20200123_HR-2020-846-J_judgment.pdf; Sophie Marjanac and Sam Hunter Jones, “Are matters of national survival related to climate change really beyond a court’s power?”, *Open Global Rights* (28 June 2020), available at: <https://www.openglobalrights.org/matters-of-national-survival-climate-change-beyond-courts/>.

⁸² German Constitutional Court, *1 BvR 2656/18*, Order (24 March 2021), §36; Eckes (n80).

⁸³ *Human Rights Committee*, ‘General Comment No. 36 (2018) on Article 6 of the International Covenant on Civil and Political Rights, on the Right to Life’, UN Doc. CCPR/C/GC/36 (15 October 2018), pgs. 14–15, available at: <https://www.ohchr.org/en/documents/general-comments-and-recommendations/general-comment-no-36-article-6-right-life>; Philippe Sands, “Treaty, custom and the cross-fertilization of International Law”, 1 *Yale Human Rights and Development Law Journal* (1998).

taken into consideration in the interpretation and application of the Convention⁸⁴ – the International Court of Justice,⁸⁵ and the Inter-American Court of Human Rights.⁸⁶

80. The aforementioned interpretation is further informed by academic literature⁸⁷ and, as referenced above, by Article 31 of the Vienna Convention on the Law of Treaties. To recall, Article 31(3)(c) VCLT specifically provides that “any relevant rules of international law applicable in the relations between the parties” shall be taken into account when interpreting a treaty. Thereby, the provision emphasises “the ‘unity of international law’ and the sense in which rules should not be considered in isolation of general international law.”⁸⁸
81. The International Law Commission’s Report on the Fragmentation of International Law concluded that Article 31(3)(c) VCLT reflects the reality that international law is a dynamic legal system and that therefore “[r]ules of international law subsequent to the treaty to be interpreted may be taken into account especially where the concepts used in the treaty are open or evolving.” The Report continues: “[t]his is the case, in particular, where: (a) the concept is one which implies taking into account subsequent, technical, economic or legal developments.”⁸⁹ Above, we have demonstrated how UNCLOS is framed in a manner that allows for an evolving understanding of its provisions, and for ‘unsuspected’ developments, including new forms of pollutants to be included in its definition of pollution (see paras. 65-66).
82. As explained by the ILC Special Rapporteur on Fragmentation of International Law, Martti Koskeniemi, systemic integration, as provided for under Article 31(3)(c) VCLT counters the idea: “that international tribunals or law-applying (treaty) bodies are not entitled to apply the law that goes ‘beyond’ the four corners of the constituting instrument”, instead submitting that:

“all international law exists in systemic relationship with other law, no such application can take place without situating the relevant jurisdiction-endowing instrument in its normative environment. This means that although a tribunal may only have jurisdiction in regard to a particular instrument, it must always interpret

⁸⁴ European Court of Human Rights (ECtHR), *Bosphorus Hava Yollar Turim*, application no. 45036/98 (2005), paras. 100, 150; ECtHR, *Rees v the United Kingdom*, application no. 9532/81 (1986), para. 47; ECtHR, *Öneryıldız v Turkey*, application no. 48939/99 (2004), paras. 59, 93; ECtHR, *Oluic v Croatia*, application no. 61260/08 (2010), paras. 29–31, 60-62; Wewerinke-Singh and McCoach (n80).

⁸⁵ Gabcikovo-Nagymaros Project (*Hungary v Slovakia*) I.C.J. Reports 1997, para. 112; International Law Commission, Fragmentation of International Law: Difficulties Arising From the Diversification and Expansion of International Law – Report of the Study Group, A/CN.4/L.702 (18 July 2006), available at: https://legal.un.org/ilc/documentation/english/a_cn4_1702.pdf.

⁸⁶ Inter-American Court of Human Rights, *Advisory Opinion OC-23/17 of November 15, 2017 Requested by Colombia*, available at: http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2017/20171115_OC-2317_opinion.pdf.

⁸⁷ Rosalyn Higgins, “A Babel of Judicial Voices? Ruminations from the Bench”, 55 *International & Comparative Law Quarterly* (2006); Alan Boyle, “Addressing Climate Change Impacts through UNCLOS Part XV Dispute Settlement Mechanisms” (2018), available at: <https://cil.nus.edu.sg/wp-content/uploads/2018/03/Panel-7-Session-1-Alan-Boyle.pdf>.

⁸⁸ Sands (n83), pg. 95, fn. 62 citing to: Combacau Jean and Serge Sur, *Droit International Public* (2e éd Montchrestien 1995).

⁸⁹ A/CN.4/L.702 (n85), para. 23.

and apply that instrument in its relationship to its normative environment – that is to say ‘other’ international law.”⁹⁰

83. To summarise, where the source of the pollution to the marine environment is greenhouse gas emissions, and the States Parties to UNCLOS have undertaken international treaty obligations to reduce said emissions, the normative environment, including the governing framework on GHG emissions – i.e. the UNFCCC and Paris Agreement – is relevant to the interpretation of the obligations under UNCLOS. It is the UNFCCC Paris Agreement which currently sets the international standard for the management and control of greenhouse gas emissions.
84. Management of greenhouse gas emissions (in accordance with the due diligence obligation under UNCLOS) therefore includes and encompasses the obligations of State parties to mitigate greenhouse gas emissions under the Paris Agreement, which include, *inter alia*:
- Article 3: the obligation to undertake and communicate ambitious efforts as defined in Articles 4, 7, 9, 10, 11 and 13 with a view to achieving the purpose of the Agreement set out in Article 2 (the temperature goal);
 - Article 4(1): the obligation to reach peak emissions of greenhouse gases as soon as possible, and to reach net zero in the second half of the century;
 - Article 4(2): the obligation to prepare, communicate and maintain successive Nationally Determined Contributions (NDCs) and to pursue domestic mitigation measures with the aim of achieving the objectives of the NDCs;
 - Article 4(3): the obligation that each NDC represents a progression beyond the previous, and reflect the State Parties’ “highest possible ambition”; and
 - Article 4(4): the obligation on developed country parties to undertake economy wide absolute emission reduction targets.
85. Ceasing harmful levels of greenhouse gas emissions is also required under relevant provisions on State responsibility. While the emission of greenhouse gases is not an illegal act, emitting greenhouse gases at a level that has ‘deleterious effects’ on the marine environment is in violation of States’ obligations under Part XII. States are required to cease such acts and re-establish the situation affected by the breach (see paras. 30-31). While full reparation may not be possible/feasible, either technically or financially, it has nonetheless been scientifically proven that the reduction of greenhouse gas emissions would increase the ability of organisms and ecosystems to adapt to ocean warming and acidification (see para. 57) and slow down sea level rise (see paras. 62-63), indicating that some level of restitution is feasible. At the same time,

⁹⁰ International Law Commission, “Fragmentation of International Law: Difficulties Arising From the Diversification and Expansion of International Law – Report of the Study Group”, *A/CN.4/L.682* (13 April 2006), paras. 423, 426(c), available at: <https://documents-dds-ny.un.org/doc/UNDOC/LTD/G06/610/77/PDF/G0661077.pdf?OpenElement>, as discussed and cited in - *Billy et al v Australia* (n20).

the IPCC has stated that: “[e]very increment of global warming will intensify multiple and concurrent hazards.”⁹¹

B. UNCLOS & International Human Rights Law

86. International and regional human rights treaties and the practice of international and regional human rights courts and tribunals have established a clear connection between States’ human rights obligations and the need for environmental and climate protection (see paras. 75-78). They have also detailed a number of specific duties related to the equitable use of sea and ocean resources, as well as the duty to protect traditional fishing practices. The obligations under UNCLOS are thus also to be understood in light of relevant internationally protected human rights. In the context of UNCLOS, the following considerations are of particular relevance to the interpretation of its principles and obligations.

87. In *Billy and Others v Australia*, the United Nations Human Rights Committee (UN HRC) noted that the claimants depended on fish and other marine resources for their subsistence and livelihoods; depended on the health of the surrounding ecosystems for their own wellbeing;⁹² and that climate change effects, including coral bleaching have led to a reduction of economically important marine species. The Committee stated that States Parties must prevent serious environmental damage which threatens disruption to the rights to privacy, family and the home of individuals under their jurisdiction.⁹³ The Committee ultimately found that the respondent State had failed to protect the claimants from the effects of serious environmental damage.⁹⁴

88. In that same decision, the UN HRC underlined the importance of traditional fishing to minority indigenous groups’ ability to maintain their cultural integrity:

“ (...) In the case of indigenous peoples, the enjoyment of culture may relate to a way of life which is closely associated with territory and the use of its resources, including such traditional activities as fishing or hunting. (...) The Committee further recalls that article 27 of the Covenant, interpreted in the light of the United Nations Declaration on the Rights of Indigenous Peoples, enshrines the inalienable right of indigenous peoples to enjoy the territories and natural resources that they have traditionally used for their subsistence and cultural identity.”⁹⁵

89. The European Court of Human Rights has clarified that the obligation on States to prevent hazards to human health and life includes the obligation to provide access to information and access to public consultation and participation in the policy- and

⁹¹ IPCC AR6 SYR SPM (n52), Headline Statements, B.1, available at: <https://www.ipcc.ch/report/ar6/syr/resources/spm-headline-statements/>.

⁹² Human Rights Committee, Views adopted by the Committee under article 5 (4) of the Optional Protocol, concerning communication No. 3624/2019 (*Billy et al v Australia*), CCPR/C/135/D/3624/2019 (22 September 2022), para. 8.10.

⁹³ *Ibid.*, para.8.9.

⁹⁴ *Ibid.*, para. 8.12.

⁹⁵ *Ibid.*, para. 8.13. See also: Benito Oliveira et al. v. Paraguay (CCPR/C/132/D/2552/2015), at 8.6; UN Committee on Economic, Social and Cultural Rights, General Comment No. 21 (2009), para. 36; United Nations Declaration on the Rights of Indigenous Peoples, art. 26 (1)). See also: African (Banjul) Charter on Human and Peoples’ Rights, art. 21 on the right to disposal of wealth and natural resources, including marine resources.

decision-making process.⁹⁶ Where a State must determine complex issues of environmental and economic policy, the decision-making process must involve appropriate investigations and studies in order to allow the state authorities to predict and evaluate in advance the effects of those activities which might damage the environment and infringe individuals' rights and to enable them to strike a fair balance between the various conflicting interests at stake.⁹⁷

90. And finally, where there has been a violation of human rights, such as harmful pollution of the marine environment, international human rights law provides that States are under the obligation to provide effective remedies, including adequate compensation.⁹⁸
91. In addition, the doctrine of systemic integration in international law requires that States in taking action to reduce emissions adhere with wider international environmental and human rights obligations, including the obligations of prevention, precaution and due diligence mentioned above.
92. This approach has also been advanced in recent proceedings. In *Billy and Others v Australia* (mentioned above), the UN Human Rights Committee considered the question of whether States have responsibility to address the impact of climate change under the International Covenant on Civil and Political Rights. A minority found that the Paris Agreement represents an international standard that should be taken into account when assessing State compliance with other treaties. Committee Member Zyberi found that:

“When it comes to mitigation measures, assessing the nationally determined contributions taken by States parties to the ICCPR under the 2015 Paris Agreement, when the State is party to both treaties, is an important starting point. States are under a positive obligation to take all appropriate measures to ensure the protection of human rights. In this context, the due diligence standard requires States to set their national climate mitigation targets at the level of their highest possible ambition and to pursue effective domestic mitigation measures with the aim of achieving those targets. (...) States should act with due diligence when taking mitigation and adaptation action, based on the best science. This is an individual responsibility of the State, relative to the risk at stake and its capacity to address it. A higher standard of due diligence applies in respect of those States with significant total emissions or very high per capita emissions (whether these are past or current emissions), given the greater burden that their emissions place on the global climate system, as well as to States with higher capacities to take high ambitious mitigation action.”⁹⁹

93. In practice, this means that States must take a credible and holistic approach to decarbonisation that avoids reliance on uncertain and high-risk solutions (which range

⁹⁶ European Court of Human Rights, *Öneryıldız v. Turkey*, Grand Chamber judgment (2004), § 90; *Guerra and Others v. Italy*, Grand Chamber judgment (1998), §§ 57-60, *Hatton and Others v. the United Kingdom*, Grand Chamber judgment (2003), § 128. See also: European Committee of Social Rights, *International Federation of Human Rights Leagues (FIDH) v. Greece* (Decision on the Merits) (23 January 2013) ECSR Complaint No. 72/2011.

⁹⁷ European Court of Human Rights, *Taşkın and Others v. Turkey*, (2004), § 119.

⁹⁸ See e.g. *Billy and Others v Australia* (n93), para 11.

⁹⁹ Human Rights Committee, Individual Opinion by Committee Member Gentian Zyberi - *Billy et al v Australia*, CCPR/C/135/D/3624/2019 (22 September 2022), pg. 20-21.

from reliance on so-called ‘negative emissions technologies’, carbon ‘offsetting’ or resource-intensive fuels that are unproven at scale).¹⁰⁰

94. Reliance on such solutions can lead not only to emissions reductions ultimately not being realised but also to significantly increased energy and resource use, which in and of themselves can lead to human rights violations and severe environmental harms. These risks have been emphasised by the IPCC in its Sixth Assessment Report; for example the IPCC explains that:

“The specifics of mitigation achievement are crucial, since large-scale deployment of some climate mitigation and land-based CDR [Carbon Dioxide Removal] measures could have deleterious impacts on biodiversity. (...) Scenarios based on demand reductions of energy and land-based production are expected to avoid many such consequences, due to their minimised reliance on BECCS [bioenergy with carbon capture and storage].”¹⁰¹

95. It is also critical in this context that States ensure the protection of human rights and ecosystems when consenting and planning for new infrastructure and projects, whether they are proposed as purported climate solutions or otherwise.

V. CONCLUSION

96. In conclusion, UNCLOS, the Paris Agreement and other relevant rules of international law including international human rights law require all State Parties to comply with their obligation to protect the marine environment by preventing, reducing and controlling pollution from greenhouse gases, by implementing laws and regulations (among other things) that make a credible and equitable contribution to of achieving the internationally agreed goal of keeping warming “well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 above pre-industrial levels (...) [to] significantly reduce the risks and impacts of climate change”, that represents their “highest possible ambition”.
97. Significantly, the Glasgow Climate Pact, adopted by the Conference of the Parties to the UNFCCC, recognises “the importance of the best available science for effective climate action and policy making.”¹⁰²
98. As shown above, the science evidences that limiting warming to 1.5°C to comply with obligations under UNCLOS, requires “rapid and deep and, in most cases, immediate greenhouse gas emissions reductions in all sectors this decade.”¹⁰³
99. At the same time, States must ensure that such steps respect their obligations under international environmental law and international human rights law – both in their

¹⁰⁰ Philippe Sands & Kate Cook, “Joint Opinion: The Restriction of Geoengineering under International Law” (26 March 2021), available at: <https://www.ohchr.org/sites/default/files/2022-06/Annex-SubmissionCIEL-ETC-HBF-TWN-Geoengineering-Opinion.pdf>.

¹⁰¹ IPCC, “Chapter 3: Mitigation Pathways Compatible with Long-Term Goals” in *Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (AR6 WGIII Ch3)* (Cambridge University Press 2022), p. 377, available at: https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_FullReport.pdf.

¹⁰² Glasgow Climate Pact, FCCC/PA/CMA/2021/10/Add.1 (8 March 2022), para. 1.

¹⁰³ IPCC AR6 SYR SPM (n52), B.6.

approach to managing the environmental and social risks posed by their plans and also in their consenting of particular projects and infrastructure.

100. To answer COSIS' question put to the Tribunal, we respectfully submit that:

(a) The State obligations under Part XII to prevent, reduce and control pollution require States to reduce greenhouse gas emissions in line with the current applicable international legal framework, being the UNFCCC and the Paris Agreement, and consistently with other applicable rules and principles of international law including international environmental and human rights law.

(b) Due diligence is integral to the State obligations under Part XII to protect and preserve the marine environment are. This requires that States' practices have to reflect the best available science on marine environmental harms and their prevention.