

Legal Analysis

Request for an Advisory Opinion from the
International Tribunal for the Law of the Sea

Contents

Executive Summary	2
I. Introduction.....	2
II. The Commission of Small Island States (COSIS)	4
A. Background	4
B. The Request for an Advisory Opinion	5
III. Advisory Jurisdiction & Discretion of the Tribunal	6
A. Jurisdiction.....	6
B. Discretion.....	7
IV. The International Law of the Sea.....	7
A. Part XII UNCLOS: Protection of the Marine Environment.....	7
B. Rules of Interpretation and Applicable Law.....	12
V. The Science of Climate Change and Oceans	13
A. Ocean Warming and Acidification	15
B. Sea level rise	16
VI. Legal Application & Analysis	17

Executive Summary

Governmental (in)action and responsibilities in the context of the climate crisis are increasingly being addressed through legal means, including at the international level. This legal briefing discusses the advisory opinion requested by the Commission of Small Island States on Climate Change and International Law (COSIS) from the International Tribunal for the Law of the Sea (ITLOS) on 12 December 2022. ITLOS set the date for written State submissions on 16 June 2023. A hearing on the procedural and substantive issues is therefore expected around Q4 2023.

The question requests ITLOS to clarify the nature and extent of the State obligation – under the United Nations Convention on the Law of the Sea (UNCLOS) – to protect and reduce pollution to the marine environment in light of the adverse effects that greenhouse gas emissions have on the oceans. This briefing analyses the matters of substance that will be examined by ITLOS, including the law applicable to marine pollution and the protection and preservation of the marine environment, the science of climate change in the context of oceans and the application of these facts to the legal framework. We conclude that because greenhouse gas emissions are to be understood as pollution under UNCLOS, and States are under a continuing obligation to “protect and preserve the marine environment”, which includes the prevention, reduction and control of pollution, the Law of the Sea Convention legally obligates States Parties to reduce their greenhouse gas emissions in line with the temperature goal set out in the Paris Agreement.

I. Introduction

1. This legal briefing analyses the United Nations Convention on the Law of the Sea (UNCLOS; the Convention) in the context of climate change and whether the Convention’s obligation to preserve and protect the marine environment translates into an obligation on States to mitigate greenhouse gas emissions.¹
2. On 12 December 2022, the Commission of Small Island States on Climate Change and International Law (COSIS; the Commission) submitted a request to the International Tribunal for the Law of the Sea (ITLOS; the Tribunal), to clarify State obligations under UNCLOS to prevent, reduce and control pollution to the marine environment resulting from climate change.² ITLOS set a preliminary date for written submissions on 16 June 2023.³ A hearing of the procedural and substantive issues is therefore expected around Q4 2023.
3. In 2021/2022, two state-led initiatives before international courts and tribunals took on prominent roles: the first initiated by the Republic of Vanuatu seeking an advisory opinion from the International Court of Justice by means of a vote from the UN General Assembly.⁴ The second, the

¹ The United Nations Convention on the Law of the Sea, 1982.

² 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.

³ In its first Order, the time limit was set for 16 May 2023 and later on extended to 16 June 2023: ITLOS, Order 2022/4 (16 December 2022), available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/C31_Order_2022-4_16.12.2022.pdf; ITLOS, Order 2023/1 (15 February 2023), available at: https://itlos.org/fileadmin/itlos/documents/cases/31/C31_Order_2023-1_15.02.2023_Readable.pdf.

⁴ For more information on the ICJ initiative, see: <https://www.vanuatuicj.com/>.

request for an advisory opinion from the International Tribunal for the Law of the Sea submitted by COSIS.

4. In January 2023, Colombia and Chile announced that they had submitted a request for an advisory opinion to the Inter-American Court of Human Rights, seeking a clarification of State obligations in the climate crisis.⁵
5. These developments are unsurprising, as Philippe Sands KC concluded in September 2015, international courts have a role to play in defining the duties of States regarding climate change.⁶
6. Advisory opinions are a means to obtain legal advice from an international court or tribunal. They do not have binding force, nonetheless are recognised as “an authoritative statement of international law.”⁷ Thereby, advisory opinions are important tools, as they provide crucial clarification of the law and contribute to the development of international law and inter-State relations.
7. As previously held by a Special Chamber constituted under UNCLOS: “judicial declarations made in advisory proceedings carry no less weight and authority than those in judgments because they are made with the same rigour and scrutiny” and the same “competences in matters of international law.”⁸ The Special Chamber concluded that determinations made in such advisory proceedings could not be “disregarded simply because the advisory opinion is not binding”, and had legal effect that had to be taken into consideration in the legal assessments of the Special Chamber.⁹
8. Advisory opinions are thus important in providing authoritative determinations of the law that may assist other courts and tribunals in their own legal assessments.
9. Especially in the context of climate change and State obligations, an advisory opinion i.e. an authoritative pronouncement on the law, would assist in providing clarity on the existing international legal frameworks, such as the Law of the Sea Convention, and inform principles such as due diligence obligations that are impacted by and have to be read in light of the adverse effects of the climate crisis.
10. A finding from an international court or tribunal that State Parties are under an obligation to mitigate against climate change, and must do so in line with the best-available science, could support the harmonisation of international law relating to the protection of the (marine) environment, and support efforts to encourage the increase in State ambition in line with the terms of the Paris Agreement.

⁵ Maria Antonia Tigre *et al*, “A Request for an Advisory Opinion at the Inter-American Court of Human Rights: Initial Reactions”, *Climate Law – A Sabin Center Blog* (17 February 2023), available at: <https://blogs.law.columbia.edu/climatechange/2023/02/17/a-request-for-an-advisory-opinion-at-the-inter-american-court-of-human-rights-initial-reactions/>.

⁶ Philippe Sands KC, *Climate Change and the Rule of Law: Adjudicating the Future in International Law* (2015), available at <https://www.supremecourt.uk/docs/professor-sands-lecture-on-climate-change-and-the-rule-of-law.pdf>.

⁷ Dispute Concerning Delimitation of the Maritime Boundary Between Mauritius and Maldives in the Indian Ocean (*Mauritius/Maldives*), Preliminary Objections, Judgment of 28 January 2021, para. 202.

⁸ *Ibid.*, para. 203.

⁹ *Ibid.*, paras. 205-206.

II. The Commission of Small Island States (COSIS)

A. Background

11. COSIS 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, Palau (November 2021), Niue (September 2022), Vanuatu (December 2022) and Saint Lucia (December 2022) joined the Commission. Membership is open to all AOSIS members (Alliance of Small Island States).

12. The preamble sets out the context and objectives of the Agreement and its States Parties:

“Recognizing that Climate Change is the Common Concern of Humanity,

Mindful of the fundamental importance of the oceans as sinks and reservoirs of greenhouse gases and the devastating impact for Small Island States of related changes in the marine environment,

(...)

Considering that the emission of greenhouse gases by Small Island States is negligible but that they bear a disproportionate and overwhelming burden of the adverse effects thereof,

(...)

Determined to take immediate action to protect and preserve the climate system and marine environment based on equity and the common but differentiated responsibilities of States to combat climate change,

Recognizing the imperative necessity of pursuing climate justice in accordance with the principles of progressive development of international law in response to the unprecedented crisis facing humankind,

Having regard to the obligations of States under the 1992 United Nations Framework Convention on Climate Change and related instruments, the 1982 United Nations Convention on the Law of the Sea, and other conventions and principles of international law applicable to the protection and preservation of the climate system and marine environment.”¹⁰

13. Pointing to *“the catastrophic effects of climate change which threaten the survival of Small Island States, and in some cases, their very existence”* and the determination of these actors to take *“immediate action to protect and preserve the climate system and marine environment”*, the Agreement establishes the Commission. Amongst other activities, COSIS has the authority to

¹⁰ See (n2).

request an advisory opinion from the International Tribunal for the Law of the Sea located in Hamburg, Germany (see [Section III.A. on ITLOS' jurisdiction](#)).

14. The International Tribunal for the Law of the Sea, was set up by the 1982 United Nations Convention on the Law of the Sea. It has jurisdiction over disputes submitted to it by its Parties regarding the interpretation or application of the Convention¹¹ and over matters provided for in other agreements that confer jurisdiction to the Tribunal.¹² It also has the power to give advisory opinions.
15. Advisory opinions differ from contentious proceedings aimed at settling disputes, as advisory proceedings are aimed at providing legal advice i.e. a determination and/or interpretation of the law.
16. On 12 December 2022, COSIS submitted its request for an advisory opinion to the Tribunal. Since then, the Tribunal has invited select intergovernmental organisations and all States Parties to UNCLOS to provide written statements by **16 June 2023**.

B. The Request for an Advisory Opinion

17. The question COSIS submitted to the Tribunal is as follows:¹³

“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?”

18. The question thus seeks clarification on State obligations to protect and prevent pollution of the marine environment that arises or is likely to arise from climate change – such as ocean warming, ocean acidification and sea level rise – caused by the greenhouse gas emissions resulting from human activity.

¹¹ UNCLOS, art. 297.

¹² ITLOS/8, Rules of the Tribunal (Version 25 March 2021), Article 21 available at: https://www.itlos.org/fileadmin/itlos/documents/basic_texts/ITLOS_8_25.03.21.pdf.

¹³ ITLOS Case No. 31, Request for Advisory Opinion by the Commission of Small Island States on Climate Change and International Law (12 December 2022) available at: https://itlos.org/fileadmin/itlos/documents/cases/31/Request_for_Advisory_Opinion_COSIS_12.12.22.pdf.

III. Advisory Jurisdiction & Discretion of the Tribunal

A. Jurisdiction

19. In 2013, the full Tribunal was requested to render an advisory opinion for the first time.
20. The request was submitted by the Sub-Regional Fisheries Commission (SRFC), an inter-governmental fisheries cooperation organisation, consisting of seven States along or bordering the West African coastline. The request for an advisory opinion was authorised by a resolution of the SRFC.¹⁴
21. In line with Article 133 of the Rules of the Tribunal, all States Parties to UNCLOS were first notified of the request, invited to submit written statements during a first stage, and participate in oral proceedings during a second stage.
22. Intergovernmental organisations “likely to be able to furnish information on the question” were also invited to participate in the written and oral stages of the proceedings.
23. During both the written and oral proceedings some intervening States challenged the Tribunal’s jurisdiction to render an advisory opinion. Those challenging the Tribunal’s jurisdiction frequently submitted that the constituent instrument, i.e. UNCLOS and more specifically Article 191, did not expressly provide the full Tribunal (only the Seabed Disputes Chamber) with advisory jurisdiction.¹⁵
24. In its opinion, the Tribunal unanimously held that it had advisory jurisdiction, basing its position on Articles 16 and 21 of the Tribunal’s Statute and Article 138 of the Rules of the Tribunal. The opinion clarified that Article 138 of the Rules provided for a list of prerequisites that needed to be satisfied before the Tribunal can exercise its advisory jurisdiction.¹⁶ These are:
- the existence of an international agreement related to the purposes of UNCLOS, which specifically provides for the submission to the Tribunal of a request for an advisory opinion (Art. 138(1) Rules);
 - the questions put to the Tribunal are of legal nature (Art. 138(1) Rules); and
 - the transmission of the request to the Tribunal by a body authorised by or in accordance with said agreement (Art. 138(2) Rules).
25. COSIS and the Agreement are related to the purposes of UNCLOS, as they address the international law of the sea and marine protection; the Agreement explicitly gives the Commission the authority to request an advisory opinion from ITLOS; and finally the question put to the Tribunal seeks to clarify the legal obligations of States under UNCLOS. The request submitted by COSIS thus meets the above requirements and the Tribunal’s jurisdiction is, *prima facie*, established.

¹⁴ ITLOS Case No. 21, Request for an advisory opinion by the Sub-Regional Fisheries Commission (SRFC).

¹⁵ Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015, para. 40ff, available at:

https://itlos.org/fileadmin/itlos/documents/cases/case_no.21/advisory_opinion_published/2015_21-advop-E.pdf.

¹⁶ *Ibid.*, paras. 37-69.

B. Discretion

26. During these previous proceedings for an advisory opinion, the Tribunal pointed to the language of Article 138 of the Rules, which provides that the “*Tribunal may give an advisory opinion*” (emphasis added). The Tribunal should refuse to do so, where “*compelling reasons*” exist.¹⁷
27. Considering the question of discretion, the Tribunal set aside States’ arguments that the questions submitted were too general and unclear, that the request went beyond the scope of the Tribunal’s judicial functions, thereby assigning the Tribunal a legislative role, and that in acceding to the request, the Tribunal would pronounce on the rights and obligations of third States.¹⁸
28. For the pending advisory proceedings, it is to be expected that some intervening States may once again submit to the Tribunal that it should exercise its discretion and not accede to the request. As in the previous request for an advisory opinion from the full Tribunal, intervening States may argue that the questions put to the Tribunal by COSIS concern the rights and obligations of third States who are not members of the Commission and the Tribunal is thus being asked to pronounce on the rights and obligations of third States without their consent. In the SRFC advisory proceedings, the Tribunal weighed such considerations against the fact that “by answering the questions it will assist the SRFC in the performance of its activities and contribute to the implementation of the Convention.”¹⁹
29. In the current advisory proceedings, the request submitted by COSIS seeks to clarify the general obligations of marine protection and pollution reduction under UNCLOS that 164 UN Member States have already accepted. While the legal clarifications sought may impact the rights and obligations of third States, they also have direct implications for the rights and obligations of the States that submitted the request and are meant to assist the Commission in carrying out its mandate. The utility of the requested opinion is thus relevant to the Tribunal’s consideration.²⁰
30. Additionally, climate change is a concern of universal character, which is confirmed by the fact that the international treaty on climate change, the Paris Agreement, has been ratified by 194 States and the European Union. The public interest character of this request should thus inform the Tribunal’s decision to accede to the request.²¹

IV. The International Law of the Sea

A. Part XII UNCLOS: Protection of the Marine Environment

31. The 1982 United Nations Convention on the Law of the Sea is a near-universally accepted treaty containing the international legal framework governing the world’s oceans.²² Its preamble emphasises, as one of the Convention’s aims, the establishment of “*a legal order for the seas and*

¹⁷ *Ibid.*, para. 71.

¹⁸ *Ibid.*, paras. 70-79.

¹⁹ *Ibid.*, para. 77.

²⁰ *Ibid.*

²¹ Laurence Boisson de Chazournes, "Chapter 6 Advisory Opinions and the Furtherance of the Common Interest of Humankind" *International Organizations and International Dispute Settlement: Trends and Prospects* (Brill | Nijhoff 2002).

²² 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.

*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.*²³

32. The protection and preservation of the marine environment is covered by Part XII of UNCLOS. Many of its provisions reflect customary international law.²⁴
33. The prevention of pollution is understood as central to the obligation on States to protect the marine environment.²⁵ To this end, 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.”

34. It is important to highlight that 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.²⁶ This means that establishing a clear causal link is not required by the definition. It has been noted that the definition under Article 1, implicitly “*refers to, and goes in line with broader concepts such as risk evaluation, precaution and due diligence.*”²⁷
35. Due diligence in international law is understood as an obligation of conduct on States. The standard applied is one of “responsible government”, taking all reasonable and necessary steps to comply with its obligations. If failing to do so, a State’s international responsibility is triggered. The exact content of the due diligence obligation is informed by applicable rules, practices and norms of international law relevant to the context and the provision(s) from which it emerges.²⁸
36. 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:

²³ UNCLOS, Preamble.

²⁴ 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.

²⁵ UNCLOS, art. 194.

²⁶ Yoshifumi Tanaka, *The International Law of the Sea* (2nd ed Cambridge University Press 2015), pg. 269.

²⁷ *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), paras. 131-132, pg. 74-75; 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; Tanaka (n26), pg. 269.

²⁸ 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*.

“Rather, it is an obligation to deploy adequate means, to exercise best possible efforts, to do the utmost, to obtain this result.”²⁹

37. 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**”³⁰ (emphasis added).*

38. Article 1 and the connected due diligence obligation thus also inform 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 by other provisions under Part XII and applicable rules of international law (see [Section IV.B. below](#)).

39. 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).

40. 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 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.”

41. 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).

42. 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

²⁹ Request for Advisory Opinion Submitted to the Seabed Disputes Chamber (n27), para. 110.

³⁰ *Ibid.*, para. 117.

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.³¹

43. Against this background, 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.”

44. 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.”*

45. 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.

46. By way of example, the level of greenhouse gas emissions associated with the production, use and disposal of conventional fossil fuel-based plastics is forecast to grow to approximately 2.1 gigatons of CO₂ equivalent (GtCO₂e) by 2040, or 19 percent of the global carbon budget. Using another approach, in 2015, GHG emissions from plastics were estimated to be 1.7 GtCO₂e and projected to increase to approximately 6.5 GtCO₂e by 2050, or 15 percent of the global carbon

³¹ Philippe Sands et al (n24), pg. 475.

budget.³² This contribution to global greenhouse gas emissions from land-based activities will then contribute to the adverse effects on the marine environment detailed below (see [Section V](#) below).

47. Read together, this means that the release of greenhouse gases from sources on land (for example from power stations, plastics production or agriculture) is defined as a source of pollution of the marine environment under Article 194. The definition also includes pollution that arises from or through the atmosphere. This 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.³³ Excess carbon dioxide absorption by the oceans causes ocean acidification which is explained further below (See [Section V.A](#) below).

48. Finally, 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.”

49. As mentioned at paragraph 35 above, where States fail to comply with their (due diligence) obligations, 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.”³⁴

50. 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,³⁵ they provide that where an internationally wrongful act occurs, States are under the legal obligation to cease the wrongful conduct,³⁶ make full reparation for the injury,³⁷ and to cooperate to bring the breach to an end.³⁸

³² *United Nations Environment Programme*, “From Pollution to Solution: A global assessment of marine litter and plastic pollution” (2021), available at: <https://www.unep.org/resources/pollution-solution-global-assessment-marine-litter-and-plastic-pollution>.

³³ IPCC, ‘2019: Summary for Policymakers’, in Hans-Otto Pörtner *et al* (eds) *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/>.

³⁴ 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 compensation for damage and the settlement of disputes, as well as, where appropriate, development of criteria and procedures for payment of adequate compensation, such as compulsory insurance or compensation funds.”

³⁵ *Request for Advisory Opinion Submitted to the Seabed Disputes Chamber* (n27), para. 183.

³⁶ 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.

³⁷ *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.”

³⁸ *Ibid.*, arts. 40-41.

51. In conclusion, the above provisions of Part XII of UNCLOS are drafted sufficiently broadly to necessitate climate change mitigation (that is, the reduction of greenhouse gas emissions) as a measure to preserve and protect the marine environment. Failure to do so entails State responsibility. 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) must be consulted.

B. Rules of Interpretation and Applicable Law

52. International agreements and norms do not exist in isolation. Many international treaties refer to other international agreements and rules as means for interpretation.³⁹ This provides for the harmonisation of international law and coherence between the different international legal obligations of States.⁴⁰

53. 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 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.”

54. Together with the above considered Article 207 and 212, it 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. 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.⁴¹

55. Similarly, the obligation of due diligence, a standard of conduct frequently invoked to assess States' environmental obligations, also informs Part XII obligations.⁴² This is supported by the jurisprudence of the International Court of Justice and the ITLOS Seabed Disputes Chamber.⁴³

³⁹ 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: 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.

⁴⁰ Matthias Herdegen, “Interpretation in International Law” (November 2020) (MPEPIL online edn).

⁴¹ The South China Sea Arbitration (*Phil. v. China*), PCA Case No. 2013-19, Award (July 12, 2016), paras. 941-942.

⁴² 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.

⁴³ *Request for Advisory Opinion Submitted to the Seabed Disputes Chamber* (n27), para. 110; Schäli (n27).

56. 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.”

57. Read together, these findings are significant. They confirm that Part XII of UNCLOS and related State obligations – such as due diligence – are informed 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.

V. The Science of Climate Change and Oceans

58. 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. “[T]o significantly reduce the risks and impacts of climate change”, 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”.*⁴⁴

59. 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.⁴⁵

60. Global warming, one component 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.”⁴⁶ 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.”⁴⁷ It is this increase in heat (‘energy’) 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.”⁴⁸

⁴⁴ Paris Agreement to the United Nations Framework Convention on Climate Change, 2015.

⁴⁵ NASA, “Evidence”, available at: <https://climate.nasa.gov/evidence/>.

⁴⁶ NASA, “Global Warming vs. Climate Change”, available at: <https://climate.nasa.gov/global-warming-vs-climate-change/>.

⁴⁷ NASA (n45).

⁴⁸ *Ibid.*

61. Scientific consensus on global warming and the human impact on Earth's climate system is unequivocal and “has evolved from theory to established fact”⁴⁹ with scientific consensus quantified at around 97 percent or higher.⁵⁰
62. 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.⁵¹ 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.⁵²
63. The IPCC publishes its Assessment Reports every few years, comprised of three parts by separate working groups and a synthesis report.⁵³ For the IPCC's Sixth Assessment Report (AR6), the report of Working Group I on the Physical Science Basis⁵⁴ comprised 234 scientists who reviewed over 14,000 scientific research papers.⁵⁵ 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.⁵⁶ The IPCC's work is thus considered the world's most authoritative assessment of the science on climate change.⁵⁷
64. 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.⁵⁸
65. Life on earth depends on the oceans and the cryosphere, i.e. “the frozen components of the Earth system.”⁵⁹ 71 percent of the planet's surface area is covered by oceans, containing about 97

⁴⁹ IPCC, “Technical Summary”, in Valerie Masson-Delmotte *et al* (eds) *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.

⁵⁰ 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>.

⁵¹ IPCC: <https://www.ipcc.ch/about/>.

⁵² *Ibid.*

⁵³ IPCC, “IPCC Factsheet – What is the IPCC”, available at:

https://www.ipcc.ch/site/assets/uploads/2021/07/AR6_FS_What_is_IPCC.pdf.

⁵⁴ 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.

⁵⁵ 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>.

⁵⁶ 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>.

⁵⁷ IPCC, “About: Structure”, available at: <https://www.ipcc.ch/about/structure/>.

⁵⁸ IPCC, “The Ocean” in VR Barros *et al* (eds) *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 (n33).

⁵⁹ IPCC SROCC SPM (n33), pg. 5.

percent of its water, while 10 percent of the planet's land area is covered by glaciers or ice sheets.⁶⁰ 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.”⁶¹

66. According to the IPCC, the world's oceans have “absorbed 93% of the extra energy from the enhanced greenhouse effect and approximately 30% of anthropogenic carbon dioxide from the atmosphere.”⁶² 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

67. 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.⁶³ 2021 – the most recent year ocean heat was assessed – was the highest on record.⁶⁴ 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.”⁶⁵

68. 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.⁶⁶ The projected impacts include harm to cold-water corals, which are essential to marine biodiversity.⁶⁷ At the same time, ocean acidification also inhibits ecosystem recovery.⁶⁸

69. 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.⁶⁹ “Long-term loss and degradation of marine ecosystems” also “compromises the ocean's role in cultural, recreational, and intrinsic values important for human identity and well-being.”⁷⁰ Hazards to human health are also part of UNCLOS' definition of pollution.

70. 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 Oceania.⁷¹

⁶⁰ *Ibid.*

⁶¹ *Ibid.*

⁶² IPCC WGII AR5 Ch30 (n58), pg. 1658.

⁶³ NASA, “Vital Signs: Ocean Warming”, available at: <https://climate.nasa.gov/vital-signs/ocean-warming/>.

⁶⁴ 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>.

⁶⁵ 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.

⁶⁶ IPCC SROCC SPM (n33), pg. 9.

⁶⁷ *Ibid.*, pg. 22.

⁶⁸ *Ibid.*, pg. 24.

⁶⁹ *Ibid.*, pg. 26.

⁷⁰ *Ibid.*; IPCC WG1 AR5 SPM (n65).

⁷¹ *Ibid.*, pg. 18.

71. 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.⁷²

B. Sea level rise

72. 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.⁷³ 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.⁷⁴

73. Sea level rise has significant impacts on coastal communities. Since the 1960s in many places coastal flooding has almost doubled in frequency.⁷⁵

74. 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.⁷⁶ Expected impacts include habitat contraction, loss of functionality and biodiversity.⁷⁷ Depending on the level of sea level rise, the IPCC projects that 20-90 percent of coastal wetlands, which often act as carbon storage, will be lost.⁷⁸

75. 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 water contaminates freshwater and land, threatening livelihoods and food security.⁷⁹ 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.⁸⁰

76. Even if current emissions were to be lowered quickly, sea level rise is irreversible. By 2050, sea levels are likely to have risen between 15 to 30 centimetres.⁸¹ Importantly, however, emissions reductions can still have significant effects beyond 2050. 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.⁸²

⁷² *Ibid.*, pg. 24.

⁷³ WMO (n64); IPCC WG1 AR5 SPM (n65), pgs. 9-10.

⁷⁴ *Ibid.*, pgs. 11-12.

⁷⁵ 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>.

⁷⁶ IPCC, "2019: Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities" in Hans-Otto Pörtner *et al* (eds) *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.

⁷⁷ *Ibid.*

⁷⁸ IPCC SROCC SPM (n33), pg. 24.

⁷⁹ 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>.

⁸⁰ *Ibid.*

⁸¹ IPCC WG1 AR5 SPM (n65), pg. 21.

⁸² 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*, B.3.1, available at: https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf.

77. The foregoing is evidence 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.

VI. Legal Application & Analysis

78. 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.⁸³

79. 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.⁸⁴ No such direct reference can be found in either the text of UNCLOS or its *travaux préparatoires*.⁸⁵ Nonetheless, the provisions of UNCLOS themselves indicate that the Convention is not a static instrument, and is instead open to evolution,⁸⁶ as evidenced by the above-mentioned Articles 207, 212 and 237 that allow for interpretation in line with other international rules and standards.

80. This reference to the applicability of other, non-conflicting, rules of international law leads to the conclusion that reading UNCLOS obligations together with some of the more recent international agreements such as the Paris Agreement, allows for more progressive interpretation of the obligations under UNCLOS to preserve and protect the marine environment.

81. 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. UNCLOS' 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.⁸⁷ 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 follows, that UNCLOS' definition of maritime pollution includes more recently recognised threats to marine environments, such as global warming.

82. The best-available science establishes a clear causal link between greenhouse gas emissions – even though this is not strictly required under UNCLOS (*see paragraph 34 above*) – and harm to the marine environment. Anthropogenic greenhouse gases are absorbed by the oceans causing

⁸³ Tanaka (n26); 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 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.

⁸⁴ 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.

⁸⁵ 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.

⁸⁶ Boyle (n83), 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.

⁸⁷ 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>.

acidification, ocean warming and sea level rise all three of which ‘result’ or are ‘likely to result’ in ‘deleterious effects.’ To recall, these 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.*”

83. 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 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.
84. 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 may capture emissions of greenhouse gases into the atmosphere, which cause global warming and related impacts.
85. 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, regulating as appropriate, observing the precautionary principle and taking enforcement action. 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.*”⁸⁸
86. 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 paragraph 37 above*).⁸⁹ Where due diligence obligations 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.
87. The interpretation of State obligations advanced in this briefing – 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.
88. 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

⁸⁸ Boyle (n83), 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.

⁸⁹ *Request for Advisory Opinion Submitted to the Seabed Disputes Chamber* (n27), para. 117.

of the State's human rights obligations.⁹⁰ The duty to reduce emissions in line with the Paris Agreement was thus based on obligations arising under a different (international) framework.⁹¹

89. 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.⁹²
90. 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.⁹³
91. 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.⁹⁴ 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 taken into consideration in the interpretation and application of the Convention⁹⁵ – the International Court of Justice,⁹⁶ and the Inter-American Court of Human Rights.⁹⁷
92. Most recently, in September 2022, the UN Human Rights Committee also considered the question of whether States have responsibility to address the impact of climate change under the

⁹⁰ 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.

⁹¹ 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.

⁹² 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/>.

⁹³ German Constitutional Court, 1 BvR 2656/18, Order (24 March 2021), §36; Eckes (n91).

⁹⁴ *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).

⁹⁵ 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, *Oluić v Croatia*, application no. 61260/08 (2010), paras. 29–31, 60–62; Wewerinke-Singh and McCoach (n91).

⁹⁶ 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_l702.pdf.

⁹⁷ Inter-American Court of Human Rights, *Advisory Opinion OC-23/17 of November 15, 2017 Requested by Colombia and Chile*, available at: http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2017/20171115_OC-2317_opinion.pdf.

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.”⁹⁸

93. Finally, the Seabed Disputes Chamber itself established that State obligations – such as the duty of due diligence – change in light of new developments, such as new scientific knowledge (see *paragraph 86*) and are not stagnant.
94. The aforementioned interpretation is further informed by academic literature⁹⁹ and, as referenced above (see [Section IV.B.](#) 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.*”¹⁰⁰
95. 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.*”¹⁰¹ Above, we have demonstrated how UNCLOS is framed in a manner that allows for an evolving understanding of its provisions (see *paragraph 79*), and for ‘unsuspected’ developments, including new forms of pollutants to be included in its definition of pollution (see *paragraph 81*).
96. As explained by the ILC Special Rapporteur on Fragmentation of International Law, Martti Koskenniemi, systemic integration, as provided for under Article 31(3)(c) VCLT counters the idea:

⁹⁸ 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.

⁹⁹ 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>.

¹⁰⁰ Sands (n94), pg. 95, fn. 62 citing to: Combacau Jean and Serge Sur, *Droit International Public* (2e éd Montchrestien 1995).

¹⁰¹ A/CN.4/L.702 (n96), para. 23.

“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 and apply that instrument in its relationship to its normative environment – that is to say ‘other’ international law.”¹⁰²

97. 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. 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.

98. 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 paragraph 50 above*). 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 paragraph 71 above*) and slow down sea level rise (*see paragraph 76 above*), indicating that some level of restitution is feasible.

¹⁰² 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 *Reply - Billy et al v Australia* (n39).

99. In conclusion, UNCLOS and the Paris Agreement would thus 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) with the objective 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”.
100. To answer COSIS’ question submitted to the Tribunal, we 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.
 - (b) The State obligations under Part XII to protect and preserve the marine environment are informed by the due diligence obligation. This requires that States’ practices have to reflect the best available science on marine environmental harms and their prevention.

Lea Main-Klingst (LMain-Klingst@clientearth.org) & Sophie Marjanac (SMarjanac@clientearth.org)
www.clientearth.org

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