

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 THE REPUBLIC OF SIERRA LEONE

16 JUNE 2023

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I. Introduction

1. On 26 August 2022, the Commission for Small Island States on Climate Change and International Law (“**COSIS**”) submitted a request to the International Tribunal for the Law of the Sea (“**ITLOS**” or “**Tribunal**”) for an advisory opinion on the following legal questions:

*“What are the specific obligations of States Parties to the United Nations Convention on the Law of the Sea (the “**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?”

2. In its Order 2022/4 of 16 December 2022, the Tribunal invited States Parties to the United Nations Convention on the Law of the Sea (“**UNCLOS**” or “**Convention**”) and intergovernmental organisations to present written statements on the questions by 16 May 2023 in accordance with Article 133(3) of the Rules of the Tribunal (“**Rules**”). The deadline for submitting written statements was extended to 16 June 2023 by Order 2023/1. The present Written Statement by the Republic of Sierra Leone (“**Sierra Leone**”) is submitted pursuant to that order. Sierra Leone was proud to sign UNCLOS on 10 December 1982 and to become a State Party effective 12 December 1994.
3. Sierra Leone is located on the West Coast of the African continent and, like other African States, is among the lowest contributors of greenhouse gas (“**GHG**”) emissions responsible for human-induced climate change. Sierra Leone has contributed <0.01% to the total cumulative historical global carbon dioxide pollution – a negligible amount. Its territorial emissions in the past decade have been between 1-1.3 million tons of carbon dioxide per year (as compared with the emissions of developed countries, which are in the billions), with negligible historical emissions.¹ Since Sierra Leone became independent in April

¹ “Global Carbon Project, ‘Global Carbon Atlas: Sierra Leone’”, available at: <https://globalcarbonatlas.org/emissions/carbon-emissions/> (last visited 8 June 2023); Hannah Ritchie and Max

1961, its per capita emissions have not exceeded 0.6 metric tons.² As a region, Africa has the lowest per capita GHG emissions in the world,³ and has contributed only 3% of total CO₂ emissions from 1751 to 2017.⁴ Yet despite contributing the least to climate change, African countries, including Sierra Leone, have been disproportionately impacted by the deleterious effects of climate change and remain among the most vulnerable to its emerging and continued impacts.

4. Developing countries are already ten times more likely to be affected by a climate disaster, as compared to developed countries.⁵ For Sierra Leone, this risk may be even higher due to its particular geography as a low-lying coastal State. In Sierra Leone, sea level rise has caused significant challenges to the livelihoods of coastal inhabitants. Coastal erosion is taking place in some of its coastal areas, resulting in a shifting of the coastline by about four to six meters per year.⁶
5. Additionally, coastal fisheries in the Guinea Current Large Marine Ecosystem are an important source of micronutrients for countries like Sierra Leone, but were “found to have the greatest cumulative human impact and the highest nutrient and pollution levels, associated with agricultural, industrial and domestic wastes” when compared to other sub-Saharan African large marine ecosystems.⁷ Due to its strong dependency on fisheries’ resources, a rapidly growing population and recent experience with violent conflict from

Roser, “Sierra Leone: CO₂ Country Profile” (*Our World In Data*), available at: <https://ourworldindata.org/co2/country/sierra-leone> (last visited 8 June 2023).

² Government of Sierra Leone, The Environment Protection Agency, “Sierra Leone’s Intended Nationally Determined Contribution (INDC)” (2015), available at: <https://faolex.fao.org/docs/pdf/sie187290.pdf> (last visited 8 June 2023), [PDF] p. 3.

³ Hans-Otto Pörtner *et al.* (eds), *Climate Change 2022: Impacts, Adaptation, and Vulnerability (Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change)* (Cambridge University Press 2022) (“**Sixth IPCC Report**”), p. 1294.

⁴ Hannah Ritchie, *Who has contributed most to global CO₂ emissions?*, Our World in Data (1 October 2019), available at <https://ourworldindata.org/contributed-most-global-co2> (last visited 15 June 2023) (bottom right of first Figure).

⁵ According to the Notre Dame Global Adaptation Initiative, developing countries have a tenfold chance of being affected by a climate disaster compared to those in wealthy countries each year. See Notre Dame Global Adaptation Initiative, “About”, available at: <https://gain.nd.edu/about/> (last visited 8 June 2023).

⁶ Government of Sierra Leone, “National Adaptation Plan” (2021), available at: https://unfccc.int/sites/default/files/resource/SierraLeone_iNAP_Final.pdf (last visited 8 June 2023), p. 29.

⁷ Stephen Kirkman *et al.*, “Ecosystem health and human wealth – A comparison of sub-Saharan African Large Marine Ecosystems”, (2020), 36 *Environmental Development*, p. 1.

which it continues to recover, Sierra Leone is both particularly susceptible to climate change impacts and particularly lacking in capacity to adapt to these impacts.⁸

6. Sierra Leone is among the 10% of countries in the world that are most vulnerable to the adverse impacts of climate change, yet one of the least able to deal with the effects. In recent years, Sierra Leone has experienced “[u]npredictable weather patterns, severe flooding, mudslides, and associated crop failures.”⁹ The coastal population of Sierra Leone, which is currently around seven million people, is expected to triple by 2030 and increase seven-fold by 2060. Needless to say, this extreme population increase is likely to further exacerbate Sierra Leone’s exposure to sea-level rise, flooding, food security and other challenges to its coastal ecosystems.¹⁰
7. Sierra Leone has long been committed to the processes and procedures established by the Convention. Sierra Leone is conscious of its obligations as a State Party and is committed to enhancing the Convention’s effectiveness as the Constitution of the Oceans. In this regard, Sierra Leone is cognizant of the fact that the obligations imposed on States Parties pursuant to Part XII of the Convention will be particularly important in providing the steps needed for States to address the threats posed by climate change.
8. Sierra Leone therefore strongly welcomes the decision by COSIS to address the impact and deleterious effects of climate change on the marine environment and the resulting obligations of States under the Convention, by way of its request to the Tribunal for an advisory opinion on the questions referred to in paragraph 1 of this Written Statement.
9. An advisory opinion, though technically provided only to the entity request it, will likely assist in clarifying the responsibilities of States Parties. It should also offer, as part of the required clarification, an equitable way forward, firmly rooted in the Convention, for sharing the burden among States, with a view to minimizing and mitigating the impacts of climate change on the marine environment. The opportunity should not be lost. There is a

⁸ See Christopher D. Golden *et al.*, “Nutrition: Fall in fish catch threatens human health”, (2016) 534 *Nature*, p. 320; see also IPCC, “Synthesis Report of the IPCC Sixth Assessment Report (AR6): Longer Report” (IPCC, 2022), available at: https://report.ipcc.ch/ar6syrr/pdf/IPCC_AR6_SYR_LongerReport.pdf (last visited 8 June 2023) (“**IPCC Synthesis Report**”), pp. 13-15, 17.

⁹ United Nations, Sierra Leone, “Why COP27 Matters to Sierra Leone”, (2 November 2022), available at: <https://sierraleone.un.org/en/205740-why-cop27-matters-sierra-leone> (last visited 8 June 2023).

¹⁰ Barbara Neumann, *et al.*, “Future Coastal Population Growth and Exposure to Sea-Level Rise and Coastal Flooding - A Global Assessment” (11 March 2015, *PLOS ONE*), available at: <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0118571> (last visited 8 June 2023), pp. 10, 28.

need for a yardstick for safeguarding the oceans from the existential threats posed by climate change, and that yardstick is the current state of climate change science and rules to serve as the basis for the due diligence obligations of States Parties under Part XII and elsewhere in the Convention.

10. The present submission is divided into two parts. First, Sierra Leone addresses the predicate question of jurisdiction. This is followed by a discussion, in successive parts, of the two questions posed to the Tribunal. In the final part, Sierra Leone offers concluding observations. Sierra Leone hopes that its views, and those of other States, will be taken into account in the Tribunal's advisory opinion.

II. Jurisdiction

A. Legal Basis for the Advisory Opinion

11. Article 21 of the Statute of the Tribunal ("**Statute**") provides that the jurisdiction of the Tribunal comprises "all disputes and applications submitted to it in accordance with this Convention and all matters specifically provided for in any other agreement which confers jurisdiction on the Tribunal."¹¹ In *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC)* ("**SRFC Advisory Opinion**"), ITLOS confirmed that although neither the Convention nor the Statute makes explicit reference to the advisory jurisdiction of the full Tribunal,¹² the reference to "all matters" in Article 21 of the Statute is a reference to something more than just "disputes" and includes advisory opinions.¹³ Thus, the Tribunal has jurisdiction to render advisory opinions, subject to fulfilling the necessary prerequisites for the exercise of that jurisdiction as provided for in the Rules and practice of the Tribunal.¹⁴

12. Article 138(1) of the Rules provides that the Tribunal "may give an advisory opinion on a legal question if an international agreement related to the purposes of the Convention

¹¹ Statute of the International Tribunal for the Law of the Sea, (signed 10 December 1982, entered into force 16 November 1994) (1833 UNTS 561) ("**Statute**"), art. 21.

¹² *Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission* (Advisory Opinion), 2 April 2015 [2015] ITLOS Rep. 4 ("**SRFC Advisory Opinion**"), para. 53. This is as opposed to the advisory jurisdiction of the Seabed Disputes Chamber, which is explicitly provided for in ITLOS Statute, art. 40.

¹³ *SRFC Advisory Opinion*, paras. 55-56. See also Judge Kateka, "Advisory Proceedings before the Seabed Disputes Chamber and before the ITLOS as a Full Court" (2013) 17 *Max Planck Yearbook of United Nations Law* 159, p. 168, n. 30.

¹⁴ *SRFC Advisory Opinion*, paras. 59-60.

specifically provides for the submission to the Tribunal of a request for such an opinion.”¹⁵ Under Article 138(2) of the Rules, such a request “shall be transmitted to the Tribunal by whatever body is authorized by or in accordance with the agreement to make the request to the Tribunal.”¹⁶

13. The prerequisites for the exercise of advisory jurisdiction as set out in Article 138 of the Rules are therefore that: (1) there must be an international agreement related to the purposes of the Convention which specifically provides for the submission to the Tribunal of a request for an advisory opinion; (2) the request must be transmitted by a body authorised by or in accordance with that agreement; and (3) such opinion may be given on a “legal question” only.¹⁷ These prerequisites are satisfied here:

- 1) COSIS is an international organisation,¹⁸ established pursuant to the Agreement for the establishment of the Commission of Small Island States on Climate Change and International Law, dated 31 October 2021 (“**COSIS Agreement**”).¹⁹ The COSIS Agreement is an international agreement concluded by Antigua and Barbuda, Tuvalu, Niue, Palau, Vanuatu and Saint Lucia.²⁰ Its objective is to provide COSIS with the mandate to “promote and contribute to the definition, implementation, and progressive development of rules and principles of international law concerning climate change, including, but not limited to, the obligations of States relating to the protection and preservation of the marine environment and their responsibility

¹⁵ Rules of the Tribunal (ITLOS/8) as adopted on 28 October 1997 and amended on 15 March 2001, 21 September 2001, 17 March 2009, 25 September 2018, 25 September 2020 and 25 March 2021, *available at*: https://www.itlos.org/fileadmin/itlos/documents/basic_texts/ITLOS_8_25.03.21.pdf (last visited 8 June 2023) (“**Rules**”), art. 138(1).

¹⁶ Rules, art. 138(2).

¹⁷ *SRFC Advisory Opinion*, paras. 59-60.

¹⁸ In the International Law Commission’s Draft Articles on the Responsibility of International Organizations, adopted at the sixty-third session of the Commission in 2011, the Commission defined an “international organization”, in Article 2(a), to mean “an organization established by a treaty or other instrument governed by international law and possessing its own international legal personality.” It also provided that, international organizations may include as members, in addition to States, other entities. While the definition was for the specific purposes of the ILC’s Draft Articles, rather than more generally for all purposes, it is clear that the definition contains the essential common characteristics of an international organization. *See* ILC, Draft Articles on Responsibility of International Organizations (2011), UN Doc. A/66/10, p. 54.

¹⁹ Agreement for the establishment of the Commission of Small Island States on Climate Change and International Law (entered into force 31 October 2021), *available at*: <https://treaties.un.org/doc/Publication/UNTS/No%20Volume/56940/Part/I-56940-08000002805c2ace.pdf> (last visited 8 June 2023) (“**COSIS Agreement**”).

²⁰ *Ibid.*

for injuries arising from internationally wrongful acts in respect of the breach of such obligations.”²¹ Thus, the COSIS Agreement is closely related to the purposes of UNCLOS.

- 2) Article 2(2) of the COSIS Agreement provides for the submission to the Tribunal of a request for an advisory opinion. Article 3(3) of the COSIS Agreement provides that COSIS shall be represented by a Chair or Co-Chair. Article 3(5) provides that COSIS decisions shall be made in principle by consensus. By a Decision of the Third Meeting of COSIS dated 26 August 2022, COSIS decided, in accordance with Article 3(5) of the COSIS Agreement, to submit a request for an advisory opinion to the Tribunal (“**Decision**”).²² On 12 December 2022, the Co-Chairs, representing COSIS pursuant to Article 3(3) of the COSIS Agreement, submitted the request to the Tribunal (“**COSIS Request**”).²³
- 3) The COSIS Request can be read as presenting two separate but interrelated legal questions. The first question concerns the legal obligations of States in the prevention, reduction and control of pollution affecting the marine environment. The second question concerns the protection and preservation of the marine environment in relation to climate change impacts. The questions raised by COSIS are framed in terms of law and call for interpretation of the relevant provisions of the Convention and general international law.²⁴ Accordingly, the COSIS Request contains legal questions which are sufficiently clear to enable the delivery of an advisory opinion pertaining to the purposes of the Convention.

²¹ *Ibid.*, art. 1(3).

²² COSIS, Decision of the Third Meeting (26 August 2022), available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/COSIS_Decision_with_note_by_the_Registry.pdf (last visited 10 June 2023), para. 1.

²³ COSIS, Request for Advisory Opinion (12 December 2022), available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Request_for_Advisory_Opinion_COSIS_12.12.22.pdf (last visited 10 June 2023).

²⁴ *Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area* (Advisory Opinion) 1 February 2011 [2011] ITLOS Rep. 10 (“*Area Advisory Opinion*”), para 39; *Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo* (Advisory Opinion), [2010] ICJ Rep 403, para. 25; *Western Sahara* (Advisory Opinion) [1975] ICJ Rep. 12, para. 15.

14. It follows that the COSIS Agreement and the Decision, read together with Article 21 of the Statute and Article 138 of the Rules, confer advisory jurisdiction on the Tribunal for the purposes of the COSIS Request.

B. Discretionary Exercise of Advisory Jurisdiction

15. Article 138(1) provides a discretionary power to the Tribunal to render an advisory opinion through use of the word “may.” Thus, even where the Tribunal determines that it has jurisdiction to render an advisory opinion, it may still exercise its discretion to decline to do so if appropriate. However, in the *SFRC Advisory Opinion*, the Tribunal found it well established that “a request for an advisory opinion should not in principle be refused except for ‘compelling reasons’.”²⁵ In that case, the Tribunal decided to exercise its advisory jurisdiction. Thus, save where there are “compelling reasons,” the Tribunal should not decline to exercise its advisory jurisdiction.

16. The approach of the Tribunal adopted in the *SFRC Advisory Opinion* is consistent with the practice of the International Court of Justice (“**ICJ**”), where there is a clear presumption in favor of exercising jurisdiction once advisory jurisdiction has been established. The ICJ has an institutional role under the Charter of the United Nations; its practice can therefore serve as inspiration for the Tribunal, which also has an institutional role as the guardian of the Convention in interpreting and applying it. In the many decades since its establishment in 1946, the ICJ has never exercised its discretionary power to decline to give an advisory opinion where the conditions for the exercise of jurisdiction are met.²⁶

17. Similarly, only the existence of truly compelling reasons should cause this Tribunal not to exercise its otherwise well-founded jurisdiction.²⁷ In the present case, there are no such compelling reasons. To the contrary, an opinion will have the important purpose of clarifying the obligations and rights of States Parties under the Convention in light of the

²⁵ *SFRC Advisory Opinion*, paras. 59-60, 71, citing to *Legality of the Threat or Use of Nuclear Weapons* (Advisory Opinion) [1996] ICJ Rep. 226, para. 14.

²⁶ The only time that the Court did not exercise advisory jurisdiction was in *Legality of the Use by a State of Nuclear Weapons in Armed Conflict* (Advisory Opinion) [1996] ICJ Rep 66, where it found that it did not have jurisdiction to start with.

²⁷ For an example of a compelling reason, see *Request for an Advisory Opinion on the Status of Eastern Carelia* (Advisory Opinion) [1923] PCIJ Series B, No 5, pp. 28-29: The PCIJ refused to exercise advisory jurisdiction because the legal question on which it was asked to pronounce concerned “directly the main point of the controversy between Finland and Russia and [could] only be decided by an investigation into the facts underlying the case. Answering the question would be substantially equivalent to deciding the dispute between the parties.”

existential threat posed for all States by climate change. It will provide States Parties with the necessary legal guidance on how to interpret and discharge their obligations in the face of the scientific consensus on the acute threats posed by climate change. Furthermore, and in any event, COSIS has a direct institutional interest in the matter; an advisory opinion would assist COSIS in the proper exercise of its own future functions related to accomplishing the purposes of the Convention.

18. The fact that, since the COSIS Request was issued, there have been additional requests for advisory opinions from the ICJ²⁸ (“**ICJ Request**”) and the Inter-American Court of Human Rights²⁹ (“**IACtHR**” and “**IACtHR Request**”), respectively, that broadly relate to climate change, does not detract from the propriety of the Tribunal exercising jurisdiction in relation to the present request. First, the fact that two other requests for advisory opinions relating to climate change have been issued in the past twelve months only serves to underscore the existential and urgent nature of the threat posed by climate change in a multiplicity of contexts and emphasises the significance of the issues under consideration by this Tribunal.
19. Second, the questions contained in the ICJ Request and IACtHR Request are substantially different to the questions raised by COSIS. The COSIS Request pertains to the obligations of States under the Convention and refers specifically to the reduction of pollution to the marine environment. In contrast, neither the IACtHR nor the ICJ Request concerns the marine environment or obligations under the Convention in particular. The IACtHR Request concerns the impact of climate change on human rights obligations set forth in the American Convention on Human Rights and other inter-American treaties.³⁰ The ICJ Request relates broadly to the climate system. It concerns the legal consequences for harm

²⁸ On 29 March 2023, the United Nations General Assembly requested an advisory opinion from the ICJ on the obligations of States under international law to protect the “climate system and other parts of the environment” from anthropogenic emissions, and the legal consequences for States who have caused significant harm to the climate system and other parts of the environment. *See* UN General Assembly Resolution 77/L.58 on Request for an advisory opinion of the International Court of Justice on the obligations of States in respect of climate change, UN Doc. A/77/L.58 (29 March 2023).

²⁹ On 9 January 2023, Chile and Colombia jointly requested an advisory opinion from the IACtHR on the obligations of States under the framework of international human rights law in responding to the “climate emergency.” *See* IACtHR, “Request for an Advisory Opinion on Climate Emergency and Human Rights to the Inter-American Court of Human Rights from the Republic of Colombia and the Republic of Chile” (9 January 2023), *available at*: https://www.corteidh.or.cr/docs/opiniones/soc_1_2023_en.pdf (last visited 8 June 2023) (“**IACtHR Request**”).

³⁰ *Ibid.*, p. 2.

under general international law and is not limited to the specific obligations relating to the marine environment or obligations under the Convention. The other requests are thus sufficiently different that any overlap is incidental and should not affect the Tribunal's discretion to exercise its jurisdiction pertaining to the obligations *under the Convention*. On the other hand, by discharging its own mandate and providing an advisory opinion, the Tribunal will likely contribute to the clarification of the body of legal norms concerning climate change – a widely recognized existential threat to all of humanity and our shared planet's ecosystems.³¹

20. In sum, with respect to jurisdiction, Sierra Leone submits that the Court has jurisdiction to give the Advisory Opinion requested by COSIS; that COSIS is a competent international organization to make the request under the Convention;³² and that in keeping with past precedent, it is both appropriate and prudent for the Tribunal to exercise its advisory jurisdiction over the questions contained in the COSIS Request.

III. Legal Arguments

A. Overarching Issues

21. In Sierra Leone's view, the questions presented call upon the Tribunal to identify and consider the rules of international law, including those in the field of climate change that are relevant in the interpretation of obligations under the Convention. This requires the Convention's interpretation in accordance with Article 31 of the Vienna Convention on the Law of Treaties ("**Vienna Convention**"),³³ which reflects customary international law.³⁴

³¹ While, as in the *SFRC Advisory Opinion*, it could be argued that the Tribunal should not pronounce itself on the rights and obligations of third States which are not members of COSIS, it is equally true that in advisory proceedings the consent of States that are not members of the requesting entity (here, COSIS) is not relevant since the advisory opinion does not as such carry binding force. See *Interpretation of Peace Treaties with Bulgaria, Hungary and Romania*, Advisory Opinion [1950] ICJ Rep 65, p. 71. That said, if taken on board in good faith and in a spirit of international cooperation, an answer to the questions posed should be of assistance to all States Parties in interpreting and implementing their obligations under the Convention.

³² Article 2(1) of the COSIS Agreement provides that the Commission's activities shall include *inter alia*: "Assisting Small Island States to promote and contribute to the definition, implementation, and progressive development of rules and principles of international law concerning climate change, in particular the protection and preservation of the marine environment, including through the jurisprudence of international courts and tribunals."

³³ Vienna Convention on the Law of Treaties (signed 23 May 1969, entered into force 27 January 1980) 1155 UNTS 331.

³⁴ As confirmed by the ICJ in *Pulp Mills on the River Uruguay* (Argentina v. Uruguay) (Judgment) [2010] ICJ Rep. 14, para. 65 ("**Pulp Mills Judgment**"); *Dispute regarding Navigational and Related Rights* (Costa Rica v. Nicaragua) (Judgment) [2009] ICJ Rep. 213, para. 47; *Application of the Convention on the Prevention and*

Sierra Leone's Written Statement shows that a good faith interpretation of Part XII of the Convention, giving its terms their ordinary meaning, in context and in light of the Convention's object and purpose, and taking into account any relevant rules of international law applicable in the relations between the parties, imposes obligations on States Parties to take particular measures to "prevent, reduce and control pollution of the marine environment" and to protect and preserve the marine environment from climate change-related deleterious effects.

22. The Convention was adopted before the current level of awareness by States and the scientific community as regards the causes and consequences of climate change, and more specifically, GHG emissions. The scientific knowledge now available is much greater than when the Convention was negotiated and adopted in 1982. The Convention, therefore, did not explicitly provide for, nor could it be expected to provide for, climate change related impacts on the marine environment. Yet, as the ICJ observed in the *Gabčíkovo-Nagymaros Case*, some treaties are not "static" but are open to "adapt to emerging norms of international law," which may include the development of new environmental norms.³⁵
23. Sierra Leone submits that the impacts of climate change on the marine environment fall within the scope of the Convention, in particular Parts XII and XIV, and the obligations on States to protect and preserve the marine environment, and prevent pollution to it, apply in the context of climate change effects for the reasons given below:
 - a. There is a scientifically established causal nexus between anthropogenic GHG emissions into the atmosphere and deleterious effects on the marine environment.
 - b. In accordance with the principle of systemic integration set out in Article 31(3)(c) of the Vienna Convention on the Law of Treaties, which requires that treaty interpretation take into account any relevant rules of international law

Punishment of the Crime of Genocide (Bosnia and Herzegovina v. Serbia and Montenegro) (Judgment) [2007] ICJ Rep. 43, para. 160; *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory* (Advisory Opinion) [2004] ICJ Rep. 136, para. 94; *Avena and Other Mexican Nationals* (Mexico v. United States of America) (Judgment) [2004] ICJ Rep. 12, para. 83; *Sovereignty over Pulau Ligitan and Pulau Sipadan* (Indonesia/Malaysia) (Judgment) [2002] ICJ Rep. 625, para. 37; *LaGrand* (Germany v. United States of America) (Judgment) [2001] ICJ Rep. 466, para. 99; *Kasikili/Sedudu Island* (Botswana/Namibia) (Judgment) [1999] ICJ Rep. 1045, para. 18; *Territorial Dispute* (Libyan Arab Jamahiriya/Chad) (Judgment) [1994] ICJ Rep. 6, para. 41; and by the Seabed Disputes Chamber of this Tribunal in *Area Advisory Opinion* para. 57.

³⁵ *Gabčíkovo-Nagymaros Project* (Hungary/Slovakia) (Judgment) [1997] ICJ Rep. 7, para. 112.

applicable in the relations between the parties, the obligations of States to protect and preserve the marine environment and to prevent, reduce and control pollution to the marine environment must be interpreted in light of existing general principles of international law, in particular international environmental law. This includes the law on climate change and the taking into account of the current science on climate change.

24. That the release of GHGs pollutes the marine environment, and that the marine environment is in need of protection from the impacts and effects of climate change, has been made evident by a number of international bodies and instruments over the past 15 years or more.³⁶ Heat and carbon dioxide absorbed by the ocean directly affect marine systems by leading to the increase of ocean temperature, marine heatwaves, sea levels, and ocean acidification, as well as decreases in dissolved oxygen levels. These changes all harm ocean and coastal systems, and the human activities that are dependent on them,³⁷ such as fishing. Each is directly caused by GHG emissions from human activity and has distinct regional and temporal characteristics.³⁸ The latest Report (“**Sixth IPCC Report**”) of the Intergovernmental Panel on Climate Change (“**IPCC**”), which reflects the current best available science on climate change,³⁹ concluded that it is “virtually certain” that the global

³⁶ See, e.g., Protocol on Integrated Coastal Zone Management in the Mediterranean Sea [2009] OJ Series L 34/19 (“**ICZM Protocol**”), Preamble, which includes express reference to the UN Framework Convention on Climate Change (signed 9 May 1992, entered into force 21 March 1994), 1771 UNTS 107 (“**UNFCCC**”) and to climate change in general. See also *ibid.*, art. 5(e); See also International Law Association, “Resolution 2/2014 on Declaration of Legal Principles Relating to Climate Change” (2014), Annex: ILA Legal Principles Relating to Climate Change: Draft Articles, available at: <https://ila.vettoreweb.com/Storage/Download.aspx?DbStorageId=1253&StorageFileGuid=f93d2f56-5629-40aa-a940-34c7da6e8545> (last visited 8 June 2023), draft art. 10(3)(c). The ILA has clarified that the obligations in the Draft Article apply “in light of [the] interdependence between climate change and the marine environment” and that the rights and obligations referred to are those “under the existing and evolving law of the sea related instruments;” UN General Assembly Resolution 61/222 on Oceans and the law of the sea, UN Doc. A/RES/61/222 (20 December 2006), Preamble, p. 2, in which the General Assembly “express[ed] its concern over the projected adverse effects of anthropogenic and natural climate change and ocean acidification on the marine environment and marine biodiversity.” The General Assembly has raised the matter in its yearly resolutions on Oceans and the law of the sea. See the latest such resolution at UN General Assembly Resolution 77/248 on Oceans and the law of the sea, UN Doc. A/RES/77/248 (30 December 2022), Preamble, p. 4, in which the General Assembly “reiterat[ed] its serious concern at the current and projected adverse effects of climate change, including rising seawater temperature, ocean deoxygenation, and sea level rise, as well as ocean acidification, on the marine environment and marine biodiversity, and emphasizing the urgency of addressing these adverse effects.” It further acknowledged that the Convention “provides the legal framework for the conservation and sustainable use of the oceans and their resources [...] while at the same time protecting biodiversity and the marine environment and addressing the impacts of climate change.”

³⁷ Sixth IPCC Report, p. 381.

³⁸ *Ibid.*, pp. 387-388, 392.

³⁹ See UN Climate Change, 1.5 Degrees: A Climate Action Blog, “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>

upper ocean (0-700 metres) has warmed since the 1970s and that it is “extremely likely” that human influence is the main driver.⁴⁰ The Guinea Current Large Marine Ecosystem, which flows along the coast of Sierra Leone, has experienced consistent warming between 1981 and 2019⁴¹ with a cumulative warming of 0.91C at an average rate of 0.14C per decade between 1957 and 2022.⁴²

25. While earlier IPCC reports referred to the “growing confidence” in the detection of climate change impacts on the ocean and their attribution to anthropogenic GHG emissions,⁴³ the Sixth IPCC Report determined without equivocation that “the extent and magnitude of climate change impacts are larger than estimated in previous assessments” and that “climate change has caused substantial damages, and increasingly irreversible losses [...] in coastal and open ocean ecosystems.”⁴⁴

26. The importance of the ocean cannot be overstated. As described by IPCC Working Group II to the Sixth IPCC Report:

“The ocean sustains life on Earth by providing essential resources and modulating planetary flows of energy and materials. Together, harvests from the ocean and inland waters provide more than 20% of dietary animal protein for more than 3.3 billion people worldwide and livelihoods for about 60 million people. The global ocean is centrally involved in sequestering anthropogenic atmospheric CO₂ and recycling many elements, and it regulates the global climate system by redistributing heat and water. The ocean also provides a wealth of aesthetic and cultural resources, contains vast biodiversity, supports more animal biomass than on land and produces at least half the

report#:~:text=Key%20to%20the%20IPCC's%20credibility,justify%20their%20own%20climate%20action (last visited 8 June 2023): “The IPCC reports are the culmination of work by thousands of scientists from around the world. It bases its reports on published and peer reviewed scientific technical literature and provides opportunities for accredited NGOs and experts from all areas of the climate sphere – including from the energy sector – to debate the current science. The goal of these assessments is to inform international policy and negotiations on climate-related issues. Key to the IPCC’s credibility is the fact that this is a science-driven process, and the rigorous peer-review process ensures its reports cannot be politically motivated. Essentially the IPCC’s reports provide the science that governments can use to guide and justify their own climate action.”

⁴⁰ IPCC Synthesis Report, pp. 11-12, Table 2.1.

⁴¹ Neville Sweijd, *et al.*, “Trends in sea surface temperature and chlorophyll-a in the seven African Large Marine Ecosystems” (2020) 36 *Environmental Development* (2020), p. 4.

⁴² Augustin Kessler *et al.*, “Observation-based Sea surface temperature trends in Atlantic large marine ecosystems” (2022) 208 *Progress in Oceanography*, p. 3, Table 2.

⁴³ Sixth IPCC Report, p. 385.

⁴⁴ IPCC Synthesis Report, p. 15.

world's photosynthetic oxygen. Ecosystem services delivered by ocean and coastal ecosystems support humanity by protecting coastlines, providing nutrition and economic opportunities and providing many intangible benefits. Even though ecosystem services and biodiversity underpin human well-being and support climate mitigation and adaptation, there are also ethical arguments for preserving biodiversity and ecosystem functions regardless of the beneficiary."⁴⁵

27. Since its adoption at Montego Bay in 1982, States Parties to the Convention have entered into separate international agreements pertaining to climate change and its effects, including the 1994 UNFCCC⁴⁶ and the 2015 Paris Agreement.⁴⁷ Other relevant rules of international law applicable in the relations between States Parties include the 1992 Rio Declaration⁴⁸ and Agenda 21,⁴⁹ the latter of which makes explicit reference to the Convention.⁵⁰ Additionally, international courts and tribunals interpreting the Convention frequently take into account scientific evidence when defining and interpreting the scope of State obligations under it.⁵¹ As stated above, the Sixth IPCC Report reflects the current science on climate change and its effects, including on the marine environment, and should be the main scientific reference taken into account by the Tribunal in its advisory opinion.

B. Response to Question 1

28. It will be recalled that COSIS, in its request to the Tribunal for an advisory opinion, posed two specific questions. The first question stated as follows:

⁴⁵ Sixth IPCC Report, p. 385.

⁴⁶ UNFCCC.

⁴⁷ Paris Agreement to the United Nations Framework Convention on Climate Change (signed 12 December 2015, entered into force 4 November 2016), TIAS 16-1104 ("**Paris Agreement**").

⁴⁸ UN General Assembly, Report of the UN Conference on Environment and Development (Rio de Janeiro, 3-14 June 1992), UN Doc. A/CONF.151/26 (Vol. 1), Annex I: Rio Declaration on Environment and Development ("**Rio Declaration**").

⁴⁹ UN General Assembly, Report of the UN Conference on Environment and Development (Rio de Janeiro, 3-14 June 1992), UN Doc. A/CONF.151/26 (Vol. 1), Annex II: Agenda 21: Programme of Action for Sustainable Development ("**Agenda 21**").

⁵⁰ *Ibid.*, ch. 17.

⁵¹ *South China Sea Arbitration* (Philippines v. China) (Award) PCA Case No 2013-19, ICGJ 495 (PCA 2016), 12 July 2016 ("**South China Sea Arbitration**"), para. 945; *Area Advisory Opinion*, para. 117; *SRFC Advisory Opinion*, para. 132; *Southern Bluefin Tuna Cases* (New Zealand v. Japan; Australia v. Japan) (Provisional Measures Order of 27 August 1999) [1999] ITLOS Rep. 280 ("**Southern Bluefin Tuna Cases**"), para. 80.

“What are the specific obligations of States 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?”

29. While the first question is worded broadly, it is principally directed at States Parties’ obligations under Article 194 of the Convention to prevent, reduce, and control “pollution of the marine environment” as defined in Article 1(4) of the Convention.⁵² In the paragraphs that follow, Sierra Leone demonstrates how anthropogenic GHG emissions significantly harm the marine environment so as to qualify as pollution within the meaning of Article 1(4) of the Convention.

30. Over 90% of the heat generated by excessive levels of anthropogenic GHG emissions is absorbed by the world’s oceans.⁵³ This has led to a dangerous increase of water temperature,⁵⁴ ocean acidification affecting a plethora of marine ecosystems, and rising sea levels.⁵⁵ Between 1957 and 2020, the sea surface temperature of Sierra Leone’s marine environment increased by 0.91°Celsius, at an average rate of 0.14°Celsius per decade.⁵⁶

31. Climatic impact drivers, such as ocean warming, ocean acidification, deoxygenation, and other physical and chemical changes to the marine environment, are caused, largely, by

⁵² The broad nature of the first question is reflected in the fact that it refers to the relevant obligations as *including* those under Part XII of the Convention.

⁵³ Sixth IPCC Report, p. 128; Donald J. Wuebbles *et al.*, *Climate Science Special Report: Fourth National Climate Assessment, Vol. 1* (U.S. Global Change Research Program, 2017), *available at*: <https://www.nrc.gov/docs/ML1900/ML19008A410.pdf> (last visited 8 June 2023), p. 37.

⁵⁴ Lijing Cheng, *et al.*, “Record-Setting Ocean Warmth Continued in 2019” (2020) 37 *Advances in Atmospheric Sciences* 137-142, pp. 137, 140-141.

⁵⁵ *See ibid.*; Monika Rhein *et al.*, “Observations: Ocean” in IPCC, “Climate Change 2013: The Physical Science Basis (Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change)”, *available at*: https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf (last visited 8 June 2023), p. v *et seq.*; Nerilie Abram *et al.*, “Framing and Context of the Report” in Hans-Otto Pörtner *et al.* (eds.), *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (Cambridge University Press, 2019), pp. 76-77, 79, 90; Katarzyna B. Tokarska *et al.*, “Quantifying human contributions to past and future ocean warming and thermosteric sea level rise” (2019) 14(7) *Environmental Research Letters*, p. 1.

⁵⁶ Augustin Kessler *et al.*, “Observation-based Sea surface temperature trends in Atlantic large marine ecosystems” (2022) 208 *Progress in Oceanography* 1, p. 3, Table 2.

human induced GHG emissions, such as carbon dioxide.⁵⁷ Marine pollution (carbon dioxide and excess heat) can come from a range of sources, but the primary origin is fossil fuel combustion, which releases GHGs into the atmosphere, trapping heat from the sun. The location of this combustion does not determine the location of its impacts. Fossil fuel burning anywhere can drive climatic impacts in Sierra Leone. Many of these climatic impacts, including ocean acidification, sea level rise, and ocean deoxygenation, are irreversible on centennial to millennial time scales. It is virtually certain that global sea levels will continue to increase in the 21st century, at rates dependent on future emissions.⁵⁸

32. Ocean acidification, for instance, which is caused by the absorption in the oceans of carbon dioxide at extreme levels and has reached 30% since the beginning of the industrial revolution,⁵⁹ affects coastal ecosystems. This, in turn, affects their functioning, habitat area and biodiversity.⁶⁰ Ocean acidification is projected to continue globally, leading to changes in marine food webs due to varying effects on marine species.⁶¹

33. Marine biodiversity has already changed significantly as a result of ocean warming and loss of sea ice, sea level rise, coral bleaching, marine heatwaves, and upwelling changes.⁶² Sierra Leone has high levels of biodiversity present in its freshwater swamps, coastal ecosystems and marine ecosystems. The coastline covers 506 km and includes sandy beaches, cliffs, lagoons, estuaries, mudflats, creeks, bays and mangrove swamps.⁶³ There are approximately 105,200 hectares of mangroves along its coastline.⁶⁴ However, Sierra Leone's coastal ecosystems have been severely threatened by climate change. Additionally,

⁵⁷ Sixth IPCC Report, pp. 387-388, 392.

⁵⁸ IPCC Synthesis Report, p. 34.

⁵⁹ Climate Change 2013: The Physical Science Basis (Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change), available at: https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf (last visited 8 June 2023), p. 11.

⁶⁰ Carol Turley and Jean-Pierre Gattuso, "Future biological and ecosystem impacts of ocean acidification and their socioeconomic-policy implications" (2012) 4 *Current Opinion in Environmental Sustainability* 278-286, pp. 281-282.

⁶¹ Sixth IPCC Report, p. 2148.

⁶² *Ibid.*, p. 456.

⁶³ UN Development Program, *Action Plan for Coastal Protection Measures - Developed for Port Loko, Bonthe, Moyamba and Western Area Rural District Councils*, available at: <https://www.undp.org/sites/g/files/zskgke326/files/2023-03/undp-sle-action-plan-coastal-protection-measures-2022-2023.pdf> (last visited 10 August 2022), pp. 4, 7, 8.

⁶⁴ Government of Sierra Leone, "National Adaptation Plan" (2021), available at: https://unfccc.int/sites/default/files/resource/SierraLeone_iNAP_Final.pdf (last visited 8 June 2023), pp. 14-15.

about 300,000 hectares of wetlands and marine ecosystems are mangrove forests that are a critical source of livelihoods and ecological support along the coastal plains of the Western Area of Sierra Leone and other riverine areas across the country. However, mangrove coverage in Sierra Leone, including on its coast, is estimated to have decreased by approximately 25% since 1990.⁶⁵ Further, assessment of marine species in the Eastern Central Atlantic Ocean, which includes West and Central Africa, showed that 8% or 125 species are considered threatened using IUCN Red List Guidelines.⁶⁶

34. Increases in ocean temperature related to the emission of GHGs reduce dissolved oxygen in the ocean and significantly affect sea life, particularly corals and other temperature- and chemistry-sensitive organisms.⁶⁷ The rising heat increases evaporation, and the extra moisture in the warmer atmosphere nourishes heavy rains and promotes flooding,⁶⁸ leading to a more extreme hydrological cycle and more extreme weather (in particular hurricanes and typhoons).⁶⁹ These impacts have been experienced in Sierra Leone and are likely caused by global GHG emissions.
35. Sierra Leone has had to deal with the impact of food insecurity, particularly amongst rural households, for decades.⁷⁰ Fisheries are vital for food security and are especially important to vulnerable regions and communities. Ocean warming in the 20th century and beyond has contributed to an overall decrease in maximum catch potential, compounding the impacts from overfishing for some fish stocks. In the Guinea Current Large Marine Ecosystem (“GCLME”) that flows along Sierra Leone’s coast, ocean warming has contributed to an increase in mean temperature of the catch, suggesting that changes to the species composition in the GCLME is already underway. Further, continued warming is projected,

⁶⁵ *Ibid.*, p. 18.

⁶⁶ Beth Polidoro *et al.*, “The status of marine biodiversity in the Eastern Central Atlantic (West and Central Africa)” (2017) 27 *Aquatic Conservation: Marine and Freshwater Ecosystems* 1021-1034, p. 5.

⁶⁷ Nathaniel L. Bindoff *et al.*, “Changing Ocean, marine ecosystems, and dependent communities” in Hans-Otto Pörtner *et al.* (eds.), *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (Cambridge University Press, 2019), p. 512.

⁶⁸ Kevin E. Trenberth, “Changes in precipitation with climate change” (2011) 47 *Climate Research* 123-138, pp. 123, 128; Matthew Collins *et al.*, “Extremes, abrupt changes and managing risks” in Hans-Otto Pörtner *et al.* (eds.), in *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* (Cambridge University Press 2019), pp. 589-655.

⁶⁹ Kevin E. Trenberth *et al.*, “Hurricane Harvey links to ocean heat content, and climate change adaptation” (2018) 6 *Earth’s Future* 730-744, p. 732.

⁷⁰ Tony Binns and Jerram Bateman, “Rural livelihoods and food security: long-term insights from Sierra Leone’s Eastern Province” (2016) 55(2) *Geographical Research*, pp. 1, 4; Michael Johnny and Bashiru Mansaray “Socio-Cultural Factors of Food Insecurity in Sierra Leone” (2019) 9(10) *Developing Country Studies* 63-68, pp. 64-65.

by 2050, to reduce fisheries jobs with the GCLME by 30% and reduce catch potential by up to 42%.⁷¹ Ocean warming and ocean acidification have adversely affected food production from shellfish aquaculture and fisheries in some oceanic regions, by affecting the early life history stages of marine food species.⁷²

36. The fisheries sector is very important in Sierra Leone as it gives food security and employment opportunities, in addition to its role as an economic activity and source of export earnings. The sector contributes approximately 10% to the country's GDP and is the primary livelihood for 500,000 people.⁷³ Per capita fish consumption in Sierra Leone is approximately 17 kg per annum and provides about 80% of animal protein intake by all Sierra Leoneans.⁷⁴ Over 80% of fish produced in Sierra Leone is from the marine fisheries sub-sector.⁷⁵ However, a substantial decline in marine fish production and protein supply is projected by the 2050's due to climate change, with a 21% decrease in the economic value of landed fish and a 50% decline in fisheries-related employment opportunities.⁷⁶ It is estimated that 5-10% of the GDP of West African countries will go towards adaptation costs arising from loss of coastal ecosystems and fisheries productivity.⁷⁷
37. Additionally, West African nations such as Sierra Leone are particularly vulnerable to a decreased seafood supply from international imports. It is thus likely that Sierra Leone's climate risks of seafood insecurity will be increased by climate impacts on fisheries elsewhere in the world.⁷⁸ Finally, ocean warming and acidification have the potential to

⁷¹ Dyhia Belhabib *et al.*, "Overview of West African fisheries under climate change: Impacts, vulnerabilities and adaptive responses of the artisanal and industrial sectors" (2016) 71 *Marine Policy* 15-28, p. 22.

⁷² IPCC Synthesis Report, p. 15.

⁷³ Government of Sierra Leone, "National Adaptation Plan" (2021), available at: https://unfccc.int/sites/default/files/resource/SierraLeone_iNAP_Final.pdf (last visited 8 June 2023), p. 17.

⁷⁴ Kamorba Dabo and Lahai Sesay, *Migration of small-scale fishermen in Sierra Leone: current status* (Union Internationale pour la Conservation de la Nature 2012), available at: http://spcsrp.org/sites/default/files/csrp/projets/recargao/comp4/natRep/Migrant_fisheries_Sierra_Leone_final_sc.pdf (last visited 8 June 2023), p. 4.

⁷⁵ *Ibid.*

⁷⁶ Vicky Lam *et al.*, "Climate change impacts on fisheries in West Africa: implications for economic, food and nutritional security" (2012) 34 *African Journal of Marine Science* 103-117, p. 103.

⁷⁷ Robert Zougmore *et al.*, "Toward climate-smart agriculture in West Africa: a review of climate change impacts, adaptation strategies and policy developments for the livestock, fishery and crop production sectors" (2016) 5(26) *Agriculture & Food Security* 1-16, p. 7.

⁷⁸ Jessica A. Gephart *et al.*, "Shocks to fish production: Identification, trends, and consequences" (2017) 42 *Global Environmental Change* 24-32, p. 24.

reduce the nutritional quality of seafood by reducing levels of protein, lipid and omega-3 fatty acids.⁷⁹ This further exacerbates the problem, even if fishing stocks remain stable.

38. Climate change has already impacted Sierra Leone’s fisheries significantly. For example,

*“[i]n the mid 1980s there was a sudden increase in the population of *Ballistes capriscus* and reduction in the sparid (snapper) population. It is now believed that this change was related to an incursion of cold saline bottom water into the shelf. This change in ocean climate was linked with an overall regional change. This phenomenon changed and reversed in 1988 to the present status. The cold front shifted to Guinea Bissau taking with it the *Ballistes* population. Towards the end of the dry season (March – April, 2002) both industrial and artisanal fishery sector have been constantly reporting a drop in their catches.”⁸⁰*

39. From July to August 2011 and in August 2012, in Freetown, the capital and most populous city in Sierra Leone, warmer seas contributed to a toxic algae bloom and increased cases of food poisoning from consumption of shellfish and reef fish.⁸¹ At an increase in water temperature of >4°C, Sierra Leone will suffer a 51 to 60% decrease in maximum catch potential of marine fisheries. Central, west and east Africa are projected to be at the greatest nutritional risk from sea temperature rise, leading to reduced catch in coastal waters.⁸²

40. Coral reefs “are one of the most vulnerable marine ecosystems. More than half of the world’s reefs are under medium or high risk of degradation.”⁸³ Mass coral bleaching and mortality, triggered by ocean warming, is the most widespread and conspicuous impact of climate change. The Sixth IPCC Report warns that “[c]oral bleaching and mortality will

⁷⁹ Rick D. Tate *et al.*, “Ocean acidification and warming impacts the nutritional properties of the predatory whelk, *Dicathais orbita*” (2017) 493 *Journal of Experimental Marine Biology and Ecology* 7-13, p. 7; Roslizawati Ab Lah *et al.*, “Ocean warming and acidification affect the nutritional quality of the commercially-harvested turbinid snail *Turbo militaris*” (2018) 141 *Marine Environmental Research*, p. 100; Anaëlle Lemasson *et al.*, “Changes in the biochemical and nutrient composition of seafood due to ocean acidification and warming” (2019) 143 *Marine Environmental Research* 82-92, p. 82.

⁸⁰ Environment Protection Agency of Sierra Leone, “Fifth national report to the convention of biological diversity” (2014), available at: <https://www.cbd.int/doc/world/sl/sl-nr-05-en.pdf> (last visited 8 June 2023), p. 50.

⁸¹ Government of Sierra Leone, “National Adaptation Plan” (2021), available at: https://unfccc.int/sites/default/files/resource/SierraLeone_iNAP_Final.pdf (last visited 8 June 2023), p. 30.

⁸² Sixth IPCC Report, p. 1358.

⁸³ *Ibid.*, p. 413, Table 3.3.

increase in frequency and magnitude over the next decades.”⁸⁴ In Africa, marine heatwaves have triggered mass coral bleaching and mortality over the past 20 years.

41. If the ocean continues to warm, “compound extreme events will become more frequent, with higher likelihood of unprecedented intensities, durations or spatial extent.”⁸⁵ At a 1.5°C global temperature increase, among the principal hazards to ecosystems are continued sea level rise and increased frequency and magnitude of extreme sea level events that encroach on coastal human settlements and damage coastal infrastructure. This creates a serious risk of committing low-lying coastal ecosystems to submergence and loss, and expanding land salinization, with cascading risks to livelihoods, health, well-being, cultural values, food and water security.⁸⁶ Marine heatwaves will continue to increase in frequency, with a likely global increase of 2-9 times in 2081-2100 compared to 1995-2014, with some of the largest increases in tropical oceans,⁸⁷ such as those surrounding Sierra Leone. In fact, the number of marine heatwaves along the southern African coastline doubled from 1982 to 2016 as a result of human-induced climate change.⁸⁸

42. Coastal ecosystems in West Africa are among the most vulnerable because of extensive low-lying deltas exposed to sea level rise, erosion, saltwater intrusion and flooding.⁸⁹ Sea level rise has the effect of augmenting a decrease in the quality and quantity of ground water resources otherwise caused by human activities. If no action is taken, a total of 26.4 km sq. of the Sierra Leonean coastline is estimated to be lost to the sea; by 2050, the rising sea levels are projected to lead to \$46.8 million in building losses with 1,881 buildings affected.⁹⁰ Freetown is one of the cities most at risk from intensified storm surges as a result of sea level rise, with an estimated 40% increase in the storm surge zone for Sierra Leone.⁹¹ According to the Government of Sierra Leone’s Third National Communication to the

⁸⁴ *Ibid.*

⁸⁵ IPCC Synthesis report, p. 43.

⁸⁶ *Ibid.*, p. 63.

⁸⁷ Sixth IPCC Report, p. 393.

⁸⁸ *Ibid.*, p. 1329.

⁸⁹ *Ibid.*, p. 1333.

⁹⁰ Government of Sierra Leone, “National Adaptation Plan” (2021), *available at*: https://unfccc.int/sites/default/files/resource/SierraLeone_iNAP_Final.pdf (last visited 8 June 2023), p. 29.

⁹¹ Susmita Dasgupta *et al.*, *Sea-Level Rise and Storm Surges: A Comparative Analysis of Impacts in Developing Countries* (The World Bank 2009), p. 33, Table 4; Sherein El-Shahat *et al.*, “Vulnerability assessment of African coasts to sea level rise using GIS and remote sensing” (2021) 23 *Environment, Development and Sustainability* 2827-2845, pp. 2827, 2844.

UNFCCC, submitted in 2018, “[t]he coastal zone of Sierra Leone is very susceptible to sea level rise, which would cause increased beach erosion rates and higher incidences of coastal flooding. Permanent inundation could occur in some areas.”⁹² Sea level rise is expected to affect almost 2,315,860 people who are at risk of experiencing a one metre rise of the sea level along coastal areas.⁹³ Already, in various parts of Sierra Leone, islands face sea level rise. For instance, the inhabitants of Yelibuya, Turtle Island and Plantain Island have had to be relocated due to flooding and partial and permanent inundation.⁹⁴

43. If GHG emissions increase significantly, 99% of coral reef locations will experience at least one severe bleaching event between 2090 and 2099.⁹⁵ As warming levels increase, so do the risks of species extinction and irreversible loss of coral reef biodiversity.⁹⁶ Warm-water coral reef ecosystems house one-quarter of marine biodiversity and provide services in the form of food, income and shoreline protection to coastal communities around the world. These ecosystems are threatened by climate-induced drivers, especially ocean warming, marine heatwaves, ocean acidification, sea level rise and tropical cyclones.⁹⁷
44. The Convention sets forth in Article 194 the general obligation to prevent, reduce and control all forms of marine pollution inland and its consequent impact. The obligation in Article 194 extends to marine pollution from *any* source.⁹⁸ In accordance with Article 31 of the Vienna Convention, the ordinary meaning of this provision is that pollution of the marine environment from any source, including from the effects of climate change, is covered by Article 194.

⁹² See Government of Sierra Leone, “Third National Communication of Sierra Leone to the United Nations Framework Convention on Climate Change” (2018), NC/NC3/2018, available at: <https://unfccc.int/sites/default/files/resource/FinalThird%20Nat.%20Com.%20document%20111.pdf>, p. 354.

⁹³ *Ibid.*, p. 22.

⁹⁴ See Abdul Bruma, “Sierra Leone’s sinking islands” (*China Dialogue* 2021), available at: <https://chinadialogueocean.net/en/governance/19162-sea-level-rise-sierra-leone-sinking-islands/> (last visited 9 June 2023); Mohammed Konneh, “Sierra Leone Turtle Island on The Brink of Sinking” (*Sierraloaded* 2022), available at: <https://sierraloaded.sl/news/turtle-island-brink-of-sinking/> (last visited 9 June 2023). See also Mara Kardas-Nelson, “Yelibuya: Why is this town in Sierra Leone sinking?” (2018) *Aljazeera*, available at: <https://www.aljazeera.com/features/2018/8/24/yelibuya-why-is-this-town-in-sierra-leone-sinking> (last visited 9 June 2023).

⁹⁵ Sixth IPCC Report, p. 413, Table 3.3.

⁹⁶ IPCC Synthesis Report, p. 42.

⁹⁷ Sixth IPCC Report, p. 410.

⁹⁸ UNCLOS, art. 194(1).

45. The Convention 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.”⁹⁹

The effects of anthropogenic emissions of GHGs on the ocean must be seen as “the introduction ...of substances or energy into the marine environment.”

46. Applying the ordinary meaning of the words, the sources of marine pollution provided for in the relevant provisions of the Convention include excessive GHG emissions. Of particular importance are Articles 194(3) and Article 212, both of which refer to the release or introduction of substances into the atmosphere:

- a. Article 194(3)(a) provides that the duty to protect and preserve the marine environment under Part XII requires States Parties to “deal with *all sources*” of marine pollution and obliges them take measures to minimise “to the fullest possible extent [...] the release of toxic, harmful or noxious substances ...*from or through the atmosphere [...]*”.
- b. Article 212 more broadly requires States to take measures to “prevent, reduce and control pollution of the marine environment *from or through the atmosphere [...]*”.

47. Thus, impacts on the marine environment through the introduction of harm-causing substances amounts to pollution of the marine environment. This ordinary meaning of the words, in their context, is further buttressed by other provisions of Part XII, which, on their face, cover GHG emissions as causes of marine pollution. Article 207 concerns pollution from land-based sources, Article 211, pollution from vessels, and Article 212, pollution from or through the atmosphere. GHG emissions emanate to the greatest extent from the burning of fossil fuels, including oil, coal and gas.¹⁰⁰ Fossil fuels are used to produce energy

⁹⁹ Convention, art. 1(4).

¹⁰⁰ For more on the link between marine-pollution and land-based pollution, see United Nations Division for Ocean Affairs and the Law of the Sea, “First Global Integrated Marine Assessment (first World Ocean Assessment)”. Available from www.un.org/depts/los/global_reporting/WOA_RegProcess.htm (see, in particular,

for industry, vehicles, heating, vessels and aircrafts; indeed, the energy industry is the most polluting industry in the world.¹⁰¹ The resulting pollution, regardless of whether it emanates from land-based sources, vessels, or the atmosphere, ends up in the oceans and thus falls within the definition of pollution of the marine environment.

48. This interpretation of Article 194 as including in the definition of marine pollution excessive anthropogenic GHG emissions into the atmosphere thus flows from the ordinary meaning of the words of that provision (and the other related provisions of Part XII detailed above) in its context. Moreover, that interpretation is consistent with the object and purpose of the Convention. This includes the preservation and protection of the marine environment, which can be gleaned from the preamble of the Convention,¹⁰² and the fact that the Convention, in addition to providing for the protection of the marine environment in its different Parts,¹⁰³ includes the 45 articles contained in Part XII that are dedicated to the marine environment's protection and preservation.
49. On the basis of the above, Sierra Leone submits that the ordinary meaning of the provisions in Part XII, in their context and in light of the object and purpose of the Convention, requires States to prevent, reduce and control marine pollution by, *inter alia*, taking measures to mitigate climate change. They are to take all necessary measures, individually or jointly as appropriate, to prevent, reduce and control pollution of the marine environment from any source.
50. The obligation of States to prevent, reduce and control their GHG emissions pursuant to Article 194 and the related provisions in Part XII of the Convention is one of due diligence. Due diligence obligations are obligations of conduct, rather than result. As it is typically

chap. 20 on “Coastal, riverine and atmospheric inputs from land”). The summary of the report was approved by the General Assembly at its seventieth session: see General Assembly resolution 70/235 of 23 December 2015 on oceans and the law of the sea. See also United Nations Climate Action, “Causes and Effects of Climate Change”, available at: <https://www.un.org/en/climatechange/science/causes-effects-climate-change> (last visited 8 June 2023).

¹⁰¹ Dan Arvizu *et al.*, “Summary for Policy Makers” in Ottmar Edenhofer *et al.* (eds) *Renewable Energy Sources and Climate Change Mitigation, Special Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press 2012), p. 7.

¹⁰² Convention, Preamble: “Recognizing the desirability of establishing through this Convention, with due regard for the sovereignty of all States, 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.”

¹⁰³ See, *e.g.*, Convention, arts. 61-68; 116-120; 145; 240; 263.

individuals, or entities, within States that carry out GHG-emitting activities, rather than the States themselves,¹⁰⁴ due diligence requires States to “ensur[e] [that] activities within their jurisdiction and control do not harm the marine environment.”¹⁰⁵ To this end, States must adopt appropriate laws to prohibit practices that have the potential to harm the marine environment, and take steps to enforce such rules and measures against persons or entities engaged in these harmful practices.¹⁰⁶ The principle of due diligence has been read into Article 192, 193 and 194 by this Tribunal and by other international courts and tribunals,¹⁰⁷ and Part XII as a whole is considered to rely heavily on this concept.¹⁰⁸

51. In this regard, Sierra Leone in particular underlines Article 193, which recognizes that States enjoy the sovereign right to exploit their natural resources *pursuant to their environmental policies* and in accordance with their duty to protect and preserve the marine environment. While the provision confirms their freedom to regulate the exploitation of natural resources, including in relation to foreign investors, it makes clear that this right is subject to the legal and policy constraints imposed by the need to protect the marine environment, failing which States’ compliance with their legal duties to protect and preserve the marine environment under the Convention could be cast into doubt.

52. Determining concretely the content of the due diligence obligations of States Parties requires an assessment of the measures required under the relevant provisions of the Convention. Moreover, in so far as the Convention was negotiated as a package deal, it must be interpreted as a whole, taking into account the specific provisions in other parts of the Convention, in particular Articles 61, 62 and 63 on the sustainable management of fish stocks. While the Convention does not expressly identify the measures to be adopted, these measures can be identified by interpreting the relevant provisions in accordance with Article 31(3)(c) of the Vienna Convention, which provides for the taking into account of “any relevant rules of international law applicable in the relations between the parties.” In relation to pollution from land-based sources, the Convention itself refers to

¹⁰⁴ See e.g., Bastiaan Ewoud Klerk, “Protecting the marine environment from the impacts of climate change: A regime interaction study” (2022) 32 (1) *RECEIL* 44-56 (“**Klerk, 2022**”), p. 53.

¹⁰⁵ *South China Sea Arbitration*, para. 944.

¹⁰⁶ *Ibid.*; *SRFC Advisory Opinion*, paras. 131, 136, 138; *Pulp Mills Judgment*, para. 197.

¹⁰⁷ *South China Sea Arbitration*, paras. 944; *SRFC Advisory Opinion*, paras. 120, 136; *Area Advisory Opinion*, para. 117.

¹⁰⁸ Klerk, 2022, p. 53.

“internationally agreed rules, standards and recommended practices and procedures” as relevant in the determination of the measures to be adopted.¹⁰⁹ There appears to be no explicit requirement for States to adopt universal rules and standards in dealing with pollution from other sources, save for the specific obligations set out in Articles 207 through 212. However, in the view of Sierra Leone, it is implicit that the adoption of such rules and standards will be a necessary element in the discharge of the due diligence obligations of States under the Convention.

53. The most relevant rules concerning the mitigation of climate change related impacts are those to be found in the international law on climate change, in particular the Paris Agreement, which is the latest and most comprehensive agreement on climate change mitigation and adaptation with near global participation.¹¹⁰ Those rules are applicable between the States Parties to the Convention since all States Parties to it are also States Parties to the Paris Agreement. Furthermore, the Paris Agreement reflects the scientific consensus on the impacts of climate change and the necessary measures required to address them. Thus, to identify what measures to adopt to give effect to Articles 194, 207, 211 and 212, it is to that regime we should turn.

54. The Paris Agreement was adopted under the UNFCCC. The overall objective of the UNFCCC, and thus the climate change regime, is to stabilise GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the

¹⁰⁹ Convention, art. 207. That said, as the International Law Commission has explained, in its [2021 Guidelines on the protection of the atmosphere](#) which also expressly recognized the link between land-based pollution and pollution to the marine environment, there are now several regional conventions that regulating marine pollution from land-based sources. For example, the Convention for the Protection of the Marine Environment of the North-East Atlantic (United Nations, *Treaty Series*, vol. 2354, No. 42279, p. 67, at p. 71, art. 1 (e)); the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki, 9 April 1992, *ibid.*, vol. 1507, No. 25986, p. 166, at p. 169, art. 2, para. 2); the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources (*ibid.*, vol. 1328, No. 22281, p. 105, at p. 121, art. 4, para. 1 (b)); the Protocol for the Protection of the South-East Pacific against Pollution from Land-based Sources (Quito, 22 July 1983, *ibid.*, vol. 1648, No. 28327, p. 73, at p. 90, art. II (c)); and the Protocol for the Protection of the Marine Environment against Pollution from Land-based Sources to the Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution (Kuwait, 21 February 1990, *ibid.*, vol. 2399, No. 17898, p. 3, at p. 40, art. III). For further analysis, of the marine pollution and various other issues relevant to the COSIS advisory opinion request, see the [ILC Guidelines on the protection of the atmosphere](#), adopted by the ILC at its seventy-second session, in 2021, and submitted to the General Assembly as a part of the Commission’s report covering the work of that session (A/76/10). The report, which also contains commentaries to the draft guidelines, will appear in *Yearbook of the International Law Commission, 2021*, vol. II, Part Two.

¹¹⁰ Klerk, 2022, p. 45.

climate system. The Paris Agreement provides the main vehicle for achieving this objective.

55. The principal objective of the Paris Agreement is set out in Article 2(1)(a). It provides as follows:

“[...] to strengthen the global response to the threat of climate change ... including by:

(a) 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 [...].”

This means that, at a minimum, the actions required by States collectively to prevent, reduce, and control marine pollution from climate change-related sources are to limit the increase in global temperatures to well-below 2°C above pre-industrial levels.

56. Applying the findings of the Tribunal’s Seabed Disputes Chamber in relation to the appropriate standards of due diligence, given the particular harms caused to the oceans by climate change as detailed above, it is necessary for a high standard of care to be set.¹¹¹ The Paris Agreement provides that while the immediate objective is to hold the increase in global average temperatures to well below 2°C, limiting such temperature increase to 1.5°C above pre-industrial levels should be pursued. It is this higher standard that must be used to give content to the measures to be adopted by States Parties under Part XII of the Convention.

57. Sierra Leone therefore submits that, to comply with their obligations under Part XII, States Parties to the Convention have a due diligence obligation to collectively take measures to ensure that the increase in global average temperatures is limited to 1.5°C above pre-industrial levels. The best available science on climate change confirms that failure to adhere to this objective will result in marine pollution with attendant consequences such as an increase of tropical storms and cyclones, drought, flooding, marine heatwaves, loss of

¹¹¹ *Area Advisory Opinion*, para. 117.

marine biodiversity and habitats, rising sea levels and consequential effects on the lives and livelihood of the people who depend on these factors.¹¹²

58. The conclusion reached above is consistent with the precautionary principle of international environmental law,¹¹³ which is “an integral part of the general obligation of due diligence.”¹¹⁴ It requires parties to take precautionary measures to prevent serious environmental harm, even when scientific evidence is uncertain or incomplete. The principle has been recognised in various international instruments.¹¹⁵ While not specifically mentioned in the Convention, it has been read into the definition of marine pollution under Article 1(4), which includes the introduction of substances or energy that “is likely to result” in deleterious effects on the marine environment.¹¹⁶
59. The principle has also been recognised in the jurisprudence of this Tribunal. In the *Southern Bluefin Tuna* cases, the Tribunal referred to the need to act “with prudence and caution,” when deciding to prescribe measures to prevent further deterioration of the marine environment despite scientific uncertainty.¹¹⁷ Similarly, in the *MOX Plant* case, the Tribunal held that “prudence and caution” require that parties cooperate in exchanging information concerning risks or effects of operations or activities,¹¹⁸ suggesting a close link between the duty to cooperate and the precautionary approach.¹¹⁹ The Tribunal noted that the precautionary approach is particularly relevant in cases of “irreparable damage to the

¹¹² See Sixth IPCC Report, pp. 381-383.

¹¹³ The precautionary approach is mentioned throughout UN Resolutions on the Oceans and the law of the sea, particularly in relation to the effects of climate change on the marine environment and marine biodiversity. See latest resolution, UN General Assembly Resolution 77/248 on Oceans and the law of the sea, UN Doc. A/RES/77/248 (30 December 2022), para. 227. See also *Area Advisory Opinion*, para. 59.

¹¹⁴ *Area Advisory Opinion*, para. 131.

¹¹⁵ See UN General Assembly Resolution 37/7 on World Charter for Nature, UN Doc A/RES/37/7 (28 October 1982), Annex, art. 11; Rio Declaration, Principle 15.

¹¹⁶ Robin Churchill, “The LOSC Regime for Protection of the Marine Environment – Fit for The Twenty-First Century?” in Rosemary Gail Rayfuse (ed.), *Research Handbook on International Marine Environmental Law* (Edward Elgar 2015), p. 9.

¹¹⁷ *Southern Bluefin Tuna Cases*, paras 77-80; Lan Ngoc Nguyen, *The Development of the Law of the Sea by UNCLOS Dispute Settlement Bodies* (Cambridge University Press 2023) (“**Nguyen, 2023**”), p. 183.

¹¹⁸ *MOX Plant (Ireland v. United Kingdom)*, Provisional Measures, Order of 3 December 2001 [2001] ITLOS Rep. 95, para. 84 (“**MOX Plant Order**”).

¹¹⁹ Nguyen, 2023, p. 170.

rights of a nation” or in cases of serious harm to the marine environment,¹²⁰ both of which are present in the excessive release of GHG emissions. In the *Advisory Opinion on Activities in the Area*, the Tribunal confirmed that the incorporation of the precautionary approach in a number of international instruments “has initiated a trend towards making this approach part of customary international law.”¹²¹

60. Taking a precautionary approach requires States to assess the environmental impact of any potentially polluting activities. Article 206 of the Convention obliges States to conduct an environmental assessment of the potential effects on the marine environment of planned activities under their control or jurisdiction, as well as publishing and making those assessments available to other States.¹²² The study should assess the potential environmental impacts of the proposed activity, including the impact on marine biodiversity, water quality and climate change.¹²³ This requirement constitutes an “essential part of a comprehensive environmental management system” and acts as a “particular application of the obligation on States, enunciated in Article 194, paragraph 2” of the Convention.¹²⁴ The obligation to conduct environmental impact assessments (“EIAs”) stems not only from the Convention but also from customary international law. In the *Pulp Mills Case*, the International Court of Justice observed that:

*“[A] practice, which in recent years has gained so much acceptance among States that it may now be considered a requirement under general international law [is] to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource.”*¹²⁵

¹²⁰ *MOX Plant Order*, para 75. In this regard, as already discussed above, the IPCC Sixth Assessment Report has determined that “climate change has caused *substantial* damages, and increasingly *irreversible* losses [...] in coastal and open ocean ecosystems.” See IPCC Synthesis Report, p. 15 (emphasis added).

¹²¹ *Areas Advisory Opinion*, para. 135.

¹²² Convention, art. 206. See also *South China Sea Arbitration*, para. 991; Shabtai Rosenne and Alexander Yankov (eds.), “Vol. IV: Articles 192 to 278” in Myron Nordquist, (gen. ed.) *United Nations Convention on the Law of the Sea 1982: A Commentary* (Martinus Nijhoff 2002), para. 206.1.

¹²³ See in general Monika Sabeva, “Environmental impact assessment - necessity, principles and specificities” (2015) 13(2) *Trakia Journal of Sciences* 339-345; Emmanuel Amankwah, “Environmental Impact Assessment (EIA): A Useful Tool to Address Climate Change in Ghana” (2013) 1(4) *International Journal of Environmental Protection Policy* 94-100.

¹²⁴ *South China Sea Arbitration*, para. 948.

¹²⁵ *Pulp Mills Judgement*, para. 204. See also Rio Declaration, Principle 17.

61. While Articles 204-206 of the Convention do not set out exactly what should be included in an EIA, Sierra Leone submits that the necessary components include the EIA study itself, community consultation, expert opinions, and strategic environmental assessments.¹²⁶ Community consultation ensures that the concerns and interests of local communities are taken into account, expert opinions are required to provide technical expertise regarding the proposed activities, and strategic environmental assessments encompass the potential cumulative impacts of multiple such activities on the marine environment.¹²⁷ Additionally, the EIA should include measures to mitigate any adverse environmental impacts identified, such as pollution prevention measures, habitat restoration and climate change adaptation measures.¹²⁸ In the *Pulp Mills Case*, the ICJ observed that the duty of vigilance and prevention would not be considered to have been exercised if a party planning works likely to have significant adverse impacts did not conduct an EIA.¹²⁹
62. This obligation on States Parties is to be complied with by taking into account the common but differentiated responsibilities principle, which is a principle of international environmental law,¹³⁰ reflected in both the UNFCCC and the Paris Agreement.¹³¹ In accordance with Article 31(3)(c) of the Vienna Convention, the principle of common but differentiated responsibilities is also relevant in giving content to the measures to be adopted in preventing, reducing and controlling pollution to the marine environment. This is particularly the case since the Convention itself recognises the principle. For example,

¹²⁶ Neil Craik and Kristine Gu, “Strategic Environmental Assessment in Marine Areas beyond National Jurisdiction: Implementing Integration” (2022) 37(2) *The International Journal of Marine and Coastal Law* 189-216 (“**Craik & Gu, 2022**”); Robin Warner, “Environmental Assessments in the Marine Areas of the Polar Regions” in Erik Molenaar *et al.* (eds), *The Law of the Sea and the Polar Regions: Interactions between Global and Regional Regimes* (Brill | Nijhoff, 2013) (“**Warner, 2013**”).

¹²⁷ Craik & Gu, 2022; Warner, 2013.

¹²⁸ Mingbo Zhang *et al.*, “Some Suggestions on the construction of Planning Environmental Impact Assessment system”, *Proceedings of the 2018 7th International Conference on Energy, Environment and Sustainable Development* (ICEESD 2018), available at: <https://www.atlantis-pess.com/proceedings/iceesd-18/25894726> (last visited 8 June 2023).

¹²⁹ *Pulp Mills Judgement*, para. 204.

¹³⁰ Philippe Sands, *et al.*, *Principles of International Environmental Law* (Cambridge University Press 2018), pp. 123, 244-245.

¹³¹ UNFCCC, art. 3(1) (“The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.”); UNFCCC, art. 3(2) (“The specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention, should be given full consideration.”). Paris Agreement, Preamble, arts. 2.2, 4.3, 4.19.

the preamble of the Convention bears in mind that the “achievement of these goals [...] takes into account the interests and needs of mankind as a whole and, in particular, the special interests and needs of developing countries, whether coastal or land-locked.”¹³² Article 207 recognises that measures to prevent, reduce and control land-based pollution shall “tak[e] into account characteristic regional features, the economic capacity of developing States and their need for economic development.”¹³³ Article 203 on “Preferential treatment for developing States” provides that “[d]eveloping States shall, for the purposes of prevention, reduction and control of pollution of the marine environment or minimization of its effects, be granted preference by international organizations in: (a) the allocation of appropriate funds and technical assistance; and (b) the utilization of their specialized services.”¹³⁴

63. Thus, in determining the individual contributions necessary for the achievement of this objective, developed States should assume a greater share of the burden. In particular, developed States should undertake economy-wide absolute emission reduction targets and shall provide support to developing country Parties for the implementation of their obligations.¹³⁵ Developing States should continue to enhance their mitigation efforts and are encouraged to move over time towards economy-wide emission reduction or limitation targets.¹³⁶ Finally, least developed States and small island developing States may prepare and communicate strategies, plans and actions for low GHG emissions development reflecting their special circumstances.¹³⁷

64. Due diligence is a variable concept that 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 or technological knowledge... The standard of due diligence has to be more severe for the riskier activities.”¹³⁸ The urgency of the global climate disaster resulting from the strong likelihood that global temperatures will surpass the crucial 1.5°

¹³² Convention, Preamble.

¹³³ *Ibid.*, art. 207.

¹³⁴ *Ibid.*, art. 203.

¹³⁵ Paris Agreement, arts. 4(4), 4(5).

¹³⁶ *Ibid.*, art. 4(4).

¹³⁷ *Ibid.*, art. 4(6).

¹³⁸ *Area Advisory Opinion*, para. 117; *SRFC Advisory Opinion*, para. 132.

Celsius increase in the next five years,¹³⁹ dictates that States must, at the very least, comply with their obligations under the Paris Agreement to be considered sufficiently diligent so as to comply with their obligation to prevent, reduce and control pollution of the marine environment under Part XII of the Convention.

65. Articles 194, 207, 211 and 212 obligate States to prevent, reduce and control all seaborne, airborne and land-based sources of marine pollution, including those currently generating carbon dioxide and other GHG emissions.¹⁴⁰ Specifically, under Articles 207, 211 and 212, States are obliged to adopt laws and regulations,¹⁴¹ as well as other measures as may be necessary¹⁴² to prevent, reduce and control such pollution,¹⁴³ which “shall include, *inter alia*, those designed to minimize to the fullest possible extent the release of toxic, harmful or noxious substances, especially those which are persistent.”¹⁴⁴ The harmful nature and persistency of GHG emissions into the ocean is evidenced by the fact that the carbon dioxide absorbed by it remains for more than 500 years on average, and many of its effects on marine life and habitat are irreversible or extremely difficult to reverse.¹⁴⁵

66. The obligation to limit the average global increase in temperature described above has particular implications for individual States. First, States are obliged to determine national emission targets. Second, in accordance with Article 197, States should cooperate globally and regionally, to ensure that the overall obligation to limit the increase in global average temperature is reached. The domestic practice of States, albeit scarce in this field, is also relevant in understanding the types of measures States should undertake to comply with

¹³⁹ World Meteorological Organization, “Global temperatures set to reach new records in next five years” (17 May 2023), *available at*: [https://public.wmo.int/en/media/press-release/global-temperatures-set-reach-new-records-next-five-years#:~:text=Published&text=Geneva%202017%20May%202023%20\(WMO,World%20Meteorological%20Organization%20\(WMO\)](https://public.wmo.int/en/media/press-release/global-temperatures-set-reach-new-records-next-five-years#:~:text=Published&text=Geneva%202017%20May%202023%20(WMO,World%20Meteorological%20Organization%20(WMO).). (Last visited 10 June 2023).

¹⁴⁰ A. Boyle, “*Protecting the Marine Environment from Climate Change: The LOSC Part XII Regime*” in E. Johansen et. al. (eds) *The Law of the Sea and Climate Change: Solutions and Constraints* (Cambridge University Press, 2020), p. 87.

¹⁴¹ Convention, arts. 207(1), 211(2), 212(1).

¹⁴² *Ibid.*, arts. 207(2), 212(2).

¹⁴³ *Ibid.*, arts. 207(1)-(2), 211(2), 212(1)-(2).

¹⁴⁴ *Ibid.*, arts. 194(3)(a), 207(5).

¹⁴⁵ Klerk, 2022, p. 51; “The Ocean Carbon Cycle” (2002) 11 Harvard Magazine, *available at*: <https://www.harvardmagazine.com/2002/11/the-ocean-carbon-cycle.html> (last visited 8 June 2023).

their obligations to adopt and enforce measures to reduce the impacts of climate change on the marine environment.

67. In this regard, the *Tribunal Administrativo de Cundinamarca* in Colombia held in February 2023 that the Colombian government had failed, *inter alia*, to establish an appropriate regulatory framework for its nationally determined contributions (“NDCs”) pursuant to the UNFCCC, to issue legal documents to guide territorial entities and authorities in incorporating climate change in their policies and instruments, and to establish annual GHG quotas, in violation of Colombia’s climate action laws.¹⁴⁶ Similarly, in 2023, the District Court in Mexico City found that the Mexican Sectoral Energy Plan for 2020-2034 violated Mexico’s international commitments under the UNFCCC and the Paris Agreement, by prioritising energy generated through fossil fuels over renewable sources.¹⁴⁷ Finally, the High Court of South Africa in Pretoria is currently seized of a petition alleging that the government’s plans to procure 1500 MW of new coal-fired power electricity capacity is contrary to, *inter alia*, South Africa’s international obligations under the Paris Agreement and the UNFCCC. Relying on the findings of the IPCC, the plaintiffs in that case emphasise the urgent need to reduce GHG emissions to prevent air, water, and land pollution.¹⁴⁸
68. The Tribunal has further held that the obligation to prevent, reduce and control pollution to the marine environment not only requires States to adopt appropriate measures, but also requires a “certain level of vigilance in their enforcement and exercise of administrative

¹⁴⁶ *Procuraduría General de la Nación y otro vs. Ministerio de Ambiente y Desarrollo Sostenible y otro*, 25000-2341-000-2022-01551-00 (Tribunal Administrativo de Cundinamarca) (3 February 2023), available at: http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2023/20230223_25000-2341-000-2022-01551-00_decision.pdf (last visited 8 June 2023) [Spanish] (see summary in English here: <http://climatecasechart.com/non-us-case/office-of-the-inspector-general-and-others-v-ministry-of-environment-and-sustainable-development-and-others/>) (last visited 8 June 2023).

¹⁴⁷ *Greenpeace Mexico v. Ministry of Energy and Others*, Amparo No. 104/2020 (District Court of Mexico City) (1 January 2023), available at: http://climatecasechart.com/wp-content/uploads/sites/16/non-us-case-documents/2023/20230103_Amparo-1352021_decision.pdf (last visited 8 June 2023) [Spanish] (see summary in English here: <http://climatecasechart.com/non-us-case/greenpeace-mexico-v-ministry-of-energy-and-others-on-the-national-electric-system-policies/>) (last visited 8 June 2023).

¹⁴⁸ *Africa Climate Alliance et. al., v. Minister of Mineral Resources & Energy et. al.* (#CancelCoal case), Case No. 56907/21 (High Court of South Africa, Gauteng Division, Pretoria), available at: <http://climatecasechart.com/non-us-case/africa-climate-alliance-et-al-v-minister-of-mineral-resources-energy-et-al-cancelcoal-case/> (last visited 8 June 2023).

control.”¹⁴⁹ Thus, it is not enough to enact the measures described above; States must also be vigilant and diligent in enforcing them against the responsible individuals or entities.¹⁵⁰

69. Sierra Leone is a developing State. Despite only being encouraged to move over time towards GHG emission reduction targets resulting in the prevention, reduction, and control of pollution of the marine environment, Sierra Leone has nevertheless taken significant steps in mitigating the impacts of climate change on the marine environment.

70. Sierra Leone’s National Adaptation Plan, which is the cornerstone of its climate change response to the UNFCCC, envisions the achievement of the following long-term goals for climate change mitigation: a reduction in carbon dioxide emission levels by 5% by 2025; 10% by 2030; and 25% by 2050, with a transformational shift toward low-emission development pathways.¹⁵¹

71. Sierra Leone has implemented several projects aimed at low-carbon development and low-carbon emissions, including the Promoting Renewable Energy for Sustainable Development project (2014-2018)¹⁵² and the West Africa Biodiversity and Climate Change Programme,¹⁵³ aimed at improving conservation and climate resilience, as well as low-emissions growth across West Africa (2015-2020). It is expected that these projects and measures will contribute significantly to the reduction of marine polluting GHG emissions.

¹⁴⁹ *SRFC Advisory Opinion*, para 131. Both Article 207 and Article 212 of the Convention have corresponding enforcement provisions that can be found in Article 213 and Article 222 respectively. The wording in both enforcement provisions is slightly different, but essentially requires that States enforce their laws and regulations adopted in accordance with article 207/212 and with other provisions of this Convention, and 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 or from or through the atmosphere.

¹⁵⁰ *See South China Sea Arbitration*, para. 964.

¹⁵¹ Government of Sierra Leone, “Updated Nationally Determined Contribution” (2021), available at: <https://unfccc.int/sites/default/files/NDC/2022-06/210804%20125%20SL%20NDC%20%281%29.pdf> (last visited 10 June 2023), p. x; *see also* Government of Sierra Leone, *Sierra Leone’s Intended Nationally Determined Contribution* (INDC) (2015), available at: <https://faolex.fao.org/docs/pdf/sie187290.pdf>, p. 7 of the PDF.

¹⁵² Government of Sierra Leone, “National Adaptation Plan” (2021), available at: https://unfccc.int/sites/default/files/resource/SierraLeone_iNAP_Final.pdf (last visited 8 June 2023), p. 42. The project was funded by the European Union in the amount of €7 million, and implemented by ENFO, OXFAM-IBIS, COOPI, and WHH (2014-2018).

¹⁵³ *Ibid.*, p. 43.

72. In sum, Sierra Leone submits that the specific obligations of States Parties to the Convention 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, are:

- c. Taking measures, collectively, to limit the increase in global average temperature to 1.5° Celsius above pre-industrial levels;
- d. Preparing, communicating, and maintaining successive NDCs that they intend to achieve;¹⁵⁴
- e. Pursuing domestic mitigation measures with the aim of achieving the objectives of such NDCs;¹⁵⁵ and
- f. Ensuring that entities and/or individuals under their jurisdiction or control act consistently with the measures adopted.

73. In enforcing the above measures, account must be taken of Articles 198 and 199 of the Convention, which place an obligation on States “to cooperate, to the extent possible, in eliminating the effects of pollution and preventing or minimizing the damage” when “the marine environment is in imminent danger of being damaged or has been damaged by pollution.” The duty to cooperate includes obligations “to exchange information, to consult with other States potentially affected by the planned activities, to jointly study the impacts of the activity on the marine environment, monitor risks or the effects of the operation and devise measures to prevent pollution of the marine environment.”¹⁵⁶ As clarified by the Tribunal, the consultations “should be meaningful in the sense that substantial effort should be made by all States concerned, with a view to adopting effective measures.”¹⁵⁷

C. Response to Question 2

74. The second question presented by COSIS to the Tribunal is as follows:

¹⁵⁴ Paris Agreement, art. 4(2).

¹⁵⁵ *Ibid.*, art. 4(2).

¹⁵⁶ Nguyen, 2023, p. 173. *See MOX Plant Case (Ireland v. United Kingdom)*, PCA Case No. 2002-01, Order on Suspension of Proceedings on Jurisdiction and Merits, and Request for Further Provisional Measures (24 June 2003), para. 37.

¹⁵⁷ *SRFC Advisory Opinion*, para. 210.

“What are the specific obligations of States Parties to the United Nations Convention on the Law of the Sea (“UNCLOS”), including under Part XII [...]

b) to protect and preserve the marine environment in relation to climate change impacts, including ocean warming and sea level rise, and ocean acidification?”

75. As with the specific obligations of States and their corresponding right to take steps to prevent, reduce and control pollution, the obligations on States Parties to protect and preserve the marine environment must be determined from a good faith interpretation of Article 192, applying Article 31(1) of the Vienna Convention. The same considerations applicable to the interpretation of the obligation to prevent, reduce and control pollution under Article 194 apply to the obligation to protect and preserve the environment under Article 192.

76. Pursuant to Article 192, States have a general obligation to protect and preserve the marine environment, including marine biodiversity, living resources and marine life.¹⁵⁸ As has been held by other international courts and tribunals, this general obligation imposes a duty on States Parties to take active measures to protect the marine environment from future damage, to preserve it, by “maintaining or improving its present condition,” as well as a duty not to degrade the marine environment.¹⁵⁹ While Article 194 is specific to protecting the marine environment from pollution, the obligation enshrined in Article 192 is broader, encompassing the protection and preservation of the marine environment generally. In the context of climate change, this involves protecting and preserving the marine environment, not only from pollution, but from the impacts of climate change in a broader sense, including from loss of biodiversity and habitat and the impact on fisheries. It also includes measures to address ocean warming and sea level rise as well as ocean acidification.

77. As with Article 194, the obligation contained in Article 192 is one of due diligence,¹⁶⁰ in that States must ensure the protection and preservation of the marine environment. Ensuring the marine environment’s protection from climate change necessarily requires States to act in accordance with the best available scientific information on climate change, including

¹⁵⁸ *South China Sea Arbitration*, para. 941; *Southern Bluefin Tuna Cases*, para. 70; *SRFC Advisory Opinion*, para. 216.

¹⁵⁹ *South China Sea Arbitration*, paras. 941, 957.

¹⁶⁰ *See Area Advisory Opinion*, para. 117; *South China Sea Arbitration*, para. 944; *SRFC Advisory Opinion*, paras. 120, 136.

the most effective mitigation and adaptation techniques, which may be found in the Sixth IPCC Report.

78. The Sixth IPCC Report describes measures that States should take and, therefore, have the right to take, to mitigate and adapt to climate change impacts. These measures range from prioritizing sustainable fisheries and coastal management to scaling and implementing carbon dioxide removal processes. This involves removing carbon dioxide from the atmosphere and durably storing it in geological, terrestrial or ocean reservoirs or products. It also involves measures to enhance biological or geochemical carbon dioxide sinks, and direct air carbon dioxide capture and storage. It may also involve ocean alkalization or ocean alkalinity enhancement to reduce ocean acidification.¹⁶¹ Some types of carbon dioxide removal (CDR) are able to enhance biodiversity and ecosystem functions, and consequently employment opportunities and local livelihoods.¹⁶² While States must weigh trade-offs between investments in adaptation to climate impacts and mitigation of greenhouse gas emissions, both can and will play a critical role in protecting and preserving marine environments.
79. Additionally, the protection and restoration of coastal “blue carbon” ecosystems, such as mangroves and tidal marshes, are likely to increase carbon uptake and storage to help minimise the effects of ocean warming and ocean acidification. In this regard, the Sixth IPCC Report notes that “strengthening precautionary approaches, such as rebuilding overexploited or depleted fisheries, and responsiveness of existing fisheries management strategies reduces negative climate change impacts on fisheries,” and is likely to benefit regional economies and livelihoods.¹⁶³
80. The measures outlined above to mitigate and adapt to climate change impacts on the marine environment require a high degree of international cooperation, and the provision of international assistance and funding to developing States. In fact, the obligation to protect and preserve the marine environment under Article 192 is informed by the other provisions of Part XII and elsewhere in the Convention, as well as the general corpus of international

¹⁶¹ See IPCC Synthesis Report, p. 52.

¹⁶² *Ibid.*, p. 54.

¹⁶³ *Ibid.*, p. 74.

environmental law.¹⁶⁴ In this regard, Article 197 of the Convention contains the obligation of States to cooperate, both globally and regionally, in formulating and elaborating rules, standards, practices and procedures for the protection and preservation of the marine environment.¹⁶⁵ Similarly, Part XIV of the Convention, on the development and transfer of marine technology, contains obligations on States to promote the technological capacity of developing States which may need assistance to protect and preserve the marine environment, with a view to accelerating the economic and social development of such States.¹⁶⁶ In the context of climate change, the Sixth IPCC Report provides that effective mitigation and adaptation of climate change impacts necessitates accelerated financial support for developing countries from developed countries, due to the fact that developing countries typically lack the comprehensive data and adequate financial resources at the scale needed to adapt and reduce economic and non-economic damages and losses resulting from climate change.¹⁶⁷ This includes the climate change impacts on the marine environment.

81. To give content, and to identify the specific obligations to protect and preserve the marine environment, Article 31(3)(c) of the Vienna Convention requires consideration of other relevant rules of international law. These include the Paris Agreement, and the overall objective to limit the increase in global average temperature set therein, as well as other principles such as the common but differentiated responsibilities principle and the precautionary principle.
82. In light of the above, the specific obligations and corresponding rights of States Parties to protect and preserve the marine environment in relation to climate change impacts, including ocean warming, sea level rise, and ocean acidification include:
 - a. Taking measures, directly or through competent international organizations, to limit the increase in global average temperature to 1.5°C above pre-industrial levels by taking effective measures to achieve that result and by promoting scientific, educational, technical or other assistance to developing States;

¹⁶⁴ *South China Sea Arbitration*, para. 941.

¹⁶⁵ Convention, art. 197.

¹⁶⁶ *Ibid.*, art. 266(1)-(2). *See also* Convention, arts. 275-276.

¹⁶⁷ Sixth IPCC Report, p. 1289.

- b. Preparing, communicating, and maintaining successive NDCs that they intend to achieve and providing assistance with the view to minimizing the effects of serious pollution to the marine environment;¹⁶⁸
- c. Pursuing domestic mitigation measures with the aim of achieving the objectives of such NDCs and in so doing supplying developing States with the necessary equipment and facilities and enhancing their capacity to manufacture such equipment;¹⁶⁹ and
- d. Ensuring that entities and/or individuals under their jurisdiction or control act consistently with the measures adopted by, for instance, providing support enabling sound environmental impact assessments.

83. As discussed above, and in keeping with the common but differentiated responsibilities principle, developed States are obliged to assume the lion's share of the burden. Otherwise, it should be self-evident that with the most vulnerable States unable to undertake effective measures to mitigate damage, due to lack of the capacity to do so, the obligations to protect the marine environment from the deleterious impacts of climate change under the Convention will be rendered nugatory – to the detriment of all States including both developed and developing countries and their respective populations.

84. Article 202 of the Convention specifically provides for scientific and technical assistance to developing States, aimed at capacity building, and including scientific training, supplying necessary equipment and facilities, and enhancing the capacity of developing States to manufacture such equipment.¹⁷⁰ The types of measures States should take to cooperate to protect and preserve the marine environment from the impacts of climate change may be found in several provisions of the Paris Agreement, and include transferring technology at different stages of the technology cycle as well as the financial support needed to implement it,¹⁷¹ capacity-building measures,¹⁷² and other actions to enhance

¹⁶⁸ Paris Agreement, art. 4(2)

¹⁶⁹ *See, e.g., ibid.*, arts. 4(2), (5).

¹⁷⁰ Convention, art. 202.

¹⁷¹ Paris Agreement, art. 10(6)

¹⁷² *Ibid.*, art. 11.

climate change education, training, public awareness, public participation, and public access to information.¹⁷³

85. The decisions of multiple Conferences of Parties (“COPs”) to the UNFCCC include provisions related to capacity building for developing countries.¹⁷⁴ These culminated in the *Framework for capacity building in developing countries* (2001),¹⁷⁵ which notes that “[c]apacity building is crucial to developing countries, especially those that are particularly vulnerable to the adverse effects of climate change.”¹⁷⁶ The Framework emphasizes that such capacity building includes, *inter alia*, the “development and transfer of technology”¹⁷⁷ and provides that “[f]inancial and technical resources should be made available ... to assist developing countries, in particular the least developed countries and small island developing States among them.”¹⁷⁸ In a decision from 2001 on *Development and transfer of technologies*, the COP urged “developed country Parties to provide technical and financial assistance.”¹⁷⁹ Since then, COP decisions have continuously “urg[ed] developed country Parties to provide enhanced support, including through financial resources, technology transfer and capacity-building, to assist developing country Parties with respect to both mitigation and adaptation, in continuation of their existing obligations under the [UNFCCC].”¹⁸⁰

86. As already discussed, developing States are the most vulnerable to climate change, despite bearing the least responsibility for the climate crisis. The climate change crisis is exasperated by the failure of developed States to provide assistance. The Sixth IPCC Report confirms that “any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future *for all*.”¹⁸¹ This will disproportionately affect Africa, and, in

¹⁷³ *Ibid.*, art. 12.

¹⁷⁴ See Conference of Parties to the United Nations Framework Convention on Climate Change (“COP”), Decisions 11/CP.1, 10/CP.2, 11/CP.2, 9/CP.3, 2/CP.4, 4/CP.4, 5/CP.4, 6/CP.4, 7/CP.4, 12/CP.4 and 14/CP.4.

¹⁷⁵ COP Decision 2/CP.7, 2001, Annex.

¹⁷⁶ *Ibid.*, Annex, para. 9.

¹⁷⁷ *Ibid.*, Annex, para. 15(j).

¹⁷⁸ *Ibid.*, Annex, para. 21.

¹⁷⁹ COP Decision 4/CP.7, 2001, para. 4.

¹⁸⁰ See COP Decisions CP.26; see also 1/CP.16, Section V, 2/CP.10 (2004), 1/CP.11 (2005), 2/CP.11 (2005), 1/CP.13 (2007) 2/CP.13, (2007), 1/CP.15 (2009), 2/CP.15 (2009), 1/CP.24 (2018), 1/CP.25 (2019).

¹⁸¹ IPCC Synthesis Report, p. 55 (emphasis added).

particular, its most vulnerable populations.¹⁸² By establishing more concrete obligations for developed States to assist developing States under the common but differentiated responsibilities principle, and in the terms of international instruments such as the Convention, this vicious cycle can more likely be broken. In this regard, the COP has:

“decid[ed] that Parties’ efforts should be undertaken on the basis of equity and common but differentiated responsibilities and respective capabilities, and the provision of finance, technology transfer and capacity-building to developing countries in order to support their mitigation and adaptation actions under the [UNFCCC], and tak[ing] into account the imperatives of equitable access to sustainable development, the survival of countries and protecting the integrity of Mother Earth.”¹⁸³

87. Finance is a key barrier for ocean health, governance, and adaptation to climate change in Africa.¹⁸⁴ Current financial flows are insufficient to meet the costs of coastal and marine impacts of climate change and ocean-focused finance is unevenly distributed, with higher flows within, and to, developed countries.¹⁸⁵ Accelerated financial support for developing countries from developed countries and other sources is a critical enabler to enhance mitigation action.¹⁸⁶ Options for scaling up mitigation and adaptation in developing regions include: increasing levels of public finance and publicly mobilized private finance flows from developed to developing countries in the context of the USD 100 billion-a-year goal of the Paris Agreement; increasing the use of public guarantees to reduce risks and leverage private flows at a lower cost; developing local capital markets; and building greater trust in international cooperation processes. A coordinated effort to make the post-pandemic recovery sustainable over the long term through increased flows of financing over this decade can accelerate climate action, including in developing regions facing high debt costs, debt distress, and macroeconomic uncertainty.¹⁸⁷

¹⁸² *Ibid.*, p. 57.

¹⁸³ COP Decisions FCCC/CP/2012/L.14/Rev.1, para. 2.

¹⁸⁴ Sixth IPCC Report, p. 488, 1293.

¹⁸⁵ *Ibid.*, p. 488.

¹⁸⁶ *Ibid.*, p. 1289.

¹⁸⁷ IPCC Synthesis Report, p. 82.

88. Many developing countries lack comprehensive data at the scale needed, and lack the adequate financial resources required for adaptation for reducing associated economic and non-economic losses and damages.¹⁸⁸ Climate-related research in Africa faces severe data constraints, as well as inequities in funding and research leadership that reduce adaptive capacity.¹⁸⁹ As confirmed by the IPCC, “[c]limate-related research on Africa has received a very small percentage (around 4%) of global climate research funding. [A]s a percentage of all research funding allocated to a region, climate research has, since 2010, made up 5% of Africa-related research funding compared to a 3% share for climate research in global research funding.”¹⁹⁰
89. Climate change strategies have been implemented in many African States, including Sierra Leone, that typically have found it difficult to obtain international support and also lack the necessary resources to adopt appropriate mitigation measures themselves. Sierra Leone has identified that one of the main barriers to technology transfer is the high initial capital cost of technologies, and that there is also a lack of data, particularly with regards to vulnerability issues, which prevents adoption and application of technologies for adaptation.¹⁹¹ For example, Sierra Leone’s National Adaptation Plan notes the need to set up a marine meteorological research station, which is vital to monitor sea level rise.¹⁹² Sierra Leone does not have in place a Permanent Service for Mean Sea Level (“PMSML”) tide gauge, which would be beneficial for monitoring and reporting changes in sea level rise. While Sierra Leone has a tide gauge in Freetown, it is not datum controlled (*i.e.*, it does not have a standard base elevation reference point to use as a data control) and is therefore not considered to be of “research quality” by PMSML, inhibiting Sierra Leone’s ability to monitor and record changes. Installing tide gauges in the near term is of utmost importance to Sierra Leone’s climate mitigation strategy.

¹⁸⁸ Sixth IPCC Report, p. 1289.

¹⁸⁹ *Ibid.*

¹⁹⁰ *Ibid.*, p. 1296.

¹⁹¹ Government of Sierra Leone, “Third National Communication of Sierra Leone to the United Nations Framework Convention on Climate Change” (2018), *available at*: <https://unfccc.int/sites/default/files/resource/FinalThird%20Nat.%20Com.%20document%20111.pdf> (last visited 9 June 2023), p. 27.

¹⁹² Government of Sierra Leone, “National Adaptation Plan” (2021), *available at*: https://unfccc.int/sites/default/files/resource/SierraLeone_iNAP_Final.pdf (last visited 8 June 2023), p. 27.

90. Thus, one way in which developed States could comply with their obligations to cooperate under Parts XII and XIV of the Convention would be to provide robust assistance to African countries like Sierra Leone to effectively implement their national climate change strategies through the provision of financial and technological resources and know-how to do so. This type of knowledge- and resource-sharing would significantly contribute to the protection and restoration not only of the marine environments of the coastal States most affected by sea level rise and the effects of climate change, but also likely of the marine environment as a whole.

91. Once the appropriate support has been received, developing countries like Sierra Leone have a corresponding duty to engage in assistance and cooperation, through adaptation planning processes and implementation of adaptation actions, as well as through assessments of climate change impacts and vulnerability. In so doing, developing countries like Sierra Leone must take into account vulnerable people, places, and ecosystems; monitor, evaluate, and learn from adaptation plans, policies, programs and actions; and build the resilience of socioeconomic and ecological systems, including through sustainable management of natural resources.¹⁹³

IV. Conclusion

92. In conclusion, for all the detailed reasons set out above, Sierra Leone considers that the Tribunal, on the question of jurisdiction:

- 1) Has been properly seized of the COSIS Request for an advisory opinion concerning two legal questions relating to the specific obligations of States Parties to prevent, reduce and control pollution of the marine environment under Part XII of the Convention;
- 2) Has jurisdiction to render an advisory opinion on the two questions posed by COSIS pursuant to Article 21 of the Statute and Article 138 of the Rules; and
- 3) Should not decline to exercise its advisory jurisdiction as there are no compelling reasons to do so, especially in the face of the clear presumption in favor of exercising advisory jurisdiction once such jurisdiction has been established.

93. On the substance of the first question raised by COSIS, Sierra Leone submits that:

¹⁹³ Paris Agreement, art. 7(9).

- 1) Part XII of the Convention imposes obligations on and corresponding rights for States to prevent, reduce and control pollution of the marine environment, and those obligations should be interpreted by taking into account the current state of the science on climate change, in particular the Sixth IPCC Report, and the relevant rules of international law on climate change applicable in the relations between the parties, in particular the Paris Agreement.
- 2) Such obligations include the duty act in accordance with a high standard of due diligence to mitigate climate change impacts on the marine environment by adopting and enforcing measures to reduce GHG emissions in such a way to ensure that the global temperature increase is limited to 1.5°C above pre-industrial levels.

94. On the substance of the second question raised by COSIS, Sierra Leone submits that:

- 1) The obligation (and corresponding right) to protect and preserve the marine environment under Article 192 is much broader than the obligations enshrined in Article 194, and encompasses the protection and preservation of the marine environment generally. In the climate change context, this involves protecting and preserving the marine environment not only from pollution, but also from the impacts of climate change in a broader sense including from loss of biodiversity and habitat and the impact on fisheries.
- 2) Such obligations and corresponding rights to regulate include all those under Question 1, as well as the obligations to cooperate internationally both directly and through competent international organizations to ensure that all States, and in particular those most vulnerable, have the capacity to mitigate the deleterious impacts of climate change, and to adapt to those effects to protect their communities and livelihoods. This is only possible by the provision of technical and financial assistance by developed States to developing States, and in particular to low-lying coastal States whose marine environments are most vulnerable to the deleterious effects of climate change described in this Written Statement.

Respectfully submitted,

A handwritten signature in blue ink, consisting of a stylized 'M' followed by a horizontal line.

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16 June 2023