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

WRITTEN STATEMENT OF THE REPUBLIC OF CHILE

16 JUNE 2023

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

WRITTEN STATEMENT OF THE REPUBLIC OF CHILE

1. On 12 December 2022, the Commission of Small Island States on Climate Change and International Law (the Commission or COSIS) requested an advisory opinion from the International Tribunal for the Law of the Sea (the Tribunal). The question submitted to the Tribunal reads, as follows:

> "*What are the specific obligations of State 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. By Order of 16 December 2022, the Tribunal invited the States Parties to the United Nations Convention on the Law of the Sea (the Convention or UNCLOS) and others to present written statements on the questions submitted to the Tribunal for an advisory opinion, and fixed a time-limit of 16 May 2023. The time-limit was extended to 16 June 2023 by Order of 15 February 2023.

I. Jurisdiction and exercise of the Tribunal's discretionary power to give an Advisory Opinion

3. Before entering into the substance, the Tribunal will need to consider (a) whether it has jurisdiction to give the advisory opinion requested by the Commission, and (b) whether it should exercise its discretion to give the opinion or not.

(i) Jurisdiction

4. The International Tribunal for the Law of the Sea has been asked to render an advisory opinion under articles 21 and 27 of the Statute of the Tribunal (the Statute) and articles 130, 131, 133, and 138 of the Rules of Procedure (the Rules).

5. In this regard, Chile recognizes the well-settled principle of *la compétence de la compétence,*[1] whereby whenever the Tribunal is dealing with a dispute concerning the jurisdiction of the same tribunal, that "matter shall be settled by decision of that court or tribunal".[2]

6. Chile notes that the legal basis for the advisory jurisdiction of the Tribunal is Article 21 of the Statute, which reads:

> "The jurisdiction of the Tribunal comprises all disputes and all 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".

7. Chile holds that the terms "all matters specifically provided for in any other agreement which confers jurisdiction on the Tribunal" provide the legal basis for the advisory jurisdiction of the Tribunal.

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[1] See, for example, Nottebohm case (Preliminary Objection), Judgment of November 18th, 1953, I.C.J. Reports 1953, p. 111, at pp. 119-120.
[2] Article 288 (8) of the 1982 United Nations Convention on the Law of the Sea.

8. The same Tribunal, in the Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC), has observed that:

"Article 21 and the 'other agreement' conferring jurisdiction on the Tribunal are interconnected and constitute the substantive legal basis of the advisory jurisdiction of the Tribunal".[3]

9. According to Article 138 of the Rules the request must comply with three elements contained in the following paragraphs:

"1. The Tribunal may give an advisory opinion on a legal question if an international agreement related to the purposes of the Convention specifically provides for the submission to the Tribunal of a request for such an opinion.

2. A request for an advisory opinion 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".

10. These three elements or requirements with which the Commission must comply are:

A) The existence of an international agreement related to the purposes of the Convention, which specifically provides for the submission of an advisory opinion to the Tribunal.
B) The 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.
C) The request must submit a legal question to the Tribunal.

11. With regard to element A), Chile understands that the "other agreement" is the Agreement for the establishment of the Commission of Small Island States on Climate Change and International Law (COSIS). Article 2, paragraph 2, of this agreement reads:

[3] Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015, p.4, at p. 22, para. 58.

"Having regard to the fundamental importance of oceans as sinks and reservoirs of greenhouse gases and the direct relevance of the marine environment to the adverse effects of climate change on Small Island States, the Commission shall be authorized to request advisory opinions from the International Tribunal for the Law of the Sea ("ITLOS") on any legal question within the scope of the 1982 United Nations Convention on the Law of the Sea, consistent with Article 21 of the Statute of the Tribunal and Article 138 of its Rules".

12. This international agreement conferring jurisdiction to the Tribunal is concerned with the interpretation of UNCLOS, in the context of the detrimental effects of climate change on the marine environment including marine living resources. This is clear from the Preamble and Articles 1(3) and 2(1) of the COSIS Agreement. As explained by the Tribunal in the SRFC Advisory Opinion, it is the "other agreement" which confers jurisdiction to the Tribunal when that agreement encompasses matters under the Convention's umbrella.

13. Thus, in the words of the Tribunal, "Article 21 and the 'other agreement' conferring jurisdiction on the Tribunal are interconnected and constitute the substantive legal basis of the advisory jurisdiction of the Tribunal".[4] In this case, the COSIS Agreement explicitly focuses on the relationship between climate change and the law of the sea.[5] Therefore, on the basis of the broad advisory jurisdiction of the Tribunal as established by Article 21 of the Statute, in connection with the purpose of the COSIS Agreement, it is not possible to avoid the Commission's request for an advisory opinion of the full Tribunal.

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[4] Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015, p.4, at p. 22, para. 58.

[5] The Preamble of COSIS states that "(T)the Parties to this Agreement, (...) Acknowledging the importance of maritime zones and the significant reliance of Small Island States on marine living resources within such zones, as well as the impacts of climate change on the marine environment including marine living resources, (...) Determined to make immediate action to protect and preserve the climate system and marine environment based on equity and the common but differentiated responsibilities of States to combat climate change, (...) Having regard to the obligations of States under the 1982 United Nations Framework Convention on Climate Change and related instruments, the 1982 United Nations Convention on the Law of the Sea, and other conventions and principles of international law applicable to the protection and preservation of the climate system and marine environment". Article 1 (3) of the Preamble states: "The mandate of the Commission shall be 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 obligation of States relating to the protection and preservation of the marine environment and their responsibility for injuries arising from internationally wrongful acts in respect of the breach of such obligations. Article 2 (1) states: "The activities of the Commission shall include inter alias 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".

14. Therefore, Chile understands that the international agreement concluded by COSIS is related to the purposes of the Convention and, therefore, the first requirement is fulfilled.

15. Further, the request for an advisory opinion was submitted by the Co-Chairs of the Commission. In its turn, the Commission has the authority to request advisory opinions from the Tribunal on any legal question within the scope of UNCLOS, in accordance with Article 2 of the COSIS Agreement. Therefore, Chile considers that the second element B) is fulfilled.

16. With regard to element C), in this case the request for an advisory opinion referred two questions to the Tribunal. These questions are:

"What are the specific obligations of State 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?"

17. Chile considers that the legal status of these questions is clear from the fact that the answers that the Tribunal might give need to identify specific legal obligations of State Parties of UNCLOS. Chile notes that the questions might encompass some political aspects, but as decided by the International Court of Justice (ICJ) in other advisory opinions, the fact that a question has political aspects does not suffice to deprive a request for advisory opinion

of its legal character.[6] The ICJ has stated that it cannot refuse to respond a request for an advisory opinion on the sole basis that it is related to certain political aspects or motives.[7]

18. In connection with other aspects that the Tribunal might be called to consider when deciding to give this advisory opinion, it is interesting to highlight that the request has been submitted by COSIS despite the fact that the questions concern all States Parties to UNCLOS. Therefore, in answering the questions referred by COSIS to the Tribunal, the latter will make an interpretation on the specific obligations that all States Parties are expected to fulfill.

19. It is Chile's position that the fact that the Advisory Opinion has been requested by some States Parties to the Convention and not by all States Parties is not a reason for the Tribunal to reject giving the requested opinion. The lack of consent by the rest of the States Parties has no bearing on the power of the Tribunal to give advisory opinions, since the Tribunal is not called to decide a dispute between States. This has been the position taken by the ICJ in relation to its advisory jurisdiction. In this regard the ICJ has observed that the "Court's Opinion is given not to the States, but to the organ which is entitled to request it",[8] irrespective of the fact that the advisory opinion can or cannot affect third States. In this particular case, the advisory opinion will provide legal advice to COSIS, which has approached the Tribunal "to seek guidance in respect of its own actions".[9]

20. Nevertheless, despite the non-binding character of the advisory opinion, it is clear that the Tribunal's interpretation of UNCLOS and other legal instruments when answering the request, will be relevant not only for COSIS but to all States Parties to UNCLOS. Again, it is Chile´s position that the general relevance of the advisory opinion that the Tribunal will

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[6] Application for Review of Judgement No. 158 of the United Nations Administrative Tribunal, Advisory Opinion, I.C.J. Reports 1973, p. 172, para. 14.

[7] Conditions of Admission of a State to Membership in the United Nations (Article 4 of the Charter), Advisory Opinion, 1948, I.C.J. Reports 1947-1948, p. 61; Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (I), p. 234, para. 13; and Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, Advisory Opinion, I.C.J. Reports 2010, p. 403, at p. 415, para. 27.

[8] Interpretation of Peace Treaties, Advisory Opinion, I.C. J. Reports 1950, p. 65, at p. 71.

[9] Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015, p.4, at p. 26, para. 76.

give provides no basis for rejecting the request. In this connection, the fact that Part XII of the Convention contains common interest rules, in other words, the fact "that the obligations in question are owed by any State party to all the other States parties to the Convention", or even the fact that some obligations may be described as *erga omnes*, cannot be used as a basis for rejecting the advisory jurisdiction of the Tribunal.

21. It might be that some States want to invoke the *ratione loci* restriction to argue that the Tribunal should not give the requested advisory opinion in this case. Indeed, in the SRFC Advisory Opinion, the Tribunal counterbalanced the broad effects of its opinion with the *ratione loci* restriction of its jurisdiction when concluding that "the jurisdiction of the Tribunal in the present case is limited to the exclusive economic zones of the SRFC Member States".[10] However, the present request concerns Part XII of UNCLOS, which the Arbitral Tribunal in the South China Sea Arbitration explained that applies "to all States with respect to the marine environment in all maritime areas, both inside the national jurisdiction of States and beyond it". Accordingly, "questions of sovereignty are irrelevant to the application of Part XII of the Convention".[11] Therefore, the scope of application of the rules that the Tribunal is called to interpret leads Chile to conclude that, in the present advisory proceedings, it is not possible to invoke the *ratione loci* restriction.

22. For the above reasons, Chile considers that the Tribunal has jurisdiction to give the advisory opinion requested by COSIS.

(ii) Discretionary power

23. The Tribunal has discretionary power to decide whether or not it might render an advisory opinion. In this regard, Article 138(1) of the Rules reads as follows:

[10] Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015, p.4, at p. 25, para. 69.
[11] The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China) (Merits), 2016, PCA-CPA, Case No 2013-19, para. 940.

"The Tribunal may give an advisory opinion on a legal question if an international agreement related to the purposes of the Convention specifically provides for the submission to the Tribunal of a request for such an opinion".

24. The word "may" suggests that the Tribunal has a broad discretionary power to render or not an advisory opinion. In interpreting this provision, assistance might be found in Article 65 of the Statute of the ICJ, which states that:

"The Court may give an advisory opinion on any legal question at the request of whatever body may be authorized by or in accordance with the Charter of the United Nations to make such a request".

25. Regarding the word "may", the ICJ has pointed out that:

"The Court has recalled many times in the past that Article 65, paragraph 1, of its Statute, which provides that `The Court *may* give an advisory opinion . . .` (emphasis added), should be interpreted to mean that the Court has a discretionary power to decline to give an advisory opinion even if the conditions of jurisdiction are met".[12]

26. Nevertheless, it is important to bear in mind that the ICJ has been reluctant to reject giving an advisory opinion, except for the existence of "compelling reasons". Indeed, the ICJ "has never, in the exercise of this discretionary power, declined to respond to a request for an advisory opinion".[13] The ICJ itself has stated that "the Court should in principle not decline to give an advisory opinion".[14]

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[12] Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, I.C.J. Reports 2004, p. 136, at p. 156, para. 44.

[13] Ibid. A qualified exception can be found in: Status of Eastern Carelia, Advisory Opinion, 1923, P.C.I. J., Series B, No. 5. However, in that case, the ICJ declined its jurisdiction because "the very particular circumstances of the case, among which were that the question directly concerned an already existing dispute, one of the States parties to which was neither a party to the Statute of the Permanent Court nor a Member of the League of Nations, objected to the proceedings, and refused to take part in any way", Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I. C.J. Reports 1996, p. 226, at p. 236, para. 14.

[14] Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, I.C.J. Reports 2004, p. 136, at p. 156, para. 44.

27. It is true that the advisory proceedings before the ICJ can be triggered by the General Assembly, Security Council, or other organs or specialized agencies of the United Nations in accordance with Article 96 of the Charter of the United Nations, and this results in a high level of legitimacy of the ICJ advisory jurisdiction. In this case the advisory opinion has been requested by COSIS, the agreement that establishes an international organization composed of six States Parties to UNCLOS. Article 138 of the Rules allows States to conclude ad-hoc agreements to trigger the advisory jurisdiction of the Tribunal. Therefore, the legitimacy of the request is granted by UNCLOS, the Statute and the Rules of the Tribunal. Chile considers that the particular features of the advisory proceedings in the context of UNCLOS, provides no basis for the Tribunal to reject exercising its advisory jurisdiction.

28. Therefore, Chile concludes that the Tribunal may exercise its advisory jurisdiction in this case.

II. The scientific evidence on which the Tribunal can rely

29. In answering the request for an advisory opinion submitted by COSIS, the Tribunal will need to take into account the underlying science regarding the determination of the detrimental effects of climate change on the ocean. In this connection, Chile wishes to underline that the Tribunal has at its disposal reliable scientific knowledge provided by the Intergovernmental Panel on Climate Change ("IPCC") assessment reports, and the World Ocean Assessment ("WOA") report, as well as other scientific studies that have been validated by the scientific community working on a collaborative and global basis on these issues. Therefore, with respect to the detrimental effects of climate change on the ocean, the Tribunal can rely on factual evidence that has been endorsed by the international scientific community and by States themselves, which have reached a global consensus on climate change deleterious effects on the marine environment.

30. The IPCC was established by UN General Assembly Resolution 48/58 of 6 December 1988, and it "is the United Nations body for assessing the science related to climate

change".[15] Its assessment reports compile "comprehensive and balanced assessments of the state of knowledge on topics related to climate change".[16] Its reports "go through a rigorous process of scoping, drafting and review to ensure the highest quality",[17] which includes being "approved and accepted by the responsible Working Group, with the government representatives to the Panel coming together in a Plenary Session of the Working Group",[18] in which the approval process is open to all governments.

31. The WOA is the result of the United Nations Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects. It is a global mechanism established by States after the 2002 United Nations World Summit on Sustainable Development (Johannesburg), under UN General Assembly Resolution 57/141 of 12 December 2002 and 58/240 of 23 December 2003.

32. Thus, there is a political and scientific consensus that the ocean is one of the components of the climate system, supporting the global exchange of water, energy, and carbon. The ocean absorbs and redistributes carbon and heat, with a heat capacity four times larger than air.[19] In parallel with its role as a climate regulator, the ocean is part of the carbon cycle, with a key role as a carbon sink, containing ninety-two percent of the carbon on Earth that is not locked up in geological reservoirs.[20] Accordingly, it has a central role in the control of atmospheric carbon dioxide (CO_2). This carbon sink captures carbon and transfers it to the seabed through the food chain (i.e., in the forms of photosynthesis; absorption of carbon by marine species throughout their lives; and use of carbon as calcium carbonate to build parts of their own body, such as shells), and as result of ocean circulation (e.g., in the Polar Regions, denser water flows towards the deep sea dragging down dissolved carbon). It is

[15] IPCC, n.d. In: About the IPCC. https://www.ipcc.ch/about/
[16] IPCC, n.d. In: Preparing Reports. https://www.ipcc.ch/about/preparingreports/
[17] Ibid.
[18] IPCC, 2021. IPCC Factsheet: How does the IPCC approve reports? https://www.ipcc.ch/site/assets/uploads/2021/07/AR6_FS_approve.pdf
[19] Abram, N., J.-P. Gattuso, A. Prakash, L. Cheng, M.P. Chidichimo, S. Crate, H. Enomoto, M. Garschagen, N. Gruber, S. Harper, E. Holland, R.M. Kudela, J. Rice, K. Steffen, and K. von Schuckmann, 2019: Framing and Context of the Report. In: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, p. 78. https://doi.org/10.1017/9781009157964.003.
[20] Ibid., p. 80.

estimated by some that the ocean has absorbed about 30% of anthropogenic CO_2 emissions that had been released into the atmosphere since the industrial revolution.[21]

33. However, ocean physics is being altered by climate change. As the best available scientific knowledge indicates, and as the global political consensus recognizes, climate change has several effects on the ocean, including ocean warming, sea level rise and ocean acidification.

34. Despite the great thermic inertia of this water mass that covers about 71% of the planet,[22] ocean temperature is rising.[23] The ocean has been warming continuously[24] and taking up more than 90% of the excess heat in the climate system, as reported since 1970.[25] Marine heatwaves are not an unusual phenomenon anymore: they have become more frequent throughout the 20th century, almost doubling in frequency, and becoming longer and more intense since the 1980s.[26] Moreover, most of the marine heatwaves between 2006 and 2015 have been attributed to anthropogenic warming.[27] These changes affect sea level, which is rising unabated, and is already about 20 cm higher than in 1900.[28] In addition, the thermal

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[21] Ibid., p. 82.
[22] Ibid., p. 78.
[23] Ibid., p. 83.
[24] Eyring, V., N.P. Gillett, K.M. Achuta Rao, R. Barimalala, M. Barreiro Parrillo, N. Bellouin, C. Cassou, P.J. Durack, Y. Kosaka, S. McGregor, S. Min, O. Morgenstern, and Y. Sun, 2021: Human Influence on the Climate System. In Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, p. 426. doi:10.1017/9781009157896.005.
[25] Op. Cit., note 16, p. 83.
[26] Arias, P.A., N. Bellouin, E. Coppola, R.G. Jones, G. Krinner, J. Marotzke, V. Naik, M.D. Palmer, G.-K. Plattner, J. Rogelj, M. Rojas, J. Sillmann, T. Storelvmo, P.W. Thorne, B. Trewin, K. Achuta Rao, B. Adhikary, R.P. Allan, K. Armour, G. Bala, R. Barimalala, S. Berger, J.G. Canadell, C. Cassou, A. Cherchi, W. Collins, W.D. Collins, S.L. Connors, S. Corti, F. Cruz, F.J. Dentener, C. Dereczynski, A. Di Luca, A. Diongue Niang, F.J. Doblas-Reyes, A. Dosio, H. Douville, F. Engelbrecht, V. Eyring, E. Fischer, P. Forster, B. Fox-Kemper, J.S. Fuglestvedt, J.C. Fyfe, N.P. Gillett, L. Goldfarb, I. Gorodetskaya, J.M. Gutierrez, R. Hamdi, E. Hawkins, H.T. Hewitt, P. Hope, A.S. Islam, C. Jones, D.S. Kaufman, R.E. Kopp, Y. Kosaka, J. Kossin, S. Krakovska, J.-Y. Lee, J. Li, T. Mauritsen, T.K. Maycock, M. Meinshausen, S.-K. Min, P.M.S. Monteiro, T. Ngo-Duc, F. Otto, I. Pinto, A. Pirani, K. Raghavan, R. Ranasinghe, A.C. Ruane, L. Ruiz, J.-B. Sallée, B.H. Samset, S. Sathyendranath, S.I. Seneviratne, A.A. Sörensson, S. Szopa, I. Takayabu, A.-M. Tréguier, B. van den Hurk, R. Vautard, K. von Schuckmann, S. Zaehle, X. Zhang, and K. Zickfeld, 2021: Technical Summary. In Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, p. 74. doi:10.1017/9781009157896.002.
[27] Ibid.
[28] Op. Cit., note 16, p. 112.

expansion of the ocean, the continuing deep ocean heat uptake, and the mass loss from the Greenland and Antarctic ice sheets, contribute to a rise in global mean sea level that will continue in the centuries and millennia to come, even after cessation of emissions, with serious physical changes and social impacts.[29]

35. From a chemical perspective, when temperature rises, pH decreases, and tends to acidity. In the context of a slightly basic ocean, these chemical changes are not harmless and potentiate other related problems, like ocean acidification. Highlighted as the "other CO_2 problem", this phenomenon is the result of the absorption of anthropogenic CO_2 from the atmosphere and its conversion to carbonic acid in seawater,[30] thus lowering its pH.[31] It is an uncontroverted fact that the ocean has taken up between 20-30% of total anthropogenic CO_2 emissions since the 1980s, causing further ocean acidification.[32] Moreover, since the Industrial Revolution, the global surface ocean pH has declined on average approximately 0.1, which means an increase in acidity of about 30%.[33] As consequence, it is projected that the pH will decline an additional 0.2-0.3 over the next century unless global carbon emissions are significantly curtailed.[34]

36. The effects of climate change on the ocean are not limited to ocean warming, sea level rise, and ocean acidification. There is evidence that the ocean carbon processes are starting to change in response to the growing ocean carbon sink, which means that there will be a weakening of the ability of the ocean to continue acting as a carbon sink if no action is

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[29] Op. Cit., note 23, p. 106.
[30] Chen, D., M. Rojas, B.H. Samset, K. Cobb, A. Diongue Niang, P. Edwards, S. Emori, S.H. Faria, E. Hawkins, P. Hope, P. Huybrechts, M. Meinshausen, S.K. Mustafa, G.-K. Plattner, and A.-M. Tréguier, 2021: Framing, Context, and Methods. In Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, p. 176, https://doi.org/10.1017/9781009157896.003; United Nations, 2021. The Second World Ocean Assesment, Volume I. p. 13.
[31] United Nations, 2021. The Second World Ocean Assesment, Volume I. p. 86.
[32] IPCC, 2019: Summary for Policymakers. In: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, p. 9. https://doi.org/10.1017/9781009157964.001.
[33] United Nations, 2021. The Second World Ocean Assesment, Volume I. p. 95.
[34] United Nations, 2021. The Second World Ocean Assesment, Volume I. p. 95.

taken to prevent medium- to high-emissions scenarios,[35] due to the reduction of its buffering capacity. In comparison with the atmosphere, which has remained stable, the ocean carbon sink has continued to grow over the past six decades in response to increasing anthropogenic CO_2 emissions.[36] Inter-annual and decadal variability of the regional and global ocean carbon sink indicate that it is sensitive to climate conditions and therefore to climate change.[37]

37. It is undeniable that these changes are disturbing the marine environment, especially rare or fragile ecosystems. There is evidence of the impacts on the nutrient cycling and primary production. Ocean warming is affecting marine organisms at multiple trophic levels, fisheries, and it even threatening the current effectiveness of existing ocean and fisheries governance.[38] For calcifying organisms, whose skeletons are constituted by calcium carbonate, such as pteropods, shelled molluscs and coral reef ecosystems, extreme temperature events and ocean acidification entails a reduction in their biodiversity and abundance.[39] Tropical coral reefs are vulnerable to rising CO2 concentrations and warming, which exacerbates bleaching, while warm water corals are in high risk from ocean acidification and warming, even if global warming can be limited to 1.5°C above pre-

[35] Canadell, J.G., P.M.S. Monteiro, M.H. Costa, L. Cotrim da Cunha, P.M. Cox, A.V. Eliseev, S. Henson, M. Ishii, S. Jaccard, C. Koven, A. Lohila, P.K. Patra, S. Piao, J. Rogelj, S. Syampungani, S. Zaehle, and K. Zickfeld, 2021: Global Carbon and other Biogeochemical Cycles and Feedbacks. In Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, p. 676, https://doi.org/10.1017/9781009157896.007.

[36] Ibid.

[37] Ibid.

[38] IPCC, 2019: Technical Summary [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, E. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)]. In: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [H.- O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, p. 58. https://doi.org/10.1017/9781009157964.002

[39] Ibid., p. 61.

industrial level.[40] Moreover, ocean acidification has reached deeper into the ocean, surpassing 2000 m depth in the North Atlantic and Southern Oceans.[41]

38. From a human perspective, the deleterious effects of climate change on the marine environment have multiple consequences. As pertains food security, the increasing ocean acidification and oxygen loss are negatively affecting two of the four major upwelling systems: the California Current and the Humboldt Current, which are among the most productive ocean ecosystems. In many regions, ocean warming has already contributed to reduced fisheries catches, and since the 1970s, changes in species composition of fisheries catches have been observed.[42] Ocean warming and changes in primary production in the 20th century are related to changes in productivity of many fish stocks, with an average decrease of approximately 3% per decade in population replenishment and 4,1% in maximum catch potential.[43] As regards human health, the impact of climate change on the ocean exacerbates the effects of seawater pollution, influencing the prevalence of microbial infections. An increase in water-borne diseases, especially *Vibrio* species infections (that includes *Vibrio cholerae*, that causes cholera) has been reported, as well as new cases found in higher latitude areas that were previously not affected, which relate to sea surface warming and the increasing exposure of human population to the pathogen during extreme events such as flooding and tropical cyclones, that are linked with warming.[44] For coastal communities, which represent about 11% of the global population (around 680 million people, projected to grow to more than one billion by 2050),[45] ocean acidification, combined with rising temperatures, sea level rise, deoxygenation and increased extreme climate events, further threaten the goods and services provided by coastal ecosystems.[46] Coastal ecosystems are progressively losing their ability to adapt to climate-induced

[40] Bindoff, N.L., W.W.L. Cheung, J.G. Kairo, J. Arístegui, V.A. Guinder, R. Hallberg, N. Hilmi, N. Jiao, M.S. Karim, L. Levin, S. O'Donoghue, S.R. Purca Cuicapusa, B. Rinkevich, T. Suga, A. Tagliabue, and P. Williamson, 2019: Changing Ocean, Marine Ecosystems, and Dependent Communities. In: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, p. 497. https://doi.org/10.1017/9781009157964.007

[41] Op. Cit., note 32, p. 677.

[42] Op. Cit., note 29, p. 12.

[43] Op. Cit., note 35, p. 61.

[44] Op. Cit., note 37, pp. 509-510.

[45] Op. Cit., note 16, p. 77.

[46] Op. Cit., note 32.

changes and provide ecosystem services, including acting as protective barriers,[47] increasing the risks for these communities.

39. The position of Chile is that the Tribunal can rely on the consensus reached by the international scientific community and by States themselves on the detrimental effects of climate change on the ocean. Therefore, it does not need to ask for further evidence in order to give its advisory opinion.

III. Relevant considerations regarding question (a) of COSIS's request

40. The first question posed to the Tribunal is:

"What are the specific obligations of State 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?"

41. Article 192 of the Convention reads as follows: "States have the obligation to protect and preserve the marine environment". Question (a) refers to the specific obligations to prevent, reduce and control pollution.

42. Article 1(4) of the Convention defines pollution 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

[47] Oppenheimer, M., B.C. Glavovic, J. Hinkel, R. van de Wal, A.K. Magnan, A. Abd-Elgawad, R. Cai, M. Cifuentes-Jara, R.M. DeConto, T. Ghosh, J. Hay, F. Isla, B. Marzeion, B. Meyssignac, and Z. Sebesvari, 2019: Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities. In: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, p. 323. https://doi.org/10.1017/9781009157964.006.

legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities;".

43. As interpreted by the Arbitral Tribunal in the South China Sea Arbitration, Article 192 extends to both "protection of the marine environment from future damage and preservation in the sense of maintaining or improving its present condition".[48]

44. In its turn, Article 194(1) of the Convention prescribes that States shall take, individually or jointly, all measures necessary to prevent, reduce and control pollution of the marine environment from any source.

45. Article 194(2) of the Convention establishes that States shall take measures seeking to comply with the general rule not to cause significant harm to other States or pollution beyond national jurisdiction.[49] In this connection, the Arbitral Tribunal in the South China Sea Arbitration when commenting on the scope application of Part XII of the Convention, pointed out that "the obligations in Part XII apply to all States with respect to the marine environment in all maritime areas, both inside the national jurisdiction of States and beyond it. Accordingly, questions of sovereignty are irrelevant to the application of Part XII of the Convention".[50]

46. Article 194 further states in paragraph (3) that: "The measures taken pursuant to this Part shall deal with all sources of pollution of the marine environment. These measures shall include, *inter alia*, those designed to minimize to the fullest possible extent: (a) the release of toxic, harmful or noxious substances, especially those which are persistent, from land-based sources, from or through the atmosphere or by dumping".

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[48] The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China) (Merits), 2016, PCA-CPA, Case No 2013-19, para. 941.

[49] The ICJ has confirmed the binding character of this principle of international law when observed: "The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment", Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996, p. 226, at pp. 21-22, para. 29.

[50] The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China) (Merits), 2016, PCA-CPA, Case No 2013-19, para. 940.

47. As explained by this Tribunal in the Advisory Opinion submitted by the SRFC, living resources and marine life are part of the marine environment.[51] Already in 1999, this Tribunal stated in the Southern Bluefin Tuna Cases that "the conservation of the living resources of the sea is an element in the protection and preservation of the marine environment".[52]

48. The obligations contained in Articles 192 and 194 of the Convention are obligations of due diligence. This means that States have an obligation of conduct to take all measures necessary to prevent, reduce and control pollution of the marine environment.

49. Articles 207 and 212 of the Convention are also relevant to determine compliance with the standard of due diligence. Article 207 calls upon States to adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based sources, taking into account internationally agreed rules, standards and recommended practices and procedures. Article 207 adds that:

"4. States, acting especially through competent international organizations or diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources, taking into account characteristic regional features, the economic capacity of developing States and their need for economic development. Such rules, standards and recommended practices and procedures shall be re-examined from time to time as necessary.

5. Laws, regulations, measures, rules, standards and recommended practices and procedures referred to in paragraphs 1, 2 and 4 shall include those designed to minimize, to the fullest extent possible, the release of toxic, harmful or noxious substances, especially those which are persistent, into the marine environment".

50. In its turn, Article 212 states that:

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[51] Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission, 2 April 2015, ITLOS Reports 2015, p.4. at p. 61, para. 216.

[52] Southern Bluefin Tuna (New Zealand v. Japan; Australia v. Japan), Provisional Measures, order of 27 August 1999, ITLOS Reports 1999, p. 280, at p. 295, para.70.

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

3. States, acting especially through competent international organizations or diplomatic conference, shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control such pollution".

51. Articles 207 and 212 make it clear that the due diligence standard that States should apply in complying with their general obligation to protect and preserve the marine environment includes the adoption of national legislation, which in its turn, needs to take into account internationally agreed rules, standards and recommended practices and procedures.

52. The question that the Tribunal is called to answer refers to the specific obligations, as opposed to the general obligations, of State 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, which are caused by anthropogenic GHG emissions into the atmosphere.

53. With regard to the pollution of the marine environment and the deleterious consequences of climate change on the ocean, the Tribunal can rely on the facts that the scientific community has validated with regard to ocean warming, ocean acidification and sea-level rise, as established consequences of GHGs emissions.

54. In this regard the 2019 IPCC Special Report on the Ocean and the Cryosphere concludes that the ocean absorbs 20-30% of the anthropogenic CO_2 emissions released into the atmosphere.[53] This means that the release of CO_2 into the atmosphere from any source, including land-based sources, is a form of pollution of the marine environment. The scientific community has also established that the rise in the temperature of the planet, has caused the rise in the temperature of the ocean. According to the 2019 IPCC Special

[53] Op. Cit., note 33.

Report on the Ocean and the Cryosphere the ocean has been warming continuously and taking up more than 90% of the excess heat present in the climate system.[54] This amounts to the absorption of heat into the ocean and, therefore, can also be described as a form of pollution.

55. In conclusion, as reported in several IPCC reports and in the World Ocean Assessment, the consequences of the absorption of heat and CO_2 are: ocean warming, ocean acidification and sea level rise.

56. In this context, and in accordance with Articles 192 and 194 of the Convention, States Parties have the specific obligation to reduce GHGs emissions, in order to prevent, reduce and control ocean warming, ocean acidification and sea level rise. In the case of ocean acidification, insofar as this deleterious effect is to a great extent the result of CO_2 being captured by the ocean, the specific obligation is to reduce the emissions of a particular GHG: carbon dioxide.

57. These specific obligations are obligations of due diligence, which means that the conduct required from States in order to comply with this standard of behavior should be determined, in the first place, by reference to the elements of due diligence that are already described in Articles 194, 207 and 212 of the Convention.

58. In this connection, Article 194(1) clarifies that when taking measures to prevent, reduce and control pollution of the marine environment States shall use the best practicable means at their disposal and in accordance with their capabilities. Therefore, best practicable means at their disposal and their respective capabilities are relevant criteria when assessing States compliance with the due diligence standard.

59. Furthermore, on the basis of Articles 207 and 212 of the Convention, in addressing pollution of the marine environment caused by GHGs emissions, States shall adopt laws and regulations. In doing so, these provisions prescribe that States need to take into account internationally agreed rules, standards and recommended practices and procedures. This

[54] Ibid.

means that the Tribunal must take into consideration that the threat of climate change is addressed today by the international community of States through negotiations under the United Nations Framework Convention on Climate Change (UNFCCC). The Paris Agreement is the latest negotiated treaty that "aims to strengthen the global response to the threat of climate change".

60. Therefore, for the purposes of the interpretation of Articles 207 and 212 of the Convention, the UNFCCC and the Paris Agreement are the relevant agreed rules, standards, practices and procedures that States should take into account in the adoption of their laws and regulations to prevent pollution of the marine environment.

61. In the present case, Articles 207 and 212 explicitly authorize States Parties to take into account rules, standards, practices and procedures contained in other internationally agreed instruments. And even if this were not the case, Article 31 (3)(c) of the Vienna Convention on the Law of Treaties (VCLT),[55] which reflects customary international law,[56] calls for the application of the principle of "systemic integration", which is a useful tool to update treaties in light of the current international law, as was done by the Arbitral Tribunal in the Iron Rhine Arbitration.[57]

62. The objective of UNFCCC "is the stabilization of GHG concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system" (Article 2). UNFCCC states that this objective "would be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner" (Article 2). In case of a threat of irreversible damage, UNFCCC contemplates the application of a precautionary approach, which means that measures cannot be postponed (Art. 3.3).

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[55] Done at Vienna on 23 May 1969. Entered into force on 27 January 1980. United Nations, Treaty Series, vol. 1155, p. 331. Article 31 (3)(c) reads: "3. There shall be taken into account, together with the context: (...) c) any relevant rules of international law applicable in the relations between the parties".

[56] Oil Platforms (Islamic Republic of Iran v. United States of America), Judgment, I.C.J. Reports 2003, p. 161, at p. 182, para. 41.

[57] Iron Rhine Arbitration (Belgium v. Netherlands) (Merits), 2005, PCA-CPA, Case No 2003-02, para. 58.

63. In its turn, the Paris Agreement implements UNFCCC. State Parties to the Paris Agreement undertake to make efforts to reduce their GHGs emissions overtime, establishing successive and progressive nationally determined contributions (NDCs) that each Party intends to achieve.

64. Even though neither UNFCCC nor the Paris Agreement have the specific purpose of protecting the marine environment, the actions the Parties collectively propose to take to reduce the risks and impacts of climate change, which involve the reduction of emissions of GHGs, have a positive effect in preventing, reducing and controlling ocean warming, ocean acidification and sea level rise. This is clear from the fact that these reductions contribute to stabilize the global average temperature of the earth and reduce the amount of CO_2 being captured by the ocean.

65. It is also worth noting that, even if in the context of the general purposes of UNFCCC and the Paris Agreement, the protection of the marine environment was not a specific objective, States Parties to these treaties were aware of the relationship between GHGs emissions and impacts on the marine environment. In this connection, the preamble of UNFCCC mentions the adverse effects of the change in the Earth´s climate on the ocean when it recalls the provisions of UNGA Resolution 44/206 of December 1989. The Resolution refers to the possible adverse effects of sea-level rise on islands and coastal areas, particularly low-lying coastal areas and recognizes that low-lying and other small island countries are particularly vulnerable to the adverse effects of climate change. It should also be noted that Article 4.1(d) of UNFCCC recognizes the ocean as a sink of GHGs. In its turn, the Paris Agreement mentions the ocean in the Preamble, "noting the importance of ensuring the integrity of all ecosystems, including the oceans" and Article 5 provides that Parties should take action to conserve and enhance sinks and reservoirs as referred to in Article 4, paragraph 1 (d) of UNFCCC.

66. It is true that at the time the Convention was negotiated, climate change impacts on the ocean were not yet known to States or the scientific community. However, on the basis of Article 31 (3)(c) of the Vienna Convention on the Law of Treaties (VCLT), the interpretation of the Convention may also take into account the evolution of the international legal system at the time of the interpretation. In this connection, on the basis

of the summary of the President of the Committee of what became Part XII of UNCLOS, Chile considers the Convention as a living instrument, capable of adapting itself to further developments in the international law of the sea and to new scientific knowledge regarding the impacts of pollution on the ocean.[58] It may be said that the Convention was negotiated with an evolutive approach in mind, as States Parties have decided to further implement the relevant obligations through binding agreements and non-binding resolutions of international organizations, without need to reopen the negotiations of the Convention. The possibility of an evolutive interpretation of treaties has also been recognized by the ICJ, when noting that "an international instrument has to be interpreted and applied within the framework of the entire legal system prevailing at the time of the interpretation".[59]

67. In paragraphs 212 to 219 and 227 of UNGA Resolution 77/248, the General Assembly of the United Nations, addresses the relationship between climate change and the law of the sea expressing its concern on the impacts of climate change in the ocean and the cryosphere, including extreme sea level events and sea level rise. The General Assembly has also taken note of the relevant debate held in the context of the Informal Consultative Process, in particular at its fourteenth meeting on "The impacts of ocean acidification on the marine environment" (17 to 20 June 2013), at its eighteenth meeting on "The effects of climate change on oceans" (15 to 19 May 2017), and at its twenty-first meeting on "Sea level rise and its impacts" (14 to 18 June 2021). All this ongoing debate provides relevant information on the position of States Parties and non-parties to UNCLOS and of the scientific community on the relationship between climate change and the law of the sea.

68. Further evidence of this evolutive approach may be found in declarations of various States Parties to UNCLOS that have formally stated in the meetings of States Parties that contemporary issues, including the effects of climate change such as sea level rise, loss of biodiversity and pollution, should be resolved within the framework of the Convention.[60]

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[58] A/CONF.62/C.3/SR.4 Summary record of meetings of the Third Committee 4th meeting Extract from the Official Records of the Third United Nations Conference on the Law of the Sea, Volume II (Summary Records of Meetings of the First, Second and Third Committees, Second Session).

[59] Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970) (Advisory Opinion), ICJ Reports 1971, p. 16, at p. 31, para. 53.

[60] As recorded in the Report of the thirty-second Meeting of States Parties (New York, 13–17 June 2022), under agenda item VII Reports of the Secretary-General under article 319 of the Convention. Available at: https://www.un.org/depts/los/meeting_states_parties/thirtysecondmeetingstatesparties.htm

69. The previous paragraphs have made clear that when interpreting the Convention, the principles of systemic integration and evolutive interpretation need to be applied. In this context, human rights obligations should be considered by the Tribunal, as the deleterious effects of climate change on the ocean have undoubtedly affected and will continue to affect the enjoyment of human rights by coastal communities. The United Nations Special Rapporteur on Human Rights and the Environment has noted that sea level rise can cause saltwater intrusion, making groundwater in coastal aquifers unfit for domestic or agricultural use,[61] which may impact the communities' right to food and health. Similarly, he has highlighted that sanitation systems are vulnerable to sea level rise, affecting the enjoyment of the rights to water and sanitation.[62] Similarly, the Special Rapporteur on Climate Change has noted that higher sea temperatures are causing coral reef bleaching, affecting the right to food for people reliant on these coral reefs as a food source.[63]

70. Sea level rise has also resulted in land territories becoming uninhabitable, and individuals having to relocate,[64] thus affecting their rights to housing, property, and even self-determination.[65] As eloquently put by former United Nations High Commissioner for Human Rights, Ms. Michelle Bachelet: "The world has never seen a threat to human rights of this scope".[66] Chile believes that these and other obligations under international human rights law may assist ITLOS in the interpretation of UNCLOS, pursuant to the general rule

[61] Human rights and the global water crisis: water pollution, water scarcity and water-related disasters. Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment. 19 January 2021. A/HRC/46/28, para. 19.
[62] Op. cit., note 61, para. 19. See also regarding access to water Op. cit. note 65, para. 25. The right to water and sanitization was recognized by UNGA Resolution 64/292 of 2010.
[63] Promotion and protection of human rights in the context of climate change mitigation, loss and damage and participation. Report of the Special Rapporteur on the promotion and protection of human rights in the context of climate change. 26 July 2022, A/77/226, para. 49.
[64] Human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment. Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment. 15 July 2019, A/74/161, para. 10. See also: Providing legal options to protect the human rights of persons displaced across international borders due to climate change. Report of the Special Rapporteur on the promotion and protection of human rights in the context of climate change, Ian Fry. 18 April 2023, A/HRC/53/34, para. 9; and Op. cit. note 63, para. 60;
[65] Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment. 1 February 2016. A/HRC/31/52, para. 29.
[66] See: https://news.un.org/en/story/2019/09/1045862.

of interpretation established in Article 31 (3)(c) of the Vienna Convention on the Law of Treaties, which reflects customary international law.[67]

71. It is important to take note that State Parties to UNCLOS recently negotiated the text of an Agreement on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction (the BBNJ Agreement). The BBNJ Treaty has not yet entered into force and the final adoption of the text of the treaty is still pending. For this reason, in the next paragraphs, the treaty will be referred to as the Draft BBNJ Treaty.[68]

72. The objective of the Draft BBNJ Treaty is "to ensure the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, for the present and in the long term, *through effective implementation of the relevant provisions of the Convention* and further international cooperation and coordination" (Article. 2, emphasis added). Article 4.1 provides that: "This Agreement shall be interpreted and applied in the context of and in a manner consistent with the Convention". These two provisions make it clear that the Draft BBNJ Agreement is relevant for the interpretation of UNCLOS, in the light of Article 31 (3)(a) of the VCLT and Article 237 of the Convention.

73. Although the Draft BBNJ Treaty has not yet entered into force, the process of its negotiation shows that the participating States consider that the impacts of climate change on the marine environment are not extraneous to the UNCLOS regime.

74. The preamble of the Draft BBNJ Treaty states: "Recognizing the need to address, in a coherent and cooperative manner, biological diversity loss and degradation of ecosystems of the ocean, due, in particular, to climate change impacts on marine ecosystems, such as warming and ocean deoxygenation, as well as ocean acidification, pollution, including plastic pollution, and unsustainable use".[69]

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[67] Oil Platforms (Islamic Republic of Iran v. United States of America), Judgment, I.C.J. Reports 2003, p. 161, at p. 182, para. 41.
[68] Text of the Draft BBNJ Treaty as approved on 4 March 2023: A/CONF.232/2023/CRP.2/Rev.2.
[69] Ibid.

75. In a similar vein, Article 7 of the Draft BBNJ Treaty provides that to achieve the objectives of the agreement the Parties shall be guided by certain principles and approaches, including: "h) An approach that builds ecosystem resilience, including to adverse effects of climate change and ocean acidification, and also maintains and restores ecosystem integrity, including the carbon cycling services that underpin the role of the ocean in climate".[70]

76. The Draft BBNJ Agreement also includes the concept of "cumulative impacts", which means: "the combined and incremental impacts resulting from different activities, including known past and present and reasonably foreseeable activities, or from the repetition of similar activities over time, and the consequences of climate change, ocean acidification and related impacts" (Article 1.6).[71]

77. On the basis of the foregoing analysis, the position of Chile is that in answering question (a), the Tribunal should focus first on the language of Articles 194, 207 and 212 of UNCLOS, which establish a specific obligation of States Parties to the Convention to enact laws and regulations to prevent, reduce and control pollution. In the particular case of ocean warming, sea level rise and ocean acidification, these laws and regulations should be envisaged to obtain a reduction of GHGs emissions. In adopting these laws and regulations, States Parties to the Convention should take into account the agreed rules, standards and recommended practices and procedures contained in UNFCCC and the Paris Agreement. In particular, the laws and regulations adopted by the States Parties to the Convention should lead to a progressive reduction in GHG emissions, reflecting the highest possible ambition for each State, taking into account the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

78. With regard to the obligation to prevent, reduce and control ocean acidification, the specific obligation of States Parties to the Convention is to enact laws and regulations envisaged to specifically obtain a reduction of CO_2 emissions. Given that the focus of UNFCCC and the Paris Agreement is on a collective effort to lowering the temperature of

[70] Ibid.
[71] Ibid.

the atmosphere by reducing GHGs in general, the laws and regulations for reducing carbon dioxide emissions in each State, while taking into account the internationally agreed rules, standards and recommended practices and procedures contained in UNFCCC and the Paris Agreement, cannot rely solely on these treaties to establish compliance with the due diligence obligation to prevent, reduce and control the absorption of CO_2 by the ocean.

79. In this vein, compliance with the due diligence obligation will require the adoption of laws and regulations envisaged to respond to a problem, ocean acidification, that science has only recently been able to understand better. Due diligence is a concept that must be interpreted and applied in accordance with the evolution of scientific knowledge and the new technological developments. Therefore, Articles 207 and 212 cannot be read as referred only to agreed rules, standards, and recommended procedures established in binding treaties. In this vein, due diligence requires States to take into account the availability of scientific knowledge as it progresses in time and to act accordingly, that is to say, taking measures that are adequate to respond to environmental threats that science has only recently been able to demonstrate and explain.

80. At this point it is helpful to underline that the Seabed Disputes Chamber of the Tribunal has already stated that due diligence is a standard the content of which has to adapt to the creation of new scientific and technical knowledge. In its Advisory Opinion on the Responsibilities and Obligations of States with respect to Activities in the Area, the Seabed Disputes Chamber said that: "The content of "due diligence" obligations may not easily be described in precise terms. Among the factors that make such a description difficult is the fact that 'due diligence' is a variable concept. It may change over time as measures considered sufficiently diligent at a certain moment may become not diligent enough in light, for instance, of new scientific or technological knowledge".[72]

81. Finally, Chile notes that cooperation between States is a key tool to prevent, reduce and control pollution of the marine environment in the context of the deleterious effects of climate change, especially considering that these effects know no borders and impact maritime zones and communities at great distances from the source of pollution. In this

[72] Responsibilities and obligations of States with respect to activities in the Area, Advisory Opinion, 1 February 2011, ITLOS Reports 2011, p. 10, at p. 47, para. 117.

regard, in the MOX Plant case (Provisional Measures) the Tribunal observed "that the duty to cooperate is a fundamental principle in the prevention of pollution of the marine environment under Part XII of the Convention and general international law", and then ordered to "exchange further information with regard to possible consequences for the Irish Sea arising out of the commissioning of the MOX plant".[73]

82. Therefore, it is possible to understand that to attain the objectives of Articles 194, 207, and 212 of UNCLOS, States need also to cooperate, in formulating and elaborating international rules, standards and recommended practices and procedures as set out by Article 197.[74]

IV. Relevant considerations regarding question (b) of COSIS's request

83. The second question posed to the Tribunal is:

> "What are the specific obligations of State Parties to the United Nations Convention on the Law of the Sea (the "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?"

84. The first question (question a) asks the Tribunal to identify the specific obligations to prevent, reduce and control pollution in relation to the deleterious effects of climate change. This second question (question b) asks the Tribunal to address the specific obligations of State Parties to the Convention in relation to climate change impacts. Insofar as question (b) is not interpreted as a reiteration of question (a), Chile's position is that this question refers to the obligations of State Parties in relation to the climate change impacts that we are witnessing in the marine environment at present.

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[73] MOX Plant (Ireland v. United Kingdom) Provisional Measures, Order of 3 December 2001, ITLOS Reports 2001, p. 95, at para. 82 and p. 111.

[74] Article 197 of UNCLOS states: "States shall cooperate on a global basis and, as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features".

85. Indeed question (b) includes three climate change impacts: ocean warming, sea level rise and ocean acidification. In this vein, Chile´s interpretation is that question (b) refers to the specific obligations of State Parties to the Convention in relation to adaptation and resilience measures for the protection and preservation of the marine environment in the context of climate change impacts that can already be observed in the ocean.

86. The starting point for answering question (b) is Article 192 of the Convention. In this connection, States have the obligation to protect and preserve the marine environment, not only by preventing, reducing and controlling pollution, but also by taking other measures that protect and preserve the marine environment in the present situation in which the ocean is experiencing ocean warming, sea level rise and ocean acidification.

87. The notion of the marine environment has been broadly defined by the Tribunal in the SRFC Advisory Opinion where it observed that: "living resources and marine life are part of the marine environment".[75]The Tribunal has considered that "the conservation of the living resources of the sea is an element in the protection and preservation of the marine environment".[76]

88. Another important provision to take into account is Article 194(5) of the Convention. Despite the fact that Article 194 main focus is on measures to prevent, reduce and control pollution, paragraph (5) includes a key provision for the protection and preservation of the marine environment in situations in which pollution has already caused detrimental impacts. Article 194(5) states that "The measures taken in accordance with this Part shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life".

89. Therefore, Article 194(5) is not only concerned with measures to prevent, reduce and control pollution. This is clear from the fact that this provision states that it refers to "measures taken in accordance with this Part", that is to say, Part XII as a whole. In this connection, the Arbitral Tribunal in the Chagos Marine Protected Area Arbitration has

[75] Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015, p. 61 (paragraph 216).
[76] Southern Bluefin Tuna (New Zealand v. Japan; Australia v. Japan), Provisional Measures, Order of 27 August 1999, ITLOS Reports 1999, p. 280, at p. 295, para. 70.

already been clear about this point when stating that: "Article 194 is accordingly not limited to measures aimed strictly at controlling pollution and extends to measures focused primarily on conservation and the preservation of ecosystems".[77]

90. While the notion of "marine ecosystem" is not defined by the Convention, the Tribunal may have resort to the definitions contained in other agreements. The Arbitral Tribunal in the South China Sea Arbitration did so when applying the definition contained in Article 2 of the Biodiversity Convention, referring to an ecosystem as "a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit".[78] Another relevant treaty in this respect is the 1995 United Nations Agreement on Straddling and Highly Migratory Fish Stock, which covers biodiversity in general terms.

91. Therefore, in answering the second question posed to the Tribunal, it is important to bear in mind that the impacts of climate change on the ocean have the potential to seriously affect the preservation of the whole marine ecosystem.

92. In the identification of specific obligations binding on State Parties to protect and preserve the marine environment in the context of climate change impacts, the Tribunal should not confine its task to the interpretation of the relevant provisions of Part XII, but it should also take into account other sections of the Convention that have also been inspired by the objective of protecting the marine environment. In this vein, the provisions that should be taken into account are the following: Articles 117, 123, 192, 193, 194, 197, 203, 204, and 237. By taking all these provisions into account, the Tribunal will be in the position to give a comprehensive answer to question (b) on the specific obligations of States to protect and preserve the marine environment in the context of ocean warming, sea level rise and ocean acidification.

93. All the provisions referred to in the previous paragraph are concerned with three specific obligations that fall under the umbrella of the obligation to preserve and protect the marine

[77] Chagos Marine Protected Area Arbitration (Mauritius v. United Kingdom), Award, 18 March 2015, para. 538.
[78] The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China) (Merits), 2016, PCA-CPA, Case No 2013-19, para. 945.

environment, namely: (i) the adoption of measures for the preservation and protection of the marine environment, including its biodiversity, (ii) the duty of cooperation, including the necessary coordination, in the adoption of said measures, and (iii) the duty to cooperate in furthering the scientific knowledge that allows to adopt science-based measures for the protection and conservation of the marine environment.

94. With regard to the first specific obligation, namely, the obligation to adopt measures for the protection and preservation of the marine environment in the context of climate change impacts, the Convention has included specific provisions regarding the conservation of the living resources occurring in the various maritime zones regulated by the Convention. With regard to the territorial, the EEZ and the continental shelf, Article 193 recognizes that States have sovereign rights to exploit their natural resources pursuant to their environmental policies but it also makes clear that in exercising these rights, they need to comply with the duty to protect and preserve the marine environment which, as explained in *supra* paragraph 87, includes the living resources therein.

95. With regard to the high seas, Article 117 provides that States have the duty to adopt with respect to their nationals measures for the conservation of the living resources of the high seas. In its turn, Article 194(5) provides that States need to take measures to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.

96. In general, States are free to decide which measures to take in order to attain the objective of protecting and preserving the marine environment. Taking into consideration that the general duty of Article 192 and the specific obligations of Articles 117, 193 and 194(5) are due diligence obligations, States need to take adequate measures. This means that States have to pay due regard to the available scientific knowledge in order to be able to identify which measures are the most suitable for the purposes of protecting and preserving the marine environment.

97. Available scientific evidence indicates that in the context of ocean warming, sea level rise and ocean acidification, one particular measure that States shall consider is the creation of Marine Protected Areas (MPAs). The creation of marine protected areas (MPAs) by coastal

States or by international organizations is an area-based management approach that aims to mitigation and adaptation to the detrimental effects of climate change on the marine environment, focusing on nature-based solutions (NBS).[79] NBS "comprise attempts to recover, restore or conserve coastal and marine habitats to reduce the impacts of climate change on nature and society".[80]

98. MPAs have beneficial impacts on the marine environment from different points of view, including adaptation to the detrimental effects of climate change regarding acidification and sea-level rise. In this regard, the creation of MPAs "produce that seagrass increased mean local pH and that mangroves and macroalgae decreased it". Consequently, the "benefits to the adaptive potential of marine organisms could arise from exposure to greater pH fluctuations that occur in vegetated habitats, which has been shown to increase tolerance to acidification".[81]

99. On the other hand, MPAs "contribute to ecological adaptation by increasing biodiversity, reproductive output, and coastal protection compared with unprotected sites".[82] Thus, the coastal protection granted by MPAs results in a natural solution to face sea-level rise and the impact on small islands and areas of the mainland coastline.

100. With regard to sea-level rise, it is important to underline that this effect of climate change has prompted a debate about the need to draw new baselines and the problems associated with the ambulatory character of baselines. Chile supports the view that baselines drawn in accordance with the Convention and customary international law are permanent and cannot be affected by sea-level rise. The shift of baselines as a potential effect of sea level

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[79] "In the oceans, NbS comprise attempts to recover, restore or conserve coastal and marine habitats to reduce the impacts of climate change on nature and society", Cooley, S., D. Schoeman, L. Bopp, P. Boyd, S. Donner, D.Y. Ghebrehiwet, S.-I. Ito, W. Kiessling, P. Martinetto, E. Ojea, M.-F. Racault, B. Rost, and M. Skern-Mauritzen, 2022: Oceans and Coastal Ecosystems and Their Services. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 379–550, p. 486. doi:10.1017/9781009325844.005.

[80] Ibid., p. 486. "Nature-based solutions offer a wide range of potential benefits, including protecting ecosystem services, supporting biodiversity and mitigating climate change", Ibid.

[81] Jacquemont, J., Blasiak, R., Le Cam, C., Le Gouellec, M., Claudet, J. (2022). Ocean conservation boosts climate change mitigation and adaptation. One Earth 5: 1126-1138, at pp. 1127-1128. https://doi.org/10.1016/j.oneear.2022.09.002

[82] Ibid., p. 1128.

rise would seriously affect the area where the coastal States exercise their jurisdiction on the sea.[83] MPAs, insofar as they help to prevent sea-level rise, would contribute to reduce the problems associated to ambulatory baselines.

101. MPAs are created by States, individually or jointly with other States, to protect areas of their territorial sea, their exclusive economic zones or the high seas. By August 2021, almost 7.74% of the ocean was protected under some form of MPAs.[84] "These MPAs support adaptation by sustaining nearshore ecosystems that provide natural erosion barriers (...), ecosystem function (...), habitat, natural filtration, carbon storage, livelihoods and cultural opportunities (...), and help ecosystems and livelihoods recover after extreme events (...)".[85]

102. As regards the second specific obligations, namely, the duty of cooperation and coordination, Article 197 states that: "States shall cooperate on a global basis and, as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features." As stated by the Tribunal in the Mox Plant case, the duty to cooperate of Article 197 "is a fundamental principle in the prevention of pollution of the marine environment under Part XII of the Convention and general international law".[86]

103. It is interesting to observe that the duty to cooperate of Article 197 applies to all maritime zones. Therefore, this obligation is also applicable in areas where States hold sovereign rights with regard to the living resources, that is to say, the territorial sea, the EEZ and the continental shelf.

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[83] See: Sea-level rise in relation to international law. Additional paper to the first issues paper (2020), by Bogdan Aurescu and Nilüfer Oral, Co-Chairs of the Study Group on sea-level rise in relation to international law. International Law Commission. A/CN.4/761. 13 February 2023.
[84] Ibid., p. 481.
[85] Ibid., pp. 481-482.
[86] MOX Plant (Ireland v. United Kingdom) Provisional Measures, Order of 3 December 2001, ITLOS Reports 2001, para. 82. See also: The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China) (Merits), 2016, PCA-CPA, Case No 2013-19, para. 946.

104. With regard to the high seas, the adoption of measures to protect and preserve the marine environment requires cooperation and coordination between States. As regards the creation of MPAs on the high seas, only 1.18% of the ocean is under the protection of MPAs in areas beyond national jurisdiction (ABNJ).[87]

105. Cooperation between States should go hand in hand with coordination. As stated by the IPCC: "MPAs and other marine spatial-planning tools have great potential to address climate-change mitigation and adaptation in ocean and coastal ecosystems, if they are designed and implemented in a coordinated way that takes into account ecosystem vulnerability and responses to projected climate conditions, considers existing and future ecosystem uses and non-climate drivers, and supports effective governance".[88]

106. Cooperation is also required in relation to enclose and semi-enclosed seas. In this regard, Article 123 prescribes that States have an obligation States to "cooperate with each other in the exercise of their rights and in the performance of their duties under this Convention". And Article 123(a) adds that to this end they shall endeavor, directly or through an appropriate regional organization: (a) to coordinate the management, conservation, exploration and exploitation of the living resources of the sea and (b) to coordinate the implementation of their rights and duties with respect to the protection and preservation of the marine environment.

107. The duty of cooperation established in Article 123, read in conjunction with Article 197, should also be interpreted as requiring States to consider the creation of MPAs.

108. In its turn, Article 237 of the Convention should also be taken into account in the field of cooperation, when identifying suitable measures to protect and preserve the marine environment. This provision recognizes that the Convention contains principles that are

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[87] Ibid., p. 482.

[88] Cooley, S., D. Schoeman, L. Bopp, P. Boyd, S. Donner, D.Y. Ghebrehiwet, S.-I. Ito, W. Kiessling, P. Martinetto, E. Ojea, M.-F. Racault, B. Rost, and M. Skern-Mauritzen, 2022: Oceans and Coastal Ecosystems and Their Services. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 379–550, p. 486, at p. 483. doi:10.1017/9781009325844.005.

and will be further developed in other international agreements. In this regard, the Convention on Biodiversity (CBD) is an important treaty that has to be taken into consideration by State Parties in their efforts to protect and preserve the marine environment, including the living resources. Article 5 of the CBD reads as follows:
"Each Contracting Party shall, as far as possible and as appropriate, cooperate with other Contracting Parties, directly or, where appropriate, through competent international organizations, in respect of areas beyond national jurisdiction and on other matters of mutual interest, for the conservation and sustainable use of biological diversity". As regard protected areas, Article 8 of the CBD provides that States shall, as far as possible and as appropriate, "establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity".

109. Other international agreements that should also be taken into account are the OSPAR Convention, the Antarctic Treaty, the Convention on the Conservation of Antarctic Marine Living Resources and the Protocol on Environmental Protection to the Antarctic Treaty, all of which call States to establish forms of cooperation in the preservation and protection of the marine environment. It is interesting to underline that these treaties focus on the characteristic regional features, as required by Article 197 of the Convention.

110. Chile would also like to highlight the importance of the recent completion of the negotiation of the text of the Draft BBNJ Treaty.[89] This new instrument, negotiated under the umbrella of the Convention, contains different tools for area-based management including MPAs in areas beyond national jurisdiction. In addition, the Draft BBNJ Treaty includes provisions regarding cooperation and capacity-building and the transfer of marine technology. Therefore, the Draft BBNJ Treaty is a particularly important agreement to foster cooperation in the field of adaptation, so that States will be able to develop more effective measures to adjust to the deleterious effects of climate change on the marine environment.

111. As regards cooperation and coordination in the adoption of measures to protect and preserve the marine environment, States should also comply with Article 203 of the

[89] Text of the Draft BBNJ Treaty as approved on 4 March 2023: A/CONF.232/2023/CRP.2/Rev.2.

Convention which states that "Developing 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". Minimization of deleterious effects on the marine environment shall be understood as including ocean warming, sea level rise and ocean acidification. This is an important provision as it enables developing countries to take measures for the protection and preservation of the marine environment by obtaining cooperation from other countries in the form of the allocation of funds, technical assistance and the utilization of specialized services through international organizations, thus helping developing States to apply adaptation measures to respond to the deleterious effects of climate change.

112. As regards the third specific obligation, namely, the duty to cooperate in furthering the scientific knowledge that enables States to adopt science-based measures for the protection and preservation of the marine environment, Article 204(1) prescribes that "States shall, endeavour, as far as practicable, directly or through the competent international organizations, to observe, measure, evaluate and analyse, by recognized scientific methods, the risks or effects of pollution of the marine environment".

113. In its turn, Article 205 states that the reports resulting from Article 204 regarding the monitoring of the risk or the effects of pollution must be published and made available to all States. This specific obligation in the field of scientific cooperation is very important insofar as it allows States to develop adaptation measures in the context of the detrimental effects of climate change.

114. Article 123 (c) is also a pertinent provision to take into account as regards the particular situation of enclosed and semi enclosed seas in relation to the obligation to cooperate in furthering scientific knowledge. This provision prescribes that States bordering an enclosed or semi-enclosed sea should endeavour, directly or through an appropriate regional organization, "to coordinate their scientific research policies and undertake where appropriate joint programmes of scientific research in the area".

V. Conclusions

115. Chile considers that, in accordance with Article 21 of the Statute of the Tribunal and Article 138 of the Rules of Procedure, COSIS may request an advisory opinion from the Tribunal, and the Tribunal should exercise its advisory jurisdiction in this case.

116. Chile reaffirms that the existence of the deleterious effects of climate change on the marine environment is undeniable, a conclusion that is sustained on evidence that has been endorsed by the international scientific community and by States themselves, demonstrating that a global consensus on this matter has been reached.

117. The first question posed to the Tribunal is:

"What are the specific obligations of State 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?"

118. With regard to the first question (question a) posed to the Tribunal, Chile considers that, in the light of the general obligations established in Articles 192, 194, 207 and 212 of the Convention, the specific obligations of State Parties to the Convention are:

(1) State Parties have the specific due diligence obligation to reduce GHGs emissions, in order to prevent, reduce and control ocean warming, ocean acidification and sea level rise.

(2) In the case of ocean acidification, insofar as this deleterious effect is to a great extent the result of CO_2 being captured by the ocean, the specific due diligence obligation is to reduce the emissions of a particular GHG: carbon dioxide.

(3) In order to attain the reduction of GHGs emissions, State Parties need to adopt measures, that is to say, to enact laws and regulations envisaged to reduce their GHGs emissions.

(4) In adopting these laws and regulations State Parties shall take into account internationally agreed rules, standards and recommended practices and procedures, as those contained in the UNFCCC, the Paris Agreement and other pertinent international agreements. In this connection, the laws and regulations adopted by State Parties to the Convention should lead to a progressive reduction in GHGs emissions reflecting the highest possible ambition for each State, taking into account the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.

(5) In adopting these laws and regulations State Parties shall take into account the availability of scientific knowledge as it progresses in time and measures they enact shall be adequate to respond to environmental threats that science is progressively able to demonstrate and explain.

(6) State Parties have the duty to cooperate in formulating and elaborating international rules, standards and recommended practices and procedures for the reduction of GHGs emissions.

119. The second question posed to the Tribunal is:

"What are the specific obligations of State Parties to the United Nations Convention on the Law of the Sea (the "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?"

120. With regard to the second question (question b) posed to the Tribunal, in the light of the obligations established in Articles 117,123,192, 193, 194, 197, 203, 204, and 237, Chile considers that the specific obligations of State Parties to the Convention are:

(1) The obligation to adopt measures for the protection and preservation of the marine environment, including its biodiversity, in the context of climate change impacts, which include measures to protect and preserve the living resources existing in all maritime areas under coastal States sovereign rights and jurisdiction.

(2) The obligation to adopt with respect of their nationals, measures for the protection and preservation of the living resources occurring in the high seas, including measures to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life.

(3) The obligation to consider the creation of Marine Protected Areas.

(4) The obligation to cooperate on a global basis and, as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating rules, standards and recommended practices and procedures for the protection of the marine environment in a context of already existing climate change effects and with reference to all maritime areas.

(5) The duty to cooperate, including the necessary coordination, in the adoption of measures to protect and preserve the marine environment in the context of climate change impacts. This duty includes the obligation to take other international agreements into account, such as the Convention on Biodiversity, OSPAR Convention, the Antarctic Treaty and its Protocol on Environmental Protection, and CCAMLR when identifying suitable measures to protect and preserve the marine environment.

(6) The duty to grant preference, in the context of international organizations, to developing States in the minimization of the deleterious effects of climate change.

(7) The duty to cooperate in furthering scientific knowledge that enables States to adopt science-based measures for the protection and preservation of the marine environment, including the observation, measurement, evaluation and analysis by recognized scientific methods of the risks or effects of pollution of the marine environment in the context of the deleterious effects of climate change.

SANTIAGO, 16 June 2023

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