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
UNITED KINGDOM

16 JUNE 2023

WRITTEN STATEMENT OF THE UNITED KINGDOM

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INTRODUCTION

1. On 12 December 2022, the Co-Chairs of the Commission of Small Island States on Climate Change and International Law ('**the Commission**' or '**COSIS**') transmitted a request ('**the Request**') for an advisory opinion from the International Tribunal for the Law of the Sea ('**ITLOS**' or '**the Tribunal**').[1] The questions submitted to ITLOS ('**the Questions**') read as follows:[2]

> "What are the specific obligations of State Parties to the United Nations Convention on the Law of the Sea ('**UNCLOS**'), including under Part XII:
>
> (a) to prevent, reduce and control pollution of the marine environment in relation to the deleterious effects that result or are likely to result from climate change, including through ocean warming and sea level rise, and ocean acidification, which are caused by anthropogenic greenhouse gas emissions into the atmosphere?
>
> (b) to protect and preserve the marine environment in relation to climate change impacts, including ocean warming and sea level rise, and ocean acidification?"

2. By Order dated 16 December 2022, the President of ITLOS invited the States Parties to UNCLOS to present written statements on the Questions.[3] By Order dated 15 February 2023, the time limit for the submission of written statements was extended to 16 June 2023.[4] Pursuant to these Orders, the United Kingdom submits this written statement.

3. Before outlining the structure of this written statement (see para. 12 below), the United Kingdom makes five important preliminary observations.

4. **First**, the United Kingdom recognises that climate change[5] caused by anthropogenic[6] greenhouse gas emissions is one of the defining challenges of our time and that the urgency with which it needs to be addressed is only becoming greater.[7] The United Kingdom further recognises the particular impact of such climate change, and of ocean

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[1] https://www.itlos.org/fileadmin/itlos/documents/cases/31/Request_for_Advisory_Opinion_COSIS_12.12.22.pdf The Request was transmitted pursuant to Article 2 of the Agreement for the establishment of the Commission of Small Island States on Climate Change and International Law (entry into force 31 October 2021) ('**the COSIS Agreement**').

[2] The Questions are set out at p. 2 of the Request. The use of bold text for 'UNCLOS' has been added here.

[3] Order 2022/4: https://www.itlos.org/fileadmin/itlos/documents/cases/31/C31_Order_2022-4_16.12.2022.pdf. The invitation was also made to COSIS and other intergovernmental organisations listed in the annex to that Order.

[4] Order 2023/1:

https://www.itlos.org/fileadmin/itlos/documents/cases/31/C31_Order_2023-1_15.02.2023_Readable.pdf

[5] As to the definition of climate change, see para. 27.a below.

[6] I.e., resulting from or produced by human activities.

[7] See by way of recent example the Statement of the United Kingdom dated 2 March 2023 before the Organization for Security and Co-operation in Europe: https://www.gov.uk/government/speeches/osce-report-on-climate-and-security-uk-statement-march-2023. See also the UK Export Finance Climate Change Strategy 2021-2024: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1019141/UKEF_Climate_Change_Strategy_2021.pdf.

acidification,[8] on the marine environment.[9] This is reflected in the United Kingdom's various commitments to protect and preserve the marine environment in this regard.[10] This includes a commitment to ratify the Draft Agreement under UNCLOS on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction ('**the BBNJ Agreement**') as soon as possible and to work with global partners to ensure it is implemented quickly and effectively.[11] The BBNJ Agreement has not yet been adopted,[12] and is not yet open for signature.

5. **Second**, the United Kingdom has strong bonds of friendship with Small Island Developing States ('**SIDS**'), including through the Commonwealth. SIDS are steward to nearly one-third of the global ocean. The United Kingdom recognises that SIDS are facing and are expected to face some of the worst impacts of global climate change, as reflected in the UK Small Island Developing States Strategy 2022-2026.[13]

6. **Third**, the United Kingdom notes that the Commission has transmitted a "dossier of documents that the Commission considers likely to throw light upon the question that it referred to the Tribunal on 12 December 2022", which comprises *inter alia* a selection of Reports of the Intergovernmental Panel on Climate Change ('**the IPCC**').[14] The United Kingdom recognises the authority of the current IPCC reports as reflecting best available science in the context of climate change and its effects on the marine environment.

7. **Fourth**, in the context of climate change, the United Kingdom emphasises the primary importance of the specialised climate treaty regime, particularly the United Nations

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[8] As to the definition of ocean acidification, see para. 27.b below.

[9] As to the definition of the marine environment, see para. 37 below. See further para. 41 below.

It is noted, for example, that it is virtually certain the global ocean has warmed unabated since 1970 and has absorbed more than 90% of the excess heat in the climate system: IPCC, 2019: Summary for Policymakers in *IPCC Special Report on the Ocean and the Cryosphere in a Changing Climate* ('**IPCC, 2019: Summary for Policymakers**'), para. A.2.

[10] See for example the United Kingdom's actions during the UK Presidency of COP26: https://www.gov.uk/government/news/cop26-government-leads-on-ocean-action-day; https://ukcop26.org/wp-content/uploads/2022/11/COP26-Presidency-Outcomes.pdf. See also Goal 7 of the UK Environment Improvement Plan 2023:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1133967/environmental-improvement-plan-2023.pdf; the UK Marine Strategy Part One (October 2019), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/921262/marine-strategy-part1-october19.pdf. ('**UK Marine Strategy**'), p 12, §1.1.

[11] See the response of Foreign, Commonwealth and Development Office on 24 March 2023 to question UIN 167094 tabled 16 March 2023: https://questions-statements.parliament.uk/written-questions/detail/2023-03-16/167094.

[12] The resumed fifth session of the intergovernmental conference is currently scheduled for 19-20 June 2023: see UN Docs. A/77/L.62 and A/CONF.232/2023/L.4.

[13] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1136259/SIDS-strategy-update-2022.pdf.

[14] https://www.itlos.org/en/main/cases/list-of-cases/request-for-an-advisory-opinion-submitted-by-the-commission-of-small-island-states-on-climate-change-and-international-law-request-for-advisory-opinion-submitted-to-the-tribunal/dossier-submitted-by-the-commission-of-small-island-states-on-climate-change-and-international-law/

Framework Convention on Climate Change ('**the UNFCCC**'), the Kyoto Protocol to that Convention and the Paris Agreement. Pursuant to these three treaties, the States Parties to each treaty meet annually at the relevant Conference of the Parties (each representing the supreme decision-making body for that treaty)[15] and have adopted more than 763 formal decisions aimed at implementing the UNFCCC, the Kyoto Protocol and the Paris Agreement.[16] Each of these climate treaties and implementing decisions is (and the decisions will continue to be) the product of protracted negotiations and careful compromise between States. Accordingly, it is of paramount importance that the Tribunal pays particularly careful regard to the scope of its judicial function[17] (as discussed below) and recognises that its role in respect of UNCLOS is in this case to be performed fully conscious of the broader context of the global climate change regime and the delicate balances inherent in it.

8. **Fifth**, the United Kingdom reiterates its commitment to UNCLOS, which is a fundamental component of the global legal order. As a framework Convention, UNCLOS facilitates the development of more detailed regulation and guidance by States (including by acting through relevant international bodies) on specific issues pertaining to the law of the sea. UNCLOS also allows for the application of its terms to modern circumstances, in accordance with a good faith interpretation of those terms.

9. **Sixth,** against the backdrop of the previous five observations, these proceedings provide a significant opportunity for ITLOS to provide meaningful guidance as to **(i)** the approach to be taken in formulating requests for advisory opinions under UNCLOS and **(ii)** the approach of States to their obligations under UNCLOS to take affirmative steps to protect and preserve the marine environment in light of challenges posed by anthropogenic climate change and ocean acidification to the marine environment in the four decades since UNCLOS was concluded.

10. As to **(i)**, the Request has been framed in broad terms, creating (a) challenges for States seeking to engage meaningfully on what is a vitally important issue and (b) a challenge for ITLOS, which (as the Tribunal has itself previously emphasised) must not stray beyond the scope of its judicial function,[18] a function which includes stating and applying the existing law, but not adopting a legislative role, including on matters that States have chosen not to regulate by law in treaties on the relevant subject matter. ITLOS may thus consider it appropriate to refine the question put to it, or focus only on certain aspects of it, including by way of identification of particularised issues on which further submissions could be made. This point is elaborated on in Chapter 1 below.

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[15] The Parties meet in three settings: the Conference of the Parties ('**COP**'), the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol ('**CMP'**) and the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement ('**CMA'**): see UN, 'What are governing, process management, subsidiary, constituted and concluded Bodies?', https://unfccc.int/process-and-meetings/what-are-governing-process-management-subsidiary-constituted-and-concluded-bodies.

[16] As of the end of 2019: see UN, 'The Global Negotiation Process', https://unfccc.int/about-us/unfccc-archives/the-unfccc-archival-exhibition/the-global-negotiation-process.

[17] See *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015,* p. 4 ('***SRFC* Advisory Opinion**'), paras. 73-74. See further para. 24 below.

[18] *Ibid*.

11. As to **(ii)**, in the circumstances, the United Kingdom does not address each and every obligation that may be considered as coming within the terms of the Request. Furthermore, whilst the Questions in principle extend beyond Part XII of UNCLOS (by use of the phrase "*including* under Part XII", emphasis added), for the purposes of this statement, the United Kingdom confines itself to Part XII and definitional provisions relevant to it.

12. This written statement is accordingly structured as follows.

    a. **Chapter 1** sets out the United Kingdom's observations with respect to jurisdiction and the Tribunal's exercise of its discretion in respect of the Questions. The United Kingdom does not contend in this case that ITLOS lacks jurisdiction or that it should decline to exercise jurisdiction but, as indicated at paras 9-10 above, the United Kingdom does consider that there are matters of jurisdiction and discretion arising in this case calling for the very careful attention of ITLOS. The observations set out below are advanced by the United Kingdom with a view to assisting ITLOS in these respects.

    b. **Chapter 2** sets out the United Kingdom's position that climate change (including ocean warming and sea level rise) and ocean acidification, which are caused by anthropogenic greenhouse gas emissions into the atmosphere, fall within the scope of Part XII of UNCLOS.

    c. **Chapter 3** identifies the aspects of the Part XII regime that are engaged in respect of climate change and ocean acidification, and then sets out a series of considerations that the United Kingdom submits are of particular importance in applying the relevant obligations contained in Part XII.

    d. This written statement ends with a brief **conclusion**.

CHAPTER 1

JURISDICTION AND DISCRETION

13. Before turning to the substance of the Questions, the Tribunal must first consider **(i)** whether it has jurisdiction to give the advisory opinion requested by the Commission and **(ii)** if so, how it should exercise its discretion as to whether to give an advisory opinion, and as to the scope of any such advisory opinion.[19]

14. As noted in the Introduction, these two issues require careful consideration by ITLOS. Maintaining the integrity of the 'gates' to an international tribunal is critical to maintaining the integrity of that tribunal's standing more generally, including with respect to any pronouncements it may make on matters of vital importance.[20] ITLOS is accordingly urged to have careful regard to the scope and exercise of its jurisdiction, having in mind both the present request and the desirability of providing appropriate guidance as regards any future requests that may be made to it.

15. As to jurisdiction, the United Kingdom makes two observations:

    a. **First**, in the *SRFC* advisory proceedings[21] the United Kingdom set out its position that ITLOS does not have advisory jurisdiction. The United Kingdom observed that UNCLOS makes no reference to the Tribunal having any advisory jurisdiction (in contrast to the Seabed Disputes Chamber[22]) and addressed in detail why it considered that Article 21 of the ITLOS Statute could not confer such jurisdiction.[23] The United Kingdom recognises, however, that in that case, ITLOS found that it did have advisory jurisdiction.[24] The United Kingdom further notes that the President of ITLOS recently referred to the Tribunal's advisory jurisdiction in general terms before the United Nations ("**UN**") General Assembly.[25]

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[19] ITLOS Rules, Article 138(1) provides: "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" (emphasis added). Based on equivalent wording in the Statute of the International Court of Justice ('**ICJ**'), the ICJ has affirmed the "duty to satisfy itself, each time it is seised of a request for an opinion, as to the propriety of the exercise of its judicial function" (*Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, I.C.J. Reports 2004,* p.136 ('***Legal Consequences of the Construction of a Wall***'), para. 45. See also *Legal Consequences of the Separation of the Chagos Archipelago from Mauritius in 1965*, *Advisory Opinion, I.C.J. Reports 2019*, p. 95 ('***Legal Consequences of the Separation of the Chagos Archipelago from Mauritius***'), paras. 54 and 66).

[20] Cf *Application of the International Convention on the Elimination of All Forms of Racial Discrimination (Armenia v. Azerbaijan)*, *Provisional Measures, Dissenting Opinion of Judge Yusuf*, *I.C.J. Reports 2021,* p. 395, para. 1.

[21] *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC) (Request for Advisory Opinion submitted to the Tribunal)* (**'the SRFC proceedings'**). The *SRFC* Advisory Opinion was issued on 2 April 2015.

[22] See UNCLOS, Article 191.

[23] See the Written Statement of the United Kingdom dated 28 November 2013 (Section I) and the second Written Statement of the United Kingdom dated 5 March 2014 (paras. 4-7).

[24] *SRFC* Advisory Opinion, Operative Clause, para. 1.

[25] Speech of H.E. Judge Albert Hoffmann, 8 December 2022 (p. 4):

b. **Second**, the United Kingdom notes that Article 2(2) of the COSIS Agreement does not expressly 'confer jurisdiction' on ITLOS, as required by Article 21 of the ITLOS Statute.[26] Rather, it authorises the Commission to request an advisory opinion from ITLOS.[27] The United Kingdom recognises, however, that similar wording was contained in the agreement under consideration in the *SRFC* proceedings on which the Tribunal considered it could base its jurisdiction, together with Article 21 of the ITLOS Statute.[28]

16. In light of these two observations, ITLOS is respectfully invited to clarify its reasoning with respect to the basis of its advisory jurisdiction in these proceedings.

17. Turning to discretion, the United Kingdom addresses two aspects of the present Request.

18. The first is that a very small number of States – only two in the first instance[29] – have created an international organisation on which they have conferred a power to request advisory opinions that focus on the obligations of States **(i)** *not* party to the Request and **(ii)** that had no opportunity to be involved in the framing of the Request or the decision to make it at all, for example through a multilateral process.[30] Whilst any advisory opinion that may be issued by ITLOS would not be legally binding,[31] it would nonetheless have implications for all UNCLOS State Parties.

19. It is of course well-established that the consent of States is fundamental to the jurisdiction of international courts and tribunals.[32] Yet in the present proceedings neither the United Kingdom nor any other State not party to the COSIS Agreement has directly, or even indirectly through any process envisaged by UNCLOS, consented to any aspect of a request which plainly focuses on the obligations of all States Parties to UNCLOS.[33] In

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https://www.itlos.org/fileadmin/itlos/documents/statements_of_president/hoffmann/Statement_Hoffmann_UNGA_UNCLOS40_20221208_EN.pdf. It is also observed that Article 48(6) of the BBNJ Agreement is drafted on the basis that ITLOS has advisory jurisdiction ("The Conference of the Parties may decide to request the International Tribunal for the Law of the Sea to give an advisory opinion on a legal question on the conformity with this Agreement of a proposal before the Conference of the Parties on any matter within its competence. ...").

[26] Article 21 provides: "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*" (emphasis added).

[27] Article 2(2) provides: "…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 ITLOS Statute and Article 138 of its Rules" (emphasis added).

[28] See *SRFC* Advisory Opinion, para. 2 and Operative Clause, para. 1.

[29] The COSIS Agreement entered into force with the signatures of Antigua and Barbuda and Tuvalu on 31 October 2021 (see Article 4(2) providing that "[t]his Agreement shall enter into force upon signature by two or more States"). Membership of COSIS now also includes Palau, Niue, Vanuatu and St Lucia.

[30] This is in stark contrast to the procedure in place with respect to advisory proceedings before the ICJ: see UN Charter, Article 96; ICJ Statute, Article 65.

[31] As noted in the *SRFC* Advisory Opinion, para. 76 and the Declaration of Judge Cot, p. 73, para. 11.

[32] *Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, p. 12 ('***Western Sahara***'), para. 33.

[33] For the avoidance of doubt, the Tribunal is of course not asked to – and could not in any event – consider whether any particular State is in compliance with its obligations under UNCLOS (or any other international agreed rules, notably the Paris Agreement).

the *SRFC* proceedings, the requesting international organisation (SRFC) was a regional fisheries commission of a kind expressly referred to in UNCLOS.[34] It sought an advisory opinion related to its functions, as also described in UNCLOS.[35] In this case, the international organisation (COSIS) is of a kind not referred to in UNCLOS. Its creation and purposes were not the subject of consultation among the States Parties to UNCLOS or pursuant to the terms of UNCLOS, yet prominent among its purposes is the seeking of advisory opinions concerning the obligations of States Parties to UNCLOS.

20. Accordingly, it is important that ITLOS has careful regard to the appropriate parameters of the exercise of its discretion.[36] As to those parameters, the United Kingdom notes the following factors:

    a. The importance of the good faith exercise of rights and jurisdiction by States Parties, as reflected in Article 300 of UNCLOS. No difficulty arises from this factor in the present case.

    b. The importance of a request relating to the specific activities of the organisation that has made the referral.[37]

    c. Regarding an international agreement that specifically provides for the submission to ITLOS of a request for an advisory opinion, the importance of that agreement relating to the purposes of UNCLOS.[38]

    d. The importance of a request comprising a legal question that concerns the interpretation or application of UNCLOS or of an international agreement related to the purposes of UNCLOS.

    e. The importance of a request comprising a legal question that is framed in specific terms so as to allow ITLOS to provide an answer compatible with its judicial function, rather than inviting it to embark on an exercise of judicial legislation or policy-making.[39]

21. That final factor (the specificity of a request) brings the United Kingdom to the second aspect of the Request which it considers merits particular comment.

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[34] UNCLOS, Article 118.

[35] *Ibid*.

[36] Cf Declaration of Judge Cot in the *SRFC* Advisory Opinion, proposing that the Tribunal "provide a procedural framework" and establish "a coherent system" (paras. 9 and 13).

[37] See ITLOS Rules, Article 131(1) referring to the "legal question arising *within the scope of the activities* of" the relevant organisation (noting Article 138(3) of the Rules requires the Tribunal to apply *mutatis mutandis* Articles 130 to 137 of the Rules). See also the importance of the "principle of speciality" highlighted by the ICJ in *Legality of the Use by a State of Nuclear Weapons in Armed Conflict, Advisory Opinion, I.C.J. Reports 1996* p. 66, para. 25 ("International organizations are governed by the "principle of speciality", that is to say, they are invested by the States which create them with powers, the limits of which are a function of the common interests whose promotion those States entrust to them").

[38] ITLOS Rules, Article 138(1) provides: "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" (emphasis added).

[39] See addressed at para. 24 below.

22. The United Kingdom accepts that the Request constitutes a "legal question",[40] and recognises that a legal question may be "abstract".[41] The Questions, however, are framed in broad terms (as noted above in the Introduction).

23. They purport to address **(i)** *all* obligations, not only under Part XII but also under UNCLOS more generally[42] **(ii)** relevant to "climate change" and "ocean acidification", noting that the Questions (a) are not limited to any particular aspects of climate change and ocean acidification,[43] and (b) are not framed with respect to any particular sources or incidents of anthropogenic greenhouse gas emissions, but with respect to such emissions into the atmosphere generally.

24. The ITLOS Rules expressly require that there be a "precise statement of the question".[44] Implicit in that requirement is that there is sufficient precision as to the issue(s) to be addressed by the Tribunal. Similarly, as to ITLOS's observation that the request be "clear enough to enable it to deliver an advisory opinion",[45] it is implicit (and in any event must be the case) that the scope of a question must not go beyond what could feasibly be addressed in an advisory opinion. ITLOS has confirmed that it must not stray beyond the scope of its judicial functions,[46] a function which extends to stating and applying the existing law but not to adopting a legislative role.

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[40] ITLOS Rules, Article 138 (1) provides: "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" (emphasis added). See *Responsibilities and obligations of States with respect to activities in the Area, Advisory Opinion, 1 February 2011, ITLOS Reports 2011*, p. 10 ('***Activities in the Area*, Advisory Opinion**'), at para. 39: "The questions put to the Chamber concern the interpretation of provisions of the Convention and raise issues of general international law. The Chamber recalls that the International Court of Justice (hereinafter "the ICJ") has stated that "questions 'framed in terms of law and rais[ing] problems of international law . . . are by their very nature susceptible of a reply based on law'"", referring to *Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, Advisory Opinion, I.C.J. Reports 2010*, p. 403, para. 25; *Western Sahara,* para. 15).

[41] *SRFC* Advisory Opinion, para. 72 citing *Admission of a State to the United Nations (Charter, Art. 4), Advisory Opinion: I.C.J. Reports 1948,* p. 57, at p. 61.

[42] The question asks: "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…" (emphasis added).

[43] The question refers to climate change "*including* through ocean warming and sea level rise" and ocean acidification (emphasis added).

[44] Article 138(3) of the ITLOS Rules requires the Tribunal to apply *mutatis mutandis* Articles 130 to 137 of the Rules. Article 131(1) of the ITLOS Rules provides that a request for an advisory opinion "shall contain a precise statement of the question".

[45] *SRFC* Advisory Opinion, para. 72.

[46] See *SRFC* Advisory Opinion, paras. 73-74: "73. It has also been contended that, while the four questions may be couched as legal questions, what the SRFC actually seeks is not answers *lex lata*, but *lex ferenda* and that is outside the functions of the Tribunal as a judicial body. 74. The Tribunal does not consider that, in submitting this Request, the SRFC is seeking a legislative role for the Tribunal. The Tribunal also wishes to make it clear that it does not take a position on issues beyond the scope of its judicial functions." See also *Judgment No. 2867 of the Administrative Tribunal of the International Labour Organization upon a Complaint Filed against the International Fund for Agricultural Development*, *Advisory Opinion, I.C.J. Reports 2012*, p. 10, para. 34 ("The Court and its predecessor have emphasized that, in their advisory jurisdiction, they must maintain their integrity as judicial bodies"); *Frontier Dispute (Burkina Faso/Niger), Judgment, I.C.J. Reports 2013*, p. 44, para. 45 citing *Northern Cameroons (Cameroon* v. *United Kingdom), Preliminary Objections, Judgment, I.C.J. Reports 1963*, p. 15 at p. 29 "…even if the Court, when seised, finds that it has jurisdiction, the Court is not compelled in every

25. Accordingly:

a. On a general level, ITLOS may consider it useful to provide guidance on the critical importance of questions posed to it in advisory proceedings being sufficiently specific.

b. As to these proceedings, ITLOS may seek to refine the Questions put to it, or focus only on certain aspects of those Questions,[47] including by way of identification of particularised issues on which further submissions could be made.[48] The position of the United Kingdom is that:

i. ITLOS should limit itself to Part XII and definitional provisions related to it, and

ii. consistently with the following Chapter of this statement, that ITLOS should focus on:

A. establishing that issues of anthropogenic climate change and ocean acidification come within the scope of Part XII of UNCLOS; and

B. providing guidance on considerations generally applicable across Part XII, with reference to specific articles where illustrative, rather than seeking to opine on the interpretation and application of each article specifically.

case to exercise that jurisdiction. There are inherent limitations on the exercise of the judicial function which the Court, as a court of justice, can never ignore. There may thus be an incompatibility between the desires of an applicant, or, indeed, of both parties to a case, on the one hand, and on the other hand the duty of the Court to maintain its judicial character. The Court itself, and not the parties, must be the guardian of the Court's judicial integrity."

[47] As noted by the ICJ with respect to "lack of clarity in the drafting of a question", "such uncertainty will require clarification in interpretation" (*Legal Consequences of the Construction of a Wall*, para. 38. See also *Legal Consequences of the Separation of the Chagos Archipelago from Mauritius in 1965*, paras. 61 and 135).

[48] States should of course be given a reasonable time to respond in this regard, consistent with the practice in inter-State proceedings, including if this is by way of written issues circulated by ITLOS in advance of the hearing on which it would particularly welcome oral submissions from States.

CHAPTER 2

CLIMATE CHANGE AND OCEAN ACIDIFICATION FALL WITHIN PART XII OF UNCLOS

I. Introduction

26. This Chapter addresses whether climate change and ocean acidification caused by the introduction of anthropogenic greenhouse gas emissions[49] into the atmosphere fall within Part XII of UNCLOS.

27. Climate change and ocean acidification are not defined in the Request. For the purpose of this written statement, the United Kingdom refers to the definitions of climate change and ocean acidification adopted by the IPCC and accordingly notes that:[50]

    a. Climate change refers to a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer.

    b. Ocean acidification refers to a reduction in the pH of the ocean, accompanied by other chemical changes (primarily in the levels of carbonate and bicarbonate ions), over an extended period, typically decades or longer, which is caused primarily by uptake of carbon dioxide (CO_2) from the atmosphere.

28. Climate change and ocean acidification were not expressly addressed in UNCLOS, or 'on the agenda' during its drafting. However, as stated above, UNCLOS is a framework convention, which can be applied to meet subsequent challenges such as these, on the basis of good faith interpretation of its terms under the well-established rules of treaty interpretation.[51]

29. Part XII of UNCLOS is where the principal relevant obligations are contained.[52] It is entitled "Protection and Preservation of the Marine Environment". Its provisions focus primarily on measures to prevent, reduce and control pollution of the marine environment (e.g., Article 194(1)). However, there are specific provisions that address protection and

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[49] "Anthropogenic greenhouse gas emissions" in this statement refers to emissions of greenhouse gases caused by human activities, and "greenhouse gases" refers to gaseous constituents of the atmosphere that absorb and emit radiation at specific wavelengths within the spectrum of radiation emitted by the Earth's ocean and land surface, by the atmosphere itself, and by clouds: IPCC, 2019: Annex I: Glossary in *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate*, pp. 677-702 ('**IPCC, 2019: Glossary**') at pp. 679 and 687.

[50] IPCC, 2019: Glossary, pp. 681 and 693. It is noted that further detail is included in the definitions set out in this Glossary.

[51] Articles 31-32, Vienna Convention on the Law of Treaties, signed at Vienna on 23 May 1969 (entry into force 27 January 1980), 1155 UNTS 331 ('**Vienna Convention**'). These Articles reflect customary international law: see, e.g., *Kasikili/Sedudu Island (Botswana/Namibia), Judgment, I.C.J. Reports 1999*, p. 1045, para. 18*; Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia and Herzegovina v. Serbia and Montenegro), Judgment, I.C.J. Reports 2007*, p. 43 ('***Kasikili/Sedudu Island***'), para. 160. See also *Territorial Dispute (Libyan Arab Jamahiriya/Chad), Judgment, I.C.J. Reports 1994*, p. 6 ('***Territorial Dispute***'), para. 41.

[52] As stated above (see para. 11 above), the scope of the Request in principle extends beyond Part XII (by use of the phrase "*including* under Part XII", emphasis added), but for the purposes of this statement, the United Kingdom focuses on Part XII of UNCLOS and definitional provisions relevant to it.

preservation of the marine environment more generally, beyond pollution (most notably Articles 192 and 194(5), see further paras. 46-52 and 55 below).

30. Against that background, the starting point in determining the extent to which Part XII is engaged is assessing whether climate change and ocean acidification caused by the introduction of anthropogenic greenhouse gas emissions into the atmosphere constitute "pollution of the marine environment" within the meaning of Article 1(1)(4) of UNCLOS. For the reasons set out below, the position of the United Kingdom is that they do.

II. Pollution of the marine environment

31. Article 1 is located in Part I of UNCLOS and is entitled "Use of terms and scope". Article 1(1)(4) provides:

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

32. Article 1(1)(4) is comprised of three elements: **(i)** there must be a "substance" or "energy", **(ii)** it must be introduced by man, directly or indirectly, into the "marine environment"; and **(iii)** such introduction must result in, or be likely to result in, "deleterious effects" such as those set out in Article 1(1)(4). Each of these elements is considered in turn below.

33. **First**, interpreted in good faith in accordance with the ordinary meaning of its terms,[53] Article 1(1)(4) includes within its scope greenhouse gases (each such gas being a "substance"[54]) and heat ("energy"[55]). That Article 1(1)(4) includes greenhouse gases and heat is consistent with:

    a. The context of Article 1(1)(4), including Article 194(1) and (3), which refer to "any source" of pollution and "all sources" of pollution, respectively.

[53] See Vienna Convention, Article 31(1) (reflecting customary international law, as noted above).

[54] The ordinary meaning of "substance" ("substance" in French) is: "[a] kind of matter of a definite chemical composition, as a compound or element" (Oxford English Dictionary); "matter of particular or definite chemical constitution" (Merriam Webster); "[i]l se dit, en termes de Sciences et dans le langage ordinaire, de Toute sorte de matière" (*Dictionnaire de l'Académie française*).

[55] The ordinary meaning of "energy" ("énergie" in French) is: "a fundamental entity of nature that is transferred between parts of a system in the production of physical change within the system and usually regarded as the capacity for doing work" (Merriam Webster); "usable power (such as heat or electricity)" (Merriam Webster); "[c]apacité qu'a un corps, un système, de produire un travail" (*Dictionnaire de l'Académie française*).

b. The object and purpose of UNCLOS, which is *inter alia* to "promote the protection and preservation of the marine environment".[56] If that object and purpose are to be met, the Parties must aim to protect the marine environment from *all* pollutants.

c. Relevant rules of international law applicable in the relations between the parties, including the Montreal Protocol on Substances that Deplete the Ozone Layer (to which all States Parties to UNCLOS are also party), which treats at least some greenhouse gases as "substances".[57]

d. The circumstances of conclusion of UNCLOS. Article 1(1)(4) is similar to the definition of pollution prepared by a joint working group of the Scientific Committee on Oceanic Research ('**SCOR**') and the Advisory Committee on Marine Resources Research ('**ACMRR**') in 1966.[58] This definition was slightly broadened by the Intergovernmental Oceanographic Commission of UNESCO ('**IOC**')[59] in 1967 and endorsed by the Joint Group of Experts on the Scientific Aspects of Marine Pollution ('**GESAMP**') in 1969.[60] In 1971, the Intergovernmental Working Group on Marine Pollution ('**IWGMP**') included a slightly revised version of the definition in the General Principles for Assessment and Control of Marine Pollution.[61] Principle 14 stated that controlling marine pollution "should be sufficiently flexible to … take into account the fact that a

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[56] The Preamble provides: "*Recognizing the desirability of establishing through this Convention*, with due regard for the sovereignty of all States, a legal order for the seas and oceans which will facilitate international communication, and *will promote the* peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, *protection and preservation of the marine environment*" (emphasis added).

[57] Montreal Protocol on Substances that Deplete the Ozone Layer, signed at Montreal on 16 September 1987 (entry into force 1 January 1989), 1522 UNTS 3 ('**Montreal Protocol**').

[58] "Introduction by man of substances into the marine environment resulting in such deleterious effects as harm to living resources, hazards to human health, hindrance to marine activities including fishing, and reduction of amenities": Report of SCOR/ACMRR Working Group 22 on Marine Pollution (Paris, 12-14 December 1966), https://scor-int.org/Publications/WG22-1967.pdf, p. 25. The Working Group acknowledged that heat was a source of marine pollution (p. 28).

[59] "Introduction by man of substances into marine environment resulting in such deleterious effects as harm to living resources, hazards to human health, hindrance to marine activities including fishing, impairment of quality for use of sea water and reduction of amenities": Report of the First Meeting of the IOC Working Group on Marine Pollution (Paris, 14-17 August 1967), https://www.ices.dk/sites/pub/CM%20Doccuments/1967/E/1967_E11.pdf, p. 1.

[60] GESAMP agreed that the definition was acceptable on the basis that estuarine waters would be considered as falling within the marine environment, and it acknowledged that heat was a source of marine pollution: Report of the First Session (London, 17-21 March 1969), http://www.gesamp.org/site/assets/files/1172/report-of-the-1st-session-1969-en-1.pdf, pp. 5, 8 and 14.

[61] "[T]he introduction by man, directly or indirectly, of substances or energy into the marine environment (including estuaries) resulting in such deleterious effects as harm to living resources, hazards to human health, hindrance to marine activities including fishing, impairment of quality for use of sea water, and reduction of amenities": UN Doc. A/Conf.48/14/Rev.1, Annex III, p. 73. This revised definition also appears in an outline prepared by the IOC: https://unesdoc.unesco.org/ark:/48223/pf0000133279, p. 16.

number of new and hitherto unsuspected pollutants are bound to be brought to light".[62]

e. The *travaux préparatoires*, which indicate that States took cognisance of the GESAMP definition and broadened that definition's scope.[63]

34. It is also noted that:

a. Annex VI of the International Convention for the Prevention of Pollution from Ships ('**MARPOL**') treats the emission of greenhouse gases from ships as "air pollution",[64] and the Marine Environment Protection Committee (which is empowered to consider any matter within the scope of the International Maritime Organization ('**IMO**') concerning the prevention and control of marine pollution from ships)[65] has adopted a detailed strategy on the reduction of greenhouse gas emissions from ships.[66]

b. The International Law Commission ('**ILC**') draft guidelines on the protection of the atmosphere define atmospheric pollution as "the introduction or release by humans, directly or indirectly, into the atmosphere of *substances or energy* …".[67] The ILC commentary to the draft guidelines expressly refers to Article 1(1)(4) of UNCLOS, before concluding that "energy" in the draft guidelines includes "heat, light, noise and radioactivity introduced and released into the atmosphere through human activities".[68]

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[62] The UN Conference on the Human Environment recommended that Governments endorse the principles proposed by the IWGMP as "guiding concepts" for the Conference on the Law of the Sea, UN Doc. A/Conf.48/14/Rev.1, p. 23, Recommendation 92.

[63] CRP/MP/14, Results of consideration of proposals and amendments relating to the preservation of the marine environment (15 August 1974): Platzoder, Third UN Conference on the Law of the Sea, Volume X, p. 194. The Informal Group of Juridical Experts (Evensen Group) proposed a revised version of the definition in March 1976 which was adopted in UNCLOS (with minor formatting changes): Platzoder, Third UN Conference on the Law of the Sea, Volume XI, p. 525.

[64] Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, signed at London on 17 February 1978 (entry into force on 2 October 1983), 1340 UNTS 61 and 1341 UNTS 3 (as amended), Annex VI, Regulation 12.

[65] Convention on the International Maritime Organization, signed at Geneva on 6 March 1948 (entry into force 17 March 1958), 289 UNTS 3, Article 38.

[66] Initial IMO Strategy on Reduction of GHG emissions from ships, Resolution MEPC.304(72) (adopted on 13 April 2018). See the ongoing work of the IMO on climate action and clean air in shipping: https://www.imo.org/en/OurWork/Environment/Pages/Decarbonization%20and%20Clean%20air%20in%20shipping.aspx.

[67] 2021 Draft Guidelines on the protection of the atmosphere, with commentaries, draft guideline 1(b) (emphasis added). The UK welcomed the Draft Guidelines as a potentially useful contribution to the international law on protection of the atmosphere and emphasised the significance of existing international obligations that address many of the relevant issues: https://press.un.org/en/2021/gal3645.doc.htm.

[68] *Ibid*, p. 23. See also article 1(a) of the Convention on Long-Range Transboundary Air Pollution, signed at Geneva on 13 November 1979 (entry into force 16 March 1983), 1302 UNTS 217.

35. The views expressed in relevant commentary are consistent with the position that Article 1(1)(4) includes greenhouse gases and heat.[69]

36. **Second**, the "substance" or "energy" must be introduced by man, directly or indirectly, into the marine environment.

37. Interpreted in good faith in accordance with the ordinary meaning to be given to the terms in their context,[70] "marine environment" in Article 1(1)(4) includes within its scope the seabed and ocean floor and subsoil thereof,[71] the water column, estuaries,[72] and the coastline.[73] It also includes in its scope all (marine) living resources and marine life[74] (e.g., flora and fauna),[75] and the ecosystems and the habitats of marine life.[76] This interpretation is consistent with:

    a. The object and purpose of UNCLOS, which is *inter alia* to address "the problems of ocean space".[77]

    b. Subsequent agreements regarding the interpretation of UNCLOS, including regulations approved by the Assembly of the International Seabed Authority ('**ISA**') (collectively, '**the ISA Exploration Regulations**'), each of which defines the marine environment as including "the physical, chemical, geological and biological components, conditions and factors which interact and determine the productivity, state, condition and quality of the marine ecosystem, the waters of the

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[69] See (1) Proelss (ed), United Nations Convention on the Law of the Sea: A Commentary, (2017), p. 1278 ("…the environmental provisions of the Convention are both general in their application, by protecting the entire marine environment, and comprehensive, by including all forms and sources of marine pollution"); p. 1282 ("The provisions of the Convention in Part XII, Section 1 thus has to be adaptable to known and unknown anthropogenic pollution and intrusion, even of a non-substantial nature. As a consequence of this approach, Part XII is not static but open to future development"); (2) Harrison, Saving the Oceans Through Law (2017), p. 255 ("Given the broad definition of pollution of the marine environment, under UNCLOS, there is little doubt that climate change and ocean acidification fall within the scope of Convention's provisions on the protection of the marine environment"); (3) Holst, 'Taking the current when it serves: Prospects and challenges for an ITLOS advisory opinion on oceans and climate change' (2022) *RECIEL*, p. 5 ("It would seem uncontroversial that the oceanic uptake of atmospheric greenhouse gas (GHG) emissions qualifies as 'pollution of the marine environment'"); (4) Guilfoyle (Oral evidence to the House of Lords International Relations and Defence Committee on 24 Nov 2021), https://committees.parliament.uk/oralevidence/3126/html/ ("Introducing CO_2, or indirectly excess heat energy, into the oceans would be relatively straightforward to class as pollution of the ocean under Article 1 of UNCLOS"); (5) Advisory Committee on Protection of the Seas (Written evidence to the House of Lords International Relations and Defence Committee dated 11 Nov 2021), https://committees.parliament.uk/writtenevidence/40828/pdf/ ("…there is no doubt that the increase in greenhouse gas (GHG) emissions that result in, e.g., ocean warming and acidification, among other deleterious effects, falls within the definition of pollution under this Article [1(1)(4)]"). (Footnotes omitted.)

[70] See Vienna Convention, Article 31(1) (reflecting customary international law, as noted above).

[71] UNCLOS, Article 145 read with Article 1(1)(1).

[72] UNCLOS, Article 1(1)(4).

[73] UNCLOS, Article 145(a) and Article 211(1). See the discussion of the term "shoreline" in the Virginia Commentary at para 211.15(c), footnote 22.

[74] UNCLOS, Article 1(1)(4).

[75] UNCLOS, Article 145(b).

[76] UNCLOS, Article 194(5).

[77] UNCLOS, Preamble.

seas and oceans and the airspace above those waters, as well as the seabed and ocean floor and subsoil thereof".[78]

c. The circumstances of conclusion of UNCLOS, which indicate that the groups which drafted the precursors of the definition of "pollution of the marine environment" in Article 1(1)(4) of UNLOS understood "marine environment" to include within its scope *inter alia* marine life and eco-systems.[79]

d. The *travaux préparatoires*, which indicate that States Parties expressly accepted that "marine environment" includes "marine life".[80]

38. The views expressed in the jurisprudence[81] and relevant commentary[82] are consistent with the position set out above.

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[78] (1) ISBA/6/A/18, Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area (13 July 2000): https://www.isa.org.jm/wp-content/uploads/2022/06/isba-6a-18_1.pdf ('**Nodules Regulations**'); (2) ISBA/16/A/12/Rev.1, Regulations on prospecting and exploration for polymetallic sulphides in the Area (7 May 2010): https://www.isa.org.jm/wp-content/uploads/2022/06/isba-16a-12rev1_2_0.pdf ('**Sulphides Regulations**'); (3) ISBA/18/A/11, Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area (27 July 2012): https://www.isa.org.jm/wp-content/uploads/2022/06/isba-18a-11_0.pdf. The ISA Exploration Regulations were adopted by the Assembly of the ISA, and all States Parties to UNCLOS are represented in the Assembly of the ISA. The ISA Exploration Regulations are adopted pursuant to Article 145 of UNCLOS and Annex III, Article 17 of UNCLOS. See further the definition of the 'marine environment' in the draft exploitation regulations under consideration at the time of writing.

[79] See paragraph 33.d above and the sources cited therein.

[80] Reports of the Committees and Negotiating Groups on negotiations at the resumed seventh session, UN Doc. A/CONF.62/RCNG/1 (circulated on 19 May 1978), p. 97. Prior to this, Malta and Kenya (the latter, on two occasions) suggested definitions of "marine environment" to include in UNCLOS, but neither was adopted: CRP/MP/1 (Platzoder, Third UN Conference on the Law of the Sea, Volume X, p. 71).

[81] *Southern Bluefin Tuna (New Zealand* v. *Japan; Australia* v. *Japan), Provisional Measures, Order of 27 August 1999, ITLOS Reports 1999*, p. 280 ('***Southern Bluefin Tuna* Order**'), para. 70 ("*Considering that the conservation of the living resources of the sea is an element in* the protection and preservation of the marine environment" (emphasis in original)); *SRFC* Advisory Opinion ("…living resources and marine life are part of the marine environment"); *South China Sea Arbitration (Philippines v China),* Award, 12 July 2016 ('***South China Sea (Merits)***') (the tribunal implicitly accepts that ecosystems and habitats (paras. 945 and 970) and species (paras. 960 and 970) constitute part of the marine environment).

[82] (1) Virginia Commentary, para 1.23 ("Although there is no explanation in the Convention for the term "marine environment" …, its meaning can be deduced from Part XII, especially from articles 192 to 196. The absence of any specific meaning for this term allows the Convention an element of flexibility in accommodating the continuously-expanding human knowledge and human activities relating to the marine environment, including its protection and preservation"); (2) Boyle, 'Climate Change, Ocean Governance and UNCLOS' in Barrett and Barnes (eds), Law of the Sea: UNCLOS as a Living Treaty (2016), p. 217 ("Later treaties, such as the Convention on Biological Diversity, suggest that, consistently with the objects and purposes of UNCLOS, Part XII can readily be interpreted to cover protection of marine biodiversity in general, and conservation of coral reefs in particular"); (3) Proelss (ed), United Nations Convention on the Law of the Sea: A Commentary (2017), p. 23 ("As shown in the reference to 'living resources and marine life', this definition makes clear that 'the marine environment' encompasses marine living organisms. … Hence the protection of the marine environment also involves the protection of marine species. It can be considered that the concept of the marine environment covers marine biological diversity. … [Marine pollutants'] adverse impacts on the marine environment, including marine species and ecosystems, may also vary according to regions"); p. 1286 ("In contrast to other terms, 'marine environment' is not expressly defined in Art. 1(1)(4). However, Art. 1(1)(4), dealing with 'pollution of the marine environment', allows a conclusion with regard to the spatial scope of the term and its content. The marine environment can be defined in various ways, its scope ranging accordingly from ocean-level processes to those of regional seas or

39. It follows that humans introduce greenhouse gases into the marine environment when human activities (e.g., the burning of fossil fuels, deforestation, land use and land use changes, livestock production, fertilisation, waste management and industrial processes) emit greenhouse gases into the atmosphere and those anthropogenic greenhouse gas emissions are absorbed into the ocean. Humans also introduce heat into the marine environment when anthropogenic greenhouse gases radiate heat that enters the surface of the ocean and the water column.

40. **Third**, the "substance" or "energy" introduced must result in, or be likely to result in, "deleterious effects",[83] such as those set out in Article 1(1)(4).[84]

41. It is clear that the introduction of anthropogenic greenhouse gases and heat into the marine environment results in, and is likely to result in further, deleterious effects including ocean warming, sea level rise and ocean acidification.[85] In summary:[86]

    a. Ocean warming. It is virtually certain that the global ocean has warmed unabated since 1970 and has absorbed more than 90% of the excess heat in the climate system.[87] Ocean warming is attributed to anthropogenic drivers of climate change (e.g., the introduction of heat into the marine environment from anthropogenic greenhouse gases, as described above).[88] Ocean warming is harming living resources and marine life by contributing to an overall decrease in the abundance of fish and shellfish stocks,[89] increasing the risk of species extinction,[90] and causing shifts in the geographical range and seasonal activities of many marine species.[91] The decline in the abundance of fish and shellfish stocks is hindering marine

smaller entities and those that occur at species and genetic level. Through the wording of Art 1(1)(4), it is clarified that estuaries are spatially included. … The Convention thus goes beyond the anthropocentric understanding of the environment; its scope is comprehensive and includes the entire marine ecosystem"). (Footnotes omitted.)

[83] The ordinary meaning of "deleterious" is "[c]ausing physical harm or damage to a person or thing; detrimental to life or health; harmful; noxious" (Oxford English Dictionary); "harmful often in a subtle or unexpected way" (Merriam Webster). The French version of UNCLOS refers to "nuisibles". The ordinary meaning of "nuisibles" is "[q]ui nuit, porte préjudice, fait du tort" (*Dictionnaire de l'Académie française*).

[84] Use of the language "such … as" in Article 1(1)(4) indicates that the "deleterious effects" listed therein are illustrative only.

[85] See, e.g., the UK Marine Strategy, pp. 43-44.

[86] It is recognised that there is an element of inter-connection when assessing deleterious effects of ocean warming, sea level rise and ocean acidification: e.g., the loss of nearly 50% of coastal wetlands over the past 100 years is as a result of the combined effects of localised human pressures, sea level rise, warming and extreme climate events (IPCC, 2019: Summary for Policymakers, para. A.6.1).

[87] IPCC, 2019: Summary for Policymakers, para. A.2. We use the term "absorb" synonymously with the phrase "taken up" (the latter phrase is used in para. A.2).

[88] IPCC, 2019: Summary for Policymakers, para. A.2.1.

[89] IPCC, 2019: Summary for Policymakers, para. A.5.4.

[90] IPCC, 2023: Synthesis Report of the IPCC Sixth Assessment Report (AR6) ('**IPCC, 2023: AR6 SYR**'), para. B.3.2.

[91] IPCC, 2019: Summary for Policymakers, para. A.5.

activities, particularly fishing,[92] and adversely affecting food production;[93] it has particularly negative consequences for Indigenous people and local communities that are dependent on fisheries.[94] Ocean warming is also harming living resources and marine life by causing the loss of vegetated coastal ecosystems,[95] and marine heatwaves are causing mass mortalities in many ocean ecosystems.[96] Further, large-scale coral bleaching events are occurring at increasing frequency.[97] The decline in warm-water coral reefs is likely to compromise the services the reefs provide to society, such as food provision (e.g., reefs house and feed fish and other marine life that humans eat), coastal protection and tourism, thus reducing amenities.[98] Ocean warming also poses hazards to human health and impairs the quality of sea water. It does so by exposing humans to elevated bioaccumulation of persistent organic pollutants and mercury in marine life and to harmful algal blooms.[99] The increase in harmful algal blooms is also reducing amenities and negatively impacting tourism.[100]

b. Sea level rise. Global mean sea level has risen faster since 1900 than over any preceding century in at least the last 3000 years.[101] It is virtually certain that global mean sea level will continue to rise over the 21st century as a result of the continued warming of the climate system, and this rise will continue for centuries to millennia.[102] The dominant cause of global mean sea level rise since 1970 is anthropogenic drivers of climate change (e.g., the introduction of heat into the marine environment from anthropogenic greenhouse gases, as described above).[103]

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[92] IPCC, 2019: Summary for Policymakers, para. A.5.4 (e.g., ocean warming has contributed to an overall decrease in maximum catch potential and reduced fisheries catches).

[93] IPCC, 2023: AR6 SYR, para. A.2.4.

[94] IPCC, 2019: Summary for Policymakers, para. A.8.1.

[95] IPCC, 2019: Summary for Policymakers, para. A.6.1. The loss of vegetated coastal ecosystems is also due to localised human pressures, sea level rise and extreme climate events.

[96] IPCC, 2022: Oceans and Coastal Ecosystems and Their Services in *Climate Change 2022: Impacts, Adaptation and Vulnerability* ('**IPCC, 2022: Oceans and Coastal Ecosystems and Their Services**'), p 381.

[97] IPCC, 2019: Summary for Policymakers, para. A.6.4. Serious coral bleaching events harms living resources and marine life by causing the death of corals, which can impact other marine species that rely on corals (see: Harrison, Saving the Oceans Through Law (2017) at p. 247).

[98] IPCC, 2019: Summary for Policymakers, para. B.8.2. As to the meaning of "reduction of amenities", reliance is placed on its ordinary meaning. The Spanish and Russian versions of UNCLOS refer to "menoscabo de los lugares de esparcimiento" and "ухудшение условий отдыха" respectively.

[99] IPCC, 2019: Summary for Policymakers, paras. B.8.2 and B.8.3. Warming also exacerbates coastal eutrophication and associated hypoxia, causing 'dead zones', which drive severe impacts on coastal and shelf-sea ecosystems, including mass mortalities, habitat reduction and fisheries disruptions (IPCC, 2022: Oceans and Coastal Ecosystems and Their Services, p. 381).

[100] IPCC, 2019: Summary for Policymakers, para. A.8.2.

[101] IPCC, 2021: Summary for Policymakers in *Climate Change 2021: The Physical Science Basis* ('**IPCC, 2021: Summary for Policymakers**'), para. A.2.4.

[102] IPCC, 2021: Regional fact sheet – Ocean; See also IPCC, 2019: Summary for Policymakers, paras. B.3 and A.3.1.

[103] IPCC, 2019: Summary for Policymakers, para. A.3.1. See also IPCC, 2021: Summary for Policymakers, para. A.1.7. Thermal expansion explained 50% of sea level rise during 1971-2018, while ice loss from glaciers

Sea level rise in estuaries is harming living resources and marine life by causing the redistribution of marine species and a reduction of suitable habitats.[104] In coastal ecosystems, it is causing habitat contraction, geographical shifts of species, and loss of biodiversity and ecosystem functionality.[105] It will eventually result in the loss of some coastal ecosystems entirely.[106] Sea level rise that is now unavoidable will also cause *inter alia* flooding and damage to coastal infrastructure which cascades into risks to livelihoods, settlements, health, well-being, food and water security, and cultural values in the near to long-term, thus posing hazards to human health, hindering marine activities and reducing amenities.[107] Sea level rise poses an existential threat for some small islands and low-lying coasts.[108] In a high emissions scenario, some islands are likely to become uninhabitable.[109]

c. Ocean acidification. It is virtually certain that the ocean has undergone increasing surface acidification by absorbing more CO_2[110] and that anthropogenic CO_2 emissions are the main driver of the current global acidification of the surface of the open ocean.[111] Indeed, pH as low as it has been in recent decades on the surface of the open ocean is unusual when compared with data concerning the last 2 million years.[112] Ocean acidification is harming living resources and marine life by eroding calcifying (e.g., shell and skeleton producing) organisms such as corals, barnacles and mussels,[113] and altering ecosystems structure, with direct negative impacts on biomass production and the type of species present in ecosystems.[114] It is also hindering maritime activities by adversely affecting food production from fisheries and shellfish aquaculture.[115]

III. Consequences for Part XII obligations

42. The analysis above confirms that climate change and ocean acidification caused by the introduction of anthropogenic greenhouse gas emissions into the atmosphere fall within the meaning of "pollution of the marine environment" for the purposes of Article 1(1)(4) of UNCLOS. Accordingly, obligations under Part XII apply with respect to such climate

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contributed 22%, ice sheets 20% and changes in land-water storage 8%: IPCC, 2021: Summary for Policymakers, para. A.4.3.

[104] IPCC, 2019: Summary for Policymakers, para. A.6.2.

[105] IPCC, 2019: Summary for Policymakers, para. A.6.3.

[106] IPCC, 2022: Summary for Policymakers in *Climate Change 2022: Impacts, Adaptation and Vulnerability* ('**IPCC, 2022: Summary for Policymakers**'), para. B.5.2.

[107] IPCC, 2022: Summary for Policymakers, para. B.5.2. See also paras. B.3.1 and B.4.3.

[108] IPCC, 2022: Summary for Policymakers, para. B.4.5.

[109] IPCC, 2019: Summary for Policymakers, para. B.9.2.

[110] IPCC, 2019: Summary for Policymakers, paras. A.2. It is very likely the ocean has absorbed between 20-30% of total anthropogenic $C0_2$ emissions since the 1980s (see para. A.2.5).

[111] IPCC, 2021: Summary for Policymakers, A.1.6.

[112] IPCC, 2021: Summary for Policymakers, A.2.4.

[113] IPCC, 2019: Summary for Policymakers, para. A.6.4.

[114] IPCC, 2019: Summary for Policymakers, para. A.5.3.

[115] IPCC, 2023: AR6 SYR, para. A.2.4.

change and ocean acidification, notably States' obligations to prevent, reduce and control pollution of the marine environment as set forth throughout Part XII.

43. However, even if, contrary to the United Kingdom's position, climate change and ocean acidification caused by the introduction of anthropogenic greenhouse gas emissions into the atmosphere were considered by ITLOS not to constitute "pollution of the marine environment", those Part XII provisions not relating specifically to pollution would nonetheless be engaged. Notably, the general obligation to protect and preserve the marine environment recognised in Article 192 would remain relevant in any event (on which, see paras. 46-52 below).

CHAPTER 3

RELEVANT ASPECTS OF PART XII AND THEIR APPLICATION

I. Introduction

44. This Chapter addresses five considerations which the United Kingdom submits are of particular relevance to the application of Part XII of UNCLOS. Before moving to discuss those considerations in turn (see section III below), the United Kingdom identifies aspects of the Part XII regime that are especially engaged in respect of climate change and ocean acidification (see section II immediately below), as foreshadowed at para. 12.c above.

II. Relevant aspects of the Part XII regime

45. This section begins by addressing Article 192 of UNCLOS (the general obligation) (paras. 46-52 below). It then outlines provisions within Part XII of UNCLOS that give more specific content to that general obligation, namely **(i)** provisions establishing a regime for the prevention, reduction and control of pollution of the marine environment (para. 54 below); and **(ii)** provisions addressing the protection and preservation of the marine environment more broadly (beyond measures to prevent, reduce and control pollution) (para. 55 below).

A. Article 192

46. The starting point is Article 192 of UNCLOS, which is located in section 1 of Part XII entitled "general provisions", and is entitled "General obligation". It provides that "States have the obligation to protect and preserve the marine environment".

47. Interpreted in good faith in accordance with the ordinary meaning of its terms,[116] this Article positively affirms "the obligation" of States to protect and preserve the marine environment. "The obligation" referred to in Article 192 is expressly described (in the title of that Article) as "general", i.e., non-particularised. The specific content of the obligation is elaborated in the following three sources.

48. **First**, it is elaborated in the other relevant provisions of UNCLOS, notably within Part XII.

49. Express reference to the other "provisions" of UNCLOS was included in an earlier draft of Article 192,[117] in recognition of the fact that the drafters would "wish to specify in

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[116] See Vienna Convention, Article 31(1) (reflecting customary international law as noted above).

[117] See (1) Note by the Chairman of Working Group 2, addressed to the Chairman of the Sub-Committee III (1973), UN Doc. A/AC.138/SC.III/L.39 in the Report of the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction, Volume I, p. 85 at p. 86, https://digitallibrary.un.org/record/725186?ln=en (the draft text stated: "States have the obligation to protect and preserve the marine environment, in accordance with the provisions of these articles"); (2) Results of consideration of proposals and amendments relating to the preservation of the marine environment (1974), UN Doc. A/CONF.62/C.3/L.15, https://legal.un.org/diplomaticconferences/1973_los/docs/english/vol_3/a_conf62_c3_l15.pdf (the draft text stated "States have the obligation to protect and preserve the marine environment, (in accordance with the provisions of these articles)".

subsequent articles the scope, qualifications and limitations of this general obligation".[118] During the course of the third session of the Third UN Conference on the Law of the Sea (which was held March to May 1975), express reference to the other "provisions" of UNCLOS was not included in the draft for discussion,[119] and – as noted above – is not set out in the final text of Article 192. This did not, however, change the intended meaning in this respect. In particular, that the specific content of "the obligation" referred to in Article 192 is to be determined with reference to the other relevant provisions of UNCLOS is consistent with:

a. The context of Article 192, considering that the scheme of Part XII is to first set out the 'general obligation' followed by provisions expressly specifying what a State "shall" do in order to protect and preserve the marine environment.

b. The object and purpose of UNCLOS, which is to *inter alia* "promote the protection and preservation of the marine environment".[120] If that object and purpose is to be met, "the obligation" referred to in Article 192 must have specific content.

c. The principle of effectiveness, which demands that meaning is given to the terms of a treaty.[121]

50. Further, the views expressed in the relevant jurisprudence[122] and commentary[123] are consistent with this position.

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[118] Note by the Chairman of Working Group 2, addressed to the Chairman of the Sub-Committee III (1973), UN Doc. A/AC.138/SC.III/L.39 in the Report of the Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction, Volume I, p. 85 at p. 86 https://digitallibrary.un.org/record/725186?ln=en.

[119] See the Informal Single Negotiating Text (III), UN Doc. A/CONF.62/WP.8/PartIII, Part I, Article 2:

https://legal.un.org/diplomaticconferences/1973_los/docs/english/vol_4/a_conf62_wp8_part3.pdf.

[120] The Preamble provides: "*Recognizing the desirability of establishing through this Convention*, with due regard for the sovereignty of all States, a legal order for the seas and oceans which will facilitate international communication, and *will promote the* peaceful uses of the seas and oceans, the equitable and efficient utilization of their resources, the conservation of their living resources, and the study, *protection and preservation of the marine environment*" (emphasis added).

[121] Addressed at paras. 85-87 below.

[122] *South China Sea (Merits)*, paras. 941-942.

[123] See (1) Report of the Secretary-General of the UN, 'Protection and preservation of the marine environment', UN Doc. A/44/461 (1989), para. 30 ("The general obligation to protect and preserve the marine environment, set out in article 192, is given specific content in articles 194 and 196, which elaborate the scope of the regulated subject: pollution of the marine environment"); (2) Virginia Commentary, para 192.1 ("Section 1 therefore formulates a series of legal principles in appropriate treaty language, without imposing specific obligations or conferring quantifiable rights on States"; para 192.11(c) ("the general obligation of article 192 is set forth in an extremely lapidary form, and the various formulas used in previous drafts, such as "in accordance with the provisions of these articles," were not included in the final text. This omission is not to be misconstrued, however. In one sense such words would be redundant. … It is clear from the Convention as a whole (and not merely from Part XII), that the obligation of article 192 (and with it the right of article 193) is always subject to the specific rights and duties laid down in the Convention"); (3) Proelss (ed), United Nations Convention on the Law of the Sea: A Commentary (2017), pp. 1278-1284 ("Art. 192, as the leading principle for a reasonable and careful maintenance of the sea, is underpinned by more stringent and detailed provisions, mainly, but not only, concerning the different types of pollution… Art 192 needs to be understood as a legally binding commitment, a principle and not only a political obligation. The content of the general obligation in Art. 192 is further detailed in the

51. **Second**, it is elaborated in specific obligations assumed by States under other relevant conventions (see Article 237 UNCLOS).[124] In respect of anthropogenic greenhouse gas emissions, it is the UNFCCC and Paris Agreement that are most obviously relevant in this regard.

52. **Third**, it is elaborated in other relevant norms of international law, as appropriate. By the end of the second session of the Third UN Conference on the Law of the Sea (which was held from 20 June to 29 August 1974) proposals were advanced to expressly refer in the text of Article 192 to "other norms of international law" (Spain), "other rules of international law" (the Netherlands) and "general principles of international law" (Algeria).[125] None of those proposals was adopted. Nonetheless, the United Kingdom accepts that reference may be had to relevant norms of international law in this regard.[126]

B. Other relevant provisions in Part XII

53. Several provisions within Part XII set out what States are required to do, and not to do, in order to comply with the general obligation affirmed in Article 192 in the context of climate change and ocean acidification. Those provisions may be broadly divided into two categories. First, provisions establishing a regime for the prevention, reduction and control of pollution of the marine environment. Secondly, beyond measures to prevent, reduce and control pollution, provisions addressing the protection and preservation of the marine environment more broadly.

54. Turning to the first category (i.e., the regime for the prevention, reduction and control of pollution of the marine environment), this is established in sections 1, 5 and 6 of Part XII:

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subsequent provisions of part XII including Art. 194, as well as by reference to specific obligations set out in other international agreements, as envisaged in Art. 37 of the Convention"; (4) Harrison, Saving the Oceans Through Law, p. 23 ("it is difficult to see how a court or tribunal could give any substantive content to the highly ambiguous terms of Article 192 without overstepping its judicial role and straying into law-making. Indeed, those tribunals that have sought to interpret Article 192 as a provision with norm-creating character have gone on to say that 'the content of the general obligation in Article 192 is further detailed in the subsequent provisions of Part XII', [*South China Sea (Merits),* para. 942] suggesting that Article 192 cannot be interpreted and applied in isolation. It is for this reason that Article 192 is perhaps better characterized as a statement of principle, whose primary function is to determine the scope of Part XII as a whole").

[124] Article 237 provides: "1. The provisions of this Part are without prejudice to the specific obligations assumed by States under special conventions and agreements concluded previously which relate to the protection and preservation of the marine environment and to agreements which may be concluded in furtherance of the general principles set forth in this Convention 2. Specific obligations assumed by States under special conventions, with respect to the protection and preservation of the marine environment, should be carried out in a manner consistent with the general principles and objectives of this Convention".

[125] CRP/MP/2 (Platzoder, Third UN Conference on the Law of the Sea, Volume X, at p. 141).

[126] This was the view taken in the *South China Sea (Merits)* Award, para. 941 ("… the Tribunal considers it well established that Article 192 does impose a duty on States Parties, the content of which is informed by the other provisions of Part XII and other applicable rules of international law" (emphasis added, footnotes omitted)). Regard can be had to the Vienna Convention, Article 31(3)(c), as necessary. See more generally Preamble, 8th para. ("*Affirming* that matters not regulated by this Convention continue to be governed by the rules and principles of general international law").

a. States Parties' primary obligation is to take "measures to prevent, reduce and control pollution of the marine environment" under Article 194 (as its title records).

b. The obligation to take these measures extends to pollution of the marine environment (within the meaning of Article 1(1)(4), addressed above) "from any source" (see Article 194(1)). This is reiterated in Article 194(3), which confirms that "measures" to be taken by States shall address "all sources of pollution", including "(a) the release of toxic, harmful or noxious substances … from land-based sources, from or through the atmosphere".

c. Article 194(1) specifies that States must "take, individually or jointly as appropriate, all measures that are necessary to prevent, reduce and control pollution of the marine environment". Reduction of anthropogenic greenhouse gas emissions is evidently a context in which it is joint measures that are appropriate. Article 194(1) requires States to use "for this purpose the best practicable means at their disposal and in accordance with their capabilities". This provision also obliges States to "endeavour to harmonize their policies in this connection".

d. Article 194(2) requires States to "take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment". This focuses on the transboundary consequences of activities under States' own jurisdiction or control.

e. Sections 5 and 6 of Part XII provide further particularity as to the measures that States must take to prevent, reduce and control pollution of the marine environment and their enforcement. Those sections treat different categories of pollution separately. Article 207 and Article 212 come within section 5, and the United Kingdom's position on them is relevantly as follows:

    i. Article 207 addresses measures concerning pollution of the marine environment "from land-based sources, including rivers, estuaries, pipelines and outfall structures", whereas Article 212 captures 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".

    ii. Pollution in the form of anthropogenic greenhouse gas emissions is addressed by Article 212, including when those emissions are created on land (e.g., by fossil fuel generating infrastructure):

        A. Interpreted in good faith in accordance with the ordinary meaning of the terms used,[127] "pollution of the marine environment from … the atmosphere" in Article 212 describes the circumstance in which the atmosphere directly conveys the pollutant (e.g., anthropogenic greenhouse gases) into the marine environment, including where the pollutant entered the atmosphere from a land-based source. This is consistent with the broad geographical scope of Article 212(1), which

[127] Vienna Convention, Article 31(1) (reflecting customary international law as noted above).

extends to "the air space under [States Parties'] sovereignty" and thus captures emissions generated by land-based sources.

B. By contrast, "pollution … from land-based sources" in Article 207 captures the circumstance in which a land-based source directly conveys the pollutant into the marine environment without passing through the atmosphere, as occurs when a pollutant is conveyed from a land-based source into the marine environment by way of "rivers, estuaries, pipelines and outfall structures".

C. The United Kingdom's position in this regard is consistent with relevant commentary.[128]

iii. Alternatively, the United Kingdom relies on Article 207 as the source of the obligation to take measures specifically targeting anthropogenic greenhouse gas emissions.

f. As to the content of States Parties' obligations under those provisions, States must:

i. "adopt laws and regulations to prevent, reduce and control pollution of the marine environment" from those sources "taking into account internationally agreed rules, standards and recommended practices and procedures" (see Articles 207(1) and 212(1));

ii. endeavour to establish global and regional legal frameworks for the same purpose (i.e., "global and regional rules, standards and recommended practices and procedures"), under the auspices of "competent international organizations or diplomatic conference" (see Articles 207(4)[129] and 212(3));

[128] (1) Proelss (ed), United Nations Convention on the Law of the Sea: A Commentary (2017), p. 1383 ("By means of the word 'including' it becomes clear that the enumeration has a non-exhaustive character. Thus, additional land-based sources (apart from atmospheric land-based source pollution which is covered in Art. 212) that potentially cause harm to the marine environment may fall within the scope of this provision"); p. 1147 ("'From' describes the instance that the atmosphere itself is 'the polluter' because it conveys pollutants which directly affect the marine environment, such as persistent organic pollutants or greenhouse gases"); (2) Virginia Commentary, para. 212.9(a): "The article addresses pollution of the marine environment from or through the atmosphere and applies "to the air space under [States'] sovereignty and to vessels flying their flag or vessels or aircraft of their registry"; it is thus applicable whether the pollution is land-based or not"; (3) Harrison, Saving the Oceans Through Law (2017), pp. 255-256 ("this provision has a broad scope and it covers both air pollution produced by all activities within the sovereign territory of a State, as well as air pollution from ships and aircrafts of their nationality, wherever they are in the world"); (4) Stephens, 'Warming Waters and Souring Seas: Climate Change and Ocean Acidification' in Rothwell *et al* (eds) The Oxford Handbook on the Law of the Sea, p. 783 ("These provisions, together with the broad definition of 'pollution' in Article 1(1)(4) to include 'substances or energy', impose a due diligence obligation upon States to control and reduce emissions of GHGs that will damage the marine environment causing harm to other States").

[129] The obligation in Article 207(4) concerning global and regional cooperation contains additional text as follows: "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". Article 207 contains an additional obligation in Article 207(5), which states that "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".

iii. adopt laws and regulations, as well as taking "other measures necessary" to implement any rules or standards established through that process (see Article 213 as regards land-based pollution and Article 222 as regards pollution from or through the atmosphere); and

iv. take measures beyond just establishing domestic legal frameworks, namely those that "may be necessary to prevent, reduce and control such pollution" (see Articles 207(2) and 212(2)).

55. Turning to the second category identified at para. 45 above (i.e., specific obligations to protect and preserve the marine environment, beyond measures to prevent, reduce and control pollution), this includes:

a. the obligation in Article 194(5) to take measures "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", which, by its own terms, is not limited to measures targeting pollution;[130]

b. the obligation in Article 197 to "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";

c. the related obligation to "cooperate, directly or through competent international organizations, for the purpose of promoting studies, undertaking programmes of scientific research and encouraging the exchange of information and data acquired about pollution of the marine environment" (see Article 200) and for the purpose of "establishing appropriate scientific criteria for the formulation and elaboration of rules, standards and recommended practices and procedures" in the light of the information and data obtained (see Article 201); and

d. the obligation under Article 206 concerning the "[a]ssessment of potential effects of activities", which provides as follows: "When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205".

56. The obligations under Part XII are without prejudice to **(i)** special treaties relating to protection and preservation of the marine environment concluded before UNCLOS and **(ii)** any treaties concluded to further UNCLOS's general principles (including those concluded in discharge of States Parties' obligations under Articles 207 and 212,

[130] See also *Chagos Marine Protected Area Arbitration (Republic of Mauritius v United Kingdom)*, Award, 18 March 2015 ('***Chagos* Award**'), paras. 320 and 538; *South China Sea Arbitration (Philippines v China)*, Award on Jurisdiction and Admissibility, 29 October 2015 ('***South China Sea (Jurisdiction)***'), para. 284; *South China Sea (Merits)*, para. 945.

discussed above).[131] However, and in keeping with UNCLOS's function as a framework convention, those specific obligations must be "carried out in a manner consistent with the general principles and objectives"[132] of UNCLOS.[133]

57. Further rights and obligations concerning the protection and preservation of the marine environment are also found in other Parts of UNCLOS.[134] Those provisions, however, are outside the scope of this statement, as explained above.[135]

III. Relevant considerations

58. There is a developed body of principles, approaches and concepts[136] that is relevant to the protection and preservation of the marine environment pursuant to the terms of UNCLOS.[137]

59. In the context of climate change and ocean acidification, the United Kingdom submits that **five** of these considerations are of particular importance when applying the Part XII obligations set out above.

60. These five considerations are:

    a. the due diligence standard;

    b. the precautionary principle;

    c. the duty of cooperation on the international plane;

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[131] See UNCLOS, Article 237(1).

[132] See UNCLOS, Article 237(2).

[133] Several marine environmental treaties expressly provide that they are to be interpreted consistently with UNCLOS: see, e.g., United Nations Convention on Biological Diversity, signed at Rio de Janeiro on 5 June 1992 (entry into force on 29 December 1993), 1760 UNTS 79 ('**Convention on Biological Diversity**'), Article 22(2); Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, signed on 29 December 1972 (entered into force on 30 August 1975), 1046 UNTS 120, Article XII; MARPOL, Article 9(2).

[134] Outside Part XII, see, e.g., Article 21(1)(f) (Laws and regulations of the coastal State relating to innocent passage); Article 56(1)(b)(iii) (Rights, jurisdiction and duties of the coastal State in the exclusive economic zone); Article 60(3) (Artificial islands, installations and structures in the exclusive economic zone); Article 123(b) (Cooperation of States bordering enclosed or semi-enclosed seas); Article 145 (Protection of the marine environment); Article 155(2) (The Review Conference); Article 162(2)(w)-(x) (Powers and functions [of the Council]); Article 165(1)-(2) (The Legal and Technical Commission); Article 240(d) (General principles for the conduct of marine scientific research); Article 266(2) (Promotion of the development and transfer of marine technology); Article 277(c) (Functions of regional centres).

[135] See para. 11 above.

[136] The United Kingdom recognises that the legal status of several of these principles, approaches and concepts is not settled. For this reason, it refers to them collectively as 'considerations'.

[137] See, e.g., *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica), Judgment, I.C.J. Reports 2015*, p. 665 ('***Certain Activities* Judgment'**), Separate Opinion of Judge *ad hoc* Dugard, para. 6 ("The main purpose of environmental law is to prevent harm to the environment. … A cluster of principles seek to achieve this goal, including the principle of prevention, the precautionary principle, the principle of co-operation, notification and consultation and the obligation of due diligence.")

d. the concept of effectiveness; and

e. the concept of best available science.

61. This list is not exhaustive.[138] However, these five considerations are particularly relevant in the current context, and for that reason are addressed in turn below.

62. With respect to each consideration, the United Kingdom sets out: **(i)** a summary of its content as relevant to the specific context of UNCLOS; **(ii)** the key relevant provisions under UNCLOS; and **(iii)** an indication of how that consideration applies in the particular context of climate change and ocean acidification under UNCLOS.

A. First relevant consideration: due diligence

63. Due diligence is a standard against which State conduct can be assessed in many areas of international law. It is a means of "operationalising" primary rules of international law, including the obligation to protect and preserve the marine environment under Part XII of UNCLOS.[139] The ITLOS Seabed Disputes Chamber has rightly characterised due diligence as a "variable concept".[140] Its precise requirements will depend on the primary rule in question and on the particular facts and circumstances.

64. The due diligence standard has two key applications in the context of Part XII of UNCLOS, namely "operationalising": (i) the substantive obligation to prevent harm to the marine environment ('the prevention principle') under Article 194(2) (see paras. 65-

[138] For example, the 'ecosystem approach' is a strategy for protecting and preserving the marine environment which focuses on the environment holistically: see, e.g., Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, signed at New York on 4 August 1995 (entry into force on 11 December 2001 ('**Fish Stocks Agreement**'), Preamble, 7th para. and Article 5(d)-(e). Part XII of UNCLOS reflects the ecosystem approach by incorporating an express obligation focused on the preservation of ecosystems in Article 194(5). It has been held to give shape to the general obligation in Article 192 in the context of fragile ecosystems: *South China Sea (Merits)* Award, para. 959. In addition, it informs the more specific measures envisaged by Articles 194(2), 197, 206, 207 and 212.

See also the concept of sustainable development, which captures the "need to reconcile economic development with the protection of the environment": *Gabčikovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997,* p.7 ('***Gabčikovo-Nagymaros***'), para. 140; see further *Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010*, p. 14 ('***Pulp Mills*** **Judgment**'), para. 177; Report of the UN Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26/Vol.1, Annex I ('**Rio Declaration**'), Principles 3 and 4. Its relevance to UNCLOS was acknowledged in Agenda 21 at the UN Conference on Environment & Development, Rio de Janeiro, 3-4 June 1992 ('**Agenda 21**'), para. 17.1 (UNCLOS "sets forth rights and obligations of States and provides the international basis upon which to pursue the protection and sustainable development of the marine and coastal environment and its resources").

For the avoidance of doubt, the United Kingdom does not accept that either of these considerations has the status of a rule of international law.

[139] Ollino, Due Diligence Obligations in International Law (2022), pp. 18, 55, 63; Proelss, 'The Contribution of ITLOS to Strengthening the Regime for the Protection of the Marine Environment' in Del Vecchio and Virzo (eds) Interpretations of the United Nations Convention on the Law of the Sea by International Courts and Tribunals (2019), pp. 93 and 105.

[140] *Activities in the Area*, Advisory Opinion, para. 117.

69 below); and (ii) the procedural obligation to assess risk of harm to the marine environment under Article 206 ('the assessment obligation') (see paras. 70-74 below).[141]

1. The prevention principle

65. The principle of prevention has been recognised by the ICJ as a "customary rule"[142] in the context of transboundary harm not involving climate change.[143] It obliges a State "to use all the means at its disposal to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State",[144] and is framed as a duty to prevent, or at least to mitigate, such harm.[145] Whilst climate change presents different challenges from the cases in which this principle has been developed, the United Kingdom considers that its content is relevant when considering States' obligations under Article 194(2) of UNCLOS.

66. Of particular relevance is the ICJ's recognition that the relevant standard by which States' conduct is to be assessed is due diligence.[146] This requires that States adhere to a standard of conduct, rather than attain a particular result.[147] The precise steps that will be required

[141] The categorisation of international environmental obligations as substantive and procedural was recognised in the *Certain Activities* Judgment, para. 100.

[142] *Pulp Mills* Judgment, para. 101, referring to *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996,* p. 242, para. 29, where it was first described as "part of the corpus of international law relating to the environment". The "duty to prevent, or at least to mitigate" "significant harm to the environment" has also been recognised by several arbitral tribunals: *Arbitration Regarding the Iron Rhine ("IJzeren Rijn") Railway (Belgium v Netherlands)*, Award, 24 May 2005 ('***Iron Rhine***'), para. 59 (see also para. 222); *The Indus Waters Kishenganga Arbitration (Pakistan v India)*, Partial Award, 18 February 2013 ('***Indus Waters***'), para. 451; *South China Sea (Merits)*, para. 941. The prevention principle was developed in the *Trail Smelter Case (United States, Canada)* (1938/1941) III RIAA 1938, p. 1965 ('***Trial Smelter***'), and was referenced in the Report of the UN Conference on the Human Environment, Stockholm, 5-16 June 1972, UN Doc. A/CONF.48/14/Rev.1, p. 3 ('**Stockholm Declaration**') at p. 5, Principle 21; Rio Declaration, Principle 2. For the avoidance of doubt, neither the Stockholm nor the Rio Declaration is legally binding.

[143] *Trail Smelter* concerned a smelter emitting toxic fumes over the US-Canadian border; *Gabčikovo-Nagymaros*, the diversion and damming of, and building an electricity station on, the Danube River; *Indus Waters*, the construction and operation of an upriver dam; *Iron Rhine*, "large-scale construction activity" in respect of railway lines. Furthermore, in *Activities in the Area*, Advisory Opinion, the Seabed Disputes Chamber was addressing mining operations on the deep seabed.

[144] *Pulp Mills* Judgment, para. 101; affirmed in *Certain Activities* Judgment, para. 118.

[145] See fn. 143 above (*Iron Rhine*, para. 59; *Indus Waters*, para. 941); *South China Sea (Merits)*, para. 941.

[146] *Certain Activities* Judgment, paras. 104, 153 and 168 ("obligation to exercise due diligence in preventing significant transboundary harm"); Separate Opinion of Judge Donoghue, para. 1 ("… States have an obligation under customary international law to exercise due diligence in preventing significant transboundary harm") and para. 8 (where Judge Donoghue refers to "a standard of due diligence in the prevention of significant transboundary environmental harm" and "an obligation to exercise due diligence in preventing significant transboundary environmental harm"); Separate Opinion of Judge *ad hoc* Dugard, para. 7 ("The duty of due diligence therefore is the standard of conduct required to implement the principle of prevention") and para. 9 ("Due diligence is the standard of conduct that the State must show at all times to prevent significant transboundary harm").

[147] *Pulp Mills* Judgment, para. 187, where Article 36 of the 1975 Statute of the River Uruguay (the treaty at issue in that case) is described as both "an obligation of conduct" by which the "Parties are therefore called upon … to exercise due diligence"; *Certain Activities* Judgment, Separate Opinion of Judge Donoghue, para. 9 ("The requirement to exercise due diligence, as the governing primary norm, is an obligation of conduct that applies to all phases of a project….").

to satisfy it will naturally depend on the facts and circumstances,[148] including the degree of risk of harm.[149] At the very least, it will require a State to formulate and implement policies to prevent the relevant harm, including through legislative and administrative measures, as well as exercising a "certain level of vigilance in their enforcement".[150]

67. This standard applies to assessing States' conduct under Article 194(2) of UNCLOS. The Seabed Disputes Chamber has recognised that an obligation "to ensure" such as Article 194(2) imports a standard of due diligence. Consistent with the ICJ jurisprudence noted above, this was interpreted by the Seabed Disputes Chamber as an obligation "of conduct", not "of result".[151] It obliges a State to "deploy adequate means, to exercise best possible efforts, to do the utmost" [152] to prevent damage. Its requirements may vary over time, in particular "in light … of new scientific or technical knowledge" and will necessarily "be more severe for riskier activities".[153] Nonetheless, Article 194(2) requires, at a minimum, each UNCLOS State Party to take preventative measures within its domestic legal system, including the adoption of laws, regulations, and administrative measures, with effective enforcement and monitoring mechanisms.[154] Article 212(2) further provides that "other measures" may be necessary to prevent, reduce and control pollution from or through the atmosphere.[155]

68. The United Kingdom makes the following two observations about States Parties' obligations under Articles 194(1), 194(2) and 212 to take all "necessary" measures to prevent, reduce and control pollution of the marine environment as applicable in the specific context of climate change and ocean acidification:

    a. **First**, the UNFCCC and the Paris Agreement inform the content of the due diligence standard under Articles 194 and 212 as applied to anthropogenic

[148] *Certain Activities* Judgment, Separate Opinion of Judge Donoghue, para. 10 ("whether the State of origin has met its due diligence obligations must be answered in light of the particular facts and circumstances"); Separate Opinion of Judge *ad hoc* Dugard, para. 11 ("due diligence is a more open-textured obligation that could potentially be satisfied in a number of different ways").

[149] Noting that the due diligence standard "may … change in relation to the risks involved in the activity" and "has to be more severe for the riskier activities": *Activities in the Area*, Advisory Opinion, para. 117.

[150] *Pulp Mills* Judgment, para. 197, which describes Article 41 of the 1975 Statute of the River Uruguay as "an obligation which entails not only the adoption of appropriate rules and measures [as expressly referenced in that article], but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators, to safeguard the rights of the other party".

[151] *Activities in the Area*, Advisory Opinion, para. 110 ("To utilize the terminology current in international law, this obligation may be characterized as an obligation "of conduct" and not "of result", and as an obligation of "due diligence"); *cf Pulp Mills* Judgment, para. 187; see also para. 197.

[152] *Activities in the Area*, Advisory Opinion, para. 110; see also para. 131. This formulation was endorsed in the *SRFC* Advisory Opinion, para. 129.

[153] *Activities in the Area*, Advisory Opinion, para. 117.

[154] *Activities in the Area*, Advisory Opinion, reply to Question 1 ("This "due diligence" obligation requires the sponsoring State to take measures within its legal system. These measures must consist of laws and regulations and administrative measures. The applicable standard is that the measures must be "reasonably appropriate".) ITLOS was informed by the specific obligations under Annex III, Article 4, para. 4. See further *Pulp Mills* Judgment, para. 197.

[155] Alternatively, Article 207(2).

greenhouse gases.[156] The measures that are "necessary" for the purposes of Articles 194 and 212 must be determined by reference to those carefully negotiated treaties that are specific to control of anthropogenic greenhouse gas emissions.[157]

b. **Second**, the best available science is a relevant factor for States to consider in making their assessment of potential measures under Articles 194 and 212. In this context, the United Kingdom accepts the current IPCC reports as identifying best available science, including as relevant to the due diligence standard.[158] The precise content and application of that standard in any given context, however, remains a legal question that cannot be answered solely by reference to scientific sources.

69. The United Kingdom naturally accepts that the reduction of anthropogenic greenhouse gases is necessary for the protection and preservation of the marine environment, consistent with best available science. It also considers that the plain terms of Article 212(1) require States Parties to adopt (and where necessary review and amend) domestic laws and regulations to prevent and reduce anthropogenic greenhouse gas emissions as necessary for the protection and preservation of the marine environment, on the basis that the UNFCCC and the Paris Agreement are the relevant generally accepted international rules and standards (GAIRS). It remains a matter for States as to how they implement the requisite level of greenhouse gas emission reduction pursuant to Articles 194 and 212, bearing in mind their particular capabilities, the practicable means at their disposal[159] and the extent of their existing international commitments under the UNFCCC and the Paris Agreement.

2. The assessment obligation

70. For the purposes of applying Article 206 of UNCLOS, assessment obligations recognised by the ICJ in cases not concerning climate change provide some guidance. In such other cases, the ICJ has held that States are obliged to assess proposed State activities that carry a risk of transboundary harm,[160] as well as to require that non-State entities within its territory, jurisdiction or control engage in any such activities only upon approval from the State subject to and following an appropriate assessment.[161] The obligation "applies generally to proposed activities which may have a significant adverse impact in a

[156] As the relevant GAIRS for the purposes of Article 212(1) and by reason of Article 31(3)(c) of the Vienna Convention.

[157] See further para. 7 above.

[158] See further paras. 88-90 below addressing 'best available science' as a key consideration.

[159] Article 194(1) expressly refers both to States' "capabilities" and "the best practicable means at their disposal".

[160] *Certain Activities* Judgment, para. 104 ("… to fulfil its obligation to exercise due diligence in preventing significant transboundary harm, a State must, before embarking on an activity having the potential adversely to affect the environment of another State, ascertain if there is a risk of significant transboundary harm, which would trigger the requirement to carry out an environmental impact assessment") and para. 168 (reiterating the conclusion at para. 104); see further *Certain Activities* Judgment, Separate Opinion of Judge Owada, paras. 18 and 20-21.

[161] *Pulp Mills* Judgment, para. 204 ("it may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource. Moreover, due diligence, and the duty of vigilance and prevention which it implies, would not be considered to have been exercised, if a party planning works liable to affect the régime of the river or the quality of its waters did not undertake an environmental impact assessment on the potential effects of such works").

transboundary context".[162] It follows that activity within a State's territory, jurisdiction or control causing such a significant adverse impact in another State's territory or in areas beyond national jurisdiction similarly engages the obligation.

71. This duty has its genesis in domestic law,[163] but has been widely recognised in international instruments and guidelines,[164] most relevantly, the UNFCCC.[165] The ICJ considers it to form part of "general international law".[166] However, neither the scope and content of an assessment, nor its result in any given circumstance, is determined by international law. Save where specific treaty obligations address the matter,[167] States must make a "[d]etermination of the content … in light of the specific circumstances of each case",[168] including pursuant to relevant domestic laws and policies.

72. In UNCLOS, the obligation to undertake an assessment of activities potentially causing significant harm to the marine environment is set out in Article 206.[169] This provision is a specific application of States Parties' preventative duty in Article 194(2).[170] As the Seabed Disputes Chamber of ITLOS has previously acknowledged,[171] the duty is generally framed and the process is largely unparticularised. Notably, Article 206 does not dictate what steps States Parties should and should not take in assessing particular risks of harm or particular circumstances. The following general observations may nonetheless be made about the requirements of Article 206:

    a. **First**, Article 206 refers to the obligation to "assess" (rather than an obligation to undertake a specific type of assessment).

[162] E.g., the United Nations Convention on Environmental Impact Assessment in a Transboundary Context, signed in Espoo on 25 February 1991 (entry into force on 10 September 1997), 1989 UNTS 309 ('**Espoo Convention**').

[163] See, e.g., National Environmental Policy Act of 1969 (United States).

[164] See, e.g., UN Environmental Programme ('**UNEP**') Principles on Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, 17 ILM 1094, UN Doc. UNEP/IG12/2 (1978), Principle 4; Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution, signed at Kuwait on 23 April 1978, 1140 UNTS 133, Article XI; UNEP Goals and Principles of Environmental Impact Assessment, UNEP/GC/DEC/14/25, 14th Sess (1987); Rio Declaration, Principle 17; Espoo Convention; North American Agreement on Environmental Cooperation, 8 September 1993, (1993) 32 ILM 1480, Articles 2(1)(e) and 10(7)(a); Convention on Biological Diversity, Article 14(1).

[165] UNFCCC, Article 4(1)(f).

[166] *Pulp Mills*, Judgment, para. 204; *Certain Activities*, Judgment, paras. 104, 152, 162, 168. It has been recognised that the obligation to prepare an environmental impact assessment is customary in nature: see *Certain Activities*, Judgment, Separate Opinion of Judge *ad hoc* Dugard, para. 17; *Activities in the Area*, para. 145.

[167] *Certain Activities*, Judgment, para. 104.

[168] *Ibid.*

[169] See para. 55.d above.

[170] *South China Sea (Merits)*, para. 948 ("Article 206 has been described as … a "particular application of the obligation on states, enunciated in Article 194(2)"").

[171] *Activities in the Area*, Advisory Opinion, para. 149 ("… article 206 of the Convention gives only few indications of this scope and content …').

b. **Second**, the Article 206 duty applies to "planned activities", implying that the assessment must be conducted before the activity takes place.[172] Unlike the Espoo Convention,[173] UNCLOS does not define the "activities" for which an assessment must be prepared. "Activity" is a general term.

c. **Third**, the threshold is that the planned activity is under the State's "jurisdiction or control". This means that States Parties' obligations may be engaged in connection with activities in areas beyond national jurisdiction.[174]

d. **Fourth**, the threshold for an assessment is that the planned activity "may cause substantial pollution of or significant and harmful changes to the marine environment". The language of "substantial pollution" identifies a different threshold than other instruments.[175] This may not be practically significant, as the two parts of the test are disjunctive. This means that the potentially lower (and more usual) threshold of "significant and harmful" will apply in any event. There is no requirement in UNCLOS that potential harm be transboundary before the obligation is attracted.

e. **Fifth**, if the State has "reasonable grounds for believing" that this threshold is met, it is obliged to carry out an assessment. The language of "reasonable grounds" invites an objective assessment of State conduct in this regard.[176]

f. **Sixth**, the State's obligation under Article 206 is tempered by the language "as far as practicable", which corresponds with the "best practical means" language in Article 194(1).[177]

g. **Seventh**, once an assessment has been prepared, the State is obliged to communicate it in accordance with Article 205. This obligation has been described

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[172] *Pulp Mills* Judgment, para. 205 ("… an environmental impact assessment must be conducted prior to the implementation of a project"); *Certain Activities*, Judgment, paras. 104 ("before embarking on an activity"), p. 153 ("prior to undertaking an activity") and p. 161 ("the obligation to conduct an environmental impact assessment requires an *ex ante* evaluation of the risk"). However, the assessment obligation is a "continuous one"; it may require monitoring "throughout the life of the project", if necessary: *Certain Activities*, Judgment, para. 161; see also *Pulp Mills* Judgment, para. 205 ("once operations have started and, where necessary, throughout the life of the project, continuous monitoring of its effects on the environment shall be undertaken"). This is particularly significant in the present context, where the status quo is dangerous.

[173] Espoo Convention, Appendix I.

[174] *Activities in the Area*, Advisory Opinion, para. 148 ("… the language used seems broad enough to cover activities in the Area even beyond the scope of the Regulations. The Court's reasoning in a transboundary context may also apply to activities with an impact on the environment in an area beyond the limits of national jurisdiction; and the Court's references to "shared resources" may also apply to resources that are the common heritage of mankind").

[175] Compare Rio Declaration, Principle 17; Espoo Convention, Article 2(3); and Convention on Biological Diversity, Article 14.

[176] See *Certain Activities*, Judgment, para. 153, which refers to "an objective evaluation of all the relevant circumstances". These circumstances will include "the nature and magnitude of the project and the context in which it [is] to be carried out": para. 155.

[177] See para. 54.c above.

as an "absolute" obligation.[178] Article 205 requires that the State "shall publish reports … or provide such reports … to the competent international organizations which should make them available to all States".[179] It therefore clearly intends that reports are made publicly available for the consideration of all States.

a. Application to climate change and ocean acidification

73. Against that background, the United Kingdom's position is that States' assessment obligations are engaged under Part XII of UNCLOS in at least two ways:

    a. Article 206 requires States Parties to assess, as far as practicable, activities within their jurisdiction or control where there exist reasonable grounds for believing that those activities may substantially pollute the marine environment, or otherwise cause significant and harmful changes to it. Accordingly, State "activity" that may cause significant anthropogenic greenhouse gas emissions requires an assessment to be undertaken, with a view to minimising adverse effects of those emissions, which then must be reported in accordance with Article 205. This interpretation of Article 206 is consistent with Article 4(1)(f) of the UNFCCC, which requires States Parties to "[t]ake climate change considerations into account … in their relevant … policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimizing adverse effects…".[180]

    b. States are obliged to establish a framework of domestic laws and regulations to ensure that entities in their jurisdiction or under their control undertake assessments for activities that may cause significant anthropogenic greenhouse gas emissions, and that such assessments are duly considered by the relevant State. This is a consequence of the due diligence standard that applies pursuant to Article 206. It is also consistent with States' law-making obligations under Article 212 (discussed above).

74. States Parties are also required by Article 204(2) to monitor ("keep under surveillance") the effects of activities which they permit, or engage in, so as to determine whether these activities are likely to pollute the marine environment (i.e., in the context under consideration here, likely to result in the significant emission of greenhouse gases which would then be absorbed into the marine environment). This obligation may be satisfied by a State putting in place an appropriate legal or regulatory framework to monitor greenhouse gas emissions. This is consistent with the requirements of the due diligence standard (see paras. 65-67 above) and with Article 212(1) (see paras. 54.f and 69 above).

[178] *South China Sea (Merits)*, para. 948 ("the obligation to communicate reports of the results of the assessments is absolute").

[179] The UN Division for Ocean Affairs and the Law of the Sea published a list of competent organisations under Article 205 in Law of the Sea Bulletin No. 31 (1996): https://www.un.org/depts/los/doalos_publications/LOSBulletins/bulletinpdf/bulletinE31.pdf

[180] Although the language of Article 206 captures future State activities (*viz*. "planned activities"), States Parties are also obliged to monitor existing activities under Article 204 (see para. 74 below).

B. Second relevant consideration: precautionary principle

75. The precautionary principle appeared in various international environmental instruments in the 1980s.[181] It was included in the Rio Declaration in 1992 in the following terms: "In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall be not used as a reason for postponing cost-effective measures to prevent environmental degradation".[182] The principle has since been adopted in a variety of treaties specifically concerning the marine environment.[183]

[181] Reference was made to precaution as early as 1985: see Vienna Convention for the Protection of the Ozone Layer, signed at Vienna on 22 March 1985 (entry into force on 22 September 1988), 1513 UNTS 293 ('**Ozone Convention**'), Preamble, 5th para. ("Mindful also of the precautionary measures for the protection of the ozone layer which have already been taken at the national and international levels"); this was followed in the Montreal Protocol, Preamble, 8th para. ("Noting the precautionary measures for controlling emissions of certain chlorofluorocarbons that have already been taken at national and regional levels"); Ministerial Declaration of the Second International Conference on the Protection of the North Sea (25 November 1987) 27 ILM 835 (1988), para. VII ("… in order to protect the North Sea from possibly damaging effects of the most dangerous substances, a precautionary approach is necessary …"); Bergen Ministerial Declaration on Sustainable Development in the UN Economic Commission for Europe (UNECE) Region, 16 May 1990, para. 7 ("In order to achieve sustainable development, policies must be based on the precautionary principle …").

[182] See also Agenda 21, para. 17.21 ("This requires new approaches to marine and coastal area management and development, at the national, subregional regional and global levels, approaches that are integrated in content and are precautionary and anticipatory in ambit").

[183] See, e.g., (1) Convention for the Protection of the Marine Environment of the North-East Atlantic, signed at Paris on 22 September 1992 (entry into force on 25 March 1998), 2354 UNTS 67 ('**OPSPAR Convention'**), Article 2(2)(a) ("The Contracting Parties shall apply … the precautionary principle, by virtue of which preventive measures are to be taken when there are reasonable grounds for concern that substances or energy introduced, directly or indirectly, into the marine environment may bring about hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea, even when there is no conclusive evidence of a causal relationship between the inputs and the effects"); (2) Convention on the Protection of the Marine Environment of the Baltic Sea Area, signed in Helsinki on 17 March 1992 (entry into force on 6 October 1996) 1936 UNTS 269, Article 3(2) ("The Contracting Parties shall apply the precautionary principle, i.e., to take preventive measures when there is reason to assume that substances or energy introduced, directly or indirectly, into the marine environment may create hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea even when there is no conclusive evidence of a causal relationship between inputs and their alleged effects"); (3) Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, signed in Barcelona on 16 February 1976 (entry into force on 12 February 1978), Article 4(3)(a) ("apply, in accordance with their capabilities, the precautionary principle, by virtue of which where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation"); (4) Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean, signed at Auckland on 14 November 2009 (entry into force on 24 August 2012) 2899 UNTS 211 ('**SPRFMO Convention**'), Article 3(1)(b) ("apply the precautionary approach") and (2)(a) ("The precautionary approach as described in the 1995 Agreement and the Code of Conduct shall be applied widely to …").

76. Although its status[184] and precise content[185] are unsettled, the precautionary principle is generally understood to mean that States should not discount preventative measures on the basis that there is a lack of conclusive evidence about the nature, extent and consequences of identified harm to the environment, the degree of risk of that harm eventuating, or the efficacy of the preventative measures. The appropriateness of a particular measure is an inherently fact-sensitive question to be assessed in the particular circumstances.

77. The precautionary principle has not been expressly incorporated in UNCLOS. However, it remains relevant to the application of Part XII in a variety of ways:

    a. The language "likely to result in … deleterious effects" in the definition of "pollution of the marine environment" (Article 1(1)(4)[186]), read together with the obligation to take necessary measures to prevent, reduce and control such pollution in Article 194, reflects the precautionary principle.[187] This is because the definition does not require any certainty about those resulting deleterious effects.[188]

    b. The obligation to carry out an assessment in Article 206 similarly reflects the precautionary principle, on the basis that "reasonable grounds for believing" triggers the threshold for undertaking a preliminary assessment, as opposed to a threshold requiring any kind of certainty (see para. 72.e above).

    c. The 1995 Fish Stocks Agreement, which is an implementing agreement under UNCLOS, specifically identifies the precautionary principle as relevant to its application.[189]

    d. The UNFCCC also adopts the precautionary principle.[190] In the context of climate change, States Parties to UNCLOS are to have regard to the UNFCCC, and more

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[184] The Seabed Disputes Chamber has observed that there is "a trend towards making this approach part of customary international law": *Activities in the Area*, Advisory Opinion, para. 135. See also the World Trade Organization Reports of the Panel on *European Communities — Measures Affecting the Approval and Marketing of Biotech Products*, WT/DS291/R, WT/DS292/R and WT/DS293/R, 29 September 2006, https://www.worldtradelaw.net/document.php?id=reports/wtopanels/ec-biotech(panel).pdf&mode=download, para 7.89, which describes the legal status of the principle as "unsettled".

[185] In particular, some instruments refer to a standard of "lack of full scientific uncertainty": e.g. Rio Declaration, Principle 15; whereas others set the level of uncertainty at a threshold of "no conclusive evidence": see, e.g., OSPAR Convention, Article 2.2.

[186] See above, para. 31.

[187] See Marr, The Precautionary Principle in the Law of the Sea (2003), p. 52, referring to a "precautionary spirit" in some of the provisions of the Convention (including Article 1(1)(4)).

[188] It is noted that the definition of pollution advanced by GESAMP referred to "resulting in such deleterious effects", but was replaced by the phrase "which results or is likely to result" in the amendments proposed in 1976: see Virginia Commentary, p. 33, para. 1.6. See above, para. 33.e.

[189] Fish Stocks Agreement, Article 5(c) ("apply the precautionary approach in accordance with Article 6"); Article 6(2) ("States shall be more cautious when information is uncertain, unreliable or inadequate. The absence of adequate scientific information shall not be used as a reason for postponing or failing to take conservation and management measures"). It is also referred to in the Sulphides Regulations, regulation 33, para.2 and Annex 4, section 5.1, and the Nodules Regulations, regulation 31, para. 2.

[190] UNFCCC, Article 3(3) ("The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible

particularly its Article 3(3), as part of the generally accepted international rules and standards (GAIRS) under Article 212(1) or Article 207(1) of UNCLOS, or when interpreting their obligations under Part XII pursuant to Article 31(3)(c) of the Vienna Convention.

e. Like the ICJ,[191] ITLOS has accepted the relevance of the precautionary principle to the interpretation of States Parties' obligations to exercise due diligence in protecting and preserving the marine environment. This link was "implicit"[192] in its provisional measures order in the *Southern Bluefin Tuna Cases*.[193] Moreover, ITLOS's repeated recognition of the parties' duty to exercise "prudence and caution"[194] is accepted as being "equivalent to … applying a precautionary approach".[195] This was more directly recognised in the *Activities in the Area* Advisory Opinion, where the Seabed Disputes Chamber observed that "the precautionary approach is also an integral part of the general obligation of due diligence of sponsoring States" and gave instructive guidance concerning its application. Specifically, the Chamber indicated that scientific evidence that demonstrated "plausible indications of potential risks" would generally be sufficient to trigger a State's obligation to exercise due diligence to avoid harm, and that disregard of such risks would constitute a failure to comply with the precautionary principle.[196]

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damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost. …").

[191] The ICJ has indicated that the precautionary principle may be relevant to the interpretation and application of a treaty concerning a shared resource: *Pulp Mills* Judgment, para. 164.

[192] *Activities in the Area*, Advisory Opinion, para. 132. Several Separate Opinions in *Southern Bluefin Tuna* also make clear that the precautionary principle was contemplated: the Separate Opinion of Judge Laing, paras. 13 and 17; Separate Opinion of Judge Treves, paras. 8-9; Separate Opinion of Judge *ad hoc* Shearer, pp. 326-327.

[193] *Southern Bluefin Tuna* Order, para. 77 ("…the parties should in the circumstances act with prudence and caution to ensure that effective conservation measures are taken…"), para. 79 ("… there is scientific uncertainty regarding measures to be taken to conserve the stock of southern bluefin tuna…"), para. 80 ("…although the Tribunal cannot conclusively assess the scientific evidence presented by the parties, it finds that measures should be taken as a matter of urgency").

[194] *MOX Plant (Ireland v United Kingdom), Provisional Measures, Order of 3 December 2001, ITLOS Reports 2001,* p. 95 ('***MOX Plant* Order**'), para. 84; *Land Reclamation in and around the Straits of Johor (Malaysia v Singapore), Provisional Measures, Order of 8 October 2003, ITLOS Reports 2003*, p. 10 ('***Land Reclamation* Order**'), para. 99; *M/V "Louisa" (Saint Vincent and the Grenadines v. Kingdom of Spain), Provisional Measures, Order of 23 December 2010, ITLOS Reports 2008-2010,* p. 58, para. 77*;* para. 72; *Delimitation of the Maritime Boundary in the Atlantic Ocean (Ghana/Côte d'Ivoire), Provisional Measures, Order of 25 April 2015, ITLOS Reports 2015*, p. 146 ('***Ghana/ Côte d'Ivoire* Order**'), para. 72; see also *Activities in the Area*, Advisory Opinion, para. 132.

[195] Statement by former ITLOS President Golitsyn to the 69th Session of the UN General Assembly, 9 December 2014, para. 22: https://www.itlos.org/fileadmin/itlos/documents/statements_of_president/Golitsyn/Statement_GA_09122014_FINAL_EN.pdf.

[196] *Activities in the Area*, Advisory Opinion, para. 131 ("This obligation applies in situations where scientific evidence concerning the scope and potential negative impact of the activity in question is insufficient but where there are plausible indications of potential risks. A sponsoring State would not meet its obligation of due diligence if it disregarded those risks. Such disregard would amount to a failure to comply with the precautionary approach.")

78. In the particular context of climate change and ocean acidification, the relevance of the precautionary principle is in many respects diminishing. This is because the science clearly establishes that the introduction of anthropogenic greenhouse gases and heat results in deleterious effects on the marine environment, which will continue to occur if appropriate measures are not taken and taken promptly.[197] However, insofar as there is any remaining scientific uncertainty as to the nature or extent of the harm, the risk of it eventuating or eventuating as a result of any particular activity, or the efficacy of mitigatory measures, the precautionary principle will likely have a role to play in informing the content of the due diligence standard under Part XII obligations. The precautionary principle may also require States to be cautious in using emerging technology to seek to mitigate the effects of climate change and ocean acidification.[198]

C. Third relevant consideration: duty of cooperation on the international plane

79. The duty to cooperate is not unique to international environmental law.[199] It has a particular application in preventing environmental harm, the relevance of which the United Kingdom recognises in the specific context of Part XII of UNCLOS. As the ICJ has recognised, "it is by co-operating that States … can jointly manage the risks of damage to the environment".[200] The Stockholm Declaration likewise describes "[c]o-operation through multilateral or bilateral arrangements" as "essential to effectively control, prevent, reduce and eliminate adverse environmental effects".[201] Environmental treaties regularly impose specific obligations to cooperate on the international plane,[202]

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[197] See, e.g., para. 41.a above as regards ocean warming. As noted there, it is virtually certain that the global ocean has warmed since 1970. It is very likely that this has anthropogenic causes: IPCC, 2019: Summary for Policymakers, para. A.2.1. It is virtually certain that the ocean will transition to unprecedented conditions with increased temperatures and further acidification in the 21st century (later noting that "[t]he rates and magnitudes of changes will be smaller under scenarios with low greenhouse gas emissions (very likely)": IPCC, 2019: Summary for Policymakers, para. B.2.

[198] See, e.g., 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (as amended in 2006). It was amended to addresses climate change mitigation technologies, namely carbon capture and storage, in Annex 1, para. 1.8, which includes "[c]arbon dioxide streams from carbon dioxide capture processes for sequestration" as wastes or other matter that may be considered for dumping. Paragraph 1 of Annex 1 expressly references "the Objectives and General Obligations of this Protocol set out in articles 2 and 3", and Article 3(1) adopts the precautionary principle as follows: "In implementing this Protocol, Contracting Parties shall apply a precautionary approach to environmental protection from dumping of wastes or other matter whereby appropriate preventative measures are taken when there is reason to believe that wastes or other matter introduced into the marine environment are likely to cause harm even when there is no conclusive evidence to prove a causal relation between inputs and their effects."

[199] See, e.g., Declaration on Principles of International Law Concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations, UNGA Res 2625 (XXV).

[200] *Pulp Mills* Judgment, para. 77.

[201] Stockholm Declaration, Principle 24; see also Rio Declaration, Principles 7 and 27.

[202] Fish Stocks Agreement, Article 8 ("Cooperation for conservation and management"); Stockholm Convention on Persistent Organic Pollutants, signed in Stockholm on 22 May 2001 (entry into force on 17 May 2004), 2256 UNTS 119, Article 11 ("The Parties shall, within their capabilities at the national and international levels encourage and/or undertake … cooperation …"); SPRFMO Convention, Article 31 ("Cooperation with Other Organisations"); see also Article 3(1)(a)(vi) ("cooperation and coordination among Contracting Parties shall be promoted …").

often with or through competent international organisations.[203] This includes the UNFCCC, which expressly acknowledges that "the global nature of climate change calls for the widest possible cooperation by all countries" and imposes specific obligations on its contracting parties to cooperate.[204]

1. International cooperation under UNCLOS

80. Part XII[205] of UNCLOS is premised on international cooperation. As explained at para. 8 above, it sets out a framework of obligations, which anticipates more specific duties being identified in complementary domestic laws and international instruments. In order to make this structure function effectively, States Parties must cooperate bilaterally and multilaterally to establish the necessary legal frameworks. Specifically:

a. Article 197 requires States Parties to "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".[206]

b. This general obligation is reinforced by Article 212(3), which obliges States Parties to endeavour to develop global and regional legal frameworks to address pollution from or through the atmosphere.[207] This is to be done by "acting especially through competent international organizations or diplomatic conference" and thus emphasises formal multilateral cooperation.

c. Similarly, Article 201 requires cooperation – again "directly or through competent international organizations" – to establish scientific criteria relevant to the formulation and elaboration of such global and regional legal frameworks.

d. Article 194(1) further obliges States Parties to "take, individually or jointly as appropriate, all measures … [and] endeavour to harmonize their policies".[208] This provision, too, is premised on international cooperation, whether directly or through international organisations.

e. Part XII of UNCLOS additionally contains obligations to cooperate beyond the creation or amendment of norms. These include inter-State cooperation for the

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[203] Convention on Biological Diversity, Article 5 ("Each Contracting Party shall, as far as possible and as appropriate, cooperate with other Contracting Parties, directly or, where appropriate, through competent international organizations …"); Ozone Convention, Article 2(2)(d) ("Co-operate with competent international bodies to implement effectively this Convention …").

[204] UNFCCC, Preamble, 6th para.; see the duties in Article 3(5); Article 4(1)(c), (d), (e), (g), (h), (i); Article 5(c) and Article 6(b). Cooperation remains "a critical enabler for achieving ambitious climate change mitigation goals and climate resilient development (high confidence)": see IPCC, 2023: AR6 SYR, para. 4.8.2.

[205] Outside Part XII, there is reference to the obligation to cooperate in relation to, e.g.: the conservation and management of living resources (Article 61(2) and Article 118); search and rescue (Article 98); States bordering enclosed or semi-enclosed seas (Article 123); marine scientific research (Article 143(3) and Article 242); and the development and transfer of technology (Article 144 and Article 266).

[206] See para. 55.b above.

[207] Alternatively see Article 207(4).

[208] See for example with respect to strategic assessments pursuant to Article 206.

purposes of notification of damage to the marine environment[209] and related contingency planning,[210] research and information sharing,[211] and providing scientific and technical assistance to developing States.[212]

81. Further, ITLOS has accepted the existence of the duty to cooperate, both under Part XII of UNCLOS, but also as a matter of international law more generally. In *MOX Plant*, the duty was described as "a fundamental principle in the prevention of pollution of the marine environment under Part XII of the Convention and general international law"[213] and was styled as the "*Grundnorm*" of Part XII.[214] It was also linked to the precautionary principle.[215]

2. Content of the duty of international cooperation

82. The terms of Part XII provide no real specificity as to how the duty of international cooperation is to be performed. The Tribunal's Order in *MOX Plant* indicates that, at the very least, the central element is "enter[ing] into consultations" with affected States, with a view to:[216]

a. exchanging information with States Parties regarding planned activities and their possible consequences (consistent with States' information-exchange obligation under Article 200);

[209] UNCLOS, Article 198 ("When a State becomes aware of cases in which the marine environment is in imminent danger of being damaged or has been damaged by pollution, it shall immediately notify other States it deems likely to be affected by such damage, as well as the competent international organizations.")

[210] UNCLOS, Article 199 ("In the cases referred to in article 198, States in the area affected, in accordance with their capabilities, and the competent international organizations shall cooperate, to the extent possible, in eliminating the effects of pollution and preventing or minimizing the damage. To this end, States shall jointly develop and promote contingency plans for responding to pollution incidents in the marine environment.")

[211] UNCLOS, Article 200 ("States shall cooperate, directly or through competent international organizations, for the purpose of promoting studies, undertaking programmes of scientific research and encouraging the exchange of information and data acquired about pollution of the marine environment").

[212] UNCLOS, Article 202 ("States shall, directly or through competent international organizations: (a) promote programmes of scientific, educational, technical and other assistance to developing States for the protection and preservation of the marine environment and the prevention, reduction and control of marine pollution … (b) provide appropriate assistance, especially to developing States, for the minimization of the effects of major incidents which may cause serious pollution of the marine environment; (c) provide appropriate assistance, especially to developing States, concerning the preparation of environmental assessments.")

[213] *MOX Plant* Order, para. 82; affirmed in *Land Reclamation* Order, para. 92; *Ghana/Côte d'Ivoire* Order, para. 73; *SRFC* Advisory Opinion, para. 140.

[214] *MOX Plant* Order, Separate Opinion of Judge Wolfrum, p. 135.

[215] *MOX Plant* Order, para. 84 ("… prudence and caution require that Ireland and the United Kingdom cooperate in exchanging information concerning the risks or effects of the operation of the MOX plant …").

[216] *MOX Plant* Order, para. 89, *dispositif* (1); see *Land Reclamation* Order, para. 106, *dispositif* (1) as a further example. See further *SRFC* Advisory Opinion, Separate Opinion of Judge Paik, para. 36 ("[t]he obligation to cooperate may include duties to notify, to exchange information, and to consult and negotiate").

b. monitoring the risks or effects of the operation of the planned activities for the affected marine environment (consistent with States' monitoring obligation under Article 204[217]); and

c. devising any necessary measures to prevent harm to the marine environment (consistent with States' general obligations under Articles 192, 194(2), 207(2) and 212(2)).

83. The obligation upon States Parties to provide scientific and technical assistance to developing States is equally relevant in this regard (see Article 202, cited above).

3. Application to climate change and ocean acidification

84. The United Kingdom's position is that the series of obligations of international cooperation set out in Part XII of UNCLOS have real significance in the context of climate change and ocean acidification. Of particular relevance is States Parties' obligation in Article 197 to cooperate in formulating and elaborating international rules for the protection and preservation of the marine environment, which extends to rule-making on the specific subjects of climate change and ocean acidification in effective diplomatic or international fora.[218] The cooperation for the purposes of Part XII can take many forms, but at least requires States Parties to engage with one another in good faith,[219] including through **(i)** the exchange of relevant data and information, **(ii)** the provision of technical assistance to developing States, **(iii)** monitoring the risks or effects of planned activities and communicating the results as necessary and **(iv)** participating in meaningful discussions conducted with a view to devising specific and effective measures to prevent further harm to the marine environment and to mitigate existing harm where possible.

D. Fourth relevant consideration: effectiveness

85. The concept of effectiveness has several relevant meanings. It is best known as a principle of treaty interpretation, with two relevant aspects: **(i)** a general sense of realising the objectives of a treaty; and **(ii)** the rule that a treaty should be accorded an interpretation which gives each of its terms meaning, rather than rendering any of them redundant.[220] Both are captured by the principle of good faith interpretation in Article 31(1) of the

[217] See para. 74 above.

[218] See also Article 212(3).

[219] See generally Article 300 of UNCLOS.

[220] This is often described as '*effet utile*' or by the Latin maxim '*ut res magis valeat quam pereat*'.

Vienna Convention[221] and are applied by the ICJ[222] and ITLOS.[223] Further, in the context of international environmental law, effectiveness also relates to the assessment of the efficacy of a regime, framework or measure.[224]

86. Part XII of UNCLOS embodies the concept of effectiveness in Sections 5 and 6 concerning "international rules and national legislation" and "enforcement" respectively.[225] The intent of these sections as a whole is to ensure that the Part XII regime is effective. Further, the specific language of "necessary" measures in Article 194(1), Article 194(2), Article 194(5) and Article 212(2)[226] underlines that States Parties are obliged to adopt measures that are effective in achieving the stated objective of preventing, reducing and controlling pollution from or through the atmosphere. This is also reflected in the enforcement provision corresponding to Article 212, which similarly requires States to "take other measures necessary" (Article 222). Further, ITLOS has been guided by considerations of "effectiveness" in interpreting measures required by other provisions of UNCLOS governed by a due diligence standard.[227]

87. The concept of effectiveness reinforces the need to take measures to remedy the effects of climate change and ocean acidification that are targeted, have regard to time frames (in particular in the context of best available science making clear the need for deep, rapid and sustainable cuts to emissions and the importance of having regard to tipping points[228]) and are as far-reaching and efficacious as possible.

E. Fifth relevant consideration: best available science

88. Best available science requires States to use the best scientific information available when implementing their obligations under UNCLOS. It is a concept that has specific relevance to the application of UNCLOS as a whole, including Part XII. Its application

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[221] Gardiner, Treaty Interpretation (2nd ed, 2015), p. 66.

[222] See, e.g., *Territorial Dispute*, para. 47 ("Any other construction would be contrary to the actual terms of Article 3 and would render completely ineffective the reference to one or other of those instruments in Annex 1"); *Kasikili/Sedudu Island*, para. 93 ("It can therefore be assumed that the reference expressly made, in this provision, to the "rules and principles of international law", if it is to be meaningful, signifies something else"); see more generally *Fisheries Jurisdiction (Spain v. Canada), Jurisdiction of the Court, Judgment, I.C.J. Reports 1998,* p. 432, para. 52 ("The Court was addressed by both Parties on the principle of effectiveness. Certainly, this principle has an important role in the law of treaties and in the jurisprudence of this Court").

[223] See, e.g., the reference to the principle in *M/V "Norstar" (Panama v Italy), Judgment, ITLOS Reports 2018-2019*, p. 10, para. 244, albeit that it was not ultimately relevant in that context.

[224] Andresen, 'Effectiveness' in Rajamani and Peel (eds), The Oxford Handbook of International Environmental Law (2nd ed, 2021), p. 988.

[225] See para. 54.e above.

[226] See also Article 207(2), as well as the wording "to the fullest extent possible" in Article 207(5).

[227] See *SRFC* Advisory Opinion, para. 210 ("… consultations … with a view to adopting effective measures necessary to coordinate and ensure the conservation and development of shared stocks"); para. 211 ("… the conservation and development of shared stocks in the exclusive economic zone of an SRFC Member State require from that State effective measures aimed at preventing over-exploitation …"); p. 214 ("… conservation and management measures, to be effective, should concern …") and p. 215 ("… in order to secure the effectiveness of the conservation and development measures …").

[228] For the climate system, 'tipping points' refers to a critical threshold when global or regional climate changes from one stable state to another stable state: IPCC, 2019: Glossary, p. 699.

is recognised in specific UNCLOS provisions, both in Part XII[229] and outside of it.[230] It is recognised in the Fish Stocks Agreement,[231] which as noted above is an agreement implementing UNCLOS. The Paris Agreement also makes several references to best available science.

89. Insofar as climate change and ocean acidification in respect of the marine environment are concerned:

a. ITLOS has acknowledged the relevance of best available science (i.e., "new scientific or technical knowledge") to the due diligence standard.[232]

b. Best available science is linked to the precautionary principle as it is the state of scientific knowledge that will inform, for example, whether particular prudence and caution are demanded with respect to a proposed course of action.

c. Best available science is also relevant to the application of the duty of cooperation, including in providing part of the context in which States make decisions as to **(i)** what information is to be shared,[233] **(ii)** what preventative measures are necessary and require consultations as part of a decision-making process as to whether they are pursued[234] and **(iii)** what specific assistance is to be provided to developing States.

d. Best available science is further relevant to the application of the principle of effectiveness as it constitutes part of the context in which States make decisions about the measures that are most likely to be effective in achieving the objective of preventing, reducing and controlling pollution and otherwise protecting and preserving the marine environment.

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[229] UNCLOS, Article 234 ("… Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence …").

[230] UNCLOS, Article 119(1)(a) ("States shall … take measures which are designed, on the best scientific evidence available to the States concerned, to maintain or restore populations of harvested species at levels …").

[231] Fish Stocks Agreement, Article 5(b) ("… ensure that such measures are based on the best scientific evidence available and are designed to maintain or restore stocks at levels capable of producing maximum sustainable yield …"); see also Article 6(3).

[232] *Activities in the Area*, Advisory Opinion, para. 117.

[233] Consistent with this, see Paris Agreement, Article 7 ("Parties should strengthen their cooperation on enhancing action on adaptation, taking into account the Cancun Adaptation Framework, including with regard to: (a) Sharing information, good practices, experiences and lessons learned, including, as appropriate, as these relate to science, planning, policies and implementation in relation to adaptation actions.").

[234] Consistent with this, see Paris Agreement, Article 4 ("In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science…."). See also Article 7(5) ("Parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be based on and guided by the best available science… .").

90. As noted above, the United Kingdom accepts that the current IPCC reports reflect best available science in the context of climate change and its effects on the marine environment.

CONCLUSION

91. For the reasons set out above:

a. The United Kingdom does not contend in this case that ITLOS lacks jurisdiction or that it should decline to exercise jurisdiction. It does, however, consider that there are matters of jurisdiction and discretion arising in this case calling for the very careful attention of ITLOS. The observations set out in this statement are advanced by the United Kingdom with a view to assisting ITLOS in these respects (see Chapter 1).

b. The United Kingdom considers that climate change (including ocean warming and sea level rise) and ocean acidification that are caused by anthropogenic greenhouse gas emissions into the atmosphere fall within the scope of Part XII of UNCLOS (see Chapter 2).

c. The United Kingdom considers that, accordingly, aspects of the Part XII regime in UNCLOS are engaged in respect of climate change and ocean acidification. In particular, Article 192 sets out the general obligation of States to protect and preserve the marine environment, with subsequent provisions within Part XII of UNCLOS providing more specific content to that general obligation, namely **(i)** provisions establishing a regime for the prevention, reduction and control of pollution of the marine environment and **(ii)** provisions addressing the protection and preservation of the marine environment more broadly (beyond measures to prevent, reduce and control pollution) (see Chapter 3(II)).

d. The United Kingdom submits that in the context of climate change and ocean acidification, the following five considerations are of particular importance when applying the relevant obligations contained in Part XII: **(i)** the due diligence standard; **(ii)** the precautionary principle; **(iii)** the duty of cooperation on the international plane; **(iv)** the concept of effectiveness; and **(v)** the concept of best available science (see Chapter 3(III)).

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