ANNEX 1

WRITTEN STATEMENT BY THE EUROPEAN UNION OF 15 JUNE 2023

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

(CASE NO. 31)

INTERNATIONAL TRIBUNAL FOR THE LAW OF THE SEA

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LIST OF ABBREVIATIONS AND ACRONYMS USED

BBNJ Agreement	Draft agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction
COP	Conference of the Parties
COSIS	Commission of Small Island States on Climate Change and International Law
EIA	Environmental Impact Assessment
GHG	Greenhouse gas
ICJ	International Court of Justice
IMO	International Maritime Organization
IPCC	Intergovernmental Panel on Climate Change
ITLOS, the Tribunal	International Tribunal for the Law of the Sea
MARPOL	International Convention for the Prevention of Pollution from Ships
PCA	Permanent Court of Arbitration
SEA	Strategic Environmental Assessment
EU	The European Union
UN	The United Nations
UNCLOS, LOSC, the Convention	The United Nation Convention on the Law of the Sea
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
VCLT	Vienna Convention on the Law of Treaties

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CHAPTER I

INTRODUCTION

1. On 28 March 2013, the International Tribunal for the Law of the Sea (hereinafter "ITLOS" or "the Tribunal") received a request for an advisory opinion from the Commission of Small Island States on Climate Change and International Law (hereinafter "COSIS"). The request was based on a Decision by COSIS, adopted by unanimity of its Members at the third meeting of COSIS on 26 August 2022, with which the COSIS referred the following legal questions to the Tribunal for an advisory opinion:

   "What are the specific obligations of State Parties to the United Nations Convention on the Law of the Sea (the "UNCLOS"), including under Part XII:

   (a) to prevent, reduce and control pollution of the marine environment in relation to the deleterious effects that result or are likely to result from climate change, including through ocean warming and sea level rise, and ocean acidification, which are caused by anthropogenic greenhouse gas emissions into the atmosphere?

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

2. The request was entered in the List of cases of ITLOS as Case No. 31.

3. By order of 16 December 2022, the President of ITLOS invited the Contracting Parties to UNCLOS to present written statements on the questions submitted to the Tribunal in Case No. 31. In accordance with Article 133(3) of the Rules of the Tribunal, the President of the Tribunal fixed 16 May 2023 as the time limit within which written statements may be presented to ITLOS[1]. By Order of 15 February 2023, the President of ITLOS extended the time limit to present such statements by one month, until 16 June 2023[2].

[1] ITLOS, *Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law*, Order 2022/4 of 16 December 2022.

[2] ITLOS, *Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law*, Order 2023/1 of 15 February 2023.

4. The European Union[3], a Party to the United Nations Convention on the Law of the Sea (hereinafter "UNCLOS")[4], respectfully submits the following observations.

[3] The European Union, which has replaced and succeeded the European Community, is founded on the Treaty on European Union and on the Treaty on the Functioning of the European Union (as last amended) and has legal personality. Its Member States are: Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden.

[4] See Decision 98/392/EC of the Council of 23 March 1998 concerning the conclusion by the European Community of the United Nations Convention of 10 December 1982 on the Law of the Sea and the Agreement of 28 July 1994 relating to the implementation of part XI thereof, Official Journal of the European Union, OJ L 179 of 23 June 1998 (**Annex 1**).

CHAPTER II

JURISDICTION AND ADMISSIBILITY

I. Jurisdiction

5. This written statement is without prejudice to the question of the jurisdiction of the Tribunal to examine the request for an advisory opinion in respect of the questions raised before it.

II. Admissibility

6. Pursuant to Article 138 (1) of the Rules of the Tribunal, *"[t]he Tribunal may give an advisory opinion"*, which implies *inter alia* that it has discretion in regard to the admissibility of individual questions.

7. This written statement is without prejudice to the question of the admissibility of the questions referred to the Tribunal by COSIS.

CHAPTER III

RESPONSES TO THE QUESTIONS

I. Substance

A. Structure of the Statement by the European Union on the proposed replies to the questions by the COSIS

8. In order to answer the questions in a useful manner, it is necessary to determine whether, and if so to what extent, UNCLOS, and notably Part XII thereof, establishes obligations requiring its Parties to take action in relation to climate change. To this end, the written statement will proceed first by analysing the applicable law, and then by considering these three fundamental questions: (i) What is the specific content of the obligations of Contracting Parties to protect and preserve the marine environment against climate change impacts, such as ocean warming, ocean acidification and sea-level rise, which are caused by Greenhouse Gas (GHG) emissions?; (ii) Does the term "*pollution of the marine environment*" comprise GHG emissions?; (iii) If the reply to (ii) is in the affirmative, what is the precise content of the obligations of Contracting Parties to prevent, reduce and control GHG emissions, with a view to limiting the deleterious effects for the marine environment that result or are likely to result from climate change caused by such emissions?

9. This statement does not have the ambition to analyse in detail the content of each and every obligation under Part XII of UNCLOS related to the protection and preservation of the marine environment, nor to address matters concerning the delimitation of jurisdiction between flag and coastal States in relation to the obligations of Part XII of UNCLOS, which appear to exceed the scope of the questions referred to the Tribunal.

10. Question (a) referred to ITLOS reflects the wording of Article 194(1) of UNCLOS, according to which *"States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection"*. Question (b) reflects the wording of Article 192 of UNCLOS, according to which *"States have the obligation to protect and preserve the marine environment"*.

11. Considering that Article 192 of UNCLOS constitutes the primary and general obligation of Part XII, setting the basis for all the obligations further specified in its following provisions, the European Union's written statement should consider question (b) first.

B. Applicable law

12. The law applicable to the questions referred to the Tribunal stems from three sets of sources:

    a. UNCLOS itself, to which the questions explicitly refer;
    b. other applicable rules of international law, referred to explicitly or implicitly by the provisions of Part XII of UNCLOS Part XII, among which the most relevant for the purpose of replying to the questions referred are those laid down by the United Nations Framework Convention on Climate Change (UNFCCC)[5] and the Paris Agreement[6];
    c. the Vienna Convention on the Law of Treaties (VCLT), which is particularly relevant to define the scope of the definition of 'pollution of the marine environment' enshrined in Article 1(1)(4) of UNCLOS.

13. These sets of applicable rules are inter-linked, and their relation is central to reply to the questions referred. Indeed, UNCLOS, which is considered to be the "constitution of the oceans", is broadly recognised as a *"living treaty"*[7] which needs to be interpreted in light of other international legal instruments supplementing it and therefore to be applied having regard to subsequent international law and policy developments[8]. This feature is particularly relevant with regard to Part XII of UNCLOS, whose objective to protect and preserve the marine environment is largely achieved *"by advancement (furtherance) of the Convention in regional treaties and regulations, in which individual and regional factors can be taken into account, and in national laws relating to the internal waters, the territorial sea and the respective EEZ transposing the obligations of Part XII"*[9]. This feature is therefore a central element to consider when replying to the questions referred to ITLOS.

14. As concerns the questions at issue, the openness of Part XII of UNCLOS to other international legal instruments and regimes is reflected in particular in three sets of provisions of Part XII of UNCLOS, namely: (1) Articles 192 and 194, which constitute the primary and general obligations of Part XII and are characterised by broad terms and due diligence obligations, whose interpretation is to be informed by other international law principles and provisions; (2) the source-specific obligations of Section 5 of Part XII of UNCLOS, which explicitly refer to *"internationally agreed rules, standards and recommended practices and procedures"* external to UNCLOS, which are to be considered or to be taken into account in order to comply with those obligations under UNCLOS; and (3) Article 237, which acknowledges and upholds the role of *"agreements which may be concluded in furtherance of the general principles set forth in this Convention"*, hence confirming UNCLOS's intention to coordinate and integrate different legal regimes to substantiate its own provisions.

5 United Nations Framework Convention on Climate Change, New York, 9 May 1992, UN Treaty Series No. 30822.

6 Paris Agreement, 12 December 2015, UN Treaty Series No. 54113.

7 See in this regard: T. Stephens, *Law of the Sea: UNCLOS as a Living Treaty,* Barrett, Jill, and Barnes, Richard (eds.), *British Yearbook of International Law*, 2016, pages 225–231, Vol. 86, Issue 1.

8 See in this regard: A. Boyle, *Protecting the Marine Environment from Climate Change: The LOSC Part XII Regime*, Johansen, E., Busch, S., and. Jakobsen, I. (eds), *The Law of the Sea and Climate Change: Solutions and Constraints*, Cambridge: Cambridge University Press, 2020, page 84.

9 A. Proelss, *United Nations Convention on the Law of* the Sea*: A Commentary*, C.H. Beck; Hart; Nomos, 2017, page 1281.

15. The VCLT guides the interpretation of the general obligations in Article 192 and 194 in so far the *"context"* and *"object and purpose"* of UNCLOS for the purpose of Article 31(1) VCLT help defining the scope of the definition of *"pollution of the marine environment",* which is key to answer question (a) referred to the Tribunal.

C. Question (b): What are the specific obligations of State Parties to UNCLOS, including under Part XII, to protect and preserve the marine environment in relation to climate change impacts, including ocean warming and sea level rise, and ocean acidification?

16. Article 192 of UNCLOS imposes an obligation on States to protect and preserve the marine environment. This constitutes the primary and general obligation of Part XII of UNCLOS, which the subsequent provisions of Part XII of UNCLOS further develop and detail.

17. In *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC),* this Tribunal has already had the opportunity to clarify that the obligation enshrined in Article 192 UNCLOS is a duty of due diligence[10], or an obligation of conduct, rather than of result. This means that Article 192 UNCLOS does not provide for an obligation of State Parties to necessarily *achieve* compliance with the requirement to protect and preserve the marine environment, but merely to *take all necessary measures to ensure* compliance with that requirement.

18. In the *South China Sea Arbitration*, the Arbitral Tribunal found that the obligation under Article 192 UNCLOS features a dual nature, as it "*extends both to "protection" of the marine environment from future damage and "preservation" in the sense of maintaining or improving its present condition"* and hence encompasses both *"the positive obligation to take active measures to protect and preserve the marine environment"* and *"the negative obligation not to degrade the marine environment"*[11].

19. Thereby the Arbitral Tribunal clarified that Article 192 of UNCLOS also covers the protection of the marine environment from *future* damage. This should not, however, be construed as a duty to anticipate any hypothetical risk, but rather as a *"duty to prevent, or at least mitigate significant harm to the environment"*[12] in accordance with a standard of due diligence informed – as discussed below– by applicable international law and other provisions of UNCLOS.

20. Further, ITLOS has already clarified that the precise content of due diligence obligations varies depending on the circumstances of the specific case and notably the level of risk related

[10] ITLOS, *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC),* Case Nº 21, Advisory Opinion of 2 April 2015, paragraph 219. See also: Permanent Court of Arbitration (PCA), *The South China Sea Arbitration (The Republic of Philippines v. The People's Republic of China),* Case Nº 2013-19, Award of 12 July 2016, paragraph 959 (hereinafter 'the *South China Sea Arbitration*')

[11] PCA, *The South China Sea Arbitration*, Case Nº 2013-19, Award of 12 July 2016, paragraph 941.

[12] Ibidem.

to the activity at stake[13] requiring, however, *"the adoption of appropriate rules and measures but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to the public and private operators"*[14].

21. Finally, in terms of the object of protection, Article 192 UNCLOS covers the preservation and protection of the marine environment *per se,* beyond the issue of pollution. Indeed, as already clarified by the ITLOS *"living resources and marine life are part of the marine environment"*[15] and *"the conservation of the living resources of the sea is an element in the protection and preservation of the marine environment"*[16]. Further, the Arbitral Tribunal in the *South China Sea Arbitration* found that Article 192 UNCLOS *"is given particular shape in the context of fragile ecosystems by Article 194(5)"*[17]. The fulfilment of such duty of due diligence may for instance comprise the establishment of marine protected areas[18]. These findings resonate with the words of the ICJ – then applied specifically to Article 192 UNCLOS in the *South China Sea Arbitration*[19] – according to which *"the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn. The existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment"*[20].

22. Such obligation to protect and preserve the living and non-living marine resources also applies and is particularly important in relation to threats posed by the effects of climate change, as it essentially requires States to enhance the adaptation capacities of marine ecosystems vis-à-vis those effects[21].

[13] ITLOS, *Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area (Request for Advisory Opinion submitted to the Seabed Disputes Chamber),* Case Nº 17, Advisory Opinion of 1 February 2011, paragraph 117.

[14] Ibidem, paragraph 115, citing ICJ, *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment of 20 April 2010, I.C.J. Reports 2010, p. 18, paragraph 197.

[15] ITLOS, *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC) (Request for Advisory Opinion submitted to the Tribunal)*, Case Nº 21, Advisory Opinion of 2 April 2015, paragraph 216.

[16] ITLOS, *Southern Bluefin Tuna (New Zealand v. Japan; Australia v. Japan)*, List of cases: Nos. 3 and 4, Order of 27 August 1999 (Provisional Measures), ITLOS Reports 1999, p. 280, at page 295, para. 70.

[17] PCA, *South China Sea Arbitration,* paragraph 959. In particular, the Tribunal considered that in this context *"Article 192 imposes a due diligence obligation to take those 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"".*

[18] See in this regard: PCA, *Chagos Marine Protected Area Arbitration (Mauritius v. United Kingdom)*, Case Nº 2011-03, Award of 18 March 2015, paragraph 538, in relation to Article 194(5) of UNCLOS, which can be considered as reflecting the broader obligation under Article 192 UNCLOS.

[19] PCA, *South China Sea Arbitration,* paragraph 941.

[20] The ICJ, *Legality of the Threat of Use of Nuclear Weapons*, Advisory Opinion, ICJ Reports 1996, p. 226 at page 240, paragraph 29.

[21] See in this regard: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - EU Biodiversity Strategy For 2030 Bringing Nature Back Into Our Lives, COM(2020) 380 final (**Annex 2**), page 2: *"nature-based solutions, such as*

23. Further, the content of this obligation of due diligence *"is informed by the other provisions of Part XII and other applicable rules of international law"*[22]. Indeed, *"[t]he content of the general obligation in Article 192 is further detailed in the subsequent provisions of Part XII, including Article 194, as well as by reference to specific obligations set out in other international agreements, as envisaged in Article 237 of the Convention"*[23].

24. Other rules of international law to be taken into account in defining the obligation of Article 192 UNCLOS include the principle of prevention of environmental harm, which according to the ICJ *"has its origins in the due diligence that is required of a State in its territory"* and constitutes customary international law[24], and the precautionary principle[25], as reflected notably in the Rio Declaration on Environment and Development[26], which may lower the minimum threshold at which States are required to take action, albeit leaving them discretion as to what action is to be taken[27].

25. Taken together, these principles notably require States to exercise their best efforts to formulate and implement *"policies designed to prevent significant transboundary harm or to minimize the risk thereof"* [28], exercise prudence and *"review their obligations of prevention in a continuous manner to keep abreast of the advances in scientific knowledge"*[29] according to their capabilities[30].

protecting and restoring wetlands, peatlands and coastal ecosystems, or sustainably managing marine areas, forests, grasslands and agricultural soils, will be essential for emission reduction and climate adaptation".

22 PCA, *South China Sea Arbitration,* paragraph 941.

23 Ibidem, paragraph 942.

24 ICJ, *Pulp Mills on the River Uruguay (Argentina v. Uruguay),* Judgment, I.C.J. Reports 2010, p. 18, paragraphs 197 and 101.

25 It is debated whether the precautionary principle constitutes customary international law. See in this regard ITLOS, *Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area,* Case No. 17, Advisory Opinion of 1 February 2011, paragraph 135.

26 UN, Rio Declaration on Environment and Development, The United Nations Conference on Environment and Development, Rio de Janeiro, 1992, A/CONF.151/26 (Vol. I), Principle 15: *"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 not be used as a reason for postponing cost-effective measures to prevent environmental degradation".* Further, in the context of the 2012 review of the Agenda 21 of the 1992 Rio Conference (see UN, UNGA Res 66/288, 2012, Annex, paragraph 158), States committed "*to protect, and restore, the health, productivity and resilience of oceans and marine ecosystems, to maintain their biodiversity, enabling their conservation and sustainable use for present and future generations, and to effectively apply an ecosystem approach and the precautionary approach in the management, in accordance with international law, of activities having an impact on the marine environment, to deliver on all three dimensions of sustainable development".*

27 In this regard see: J. Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment*, Oxford: Oxford University Press, 2017, page 32.

28 International Law Commission, 'Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries', 2001, II/2 YB Intl L Commission 148, 155, commentary to Article 3, paragraph (10).

29 Ibidem, commentary to Article 10, paragraph (7).

30 See UN, Rio Declaration of 1992, Principle 15, according to which: *"In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats*

26. Moreover, as concerns the protection and preservation of the marine environment vis-à-vis climate change and its effects, the general obligation enshrined in Article 192 and all relevant obligations in Part of XII UNCLOS should be informed by the commitments set out in the UNFCCC, the Paris Agreement, and the subsequent relevant decisions taken by the governing bodies of these treaties.

27. Indeed, the absence, in Article 192 UNCLOS, of any clause qualifying the type of harm against which the protection and preservation of the marine environment must be ensured means that under that provision States are required to take measures to protect and preserve the marine environment against *any kind of harm*, including harm caused by climate change, such as ocean warming, sea level rise and ocean acidification, which are caused by GHG emissions into the atmosphere.

28. In particular, because it reflects the most relevant expression of States' understanding of their legal obligations in respect of climate change, the Paris Agreement constitutes the primary instrument of international law governing climate change compliance with which is necessary and appropriate in order to respect the general obligation in Article 192 and with all obligations in Part XII of UNCLOS based thereon.

29. The relevance of the Paris Agreement in the context of the law of the sea has also been confirmed by the UN Secretary-General in his report on 'Oceans and the law of the sea', in which he noted that: *"Increased near-term action, reflected in nationally determined contributions, will be essential to reach the Paris Agreement targets, which include many possibilities for ocean-related action"*[31].

30. Pursuant to Article 237(1) UNCLOS, the provisions of Part XII of UNCLOS *"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".* This provision marks once again the openness of UNCLOS Part XII to other legal regimes and – as it is also the case for Article 31(3)(c) VCLT – suggests that its provisions are to be interpreted taking into account other relevant rules of international law applicable between its parties.

31. In so far as the Paris Agreement is considered to contribute to the protection of the marine environment (see also paragraph 63 below), it may be interpreted as *"concluded in furtherance of the general principles set forth in"* Part XII of UNCLOS within the meaning of Article 237 of UNCLOS. However, should one consider the Paris Agreement as not covered by Article 237, the preservation of the rights and obligations arising from the Paris Agreement would still be ensured by the more general conflict and articulation rules laid down in Article

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".

[31] UN General Assembly (UNGA), Report of the Secretary-General, *Oceans and the law of the sea*, A/76/311, 30 August 2021, paragraph 48.

311(2)[32] and (5)[33] UNCLOS, given that the Paris Agreement is fully compatible with UNCLOS.

32. Relevant rule of international law to inform the duty of due diligence as regards the specific aspect of the conservation of the living resources of the sea (paragraphs 21-22 above) should notably include those laid down in the Convention on Biological Diversity[34], which aims at *"the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources"*[35] and, as concern the marine environment specifically, requires its Parties to: *"implement this Convention with respect to the marine environment consistently with the rights and obligations of States under the law of the sea"*[36].

33. Other provisions of Part XII of UNCLOS, in further detailing the general obligation in Article 192, likewise contribute to informing the content of that provision. Section 5 of Part XII notably establishes obligations specific to the different sources of marine pollution and will be discussed below in section D.2. On the other hand, the general obligation in Article 192 is informed by the horizontal obligations to act in good faith[37] and to cooperate internationally for the protection and preservation of the marine environment[38].

34. Likewise, Article 192 UNCLOS is informed by the procedural obligations laid down in Section 4, which notably establish the requirement to carry out an environmental impact assessment (EIA) in cases where 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"*[39], along with the requirement to monitor *"the effects of any activities which they permit or in which they engage in order to determine whether these activities are likely to pollute the marine environment"*[40] and to report the results of such monitoring[41].

35. In *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area,* the Seabed Disputes Chamber of ITLOS found that *"[t]he obligation to*

[32] Article 311(2) provides that: *"This Convention shall not alter the rights and obligations of States Parties which arise from other agreements compatible with this Convention and which do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention".*

[33] Article 311(5) provides that: *"This article does not affect international agreements expressly permitted or preserved by other articles of this Convention".*

[34] UN, Convention on biological diversity, Rio de Janeiro, 5 June 1992, Treaty Series, vol. 1760, page 79.

[35] Article 1 of the UN Convention on biological diversity.

[36] Article 22(2) of the UN Convention on biological diversity.

[37] Article 300 of UNCLOS.

[38] Article 197 of UNCLOS.

[39] Article 206 of UNCLOS.

[40] Article 204 of UNCLOS.

[41] Article 205 of UNCLOS.

conduct an environmental impact assessment is also a general obligation under customary law and is set out as a direct obligation for all States in article 206 of the Convention"[42].

36. The EIA obligation in UNCLOS should be interpreted as applying to all planned activities, whether they take place within or beyond national jurisdiction, if they risk causing 'substantial pollution of or significant and harmful changes to the marine environment'.

37. The 'Agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction' (the BBNJ Agreement) will contain a dedicated part on EIAs[43]. One of its objectives is to *"[o]perationalize the provisions of the Convention on environmental impact assessment for areas beyond national jurisdiction by establishing processes, thresholds and other requirements for conducting and reporting assessments by Parties"*[44]. Therefore, once it has entered into force[45], the BBNJ Agreement will further implement and strengthen the EIA obligation laid down in Article 206 of UNCLOS.

38. The EIA obligation in Article 206 of UNCLOS should be interpreted as covering all phases of a planned activity. Even if that obligation seems to primarily target individual activities, there is a clear relationship with strategic environmental assessments (SEAs) for plans and programmes relating to such activities. This is also reflected in the BBNJ Agreement, as one of the (other) objectives of the aforementioned EIA part is to *"[p]rovide for strategic environmental assessments*"[46] and it indeed contains a dedicated provision on SEA[47].

D. Question (a): What are the specific obligations of State Parties to UNCLOS 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

[42] ITLOS, *Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area,* Advisory Opinion of 1 February 2011, *ITLOS Reports 2011*, page 75, paragraph 242. In *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgement of 20 April 2010, paragraph 204, the ICJ recognised that*: "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"*.

[43] See Part IV on Environmental Impact Assessments of the Draft Agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.

[44] Article 27 (a) of the draft BBNJ Agreement.

[45] The BBNJ Agreement is to be adopted at the further resumed fifth session of the Intergovernmental Conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, taking place on 19 and 20 June 2023 in New York (*see* UN, A/77/L.62, Draft decision on Intergovernmental conference on an international legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction). After its adoption, the BBNJ Agreement will enter into force *"120 days after the date of deposit of the sixtieth instrument of ratification, approval, acceptance or accession"* (Article 68 of the draft BBNJ Agreement).

[46] Article 27 (d) of the draft BBNJ Agreement.

[47] Article 39 of the draft BBNJ Agreement.

through ocean warming and sea level rise, and ocean acidification, which are caused by anthropogenic greenhouse gas emissions into the atmosphere?

1. The interpretation of the definition of 'pollution of the marine environment' and the ensuing obligations of States under Article 194 UNCLOS

39. Question (a) partially reflects the language used in Article 194 of UNCLOS. While further developing the general principle enshrined in Article 192 and translating it into more concrete obligations for State Parties, the obligation under Article 194 is still very broad and open-ended in scope.

40. On the one hand, Article 194 explicitly applies to pollution of the marine environment *from any source*, and can be interpreted as applying to both transboundary and non-transboundary pollution[48]. On the other hand, it contains obligations of due diligence rather than of result, the content of which is highly general and to be defined as described in section C above in relation to Article 192. This notably means that Article 194 does not introduce a total prohibition of pollution of the marine environment nor a requirement to immediately cease all pollution – including in the form of GHG emissions – but rather obliges States to take the necessary measures and use their best efforts to prevent, minimize and gradually reduce GHG emissions, including by cooperating internationally and regionally, observing the precautionary principle and the requirement of good faith, carrying out EIAs when needed and using the best available technology, while retaining a certain margin of discretion as to the precise measures to be taken[49].

41. However, Article 194 of UNCLOS goes beyond the obligation under Article 192, laying down further and more precise obligations for States, mostly as regards the prevention, reduction and control of pollution of the marine environment.

42. The notion of 'pollution of the marine environment' for the purposes of UNCLOS is defined in its Article 1(1)(4) of UNCLOS as the introduction by man, directly or indirectly, of substances or energy into the marine environment, including estuaries, which results or is likely to result in such deleterious effects as harm to living resources and marine life, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities.

43. GHG emissions should be considered as falling within this definition in so far as they constitute substances which, when introduced in the marine environment, result or are likely to result in such deleterious effects as harm to living resources and marine life, hazards to human

[48] See in this regard: J. Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment,* Oxford: Oxford University Press, 2017, page 27.

[49] See in this regard: J. Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment,* Oxford: Oxford University Press, 2017, page 29; and A. Boyle, "*Protecting the Marine Environment from Climate Change: The LOSC Part XII Regime",* in *The Law of the Sea and Climate Change: Solutions and Constraints,* Johansen, E., Busch, S., and. Jakobsen, I. (eds), Cambridge: Cambridge University Press, 2020, page 88.

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[50].

44. The scientific evidence for the deleterious effects which GHG emissions have on the marine environment is well documented[51]. These effects include, notably, ocean warming, ocean acidification and, indirectly, sea level rise, which should therefore be considered as *"deleterious effects"* for the purposes of Article 1(1)(4) of UNCLOS.

45. Ocean warming harms the marine environment in a number of ways, for instance by contributing to *"changes in biogeography of organisms ranging from phytoplankton to marine mammals (high confidence), consequently changing community composition (high confidence), and in some cases, altering interactions between organisms (medium confidence)"*[52]. Ocean acidification, which is caused mainly by the ocean's uptake of carbon dioxide from the atmosphere[53], is also one of such effects in so far as, by determining a reduction of the ocean pH, causes inter alia the *"reduction of calcareous species and loss of ecosystem biodiversity and complexity shifting towards algae dominated habitats (high confidence)"*[54].

46. Further, GHG emissions indirectly determine sea level rise[55], which likewise constitutes a 'deleterious effect' for the purposes of Article 1(1)(4) UNCLOS in so far as it *"threaten[s]*

[50] In this regard see: A. Boyle, "*Protecting the Marine Environment from Climate Change: The LOSC Part XII Regime",* in *The Law of the Sea and Climate Change: Solutions and Constraints*, Johansen, E., Busch, S., and. Jakobsen, I. (eds), Cambridge: Cambridge University Press, 2020., page 85; N. L. Nguyen, *Expanding the Environmental Regulatory Scope of UNCLOS Through the Rule of Reference: Potentials and Limits, Ocean Development & International Law*, Vol. 52, Issue 4, 2021,419-444, page 430,; and M. McCreath, , *The Potential for UNCLOS Climate Change Litigation to Achieve Effective Mitigation Outcomes*, *Climate Change Litigation in the Asia Pacific*, Lin, J. and Kysar, D. (eds.), Cambridge: Cambridge University Press, pages 120-143, page 123.

[51] See for instance Intergovernmental Panel on Climate Change (IPCC), Synthesis Report of the IPCC Sixth Assessment Report (AR6), *Climate Change 2023 - Summary for Policymakers*, page 5, paragraphs A.1, A.2:*"Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred. Human-caused climate change is already affecting many weather and climate extremes in every region across the globe. This has led to widespread adverse impacts and related losses and damages to nature and people (high confidence)"* and A.2.3 *"Climate change has caused substantial damages, and increasingly irreversible losses, in terrestrial, freshwater, cryospheric, and coastal and open ocean ecosystems (high confidence)"*; see also: UNGA, Report of the Secretary-General on Oceans and the law of the sea, 30 August 2021, A/76/311; UNGA, Report of the Secretary-General on Oceans and the law of the sea, 28 March 2022, A/77/68; UNGA, A/RES/77/248, 30 December 2022,.

[52] IPCC, *Special Report on the Ocean and Cryosphere in a Changing Climate, Changing Ocean, Marine Ecosystems, and Dependent Communities — Special Report on the Ocean and Cryosphere in a Changing Climate, 2019*, Chapter 5, page 450.

[53] IPCC, Synthesis Report of the IPCC Sixth Assessment Report (AR6) Longer Report, 2023, page 11, paragraph 2.1.2: *"It is virtually certain that human-caused CO2 emissions are the main driver of current global acidification of the surface open ocean"*

[54] IPCC, *Special Report on the Ocean and Cryosphere in a Changing Climate, Changing Ocean, Marine Ecosystems, and Dependent Communities — Special Report on the Ocean and Cryosphere in a Changing Climate*, 2019, Chapter 5, page 453.

[55] IPCC, *Special Report on the Ocean and Cryosphere in a Changing Climate - Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities*, 2019, Chapter 4, page 328: *"The larger the emissions the larger the risks associated with SLR"* and 340: *"Part of this regional sea level rise is due to global sea level rise of which a majority is attributable to anthropogenic greenhouse gas emissions (high confidence; Slangen et al.*

coastal zones through a range of coastal hazards including (i) the permanent submergence of land by higher mean sea levels or mean high tides; (ii) more frequent or intense coastal flooding; (iii) enhanced coastal erosion; (iv) loss and change of coastal ecosystems; (v) salinisation"[56].

47. Therefore, GHG emissions should be considered as a form of pollution of the marine environment for the purposes of Part XII of UNCLOS. On this basis, Article 194 of UNCLOS should be read as requiring States to take all measures necessary to prevent, reduce and control pollution of the marine environment in the form of GHG emissions.

48. This interpretation is also in line with Article 31(1) of the VCLT. Indeed, based on the broad wording of the 'pollution of the marine environment' definition in Article 1(1)(4) and on the 'General Principles for Assessment and Control of Marine Pollution' which likely inspired it[57], the context and the object and purpose of the conclusion of UNCLOS suggest that *"the parties' intent upon conclusion of the treaty was, or may be presumed to have been, to give the terms used — or some of them — a meaning or content capable of evolving, not one fixed once and for all, so as to make allowance for, among other things, developments in international law"*[58]. Indeed, Principle 14 provided that: *"The development and implementation of control should be sufficiently flexible to reflect increasing knowledge of the marine ecosystem, pollution effects, and improvements in technological means for pollution control and to take into account the fact that a number of new and hitherto unsuspected pollutants are bound to be brought to light"*[59].

49. The ICJ has indeed already applied the *"idea that, where the parties have used generic terms in a treaty, the parties necessarily having been aware that the meaning of the terms was likely to evolve over time, and where the treaty has been entered into for a very long period or is "of continuing duration", the parties must be presumed, as a general rule, to have intended those*

2016). The remaining part of the regional sea-level rise in ocean basins is a combination of the response to anthropogenic GHG emissions and internal variability". See also, IPCC, Synthesis Report of the IPCC Sixth Assessment Report (AR6) Longer Report, 2023, page 34: *"Ocean acidification (virtually certain), ocean deoxygenation (high confidence) and global mean sea level (virtually certain) will continue to increase in the 21st century, at rates dependent on future emissions."*

56 IPCC, *Special Report on the Ocean and Cryosphere in a Changing Climate - Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities*, 2019, Chapter 4, page 328, paragraph 4.1.3.

57 It seems that the definition of pollution in Article 1(1)(4) of UNCLOS is based on a text developed by the Group of Experts on the Scientific Aspects of Marine Environmental Protection, whose intentions were reflected in the 'General Principles for Assessment and Control of Marine Pollution' developed by the UN Conference on the Human Environment, see: UN, Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972, A/Conf.48/14/Rev.1, 1972, Annex III. The 1972 UN Conference on the Human Environment recommended Governments to *"collectively endorse [those principles] as guiding concepts for the Conference on the Law of the Sea"* (Recommendation 92, UN, A/Conf.48/14/Rev.1, 1972). In this regard see also: J. Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment,* Oxford: Oxford University Press, 2017, pages 26-27; and A. Proelss, *United Nations Convention on the Law of the Sea: A Commentary*, Beck, Hart, Nomos, 2017, page 23.

58 ICJ, *Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua),* Judgment of 13 July 2009, I.C.J. Reports 2009, p. 213, paragraph 64.

59 UN Conference on the Human Environment, A/Conf.48/14/Rev.1 (1972).

terms to have an evolving meaning"[60]. According to that Court, in such cases *"in order to respect the parties' common intention at the time the treaty was concluded, not to depart from it, that account should be taken of the meaning acquired by the terms in question upon each occasion on which the treaty is to be applied"*[61].

50. In the current historical context in which the deleterious effects of GHG emissions are significant and backed by scientific evidence, the definition of 'pollution of the marine environment' cannot but cover also these substances.

51. Crucially, this conclusion seems to have been endorsed by the State Parties to UNCLOS themselves, which at their latest meeting in June 2022 not only recognised the deleterious effects of climate change on the marine environment, but also explicitly linked such effects to the concept of 'pollution'[62].

52. On the other hand, the proposed interpretation of Article 1(1)(4) of UNCLOS is not put into question by the fact that most GHG emissions that reach the marine environment are produced on land and introduced first in the atmosphere. Indeed, Articles 1, 207 and 212 of UNCLOS take this aspect into account, defining 'pollution of the marine environment' as including the **indirect** introduction by man of energy or substances therein, and specifically regulating pollution of the marine environment from 'land-based sources' and 'from or through the atmosphere'.

53. Question (a) specifically asks what State Parties' obligations are *"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"* (emphasis added). In light of the above considerations, this question should be read as enquiring about State Parties' obligations to prevent, reduce and control GHG emissions with a view to limiting the deleterious effects that result or are likely to result from climate change caused by such emissions to the marine environment.

54. Based on the foregoing, the contracting parties' obligations to 'protect and preserve the marine environment' (Article 192 of UNCLOS) and to 'prevent, reduce and control pollution of the marine environment' (Article 194 of UNCLOS) in relation to the deleterious effects that result or are likely to result from climate change should be held to include a general obligation to protect the marine environment by preventing, reducing and controlling the deleterious effects of GHG emissions thereon and to take climate change mitigation measures.

55. As seen above, this general duty is chiefly informed by the UNFCCC and the Paris Agreement. In this regard it should be noted that, while the ultimate objective of the UNFCCC is the *"stabilization of greenhouse gas concentrations in the atmosphere at a level that would*

60 ICJ, *Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua),* Judgment of 13 July 2009, I.C.J. Reports 2009, p. 213, paragraph 66.

61 Ibidem, paragraph 64.

62 UN, *Report of the thirty-second Meeting of States Parties*, SPLOS/32/15, 5 July 2022, paragraph 80: *"Several delegations emphasized that contemporary issues, including those related to illegal, unreported and unregulated fishing, **the effects of climate change such as sea level rise, loss of biodiversity and pollution**, should be resolved within the framework of the Convention"* (emphasis added).

prevent dangerous anthropogenic interference with the climate system"[63], the Paris Agreement specifically aims at the progressive *reduction* of GHG emissions[64] in order to achieve the long-term temperature goal.

56. Articles 192 and 194 of UNCLOS should further be held to include an obligation to take into account the specific effects of GHG emissions and climate change on the marine environment in the context of measures taken in application of the source-related obligations under Section 5 of Part XII of UNCLOS and the 'monitoring and assessment' obligations under Section 4 of Part XII of UNCLOS. For instance, ocean acidification, which is caused by carbon dioxide, and its further effects on the marine environment should be specifically taken into account in the implementation of obligations laid down in Article 207 and 212 of Section 5, and when carrying out environmental impact assessments pursuant to Article 206 UNCLOS[65], so as to ensure that adequate action is taken to address it.

57. Because ocean acidification is not caused by all kinds of GHG emissions, but specifically by CO2 emissions, complying with Articles 192 and 194 of UNCLOS and the ensuing obligations in sections 4 and 5 of Part XII of UNCLOS would thus require State parties to adopt measures to prevent, control and reduce CO2 emissions specifically, in order to preserve and protect the marine environment against acidification.

2. The Obligations of States under Section 5 of Part XII as regards pollution of the marine environment from land-based sources and from or through the atmosphere

58. The provisions of Section 5 of Part XII of UNCLOS operationalise, also through *"rules of reference",* i.e. through the recourse to existing rules and standards contained in instruments external to UNCLOS[66], the general obligations laid down in Articles 192 and 194 of UNCLOS. The analysis of both the types of obligations imposed on State Parties by UNCLOS and the rules that are being referenced are relevant to determine the exact scope of the UNCLOS obligation concerned. Therefore, the content of the obligations imposed on States under UNCLOS and their relationship with obligations laid down in other relevant international agreements and instruments would need to be clarified by the Tribunal when replying to the questions referred to it.

59. In the context of the source-specific obligations laid down in Section 5 of Part XII of UNCLOS, Articles 207 and 213 of UNCLOS on the one hand, and Article 212 and 222 of UNCLOS on the other, are the most relevant for pollution consisting in GHG emissions. Indeed, while GHG emissions may relate to various provision of Section 5, these fall predominantly under the category of 'Pollution from land-based sources', regulated by Articles 207 and 213 of UNCLOS, and of 'Pollution from or through the atmosphere', regulated by Articles 212 and 222 of UNCLOS.

63 Article 2 of the UNFCCC, emphasis added.

64 See notably Articles 4 and 10(1) of the Paris Agreement.

65 As stated above in paragraph 28, the Paris Agreement remains the necessary and appropriate climate change instrument to comply with UNCLOS Part XII, even with reference to the limited specific UNCLOS obligations regarding ocean acidification and EIA.

66 See inter alia: N.L. Nguyen, *Expanding the Environmental Regulatory Scope of UNCLOS Through the Rule of Reference: Potentials and Limits*, *Ocean Development & International Law*, Vol. 52, Issue 4, 2021, page 421.

60. For instance, Article 211 of UNCLOS on 'Pollution from vessels' also relates to pollution in the form of GHG emissions. However, Article 212 of UNCLOS on 'Pollution from or through the atmosphere', which can also integrate a particular type of (air-borne) pollution from vessels, is specifically relevant in the context of the questions referred to the ITLOS[67].

61. Articles 207 and 213 as well as Article 212 and 222 of UNCLOS, require States Parties (1) to adopt laws and regulations and take other necessary measures to prevent, reduce and control pollution of the marine environment from land-based and atmospheric sources, "*taking into account internationally agreed rules, standards and recommended practices and procedures"*[68]; (2) to *"endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment*" from land-based and atmospheric sources[69]; and (3) to enforce those national laws and regulations and implement those international rules and standards[70].

62. While a number of international agreements[71] may constitute relevant 'internationally agreed rules, standards and recommended practices and procedures' for the purposes of Articles 207, 212, 213 and 222 of UNCLOS, as seen in relation to Article 192 and 194, the UNFCCC and the Paris Agreement constitute the most relevant international rules to be taken into account and that have been further established and implemented to prevent, reduce and control GHG emissions.

63. Indeed, while the Paris Agreement does not explicitly address the marine environment in its operative part, it does contribute to the prevention, reduction and control of pollution of the marine environment by requiring States to progressively reduce their overall GHG emissions, which are in turn responsible for deleterious effects on the marine environment. The aspiration of the Paris Agreement to control GHG emissions for the benefit of all ecosystems – including the marine ones – is reflected in its Preamble, which explicitly mentions "*the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity*"[72]. Further, the Conference of the Parties (COP) to the UNFCCC has acknowledged the need to increase actions in relation to ocean and climate change. The first ocean and climate change dialogue to strengthen mitigation and adaptation action in this

67 To this effect see for instance: Ibidem, page 431.

68 Articles 207(1) and 212(1) of UNCLOS.

69 Article 207(4) and 212(3) of UNCLOS. For pollution from land-based sources, Article 207(3) also requires State Parties to *"endeavour to harmonise their policies in this connection at the appropriate regional level".*

70 Articles 213 and 222 of UNCLOS.

71 For instance the International Convention for the Prevention of Pollution from Ships (MARPOL) and the Convention on Biological Diversity. In particular, MARPOL Annex VI concerns the Prevention of Air Pollution from Ships. The latest amendments to MARPOL through MEPC Resolution.366(79) of 16 December 2022 provide rules for limiting GHG emissions encouraging Member States, together with port authorities and the shipping sector, to contribute to reducing GHG emissions from ships through shipping routes and maritime hubs consistent with international law. On the other hand, as mentioned above, Article 194(5) of UNCLOS goes beyond the issue of pollution, also providing for the protection and preservation of rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life. In the context of Section 5 of Part XII of UNCLOS, the provisions of the Convention on Biological Diversity may in particular be relevant to implement Articles 207 and 212 of UNCLOS read in combination with Article 194(5) of UNCLOS.

72 Paris Agreement, Recital (13). See also Articles 1(3) and 2 of the UNFCCC.

context was established at COP25[73], while COP27 *"[e]ncouraged Parties to consider, as appropriate, ocean-based action in their national climate goals and in the implementation of these goals, including but not limited to nationally determined contributions, long-term strategies and adaptation communications"* and appointed facilitators to steer the implementation of the dialogues[74].

64. On this basis, the specific content of the obligations under Articles 207, 212, 213 and 222 of UNCLOS as regards the effects of climate change should be interpreted as follows.

65. In order to comply with Articles 207(1) and 212(1) of UNCLOS, as well as with the more general obligations enshrined in Articles 192 and 194 of UNCLOS, States Parties must take into account the rules laid down in the Paris Agreement and in the UNFCCC when adopting national laws and regulations for the protection of the marine environment.

66. The obligation to 'take into account' external rules and standards does not result in the external rules and standards as such becoming binding on States Parties to UNCLOS, which hence do not become obliged to implement those external rules through UNCLOS, unless they have individually consented to be bound by those rules and standards[75]. Rather, this obligation establishes a minimum standard of conduct for States Parties, while leaving them a broad margin of discretion in deciding whether and how to implement these external rules when applying UNCLOS provisions[76].

67. It follows that States Parties to UNCLOS adopting legislation which disregards the Paris Agreement would not act in conformity with the obligation to 'take into account' that Agreement and should thus be considered to be non-compliant with Articles 207 and 212 of UNCLOS and, hence, also with Articles 194 and 192 of UNCLOS.

68. At the same time, by referring to existing internationally agreed rules, UNCLOS does not impose on States Parties more stringent obligations than those already agreed in those rules. Specifically, as concerns obligations regarding climate change effects, it does not by itself impose more stringent commitments than those laid down in the UNFCCC and the Paris Agreement.

69. Indeed, the open-ended and evolutionary obligations of the Parties under the Paris Agreement are broad enough to provide for the level of due diligence which is necessary and appropriate to comply with Articles 192 and 194 of UNCLOS.

70. Articles 207(4) and 212(3) of UNCLOS lay down the obligation to endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment. States must then take into account the

[73] UNFCCC COP, Decision 1/CP.25, Chile Madrid Time for Action, paragraph 31.

[74] UNFCCC COP, Decision 1/CP.25, Chile Madrid Time for Action, paragraph 31.

[74] UNFCCC COP, Decision 1/CP.27, Sharm el-Sheikh Implementation Plan, paragraphs 49-50.

[75] See in this regard J. Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment,* Oxford: Oxford University Press, 2017, page 68.

[76] In this regard see inter alia: L. N. Nguyen, Lan, *Expanding the Environmental Regulatory Scope of UNCLOS Through the Rule of Reference: Potentials and Limits*, *Ocean Development & International Law*, Vol. 52, Issue 4, 2021, 419-444, page 421..

results of such international cooperation when adopting national legislation pursuant to Articles 207(1) and 212(1) of UNCLOS.

71. Calling for the further development of national, regional and international rules, standards and recommended practices and procedures in the field of marine environmental protection to complement UNCLOS provisions, this obligation reflects the *"fundamental principle"* of international cooperation for the protection of the marine environment[77] which, as seen above, underpins the whole Part XII of UNCLOS.

72. As is the case for Articles 192 and 194 of UNCLOS, also this international cooperation obligation is conduct- rather than result-oriented, in that it only requires States to 'endeavour' to establish international rules, regardless of whether such end is actually met.

73. However, in Article 207(4) of UNCLOS this obligation is explicitly subject to the qualification that the characteristic regional features, the economic capacity of developing States and their need for economic development are to be taken into account. This cannot surprise, considering the relationship between the nature of the activities falling under the scope of Articles 207 of UNCLOS and the economic development of a State. Therefore, the different financial and technical resources at the disposal of a State can contribute to determine the precise standard of due diligence required by a given State under Article 207(4) of UNCLOS[78]. Further, the exercise of good faith, in accordance with Article 300 of UNCLOS, should be a relevant criterion for the assessment of compliance with this due diligence obligation.

74. In any case, the obligations under Articles 207 and 212 of UNCLOS are eminently open-ended, in so far as they require States to also *"take other measures as may be necessary to prevent, reduce and control",* respectively, pollution from land-based sources and from or through the atmosphere[79].

75. Finally, Articles 213 and 222 of UNCLOS lay down the obligation for States to enforce their laws and regulations adopted in accordance with Articles 207 and 212(1) and to adopt laws and regulations and take other measures necessary to implement applicable international rules and standards established through competent international organizations or diplomatic conference to prevent, reduce and control pollution of the marine environment from land-based sources and from or through the atmosphere.

76. These articles complete Articles 207 and 212 of UNCLOS, respectively, by laying down the provisions for their enforcement. Whereas Article 222 of UNCLOS concerns enforcement within the air space under a given State's sovereignty and regarding vessels flying its flag or vessels and aircraft of its registry, Article 213 of UNCLOS concerns only sources of pollution based on the State's land territory. Both provisions leave a broad discretion to States on how to actually enforce their laws and regulations.

[77] ITLOS, *MOX Plant (Ireland v. United Kingdom)*, Order of 3 December 2001 (Provisional Measures), Case No. 10, paragraph 82.

[78] See in this regard: J. Harrison, *Saving the Oceans through Law: The International Legal Framework for the Protection of the Marine Environment,* Oxford: Oxford University Press, 2017, page 67.

[79] Articles 207(2) and 212(2) of UNCLOS.

77. As concerns Article 213 of UNCLOS, the obligation to enforce their laws and regulations adopted in accordance with Article 207 should be interpreted as requiring States to *"provide necessary technical know-how, appropriate management strategies and adequate administrative procedures to prohibit or permit, regulate and control sources of pollution based in its territory, including internal and territorial waters, rivers and estuaries, as well as pipelines and outfall structures"*[80]. Further, the obligation to adopt laws and regulations and take other measures necessary to implement applicable international rules and standards established through competent international organizations or diplomatic conference to prevent, reduce and control pollution of the marine environment from land-based sources should be interpreted to the effect that States must at least comply with the legally binding rules and standards they have already committed to in global or regional treaties[81].

78. Because atmospheric pollution by vessels is (*inter alia*) a specific form of vessel-source pollution, enforcement activities in accordance with Article 222 of UNCLOS should take place consistently with Article 217 of UNCLOS on enforcement by flag States, and with Article 220 of UNCLOS on enforcement by coastal States.

79. Finally, Article 222 of UNCLOS requires States to enforce their laws and regulations adopted not only in accordance with Article 212(1), but also with other provisions of UNCLOS. These may for instance include measures taken in accordance with Articles 194 or 211 of UNCLOS[82].

E. How the European Union is complying with Articles 192 and 194 and Articles 207, 212, 213 and 222 of UNCLOS

80. The European Union (the EU) , through its ambitious climate legislation and as an international cooperation leader in this field, is complying with and even adopting higher standards than those required under Articles 192, 194, 207, 212, 213 and 222 of UNCLOS.

81. To implement the Paris Agreement, and in particular the requirement to prepare, communicate and maintain successive nationally determined contributions (NDCs) in accordance with Article 4 thereof, the EU has indeed adopted or is in the process of adopting an ambitious legislative package to reduce, minimize and control GHG emissions and thereby limit climate change and its impacts, including on the marine environment. This notably includes:

- the EU Climate Law (**Annex 3**)[83];
- the Regulation establishing a carbon border adjustment mechanism (**Annex 4**)[84];

[80] A. Proelss, *United Nations Convention on the Law of the Sea: A Commentary*, Beck, Hart, Nomos, 2017, page 1455.

[81] Ibidem. International agreements that may constitute relevant 'internationally agreed rules, standards and recommended practices and procedures' for the purposes of Articles 207, 212, 213 and 222 UNCLOS include those mentioned in footnote 71 above.

[82] Ibidem, page 1525.

[83] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law'), OJ L 243, 9.7.2021, pages 1–17.

[84] Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism, OJ L 130, 16.5.2023, p. 52–104.

- the Regulation on binding annual GHG emission reductions (**Annex 5**)[85];
- the Renewable Energy Directive (**Annex 6**)[86];
- the Energy Efficiency Directive (**Annex 7**)[87];
- the Directive providing a framework for the taxation of energy products and electricity (**Annex 8)**[88];
- the Alternative Fuels Infrastructure Directive (**Annex 9**)[89];
- and the Regulation on deforestation-free products (**Annex 10**)[90];
- the proposal to extend the Emission Trading System to the maritime shipping sector (**Annex 11)**[91]; and
- a series of proposals to foster the decarbonisation of maritime transport[92].

82. Through this ambitious climate legislation, the EU is fully complying with its obligations under Part XII of UNCLOS to protect and preserve the marine environment, pursuant to Article 192 of UNCLOS; to take all measures, consistent with UNCLOS, which are necessary to prevent, reduce and control pollution of the marine environment in the form of GHG

[85] Regulation (EU) 2018/842 of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013, OJ L 156, 19.6.2018, p. 26–42.

[86] Directive (EU) 2001/2018 of 11 December 2018 on the promotion of the use of energy from renewable sources (recast), OJ L 328, 21.12.2018, p. 82–209.

[87] Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC, OJ L 315, 14.11.2012, p. 1–56.

[88] Directive (EC) 2003/96 Council Directive 2003/96/EC of 27 October 2003 restructuring the Community framework for the taxation of energy products and electricity, OJ L 283, 31.10.2003, p. 51–70.

[89] Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure, OJ L 307, 28.10.2014, p. 1–20.

[90] Regulation (EU) 2023/1115 of the European Parliament and of the Council of 31 May 2023 on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010, OJ L 150, 9.6.2023, p. 206–247 (not yet into force at the time of writing).

[91] See: Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union, Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and Regulation (EU) 2015/757, COM(2021)551.

[92] For instance: Proposal for a Regulation on the use of renewable and low-carbon fuels in maritime transport and amending Directive 2009/16/EC, COM(2021)562 final (**Annex 12**); the Proposal for a Regulation on the deployment of alternative fuels infrastructure and repealing Directive 2014/94/EU of the European Parliament and of the Council, COM(2021) 559 (**Annex 13**); Proposal for a Council Directive restructuring the Union framework for the taxation of energy products and electricity, COM(2021) 563 final (**Annex 14**); Proposal for a Directive of the European Parliament and of the Council amending Directive (EU) 2018/2001 of the European Parliament and of the Council, Regulation (EU) 2018/1999 of the European Parliament and of the Council and Directive 98/70/EC of the European Parliament and of the Council as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652, COM/2021/557 final (**Annex 15**).

emissions, pursuant to Article 194 of UNCLOS; to adopt laws and regulations to prevent, reduce and control pollution of the marine environment from land-based and atmospheric sources taking into account relevant internationally agreed rules, standards and recommended practices and procedures, pursuant to Articles 207(1) and 212(1) of UNCLOS and; to adopt laws and regulations to implement those applicable international rules and standards, pursuant to Articles 213 and 222 of UNCLOS.

83. In addition to contributing to the EU's implementation of the Paris Agreement, the EU Marine Strategy Framework Directive (**Annex 16**)[93] aims to protect the marine environment from the impact of deleterious human activities, explicitly taking into account the EU's and Member States' obligations as State Parties to UNCLOS. On the other hand, the EU maritime transport legislation takes into account and implements the International Maritime Organization (IMO) legislative framework[94], which also sets out relevant rules and standards for the purposes of Articles 212 and 222 of UNCLOS.

84. Further, the EU is also protecting and preserving the marine environment through legislation and policies aimed at fostering mitigation of and adaptation to climate change's effects on the marine environment by increasing its resilience. Notably, this includes the Habitats Directive (**Annex 21**)[95] and the EU Biodiversity Strategy (see annex 2)[96], which aim to protect 30% of the seas of the EU Member States by 2030 while fostering the ambitious implementation of the Convention on Biological Diversity; and the Regulation on the conservation of fisheries resources and the protection of marine ecosystems through technical measures (**Annex 23**)[97].

[93] Directive 2008/56/EC establishing a framework for community action in the field of marine environmental policy, OJ L 164, 25.6.2008, p. 19–40, see in particular Recital (17).

[94] See: Directive (EU) 2016/802 of the European Parliament and of the Council of 11 May 2016 relating to a reduction in the sulphur content of certain liquid fuels (codification), OJ L 132, 21.5.2016, p. 58–78, which transposes into Union law the designation of sulphur oxides emission control areas under Annex VI to the MARPOL Convention, (**Annex 17**); Regulation (EU) 2015/757 on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC, OJ L 123, 19.5.2015, p. 55–76 (**Annex 18**), which in Article 22 explicitly takes into account the IMO framework; Directive (EU) 2018/410 of the European Parliament and of the Council of 14 March 2018 amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, and Decision (EU) 2015/1814, OJ L 76, 19.3.2018 (**Annex 19**); and Decision (EU) 2015/1814 of the European Parliament and of the Council of 6 October 2015 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and amending Directive 2003/87/EC, OJ L 264, 9.10.2015, p. 1–5 (**Annex 20**), which in recital (4) explicitly takes into account the IMO GHG emission reduction strategy.

[95] Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, OJ L 206, 22.7.1992, p. 7–50.

[96] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions EU Biodiversity Strategy for 2030 Bringing nature back into our lives, COM/2020/380 final. See also: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on a new approach for a sustainable blue economy in the EU Transforming the EU's Blue Economy for a Sustainable Future, COM/2021/240 final (**Annex 22**).

[97] Regulation (EU) 2019/1241 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005, OJ L 198, 25.7.2019, p.

85. Moreover, the EU Adaptation Strategy (**Annex 25**)[98] aims to increase the resilience of coasts and marine environment by improving the knowledge of local impacts of climate change to minimize material damage thereof, by promoting nature-based solutions to enhance coastal defence and by engaging in a global cooperation to integrate climate considerations for international resources managed by the EU jointly with other partners, such as the protection of biodiversity beyond areas of national jurisdiction under the UN Convention on the Law of the Sea.

86. Moreover, the EU fully complies with the obligation, in Article 207(4) and 212(3) of UNCLOS, to endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment in the form of GHG emissions with a view of limiting the deleterious effects that result or are likely to result from climate change.

87. First and foremost, the EU has actively engaged in the negotiations of the Paris Agreement and promptly ratified it along with all its Member States.

88. Further, the EU has taken an active role in the negotiation of the above-mentioned BBNJ Agreement. The EU will contribute to ensuring a swift achievement of the ratification threshold necessary for the entry into force of the Agreement[99], and *"has pledged €40 million as part of a Global Ocean Programme and has invited members of the High Ambition Coalition to do the same within their capabilities"* in order to support developing countries prepare for the implementation of the Agreement[100].

89. Likewise, the EU is a Contracting Party to less recent treaties for the protection of the marine environment from land-based or atmospheric pollution, such as the Convention for the protection of the marine environment of the north-east Atlantic[101] and the Barcelona Convention[102] and its Protocol on Pollution from Land-Based Sources[103].

90. As concerns the shipping sector, despite not being able to become a Party to the relevant IMO conventions, the EU endeavoured to develop those instruments both through the European Commission's observer status and by coordinating positions and submissions of Member

105–201. See also: Council Regulation (EC) No 734/2008 on the protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears, OJ L 201, 30.7.2008, p. 8–13 (**Annex 24**).

98 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Forging a Climate-Resilient Europe - the new EU Strategy on Adaptation to Climate Change, COM/2021/82 final.

99 Pursuant to its Article 61, the BBNJ Agreement will enter into force *"120 days after the date of deposit of the sixtieth instrument of ratification, approval, acceptance or accession"*.

100 European Commission, Protecting the ocean, time for action (europa.eu), https://oceans-and-fisheries.ec.europa.eu/ocean/international-ocean-governance/protecting-ocean-time-action_en.

101 Council Decision 98/249/EC of 7 October 1997 on the conclusion of the Convention for the protection of the marine environment of the north-east Atlantic, OJ L 104, 3.4.1998, p. 1–1 (**Annex 26**).

102 Council Decision 77/585/EEC of 25 July 1977 concluding the Convention for the protection of the Mediterranean Sea against pollution and the Protocol for the prevention of the pollution of the Mediterranean Sea by dumping from ships and aircraft, OJ L 240, 19.9.1977, p. 1–2 (**Annex 27**).

103 Council Decision 83/101/EEC of 28 February 1983 concluding the Protocol for the protection of the Mediterranean Sea against pollution from land-based sources, OJ L 67, 12.3.1983, p. 1–2 (**Annex 28**).

States in areas of EU competence. Notably, it actively supported amendments to the MARPOL Convention so as to increase the emission reduction targets reflected therein[104].

II. Final remarks

91. As can be concluded from the above, UNCLOS lends itself to an evolutionary interpretation, which also takes into account other international legal instruments.

92. Based on this premise, if ITLOS decides to respond to the questions in the form submitted to it, the Advisory Opinion should interpret UNCLOS as laying down obligations to protect and preserve the marine environment and prevent, reduce and control pollution thereof also as regards the deleterious effects of climate change caused by anthropogenic GHG emissions.

93. The Advisory Opinion should further consider the Paris Agreement as the most relevant instrument to inform the due diligence obligation set out in Articles 192 and 194 of UNCLOS and, on the other hand, as the most relevant source of internationally agreed rules, standards, recommended practices and procedures to be taken into account, established and implemented in relation to land-based and atmospheric pollution for the purposes of Articles 207, 212, 213 and 222 of UNCLOS.

94. Finally, the Advisory Opinion should also clarify that such references to internationally agreed rules require to consider the Paris Agreement as the most relevant standard necessary and appropriate to comply with Part XII of UNCLOS as regards the deleterious effects of climate change, without imposing more stringent obligations than those already agreed thereunder.

[104] See for instance: EU submissions proposing a revision of the Initial IMO Strategy on reduction of GHG emissions from ships to increase its level of ambition (ISWG-GHG 13/3/1) (**Annex 29)** and on technical measures to support the uptake of sustainable ship fuels (Proposal for a GHG Fuel Standard - ISWG-GHG 12/3/3) **(Annex 30)**; Council Decision (EU) 2022/2078 of 24 October 2022 on the position to be taken on behalf of the European Union within the International Maritime Organization's Maritime Safety Committee during its 106th session and within the International Maritime Organization's Marine Environment Protection Committee during its 79th session as regards the amendment of the International Convention for the Safety of Life at Sea (SOLAS), of the International Code on the Enhanced Programme of Inspections during Surveys of Bulk Carriers and Oil Tankers, 2011 (the '2011 ESP Code') and of Annex VI to the International Convention for the Prevention of Pollution from Ships (MARPOL), OJ L 280, 28.10.2022, (**Annex 31**).

CHAPTER IV

SUMMARY AND CONCLUSION

95. In sum, the European Union respectfully proposes to answer the questions referred by the COSIS along the lines set out above.

The European Commission, on behalf of the European Union

André BOUQUET
Agent

Bernhard HOFSTÖTTER
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ANNEX 2

ORAL STATEMENT BY THE EUROPEAN UNION OF 20 SEPTEMBER 2023

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

(CASE NO. 31)

INTERNATIONAL TRIBUNAL FOR THE LAW OF THE SEA

2023

Public sitting

held on Wednesday, 20 September 2023, at 10 a.m.,

at the International Tribunal for the Law of the Sea, Hamburg,

President Albert J. Hoffmann presiding

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)

Verbatim Record

Present:	President	Albert J. Hoffmann
	Vice-President	Tomas Heidar
	Judges	José Luís Jesus
		Stanislaw Pawlak
		Shunji Yanai
		James L. Kateka
		Boualem Bouguetaia
		Jin-Hyun Paik
		David Joseph Attard
		Markiyan Z. Kulyk
		Alonso Gómez-Robledo
		Óscar Cabello Sarubbi
		Neeru Chadha
		Kriangsak Kittichaisaree
		Roman Kolodkin
		Liesbeth Lijnzaad
		María Teresa Infante Caffi
		Jielong Duan
		Kathy-Ann Brown
		Ida Caracciolo
		Maurice K. Kamga
	Registrar	Ximena Hinrichs Oyarce

List of delegations:

STATES PARTIES

Timor-Leste

Ms Elizabeth Exposto, Chief of Staff to the Prime Minister; Chief Executive Officer, Land and Maritime Boundary Office
Mr John Middleton AM KC, Senior Advisor, DLA Piper; Former Judge, Federal Court of Australia
Mr Eran Sthoeger, Legal Counsel
Mr Simon Fenby, Principal Legal Advisor, Land and Maritime Boundary Office
Ms Ana Catarina Sereto Antunes, Senior Policy and Strategy Advisor, Land and Maritime Boundary Office
Ms Adelsia Coelho da Silva, Junior Legal Advisor, Land and Maritime Boundary Office
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Ms Nguyen Thi Tuong Van, Assistant to Director-General, Department of International Law and Treaties, Ministry of Foreign Affairs

THE PRESIDENT: Good morning. Today the Tribunal will continue the hearing in the *Request for an Advisory Opinion submitted by the Commission of Small Island States on Climate Change and International Law*. This morning we will hear oral statements from Timor-Leste, the European Union and Viet Nam.

I now invite the representative of Timor-Leste, Ms Exposto, to make her statement. You have the floor, Madam.

MS EXPOSTO: Mr President, members of the Tribunal, it is an honour to appear before the Tribunal in these historic advisory proceedings as Representative of the Government of the Democratic Republic of Timor-Leste, in my position as Chief of Staff to His Excellency, the Prime Minister Kay Rala Xanana Gusmão, and Chief Executive Officer of Timor-Leste's Land and Maritime Boundary Office. I appear with our legal counsel, the Honourable Former Justice John Middleton AM KC and Eran Sthoeger, Esquire.

We thank the Commission of Small Island States for the request for this advisory opinion. As a small island State, Timor-Leste is supportive of small States utilizing international law to have their voices heard and to contribute to peace and social justice.

Turning now to the matter at hand. *Hau nia Tasi, Hau nia Timor.* In Tetum, this translates to "My sea, My Timor"'. While it is possible to translate this Tetum expression literally, words cannot convey the special relationship between the Timorese people and the sea.

Timor-Leste may be a small island nation, but we have a complex, vibrant culture. A culture in which our very identity is anchored in the sea.

The ocean has forged Timor-Leste's past and is central to our vision for the future. For the people of Timor-Leste, the ocean is critical to our way of life. The seas have spiritual significance for the Timorese people. According to legend, the Timorese are grandchildren of the crocodile – upon its death, its body became the land of Timor, the ridges on its back became the mountains and the valleys, and the oceans its final resting place.

As the saying goes, a rising tide lifts all boats. That said, as developed countries pursue economic growth while generating substantial greenhouse gas emissions, sea-level rise risks submerging small island States.

As such, we want to add our voices, and most importantly our actions, to those committed to defending the ocean on which we all depend. Even though we are not all equally responsible for the pressures placed on the environment, particularly our oceans, we will all suffer from these pressures. And some of us suffer disproportionally compared to the little we contributed to the problem.

Many Timorese depend on the oceans for their sustenance and livelihoods by fishing and harvesting marine species, such as tuna, snapper and seaweed. The rich coral reefs and steep underwater cliffs that surround Timor-Leste are part of a diverse ecosystem, attracting scientists and tourists. Protection and preservation of the

marine environment is therefore critical to protecting Timor-Leste's way of life and economic development.

As an island, we have access to the broad and rich biological, geological, mineral and geostrategic resources of the sea. Our development and the sea are inseparable. This interdependency must be managed in a way that is balanced and, most importantly, sustainable. This is why our communities follow *Tara Bandu*, an ancestral practice that respects and protects our nature, which is sacred to us. This traditional custom seeks both to manage our natural resources sustainably as well as to contribute to the development of our communities.

The request before the Tribunal raises important issues for Timor-Leste regarding the protection and preservation of our marine environment, alongside our rights as a developing State to pursue economic development, particularly via our natural resources. Although Timor-Leste has proved its resilience time and time again, we are living in a time where climate change threatens our very survival. Timor-Leste is recognized as highly vulnerable to climate change impacts.[1]

A key contributor to our vulnerability to the impacts of climate change is Timor-Leste's status as a Least Developed Country and Small Island Developing State.[2] As a new nation, just 21 years old, we have faced many challenges arising from our history of colonization, conflict and occupation.

Timor-Leste has limited avenues to generate revenue to support its people. At the time of our independence, Timor-Leste had nothing. To build an independent State, we faced numerous challenges: scarce human and financial resources, non-existent infrastructure, reduced access to education, technology and know-how.[3] Today, we have overcome many of those challenges, providing security and stability to our people, moving us forward as a democratic nation.

For years Timor-Leste fought hard to secure sovereignty over its seas to achieve a permanent maritime boundary with Australia, which included the allocation of certain proved resource rights in the Timor Sea. Timor-Leste is now in a position where it wishes to develop those resources and to do so in an environmentally responsible way, to deliver long-term social and economic benefits to our people.

Timor-Leste has recently formed its IXth Constitutional Government. Our Prime Minister, Kay Rala Xanana Gusmão, in his address at the swearing-in ceremony of the IXth Government set a clear vision for Timor-Leste, and I quote: "Our vision is that of a nation with a prosperous, healthy, educated, skilled, innovative and dynamic society, with comprehensive access to essential goods and services, and where

[1] University of Notre Dame (2021), *Notre Dame Global Adaptation Initiative*, available at: https://gain.nd.edu/our-work/country-index/

[2] United Nations Conference on Trade and Development, *UN list of least developed countries* (online, 2021), available at: https://unctad.org/topic/least-developed-countries/list

[3] Address by His Excellency the Minister for Planning and Strategic Investment and Chief Negotiator on Maritime Boundaries, Kay Rala Xanana Gusmão, at the Compulsory Conciliation Proceedings at the Peace Palace at The Hague (29 August 2016), pp. 5 – 6, available at: https://www.gfm.tl/wp-content/uploads/2021/01/Concilation-Open-Hearing-Minister-Xanana.pdf

production and employment in every productive sector corresponds to that expected from an emerging economy*".*[4]

The Government wants to transform Timor-Leste's natural wealth derived from its soils or seas, into food security, health, productivity and job opportunities. This includes developing infrastructure, the private sector and encouraging economic diversification and job creation.[5]

Our independence came late and at a high price. Many Timorese people have fought and died for our sovereignty.[6] Our people deserve the same opportunities that were afforded to developed countries to fund basic services and combat poverty. While our people are still poor, Timor-Leste is relatively rich in natural resources. It is this wealth that we must use to progress the development of our country.[7] After so much suffering, after enduring so much sacrifice, States like Timor-Leste cannot be expected to bear a disproportionate share of the brunt of solving a problem to which we did not contribute.

The Government will continue implementing the *Hau nia Tasi, Hau nia Timor – My Sea, My Timor* – awareness campaign. Timor-Leste is also prioritizing the development of a Timor-Leste Blue Economy Policy for the sustainable growth of the Nation, including the preservation, conservation and sustainable use of our ocean resources, and the promotion of initiatives and programmes aimed at environmental, economic and social sustainability. This approach will also reinforce our strategy of preserving and valorizing natural resources, our biodiversity, and safeguarding, in general, the environment, land and sea for the sustainable development of the economy.[8]

States must have clear guidance on their obligations under international law to manage their greenhouse gas emissions to reduce potential impacts on the marine environment and limit the effects of climate change, for current and future generations. This is true for the world's major emitters, as well as States like Timor-Leste which contribute the most miniscule amount of greenhouse gases, just

[4] Speech by His Excellency the Prime Minister Kay Rala Xanana Gusmão on the occasion of the swearing-in ceremony of the IX Constitutional Government (1 July 2023), p. 4, available at: http://timor-leste.gov.tl/wp-content/uploads/2023/07/EN-Discurso_Tomada-de-Posse_01_07_2023.pdf
[5] Speech by His Excellency the Prime Minister Kay Rala Xanana Gusmão on the occasion of the swearing-in ceremony of the IX Constitutional Government (1 July 2023), p. 7, available at: http://timor-leste.gov.tl/wp-content/uploads/2023/07/EN-Discurso_Tomada-de-Posse_01_07_2023.pdf
[6] Address by His Excellency the Minister for Planning and Strategic Investment and Chief Negotiator on Maritime Boundaries, Kay Rala Xanana Gusmão, at the Compulsory Conciliation Proceedings at the Peace Palace at The Hague (29 August 2016), p. 9, available at: https://www.gfm.tl/wp-content/uploads/2021/01/Concilation-Open-Hearing-Minister-Xanana.pdf
[7] Keynote Address by His Excellency Kay Rala Xanana Gusmão on Economic Diversification in the Region: "Sustainable Best Practices and Business Models: Lessons learned by Timor-Leste," at the Atlantic Council Global Energy Forum (13 January 2018), p. 4, available at: https://www.gfm.tl/wp-content/uploads/2021/01/Xanana-speech-Eng-ver-Timor-Leste-Economic-Diversification_17.1.2018.pdf
[8] Speech of His Excellency the Prime Minister Kay Rala Xanana Gusmão on the occasion of the presentation of the programme of the IX Constitutional Government to the National Parliament (18 July 2023), p. 12, available at: http://timor-leste.gov.tl/wp-content/uploads/2023/07/2023-07-18-Presentation-Programme-9th-Government-National-Parliament-.pdf

0.003 per cent of global emissions[9] but suffer the consequences of the actions of others. While doing so, the Tribunal must consider, as States have agreed in the Paris Agreement, that developing countries, and specifically the least developed such as Timor-Leste, are afforded their basic rights to pursue their own sustainable economic development. Timor-Leste has the right to give its people a better life.

Just as we fought so hard and suffered so much for our independence, we will not rest until we have lifted our people out of poverty and secured our nation's future economic development, whilst also protecting our oceans.

As our Prime Minister Xanana Gusmão has said:

> People never fight for their independence alone. They do not fight for a flag, an anthem, a president, their own government or periodic elections. There are other dreams that come together around the ideal of independence, such as enabling the development and progress of both country and in the context of people.

Timor-Leste welcomes the opportunity to make submissions in this Tribunal's advisory jurisdiction. This is not a fight amongst States. This is a fight for our oceans, our planet, our people, our development. Individually, we are one drop. Together, we are an ocean.[10]

Mr President, members of the Tribunal, thank you for your attention.

I now ask that the Tribunal please invite the Honourable Former Justice John Middleton AM KC to continue Timor-Leste's submissions.

THE PRESIDENT: Thank you, Ms Exposto. I now give the floor to Mr Middleton to make his statement. You have the floor, Sir.

MR MIDDLETON: Mr President, honourable members of the Tribunal, you have as recently as Monday been taken to the mythical times of Sisyphus and the punishment imposed on him by the god Zeus to endlessly push a boulder uphill. And you have also been taken to outer space to view from afar our blue ocean dominated planet.

I am going to ask you to transport yourselves outside this splendid building and outside this beautiful town of Hamburg. I am asking you to place yourselves in the present time by reflecting on the future and to travel to Timor-Leste and to place yourself in the position of its inhabitants.

With that prelude, and at this stage of the proceedings, we will not repeat many points that have already been made, that have been addressed by other submissions and interventions. In answering the important questions before the Tribunal, Timor-Leste will emphasize three points.

[9] Government of Timor-Leste, *Nationally Determined Contribution Timor-Leste 2022 – 2030,* p. 1, available at: https://unfccc.int/sites/default/files/NDC/2022-11/Timor_Leste%20Updated%20NDC%202022_2030.pdf

[10] Ryunosuke Satoro, Japanese poet.

First, that States have a right to develop their natural resources in accordance with their right to protect and preserve the marine environment. The Tribunal's interpretation of States' obligations under UNCLOS must not compromise that right.

Second, States, especially the least developed, have a right to development. The Tribunal's interpretation of a State's obligations under UNCLOS must not compromise that right either.

And third, the Tribunal must apply the principle of common but differentiated responsibilities to the relevant obligations of States under UNCLOS.

I will be addressing the first two points and question (b) put to the Tribunal. Mr Sthoeger will speak to the third point on common but differentiated responsibilities and answer question (a) put to the Tribunal.

Before turning to the law, let me first very quickly summarize the significant impacts of greenhouse gas emissions on Timor-Leste's marine environment. It is important to note, at the outset, that there is very limited data as to the effects of climate change on Timor-Leste. As such, it is difficult to comprehensively report and monitor the impacts of climate change on its marine environment. The unavailability of such information stresses the importance of protecting and preserving global marine resources, particularly for Small Island Developing States.

The available data does demonstrate that the continued increase in greenhouse gas emissions has a significant impact on Timor-Leste in three major areas: first*,* on its coral and marine ecosystems; second, on its fisheries sector; and, third*,* on its coastal communities and sea-level rise.

As to Timor-Leste's coral and marine ecosystems, Asia supports approximately 40 per cent of the world's coral reef area, mostly in Southeast Asia. The world's most diverse reef communities are in the "Coral Triangle",[1] in which Timor-Leste is located. The Coral Triangle is a high biodiversity hotspot comprising several globally significant ecosystems and endemic species. Due to the emission of greenhouse gasses, ocean acidification of Timor-Leste's waters has increased in recent decades.

Climate modelling projects this to continue. This will impact the ecosystem's health alongside other pressures, which we all know of, including storm damage, coral bleaching, and fishing pressure. Continuation of current trends in sea surface temperatures and ocean acidification would result in large declines in coral-dominated reefs in the region by mid-century.[2]

Tied to its marine ecosystems is Timor-Leste's fisheries sector. Fish production is a vital component of regional livelihoods. The limited studies into the future climate impact on local fisheries available suggest that climate change may lead to a massive redistribution of fisheries' catch potential, with large declines in the tropics,

[1] IPCC Fifth Assessment Report, Chapter 24 "Asia", available at: https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap24_FINAL.pdf, p. 1342.
[2] IPCC Fifth Assessment Report, Chapter 24 "Asia", available at: https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap24_FINAL.pdf, p. 1342.

particularly around Timor-Leste and Indonesia.[3] A decline of an order of 5 per cent to 10 per cent in local fisheries is expected by the year 2050.[4] This presents serious food security implications, as Timor-Leste relies almost exclusively on ocean and coastal ecosystems for its domestic fish consumption.[5]

Finally, as a Small Island Developing State, Timor-Leste's communities are coastal communities that will be heavily impacted by sea-level rise. The Intergovernmental Panel on Climate Change's Fifth Assessment Report notes sea-level rise will be the key issue for many coastal areas in Asia, particularly if combined with changes in cyclone frequency or intensity.[6]

Approximately 66 per cent of Timor-Leste's population lives in coastal areas and lowlands below 500 metres. Timor-Leste's capital, Dili, is particularly vulnerable to coastal flooding, situated only a few metres above sea level.[7] Natural resources available in the coastal zone are vital for the economy of coastal populations.[8] Mean sea levels in Timor-Leste are projected to rise throughout the 21st century.[9] When combined with other changes, this sea-level rise will increase the impact of storm surges and coastal flooding.

So the science is clear as to the link between the health of the marine environment and ecosystems and greenhouse gas emissions, as has already been established by other statements.[10]

Before answering the questions put to the Tribunal, let me briefly address two preliminary points. And these have been gone over quite a great deal by other participants.

On jurisdiction, we submit the conditions for the Tribunal to exercise its advisory jurisdiction are satisfied. Furthermore, there are no "compelling reasons" for the Tribunal not to exercise that jurisdiction. In this context, we note that to the extent the Tribunal refers to rules of international law external to UNCLOS is to inform its

[3] IPCC Fifth Assessment Report, Chapter 24 "Asia", available at: https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap24_FINAL.pdf, p. 1345.
[4] World Bank Group, *Climate Risk Country Profile: Timor-Leste* (2021), p. 17, available at: https://www.adb.org/sites/default/files/publication/751241/climate-risk-country-profile-timor-leste.pdf.
[5] World Bank Group, *Climate Risk Country Profile: Timor-Leste* (2021), p. 17, available at: https://www.adb.org/sites/default/files/publication/751241/climate-risk-country-profile-timor-leste.pdf.
[6] IPCC Fifth Assessment Report Chapter 24 "Asia", available at: https://www.ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap24_FINAL.pdf,, p. 1342.
[7] World Bank Group, *Climate Risk Country Profile: Timor-Leste* (2021), p. 15, available at: https://www.adb.org/sites/default/files/publication/751241/climate-risk-country-profile-timor-leste.pdf.
[8] Government of the Democratic Republic of Timor-Leste, National Adaptation Plan, p. 30, available at: https://www4.unfccc.int/sites/NAPC/Documents/Parties/Timor%20Leste%20NAP.pdf.
[9] Australian Bureau of Meteorology and CSIRO (2014), *Climate Variability, Extremes and Change in the Western Tropical Pacific: New Science and Updated Country Reports, Pacific-Australia Climate Change Science and Adaptation Planning Program Technical Report, Australian Bureau of Meteorology and Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia*, available at: https://www.pacificclimatechangescience.org/wp-content/uploads/2014/07/PACCSAP_CountryReports2014_WEB_140710.pdf.
[10] See for example oral submissions of the Commission of Small Island States, (11 September 2023, ITLOS/PV.23/C31/2), available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_2_E.pdf

interpretation of the latter, there is a clear distinction between applicable law and jurisdiction. As the Tribunal itself has noted, the applicable law "*may not be used to extend the jurisdiction of the Tribunal*".[11] Applicable laws are limited to the interpretation of rights and obligations under UNCLOS. This point was made in the written submissions of France. We further agree with the position advanced by Guatemala, for example, as to issues of jurisdiction and admissibility.

Further, as a preliminary point, a small number of participants have raised the issue of the effects of sea-level rise on basepoints and maritime entitlements. Whilst these are very important issues, Timor-Leste is of the view that these are not at the crux of these proceedings. The focus of these proceedings should, however, be on the environmental issues that are at the core of the questions and which most States have expressed views upon.

This brings me to my next point. Timor-Leste submits the interpretation of UNCLOS is informed by other rules of international law. The customary rules of treaty interpretation, as reflected in articles 31 to 33 of the Vienna Convention on the Law of Treaties, set that out.[12] Article 31(3)(c) particulary prescribes that when interpreting a treaty, "*any relevant rules of international law applicable in the relations between the [States]*" be taken into account together with its context.[13]

As the Tribunal well knows, this approach is considered "*well established*" by international courts and tribunals, including, specifically, with respect to the content of article 192 of UNCLOS, which is informed by "*other applicable rules of international law*".[14]

Relatedly, not only may the Tribunal apply "*other rules of international law not incompatible*" with UNCLOS, in the words of UNCLOS article 293, it should furthermore adopt an interpretation of UNCLOS that coincides with other applicable obligations of States Parties "*to the extent possible*", over an interpretation that creates conflicting obligations for States. This is often a principle referred to as "harmonization" or "harmonious interpretation".[15] If harmonization is not possible, the law of treaties dictates that between two treaties on the same subject matter at least, the later treaty prevails.[16]

There are various environmental, human rights and other international obligations that may be relevant for the correct interpretation of UNCLOS. As noted by many

[11] ITLOS, Judgment, 10 April 2019, *The M/V "Norstar" Case (Panama* v. *Italy), ITLOS Reports 2019*, p. 47, para. 136; see also Written Submission of France, para. 18.
[12] Vienna Convention on the Law of Treaties 1155 *UNTS* 331; see *Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia and Herzegovina v. Serbia and Montenegro), Judgment*, [2007] *I.C.J. Reports* 43, p. 110, par. 160; *Responsibilities and obligations of States with respect to activities in the Area (Advisory Opinion) (1 February 2011)* [2011] *ITLOS Reports* 10, p. 27, par. 57.
[13] Vienna Convention on the Law of Treaties 1155 *UNTS* 331, article 31(3).
[14] *South China Sea Arbitration (Philippines v China) (Award),* PCA Case No 2013-19, 12 July 2016, par. 941.
[15] See Conclusions of the work of the Study Group on the Fragmentation of International Law: Difficulties arising from the Diversification and Expansion of International Law, Yearbook of the International Law Commission, 2006, vol. II, Part Two, p. 178.
[16] Vienna Convention on the Law of Treaties 1155 *UNTS* 331, article 30(3).

submissions, most relevant are the obligations and commitments of States, including Timor-Leste, under the Framework Convention on Climate Change[17] and the Paris Agreement.[18]

Article 237 of UNCLOS[19] reflects the understanding that States *will continue to develop* the rules of international environmental law. UNCLOS is intended to apply in harmony with the *specific* environmental rights and obligations of States rather than undermining or superseding them. When it comes to the protection and preservation of the environment, the Framework Convention on Climate Change and the Paris Agreement are the operative special texts.[20] Concluded after UNCLOS, their drafters – including many UNCLOS parties – *were presumably aware of their obligations under UNCLOS when they adopted these texts*.

Rights and obligations in UNCLOS, particularly those in Part XII, should therefore be without prejudice to the rights and obligations of States contained in other international agreements which protect and preserve the marine environment, regulate greenhouse gas emissions and allow for negotiations between States on climate change.

Certain international human rights are also other relevant and will be explained later: the right to development and the right to self-determination.

Turning now to the specific questions put to the Tribunal.

Mr President, honourable members of the Tribunal, I propose to address question (b) first, which relates to the general obligation placed on all States to protect and preserve the marine environment.

In its recent judgment in *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea*, the International Court of Justice acknowledged that, "all States have the obligation under customary international law to protect and preserve the marine environment".[21] In UNCLOS, that obligation is articulated in article 192.

As a preliminary point, we wish to echo the sentiments expressed by Guatemala as to how the Tribunal should interpret articles 192 and 194 of UNCLOS. In particular, that any specific obligations found to exist under Part XII are without prejudice to the specific obligations agreed by States under the Framework Convention on Climate Change and the Paris Agreement.

[17] United Nations Framework Convention on Climate Change (signed 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107.
[18] The Paris Agreement, Decision 1/CP.21 contained in FCCC/CP/2015/10/Add.1 (13 December 2015).
[19] Convention on the Law of the Sea, 10 December 1982, 1833 *UNTS* 397, article 237.
[20] Alan Boyle, Protecting the Marine Environment from Climate Change: The LOSC Part XII Regime, in *The Law of the Sea and Climate Change: Solutions and Constraints* (Elise Johansen, Signe Veierud Busch and Ingvild Ulrikke Jakobsen, eds., 2021) 81-103, at pp. 93-94.
[21] *Alleged Violations of Sovereign Rights and Maritime Spaces in the Caribbean Sea (Nicaragua* v. *Colombia),* Judgment of 21 April 2022, par. 95, https://www.icj-cij.org/public/files/case-related/155/155-20220421-JUD-01-00-EN.pdf.

Article 192 requires States to "protect" the marine environment from future damage, whilst also taking actions to "preserve" or maintain and improve the marine environment's present condition.[22] Therefore, the obligation in article 192 extends to the restoration of parts of the marine environment or ecosystems that have experienced degradation.[23] These obligations, as with many other obligations related to the environment in UNCLOS, are of a "due diligence" character. Not only must States refrain from certain actions, but they are also required to *positively* take action to meet their obligations.

Due diligence entails that a State is "obliged to use all the means at its disposal in order 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".[24]

In considering the content of a "due diligence obligation", the Seabed Disputes Chamber in its Advisory Opinion on *Activities in the Area*, concluded that a "due diligence" obligation required States to take affirmative measures *within its legal system*, consisting of "laws and regulations and administrative measures".[25]

And it is to be recalled that the exercise of due diligence requires in addition to adopting rules and measures, there must be "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".[26] Importantly, this is a continuing obligation.[27] The obligation evolves over time taking into account "new scientific or technological knowledge … [or] change[s] in relation to the risks involved in the activity".[28]

The general obligation to protect and preserve the environment is informed by, and does not negate, other rights and obligations of States Parties. Immediately following article 192, article 193 provides that, "States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment". Principle 21 of the United Nations Declaration on the Human Environment also recognizes this right.[29]

As is stated in the Virginia commentary, "[i]t 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

[22] *South China Sea Arbitration (Philippines v China) (Award),* PCA Case No 2013-19, 12 July 2016, par. 941; see also United Nations Convention on the Law of the Sea (Myron H. Nordquist et al. eds. 2013), vol I, pp. 39-40.
[23] *United Nations Convention on the Law of the Sea* (Myron H. Nordquist et al. eds. 2013), vol I, pp. 39-40.
[24] *Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment* [2010] *ICJ Reports* 14, p. 56, par. 101.
[25] See also *Responsibilities and obligations of States with respect to activities in the Area (Advisory Opinion) (1 February 2011)* [2011] *ITLOS Reports* 10, 74.
[26] *Pulp Mills on the River Uruguay* (Argentina v. Uruguay), Judgment, 2010 *ICJ Rep*. 14 (20 April), par. 197.
[27] *Trail Smelter* (United States / Canada), Award, III RIAA 1905 (11 March 1941), p. 1963.
[28] *Responsibilities and obligations of States with respect to activities in the Area (Advisory Opinion) (1 February 2011)* [2011] *ITLOS Reports* 10, par. 117.
[29] Report of the United Nations Conference on the Human Environment, Stockholm, 5–16 June 1972, A/CONF.48/14/Rev.1 (United Nations publication, Sales No. E.73.II.A.14), p. 5, principle 21.

of article 193) is always subject to the specific rights and duties laid down in the Convention".[30]

During the negotiations of UNCLOS, the discussions in the Third Committee acknowledged that the potential resources of the sea "offered developing States a genuine opportunity to improve their living standards".[31]

UNCLOS recognizes the exploitation of a State's natural resources is not mutually exclusive from the protection and preservation of the marine environment.

Timor-Leste believes in the inalienable sovereign right of Small Island Developing States to exploit their natural resources but in an environmentally responsible way. The rights and obligations of States in this regard must complement each other. This has been the position recognized by the Working Groups during the negotiation of the Framework Convention on Climate Change and is expressly recognized in the text of article 4(10).

I will read it out, even though it is rather longer than most matters I would normally read out to a court, but it is worthy of attention in what it says:

> The Parties shall, in accordance with article 10, take into consideration in the implementation of the commitments of the Convention the situation of Parties, particularly developing country Parties, with economies that are vulnerable to the adverse effects of the implementation of measures to respond to climate change. This applies notably to Parties with economies that are highly dependent on income generated from the production, processing and export, and/or consumption of fossil fuels and associated energy-intensive products and/or the use of fossil fuels for which such Parties have serious difficulties in switching to alternatives.[32]

In seeking to provide a harmonious interpretation of UNCLOS, article 193 should be read having regard to the commitments made in article 4(10) of the Framework Convention on Climate Change, which I have just read out. This is further supported by the United Nations General Assembly resolution on ensuring access to affordable, reliable, sustainable, and modern energy for all, which was adopted by consensus in 2022.[33]

A developing State should not be placed in a position where it is forced to choose between the protection of the global marine environment, and the protection and advancement of its nation and people. The rights and obligations of States, in this regard, should account for various factors. This includes the level of development of each nation in accordance with its common but differentiated responsibilities and respective capabilities, in light of different national circumstances.

[30] *United Nations Convention on the Law of the Sea* (Myron H. Nordquist et al. eds. 2013), vol I, p. 43.
[31] Third United Nations Conference on the Law of the Sea, Third Committee, A/CONF.62/C.3/SR.7, par. 30, available at: https://legal.un.org/diplomaticconferences/1973_los/docs/english/vol_2/a_conf62_c3_sr7.pdf
[32] United Nations Framework Convention on Climate Change (signed 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107, article 4(10).
[33] A/RES/77/170, *Ensuring access to affordable, reliable, sustainable and modern energy for all* (14 December 2022), article 9.

Therefore, article 193 should be seen as representing a balance between the interests of individual States in their economic development and the universal interests in the protection and preservation of the marine environment.[34] The correct interpretation of article 192 must be read in tandem with the subsequent article which expressly refers to its content.

Closely related to States' right to develop their natural resources is the right to development. This is an "inalienable human right by virtue of which every human person and all peoples are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized" as recognized in the Declaration on the Right to Development Resolution.[35]

Importantly, States bear the primary responsibility for the "creation of national and international conditions favourable to the realization of the right to development".[36]

During the first session of the Intergovernmental Negotiating Committee, Working Group I considered the impacts of the Framework Convention on Climate Change on living standards and the right to development. The Working Group recognized "developing countries have as their main priority *alleviating poverty and achieving social and economic development and that their net emissions must follow from their, as yet, relatively low energy consumption to accommodate their development needs*".[37] The Working Group further recognized the right to development as an "inalienable human right".[38]

It is true that the express wording of the "right to development" was not included in the final text of the Framework Convention on Climate Change. However, its preamble clearly recognizes that, "per capita emissions in developing countries are still relatively low and that the share of global emissions originating in developing countries will grow *to meet their social and development needs*".[39]

Since the Framework Convention on Climate Change, every major climate commitment, including the Paris Agreement,[40] the Glasgow Climate Pact[41] and the

[34] *United Nations Convention on the Law of the Sea* (Myron H. Nordquist et al. eds. 2013), vol IV, p. 49.
[35] United Nations General Assembly, *Declaration on the Right to Development: resolution / adopted by the General Assembly*, 4 December 1986, A/RES/41/128, article 1(1).
[36] United Nations General Assembly, *Declaration on the Right to Development: resolution / adopted by the General Assembly*, 4 December 1986, A/RES/41/128, article 3.
[37] First session of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change, Compilation of texts related to principles, submitted by the Bureau of Working Group I (A/AC.237/Misc.6), 13 August 1991, Part III.B.4, and 1.
[38] First session of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change, Compilation of texts related to principles, submitted by the Bureau of Working Group I (A/AC.237/Misc.6), 13 August 1991, Part III.B.3.
[39] United Nations Framework Convention on Climate Change (signed 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107, preamble.
[40] The Paris Agreement, Decision 1/CP.21 contained in FCCC/CP/2015/10/Add.1 (13 December 2015).
[41] The Glasgow Climate Pact, Decision 1/CP.26 contained in FCCC/CP/2021/12/Add.1 (13 November 2021).

Sharm-el-Sheikh Implementation Plan,[42] has expressly acknowledged the right to development in its preamble.

Since 2018, the United Nations General Assembly has adopted annual resolutions in respect of the right to development. In its most recent 2022 resolution, the United Nations General Assembly has acknowledged "the negative impact on the realization of the right to development owing to the further aggravation of the economic and social situation, in particular of developing countries, as a result of the effects of international energy, food and financial crises, as well as the increasing challenges posed by global climate change and the loss of biodiversity".[43]

The right to development reflects the realities of the decolonization process and the quest for newly and developing States to gain economic independence and control over their natural resources.[44] Timor-Leste is a nation that is just 21 years old, as you have heard. An interpretation of UNCLOS should be read taking into account the right to development and that developing countries have, as their main priority, alleviating poverty and achieving social and economic development.

Then, this right to development is closely interlinked to the full realization of the right of peoples to self-determination. According to the *Declaration on the Right to Development* this includes "the exercise of their inalienable right to full sovereignty over all their natural wealth and resources".[45]

Respect for the right of self-determination is also one of the purposes of the United Nations.[46] As already explained by Chile[47] and Nauru,[48] the right to self-determination is found in the International Covenant on Civil and Political Rights (ICCPR) and the International Covenant on Economic, Social and Cultural Rights (ICESCR).[49]

The General Assembly's Declaration on Friendly Relations, adopted unanimously in 1970, considered to reflect customary international law, states that: "all peoples have

[42] The Sharm el-Sheikh Implementation Plan, Decision 1/CP.27 contained in FCCC/CP/2022/10/Add.1 (20 November 2022).
[43] United Nations General Assembly, *The right to development: resolution / adopted by the General Assembly*, 15 December 2022, A/RES/77/212, par. 29.
[44] Roman Girma Teshome, 'The Draft Convention on the Right to Development: A New Dawn to the Recognition of the Right to Development as a Human Right?' (2022) 22(2) *Human Rights Law Review* 1, 9 see also Nicolaas Schrijver, 'Self-determination of Peoples and Sovereignty over Natural Wealth and Resources' in the United Nations, *Realizing the Right to Development* (Essays in Commemoration of 25 years of the United Nations Declaration on the Right to Development), (2013) HR/PUB/12/4 <https://www.un-ilibrary.org/economic-and-social-development/realizing-the-right-to-development_49006c2a-en>.
[45] United Nations General Assembly, *Declaration on the Right to Development: resolution / adopted by the General Assembly*, 4 December 1986, A/RES/41/128, article 1(2).
[46] UN Charter, article 1.
[47] Oral submissions of Chile (14 September 2023, ITLOS/PV.23/C31/7), page 12, available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_7_E.pdf
[48] Oral submissions of Nauru (14 September 2023, ITLOS/PV.23/C31/8), page 29, available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_8_E.pdf
[49] ICCPR, ICESCR, article 1.

the right freely to determine, without external influence, their political status and to pursue their economic, social and cultural development".

The International Court of Justice has also emphasized that the proper exercise of self-determination pays regard to the express free will of peoples.[50] As Nauru emphasized, self-determination is unfilled when people are deprived of their "own means of subsistence".[51] Contemporary international law considers self-determination as a *jus cogens* right, from which no derogation is permitted.[52]

Mr President, it is impossible to disconnect the reality of States that have fought in fulfilment of their right to self-determination, from the current topic under discussion. Timor-Leste, as you have heard, fought hard to secure its sovereign rights over its seas to achieve a permanent maritime boundary with Australia. This included the allocation of significant resource rights in the Timor Sea that had historically been exploited with disregard for Timor-Leste's entitlements under international law.

It has been 21 years since the restoration of Timor-Leste's independence. Timor-Leste has made significant progress in managing its overall development and securing its future. While Timor-Leste has made this remarkable progress, this new nation continues to face challenges in recovering from its recent history of colonization, conflict and occupation. It remains a Least Developed Country.[53] Remaining challenges include widespread poverty and high levels of unemployment.

Timor-Leste has limited avenues to generate revenue to support its people. The reality is that for the Timorese people to freely pursue their economic, social and cultural development – to fulfil their right to self-determination – they must be able to pursue their right to development and exercise their sovereign right to exploit their natural resources. Without the ability to develop its natural resources, Timor-Leste's development will be challenged. Its people will be deprived of their "own means of subsistence".

Mr President, with these important rights and considerations in mind, I turn to the States' obligations to protect and preserve the marine environment under article 192.

The primary means of avoiding the impacts of climate change on the marine environment is to reduce and minimize greenhouse gas emissions through a transition to a low carbon economy.[54] In that sense, Timor-Leste's contribution to global emissions is already minimal and miniscule. In 2021, Timor-Leste's per capita

[50] *Western Sahara, Advisory Opinion, I.C.J. Reports 1975*, par. 55; *Legal Consequences of the Separation of the Chagos Archipelago from Mauritius in 1965, Advisory Opinion, I.C.J. Reports 2019*, par. 157.
[51] Written Statement of Nauru, pars. 62-66.
[52] It is listed in the annex to the ILC's draft conclusions on *Identification and legal consequences of peremptory norms of general international law (*jus cogens*)*, adopted on second and final reading in 2022.
[53] United Nations Conference on Trade and Development, *UN list of least developed countries* (online, 2021), available at: https://unctad.org/topic/least-developed-countries/list
[54] Oceans and the law of the sea, on the theme "The impacts of ocean acidification on the marine environment", Report of the Secretary-General, A/68/71 (8 April 2013), par. 93.

energy consumption was 1,615 kilowatt hours.[55] As the Representative for Timor-Leste noted, Timor-Leste only contributes to 0.003 per cent of global emissions.[56]

Since Timor-Leste's independence, it has maintained similar levels of negligible energy consumption despite taking significant steps to towards the development of the nation.

Despite Timor-Leste's negligible emissions, Timor-Leste intends to undertake the development of its natural resources in an environmentally responsible manner that complies with its obligations under international law.

The transition to net zero will not happen overnight. While Timor-Leste's emissions may increase in the short term as it continues its nation-building path, the reality is that its energy consumption needs remain minimal compared to other States. Importantly, Timor-Leste recognizes that it must also do so taking into account its obligations under international law.

Through the exploitation of Timor-Leste's natural resources it will be able to satisfy its negligible energy needs. The revenue received from such will be employed to deliver short- and long-term social and economic benefits to its people. This includes transition and investment to green energy sources. This in turn will provide Timor-Leste with the foundations it needs to graduate from its status as a Least Developed Country.[57]

As a Small Island Developing State, the balance between pursuing effective and sustainable economic and social development against the need to decrease global greenhouse emissions and protect the marine environment must be considered.

As enumerated in the Paris Agreement, States' obligations must "reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances". This extends the obligation of developed States to provide developing States with the financial resources to assist them in mitigation and adaptation efforts, as well as other forms of assistance.[58]

In addition to being subject to other rights enshrined under UNCLOS, such as article 193, this interpretation of the general obligation in article 192 is in light of its context, and is informed by other related international obligations of States.[59] It has been recognized, and it is worth keeping in mind, that the content "of the general obligation in article 192 is further detailed in the subsequent provisions of Part XII,

[55] Our World in Data, *Energy use per person (Timor-Leste)* (online, 2021), available at: https://ourworldindata.org/grapher/per-capita-energy-use?tab=chart&country=~TLS
[56] Government of Timor-Leste, *Nationally Determined Contribution Timor-Leste 2022 – 2030,* p. 1, available at: https://unfccc.int/sites/default/files/NDC/2022-11/Timor_Leste%20Updated%20NDC%202022_2030.pdf
[57] United Nations Conference on Trade and Development, *UN list of least developed countries* (online, 2021), available at: https://unctad.org/topic/least-developed-countries/list
[58] Paris Agreement articles 2(2), 9-11.
[59] *South China Sea Arbitration (Philippines v China) (Award),* PCA Case No 2013-19, 12 July 2016, par. 941.

including article 194, as well as by reference to specific obligations set out in other international agreements, as envisaged by article 237 of the Convention".[60]

Mr President, honourable members, I thank you for your attention. I would now ask the Tribunal to invite Mr Sthoeger to address the Tribunal on part (a) of the question for the Tribunal regarding States' obligations and to make some observations on the principle of common but differentiated responsibilities and to make some concluding remarks. I thank you.

THE PRESIDENT: Thank you, Mr Middleton. I now give the floor to Mr Sthoeger to make his statement. You have the floor, Sir.

MR STHOEGER: It is an honour to appear before this distinguished body once again, and on behalf of Timor-Leste.

My presentation will be in three parts: first, I will answer question (a) put to the Tribunal; second, I will say a few words about the principle of common but differentiated responsibilities; and, third, I will provide Timor-Leste's concluding remarks.

Turning to question (a), Mr President, article 194(1) obligates States "to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities". As already stated by many participants, the definition of "pollution of the marine environment" in UNCLOS article 1(1)(4), applies to anthropogenic greenhouse gases.

These participants further explained that the obligation in article 194 is an obligation of conduct, not result. The conduct in question requires the exercise of due diligence, and Mr Middleton has already addressed the concept of "due diligence", which similarly applies to the obligation in article 194.

Mr President, as an obligation "of conduct", due diligence cannot be measured by achieving a specific outcome, measured in degrees or "temperature goals".[1] Nor can one assess the standard of conduct, by analogy to a State's obligation to achieve a certain result by means of its own choosing, as some have effectively suggested.[2] Furthermore, whether a due diligence obligation is for objective or subjective assessment does not change its nature as conduct-based.[3] I would add that, as a

[60] *South China Sea Arbitration (Philippines v China) (Award),* PCA Case No 2013-19, 12 July 2016, par. 942.

[1] Oral submissions of Australia, (13 September 2023, ITLOS/PV.23/C31/5), page 10, available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_5_E.pdf

[2] Oral submissions of the Commission of Small Island States (12 September 2023, ITLOS/PV.23/C31/3), pages 18-19, available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_3_E.pdf

[3] Oral submissions of the Commission of Small Island States (12 September 2023, ITLOS/PV.23/C31/3), pages 11-12, available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_3_E.pdf

practical matter, a result-based obligation will tend to limit, rather than expand, the conduct required of States, as time progresses, and that these distinctions are not academic; they can have ramifications.

So how should the Tribunal identify the relevant standard of conduct? Several of Part XII's provisions – such as 207 and 212 – refer to the adoption and existence of international rules and standards, external to UNCLOS. The standard of conduct is, therefore, informed by those rules. Furthermore, article 237 states that UNCLOS is "without prejudice" to the specific rights and obligations of States found in "*international agreements related to the protection and preservation of the marine environment*".

In the context of climate change, the relevant agreements are first and foremost the UNFCCC and the Paris Agreement. What are the legal obligations therein? As one author puts it, "The Paris Agreement contains a mix of hard, soft and non-obligations between which there is dynamic interplay… The combination of elements in each provision is a reflection of the demands of the relevant issue area".[4]

This so-called "mix" was a result of hard-fought negotiations. It is a delicate balance of obligations that States, including all UNCLOS parties, were willing to take upon themselves. But equally, what obligations they were not.

Mr President, for UNCLOS article 237, as well as for the principle of harmonious treaty interpretation, as explained by Mr Middleton, to have any meaning, the correct interpretation of the more general UNCLOS obligations cannot be to negate and override the agreements of States found in the UNFCCC and the Paris Agreement. These nuanced and carefully negotiated texts are later in time relative to UNCLOS, and UNCLOS parties should not be assumed to have taken upon themselves conflicting obligations.

As the late Professor Boyle notes, these agreements are the *lex specialis* with respect to climate change.[5] Not all participants in these proceedings agree on this point. But Timor-Leste believes this is evident.

First, environmental protections under UNCLOS are found Part XII of the 17 parts and annexes of UNCLOS. The UNFCCC and Paris Agreements, on the other hand, address climate change exclusively.

Second, it is not contested that UNCLOS is a framework agreement containing obligations of a more general nature.

[4] Lavanya Rajamani, The 2015 Paris Agreement, 28(2) *Journal of Environmental Law*, pp. 337-358(2016), at 352.

[5] Alan Boyle, Protecting the Marine Environment from Climate Change: The LOSC Part XII Regime, in *The Law of the Sea and Climate Change: Solutions and Constraints* (Elise Johansen, Signe Veierud Busch and Ingvild Ulrikke Jakobsen, eds., 2021) 81-103, at pp. 93-94.

Third, it has been pointed out that greenhouse gas emissions are but one of many forms of pollution covered by UNCLOS.[6] The UNFCCC and Paris Agreements apply only to one form of pollution. Indeed, it is revealing that even those that disagree on this point, refer to these agreements as the "climate change regime" or "specialized conventions".[7]

Of course, that the UNFCCC and Paris Agreement are *lex specialis* does not mean that UNCLOS is inapplicable or identical to them. As New Zealand has pointed out, the relationship concerns coherence, not prevalence.[8] What *lex specialis* entails, is that UNCLOS' application must be appreciated through the prism of the specialized regime.

Others have suggested that the relationship is that of complementarity.[9] If so, true complementarity entails a role for both treaty regimes. It entails a role for the obligations contained in UNCLOS Part XII in the context of these proceedings. At the same time, it also entails that UNCLOS cannot overtake later agreements and render their mix of obligations and non-obligations redundant. A result-based legal standard, not found in the Paris Agreement or elsewhere, does just that. True complementarity, Mr President, is where both bodies of law are to play their part, to form a coherent normative framework.

Now, none of this changes the dire reality presented by COSIS, based on the best available science. Each increase in global temperatures, even incremental, can and will have devastating effects. The current legal framework has proven insufficient.

Others have pointed out that, with respect to other environmental issues related to the law of the sea, States have come together to address existing gaps in the law.[10] Here too, Timor-Leste calls on States to urgently agree on further necessary action to mitigate and adapt to climate change.

[6] Oral submissions of Australia (13 September 2019, ITLOS/PV.23/C31/5), page 8-9, available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_5_E.pdf

[7] Oral submissions of Guatemala (14 September 2023, ITLOS/PV.23/C31/8), available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_8_E.pdf

[8] Oral submissions of New Zealand (15 September 2023, ITLOS/PV.23/C31/1), page 5, available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_10_E.pdf

[9] Oral submissions of the Commission of Small Island States (11 September 2023, ITLOS/PV.23/C31/2), page 30, available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_2_E.pdf; Oral submissions of the Commission of Small Island States (12 September 2023, ITLOS/PV.23/C31/3), page 24, available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_3_E.pdf; Oral submissions of Guatemala (14 September 2023, ITLOS/PV.23/C31/8), page 11, available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_8_E.pdf

[10] Oral statement of the Federated States of Micronesia (15 September 2023, ITLOS/PV.23/C31/9), available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_9_E.pdf

Furthermore, the obligation of States under article 194(1) is qualified by the "best practicable means at their disposal and in accordance with their capabilities". In other words, a State's capabilities and level of development influences the nature of the obligation imposed.[11]

This reflects the concern of developing States that these obligations could impose an excessive burden in circumstances where they: first, lack the necessary capabilities and technology; and, second, are necessarily focused on improving the economic well-being of their own peoples.

This leads me to the principle of "common but differentiated responsibilities" (CBDR), as already highlighted by others, such as Guatemala and Sierra Leone.[12] The principle is embodied in Principle 7 of the Rio Declaration[13] and reflected in UNFCCC[14] and the Paris Agreement,[15] among other treaties. It is a central principle of international environmental law.[16]

The principle of CBDR is understood as consisting of two elements.

First, concerning the common responsibilities of States for the protection of the environment, individually and collectively, including in the regulation of anthropogenic greenhouse gas emissions;

and, second, concerning the need to take into account different national circumstances'. In particular, each State's contribution to the creation of a particular environmental problem and each State's ability to prevent, reduce and control the threat.[17]

During the first session of the Intergovernmental Negotiating Committee for the UNFCCC, Working Group I noted that [18] "[d]eveloped countries are the main contributors of GHGs and thus should take the lead and shoulder the main responsibility to stabilize and limit the greenhouse gas emissions",[19]. This understanding is reflected in the texts of the UNFCCC and the Paris Agreement.

[11] International Law Association, Study Group on Due Diligence in International Law, Second Report (2016), pp. 3, 16.
[12] Oral submission of Sierra Leone (19 September 2019).
[13] United Nations Framework Convention on Climate Change (signed 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107.
[14] United Nations Framework Convention on Climate Change (signed 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107, article 3(1).
[15] The Paris Agreement, Decision 1/CP.21 contained in FCCC/CP/2015/10/Add.1 (13 December 2015), preamble, articles 2(2), 4(3), and 4(19).
[16] Ellen Hey, Sophia Paulini, Common but Differentiated Responsibilities, *Max Planck Encyclopaedia of Public International Law* (2021), para. 19.
[17] P Sands, *Principles of International Environmental Law,* "General Principles and Rules", Cambridge University Press, 2012, p. 233.
[18] Report of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change on the work of its First session, held at Washington, D.C. from 4 to 14 February 1991 (A/AC.237/6), p. 24.
[19] First session of the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change, Compilation of texts related to principles, submitted by the Bureau of Working Group I (A/AC.237/Misc.6), 13 August 1991, Part I.E.7.

It is important that the obligations in Part XII are interpreted coherently with the principle of CBDR. Otherwise, certain standards may be inappropriate, and of unwarranted economic and social cost to some States, in particular developing States.[20] For States with limited means, imposing the same level of commitment would ultimately compromise their right to pursue sustainable and inclusive development.

To address this disparity, UNCLOS, the UNFCCC, and the Paris Agreement place an obligation on developed States to provide technical and financial assistance to developing States. Such assistance is designed to support, in the words of UNCLOS article 202, "the protection and preservation of the marine environment and the prevention, reduction and control of marine pollution".[21]

Articles 202 and 203 of UNCLOS reflect the unique position of developing States in trying to balance their development and the protection of the marine environment. Article 202 calls on States Parties to promote programmes of "scientific, educational, technical and other assistance" to developing States and contains an open-ended list of specific forms of assistance.

Article 203 seeks to provide preferential treatment for developing States in the allocation of funds and technical assistance from international organizations. Both articles 202 and 203 seek to level the playing field and "ease the burden which the law could impose upon States not adequately equipped to meet those obligations".[22] Similarly, article 9 of the Paris Agreement aims to reinforce this support. It calls on developed States to "provide financial resources to assist developing country Parties with respect to both mitigation and adaptation".

With a GDP per capita of just over US$ 2,300,[23] and little to no climate-related technical or financial assistance from high-emitting States, the challenge for Timor-Leste to protect the marine environment without compromising the social security of its people, is immense.

Notwithstanding Timor-Leste's status as a Least Developed Country and an as island State, Timor-Leste continues to uphold its obligations under the Paris Agreement. In accordance with article 4(6) of the Paris Agreement, Timor-Leste has submitted two Nationally Determined Contributions (or NDCs), the latest in November 2022.[24] Importantly, Timor-Leste's NDC includes a section which sets out the means of implementing these priority areas. This section states: "The Government of Timor-Leste requires urgent technical support and financing to

[20] Malgosia A. Fitzmaurice, *International Protection of the Environment* (Hague Academy of International Law), p. 65.
[21] United Nations Convention on the Law of the Sea, article 202.
[22] *United Nations Convention on the Law of the Sea* (Myron H. Nordquist et al. eds. 2013), vol I, p. 107.
[23] The World Bank, GDP per capita (current US$) – Timor-Leste (online, 2022), available at: https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=TL
[24] United Nations Climate Change, *Nationally Determined Contributions Registry – Timor-Leste* (online), available at: https://unfccc.int/NDCREG?gclid=Cj0KCQjw84anBhCtARIsAISI-xfLPsfirA6mPdAIznR8tr95R6xlcCQeggRKjBwd-C2nMLFfx7Bq3ywaAhetEALw_wcB

establish a robust National Greenhouse-Gas (GHG) Inventory to support its ability to report to the UNFCCC and comply with the requirements of the Paris Agreement".[25]

Timor-Leste's NDC identifies specific priorities for capacity building, finance and technology transfer.[26]

At the end of the day, States like Timor-Leste are reliant on support from the international community to help it fulfil its obligations in respect of climate change.

Mr President, Timor-Leste is a staunch supporter of international law. It has relied on it time and time again to support its most important battles on the world stage. As a member of the international community, Timor-Leste has carried out its obligations under the UNFCCC and UNCLOS. On the other hand, at COP27 last November, it was again acknowledged that the world's largest and wealthiest economies have failed to deliver on their commitments to provide US$ 100 billion per year in climate funding for developing countries.[27] And, Sustainable Development Goal 14 (that is, Life Below Water) remains the most underfunded development goal.[28] Developed States and high-emitting States have not upheld their end of the deal.

Mr President, we've reached a tipping point. We must see meaningful cooperation between high-emitting States and low-emitting States to meet our shared, but ultimately differentiated, obligations; both under UNCLOS, to protect the marine environment, and under the UNFCCC to manage and reduce emissions.

In this context, UNCLOS article 197 also recognizes that the duty to cooperate to formulate international standards to protect the environment, must take *"into account regional features*". Accordingly, specially affected regions and States with lesser capacities require assistance from developed States to cooperate in the development of mitigation and adaptation standards.

Timor-Leste submits that in light of the principle of CBDR, UNCLOS places a higher responsibility on developed and industrialized nations to reduce anthropogenic greenhouse gas emissions that may contribute to global pollution and damage marine ecosystems.

Mr President, members of the Tribunal, allow me to conclude on behalf of Timor-Leste. We stand at a critical juncture. As was noted by Professor Lowe, we're facing a matter of "extreme gravity and urgency".[29] The international community, including

[25] Government of Timor-Leste, *Nationally Determined Contribution Timor-Leste 2022 – 2030,* pp. 45, available at: https://unfccc.int/sites/default/files/NDC/2022-11/Timor_Leste%20Updated%20NDC%202022_2030.pdf
[26] Government of Timor-Leste, *Nationally Determined Contribution Timor-Leste 2022 – 2030,* pp. 46, available at: https://unfccc.int/sites/default/files/NDC/2022-11/Timor_Leste%20Updated%20NDC%202022_2030.pdf
[27] Glasgow Climate Pact, Decision 1/CP.26 contained in FCCC/CP/2021/12/Add.1 (13 November 2021), par. 26 – 27, available at: https://unfccc.int/sites/default/files/resource/cp2021_12_add1_adv.pdf
[28] IISD, *Summary report, 27 June – 1 July 2022 – 2022 UN Ocean Conference* (online), available at: https://enb.iisd.org/2022-un-ocean-conference-summary#brief-analysis-second-un-ocean-conference
[29] Oral submissions of the Commission of Small Island States (12 September 2023, ITLOS/PV.23/C31/4), page 25, available at:

UNCLOS parties, must act to address this intergenerational emergency.[30] It is for States to take the best available science, such as the conclusions of the IPCC, and agree on further legal commitments. In doing so, the community of States cannot leave developing States behind. Developing States deserve the same opportunities that have been afforded to developed States, to develop their resources for the benefit of their people.

Timor-Leste is grateful that COSIS has brought the defining issue of our time before you, supported by a youth-led movement. The Tribunal has been given a very important task. It must elucidate on the rights and obligations of States Parties relating to climate change, as well as existing gaps in the law. In doing so, it must also leave sufficient room for States to further develop the legal framework through the political process under the UNFCCC. The Tribunal should bear in mind that "(too much) coercion kills all noble, voluntary devotion."[31]

Mr President, members of the Tribunal, that concludes the submissions for Timor-Leste, thank you for your kind attention.

THE PRESIDENT: Thank you, Mr Sthoeger. I now invite the representative of the European Union, Mr Bouquet, to make his statement. You have the floor, Sir.

MR BOUQUET: On behalf of the European Union, hereinafter also referred to as the "EU", I have the honour to address this Tribunal on the two important questions that have been submitted by the Commission of Small Island States on Climate Change (COSIS). In this context, we would take stock of a number of points made by other delegations in these proceedings and which show a certain degree of convergence on most of the topics.

But let me first, from the outset, warmly compliment the COSIS, which is formed by small island States that are significantly impacted or at risk by the effects of climate change, for this commendable initiative to bring these fundamental legal questions to the Tribunal, and stress that the European Union considers that it is scientifically well established that the anthropogenic emissions of greenhouse gases are leading to climate change, bringing with it significant deleterious effect to the environment and in particular to the oceans (ocean warming, ocean acidification with consequential adverse impacts on marine biodiversity and also reduced absorption of heat and greenhouse gases, and, of course, sea-level rise).

These risks are existential, and this explains why the UN Secretary-General has recently said the climate crisis is a "code red for humanity", and the EU

https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_4_E.pdf

[30] Oral submissions of the Commission of Small Island States (12 September 2023, ITLOS/PV.23/C31/4), page 22, available at: https://www.itlos.org/fileadmin/itlos/documents/cases/31/Oral_proceedings/ITLOS_PV23_C31_4_E.pdf

[31] Maurus Wollensak, The Precautionary Principle/Approach and the United Nations Convention on the Law of the Sea: Management of Living Resources, in *The Environmental Rule of Law for Oceans designing legal solutions* (Froukje Maria Platjouw, Alla Pozdnakova, eds., 2023), pp. 136-148, at. 148, quoting Knigge, A. F., *Über den Umgang mit Menschen* (Leipzig: Reclam, 1878), 126.

Commission's President referred to "a boiling planet" in her speech on the State of the European Union last week[1], echoing thereby the Secretary-General of the United Nations.

Most participants in this case agree that the scientific reports of the Intergovernmental Panel on Climate Change (IPCC), while lacking legally binding value by themselves, do reflect the global consensus of the scientific community on climate change.

In particular, the reports from the sixth assessment cycle and the Special Report on the Oceans and Cryosphere in a Changing Climate[2] reflect the current scientific knowledge on the implementation of international obligations regarding climate change and oceans.

As such, these scientific reports constitute an important contextual element which is relevant in the interpretation of the obligations incumbent on States Parties. Most participants in these proceedings agree on this point. In this regard, the EU invites the Tribunal to take the current scientific evidence on the effects of climate change on the marine environment as a fact, following an approach already deployed by the International Law Commission in its work on "Sea-level rise in relation to international law",[3] which will examine the law of the sea aspects, statehood and right of affected persons.

The European Union considers, thus, that greenhouse gas emissions constitute a major global existential concern for the entire planet, and this issue calls for global answers by the international community.

In order to find global answers, international cooperation, which is a general duty, is indispensable. The duty to cooperate is codified in article 197 of the United Nations Convention on the Law of the Sea (UNCLOS) and, as stated by this Tribunal in the *Mox Plant* case,[4] is a fundamental principle underpinning the whole of Part XII of UNCLOS.

As COSIS has highlighted, three main components of this due diligence obligation can be identified: obligations to harmonize laws, policies and procedures; obligations to take cooperative action through international organizations; and obligations to grant assistance to developing States – with a view to prevent, reduce and control pollution of the marine environment, including in the form of greenhouse gas emissions.

The European Union has taken a leading role in the implementation of these obligations. Not only has it significantly harmonized its laws and policies for the protection of the marine environment from the effects of climate change with other

[1] Available at: https://state-of-the-union.ec.europa.eu/system/files/2023-09/SOTEU_2023_Letter_of_Intent_EN_0.pdf
[2] Special Report on the Ocean and Cryosphere in a Changing Climate, available at: https://www.ipcc.ch/srocc/.
[3] See A/76/10, Chapter IX Sea-level rise in relation to international law, para. 263.
[4] *MOX Plant (Ireland* v. *United Kingdom)*, *Provisional Measures, Order of 3 December 2001, ITLOS Reports 2001*, p. 95, at p. 110, para. 82.

UNCLOS States Parties, notably through the conclusion of the Paris Agreement and the recent adoption of the BBNJ Agreement, but it has also provided meaningful assistance to developing States to tackle climate change. According to the latest OECD report (2022), the EU and its 27 Member States are, indeed, the largest contributors to international public climate finance, contributing over €23.4 billion[5] – which is equivalent to US$ 26 billion – to the collective US$ 100 billion aim, and thereby almost 40 per cent of the EU's contribution targeting climate adaptation.

In another legal context, partly overlapping questions have been raised by the UN General Assembly in a consensus resolution requesting an advisory opinion from the International Court of Justice (ICJ). The main distinction between the two requests is the particular focus of the present case on the marine environment, and the broader scope, including the fundamental rights angle and the intergenerational aspect, of the ICJ case.

UNCLOS, which is generally considered to be the "constitution of the oceans", sets out the legal framework within which all the activities in the oceans and seas must be carried out, and this has also implications for activities on land with effects on the oceans and seas.

As has been recognized in almost all the written statements, UNCLOS is a living instrument which is capable, without compromising its integrity (which is essential for the European Union), to adapt to new realities as well as to address major new challenges which are related to the protection and preservation of the marine environment, such as climate change.

As stated by Judge Paik, here present, "[t]he challenge facing the Tribunal is … how to make the Convention relevant in an area in which law and realities have changed rapidly and will continue to do so."[6]

Now, in the following presentation, the European Union will proceed in five steps: first, I will make a remark in connection to the nature of the Tribunal's advisory function (in order not to confuse it with adversarial procedures);

second, I will address the question of the applicable law;

third, I will turn to the general obligations of articles 192 and 194 of UNCLOS and their nature as obligations of conduct;

fourth, I will update the Tribunal on the high ambition implementation of these obligations by the European Union;

[5] See: Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Accelerating the transition to climate neutrality for Europe's security and prosperity EU Climate Action Progress Report 2022, 26.10.2022, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022DC0514, page 23.

[6] 2018 WMU Global Ocean Conference; Statement by Judge Jin-Hyun Paik, then President of ITLOS, Building Transformative Partnerships for Ocean Sustainability: The Role of ITLOS. See to this effect: *Law of the Sea - UNCLOS as a Living Treaty*, 2016, edited by Jill Barrett and Richard Barnes.

and, fifth, my co-agent will briefly address the two questions, in the order posed by COSIS.

Now, in this statement on behalf of the European Union, we will not address the issue of jurisdiction of the Tribunal. The written statement of the European Union was made without prejudice to the question of the jurisdiction of the Tribunal to examine the request for an advisory opinion in respect of questions put to it, and we will follow the same here today.

But this being so, we would wish to underline that this case is a request for an advisory opinion. In the 1950 Advisory Opinion on the *Interpretation of the Peace Treaties with Bulgaria, Hungary and Romania*, the ICJ referred to a dispute as "a situation in which the two sides hold clearly opposite views concerning the question of the performance or non-performance of certain treaty obligations".[7]

The present case does not concern a dispute between opposing parties or groups of opposing parties. By their very nature, advisory opinions are designed to contribute to the clarification of international law as it stands, including the explanation of all existing international legal obligations of States and international organizations, such as the European Union, in the implementation of UNCLOS.

Likewise, an advisory opinion is not well suited to adjudicate possible breaches of these international obligations or to indicate which remedies should be considered for such possible breaches. Notably, the questions before this Tribunal concern the primary rules of international law and, therefore, are not focused on secondary obligations, which are admittedly provided for under article 235 of UNCLOS.

Hence, it is not by way of an advisory opinion that the Tribunal could "hold accountable" certain States or groups of States for possible breaches. In its oral statement, COSIS stated that this case "the Tribunal is called upon to provide guidance on questions of international law; not to settle a dispute".[8] Therefore, it has to be stressed that the questions on whether compensation is available in this context is out of the scope of the present request for an advisory opinion.[9] It is also in that logic that advisory opinions have no binding force.

Also, as highlighted by most other participants in this case, it is not the task of the Tribunal to create new legal rules.

Now, these observations, of course, do not take away the eminent influence of advisory opinions which this Tribunal, as well as the ICJ, are called upon to give in this matter. And in this case, the Tribunal is being called to pronounce first.

[7] *Interpretation of Peace Treaties,* Advisory Opinion: *I.C.J. Reports 1950*, p. 65; at page 13.
[8] Public sitting held on Tuesday, 11 September 2023, at 10 a.m., at the International Tribunal for the Law of the Sea, Hamburg, President Albert J. Hoffmann presiding, *Request for an Advisory Opinion Submitted by The Commission of Small Island States on Climate Change and International Law*, ITLOS/PV.23/C31/1/Corr.1, Verbatim Record, page 24, at 33-34.
[9] Public sitting held on Tuesday, 12 September 2023, at 3 p.m., at the International Tribunal for the Law of the Sea, Hamburg, President Albert J. Hoffmann presiding, ITLOS/PV.23/C31/4, page 25, at 27-32.

Now, turning now to the applicable law, the questions, which are focused on the marine environment and pollution by greenhouse gases, are clearly to be assessed under UNCLOS, and in particular its part XII.

The law applicable by this Tribunal is identified in article 293 of UNCLOS being (1) UNCLOS itself; and (2) other rules of international law not incompatible with UNCLOS.

Moreover, article 237 of UNCLOS, the final provision of Part XII, refers to 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 UNCLOS. Part XII of UNCLOS is without prejudice to these special obligations.

In addition, in a number of specific UNCLOS provisions, and not only in Part XII, reference is made to *"generally recognized international rules and standards",* like those relating to shipping, to navigation, to marine pollution, that may inform particular provisions of UNCLOS, and this with a different degree of intensity, ranging from just taking into account, to ensuring at least a same protection. I refer here to articles 207 and 212 UNCLOS.

These provisions reflect that architecture of UNCLOS is not one of an isolated regime, but is a treaty interacting with other rules and principles of international law. Even if not all parties have always been citing the same international instruments and rules as the most relevant ones for answering the questions addressed to the Tribunal, there is a clear convergence as regards this interplay of UNCLOS with other rules of international law.

As the questions raised in the present case relate to climate change and the marine environment, most of the written submissions recognize that the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement constitute the primary legal instruments informing UNCLOS obligations in this context.

Delegations have provided also pertinent examples of other legal instruments, conventions, agreements, generally recognized rules and standards, rules of reference, such as the regulations adopted in the context of the International Maritime Organization (IMO), the Convention on Biological Diversity (CBD), or the Convention for the Protection of the Marine Environment of the North-East Atlantic (the "OSPAR Convention").

Consequently, the two questions addressed to the Tribunal are to be assessed under UNCLOS, and notably Part XII, taking into account also the UNFCCC, the Paris Agreement and certain specific rules of the IMO, or CBD and the OSPAR Convention. And this, by virtue of articles 293 and 237 UNCLOS, is in line with article 31, paragraph 3, of the Vienna Convention on the Law of Treaties.

Now, this, however, should not lead to a debate on the *lex specialis* principle because that principle is a conflict rule.

In the present case, no argument has been made that any specific provision of the UNFCCC or of the Paris Agreement would go against an obligation under UNCLOS Part XII. Indeed, the regime of the UNFCCC has put in place certain specific obligations with regard to climate change, but it has not lowered the threshold of the obligations under Part XII of UNCLOS. Rather, the UNFCCC and the Paris Agreement could even be considered as concluded in furtherance of the general principles set forth in UNCLOS for the purposes of article 237 UNCLOS.

Therefore, the different legal regimes are to be applied in conjunction, and, in the European Union's view, there is no conflict between them, which, alone, would lead to a possible discussion on the application of the *lex specialis* principle in order to resolve such conflict.

Now, as to the general obligations and their nature:as is submitted in most of the written submissions, the general obligations of the States to preserve and protect the marine environment and to prevent, control and reduce pollution of the marine environment in relation to the deleterious effects of climate change, as well as to cooperate internationally, are a set of due diligence obligations rather than obligations of result.

Some statements have been made to the effect that certain of these obligations may be obligations of result because of the severity of the risks, as assessed by science.

We noted, in this context, the questions put by Judge Kittichaisaree – I hope I pronounce well – to COSIS and to the International Union for the Conservation of Nature.

For the European Union, we would still submit that the obligations of Part XII of UNCLOS, as well as those stemming from the other relevant instruments such as the UNFCCC and Paris Agreement, as discussed in questions (a) and (b), are, by their nature, obligations of conduct. At the same time, this is not to say that such obligations would be entirely discretionary, or weak or even just symbolic obligations.

This interpretation finds support in the jurisprudence of this Tribunal, in Case No. 17[10] (*Seabed* case – decided by the Seabed Disputes Chamber) and Case No. 21[11] (*Illegal Fishing* case), as well as in the jurisprudence of the ICJ (notably in the *Pulp Mills* case[12]) and in the case law of certain UNCLOS arbitral tribunals (*South China Sea Arbitration*[13]).

It emerges from that case law that the obligation of conduct is an obligation to take best possible efforts, to do the utmost to take all the measures which are necessary based on reasonableness, non-arbitrariness and good faith (so it is, thus, not just a

[10] *Responsibilities and obligations of States with respect to activities in the Area*, *Advisory Opinion, 1 February 2011, ITLOS Reports 2011*, p. 10, at p. 25.
[11] *Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015*, p. 4.
[12] *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay), Judgment, I.C.J. Reports 2010*, p. 14.
[13] PCA, 12 July 2016, *South China Sea Award (Republic of the Philippines/People's Republic of China)*.

symbolic effort). These measures may include, beyond measures binding upon activities in the own territory, also certain conditions upon imports in order to induce producers of importing goods to observe certain minimum standards in relation to the greenhouse gas footprint.

The obligation of conduct also takes into account the capability of the State concerned. This has certain similarities with the principle of common but differentiated responsibilities and respective capabilities under the UNFCCC and the Paris Agreement, whereby account is taken of the different national circumstances, which can evolve over time and whereby the capabilities of certain States can improve.

Here, the European Union would like to echo COSIS's concern expressed in its oral statement,[14] that the differentiation should not become a pretext for certain high emitting States – even if generally still considered as developing States – to escape their obligations of conduct because in the past they may not have contributed significantly to greenhouse gas emissions, allowing them somehow to "harvest" an alleged entitlement to catch up with old industrialized countries and to emit high share of greenhouse gases.

Such an approach would push very far in the future the greenhouse gas "peaking", with long-time overshooting and possibly irreversible adverse effects on the marine environment. Such an extensive interpretation of the differentiation would simply render impossible to collectively achieve the results aimed at by the relevant obligations of conduct, and this would thus be fundamentally inconsistent with the obligation of conduct under UNCLOS Part XII and the other relevant instruments.

In this regard, it is also worth recalling that the International Law Commission considered, in the context of the draft articles on the prevention on transboundary harm, that "while the economic level of States is one of the factors to be taken into account in determining whether a State has complied with its obligation of due diligence", it "cannot be used to dispense the State from its obligation[s]".[15]

The obligation of conduct is also an evolutive one, which increases in intensity when the risk becomes clearer over time (as is shown by consensus in science).

And, finally, the obligation of conduct also entails a duty of vigilance and of enforcement of the measures taken.

Here, a confusion should be avoided, which is to consider that when a particular result is mentioned in the relevant provisions, quantified or not, like the reduction or prevention of pollution, or the limitation of the warming due to anthropogenic emissions of greenhouse gases to a maximum, that this would necessarily turn the

[14] Public sitting held on Tuesday, 12 September 2023, at 10 a.m., at the International Tribunal for the Law of the Sea, Hamburg, President Albert J. Hoffmann presiding, *Request for an Advisory Opinion Submitted by The Commission of Small Island States on Climate Change and International Law*, ITLOS/PV.23/C31/3, Verbatim Records, Page 4 at 8.

[15] Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries, International Law Commission, 2001, Commentary to Article 3, paragraph (13), p. 155.

obligations into an obligation of result, meaning into a positive legal obligation to achieve that result (and then only *force majeure* would be an excuse).

Here, the European Union would not see solid legal grounds to change the nature of these obligations of reduction or prevention of pollution by greenhouse gases or of limiting the temperature increase into obligations of result. It is also noted that no serious claim has been made that there would be a collective obligation on States and international organizations, like the European Union, to succeed in preventing all pollution by greenhouse gases and in limiting the temperature increase to 1.5°C.

This being so, the European Union considers that the obligations of conduct which are at stake in the present case are not undetermined obligations, but are serious obligations which are qualified by a rather high standard of due diligence, and it has, for its part, taken them very seriously.

This brings me to the steps taken by the European Union itself, which have been spelled out in detail in Section E of Chapter III of our written submission. Since the time of that submission, the following actions have been taken, which I will mention:

First, the European Parliament and the Council of the European Union have now formally adopted all essential elements of the legislative framework necessary to implement the ambitious “Fit for 55” package, which was proposed by the Commission, to implement the climate change target for 2030 and was laid down in the European Climate Law – being a net domestic reduction of at least 55 per cent in greenhouse gas emissions by 2030 compared to 1990. The adopted legislation has now been published in the Official Journal of the European Union and has entered into force.

Second, the EU is continuing to participate fully and actively in the First Global Stocktake under the Paris Agreement at all levels, including in the ministerial roundtables next week in New York. The EU will be pointing to what science says and what is increasingly part of every global citizen’s lived experience.

Further, the EU will be calling on all Parties to follow the lead the EU has set out in the European Climate Law and to respond to the Global Stocktake by committing to come forward, by 2025, with NDCs for the post-2030 period that are aligned with the Paris Agreement goals of avoiding 1.5°C global average temperature rise and achieving climate neutrality by 2050.

Still, in the fourth quarter of 2023, the Commission plans to adopt the Climate Action Progress Report. In addition to annual reporting on the progress towards the EU and Member States greenhouse gas reduction targets, this year the report will also include the assessments required by the Climate Law on progress made and the consistency of policies with respect to the climate-neutrality and adaptation objectives contained in that law.

Third, the EU is also working on the implementation of the Kunming-Montreal Global Biodiversity Framework adopted at COP15 of the Convention on Biological Diversity, including its goals and targets relevant for the marine biodiversity.

In her last State of the Union Speech last week, the European Commission's President has also announced the launch of the "European Wind Power package".

And, finally, the BBNJ[16] Agreement will be signed by the European Union, and by other States, later today almost as we speak. The BBNJ Agreement will be crucial in addressing the triple planetary crisis of climate change, biodiversity loss and pollution. The BBNJ Agreement will reinforce the rules on, notably, environment impact assessments (which is based on a customary law obligation), on area-based management of marine areas, and it will also include cooperative tools to share expertise and assist developing States to protect the marine environment beyond areas of national jurisdiction.

It is to be underlined that the BBNJ Agreement contains a provision on the advisory jurisdiction of ITLOS. This UNCLOS implementing agreement will thereby contribute to the achievement of the aims of the provisions of Part XII of UNCLOS as well as of other relevant instruments. The European Union encourages States to sign and ratify the BBNJ Agreement as soon as possible.

Now I would like to invite the Tribunal to call my co-agent Ms Bruti Liberati to address briefly the two questions before or after the break.

PRESIDENT: Thank you, Mr Bouquet. We have now reached almost 11:30. At this stage, the Tribunal will withdraw for a break of 30 minutes and will continue the hearing at 12:00 when I will give the floor to Ms Bruti Liberati.

(*Pause*)

PRESIDENT: I now give the floor to Ms Bruti Liberati to make her statement on behalf of the European Union. You have the floor, Madam.

MS BRUTI LIBERATI: Mr President, honourable members of the Tribunal, it is my honour to address you today on behalf of the European Union.

In my intervention, I will outline the main elements that, in the view of the European Union, this Tribunal should consider when replying to the specific questions referred to it by COSIS.

I will consider question (a) first.

As recognized by most written submissions in this case, the wording of this question reflects the text of article 194 of UNCLOS.

To delineate the EU's proposed answer to this question, I will proceed in this order:

first, I will briefly recall the *nature* of the obligations under article 194 of UNCLOS specifically to address certain arguments made by other participants in this case;

[16] Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction.

second, I will delineate the *content* of the obligations under article 194 of UNCLOS, and, to this effect, I will:

first, consider the definition of "pollution" laid down in article 1(1)(4) of UNCLOS;

second, discuss the elements which inform the content of the obligations under article 194 of UNCLOS, including in relation to the deleterious effects of climate change; third, and based on the foregoing, I will outline the specific actions required by States under article 194(1) and (2) to prevent, reduce and control greenhouse gas emissions.

As concerns the *nature* of the obligations referred to in question (a), my colleague has already mentioned that, according to settled case law, the general obligations under articles 192 and 194 paragraph 2 of UNCLOS are obligations of due diligence. That is, obligations of conduct, qualified by the duty to exercise a certain level of care.

While this Tribunal has not yet pronounced itself on the nature of the obligations under article 194(1) of UNCLOS, it is clear that also this provision entails an obligation of due diligence. In the view of the EU, this stems notably from the findings of the ICJ in the *Pulp Mills* case, where the Court has unequivocally found that "[a]n obligation to adopt regulatory or administrative measures*"* – which is precisely the prescription under article 194 paragraph 1 – "is an obligation of conduct".[1]

Further, article 194, paragraph 1, can be considered an expression of the customary international law principle of prevention of transboundary harm which, according to the International Law Commission, entails an obligation of due diligence.[2]

According to the jurisprudence of this Tribunal,[3] the precise *level of due diligence* is context-dependent, changing notably in function of the current scientific and technological knowledge, and of the risks at stake, so that an activity scientifically known to entail severe risks would require a higher degree of diligence. In principle, it is possible that the combination of these contextual factors leaves virtually no doubt as to the precise measures to be taken.

In this sense one may argue, as some participants in this case do, that the required standard of diligence is *objectively determined*. However, no matter how "objective", no matter how stringent the standard of due diligence is, the *nature* of such obligation could not be transformed from one of conduct to one of result. Arguments relating to the standard of due diligence indeed concern the requisite attributes of a

[1] *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay), Judgment, I.C.J. Reports 2010*, p. 14, at 187.
[2] Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries, International Law Commission, 2001, Commentary to Article 3, paragraph (7), page 154: *"the obligation to take preventive or minimization measures is one of due diligence".*
[3] *Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015*, p. 4, para 132, citing: *Responsibilities and obligations of States with respect to activities in the Area*, *Advisory Opinion, 1 February 2011, ITLOS Reports 2011*, p. 10, at p. 43, para. 117.

certain prescribed conduct but have nothing to do with the *objective* that that conduct aims to achieve.

This conclusion is reinforced by the fact that, as mentioned by my colleague, this Tribunal has interpreted the duty of due diligence as requiring *a highly stringent standard, a maximum duty of care*, namely "to exercise best possible efforts, to do the utmost*".*[4]

In this regard, I shall make a clarification in relation to the judgment of the ICJ in the case on the *Jurisdictional Immunities of the State*.[5] Reference to this judgment has been made during the present oral proceedings to substantiate that "the duty under article 194(1) is a direct and immediate duty, which is to reach a precise result that is neither materially impossible nor out of proportion"*.*[6]

However, the EU respectfully submits that this reference is squarely out of context here. In that case, the Court did no more than literally applying article 35 of the International Law Commission's Draft Articles on the Responsibility of States for Internationally Wrongful Acts,[7] according to which:

> A State responsible for an internationally wrongful act is under an obligation to make restitution, that is, to re-establish the situation which existed before the wrongful act was committed, provided and to the extent that restitution: (a) is not materially impossible; (b) does not involve a burden out of all proportion to the benefit deriving from restitution instead of compensation.

Besides departing from the parameters already identified by this Tribunal precisely in relation to the general obligations under UNCLOS, the conditions set out in article 35 of the Draft Articles concern "secondary rules of State responsibility"; that is to say, in the words of the International Law Commission, "the general conditions under international law for the State to be considered responsible for wrongful actions or omissions, and the legal consequences which flow therefrom". On the other hand, the draft articles "do not attempt to define the content of the international obligations, the breach of which gives rise to responsibility. This is the function of the primary rules"*.*[8]

The EU, therefore, fails to see how the parameters considered and the conclusion drawn in the case on the *Jurisdictional Immunities of the State* would be relevant in the interpretation of the obligation to prevent, reduce and control pollution of the

[4] *Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission*, *Advisory Opinion, 2 April 2015, ITLOS Reports 2015*, p. 4, para 128, citing *Responsibilities and obligations of States with respect to activities in the Area*, *Advisory Opinion, 1 February 2011, ITLOS Reports 2011*, p. 10, para. 110.
[5] *Jurisdictional Immunities of the State (Germany* v. *Italy: Greece intervening), Judgment, I.C.J. Reports 2012*, p. 99.
[6] Public sitting held on Tuesday, 12 September 2023, at 10 a.m., at the International Tribunal for the Law of the Sea, Hamburg, President Albert J. Hoffmann presiding, *Request for an Advisory Opinion Submitted by The Commission of Small Island States on Climate Change and International Law*, ITLOS/PV.23/C31/3, Verbatim Record, page 18, at 9-25.
[7] International Law Commission, *Draft Articles on Responsibility of States for Internationally Wrongful Acts*, 2001, Supplement No. 10 (A/56/10), chp.IV.E.1.
[8] Draft articles on Responsibility of States for Internationally Wrongful Acts, with commentaries, International Law Commission, 2001, General Commentary, paragraph (1), page 31.

marine environment under article 194 of UNCLOS. It is, in fact, unquestionable that this provision lays down primary rules of international law.

Having clarified the *nature* of the obligations under article 194 of UNCLOS, I will now turn to their precise *content,* particularly in relation to the deleterious effects of climate change. I will focus to this effect on paragraphs 1 and 2 of article 194.

Virtually all States and international organizations participating in this case agree that greenhouse gas emissions fall under the definition of "pollution of the marine environment" under article 1(1)(4) of UNCLOS. Indeed, science clearly shows that greenhouse gas emissions constitute substances which, when introduced in the marine environment, result or are likely to result in deleterious effects such 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 seawater and reduction of amenities.

It follows that paragraph 1 of article 194 requires States to take all measures, consistent with UNCLOS, that are necessary to prevent, reduce and control greenhouse gas emissions from any source. Such efforts to reduce or prevent greenhouse gas emissions are usually referred to as "climate mitigation measures".

Second, as already mentioned, the identification of the "necessary" measures to be taken in this respect depend on a number of factual and legal elements.

As to the factual elements, article 194 itself mentions "the best practicable means at the disposal [of a State]" and "its capabilities" as factors determining the measures to be taken. These requirements have a certain similarity with the principle of Common but Differentiated Responsibilities and respective capabilities (in the light of different national circumstances) as laid down in the UNFCCC and in the Paris Agreement, but, crucially, do not render this latter principle legally binding by virtue of UNCLOS.

Further, in the Seabed case, it was established that the due diligence duty is informed by: (1) the current scientific or technological knowledge; and (2) the risks involved in the activity (so that the standard of due diligence has to be appropriate and proportional to the degree of risk involved). This Tribunal also supported this conclusion in the *Illegal Fishing* case.[9]

Additional factors are identified in the Draft Articles of the International Law Commission on the prevention of transboundary harm from hazardous activities, in the severity and foreseeability of the harm[10] and in the economic level of a State.[11]

The role of science and of factual developments more generally is, likewise, considered a relevant factor by the ICJ, which in the *Gabčíkovo-Nagymaros Project* case stated that the impacts of a certain activity on the environment, as evidenced in

[9] *Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission*, *Advisory Opinion, 2 April 2015, ITLOS Reports 2015*, p. 4, para. 132.
[10] Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries, International Law Commission, 2001, *inter alia* Commentary to Article 3, paragraph (18), page 155.
[11] Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries, International Law Commission, 2001, Commentary to Article 3, paragraph (13), page 155.

scientific reports, are a key issue in the interpretation of States' environmental obligations. The Court also found that a requirement to take into account *current* standards existed insofar as the relevant treaty provision established "continuing – and thus necessarily evolving – obligations".[12] As other participants in this case have noted, this is definitely the case for the general obligations under UNCLOS Part XII.

As to the legal factors determining the content of the obligations under article 194, the arbitral tribunal in the *South China Sea Arbitration*[13] found that article 192 of UNCLOS is to be informed by the other provisions of Part XII and by other applicable rules of international law. The EU submits that the same finding must necessarily apply to article 194 of UNCLOS.

As agreed by most participants in this case, the UNFCCC and the Paris Agreement contain the most relevant international rules to be taken into account when interpreting article 194 of UNCLOS. However, this conclusion does not mean that States Parties to UNCLOS have an obligation to comply with the Paris Agreement or with any other international rule applicable to the interpretation of UNCLOS as a matter of UNCLOS itself. In other words, these external rules do not become binding by virtue of UNCLOS but are simply to be taken into account in accordance with articles 293 and 237 of that Convention.

Even less would this harmonious interpretation result in an UNCLOS obligation to *achieve* the temperature goal established under the Paris Agreement, as the Paris Agreement itself does not provide for such an obligation of result.

Finally, the due diligence obligation under article 194 is further specified by other obligations of Part XII of UNCLOS, and notably by those under Section 5 thereof, which regulate the different sources of pollution of the marine environment.

The EU submits that greenhouse gas emissions fall primarily within the categories of pollution from land-based sources, regulated by articles 207 and 213 (and which may also consist in plastic materials discharged in the ocean from land); and of pollution from or through the atmosphere, regulated by articles 212 and 222 of UNCLOS.

In relation to the deleterious effects of climate change, articles 207 and 212, *inter alia*, require States to adopt laws, regulations and other necessary measures to prevent, reduce and control greenhouse gas emissions, *taking into account internationally agreed rules, standards and recommended practices and procedures*. While these requirements make explicit UNCLOS' openness to other legal regimes, they do not render the referred external rules and standards binding on States Parties to UNCLOS, but merely establish a minimum standard of conduct.

Articles 207 and 212 are completed, respectively, by articles 213 and 222 which deal with the enforcement in relation to, respectively, pollution from land-based sources and pollution from or through the atmosphere. In light of States' duty of due diligence

[12] *Gabcikovo-Nagymaros Project (Hungary/Slovakia), Judgment, I.C.J. Reports 1997*, p. 7, para 140.
[13] PCA, 12 July 2016, *South China Sea Award (Republic of the Philippines/People's Republic of China)*, paras. 941-942.

as interpreted by both this Tribunal and by the ICJ, "a certain level of vigilance and the exercise of administrative control applicable to the public and private operators"[14] is required in the enforcement of the laws and regulations adopted pursuant to article 207 and 212 of UNCLOS.

Besides developing the general obligations of articles 192 and 194, articles 207, 212, 213 and 222 of UNCLOS reflect the obligation of international cooperation which, according to this Tribunal,[15] constitutes a "fundamental principle" for the protection of the marine environment underpinning the whole Part XII of UNCLOS.

I now turn to the second paragraph of article 194. In this regard, the EU would limit itself to two clarifications. First, as already mentioned, the due diligence nature of this provision was already established in the Seabed case. Those findings are fully relevant in the present case for the following reasons:

(a) In that case, the Seabed Disputes Chamber did not limit its analysis to the expression "to ensure" under article 139 of UNCLOS, but also considered the expression "taking all measures necessary to ensure" under article 153(4) UNCLOS. This is exactly the same expression used in article 194(2);

(b) Further, in that case, the Seabed Disputes Chamber dealt with the duties of States in relation to the conduct of entities operating under their control. Again, this is exactly the same scenario dealt with by article 194(2);

(c) Finally, having defined the obligations "to ensure" as obligations of due diligence, the Seabed Disputes Chamber referred precisely to article 194(2) as an example of such obligations, which give rise to liability not for any violation thereof but for the failure to adopt a certain duty of care.

This Tribunal also upheld these clarifications on the meaning of the expression "responsibility to ensure" and on the interrelationship between the notions of obligations "of due diligence" and obligations "of conduct" in in its advisory opinion in the *Illegal Fishing* case.[16]

The second clarification concerns the concept of "damage by pollution" under article 194(2). According to the EU, this concept should be interpreted to mean *significant* damage or *significant* harm. This is indeed the threshold characterizing the customary law principle of prevention of transboundary harm,[17] which article 194(2) reflects.

[14] *Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission, Advisory Opinion, 2 April 2015, ITLOS Reports 2015*, p. 4. para 131, citing the Seabed Disputes Chamber in ITLOS case No. 17, *Responsibilities and obligations of States with respect to activities in the Area, Advisory Opinion*, in turn citing the ICJ in the '*Pulp Mills'* case.
[15] *MOX Plant (Ireland v. United Kingdom)*, Provisional Measures, Order of 3 December 2001, ITLOS Reports 2001, p. 95, at p. 110, para. 82.
[16] *Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission*, *Advisory Opinion, 2 April 2015, ITLOS Reports 2015*, p. 4, para 125.
[17] See *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay), Judgment, I.C.J. Reports 2010*, p. 14, para. 101. According to the ICJ, States are obliged "*to use all the means at [their] disposal in order to avoid activities which take place in [their] territory, or in any area under [their] jurisdiction, causing* significant damage *to the environment of another State*"; and Award of the Arbitral Tribunal, *Iron*

As to the precise meaning of "significant" harm, in its Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, the International Law Commission explained that the threshold of "significant" is something more than "detectable", but need not be at the level of "serious" or "substantial" and is to be assessed based on the combined effects of the risk and the harm involved in the concerned activity.[18]

The EU submits that also article 195 of UNCLOS is an expression of the customary principle of prevention of transboundary harm and, as such, is an obligation of due diligence.

Mr President, I am now coming to my last point in relation to question (a) before this Tribunal; that is, the specific actions required by States under article 194(1) and (2) to prevent, reduce and control greenhouse gas emissions.

Based on the foregoing considerations, the EU submits that article 194 requires UNCLOS States Parties to do their utmost, to exercise their best efforts to prevent, reduce and control their greenhouse gas emissions, based on the best available science and taking into account relevant international rules and standards, using for this purpose the best practicable means at their disposal, in accordance with their capabilities, and in a manner proportional to the level of risk and to the foreseeable harm involved in the concrete activities at stake.

The current best available science, reflected in the IPCC reports, shows that limiting temperature rise to 1.5°C is necessary to avoid even more significant deleterious effects of climate change, including on the oceans. For instance, the most recent Assessment Report of the IPCC on climate change, in its Summary for policy-makers, states that: "Overshooting 1.5°C will result in irreversible adverse impacts on certain ecosystems with low resilience, such as polar, mountain, and coastal ecosystems, impacted by ice-sheet melt, glacier melt, or by accelerating and higher committed sea-level rise"[19]. At the same time, the report also states that limiting warming to 1.5°C with no or limited overshoot, involve *"rapid and deep"* greenhouse gas emission reductions"*.*[20]

Both article 2 of the Paris Agreement and the later decisions of the Conference of its Parties reflect this scientific awareness, recognizing that "limiting the temperature increase to 1.5 °C above pre-industrial levels …would significantly reduce the risks and impacts of climate change".[21]

Rhine Arbitration (Belgium/Netherlands), 24 May 2005, para 59, according to which the duty to "prevent, or at least mitigate", significant harm to the environment has become a principle of general international law.

[18] Draft articles on Prevention of Transboundary Harm from Hazardous Activities, with commentaries, International Law Commission, 2001, Commentary to Article 2, paragraph (4), page 152.

[19] IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001, page 23, B.7.2.

[20] Ibid, page 20, B.6.

[21] See Paris Agreement, article 2(1)(a). See also Decision 1/CMA.3, Glasgow Climate Pact, para 21: *"[The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement] Recognizes that the impacts of climate change will be much lower at the temperature increase of 1.5 °C compared with 2 °C and resolves to pursue efforts to limit the temperature increase to 1.5 °C".*

On this basis, the EU submits that the measures to be taken by States to comply with article 194 of UNCLOS must include measures for the reduction of greenhouse gas emissions in line with the temperature objective under the Paris Agreement. These measures are to include the adoption of laws and regulations, as well as the exercise of vigilance in the enforcement of such rules and administrative control on public and private operators in that respect.

Further, they are to cover efforts to establish new international rules and standards for the prevention and minimization of greenhouse gas emissions, and reflect the best efforts of States to prevent and minimize significant damage by greenhouse gas emissions to other States. As such, they also include carrying out environmental impact assessments in accordance with the provisions of the BBNJ Agreement once it has entered into force.

The precautionary principle is also to be applied in taking these measures, so that, in the words of the Seabed Disputes Chamber, 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 State would not meet its obligation of due diligence if it disregarded those risks.[22]

Mr President, I will now address question (b) referred to this Tribunal.

In the *Illegal Fishing* case, this Tribunal has clarified not only the due diligence nature of article 192 of UNCLOS, but also its *content*. First, it has provided guidance on the meaning of the concept of "marine environment", which is not defined in UNCLOS, explaining that this concept also covers "living resources and marine life".[23] This finding is in line with the ICJ's Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons,* according to which "the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn*".*[24]

Second, this Tribunal clarified that the obligations under article 192 are not constrained *ratione loci* as *"*article 192 applies to all maritime areas, including those encompassed by exclusive economic zones".[25] This interpretation was echoed in the *South China Sea Arbitration*,[26] when the arbitral tribunal also found that article 192

[22] *Responsibilities and obligations of States with respect to activities in the Area, Advisory Opinion*, *1 February 2011, ITLOS Reports 2011*, p. 10, para. 131
[23] *Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission*, *Advisory Opinion, 2 April 2015, ITLOS Reports 2015*, p. 4, para 216.
[24] *Legality of the Threat or Use of Nuclear Weapons*, *Advisory Opinion, I.C.J. Reports 1996*, p. 226, para. 29.
[25] *Request for Advisory Opinion submitted by the Sub-Regional Fisheries Commission*, *Advisory Opinion, 2 April 2015, ITLOS Reports 2015*, p. 4, para 120.
[26] PCA, 12 July 2016, *South China Sea Award (Republic of the Philippines/People's Republic of China)*, para. 940. The Arbitral tribunal when it concluded that: *"the obligations in Part XII apply to all States with respect to the marine environment in all maritime areas, both inside the national jurisdiction of States and beyond it"* and that, accordingly, *"questions of sovereignty are irrelevant to the application of Part XII of the Convention".*

reflects the principle of prevention of transboundary harm which constitutes a principle of customary international law.[27]

I have already mentioned that the obligations under article 194 of UNCLOS to prevent, reduce and control pollution of the marine environment in the form of greenhouse gas emissions require States to take mitigation measures. This requirement is also a component of the broader obligation under article 192 of UNCLOS.

However, article 192 goes well beyond the issue of pollution of the marine environment. In the above-mentioned *South China Sea Arbitration*, the arbitral tribunal found that article 192, read together with article 194(5) of UNCLOS, imposes a due diligence obligation to take those 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."[28]

According to the arbitral tribunal, such obligation "*extends both to 'protection' of the marine environment from future damage and to 'preservation' in the sense of maintaining or improving its present condition*" and "*thus entails both the positive obligation to take active measures to protect and preserve*[29] the marine environment" and, "by logical implication", also "the negative obligation not to degrade" it.

The EU therefore agrees with the COSIS[30] that under article 192 of UNCLOS, States must take also adaptation measures, to increase the resilience of marine ecosystems *vis-a-vis* the deleterious effects of climate change, and protect natural ocean-based carbon sinks. Following the IPCC "Special Report on the Ocean and Cryosphere in a Changing Climate", this may require, for instance, the "protection, restoration, precautionary ecosystem-based management of renewable resource use, and the reduction of pollution and other stressors" as well as "integrated water management and ecosystem-based adaptation approaches".[31]

Further, the content of article 192 is informed and further detailed by the subsequent provisions of Part XII, as well as by reference to specific obligations set out in other international agreements.[32] In the context of the protection from deleterious effects of climate change, relevant international provisions to be taken into account include: the requirement under the Paris Agreement to engage, *inter alia*, in the

[27] Ibid, para. 941: *"The corpus of international law relating to the environment, which informs the content of the general obligation in article 192, requires that States "ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control."* citing: *Legality of the Threat of Use of Nuclear Weapons*, *Advisory Opinion, I.C.J. Reports 1996*, p. 226 at pp. 240-242, para. 29.
[28] Ibid, para. 983.
[29] PCA, 12 July 2016, *South China Sea Award (Republic of the Philippines/People's Republic of China)*, para. 941.
[30] See public sitting held on Tuesday, 12 September 2023, at 3 p.m., at the International Tribunal for the Law of the Sea, Hamburg, President Albert J. Hoffmann presiding, ITLOS/PV.23/C31/4, Verbatim Record, page 3 at 7-9.
[31] IPCC, 2019: Summary for Policymakers. In: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3–35. https://doi.org/10.1017/9781009157964.001., page 30, C2.
[32] See in this regard: PCA, 12 July 2016, *South China Sea Award (Republic of the Philippines/People's Republic of China)*, para. 941-941.

implementation of adaptation measures; in the assessment of climate change impacts and vulnerability; in the monitoring and evaluation of adaptation actions; and in building the resilience of socioeconomic and ecological systems.[33]

They also include the requirement under the UNFCCC to promote sustainable management, to cooperate in the conservation and enhancement of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, and in preparing for adaptation to the impacts of climate change; and to develop appropriate and integrated plans for coastal zone management and water resources.[34]

Finally, they include the requirement under the Convention on Biological Diversity, which was explicitly considered by the arbitral tribunal when interpreting article 194(5) in the *South China Sea Arbitration*,[35] to establish a system of protected areas; regulate or manage biological resources important for the conservation of biological diversity; rehabilitate and restore degraded ecosystems; and promote the recovery of threatened species.[36]

A further international agreement which will need to be taken into account in the interpretation and implementation of article 192 UNCLOS, once entered into force, will be the BBNJ Agreement. As previously mentioned, this agreement is an example of international cooperation that strengthens the framework for the protection and preservation of the marine environment and that will also help in addressing climate change.

In particular, the general objective of the BBNJ Agreement is "to ensure the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction".[37] In order to achieve this objective, Parties shall be guided, among others, by an "approach that builds ecosystem resilience, including to adverse effects of climate change and ocean acidification, and also maintains and restores ecosystem integrity, including the carbon cycling services that underpin the role of the ocean in climate".[38]

The BBNJ Agreement also operationalizes existing environmental impact assessment obligations in a concrete and robust way to ensure that activities which may cause substantial pollution of, or significant and harmful changes to, the marine environment are assessed and conducted to prevent, mitigate and manage significant adverse impacts to the marine environment.[39]

[33] Paris Agreement, article 7(9). Ex article 5(1) parties to the Paris Agreement should also take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases.
[34] UNFCCC, article 4(1)(d) and (e).
[35] PCA, 12 July 2016, *South China Sea Award (Republic of the Philippines/People's Republic of China)*, para. 945.
[36] Convention on Biological Diversity, article 8 (a), (c) and (f).
[37] Article 2 of the Agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (certified true copy available at: XXI-10 CTC (un.org).
[38] Ibid, article 7(h).
[39] See ibid, Part IV.

Mr President, the European Union invites this Tribunal to take all these internationally agreed rules into account when determining the specific obligations under UNCLOS to preserve and protect the marine environment in relation to the deleterious effects of climate change. In the view of the European Union, such international rules inform, together with the other parameters detailed in reply to question (a), the duty of due diligence required under article 192 of UNCLOS in the context of climate change deleterious effects.

Mr President, let me now conclude the oral statement of the European Union.

The European Union greatly welcomes the initiative by COSIS to seek clarification by this Tribunal on States' obligations under UNCLOS concerning the protection of the marine environment from the effects of climate change.

The European Union considers this case a meaningful opportunity to further understand the interactions and synergies between the climate change and the law of the sea legal regimes, notably based on the current scientific evidence, and thereby foster the clarification of international law in those fields.

At the same time, the European Union invites the Tribunal to apply the *lex lata* and hence to focus its opinion on the actual scope of the questions referred to it by COSIS. These questions concern the content of *primary* – rather than secondary – rules of international law *under* UNCLOS as regards the preservation and protection of the marine environment from the deleterious effects *of climate change*.

The EU also takes the opportunity to recall the fundamental distinction between obligations of conduct and obligations of result, and invites the Tribunal to delineate the exact contours of the due diligence obligations under Part XII in relation to the deleterious effects of climate change.

Mr President, let me conclude by quoting the conclusions of the latest Report of the UN Secretary-General on the Oceans and the law of the Sea, published this month:

> With the arrival of the "era of global boiling", addressing climate change remains an urgent priority. Growing awareness of the ocean-climate-sustainable development nexus will help to ramp up ambition in the ocean space. Ocean-related responses will need to be sustainable and inclusive in order to address the climate emergency and build more resilient societies. The request for an advisory opinion from the Tribunal shows the importance and relevance of the institutions established by the Convention in addressing challenges such as climate change.[40]

Mr President, honourable members of the Tribunal, we could not be more eagerly looking forward to receiving your advisory opinion on this matter of planetary urgency.

Thank you very much for your attention.

[40] Oceans and the law of the sea – Report of the Secretary-General, A/78/339, para. 93.

THE PRESIDENT: Thank you, Ms Bruti Liberati. I now invite the representative of Viet Nam, Ms Hanh, to make her statement. You have the floor, Madam.

MS HANH: Mr President, distinguished members of the Tribunal, it is a great honour for me to appear before the Tribunal today representing the Socialist Republic of Viet Nam.

Viet Nam's statement consists of four parts:

(i) Viet Nam's overall perspectives related to climate change and marine environment;

(ii) the jurisdiction of the Tribunal;

(iii) UNCLOS provisions, which, in our view, specifically address obligations of State with regard to anthropogenic greenhouse gas emissions; and

(iv) the principle of common but differentiated responsibilities in the consideration and determination of the respective obligations of States Parties to UNCLOS in the protection and preservation of the marine environment from deleterious impacts caused by greenhouse gas emissions.

Like a large majority of States affirmed in their written submissions to the Tribunal in this procedure and as elaborated by previous speakers, climate change caused by anthropogenic greenhouse gases emissions is one of the most pressing challenges for the international community today. It is an existential threat to many low-lying nations and small island countries. It is also affecting coastal areas in many developing countries. However, anthropogenic emissions of greenhouse gases continue to rise beyond the capacity of reabsorption and rebalancing of the Earth.

(*Interpretation from French*) Mr President, members of the Tribunal, Viet Nam is one of the developing coastal States most vulnerable to the negative effects of climate change and in particular to sea-level rise. According to our national report on climate change for the year 2022, our marine environment and ecosystem have already been seriously impacted by climate change.

Viet Nam is sparing no effort to adapt to these negative effects and to mitigating them. Viet Nam is one of the countries that have committed to net "zero emissions". Legislation and policies adopted by Viet Nam over the last decade highlight the necessity to act against climate change and also underscore the link between climate change and governance of the oceans. This is, for example, the case of the law of 2012 on Viet Nam's maritime areas; the law of 2015 on the environment and resources of coastal areas and islands; and the Maritime Code of 2015. Last year, my country adopted its national strategy on climate change through to 2050.

There is no doubt whatsoever that the United Nations Convention on the Law of the Sea, as a legal framework for all maritime activities, is far from being indifferent to those vital health problems affecting both the seas and the oceans today. Clarification of the obligations incumbent upon States under the Convention is essential if one seeks to reinforce the efforts of the international community to

reduce the negative impact of climate change resulting from the anthropogenic emissions of greenhouse gases, and these instant proceedings give the opportunity to the Tribunal to contribute to this absolutely imperative cause.

(*Continued in English*) Mr President, members of the Tribunal, Viet Nam shares the view of most States which submitted written statements that the Tribunal has jurisdiction in this case and there are no compelling reasons for the Tribunal to decline to exercise such jurisdiction.

As observed by the Tribunal in its Advisory Opinion on the *Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission* (or Case 21), "[a]rticle 21 of the Statute of this Tribunal and the 'other agreement' conferring jurisdiction on the Tribunal are interconnected and constitute the substantive legal basis of the advisory jurisdiction of the Tribunal."

Article 138 of the Rules of the Tribunal sets out three prerequisites for the Tribunal to exercise such advisory opinion.

First, there shall be an international agreement related to the purposes of the Convention that specifically provides for the submission to the Tribunal of a request for an advisory opinion. In this case, the COSIS Agreement is manifestly an international agreement related to the purpose of UNCLOS, especially Part XII of UNCLOS concerning the protection and preservation of the marine environment.

Second, with regard to the transmission of the request by an authorized body, the request in this case has been transmitted by COSIS upon its decision pursuant to article 2(2) of the COSIS Agreement.

Third, relating to the nature of the request submitted, the two questions submitted by COSIS are clearly legal questions aimed at clarifying the legal obligations of States under UNCLOS related to marine environment protection and preservation.

Under article 138 Rules of the Tribunal, the Tribunal "may give an advisory opinion", meaning that the Tribunal has a discretionary power to render an opinion. But in Case 21, the Tribunal observed that "a request for an advisory opinion should not in principle be refused except for 'compelling reasons'."[1] Like a large majority of States which took part in these proceedings, Viet Nam does not see any compelling reason for the Tribunal to refuse the request for an advisory opinion.

Mr President, members of the Tribunal, let me turn now to the substance of the questions submitted by COSIS, namely, how UNCLOS regulates anthropogenic greenhouse gas emissions. The second part of my presentation examines if anthropogenic greenhouse gas emissions fall under the scope of the term "pollution" under article 1(1) of UNCLOS.

Mr President,Viet Nam is of the opinion that the current understanding of anthropogenic greenhouse gas emissions corresponds to the three elements of

[1] See *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996*, p. 226, at p. 235, para. 14

pollution provided in the definition of that term in article 1(1)(4), namely, (i) the indirect and direct introduction of substances or energy into the marine environment by man; (ii) resulting or being likely to result in deleterious effects; and (iii) such deleterious effects must be something 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.

Anthropogenic greenhouse gas emissions indeed directly and indirectly introduce substances and energy into the sea and ocean water column, which is the basic element of "marine environment". The ocean has directly absorbed greenhouse gases such as carbon dioxide, methane and nitro oxide induced by human activities, causing the increase of carbon dioxide level in the water.[2] Also, the increasing heat trapped by greenhouse gases goes into the oceans, which causes the rise of ocean temperature.[3]

Furthermore, in application of the general rule of interpretation enshrined in article 31(1) of the 1969 Vienna Convention on the Law of Treaties, requiring that the provisions of a treaty be interpreted "in accordance with the ordinary meaning to be given to the[ir] terms", the notion of "marine environment" includes the air column above the sea and ocean water column.

One can, for instance, refer in that sense to the International Seabed Authority Regulations on Prospecting and Exploration of Polymetallic Nodules in the Area, according to which "[m]arine environment includes 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 seas and oceans *and the airspace above those waters* […].".[4]

Interpreting the terms "marine environment" in the context of UNCLOS and in light of its object and purpose leads to the same conclusion. Indeed, the pollution of the marine environment from or through the atmosphere is explicitly mentioned and regulated by article 212 of UNCLOS. Also, article 194(1) refers to "the release of … harmful … substances … from or through the atmosphere".

Because of the ordinary meaning of the term "release", the "releasing of substances through the atmosphere" takes place at the moment the substances concerned leave their source and get into the air, whether such substances do later get into the sea water column or not. Wherever the place of emission is, the marine environment is forced to receive "substances" through the process of anthropogenic greenhouse gas emissions.

The fact that anthropogenic greenhouse gas emissions result in deleterious effects for the marine environment is also clearly established. The warming of the

[2] https://www.iaea.org/bulletin/how-carbon-emissions-acidify-our-ocean
[3] https://www.unep.org/news-and-stories/story/greenhouse-gases-are-depriving-our-oceans-oxygen
[4] International Seabed Authority Regulations on Prospecting and Exploration of Polymetallic Nodules in the Area, Annex to the Decision of the Council of the International Seabed Authority relating to amendments to the Regulations on Prospecting and Exploration of Polymetallic Nodules in the Area and related matters, 22 July 2013, Doc. ISBA/19/C/17; emphasis added.

atmosphere, oceans and land as a result of human activities has been scientifically demonstrated by the United Nations Intergovernmental Panel on Climate Change (or "IPCC"), the World Meteorological Organization and the United Nations Environment Program, amongst others.[5]

The last element in the definition of "pollution" under UNCLOS refers to the seriousness of deleterious effects of the introduction of substance or energy in the marine environment. "Harm" must be caused to living resources or marine life, or "hindrance" must be occasioned to "marine activities, including fishing or other legitimate uses of the sea".

This last element is present in relation to marine environment due to the extremely adverse effects of climate change caused by anthropogenic greenhouse gas emissions, which have accumulated over the years. According to the 2023 report of the IPCC, "human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming".[6] The report also mentions the damages and harms resulting from global warming and climate change such as "the hundreds of local losses of species", "the increasing occurrence of climate-related food-borne and water-borne diseases", the adverse impact on "food production from fisheries and shellfish aquaculture", "severe water scarcity", and "loss of livelihoods and culture".[7]

Mr President, the third part of my presentation will be dedicated to the demonstration that anthropogenic greenhouse gas emissions fall under article 194(3)(a) of UNCLOS and, as a consequence, States are under due diligence obligations to prevent, reduce and control such emissions.

Viet Nam agrees with a large majority of States that anthropogenic greenhouse gas emissions come within the scope of article 194(3)(a), namely, (i) the release of toxic, harmful or noxious substances, especially those which are persistent; (ii) from land-based sources, from or through the atmosphere or by dumping.

Various scientifical and legal sources have demonstrated beyond doubt the harmful and noxious character of the now out-of-balance greenhouse gases presence in the atmosphere. Anthropogenic greenhouse gases in the atmosphere are now harmful because of the combined effect of their persistence in nature, their accumulation and concentration as a result of centuries of industrialization and the present pace of emissions which increasingly exceeds the re-absorbance capacity of the Earth.[8]

As a consequence, Viet Nam submits that UNCLOS, especially Part XII, imposes obligations on States to take all measures in accordance with the Convention that are necessary to prevent, reduce and control anthropogenic greenhouse gas emissions. Viet Nam emphasizes the obligation of States to use the best practicable means at their disposal and in accordance with their capabilities to ensure that

[5] https://www.un.org/en/global-issues/climate-change. See also:https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf
[6] https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf
[7] *Ibid.*
[8] https://www.un.org/esa/sustdev/natlinfo/indicators/indisd/english/chapt9e.htm; https://www.ohchr.org/en/calls-for-input/2023/call-inputs-toxic-impacts-some-climate-change-solutions

activities under their jurisdiction or control are conducted so as not to cause damage by anthropogenic greenhouse gas emissions to other States and their environment and to minimize anthropogenic greenhouse gas emissions to the fullest extent.

It is well established by various UNCLOS dispute settlement bodies that article 194 of UNCLOS sets forth obligations not only in relation to activities directly undertaken by States and their organs, but also in relation to activities that take place within their jurisdiction and control; they have to ensure that all of these do not harm the marine environment.[9] This "due diligence" obligation is an obligation of conduct, which requires States not only to adopt appropriate rules and measures but also to demonstrate a "certain level of vigilance in their enforcement and the exercise of administrative control" to deal with all sources of pollution of the marine environment.[10]

Viet Nam joins many States in expressing a strong belief that due diligence obligations have a wide scope of application in this area. In this regard, Viet Nam expects the Tribunal to examine a specific aspect of due diligence obligations relating to the transfer of those technologies which contribute to minimize anthropogenic greenhouse gas emissions. Many countries which contribute the least to climate change but suffer the most from it, including Viet Nam, have made strong commitments to reduce anthropogenic greenhouse gas emissions.

Green technologies are crucial to the realization of these commitments and yet, under the argument that technologies are mainly developed and owned by private actors, very few measures, if any, were adopted by developed States to encourage or facilitate the transfer of such technologies to other States, particularly States with limited resources. As a result, technologies for the reduction of anthropogenic greenhouse gas emissions will be sold at market prices, in accordance with mutually agreed terms between the buyers and the sellers, even if the development of such technologies were sponsored and financed by the government. Consequently, in many instances, access to technologies reducing anthropogenic greenhouse gas emissions is out of reach of countries which contribute the least to climate change but suffer the most from it.

In Viet Nam's opinion, due diligence obligations under Part XII, particularly article 194 of UNCLOS require governments, especially governments of developed countries, to adopt measures to encourage corporations under their jurisdiction to transfer technologies reducing and minimizing anthropogenic greenhouse gas emissions to countries with limited resources, including small islands States, least developed countries and countries most vulnerable to climate change. The omission to take such measures vis-à-vis industries under one's control or jurisdiction, to make appropriate technologies more accessible and affordable to relevant countries,

[9] *South China Sea Arbitration (Philippines v. China)*, Final Award, 12 July 2016 PCA Case No 2013-19, para. 944. Similar conclusions can be drawn from the Tribunal's analysis in Advisory Opinion of 2 April 2015, requested by the Sub-regional Fisheries Commission, Case No 21, para. 124-128, citing the Seabed Disputes Chamber in its Advisory Opinion on the Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area.
[10] *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission (SRFC), Advisory Opinion of 2 April 2015, ITLOS Reports 2015*, para. 131; quoting *Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010*, p. 79, para. 197.

is, in Viet Nam's view, equivalent to non-compliance with the due diligence obligation under UNCLOS.

Accordingly, States are under due diligence obligations, corresponding to their historical contribution to the harm caused by the accumulation and concentration of anthropogenic greenhouse gas emissions as a result of centuries of industrialization and the present pace of emissions, to ensure that activities under their jurisdiction or control are conducted so as to minimize to the fullest extent anthropogenic greenhouse gas emissions and not to cause damage by anthropogenic greenhouse gas emissions to other States and their environment, or to marine areas beyond national jurisdiction.

Mr President, I now arrive at the last part of my presentation, concerning the principle of common but differentiated responsibilities (CBDR). It is Viet Nam's position that this principle should imperatively be taken into account in the consideration and determination of the respective obligations of States Parties to UNCLOS in the protection and preservation of the marine environment from deleterious impacts caused by anthropogenic greenhouse gas emissions.

According to generally accepted definitions, the principle of common but differentiated responsibilities "entails that while pursuing a common goal […], States take on different obligations, depending on their socio-economic situation and their historical contribution to the environmental problem at stake."[11]

In accordance with article 31(3)(c) of the 1969 Vienna Convention on the Law of Treaties, in the process of interpretation of any treaty, "[t]here shall be taken into account, together with the context", "any relevant rules of international law applicable in the relations between the parties." In Viet Nam's view, the principle of CBDR is a relevant rule of international law applicable in the relations between the parties to UNCLOS. The principle satisfies the requirements set out in article 31(3)(c), namely, (1) it is a rule of international law; and (2) it is relevant and applicable in the relations between the parties to UNCLOS.

First, the principle of CBDR is a rule of international law. Indeed, the principle of common but differentiated responsibilities is reflected in several treaties. It is enshrined in article 3(2) of the United Nations Framework Convention on Climate Change (UNFCCC), article 10 of the Kyoto Protocol, the Preamble and article 2(2) of the Paris Agreement, to name just a few. It has been noted in that respect that "[w]ithin the climate change regime, the concept of common but differentiated responsibilities qualifies as a legally binding principle given its explicit inclusion in [the relevant] instruments."[12]

Second, it is applicable in the relations between the Parties. At the time of the present proceedings, the UNFCCC, the Kyoto Protocol and the Paris Agreement have achieved *quasi* universal participation. The vast majority of the Parties to UNCLOS are also parties to these instruments. Therefore, the CBDR principle is applicable in the relations between almost all States Parties to UNCLOS.

[11] E. Hey and S. Paulini, "Common but Differentiated Responsibilities", MPEPIL (https://opil.ouplaw.com/display/10.1093/law:epil/9780199231690/law-9780199231690-e1568).
[12] *Ibid*.

Third, the CBDR principle is a relevant rule of international law. This principle underpins all treaties dealing with anthropogenic greenhouse gas emissions and therefore must be considered "relevant" in the determination of the obligations of States in the protection and preservation of the environment, including the marine environment, from the deleterious impacts caused by anthropogenic greenhouse gas emissions.

Mr President, members of the Tribunal, that brings me to the end of my presentation today. Let me sum up the main points of Viet Nam's argumentation.

First, it is the view of Viet Nam that the Tribunal has jurisdiction to give the advisory opinion requested by COSIS and there are no compelling reasons for the Tribunal to decline the exercise of such jurisdiction.

Second, anthropogenic greenhouse gas emissions meet the criteria to be a source of pollution to the marine environment due to their nature and deleterious effects on the marine environment. Viet Nam, as a low-lying coastal State, is fully conscious of this.

Third, due diligence obligations to prevent, reduce and control pollution of the marine environment under Part XII of UNCLOS apply to anthropogenic greenhouse gas emissions.

Fourth, obligations of States Parties to UNCLOS in the protection and preservation of the marine environment from deleterious impacts caused by anthropogenic greenhouse gas emissions must be determined in light of the principle of common but differentiated responsibilities.

Mr President, members of the Tribunal, with these conclusions, I complete the oral statement of Viet Nam. I thank you for your kind attention.

THE PRESIDENT: Thank you, Ms Hanh. This brings us to the end of this morning's sitting. The hearing will be resumed at 3 p.m. when we will hear an oral statement from the Pacific Community. The sitting is now closed.

(*Lunch adjournment*)

ANNEX 3

REGULATION (EU) 2021/1119 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 30 June 2021

establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')

I

(Legislative acts)

REGULATIONS

REGULATION (EU) 2021/1119 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 30 June 2021

establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinions of the European Economic and Social Committee ([1]),

Having regard to the opinion of the Committee of the Regions ([2]),

Acting in accordance with the ordinary legislative procedure ([3]),

Whereas:

(1) The existential threat posed by climate change requires enhanced ambition and increased climate action by the Union and the Member States. The Union is committed to stepping up efforts to tackle climate change and to delivering on the implementation of the Paris Agreement adopted under the United Nations Framework Convention on Climate Change (the 'Paris Agreement') ([4]), guided by its principles and on the basis of the best available scientific knowledge, in the context of the long-term temperature goal of the Paris Agreement.

(2) The Commission has, in its communication of 11 December 2019 entitled 'The European Green Deal' (the 'European Green Deal'), set out a new growth strategy that aims to transform the Union into a fair and prosperous society, with a modern, resource-efficient and competitive economy, where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use. The European Green Deal also aims to protect, conserve and enhance the Union's natural capital, and protect the health and well-being of citizens from environment-related risks and impacts. At the same time, this transition must be just and inclusive, leaving no one behind.

(3) The Intergovernmental Panel on Climate Change (IPCC) provides in its 2018 Special Report on the impacts of global warming of 1,5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty, a strong scientific basis for tackling climate change and illustrates the need to rapidly step up climate action

([1]) OJ C 364, 28.10.2020, p. 143, and OJ C 10, 11.1.2021, p. 69.
([2]) OJ C 324, 1.10.2020, p. 58.
([3]) Position of the European Parliament of 24 June 2021 (not yet published in the Official Journal) and decision of the Council of 28 June 2021.
([4]) OJ L 282, 19.10.2016, p. 4.

and to continue the transition to a climate-neutral economy. That report confirms that greenhouse gas emissions need to be urgently reduced, and that climate change needs to be limited to 1,5 °C, in particular to reduce the likelihood of extreme weather events and of reaching tipping points. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) has shown in its 2019 Global Assessment Report on Biodiversity and Ecosystem Services a worldwide erosion of biodiversity, with climate change as the third most important driver of biodiversity loss.

(4) A fixed long-term objective is crucial to contribute to economic and societal transformation, high-quality jobs, sustainable growth, and the achievement of the United Nations Sustainable Development Goals, as well as to reach in a just, socially balanced, fair and cost-effective manner the long-term temperature goal of the Paris Agreement.

(5) It is necessary to address the growing climate-related risks to health, including more frequent and intense heatwaves, wildfires and floods, food and water safety and security threats, and the emergence and spread of infectious diseases. As announced in its communication of 24 February 2021 entitled 'Forging a climate-resilient Europe – the new EU Strategy on Adaptation to Climate Change', the Commission has launched a European climate and health observatory under the European Climate Adaptation Platform Climate-ADAPT, to better understand, anticipate and minimise the health threats caused by climate change.

(6) This Regulation respects the fundamental rights and observes the principles recognised by the Charter of Fundamental Rights of the European Union, in particular Article 37 thereof which seeks to promote the integration into the policies of the Union of a high level of environmental protection and the improvement of the quality of the environment in accordance with the principle of sustainable development.

(7) Climate action should be an opportunity for all sectors of the economy in the Union to help secure industry leadership in global innovation. Driven by the Union's regulatory framework and efforts made by industry, it is possible to decouple economic growth from greenhouse gas emissions. For example, Union greenhouse gas emissions were reduced by 24 % between 1990 and 2019, while the economy grew by 60 % over the same period. Without prejudice to binding legislation and other initiatives adopted at Union level, all sectors of the economy – including energy, industry, transport, heating and cooling and buildings, agriculture, waste and land use, land-use change and forestry, irrespective of whether those sectors are covered by the system for greenhouse gas emission allowance trading within the Union ('EU ETS') – should play a role in contributing to the achievement of climate neutrality within the Union by 2050. In order to enhance involvement of all economic actors, the Commission should facilitate sector-specific climate dialogues and partnerships by bringing together key stakeholders in an inclusive and representative manner, so as to encourage sectors themselves to draw up indicative voluntary roadmaps and to plan their transition towards achieving the Union's climate-neutrality objective by 2050. Such roadmaps could make a valuable contribution in assisting sectors in planning the necessary investments towards the transition to a climate-neutral economy and could also serve to strengthen sectoral engagement in the pursuit of climate-neutral solutions. Such roadmaps could also complement existing initiatives, including the European Battery Alliance and the European Clean Hydrogen Alliance, which foster industrial collaboration in the transition to climate neutrality.

(8) The Paris Agreement sets out a long-term temperature goal in point (a) of Article 2(1) thereof, and aims to strengthen the global response to the threat of climate change by increasing the ability to adapt to the adverse impacts of climate change as set out in point (b) of Article 2(1) thereof and by making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development as set out in point (c) of Article 2(1) thereof. As the overall framework for the Union's contribution to the Paris Agreement, this Regulation should ensure that both the Union and the Member States contribute to the global response to climate change as referred to in the Paris Agreement.

(9) The Union's and Member States' climate action aims to protect people and the planet, welfare, prosperity, the economy, health, food systems, the integrity of eco-systems and biodiversity against the threat of climate change, in the context of the United Nations 2030 agenda for sustainable development and in pursuit of the objectives of the Paris Agreement, and to maximise prosperity within the planetary boundaries and to increase resilience and reduce vulnerability of society to climate change. In light of this, the Union's and Member States' actions should be guided by the precautionary and 'polluter pays' principles established in the Treaty on the Functioning of the European Union, and should also take into account the 'energy efficiency first' principle of the Energy Union and the 'do no harm' principle of the European Green Deal.

(10) Achieving climate neutrality should require a contribution from all economic sectors for which emissions or removals of greenhouse gases are regulated in Union law.

(11) In light of the importance of energy production and consumption for the level of greenhouse gas emissions, it is essential to ensure a transition to a safe, sustainable, affordable and secure energy system relying on the deployment of renewables, a well-functioning internal energy market and the improvement of energy efficiency, while reducing energy poverty. Digital transformation, technological innovation, and research and development are also important drivers for achieving the climate-neutrality objective.

(12) The Union has in place a regulatory framework to achieve the 2030 greenhouse gas emission reduction target agreed in 2014, before the entry into force of the Paris Agreement. The legislation implementing that target consists, inter alia, of Directive 2003/87/EC of the European Parliament and of the Council ([5]), which establishes the EU ETS, Regulation (EU) 2018/842 of the European Parliament and of the Council ([6]), which introduced national targets for reduction of greenhouse gas emissions by 2030, and Regulation (EU) 2018/841 of the European Parliament and of the Council ([7]), which requires Member States to balance greenhouse gas emissions and removals from land use, land use change and forestry.

(13) The EU ETS is a cornerstone of the Union's climate policy and constitutes its key tool for reducing greenhouse gas emissions in a cost-effective way.

(14) The Commission has, in its communication of 28 November 2018 entitled 'A Clean Planet for all – A European strategic long-term vision for a prosperous, modern, competitive and climate-neutral economy', presented a vision for achieving net-zero greenhouse gas emissions in the Union by 2050 through a socially-fair and cost-efficient transition.

(15) Through the 'Clean Energy for All Europeans' package of 30 November 2016 the Union has been pursuing an ambitious decarbonisation agenda, in particular by constructing a robust Energy Union, which includes the 2030 goals for energy efficiency and deployment of renewable energy in Directives 2012/27/EU ([8]) and (EU) 2018/2001 ([9]) of the European Parliament and of the Council, and by reinforcing relevant legislation, including Directive 2010/31/EU of the European Parliament and of the Council ([10]).

(16) The Union is a global leader in the transition towards climate neutrality, and it is determined to help raise global ambition and to strengthen the global response to climate change, using all tools at its disposal, including climate diplomacy.

([5]) Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a system for greenhouse gas emission allowance trading within the Union and amending Council Directive 96/61/EC (OJ L 275, 25.10.2003, p. 32).

([6]) Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013 (OJ L 156, 19.6.2018, p. 26).

([7]) Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU (OJ L 156, 19.6.2018, p. 1).

([8]) Directive 2012/27/EU of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (OJ L 315, 14.11.2012, p. 1).

([9]) Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82).

([10]) Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (OJ L 153, 18.6.2010, p. 13).

(17) The Union should continue its climate action and international climate leadership after 2050, in order to protect people and the planet against the threat of dangerous climate change, in pursuit of the long-term temperature goal set out in the Paris Agreement and following the scientific assessments of the IPCC, IPBES, and the European Scientific Advisory Board on Climate Change, as well as the assessments of other international bodies.

(18) The risk of carbon leakage remains in respect of those international partners that do not share the same standards of climate protection as those of the Union. The Commission therefore intends to propose a carbon border adjustment mechanism for selected sectors, to reduce such risks in a way which is compatible with the rules of the World Trade Organization. Furthermore, it is important to maintain effective policy incentives in support of technological solutions and innovations which enable the transition to a competitive climate-neutral Union economy, while providing investment certainty.

(19) The European Parliament called, in its resolution of 15 January 2020 on the European Green Deal, for the necessary transition to a climate-neutral society by 2050 at the latest and for this to be made into a European success story and has, in its resolution of 28 November 2019 on the climate and environment emergency, declared a climate and environment emergency. It has also repeatedly called on the Union to increase its 2030 climate target, and for that increased target to be part of this Regulation. The European Council, in its conclusions of 12 December 2019, has agreed on the objective of achieving a climate-neutral Union by 2050, in line with the objectives of the Paris Agreement, while also recognising that it is necessary to put in place an enabling framework that benefits all Member States and encompasses adequate instruments, incentives, support and investments to ensure a cost-efficient, just, as well as socially balanced and fair transition, taking into account different national circumstances in terms of starting points. It also noted that the transition will require significant public and private investment. On 6 March 2020, the Union submitted its long-term low greenhouse gas emission development strategy and, on 17 December 2020, its nationally determined contribution, to the United Nations Framework Convention on Climate Change (UNFCCC), following their approval by the Council.

(20) The Union should aim to achieve a balance between anthropogenic economy-wide emissions by sources and removals by sinks of greenhouse gases domestically within the Union by 2050 and, as appropriate, achieve negative emissions thereafter. That objective should encompass Union-wide greenhouse gas emissions and removals regulated in Union law. It should be possible to address such emissions and removals in the context of the review of the relevant climate and energy legislation. Sinks include natural and technological solutions, as reported in the Union's greenhouse gas inventories to the UNFCCC. Solutions that are based on carbon capture and storage (CCS) and carbon capture and use (CCU) technologies can play a role in decarbonisation, especially for the mitigation of process emissions in industry, for the Member States that choose this technology. The Union-wide 2050 climate-neutrality objective should be pursued by all Member States collectively, and Member States, the European Parliament, the Council and the Commission should take the necessary measures to enable its achievement. Measures at Union level will constitute an important part of the measures needed to achieve the objective.

(21) In its conclusions of 8 and 9 March 2007 and of 23 and 24 October 2014, the European Council endorsed the Union's greenhouse gas emission reduction target for 2020 and the 2030 climate and energy policy framework, respectively. The provisions of this Regulation on the determination of the Union's climate target for 2040 are without prejudice to the role of the European Council, as set out in the Treaties, in defining the Union's general political direction and priorities for the development of the Union's climate policy.

(22) Carbon sinks play an essential role in the transition to climate neutrality in the Union, and in particular the agriculture, forestry and land use sectors make an important contribution in that context. As announced in its communication of 20 May 2020 entitled 'A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system', the Commission will promote a new green business model to reward land managers for greenhouse gas emission reductions and carbon removals in the upcoming carbon farming initiative. Furthermore, in its communication of 11 March 2020 entitled 'A new Circular Economy Action Plan for a cleaner and more competitive Europe', the Commission has committed itself to developing a regulatory framework for certification of

carbon removals based on robust and transparent carbon accounting to monitor and verify the authenticity of carbon removals, while ensuring that there are no negative impacts on the environment, in particular biodiversity, on public health or on social or economic objectives.

(23) The restoration of ecosystems would assist in maintaining, managing and enhancing natural sinks and promote biodiversity while fighting climate change. Furthermore, the 'triple role' of forests, namely, as carbon sinks, storage and substitution, contributes to the reduction of greenhouse gases in the atmosphere, while ensuring that forests continue to grow and provide many other services.

(24) Scientific expertise and the best available, up-to-date evidence, together with information on climate change that is both factual and transparent, are imperative and need to underpin the Union's climate action and efforts to reach climate neutrality by 2050. A European Scientific Advisory Board on Climate Change (the 'Advisory Board') should be established to serve as a point of reference on scientific knowledge relating to climate change by virtue of its independence and scientific and technical expertise. The Advisory Board should complement the work of the European Environment Agency (EEA) while acting independently in discharging its tasks. Its mission should avoid any overlap with the mission of the IPCC at international level. Regulation (EC) No 401/2009 of the European Parliament and of the Council ([11]) should therefore be amended in order to establish the Advisory Board. National climate advisory bodies can play an important role in, inter alia, providing expert scientific advice on climate policy to the relevant national authorities as prescribed by the Member State concerned in those Member States where they exist. Therefore, Member States that have not already done so are invited to establish a national climate advisory body.

(25) The transition to climate neutrality requires changes across the entire policy spectrum and a collective effort of all sectors of the economy and society, as highlighted in the European Green Deal. The European Council, in its conclusions of 12 December 2019, stated that all relevant Union legislation and policies need to be consistent with, and contribute to, the fulfilment of the climate-neutrality objective while respecting a level playing field, and invited the Commission to examine whether this requires an adjustment of the existing rules.

(26) As announced in the European Green Deal, the Commission assessed the Union's 2030 target for greenhouse gas emission reduction, in its communication of 17 September 2020 entitled 'Stepping up Europe's 2030 climate ambition – Investing in a climate-neutral future for the benefit of our people'. The Commission did so on the basis of a comprehensive impact assessment and taking into account its analysis of the integrated national energy and climate plans submitted to it in accordance with Regulation (EU) 2018/1999 of the European Parliament and of the Council ([12]). In light of the 2050 climate-neutrality objective, by 2030 greenhouse gas emissions should be reduced and removals enhanced, so that net greenhouse gas emissions, that is emissions after the deduction of removals, are reduced economy-wide and domestically by at least 55 % by 2030 compared to 1990 levels. The European Council endorsed that target in its conclusions of 10 and 11 December 2020. It also provided initial guidance on its implementation. That new Union 2030 climate target is a subsequent target for the purposes of point (11) of Article 2 of Regulation (EU) 2018/1999, and therefore replaces the 2030 Union-wide target for greenhouse gas emissions set out in that point. In addition, the Commission should, by 30 June 2021, assess how the relevant Union legislation implementing the Union 2030 climate target would need to be amended in order to achieve such net emission reductions. In view of this, the Commission has announced a revision of the relevant climate and energy legislation which will be adopted in a package covering, inter alia, renewables, energy efficiency, land use, energy taxation, CO_2 emission performance standards for light-duty vehicles, effort sharing and the EU ETS.

([11]) Regulation (EC) No 401/2009 of the European Parliament and of the Council of 23 April 2009 on the European Environment Agency and the European Environment Information and Observation Network (OJ L 126, 21.5.2009, p. 13).

([12]) Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (OJ L 328, 21.12.2018, p. 1).

The Commission intends to assess the impacts of the introduction of additional Union measures that could complement existing measures, such as market-based measures that include a strong solidarity mechanism.

(27) According to Commission assessments, the existing commitments under Article 4 of Regulation (EU) 2018/841 result in a net carbon sink of 225 million tonnes of CO_2 equivalent in 2030. In order to ensure that sufficient mitigation efforts are deployed until 2030, it is appropriate to limit the contribution of net removals to the Union 2030 climate target to that level. This is without prejudice to the review of the relevant Union legislation in order to enable the achievement of the target.

(28) Expenditure under the Union budget and the European Union Recovery Instrument established by Council Regulation (EU) 2020/2094 ([13]) contributes to climate objectives, by dedicating at least 30 % of the total amount of the expenditure to supporting climate objectives, on the basis of an effective methodology and in accordance with sectoral legislation.

(29) In light of the objective of achieving climate neutrality by 2050 and in view of the international commitments under the Paris Agreement, continued efforts are necessary to ensure the phasing out of energy subsidies which are incompatible with that objective, in particular for fossil fuels, without impacting efforts to reduce energy poverty.

(30) In order to provide predictability and confidence for all economic actors, including businesses, workers, investors and consumers, to ensure a gradual reduction of greenhouse gas emissions over time and that the transition towards climate neutrality is irreversible, the Commission should propose a Union intermediate climate target for 2040, as appropriate, at the latest within six months of the first global stocktake carried out under the Paris Agreement. The Commission can make proposals to revise the intermediate target, taking into account the findings of the assessments of Union progress and measures and of national measures as well as the outcomes of the global stocktake and of international developments, including on common time frames for nationally determined contributions. As a tool to increase the transparency and accountability of the Union's climate policies, the Commission should, when making its legislative proposal for the Union 2040 climate target, publish the projected indicative Union greenhouse gas budget for the 2030-2050 period, defined as the indicative total volume of net greenhouse gas emissions that are expected to be emitted in that period without putting at risk the Union's commitments under the Paris Agreement, as well as the methodology underlying that indicative budget.

(31) Adaptation is a key component of the long-term global response to climate change. The adverse effects of climate change can potentially exceed the adaptive capacities of Member States. Therefore, Member States and the Union should enhance their adaptive capacity, strengthen resilience and reduce vulnerability to climate change, as provided for in Article 7 of the Paris Agreement, as well as maximise the co-benefits with other policies and legislation. The Commission should adopt a Union strategy on adaptation to climate change in line with the Paris Agreement. Member States should adopt comprehensive national adaptation strategies and plans based on robust climate change and vulnerability analyses, progress assessments and indicators, and guided by the best available and most recent scientific evidence. The Union should seek to create a favourable regulatory environment for national policies and measures put in place by Member States to adapt to climate change. Improving climate resilience and adaptive capacities to climate change requires shared efforts by all sectors of the economy and society, as well as policy coherence and consistency in all relevant legislation and policies.

(32) Ecosystems, people and economies in all regions of the Union will face major impacts from climate change, such as extreme heat, floods, droughts, water scarcity, sea level rise, thawing glaciers, forest fires, windthrows and agricultural losses. Recent extreme events have already had substantial impacts on ecosystems, affecting carbon sequestration and storage capacities of forest and agricultural land. Enhancing adaptive capacities and resilience, taking into account the United Nations Sustainable Development Goals, help to minimise climate change impacts, to address unavoidable impacts in a socially balanced manner and to improve living conditions in impacted areas.

([13]) Council Regulation (EU) 2020/2094 of 14 December 2020 establishing a European Union Recovery Instrument to support the recovery in the aftermath of the COVID-19 crisis (OJ L 433 I, 22.12.2020, p. 23).

Preparing early for such impacts is cost-effective and can also bring considerable co-benefits for ecosystems, health and the economy. Nature-based solutions, in particular, can benefit climate change mitigation, adaptation and biodiversity protection.

(33) The relevant programmes established under the Multiannual Financial Framework provide for the screening of projects to ensure that such projects are resilient to the potential adverse impacts of climate change through a climate vulnerability and risk assessment, including through relevant adaptation measures, and that they integrate the costs of greenhouse gas emissions and the positive effects of climate mitigation measures in the cost-benefit analysis. This contributes to the integration of climate change-related risks as well as climate change vulnerability and adaptation assessments into investment and planning decisions under the Union budget.

(34) In taking the relevant measures at Union and national level to achieve the climate-neutrality objective, Member States and the European Parliament, the Council and the Commission should, inter alia, take into account: the contribution of the transition to climate neutrality to public health, the quality of the environment, the well-being of citizens, the prosperity of society, employment and the competitiveness of the economy; the energy transition, strengthened energy security and the tackling of energy poverty; food security and affordability; the development of sustainable and smart mobility and transport systems; fairness and solidarity across and within Member States, in light of their economic capability, national circumstances, such as the specificities of islands, and the need for convergence over time; the need to make the transition just and socially fair through appropriate education and training programmes; best available and most recent scientific evidence, in particular the findings reported by the IPCC; the need to integrate climate change related risks into investment and planning decisions; cost-effectiveness and technological neutrality in achieving greenhouse gas emission reductions and removals and increasing resilience; and progression over time in environmental integrity and level of ambition.

(35) As indicated in the European Green Deal, the Commission adopted on 9 December 2020 a communication entitled 'Sustainable and Smart Mobility Strategy – putting European transport on track for the future'. The strategy sets out a roadmap for a sustainable and smart future for European transport, with an action plan towards an objective to deliver a 90 % reduction in emissions from the transport sector by 2050.

(36) To ensure that the Union and the Member States remain on track to achieve the climate-neutrality objective and progress on adaptation, the Commission should regularly assess progress, building upon information as set out in this Regulation, including information submitted and reported under Regulation (EU) 2018/1999. In order to allow for a timely preparation for the global stocktake referred to in Article 14 of the Paris Agreement, the conclusions of this assessment should be published by 30 September every five years, starting in 2023. This implies that the reports under Article 29(5) and Article 35 of that Regulation and, in the applicable years, the related reports under Article 29(1) and Article 32 of that Regulation should be submitted to the European Parliament and to the Council at the same time as the conclusions of that assessment. In the event that the collective progress made by Member States towards the achievement of the climate-neutrality objective or on adaptation is insufficient or that Union measures are inconsistent with the climate-neutrality objective or inadequate to enhance adaptive capacity, strengthen resilience or reduce vulnerability, the Commission should take the necessary measures in accordance with the Treaties. The Commission should also regularly assess relevant national measures, and issue recommendations where it finds that a Member State's measures are inconsistent with the climate-neutrality objective or inadequate to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change.

(37) The Commission should ensure a robust and objective assessment based on the most up-to-date scientific, technical and socioeconomic findings, and representative of a broad range of independent expertise, and base its assessment on relevant information including information submitted and reported by Member States, reports of the EEA, of the Advisory Board and of the Commission's Joint Research Centre, the best available and most recent scientific evidence, including the latest reports of the IPCC, IPBES and other international bodies, as well as the Earth observation data provided by the European Earth Observation Programme Copernicus. The Commission should further base its assessments on an indicative, linear trajectory linking the Union's climate targets for 2030 and 2040, when adopted, with the Union's climate-neutrality objective and serving as an indicative tool to estimate

and evaluate collective progress towards the achievement of the Union's climate-neutrality objective. The indicative, linear trajectory is without prejudice to any decision to determine a Union climate target for 2040. Given that the Commission has committed itself to exploring how the EU taxonomy can be used in the context of the European Green Deal by the public sector, this should include information on environmentally sustainable investment, by the Union or by Member States, consistent with Regulation (EU) 2020/852 of the European Parliament and of the Council ([14]) when such information becomes available. The Commission should use European and global statistics and data where available and seek expert scrutiny. The EEA should assist the Commission, as appropriate and in accordance with its annual work programme.

(38) As citizens and communities have a powerful role to play in driving the transformation towards climate neutrality forward, strong public and social engagement on climate action should be both encouraged and facilitated at all levels, including at national, regional and local level in an inclusive and accessible process. The Commission should therefore engage with all parts of society, including stakeholders representing different sectors of the economy, to enable and empower them to take action towards a climate-neutral and climate-resilient society, including through the European Climate Pact.

(39) In line with the Commission's commitment to the principles on Better Law-Making, coherence of the Union instruments as regards greenhouse gas emission reductions should be sought. The system of measuring the progress towards the achievement of the climate-neutrality objective as well as the consistency of measures taken with that objective should build upon and be consistent with the governance framework laid down in Regulation (EU) 2018/1999, taking into account all five dimensions of the Energy Union. In particular, the system of reporting on a regular basis and the sequencing of the Commission's assessment and actions on the basis of the reporting should be aligned to the requirements to submit information and provide reports by Member States laid down in Regulation (EU) 2018/1999. Regulation (EU) 2018/1999 should therefore be amended in order to include the climate-neutrality objective in the relevant provisions.

(40) Climate change is by definition a trans-boundary challenge and coordinated action at Union level is needed to effectively supplement and reinforce national policies. Since the objective of this Regulation, namely to achieve climate neutrality in the Union by 2050, cannot be sufficiently achieved by the Member States, but can rather, by reason of the scale and effects, be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality, as set out in that Article, this Regulation does not go beyond what is necessary to achieve that objective,

HAVE ADOPTED THIS REGULATION:

Article 1

Subject matter and scope

This Regulation establishes a framework for the irreversible and gradual reduction of anthropogenic greenhouse gas emissions by sources and enhancement of removals by sinks regulated in Union law.

This Regulation sets out a binding objective of climate neutrality in the Union by 2050 in pursuit of the long-term temperature goal set out in point (a) of Article 2(1) of the Paris Agreement, and provides a framework for achieving progress in pursuit of the global adaptation goal established in Article 7 of the Paris Agreement. This Regulation also sets out a binding Union target of a net domestic reduction in greenhouse gas emissions for 2030.

([14]) Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (OJ L 198, 22.6.2020, p. 13).

This Regulation applies to anthropogenic emissions by sources and removals by sinks of the greenhouse gases listed in Part 2 of Annex V to Regulation (EU) 2018/1999.

Article 2

Climate-neutrality objective

1. Union-wide greenhouse gas emissions and removals regulated in Union law shall be balanced within the Union at the latest by 2050, thus reducing emissions to net zero by that date, and the Union shall aim to achieve negative emissions thereafter.

2. The relevant Union institutions and the Member States shall take the necessary measures at Union and national level, respectively, to enable the collective achievement of the climate-neutrality objective set out in paragraph 1, taking into account the importance of promoting both fairness and solidarity among Member States and cost-effectiveness in achieving this objective.

Article 3

Scientific advice on climate change

1. The European Scientific Advisory Board on Climate Change established under Article 10a of Regulation (EC) No 401/2009 (the 'Advisory Board') shall serve as a point of reference for the Union on scientific knowledge relating to climate change by virtue of its independence and scientific and technical expertise.

2. The tasks of the Advisory Board shall include:

(a) considering the latest scientific findings of the IPCC reports and scientific climate data, in particular with regard to information relevant to the Union;

(b) providing scientific advice and issuing reports on existing and proposed Union measures, climate targets and indicative greenhouse gas budgets, and their coherence with the objectives of this Regulation and the Union's international commitments under the Paris Agreement;

(c) contributing to the exchange of independent scientific knowledge in the field of modelling, monitoring, promising research and innovation which contribute to reducing emissions or increasing removals;

(d) identifying actions and opportunities needed to successfully achieve the Union climate targets;

(e) raising awareness on climate change and its impacts, as well as stimulating dialogue and cooperation between scientific bodies within the Union, complementing existing work and efforts.

3. The Advisory Board shall be guided in its work by the best available and most recent scientific evidence, including the latest reports of the IPCC, IPBES and other international bodies. It shall follow a fully transparent process and make its reports publicly available. It may take into account, where available, the work of the national climate advisory bodies referred to in paragraph 4.

4. In the context of enhancing the role of science in the field of climate policy, each Member State is invited to establish a national climate advisory body, responsible for providing expert scientific advice on climate policy to the relevant national authorities as prescribed by the Member State concerned. Where a Member State decides to establish such an advisory body, it shall inform the EEA thereof.

Article 4

Intermediate Union climate targets

1. In order to reach the climate-neutrality objective set out in Article 2(1), the binding Union 2030 climate target shall be a domestic reduction of net greenhouse gas emissions (emissions after deduction of removals) by at least 55 % compared to 1990 levels by 2030.

When implementing the target referred to in the first subparagraph, the relevant Union institutions and the Member States shall prioritise swift and predictable emission reductions and, at the same time, enhance removals by natural sinks.

In order to ensure that sufficient mitigation efforts are deployed up to 2030, for the purpose of this Regulation and without prejudice to the review of Union legislation referred to in paragraph 2, the contribution of net removals to the Union 2030 climate target shall be limited to 225 million tonnes of CO_2 equivalent. In order to enhance the Union's carbon sink in line with the objective of achieving climate neutrality by 2050, the Union shall aim to achieve a higher volume of its net carbon sink in 2030.

2. By 30 June 2021, the Commission shall review relevant Union legislation in order to enable the achievement of the target set out in paragraph 1 of this Article and the climate-neutrality objective set out in Article 2(1) and consider taking the necessary measures, including the adoption of legislative proposals, in accordance with the Treaties.

Within the framework of the review referred to in the first subparagraph and future reviews, the Commission shall assess in particular the availability under Union law of adequate instruments and incentives to mobilise the investments needed, and propose measures as necessary.

From the adoption of the legislative proposals by the Commission, it shall monitor the legislative procedures for the different proposals and may report to the European Parliament and to the Council on whether the foreseen outcome of those legislative procedures, considered together, would achieve the target set out in paragraph 1. If the foreseen outcome would not deliver a result in line with the target set out in paragraph 1, the Commission may take the necessary measures, including the adoption of legislative proposals, in accordance with the Treaties.

3. With a view to achieving the climate-neutrality objective set out in Article 2(1) of this Regulation, a Union-wide climate target for 2040 shall be set. To that end, at the latest within six months of the first global stocktake referred to in Article 14 of the Paris Agreement, the Commission shall make a legislative proposal, as appropriate, based on a detailed impact assessment, to amend this Regulation to include the Union 2040 climate target, taking into account the conclusions of the assessments referred to in Articles 6 and 7 of this Regulation and the outcomes of the global stocktake.

4. When making its legislative proposal for the Union 2040 climate target as referred to in paragraph 3, the Commission shall, at the same time, publish in a separate report the projected indicative Union greenhouse gas budget for the 2030-2050 period, defined as the indicative total volume of net greenhouse gas emissions (expressed as CO_2 equivalent and providing separate information on emissions and removals) that are expected to be emitted in that period without putting at risk the Union's commitments under the Paris Agreement. The projected indicative Union greenhouse gas budget shall be based on the best available science, take into account the advice of the Advisory Board as well as, where adopted, the relevant Union legislation implementing the Union 2030 climate target. The Commission shall also publish the methodology underlying the projected indicative Union greenhouse gas budget.

5. When proposing the Union 2040 climate target in accordance with paragraph 3, the Commission shall consider the following:

(a) the best available and most recent scientific evidence, including the latest reports of the IPCC and the Advisory Board;

(b) the social, economic and environmental impacts, including the costs of inaction;

(c) the need to ensure a just and socially fair transition for all;

(d) cost-effectiveness and economic efficiency;

(e) competiveness of the Union's economy, in particular small and medium-sized enterprises and sectors most exposed to carbon leakage;

(f) best available cost-effective, safe and scalable technologies;

(g) energy efficiency and the 'energy efficiency first' principle, energy affordability and security of supply;

(h) fairness and solidarity between and within Member States;

(i) the need to ensure environmental effectiveness and progression over time;

(j) the need to maintain, manage and enhance natural sinks in the long term and protect and restore biodiversity;

(k) investment needs and opportunities;

(l) international developments and efforts undertaken to achieve the long-term objectives of the Paris Agreement and the ultimate objective of the UNFCCC;

(m) existing information on the projected indicative Union greenhouse gas budget for the 2030-2050 period referred to in paragraph 4.

6. Within six months of the second global stocktake referred to in Article 14 of the Paris Agreement, the Commission may propose to revise the Union 2040 climate target in accordance with Article 11 of this Regulation.

7. The provisions of this Article shall be kept under review in light of international developments and efforts undertaken to achieve the long-term objectives of the Paris Agreement, including with regard to the outcomes of international discussions on common time frames for nationally determined contributions.

Article 5

Adaptation to climate change

1. The relevant Union institutions and the Member States shall ensure continuous progress in enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change in accordance with Article 7 of the Paris Agreement.

2. The Commission shall adopt a Union strategy on adaptation to climate change in line with the Paris Agreement and shall regularly review it in the context of the review provided for in point (b) of Article 6(2) of this Regulation.

3. The relevant Union institutions and the Member States shall also ensure that policies on adaptation in the Union and in Member States are coherent, mutually supportive, provide co-benefits for sectoral policies, and work towards better integration of adaptation to climate change in a consistent manner in all policy areas, including relevant socioeconomic and environmental policies and actions, where appropriate, as well as in the Union's external action. They shall focus, in particular, on the most vulnerable and impacted populations and sectors, and identify shortcomings in this regard in consultation with civil society.

4. Member States shall adopt and implement national adaptation strategies and plans, taking into consideration the Union strategy on adaptation to climate change referred to in paragraph 2 of this Article and based on robust climate change and vulnerability analyses, progress assessments and indicators, and guided by the best available and most recent scientific evidence. In their national adaptation strategies, Member States shall take into account the particular vulnerability of the relevant sectors, inter alia, agriculture, and of water and food systems, as well as food security, and promote nature-based solutions and ecosystem-based adaptation. Member States shall regularly update the strategies and include the related updated information in the reports to be submitted under Article 19(1) of Regulation (EU) 2018/1999.

5. By 30 July 2022, the Commission shall adopt guidelines setting out common principles and practices for the identification, classification and prudential management of material physical climate risks when planning, developing, executing and monitoring projects and programmes for projects.

Article 6

Assessment of Union progress and measures

1. By 30 September 2023, and every five years thereafter, the Commission shall assess, together with the assessment provided for under Article 29(5) of Regulation (EU) 2018/1999:

(a) the collective progress made by all Member States towards the achievement of the climate-neutrality objective set out in Article 2(1) of this Regulation;

(b) the collective progress made by all Member States on adaptation as referred to in Article 5 of this Regulation.

The Commission shall submit the conclusions of that assessment, together with the State of the Energy Union report prepared in the respective calendar year in accordance with Article 35 of Regulation (EU) 2018/1999, to the European Parliament and to the Council.

2. By 30 September 2023, and every five years thereafter, the Commission shall review:

(a) the consistency of Union measures with the climate-neutrality objective set out in Article 2(1);

(b) the consistency of Union measures with ensuring progress on adaptation as referred to in Article 5.

3. Where, based on the assessments referred to in paragraphs 1 and 2 of this Article, the Commission finds that Union measures are inconsistent with the climate-neutrality objective set out in Article 2(1) or inconsistent with ensuring progress on adaptation as referred to in Article 5, or that the progress towards that climate-neutrality objective or on adaptation as referred to in Article 5 is insufficient, it shall take the necessary measures in accordance with the Treaties.

4. The Commission shall assess the consistency of any draft measure or legislative proposal, including budgetary proposals, with the climate-neutrality objective set out in Article 2(1) and the Union 2030 and 2040 climate targets before adoption, and include that assessment in any impact assessment accompanying these measures or proposals, and make the result of that assessment publicly available at the time of adoption. The Commission shall also assess whether those draft measures or legislative proposals, including budgetary proposals, are consistent with ensuring progress on adaptation as referred to in Article 5. When making its draft measures and legislative proposals, the Commission shall endeavour to align them with the objectives of this Regulation. In any case of non-alignment, the Commission shall provide the reasons as part of the consistency assessment referred to in this paragraph.

Article 7

Assessment of national measures

1. By 30 September 2023, and every five years thereafter, the Commission shall assess:

(a) the consistency of national measures identified, on the basis of the integrated national energy and climate plans, national long-term strategies and the biennial progress reports submitted in accordance with Regulation (EU) 2018/1999, as relevant for the achievement of the climate-neutrality objective set out in Article 2(1) of this Regulation with that objective;

(b) the consistency of relevant national measures with ensuring progress on adaptation as referred to in Article 5, taking into account the national adaptation strategies referred to in Article 5(4).

The Commission shall submit the conclusions of that assessment, together with the State of the Energy Union report prepared in the respective calendar year in accordance with Article 35 of Regulation (EU) 2018/1999, to the European Parliament and to the Council.

2. Where the Commission finds, after due consideration of the collective progress assessed in accordance with Article 6(1), that a Member State's measures are inconsistent with the climate-neutrality objective set out in Article 2(1) or inconsistent with ensuring progress on adaptation as referred to in Article 5, it may issue recommendations to that Member State. The Commission shall make such recommendations publicly available.

3. Where recommendations are issued in accordance with paragraph 2, the following principles shall apply:

(a) the Member State concerned shall, within six months of receipt of the recommendations, notify the Commission on how it intends to take due account of the recommendations in a spirit of solidarity between Member States and the Union and between Member States;

(b) after the submission of the notification referred to in point (a) of this paragraph, the Member State concerned shall set out, in its following integrated national energy and climate progress report submitted in accordance with Article 17 of Regulation (EU) 2018/1999, in the year following the year in which the recommendations were issued, how it has taken due account of the recommendations; if the Member State concerned decides not to address the recommendations or a substantial part thereof, that Member State shall provide the Commission its reasoning;

(c) the recommendations shall be complementary to the latest country-specific recommendations issued in the context of the European Semester.

Article 8

Common provisions on Commission assessment

1. The Commission shall base its first and second assessments referred to in Articles 6 and 7 on an indicative, linear trajectory which sets out the pathway for the reduction of net emissions at Union level and which links the Union 2030 climate target referred to in Article 4(1), the Union 2040 climate target, when adopted, and the climate-neutrality objective set out in Article 2(1).

2. Following the first and second assessments referred to in paragraph 1, the Commission shall base any subsequent assessment on an indicative, linear trajectory linking the Union 2040 climate target, when adopted, and the climate-neutrality objective set out in Article 2(1).

3. In addition to the national measures referred to in point (a) of Article 7(1), the Commission shall base its assessments referred to in Articles 6 and 7 on at least the following:

(a) information submitted and reported under Regulation (EU) 2018/1999;

(b) reports of the EEA, the Advisory Board and the Commission's Joint Research Centre;

(c) European and global statistics and data, including statistics and data from the European Earth Observation Programme Copernicus, data on reported and projected losses from adverse climate impacts and estimates on the costs of inaction or delayed action, where available;

(d) the best available and most recent scientific evidence, including the latest reports of the IPCC, IPBES and other international bodies; and

(e) any supplementary information on environmentally sustainable investment by the Union or by Member States, including, when available, investment consistent with Regulation (EU) 2020/852.

4. The EEA shall assist the Commission in the preparation of the assessments referred to in Articles 6 and 7, in accordance with its annual work programme.

Article 9

Public participation

1. The Commission shall engage with all parts of society to enable and empower them to take action towards a just and socially fair transition to a climate-neutral and climate-resilient society. The Commission shall facilitate an inclusive and accessible process at all levels, including at national, regional and local level and with social partners, academia, the business community, citizens and civil society, for the exchange of best practice and to identify actions to contribute to the achievement of the objectives of this Regulation. The Commission may also draw on the public consultations and on the multilevel climate and energy dialogues as set up by Member States in accordance with Articles 10 and 11 of Regulation (EU) 2018/1999.

2. The Commission shall use all appropriate instruments, including the European Climate Pact, to engage citizens, social partners and stakeholders, and foster dialogue and the diffusion of science-based information about climate change and its social and gender equality aspects.

Article 10

Sectoral roadmaps

The Commission shall engage with sectors of the economy within the Union that choose to prepare indicative voluntary roadmaps towards achieving the climate-neutrality objective set out in Article 2(1). The Commission shall monitor the development of such roadmaps. Its engagement shall involve the facilitation of dialogue at Union level, and the sharing of best practice among relevant stakeholders.

Article 11

Review

Within six months of each global stocktake referred to in Article 14 of the Paris Agreement, the Commission shall submit a report to the European Parliament and to the Council, together with the conclusions of the assessments referred to in Articles 6 and 7 of this Regulation, on the operation of this Regulation, taking into account:

(a) the best available and most recent scientific evidence, including the latest reports of the IPCC and the Advisory Board;

(b) international developments and efforts undertaken to achieve the long-term objectives of the Paris Agreement.

The Commission's report may be accompanied, where appropriate, by legislative proposals to amend this Regulation.

Article 12

Amendments to Regulation (EC) No 401/2009

Regulation (EC) No 401/2009 is amended as follows:

(1) the following article is inserted:

'*Article 10a*

1. A European Scientific Advisory Board on Climate Change (the "Advisory Board") is hereby established.

2. The Advisory Board shall be composed of 15 senior scientific experts covering a broad range of relevant disciplines. Members of the Advisory Board shall meet the criteria set out in paragraph 3. No more than two members of the Advisory Board shall hold the nationality of the same Member State. The independence of the members of the Advisory Board shall be beyond doubt.

3. The Management Board shall designate the members of the Advisory Board for a term of four years, which shall be renewable once, following an open, fair and transparent selection procedure. In its selection of the members of the Advisory Board, the Management Board shall seek to ensure a varied disciplinary and sectoral expertise, as well as gender and geographical balance. The selection shall be based on the following criteria:

(a) scientific excellence;

(b) experience in carrying out scientific assessments and providing scientific advice in the fields of expertise;

(c) broad expertise in the field of climate and environment sciences or other scientific fields relevant for the achievement of the Union's climate objectives;

(d) professional experience in an inter-disciplinary environment in an international context.

4. The members of the Advisory Board shall be appointed in a personal capacity and shall give their positions completely independently of the Member States and the Union institutions. The Advisory Board shall elect its chairperson from among its members for a period of four years and it shall adopt its rules of procedure.

5. The Advisory Board shall complement the work of the Agency while acting independently in discharging its tasks. The Advisory Board shall establish its annual work programme independently, and when doing so it shall consult the Management Board. The chairperson of the Advisory Board shall inform the Management Board and the Executive Director of that programme and its implementation.';

(2) in Article 11, the following paragraph is added:

'5. The Agency's budget shall also include the expenditure relating to the Advisory Board.'.

Article 13

Amendments to Regulation (EU) 2018/1999

Regulation (EU) 2018/1999 is amended as follows:

(1) in Article 1(1), point (a) is replaced by the following:

'(a) implement strategies and measures designed to meet the objectives and targets of the Energy Union and the long-term Union greenhouse gas emissions commitments consistent with the Paris Agreement, in particular the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119 of the European Parliament and of the Council (*), and, for the first ten-year period, from 2021 to 2030, in particular the Union's 2030 targets for energy and climate;

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(*) Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ("European Climate Law") (OJ L 243, 9.7.2021, p. 1).';

(2) in Article 2, point (7) is replaced by the following:

'(7) "projections" means forecasts of anthropogenic greenhouse gas emissions by sources and removals by sinks or developments of the energy system, including at least quantitative estimates for a sequence of six future years ending with 0 or 5, immediately following the reporting year;';

(3) in Article 3(2), point (f) is replaced by the following:

'(f) an assessment of the impacts of the planned policies and measures to meet the objectives referred to in point (b) of this paragraph, including their consistency with the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119, the long-term greenhouse gas emission reduction objectives under the Paris Agreement and the long-term strategies as referred to in Article 15 of this Regulation;';

(4) in Article 8(2), the following point is added:

'(e) the manner in which existing policies and measures and planned policies and measures contribute to the achievement of the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119.';

(5) Article 11 is replaced by the following:

'*Article 11*

Multilevel climate and energy dialogue

Each Member State shall establish a multilevel climate and energy dialogue pursuant to national rules, in which local authorities, civil society organisations, business community, investors and other relevant stakeholders and the general public are able actively to engage and discuss the achievement of the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119 and the different scenarios envisaged for energy and climate policies, including for the long term, and review progress, unless it already has a structure which serves the same purpose. Integrated national energy and climate plans may be discussed within the framework of such a dialogue.';

(6) Article 15 is amended as follows:

(a) paragraph 1 is replaced by the following:

'1. By 1 January 2020, and subsequently by 1 January 2029 and every 10 years thereafter, each Member State shall prepare and submit to the Commission its long-term strategy with a 30-year perspective and consistent with the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119. Member States should, where necessary, update those strategies every five years.';

(b) in paragraph 3, point (c) is replaced by the following:

'(c) achieving long-term greenhouse gas emission reductions and enhancements of removals by sinks in all sectors in accordance with the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119, in the context of necessary greenhouse gas emission reductions and enhancements of removals by sinks according to the Intergovernmental Panel on Climate Change (IPCC) to reduce the Union's greenhouse gas emissions in a cost-effective manner and enhance removals by sinks in pursuit of the long-term temperature goal in the Paris Agreement so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases within the Union and, as appropriate, achieve negative emissions thereafter;';

(7) Article 17 is amended as follows:

(a) in paragraph 2, point (a) is replaced by the following:

'(a) information on the progress accomplished towards reaching the objectives, including progress towards the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119, targets and contributions set out in the integrated national energy and climate plan, and towards financing and implementing the policies and measures necessary to meet them, including a review of actual investment against initial investment assumptions;';

(b) in paragraph 4, the first subparagraph is replaced by the following:

'The Commission, assisted by the Energy Union Committee referred to in point (b) of Article 44(1), shall adopt implementing acts to set out the structure, format, technical details and process for the information referred to in paragraphs 1 and 2 of this Article, including a methodology for the reporting on the phasing out of energy subsidies, in particular for fossil fuels, pursuant to point (d) of Article 25.';

(8) in Article 29(1), point (b) is replaced by the following:

'(b) the progress made by each Member State towards meeting its objectives, including progress towards the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119, targets and contributions and implementing the policies and measures set out in its integrated national energy and climate plan;';

(9) Article 45 is replaced by the following:

'Article 45

Review

The Commission shall report to the European Parliament and to the Council within six months of each global stocktake agreed under Article 14 of the Paris Agreement on the operation of this Regulation, its contribution to governance of the Energy Union, its contribution to the long-term goals of the Paris Agreement, progress towards the achievement of the 2030 climate and energy targets and the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119, additional Energy Union objectives and the conformity of the planning, reporting and monitoring provisions laid down in this Regulation with other Union law or decisions relating to the UNFCCC and the Paris Agreement. The Commission reports may be accompanied by legislative proposals where appropriate.';

(10) Part 1 of Annex I is amended as follows:

(a) in point 3.1.1 of Section A, point (i) is replaced by the following:

'i. Policies and measures to achieve the target set under Regulation (EU) 2018/842 as referred to in point 2.1.1 of this Section and policies and measures to comply with Regulation (EU) 2018/841, covering all key emitting sectors and sectors for the enhancement of removals, with an outlook to the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119';

(b) in Section B, the following point is added:

'5.5. The contribution of planned policies and measures to the achievement of the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119';

(11) in point (c) of Annex VI, point (viii) is replaced by the following:

'(viii) an assessment of the contribution of the policy or measure to the achievement of the Union's climate-neutrality objective set out in Article 2(1) of Regulation (EU) 2021/1119 and to the achievement of the long-term strategy referred to in Article 15 of this Regulation;'.

Article 14

Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 30 June 2021.

For the European Parliament	*For the Council*
The President	*The President*
D. M. SASSOLI	J. P. MATOS FERNANDES

ANNEX 4

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

Securing our future

Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society

{SEC(2024) 64 final} - {SWD(2024) 63 final} - {SWD(2024) 64 final}

EUROPEAN
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COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

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1 Contents

1 A Vision beyond 2030

Climate change is intensifying and its real-life costs accelerating. A historically high acceleration in climate disruption in 2023, saw global warming reaching 1.48°C above pre-industrial level for the first time, and ocean temperatures and Antarctic Ocean ice loss breaking records by a wide margin. It is clearer than ever that achieving a stable climate and safeguarding a liveable planet for current and future generations means cutting global greenhouse gas (GHG) emissions sharply and rapidly and preparing for future impacts of climate change([1]). This pathway can and must go hand in hand with shaping a prosperous and fair society, and EU industry and agricultural sector that are agile and strong in a globally competitive and increasingly sustainable economy that delivers for all the people and in line with the 20 principles of the European Pillar of Social Rights and its Action Plan.

The outcome of COP28 in Dubai and the first global stocktake of climate action shows that the rest of the world is rapidly moving onto this pathway as well. The EU, having written climate neutrality by 2050 into law, has been leading in climate action, and will stay the course.

The vision of Europe at the end of the next decade is a comprehensive one: it should remain a prime destination for investment opportunities that bring stable, future-proof quality jobs, with a strong industrial ecosystem. Europe should lead in developing the clean technology markets of the future, where all major countries and businesses seek to avail themselves of the market opportunities. Becoming a continent with clean, low-carbon, affordable energy and sustainable food and materials, will make it resilient against future crises, such as those currently caused by disruptions in the supply of fossil fuels. By remaining a global leader and a trusted partner in climate action, Europe will simultaneously strengthen its open strategic autonomy and diversify its sustainable global value chains to be the master of its fate in a volatile world.

Well-designed climate action can deliver this vision for Europe and its citizens. The European Green Deal is the EU's long-term strategy for economic growth, investment and innovation. Its implementation will notably strengthen the EU's energy independence from fossil fuels. In 2022, the value of fossil fuel imports soared to EUR 640 billion (4.1% of GDP), because of Russia's war of aggression against Ukraine. In 2023, when prices came down substantially, net fossil fuel import costs accounted for about 2.4% of GDP ([2]).

Growing the economy on the basis of fossil fuels and resource wastage is not sustainable. The EU has shown that climate action and sustaining economic growth go hand in hand by decoupling growth from greenhouse gas emissions. According to provisional data, total net

([1]) IPCC. AR6 Synthesis Report: Climate Change 2023
([2]) Based on trade data for the first 10 months and projected GDP

GHG emissions were 32.5% lower in 2022 than in 1990([3]) while the economy has grown by 67% ([4]). The materials productivity has increased by 37.5% between 2000 and 2022 ([5]).

Record levels of renewable and low carbon technologies are now being deployed. The EU installed an unprecedented 17 GW of new wind energy and 56 GW of solar (DC) in 2023. In 2022, about 3 million units of heat pumps were sold.

The European Climate Law introduced an intermediate target to be proposed by the Commission at the latest six months after the global stocktake under the Paris Agreement. Hence, in line with the scientific advice by the European Scientific Advisory Board on Climate Change and based on a detailed Impact Assessment, this Communication presents a 90% net GHG emission reduction compared to 1990 levels as the recommended target for 2040 ("the 2040 target"). It would ensure that the corresponding overall greenhouse gas (GHG) emissions budget for the EU between now and 2050 is in line with the provisions of the European Climate Law and provides a credible pathway to a strong and sustainable society in Europe.

Achieving this target will require a number of enabling conditions, such as the full implementation of the agreed 2030 framework, ensuring the competitiveness of the European industry, a greater focus on a just transition that leaves no one behind, a level playing field with international partners, and a strategic dialogue on the post-2030 framework, including with industry and the agricultural sector.

The objective of this Communication is to launch the political debate and inform the preparation of the post-2030 framework. It does not propose new policy measures or set new sector-specific targets.

At this, stability and full implementation of the legislative framework in place for meeting the 2030 climate and energy targets is a precondition for the EU to stay on course to the 2040 target on the way to climate neutrality in 2050 and to reap the full potential of the transition. In fact, an extension of current policies towards 2040 would already lead to a -88% reduction by 2040. Frontloading the decarbonisation on our path to climate neutrality by 2050 will significantly reduce fossil fuel imports (by 80% in 2040) and hence provide greater protection against price shocks and create a lead market in clean technologies, strengthening the EU's open strategic autonomy and competitiveness. More focus is however needed on a framework that ensures that all citizens benefit from the climate transition, already now and into the next decades. For example, the European Green Deal must also be an industrial decarbonisation deal. Europe needs better integration of employment and skills as well as social and distributional aspects in climate action and an enabling framework for decarbonised industry in the pursuit of sustainable economic growth, as well as a global level playing field for green business to thrive. Europe will also need to plan the necessary energy

([3]) Climate Action Progress Report 2023.
([4]) Estimate from AMECO database (European Commission, DG ECFIN), real GDP.
([5]) Eurostat, Circular Economy Monitoring Framework.

and transport infrastructure. These aspects will be addressed in the upcoming reviews already foreseen in existing EU measures to ensure the successful achievement of our 2030 objectives.

Moreover, Europe will need to mobilise the right mix of private and public sector investment to make our economy both sustainable and competitive. In this area, a European approach on finance will be needed in the coming years, in close cooperation with Member States, to generate economies of scale and scope, while limiting fragmentation of efforts and deepening of regional imbalances.

Many investments to be undertaken to realise the 2030 climate and energy targets have impacts spanning decades. Defining a climate target for 2040 now will provide investment predictability. It will help EU decision makers, Member States and stakeholders to take the necessary decisions in this critical decade, so that these are compatible with the 2040 target and the climate neutrality objective, minimising the risks of lock-in to costly, sub-optimal paths and stranded assets.

The imperative that the transition has to be just is at the heart of the European Green Deal given the worries among some citizens and industrial actors about the risks and costs of the climate and energy transition. Climate action has to bring everybody along, paying particular attention to supporting those who face the greatest challenge. That is why this Communication is the start of a dialogue and an extensive outreach to citizens, businesses, social partners, NGOs, academia and other stakeholders on the right 2040 pathway to climate neutrality by 2050. Such dialogue with industry is already taking place through Clean Transition Dialogues organised with the key industrial sectors, and will be continued and expanded, including in a 2040 perspective. The Strategic Dialogue on the Future of Agriculture with farmers and other actors in the food chain on the future of agriculture has also been launched. Furthermore, a a structured and systematic dialogue with social partners should be strengthened to ensure their contribution, focusing on employment, including availability of jobs for displaced workers, mobility, job quality, investments in reskilling and upskilling. The Commission will present the stocktake of the Clean Transition Dialogues prior to the Special European Council meeting in April this year. These dialogues and outreach will allow the next Commission to table legislative proposals for the post-2030 policy framework that will be needed to deliver the 2040 target in a fair and cost-efficient manner.

2 Ambitious global climate action

The first global stocktake under the Paris Agreement found that parties are putting increasingly effective climate policies in place, but that urgent additional action is needed to put the world fully on track for achieving the goals of the Paris Agreement.

The parties at COP28 agreed that limiting global warming to 1.5°C requires deep, rapid and sustained reductions in global GHG emissions of 43% by 2030 and 60% by 2035 compared to 2019 levels and reaching net zero CO_2 emissions globally by 2050. The Global Stocktake highlighted that the fossil fuel era should draw to an end, recognising the need for all to transition away from fossil fuels. The agreement also calls on the parties to triple global

renewable energy capacity and double the rate of energy efficiency improvements by 2030, to accelerate efforts globally towards net zero emission energy systems, making use of zero- and low-carbon fuels well before or by around mid-century. While emphasising the importance of a just transition, it also calls to accelerate efforts to phase down unabated coal, emissions from road transport, tackle methane, and other non-CO_2 emissions this decade, and phase out as soon as possible inefficient fossil fuel subsidies that do not address energy poverty or vulnerable groups. This will require a shift in investment patterns across the globe to ensure finance flows are consistent with low emission and climate resilient development pathways.

The results of COP28 set the minimum expectation for action from the entire global community and put others on the trajectory that the EU is already on. The EU will continue to contribute to building the means and momentum for increased global action and persuade and support other countries to follow suit.

Building on the success and potential of the Global Gateway, international cooperation will expand to new areas in line with the collective commitments of the Global Stocktake and new technological opportunities. Climate finance will remain at the heart of the EU's contribution to global climate action. The EU, together with its Member States and the European Investment Bank (EIB), is the biggest contributor of public climate finance to developing economies, with a contribution of €28.5 billion in 2022 and mobilising an additional €11.9 billion of private finance.

The EU and its Member States will further strengthen climate diplomacy in bilateral, plurilateral (G7, G20, OECD, Climate Club among others) and multilateral fora.

The Commission will set up a dedicated taskforce to offer its expertise and deploy staff to set up carbon markets, develop a global approach to carbon pricing[6], intensify its carbon market diplomacy around the world and amplify its efforts to replicate the success of the EU Emissions Trading System (ETS) by encouraging and supporting other jurisdictions to introduce or improve their own carbon pricing mechanisms.

The gradual implementation of the Carbon Border Adjustment Mechanism (CBAM), which entered into force, in its transitional phase, on 1 October 2023, also incentivises governments to use pricing measures to reduce emissions and for industries to reduce their GHG emissions, based on a methodology that has potential for international application.

In a volatile geopolitical environment, the EU will continue to develop stable partnerships with like-minded countries. The Green Alliances and Green Partnerships concluded with partners since 2021 will sustain the EU and partners' pathways to climate neutrality. It will broaden and deepen partnerships with reliable international suppliers, including neighbourhood countries, to ensure its long-term energy security and predictability of supply throughout the energy transition. This will help reduce external dependencies and costs while de-risking supply chains. It will also empower European businesses and society to benefit

([6]) This work should take due account of the EU's push for global carbon pricing measures for international aviation and maritime transport, through ICAO and IMO respectively.

from the global transition and from the increasing demand for clean technologies, coupled with policy instruments to ensure the resilience of the EU net-zero technologies supply.

Trade agreements can help advance climate goals and achieve our targets while ensuring that the international trading system remains fair and non-discriminatory. Trade policy can drive innovation, promoting sustainable value chains and creating market access for clean technologies and products.

Reflecting the significant momentum in enlarging the EU, the Commission will support candidate and potential candidate countries in aligning with and adopting the EU's climate and energy acquis, including the European Climate Law. This includes implementation of the commitments made through the Energy Community to deliver 2030 climate and energy targets and climate neutrality by 2050 within a framework based on the Energy Union Governance Regulation. Commitment to and transition in line with the 2040 milestone will also be an important factor in the accession process of future EU Member States.

The 2040 target, once agreed, will be the basis of the EU's new Nationally Determined Contribution (NDC) under the Paris Agreement, to be communicated to the UNFCCC by 2025, ahead of COP30. A net greenhouse gas figure for the EU in 2035 will be derived once the 2040 target is agreed, for communication as part of the new NDC.

3 The 2040 target and a pathway to climate neutrality

3.1 The target

To put the EU on a firm path to climate neutrality, this Communication presents **a 90% net GHG emissions reduction compared to 1990 levels as the recommended target for 2040 ('the 2040 target').** To deliver a reduction of net GHG emissions of 90%, the analysis in the impact assessment shows that the level of remaining EU GHG emissions in 2040 should be less than 850 $MtCO_2$-eq ([7]) and carbon removals (from the atmosphere through land-based and industrial carbon removals) should reach up to 400 $MtCO_2$.

The proposed target is based on a thorough impact assessment ([8]) that looked in detail at the implications of three target options for 2040:

- Option 1, a reduction of up to 80% compared to 1990, consistent with a linear trajectory between 2030 and 2050 ([9]);
- Option 2, a reduction of 85-90%, compatible with the level of net GHG reduction that would be reached if the current policy framework were extended to 2040 and
- Option 3, a reduction of 90-95%.

([7]) Excluding emissions from the LULUCF sector.
([8]) The analysis is based on scenarios that reflect policies and measures until March 2023. Member States will submit their final National Energy and Climate Plans in 2024, which may include additional measures.
([9]) Consistent with the trajectory referred to in Article 8 of the European Climate law, a linear trajectory between the agreed 2030 target and climate neutrality in 2050, reaching around 78% in 2040.

There is a clear difference between the target options in terms of the importance of novel technologies. Option 3 is accompanied by faster investments for deployment of novel low carbon technologies such as hydrogen production by electrolysis, carbon capture and use and industrial carbon removals between 2031 and 2040 than in Option 2. Option 1 largely leaves the deployment of new technologies to 2041-2050, and therefore risks not reaching climate neutrality by 2050. Option 3 anticipates the large amount of carbon removals that is needed to reach climate neutrality by 2050 and to deliver net negative emissions beyond.

Option 3 leads to the lowest GHG budget for the EU, with net cumulative GHG emissions (the indicative GHG budget) of 16 $GtCO_2$-eq for 2030-2050. It is the only option that corresponds to the advice of the ESABCC ([10]), minimises the total GHG emissions we put into the atmosphere and is in line with the provisions of European Climate Law to present a GHG budget that does not put at risk the EU's commitments under the Paris Agreement. With the remaining global carbon budget ([11]) shrinking fast, it is essential that all parties minimise their own cumulative emissions. Setting the EU on this pathway as early as possible will make this transition cheaper and more predictable. The more climate action is delayed, the greater the human and economic costs and the greater the need to fund restoration and adaptation, drawing resources from the EU economy.

All options feature a shift in total costs from operational (linked to fossil fuel purchases) to capital costs. Investment needs for 2031-2050 are similar across options, with Option 3 requiring higher annual investment needs in 2031-2040 than Options 1 and 2, but then lower in 2041-2050. However, with the exception of energy-intensive industries, the differences between Options 2 and 3 in terms of resulting total energy system cost, GDP and competitiveness on global export shares remains limited. Option 3 sets a clear transition path away from fossil fuels as called for by COP28, providing the greatest benefits in terms of energy independence and enhanced protection against fossil fuel price shocks. It strengthens the EU's open strategic autonomy in the highly volatile international context where dependence on fossil fuel imports is a risk for the security of the EU and its economic stability.

The recommended target requires a rapid deployment of zero and low carbon technologies by 2040, creating a large domestic market for clean tech manufacturers, incentivising research and innovation and the creation of a strong European industrial basis, which will place the EU in a leading position in the global clean technology race rather than delaying action to the last decade to 2050. However, with more action in the decade 2031-2040, Option 3 also involves moderately higher needs for raw materials (and less in the following decade), and, if novel technologies are not deployed fast enough, a higher risk of potential environmental trade-offs notably in terms of land use and role of biomass in the energy system.

([10]) ESABCC (2023). Scientific advice for the determination of an EU-wide 2040 climate target and a greenhouse gas budget for 2030–2050. DOI: 10.2800/609405
([11]) For further details, see Annex 14 of the Impact Assessment.

A target of 90% will require greater focus and effort to ensure a just transition than for less ambitious target options, as the transition is somewhat accelerated. While the difference across options in costs for households is limited (notably thanks to higher energy efficiency in Option 3 that limits energy purchases), the post-2030 policy framework should include adequate policy measures to ensure affordable energy prices and access to decarbonised solutions. Redistributive measures will be essential to address social impacts so that no one is left behind.

How the target options compare

Investments and costs

All options require a similar level of investment over 2031-2050 and entail the redirection of resources that would otherwise, in the absence of action, also need to be invested in more carbon intensive technologies in order to provide for the economy's energy needs. Energy system investment needs amount to close to €660 billion (equivalent to 3.2% of GDP) per annum on average over the entire period (against €250 billion over 2011-2020, or 1.7% of GDP, a decade with relatively low investments in the energy system), and yearly spendings in transport([12]) to about €870 billion (equivalent to 4.2% of GDP, a similar proportion of GDP as in 2011-2020). Option 3 brings some energy system investments forward to the 2030s, with an average annual investment of €710 billion over 2031-2040.

The resulting energy system costs ([13]) are also similar across options, ranging from 12.4% (Option 1), 12.7% (Option 2) to 12.9% of GDP (Option 3) in 2031-2040, a moderate increase compared to the 11.9% of GDP spent in 2011-2020, and then fall to about 11.3% for 2041-2050. The cost of fossil fuel imports decreases significantly under Option 3, to less than 1.4% of GDP by 2040 and less than 0.6% in the last decade (against 2.3% over 2010-2021 and 4.1% in 2022 during the recent energy crisis), saving about €2.8 trillion over 2031-2050.

The assessment also shows that progress, for example on the circular economy, can reduce investment needs in the energy system by about 7% over 2031-2050 (representing yearly savings of €45 billion) and spendings in transport by about 9% (€127 billion). This leads to lower energy system costs of 12.6% of GDP in 2031-2040 and 10.8% in 2041-2050, substantially lower than in 2011-2020.

Environment

All three target options offer significant co-benefits, including improvements in air quality, ecosystems, enhanced health, and reduced healthcare costs.

3.2 Cost of inaction

([12]) Investments in the transport sector reflect the expenditures on vehicles, rolling stock, aircraft and vessels plus recharging and refuelling infrastructure. They do not cover investments in infrastructure to support multimodal mobility and sustainable urban transport. In particular, the acquisition costs of private vehicles represent about 60% of the total.

([13]) The energy system cost is broader than the investments, and consists of the capital cost (annualised investment cost) and the energy expenditures for economic activities. See the impact assessment for more details.

The costs and human impacts of a changing climate are large and growing. Climate-related extreme events have risen between 1980 and 2022, causing 220 000 deaths and EUR 650 billion in economic losses over the period in the EU, of which about EUR 170 billion over the past 5 years only.([14]) As one of the consequences, in February 2024 it was decided to increase the EU's Solidarity and Emergency Aid Reserve by EUR 1.5 billion for the period 2024-2027 (i.e. on top of the EUR 1.2 billion per year under the original MFF). It is further estimated that 61 000 lives were lost to heat in 2022, a figure that was only superseded by the heatwaves of 2003, which caused 70 000 deaths ([15]). These numbers might increase rapidly, since the compound effects of climate change, land use and environmental degradation can also affect health in multiple ways creating new opportunities for transmission of viral infections among previously geographically isolated species of wildlife and the transition of diseases from wild animals to humans. In addition, climate change in combination with biodiversity loss is a significant driver of food insecurity. We now face increasing risks of reaching irreversible climate tipping points, with unknown and potentially catastrophic consequences for societies, ecosystems and economies.

Inaction would lead to far larger and growing costs in the coming decades. Although estimates of the costs of extreme weather events are uncertain, the impact assessment estimates conservatively, without taking account of possible tipping points, that such costs could lower GDP by about 7% by the end of the century. Over the period 2031-2050, the cumulative additional GDP cost of a pathway leading to worse global warming could amount to EUR 2.4 trillion in the EU, compared to the costs under a pathway compatible with the 1.5°C objective of the Paris Agreement. ([16])

While the challenges linked to the transition to climate neutrality should not be underestimated, the process itself will generate major new opportunities and secure a sustainable future for all. The impact assessment estimates that achieving the 90% target could reduce premature deaths due to air pollution from 466 000 per year in 2015 to 196 000 per year in 2040, with a related reduction in costs from about EUR 1 700 billion in 2015 to EUR 670 billion in 2040 ([17]).

Net imports of fossil fuels would be reduced while the economy will grow larger. The impact assessment estimates that the cost of stylised fossil fuel price shocks in terms of lost output and employment would be halved if they were to take place in a significantly decarbonised economy (as attained under the 2040 climate target).

([14]) European Environment Agency (2023). Economic losses from weather- and climate-related extremes in Europe.

([15]) Ballester, J., Quijal-Zamorano, M., Méndez Turrubiates, R.F. et al. Heat-related mortality in Europe during the summer of 2022. Nat Med 29, 1857–1866 (2023). https://doi.org/10.1038/s41591-023-02419-z, https://www.nature.com/articles/s41591-023-02419-z.

([16])Comparison between the impact of IPCC's Representative Concentration Pathway RCP7.0 "higher warming" pathway (with a "best estimate" warming of 2.1°C in the mid-term (2041-2060) and 3.6°C in the long-term (2081-2100)), and the 1.5°C compatible RCP1.9 pathway (with the "best estimate" temperatures of 1.6°C and 1.4°C).

([17]) Based on the value of statistical life (high valuation method). These estimates are indicative , derived from the methodology underpinning the Commission dedicated clean air analysis, such as in the 3rd Clean Air Outlook.

4 Delivering the 2040 target

Delivering the 2040 target will depend on the full implementation of the 2030 climate and energy framework and calls for the development of a post-2030 policy framework. This must be complemented with a broad enabling framework for the two equally important objectives of the European Green Deal, namely just transition and competitive sustainability. This double focus will trigger the necessary investment decisions and mobilise finance, roll-out innovative technologies and ensure that all EU citizens and economic sectors can benefit from the transition and access affordable solutions.

4.1 Implementing the 2030 policy framework

All efforts must be made to implement the 2030 energy and climate framework as the stepping stone to reaching the 2040 target and climate neutrality in 2050, in line with the European Climate Law. The on-going update of the National Energy and Climate Plans (NECPs) is a key element in monitoring the progress towards the 2030 climate and energy targets. The initial assessment of the draft NECPs ([18]) highlights the need for the increased level of ambition and improvements in the final submissions due from Member States by June 2024. The Commission calls on Member States to take decisive measures in effectively implementing the commonly agreed policies and legislation and is ready to work with Member States, sectors and social partners to facilitate the necessary actions. Tailor-made expertise through the Commission's Technical Support Instrument can help Member States undertake reforms supporting the implementation of the 2030 policy framework.

4.2 An economy that delivers for people

EU citizens are at the heart of the Green Deal. The most vulnerable people, such as those with lower income, persons with disabilities, marginalised communities and older people are much more exposed to climate hazards as they lack the means to protect themselves against such risks. This makes the EU's climate agenda even more important, alongside investment and support policies that generate social and economic benefits, which reduce poverty and inequalities. This includes investing in people through re-skilling and upskilling of the workforce, support for labour market transitions and targeted income support measures. Effective social dialogue as well as a strong involvement of stakeholders and citizens is key to anticipating and managing change alongside measures to help all to participate actively in the green transition through accessible and affordable environmentally friendly options.

A just and fair transition for people

The transition to climate neutrality is happening alongside the development of artificial intelligence, digitalisation, ageing and geopolitical insecurity amongst other trends. Together they will lead to changes in the way we produce and consume goods and services, with implications for households and workers.

([18]) COM(2023) 796 final

In terms of employment, the effects of the transition will vary by sector and by region, according to their dependence on specific activities. Fossil fuel-dependent sectors, such as transport and energy intensive industries will go through a fundamental transformation. It is also crucial to ensure that mobility options remain affordable and accessible for all, citizens and economic operators alike, and that rural and remote regions across the EU are better connected to further facilitate their development. Workers, communities and regions dependent on carbon-intensive activities will be the most affected, calling for continued just transition support as the transition takes shape, in tandem with closely coordinated and comprehensive Member State action and measures ([19]). The transition will bring new opportunities for business and job creation, for workers at all skill levels, but will benefit some regions more than others. EU cohesion policy, with its investments and specifically from the Just Transition Fund, an instrument dedicated to supporting the economic diversification and reconversion of impacted territories and communities, and national measures, will continue to play an essential role in supporting regions the most affected by the transition.

Carbon pricing, such as under the EU ETS, is reducing emissions while generating significant revenues for Member States to tackle climate change and increasingly to support industrial innovation and households for a fair transition. The ETS funded Social Climate Fund, including obligatory Member State contributions, will mobilise EUR 87 billion to support vulnerable households, transport users and micro-enterprises. On top of that, Member States are obliged to spend their overall national revenues from the ETS for climate and energy purposes, that include addressing the social impacts of the transition. Used effectively, these funds can support people through the transition and have a lasting impact on their quality of life. Support will continue to be necessary after 2030, including through Member State measures and a strengthened just transition policy framework.

4.3 The EU's energy system

Renewable, zero and low carbon energy solutions

All zero and low carbon energy solutions (including renewables, nuclear, energy efficiency, storage, CCS, CCU, carbon removals, geothermal and hydro-energy, and all other current and future net-zero energy technologies) are necessary to decarbonise the energy system by 2040. Solar and wind will make up the vast majority of renewable energy solutions. The Commission will pursue its policies to ensure a fast deployment of all renewable energy, as well as of zero and low carbon solutions, a further development of energy efficiency. It has established a number of initiatives to accelerate renewables deployment, create enabling conditions for EU renewable industry and boost their competitiveness, such as the EU Solar PV Alliance and the Wind Charter. Ambitious electrification is key and the Commission will continue to work with Member States to further develop smarter grids, system integration, demand flexibility and storage solutions. Accelerated permitting and cross-border cost

([19]) In line with and building on the Council Recommendation on "ensuring a fair transition towards climate neutrality" (C/2022/243).

sharing will speed up the development of offshore wind projects in line with the recent action plans on wind and grids.

The Communication on Industrial Carbon Management sets out a roadmap to deploy the necessary CCS and CCU technologies for hard-to-abate sectors, stressing the need for a regulatory framework in areas such as injection and transport of CO2, as a precondition to create a single market for CO2. The Commission is also launching an Industrial Alliance to facilitate stakeholder's cooperation at EU level and to accelerate the deployment of Small Modular Reactors (SMRs) and ensure a strong EU supply chain, including a skilled workforce. This will leverage EU's manufacturing and innovation capacities to accelerate the deployment of first SMR projects in the EU by early 2030 under the highest standards of nuclear safety, environmental sustainability, and industrial competitiveness.

Affordability of energy prices is crucial to ensure that the benefits of decarbonisation are brought to the whole economy. Fossil fuel prices are volatile and set by global markets. Generation costs of renewable electricity have consistently been lower than those generated by fossil-fuels for more than a decade. The progressive substitution of fossil-fuel generation by renewables, complemented by efficient uptake of clean flexibility sources such as nuclear, and supported by a full implementation of an updated electricity market design, the further integration of cross-border EU (and extra-EU) power systems, and efficient uptake of clean flexibility sources may contribute to the lowering of wholesale electricity prices. Once fossil fuels are permanently displaced of the power mix over the next two decades and necessary investments are made on grids, storages and batteries, power prices might start to significantly decrease in the EU. Investments are necessary to avoid bottlenecks in the electrification of the economy. It is critical to ensure proper financing tools to avoid the required investments to increase final prices for consumers and industry. In the meantime, promoting and expanding the use of PPA's will help to stabilise prices and shield companies from high and volatile prices caused by fossil fuels.

Complementary social and industrial policies will be needed to ensure a smooth transition from current energy price levels to affordable clean energy. EU and Member States can protect lower-income and middle-income households from steep increases in energy prices. Tailor-made support will be needed for energy-intensive industries to bridge the transition period when they face the dual challenge of investing in clean production methods when available, and coping with high energy prices. As a start, the Innovation Fund matches innovation support with such solutions in the form of carbon contracts for difference. The transition will bring new challenges, such as land and water use. Win-win solutions (solar rooftops, agri-PV, biogas and biomethane from organic waste and residues) have to be prioritised, engaging citizens in the decisions.

Energy efficiency and buildings

The 'Energy Efficiency First principle' remains a central policy principle, and the impact of the 2030 energy efficiency target extends up to 2040. This will leverage private financing across all sectors and can unlock a European marketplace for energy efficiency investments. Circular business models reduce energy and resource consumption. The public sector, at all levels, should lead by example, including through green public procurement that considers sustainability criteria, and provide a blueprint to facilitate the transition.

The EU building stock accounts for 42% of final energy consumption, more than half of natural gas gross inland consumption and about 35% of energy related greenhouse gas emissions. Around 80% of energy consumption in buildings stems from heating and cooling needs. Carbon pricing for all fuels, foreseen as of 2027, will create a level-playing field for electricity, and generate revenues including for the Social Climate Fund that could be used for investments and the financing of structural reforms. An updated energy tax design can further accelerate the green electrification of the building stock and the energy system.

Electrification, grids and infrastructure, system integration, storage, digitalisation and flexibility

Electrification with a fully decarbonised power system by 2040 is the main driver of the energy transition. The share of electricity in the final energy consumption will double from 25% today to about 50% in 2040. The impact assessment shows that renewable energy in majority ([20]), complemented by nuclear energy ([21]), will generate over 90% of the electricity consumption in the EU in 2040 ([22]).

Today, the average yearly gain from the integrated electricity market for European consumers is about EUR 34 billion per year ([23]). Higher renewable shares and electrification will require substantial investments in the expansion of the EU's power grids at distribution and transmission level, as well as in upgrading to smarter and more flexible grids. New interconnectors expanded distribution grids, energy storage facilities, dispatchable energy supply, flexibility market solutions, and sector coupling will be needed to ensure flexibility and security of supply. The recent EU Grid Action Plan is a first step and its swift implementation should remain a priority for the Commission, Member States and industry in view of delivering on the 2030 and 2040 targets. This experience could lead to a comprehensive masterplan for accelerating the development of European integrated energy infrastructure. Security and resilience of critical energy infrastructure is a key priority to for a secure and stable energy supply.

Consumers should be empowered to adapt their consumption to market conditions. The digitalisation of the energy system, including AI, is key for more flexible energy sources ([24]).

With all these workstreams in mind, avoiding excessive high network tariffs for end users due to the pay-back of upfront grid investment and electrification will be a key regulatory objective at the EU and national level.

Fossil fuels

([20]) Including bioenergy conversion technologies (e.g. biogas), coupled with a sustainable biomass supply.
([21]) The analysis is based on scenarios that reflect policies and measures until March 2023. Member States will submit their final National Energy and Climate Plans in 2024, which may include additional measures, notably reflecting most recent announcements by some Member States to increase the deployment of nuclear energy.
([22]) The remaining 10% are compensated by negative emissions or supplied with low carbon solutions including use of carbon capture and storage.
([23]) ACER (2022). Final Assessment of the EU Wholesale Electricity Market Design.
([24]) Commission Action Plan for the Digitalisation of the Energy System.

In 2040, the consumption of fossil fuels for energy would reduce by approximately 80% compared to 2021. Coal will be phased out, while oil in transport (road, maritime and aviation) would represent about 60% of the remaining energy uses of fossil fuels. The remaining use of natural gas would be divided between industry, buildings, and the power system. In line with the international commitment to transition away from fossil fuels, policies should ensure that any remaining fossil fuel combustion will be coupled as soon as possible with carbon capture (utilisation) and storage. The gas market structure will change significantly, with an increasing role for low-carbon and renewable liquid fuels and gases. Gas infrastructure will need to adapt to the decentralized production, and a significant share of the oil and gas network may gradually be repurposed for e-fuels, advanced biofuels and renewable and low carbon hydrogen. Non-energy uses, such as feedstock for manufacturing, would account for about a third of the remaining fossil fuel consumption. Inefficient fossil fuel subsidies which do not address energy poverty or just transition should have been phased out by then.

4.4 Industry decarbonisation deal

To make the European Green Deal succeed in the next decade, a firmer and renewed European agenda for sustainable industry and competitiveness must complement it now and in the coming years. This enabling framework for industry decarbonisation will build on the Green Deal Industrial Plan ([25]). Creating the right framework conditions for all sectors in the economy (including access to finance, skills, affordable energy) is a precondition for the successful transition. At the same time, there are economic sectors which, given upfront investment for clean technologies and a challenging market environment, merit special attention to adapt their production processes in order to implement the Green Deal framework. The same goes for SMEs, who will need dedicated support to access finance for sustainable investments and to navigate the relevant EU regulations.

Success in the transformation will allow the EU to maintain its industrial strength in sectors like wind power, hydropower, and electrolysers, where it already has a trade surplus, and continue to increase domestic manufacturing capacity in growing sectors like batteries, electric vehicles, heat pumps, solar PV, CCU/CCS, technology for sustainable biogas and biomethane, and circular economy. The development of strong green and circular industries, both domestically and in like-minded partners, will strengthen the EU's competitive sustainability, multiply business opportunities for companies, generate economies of scale, as well as benefit more widely to the European economy, generating highly skilled jobs to help and ensure that the climate transition is socially just and inclusive.

Global competition for zero and low emission technologies will be intense. Large recourse to public subsidies and policy initiatives from our main competitors are distorting fair and free trade. Net-zero technologies are the focus of strong geostrategic interests and a global technological race. In China, long term planning, the vertical integration of entire sectors, and public subsidies have driven down costs, leading to China's dominance in many cleantech

([25]) COM(2023) 62

supply chains, from raw materials to components and end products. In the US, the US Inflation Reduction Act provides fiscal incentives for investment and production in cleantech manufacturing. Europe is taking action to secure its own leadership role in this race, playing to its core strengths and ensuring win-win partnerships with like-minded partners. . It will continue to apply its trade defence instruments to protect the industry from unfair trade imports and, as a result, ensure resilient supply chains.Europe's strength lies, amongst others, in its stability, its predictable policies and long history of bringing high quality and innovative industrial solutions to markets.

An enabling framework for investment and competitiveness in Europe….

Securing a conducive regulatory and financing environment will attract investment and production to Europe. The Critical Raw Materials Act, the Ecodesign for Sustainable Products Regulation and the Net Zero Industry Act are key instruments to deliver an open strategic autonomy, including by scaling up domestic production, setting up key partnerships with like-minded partners, applying circular economy approaches along the value chain, diversification, strategic projects and easier permitting across technologies and infrastructure. The Net Zero Industry Act is a concrete step in creating an industrial business case for the European transition to carbon neutrality. It addresses the right topics by substantially accelerating permitting, focusing R&D investments, and access to existing EU funding schemes.

Industrial policy should strengthen those sectors that are needed for the green transition, but may be challenged by this transition as they are harder to decarbonise, and hence fail without targeted and conditioned attention and support. Examples could include industrial alliances and symbiotic industrial clusters, like hydrogen valleys ([26]), within the EU and its neighbourhood. Such clusters help suppliers of clean technologies to scale up their operations, and improve their commercial viability by supplying several industrial off-takers within a cluster, while manufacturing industry could decarbonise their operations more effectively and at a lower cost by securing access to clean technologies and sharing costs. Particular attention should be paid to the creation of lead markets for clean technologies and products in Europe, embracing, among others, circularity, and sustainably sourced bio-based products.

Furthermore, bridging instruments are required to support industries before they become commercially viable. This requires a comprehensive reflection on all elements leading to private investments: from taxation to access to finance, from skills to regulatory burdens and energy costs for the day-to-day business activities. In this context, far more and continued attention is needed for a simplified regulatory environment for business and a fresh impetus in a strong Single Market that removes undue national regulatory barriers, especially for key technologies. This allows businesses to ramp up standard solutions across Europe, thus boosting their economic attractiveness for investors and is a crucial element for the future success of the EU agenda.

([26]) https://s3platform.jrc.ec.europa.eu/hydrogen-valleys

Particular attention should also be paid to the role of SMEs. They are drivers of the transition, vital in a number of supply chains and very often also impacted at large by changes in the policy and regulatory framework. Given their more limited size, and by extension resources, they may need additional support to adapt for instance their production processes in order to implement the Green Deal framework.

Public investment must be well-targeted, with the right mix and pooling of large-scale grants, loans, equity, guarantees, advisory and other public support, which is accessible in the quickest and simplest manner. The Recovery and Resilience Facility (RRF), the instrument at the heart of NextGenerationEU will continue to contribute to the green transition. The Innovation Fund, estimated to amount to EUR 40 billion by 2030, can play a big role, including through EU-wide competitive bidding instruments and 'auctions-as-a-service' jointly with Member States. The InvestEU budgetary guarantee is expected to mobilise more than 110 billion of green investment building on Union budgetary alongside EIB Group and other implementing partners' resources.

With due attention for decarbonised and competitive manufacturing industry

Electrification, adapted production processes, low carbon fuels and a full deployment of capture for process emissions will allow manufacturing industry to significantly reduce CO_2 emissions by 2040. The EU ETS with its common carbon price, provides a market-based tool to innovate with long-term predictability for Europe's main emitters. For some industries, this implies investing in a profound transformation of the production process ([27]). Carbon capture, use and storage is a solution in hard-to-abate sectors in the absence of other solutions.

Energy costs are key for the competitiveness of industry and in particular European Energy Intensive Industries ([28]) and merit particular attention with dedicated policies to allow early movers to clean energy to benefit from a smooth transition in energy prices. As a start, the adopted Electricity Market Design Reform makes energy bills of companies more independent from the short-term market price of electricity. Further expansion of the principle of competitive sustainability by rewarding European companies investing in low carbon technologies, including through public procurement processes or through targeted reforms in electricity grid access regulations, will be key both to create a thriving domestic manufacturing base and achieve climate ambition.

… built on a more circular economy and sustainable bioeconomy

([27]) This includes electrification and switching to alternative fuels (e.g. renewable and low carbon hydrogen, e-fuels or bioenergy), symbiotic industrial clusters, innovation in low carbon processes, energy and resource efficiency, material replacement and circular business models.

([28]) According to the International Energy Agency, the strong fossil fuel dependence of the EU exposes European EIIs to higher share of energy expenditures in total cost of production than competitors in the US or China. In the aftermath of the 2021-2022 energy shock due to the EU's dependence on fossil fuel imports, recent data suggests that part of the reduction in natural gas consumptions has been driven by a decrease in industrial output, in particular by energy intensive industries.

The Impact Assessment shows that up until 2040, the circular economy will become increasingly important to achieve both climate ambition and a new prosperity model for Europe. It is key to wed action against climate change and excessive resources use with new economic opportunities and greater EU autonomy. This makes implementation of the Circular Economy Action Plan a must and calls for a renewed partnership with industry for a circular economy agenda going forward.

A renewed agenda for the circular economy has clear benefits. Through repairing, refurbishing, reusing and recycling existing products and thereby extending their functional lifetime, resources are used more efficiently in production. Primary raw materials can be substituted with secondary raw materials that are less carbon-intensive. Fossil based materials can also be replaced by sustainably sourced biobased renewable materials, or other environmentally friendly innovative materials. This is in particular the case in sectors like construction, chemicals or textiles. Investments into material innovation need to be strengthened including up-skilling in the bioeconomic sector.

A stronger circular economy offers innovative business models that meet evolving consumer preferences and seize digital solutions. For example, circular business models like product-as-a-service, circular product design ensuring longer lifetime, reuse and repair, shared economy or on-demand production can reduce economic cost of energy and material use and make waste via a loop back into the economy a resource with economic value. Circular business can create significant greenhouse gas emissions reductions in hard-to-abate sectors. Examples include the built environment through better management of construction and demolition waste, heavy industry through material management solutions, clustering of resource-intensive complementary industrial activities, transport through shared mobility and reverse logistics, and the food sector. In 2021 there were 4.3 million jobs in the economic sectors directly linked to the circular economy, an increase of 11% compared with 2015([29]). Reducing materials input through re-use and recycling has the potential to boost growth and create a significant number of jobs in the EU, with upgraded knowledge and skills.

By reducing dependence on imports of critical raw materials, and reducing the environmental pressure and risks associated with natural resource extraction and consumption, circularity can boost the EU's security and open strategic autonomy.

With a growing need for industrial carbon management and carbon removals

Industrial decarbonisation will also have to address "process emissions" not related to fuel combustion. For these, carbon capture can be a solution.

The 2040 target entails an earlier deployment of carbon capture ([30]). Part of it will allow to generate industrial carbon removals which would complement land-based removals

([29]) Eurostat (2023) EU circular economy monitoring framework. May 2023. Direct jobs. These figures do not include jobs in the circular economy when it is integrated in other sectors.
([30]) "Carbon capture" includes carbon captured from industrial processes, power and heat production, biogas upgrade and direct air capture.

sequestering carbon in biomass and soils to contribute to the 90% reductions of net GHG emissions.

This will require a large portfolio of options such as BioCCS ([31]), DACCS (Direct Air Capture with Carbon Storage) and possibly other novel approaches. Carbon Capture, Utilisation and Storage (CCUS) technologies enable the decarbonisation of industrial sectors without alternative decarbonisation solutions by storing carbon permanently underground or in products, and by replacing the fossil carbon currently used as feedstock in various industries with non-fossil carbon. Likewise, the development of CO_2 value-chains through carbon capture and use (CCU), nature-friendly biobased materials, mechanical and chemical recycling can all boost the development of non-fossil feedstock to substitute fossil fuels in carbon-based products. Carbon capture will also remain important to reach net-zero by 2050 and absolute negative emissions thereafter. This calls, amongst others, for a continuous assessment how best to provide incentives for industrial carbon removals in existing EU legislation or through new instruments, be it the ETS Directive up for review in 2026 or dedicated instruments. To reap the economic opportunities of these technologies, it remains key to develop full economic value chains for them. That is why the Commission is presenting alongside this Communication a dedicated Industrial Carbon Management Communication with a strategy for the policy framework, more innovation and investments to unlock this potential. More public investment will be required to scale up research and innovation for this nascent industry. Industrial carbon removals do not replace, but complement, natural carbon removals, which remain essential to reach the climate target.

On a global level playing field

The transition will only be successful if Europe remains a sovereign and resilient economy that diversifies its sources of supply and that is resilient to supply disruptions, price volatility and other shocks. As the EU reduces its dependence on imported fossil fuels, strategic decisions have to be made not to create new vulnerabilities through its imports of net-zero technologies or low-emission energy commodities.

Alongside the efforts to create value chains for key technologies on our own continent, the EU must strategically approach global markets, to ensure access to strategic commodities including critical raw materials at affordable prices. The EU should also leverage its greatest strength, the Single Market, through joint purchase instruments and by allowing industrial actors to engage in various cooperation models to jointly negotiate better conditions, including prices from global producers with important safeguards for encouraging the transfer of benefits to end users and the involvement of smaller companies. In parallel, the EU should ensure global cooperation and trade to support sustainability. The EU should foster the development of international standards on the global stage, building on EU standards as a source of best practices.

([31]) Carbon capture and storage of biogenic CO_2 emissions originated from the combustion of biomass to produce energy (BECCS) or from the processing of biomass in industrial applications.

As the EU is leading in decarbonising its industry, additional measures are needed to ensure competitiveness of European exports on global markets. A true level playing field for businesses in Europe and globally is created when other countries adopt carbon pricing of their own, which would also contribute to an increase of global climate ambition.

4.5 Decarbonising transport and improving mobility

In the transport sector, the implementation of the "Fit for 55" measures, combining technological solutions and carbon pricing, as well as an efficient and interconnected multimodal transport system, for both passengers and freight, will allow emissions to decrease by close to 80% in 2040 relative to 2015.

Decarbonising transport in a manner that continues to ensure affordability and accessibility will require significant investments both in new assets (zero and low emission vehicles, aircraft, vessels, rail equipment) and infrastructure for refuelling and recharging. At the same time, the renewable and low-carbon fuel costs should not be underestimated, and remain a key factor for the competitiveness of transport operators, in particular in the maritime and aviation sectors. Ensuring that a sufficient feedstock of sustainable alternative fuels is made available through dedicated measures, including regulatory where necessary, is key to reach the set ambition in a cost-effective way. As for other sectors, the associated investment needs in transport merit a discussion with Member States, the European Investment Bank and financial institutions how innovative EU finance tools can de-risk make-or-break strategic investments in a technology neutral manner for the European economy.

Projected emissions vary greatly across transport modes. Reductions of CO_2 emissions from road transport will accelerate over time and will come with significantly improved air quality in cities through the deployment of zero emission vehicles driven by the CO_2 standards, more than quadrupling the electrification of the sector over 2031-2040. The shares of battery-electric and other zero-emission vehicles are projected to rise to over 60% for cars, over 40% for vans and close to 40% for heavy-duty vehicles ([32]) by 2040. This transformation is a fully-fledged industrial policy opportunity for a sector vital for the EU economy, through investments in infrastructure and the full integration of the sector in the electricity grid, the development of critical raw materials supply chains and the development of a skilled workforce. Beyond CO_2 standards, carbon pricing and updated fuel policies will enable the decarbonisation of the stock of existing vehicles already on the roads that constitute the legacy fleet.

Maritime and air transport emissions will be reduced through the combined effects of "Fit for 55" measures. This includes the achievement of the targets set out in FuelEU Maritime ([33]) and ReFuelEU aviation([34]), spurring the deployment of renewable and low carbon fuels and of zero-emission aircraft and vessels. Through the ETS, the EU is the first jurisdiction to put

([32]) including trucks, buses and coaches.
([33]) Regulation (EU) 2023/1805 of the European Parliament and of the Council of 13 September 2023 on the use of renewable and low-carbon fuels in maritime transport, and amending Directive 2009/16/EC
([34]) Regulation (EU) 2023/2405 of the European Parliament and of the Council of 18 October 2023 on ensuring a level playing field for sustainable air transport (ReFuelEU Aviation)

an explicit carbon price on emissions from these sectors. This will stimulate and generate revenues for speeding up the large-scale uptake of zero-emission technologies, renewable and low carbon fuels and energy efficiency solutions in aviation and shipping. For instance, the Commission will organise calls for proposals with dedicated topics for the maritime sector under the Innovation Fund, as already announced.

As agreed in 2023, in 2026, the Commission will assess an extension of the carbon pricing for the aviation and maritime sectors ([35]). Addressing barriers to the deployment of alternative low- and zero-emissions fuels (including e-fuels and advanced biofuels) in aviation and maritime and giving them priority access to these fuels over sectors that have access to other decarbonisation solutions, such as direct electrification, will enable these sectors to contribute to the EU's climate objectives and to the global climate agenda ([36]). In doing so, the full climate impacts of aviation should be duly considered, in line with the latest scientific findings, and a system for airlines to monitor, report and verify non-CO_2 emissions and climate effects of aviation will be put in place.

Significant investments will be required in the energy system to replace fossil fuels with renewable and low-carbon fuels necessary to power the transport sector. Ensuring that a sufficient feedstock of sustainable alternative fuels is made available through dedicated measures is key to reaching the set ambition.

Higher use of rail thanks to increased use of railway infrastructure capacity, and an efficient and interconnected multimodal transport system for both passengers and freight supported by the multimodal Trans-European Transport Network, can therefore be significant contributors to reducing overall emissions. Deployment of different models based on mobility as a service, multimodality, digital solutions and optimised green logistics (e.g. for freight) will modernise and decarbonise the transport sector. Promoting sustainable and affordable urban mobility, including through adequate urban planning, will be important to enable more public transport, active mobility (i.e., walking and cycling) for short distance trips, with benefits for both the climate and people's health.

4.6 Land, food and bioeconomy

Ensuring climate-neutral food production and strengthening the bioeconomy sectors

Ensuring sufficient, affordable, quality food production in Europe is of strategic importance. At the same time, European farmers and foresters offer multiple vital services for the EU society, environment and economy. They ensure the production of primary food and bio-based materials, are at the core of the bioeconomy and the food system's value chains and have a vital role in ensuring food security. As managers of the land, they are also essential to ensure ecosystem services such as biodiversity protection and restoration, carbon removals or adaptation to climate change.

([35]) E.g. to cover excluded business aviation and vessels below 5000 GT.
([36]) Including to the meet the IMO Strategy on Reduction of GHG Emissions (net zero GHG by or around, i.e. close to 2050, with indicative checkpoints of at least 70% striving for 80% compared to 2008 by 2040).

Like all other sectors, agricultural activities play an important role in achieving the EU's 2040 climate ambition, while contributing to EU food sovereignty. The right policies, like boosting the availability of low-carbon alternatives ([37]) and circular applications, such as renure ([38]), with the right support to address trade-offs and decrease costs, show the potential to contribute to solutions. This is why the Commission chose to set up a Strategic Dialogue on the future of EU agriculture in order to, among other things, jointly shape the transition, and has committed to intensifying dialogue also with forest owners and other forest stakeholders. This dialogue will address issues such as viable livelihoods, reducing burdens and ensuring competitive and sustainable food production in the future. Given that it is among the most efficient global producers of food in terms of greenhouse gas (GHG) emissions, the EU should also work to prevent unfair competition and to ensure a level playing field with non-EU producers, in particular through trade agreements.

Bio-based materials that are sustainably sourced can not only store carbon over long periods (e.g., if wood is used as a construction material) but also replace fossil-based materials, and in this way the land sectors contribute to the decarbonisation of other sectors. More resource-efficient and biodiversity-friendly management of the land sector will also increase its resilience to the impacts of climate change, improve soil fertility and protect and restore nature, bringing win-win solutions for food security and the productivity of land. Also for the fisheries and aquaculture sector, in February 2023 the Commission has proposed measures to become climate neutral by 2050, by improving fuel efficiency and switching to renewable, low-carbon power sources ([39]).

This being said, policies addressing the food sector in a holistic way are more efficient than looking at the farming and fisheries sectors in isolation, because many decisions with a large mitigation potential are taken outside the farm gate: the chemical composition of fertilisers, the circular use of food waste (crop residues, manure, fisheries by-product), the reduction of food waste at the manufacture and retail stages, the choice of ingredients for manufactured food products, and consumers' dietary choices. A whole-of-food-sector approach is also the best way to give farmers perspective to solid and fair earnings from their produce.

The food industry plays an important role in driving producers' and consumers' decisions. It should receive the right incentives to procure more sustainable food ingredients and contribute to a food environment that makes healthier diets an accessible and affordable choice for consumers ([40]). The Common Agricultural Policy provides essential tools to support the transition of the farming sector towards new sustainable practices and business models. In particular, diverse and family-owned farms and those who combine crop and animal production are the backbone of EU farming and should be accompanied in the

([37]) Mitigation technologies such as selective breeding, optimised feed efficiency and improved manure management can reduce methane emissions from livestock. Precision farming and enhanced fertiliser efficiency can reduce nitrous oxide emissions.
([38]) REcovered Nitrogen from manure
([39]) The common fisheries policy today and tomorrow: a Fisheries and Oceans Pact towards sustainable, science-based, innovative and inclusive fisheries management - European Commission (europa.eu)
([40]) COM(2020) 381 final

transition to a climate-neutral land sector, taking into account its social, environmental and economic dimension.

In addition, it is crucial to create further business opportunities for a sustainable agrifood value chain and leverage private funds in synergy with public funding. This could be done with new market-based mechanisms to boost sustainable food, as this could result both in a better food price to reflect sustainability as well as a fair reward for farmers and new source of funding for investments. Only firm coordination with all industrial actors in the entire food value chain and focus on fair trading practices across that chain can unlock the right incentives for sustainable farming practices, ensure a decent and sustainable income for farmers and generate revenues to support the transition. and.

Thanks to advancements in digital monitoring technologies and advisory services, farmers and foresters will be able to quantify their GHG balance using reliable and harmonised certification methodologies ([41]). Approaches such as carbon farming enable certified climate action to be appropriately rewarded through result-based contracts with other actors in the value chain or through public support. Precision farming is one of the important tools to build on these achievements, allowing farmers to make better use of their soil and other natural assets, to the benefit of climate and environment.

Finally, as fossil-based carbon is phased out of the EU economy, farmers, foresters and fishermen will have new business opportunities to deliver biomass and bio-based materials in a sustainable manner for different uses in the bioeconomy, including in industry, construction, chemicals, energy or mobility. The enhanced use of biomass residues and waste, advanced biofuels, BECCS technologies, and biobased products should be accompanied with clear rules that promote sustainability and consider the impacts on the size of the natural carbon sink in the LULUCF sector.

Healthy ecosystems, sustainable land use, nature & biodiversity

A 2040 target and clear pathway from 2030 to 2050 should exploit and encourage synergies between climate neutrality, biodiversity and other environmental objectives.

Cutting GHG emissions and increasing carbon removals can improve resilience and biodiversity, whilst healthy nature and biodiversity are essential for climate change mitigation and resilience. Fire-prone areas are expected to expand across Europe due to climate change, threatening carbon sinks and biodiversity. Water ecosystems are highly vulnerable to climate change. High ozone levels, and air pollution damage forests, ecosystems and crops, reducing the potential for carbon removals and adaptation.

Given the intensifying competition for land and water, policies can be designed to ensure the sustainable, water efficient production and consumption of food, materials and bioenergy.

([41]) COM(2021) 800 final. The Communication on Sustainable Carbon Cycles announced an objective that, by 2028, every land manager should have access to verified emission and removal data to enable a wide uptake of carbon farming. In 2022, the Commission adopted a proposal for a Regulation establishing a Union certification framework for carbon removal, which is currently in co-legislation procedure.

Bioenergy should go in priority to sectors where the potential for electrification is limited, such as air or maritime transport.

4.7 Investing in our future

A comprehensive investment agenda

In a context of very intense global competition for attracting investment the EU needs a significant policy and financial initiative to attract and mobilise private investment within its borders and an enabling environment for the private sector to invest outside EU borders.

The EU has a strong basis to build on. The EU sustainable finance framework has already helped to enhance the transparency of corporates' business decisions and to increase the contribution of the financial sector to the transition. This framework will continue to be finetuned and developed for the needs of more actors, including those at earlier stages of the transition, in order to maximise its impact. However, the transition will not be achieved through predictability and regulation alone; Europe must become more attractive for private investment. For one, the EU Capital Markets Union must be deepened to unleash the EUR 470 billion in potential of annual private funding for companies at all stages of their development, including venture capital targeted at meeting the EU sustainability objectives and sustainable long-term investments for the climate transition ([42]).

Scaling up the impact calls for a reinforced, strategic capacity to identify and facilitate new investment opportunities and projects in sectors with the most impacts. The Commission, Member States and industry must jointly work towards creating a business case for the new business models in key sectors of the economy needed for the transition and notably in clean tech and decarbonised energy intensive industries and agriculture. Efforts on a simplified regulatory environment and a strong Single Market for businesses help in this regard.

Public sector support and direct investment should be strategically deployed, also by frontloading and maximising existing resources with large-scale pooling of funding, making it accessible in the fastest and simplest way possible and facilitating synergies between different instruments. Coordination between EU and Member State-level actions is crucial to maximise the impact of financing initiatives, with EU-level actions providing a framework to optimise policies and mobilise financial resources, while Member States tailor initiatives to specific regional and national needs in compliance with the State Aid framework. The proposed Strategic Technologies for Europe Platform (STEP), for instance, aims to improve coordination of funding to further leverage strategic investments into clean tech and bio tech.

From a public sector perspective, diversifying the financial landscape by using innovative financial instruments and targeted grants is crucial to attract private capital and to meet the investment targets. There is a clear need for a more efficient and tailored use of public

([42]) A recent think tank report suggested that companies in the EU could raise an additional EUR 470 billion in funding every year from the capital markets. See A renewed vision for EU capital markets (New Financial), January 2024.

financial resources, and the use of financial products and blending of financial sources to catalyse and de-risk private investments.

Grants should only be strategically deployed to support early-stage low carbon projects such as renewable energy, in the industrial sector, and other projects, where projects lack comfmercial viability, private investment is still nascent and difficult to market investments. For mature projects with proven revenue streams, market-oriented financial instruments, such as debt and equity finance, can play a pivotal role. These instruments can also be used for high risk first-of-a-kind or breakthrough projects in the form of impact finance or venture debt. The role of the EIB Group and other international and public financial institutions is critical to mobilise private investments, especially to de-risk projects, such as critical raw materials, and unlock the investments in infrastructure, provide longer tenors and larger tickets, as well as providing the signalling effect to other market participations.

Overall, a European approach on finance will be needed in the coming years, in close coordination with Member States, the European Investment Bank and the financial institutions to ensure a level playing field across the Single Market. Given the challenges for accelerating the deployment of net-zero technologies, intervention at the level of the Union helps coordinate responses accross Member States.

The recent European Investment Bank's counter-guarantee of EUR 5 billion for wind energy projects, for example, is expected to generate EUR 80 billion in investment. This shows the merit of a discussion with Member States how such innovative EU finance tools can de-risk make-or-break strategic investments in a technology-neutral manner into our economy.

Building on the experience the Commission gained with InvestEU, the use of financial instruments should be simplified further to make them more attractive to investors and project developers, including by tailoring instruments to specific investment types, providing clear terms, streamlining application processes, and developing user-friendly platforms, guidance and reducing administrative burdens. Further simplification throughout EU Programs and EU Financial Regulation is needed to offer true one-stop shops for finance and funding opportunities, which allows for pooling of resources, accelerated and easy access to finance, eventually combined with grants, limiting the number of forms to access support. These measures are necessary to ensure a level playing field for access to finance, which is particularly relevant for financial intermediaries and smaller businesses with limited organisational capacity.

It is important that sufficient fiscal space is preserved in Member States for investment, within the frame of medium- to long-term debt sustainability. The Innovation Fund as well as the national revenues under the EU ETS provide Member States with an important amount of funds that can be used for future-proof investments. This should be complemented by structural reforms to accelerate the transition towards climate neutrality. Similarly, the EU budget should be geared towards promoting, enabling and encouraging investment resulting in a lower level of emissions, while continuing, to implement, where applicable, the "do no significant harm" criteria, as already agreed by co-legislators for the next MFF. It should be reinforced to deliver higher quality investments and in this context the Commission urges swift progress on the proposed ETS own resource.

The 2040 target should also guide the financial sector and supervisory authorities when assessing the climate transition risks of investments, leading to favourable conditions when risks are minimised and adequate risk mitigation measures when they are not.

Research, innovation and skills

Technologies to be deployed to meet the EU's 2040 target include some that are market-ready, such as solar power, as well as a number that still need to be improved and scaled up.

It is therefore paramount to keep investing in the research and demonstration of innovative net-zero technologies, coordinating the EU and national R&I efforts, and strengthening efforts to bring innovations to the market and to scale them up. World-leading research on zero and low-carbon industrial technologies is being carried out at EU, national and regional levels across the EU, with the Horizon 2020 and Horizon Europe programmes funding cutting-edge R&I, including via partnerships with industry and Member States to help move low-carbon technologies for energy-intensive industries from basic research to deployment ([43]). Horizon Europe alone will allocate over EUR 30 billion (at least 35% of its budget) to climate action.

Revenues from carbon pricing are a clear source of financing for the deployment of innovative low carbon technologies and solutions. Since its creation in 2005, the ETS has generated more than EUR 180 billion, the largest share of which goes to Member States. Member States should be incentivised to invest these revenues into structural forward-looking reforms that significantly accelerate the manufacturing of innovative clean tech equipment and demonstrate and support the early deployment of industrial near zero solutions.

At EU level, the EU ETS Innovation Fund provides a strategic tool to support and scale up innovation in net-zero technologies towards full technological and commercial maturity. It is becoming a key instrument to deploy the EU green deal industrial strategy. In its first three rounds, the Innovation Fund allocated EUR 6.5 billion to around 100 pilot projects and demonstration plants for innovative low-carbon technologies. The amount and sectoral distribution of applications to the Innovation Fund show strong engagement of industrial actors in this transformation and a promising and abundant project pipeline. The heavy over-subscription of all large-scale calls for proposals calls for increasing available funding. For example, in the first two rounds of applications projects applied for EUR 33.8 billion of funding, for a total budget of EUR 1.1 billion. EU industry clearly has the know-how but also a challenge to invest in the new industrial revolution, for which the Innovation Fund can be an EU-based, single-market-aligned driver for cost efficient investments. The Commission will therefore seek to maximise the budget under the Innovation Fund until 2028 by frontloading the commitment of available funds. The Commission will also strengthen the synergies with other instruments and develop the Innovation Fund as a platform, through auctions to help Member States select and support the most promising projects with national funds in a cost-effective way. Innovative approaches, such as 'auctions-as-a-service' are a

([43]) European Commission (2023) Scaling up innovative technologies for climate neutrality

promising way to select the most competitive and environmentally effective projects across the Single Market, without competition distortions and in respect of the State aid rules.

New net-zero business opportunities lead to job creation and demand for new skills. Demand for additional skilled workers will come with investment made ahead of 2030 to meet the 2040 target, in net-zero technologies, in building renovations, innovative materials, and in servicing of net zero equipment. The skill sets of workers in declining fossil fuel or emission-intensive activities cannot always be easily transferred to new activities. An ambitious training and re-skilling development agenda coordinated at EU and Member State level should be developed to address the needs for new skills and jobs, building on the Skills agenda, European Year of Skills and existing EU initiatives. It should ensure new and improved job opportunities for those currently employed in sectors that are phasing out, and that the transition is not hampered by skills mismatches and shortages.

The further digitalisation of the economy will provide tools for example to manage the energy system integration and to contribute to a sustainable management of our land ([44]).

5 Conclusion and next steps

Securing the prosperity and well-being of current and future generations requires the EU to continue its transformation to climate neutrality and a sustainable, competitive economy resilient to climate hazards, geo-political risks and free of critical dependencies.

Key conclusions and policy insights for the transition can be drawn from the Commission's analysis (Annex to this Communication) to inform a broad debate on the action needed within the EU and in cooperation with our partners worldwide.

This Communication paves the way for a political debate and choices by European citizens and governments on the way forward. This will inform the next Commission making the legislative proposal to include the 2040 target in the European Climate Law and designing an appropriate post-2030 policy framework. The work done from 2024-2029 will shape Europe's path to 2040 and onwards to 2050. The policy framework will need to ensure a balanced and cost-effective contribution of all sectors to greenhouse gas emission reductions and carbon removals.

At the same time, to achieve the necessary greenhouse gas emission reductions and carbon removals, enabling conditions need to be in place. These include the full implementation of the 2030 framework; ensuring competitiveness of the European industry and agriculture; measures for ensuring a just transition; a global level playing field; and a strategic dialogue with stakeholders on the post-2030 framework, among others with a view to enabling the agricultural sector to maintain its role as guarantor of food security while decarbonising.

([44]) Such as "Destination Earth", a European Commission flagship initiative for a sustainable future.

Setting the EU's 2040 target will demonstrate the EU's determination to stay at the forefront of the global momentum of expanding cleantech manufacturing and harnessing the opportunities for economic growth and job creation. It will send a clear signal to the rest of the world that Europe remains fully committed to the Paris Agreement and to multilateral action providing the example and the means for others to act.

ANNEX

8 building blocks for achieving the 2040 target

1. **A resilient and decarbonised energy system for our buildings, transport and industry.**
   - All zero and low carbon energy solutions will be necessary (renewables, nuclear, energy efficiency, more sustainable bioenergy, storage, CCU, carbon removals, and all other current and future net-zero energy technologies).
   - The transition away from fossil fuels will increase the EU's independence and open strategic autonomy and reduce the risk of price shocks. Solid fossil fuels should be phased out. In line with REPowerEU, gas and oil use should decrease over time in a way that guarantees the EU's security of supply. A renewable and low carbon hydrogen supply chain should contribute to seasonal storage and hard to decarbonise sectors.
   - Electrification will be at the heart of the transition, through the deployment of recharging infrastructure, heat pumps and building insulation. The electricity sector should come close to full decarbonisation in the second half of the 2030s, with increased flexibility through smart grids, energy storage, demand response and low carbon dispatchable power energy storage. This will require an important reskilling effort in the manufacturing and servicing sectors.
   - The 2040 climate target will require substantial expansion and upgrades of the EU's power grids and storages. Changes in the energy mix will require significant investments over the coming 10-15 years and hinge on the ability to establish the right regulatory framework, integrated infrastructure planning, competitive manufacturing and incentives for resilient supply chains.

2. **An industrial revolution with competitiveness based on research and innovation, circularity, resource efficiency, industrial decarbonisation and clean tech manufacturing at its core.**
   - Need for a comprehensive investment agenda to attract private capital and ensure the EU remains an attractive destination for investment for research, innovation, deployment of new technologies, circular solutions and infrastructure. There is also a need for a smart and frontloaded use of public support for this transition, coupled with de-risking of private investment at scale.
   - As the Green Deal must also be an industrial decarbonisation deal, an enabling framework for decarbonised industry should complement a strengthened EU industrial policy with resilient value chains, notably for primary and secondary critical raw materials, and increased domestic manufacturing capacity in strategic sectors and principle of competitive sustainability fully incorporated in public procurement. This would require well-resourced funding mechanisms at EU level and the creation of lead markets, including through public procurement rules, market-based incentives, standards and labels to steer consumption towards sustainable, near-zero carbon materials and goods.
   - This will also require a more strategic approach to securing strategic commodities on the global market through joint purchase mechanisms, as well as measures addressing competitiveness of European exports on global markets.

- Along targeted investment support, carbon pricing will remain a principal driver for change. The current Emission Trading Systems will need to be supplemented with the efficient use of energy taxation and the phase out of fossil fuel subsidies which do not address energy poverty or just transition.

3. **Infrastructure to deliver and to transport and store hydrogen and CO_2.**

- Targeted public intervention can act as a catalyst to accelerate investment, including at European level. Particular attention should be paid to the development of a smart integrated energy infrastructure at the distribution level, including for the recharging and refuelling of vehicles, and for industrial clusters, including to supply hydrogen and low-carbon feedstock to substitute fossil-based input.
- Urban and city planning will allow citizens and business to decarbonise their environment, be it via recharging infrastructure or district heating.

4. **Enhanced emissions reductions in agriculture.**

- Agriculture plays a vital role in ensuring food security. Like other sectors, agriculture alsohas a role to play in the green transition. With effective policies that reward good practices there is room to decrease emissions from the sector faster while enhancing carbon removals in the land sector, in soils and forests. The agri-food value chain should be involved in order to create synergies and exploit the maximum mitigation potential.
- Clear policies and incentives should be put in place to realise the innovation potential in the food system and the bioeconomy at large as well as to deliver healthy and sustainable food to EU citizens.

5. **Climate policy as an investment policy**.

- An additional 1.5% of GDP compared to the 2011-2020 decade should be invested annually in the transition – moving resources away from less sustainable uses like fossil fuel subsidies. A strong mobilisation of the private sector will be pre-requisite to make this possible. The private sector will deliver most of these investments if the policy framework incentivises low carbon investment and discourages carbon intensive investment, provided there is a strong business case for these investments.
- Dedicated policies are needed to promote the EU as a leading destination for sustainable investments. This requires a comprehensive reflection on all elements: from taxation to access to finance, from skills to regulatory burdens, and from a deepening of the Single Market to energy costs. This is a crucial element for the future success of the EU agenda and should be coordinated with EU Member States.
- The transition also requires smart use of public support and financial schemes to leverage private investment at scale. Public support at scale in the sectors faced with high business risks and for households, where equity is a concern, will be essential. This will require a more active engagement and less risk-aversion from institutional financial actors and notably the EIB. At the same time, public support remains crucial, and the effective use of adequate resources, including through EU funding , should form part of a reflection, to make zero and low carbon industrial projects commercially viable.

6. **Fairness, solidarity and social policies at the core of the transition.**

- A climate neutral, inclusive and resilient economy will ensure the long-term prosperity and well-being of EU citizens. However, public policy and funds, as well as social dialogue, will have to tackle challenges for certain groups and regions, supporting decarbonisation investments by households.
- Addressing social concerns will require a clear policy focus on fairness, solidarity and social policies that not only alleviate the direct impact of carbon pricing where needed, but also

allow low-income households to make the effective transition towards no carbon emissions.

7. **EU climate diplomacy and partnerships to encourage global decarbonisation.**
   - The EU should continue to lead by example and provide a wide-ranging contribution to achieving the Paris Agreement goals and broaden and deepen its international partnerships.
   - It should deploy an active global carbon pricing diplomacy in synergy with other EU climate policy instruments such as CBAM.

8. **Risk management and resilience**.
   - The EU's natural resources are crucial to fully provide their ecosystem services, in particular in terms of controlling climate change and enhancing carbon sequestration.
   - The implementation of the Kunming-Montreal Global Biodiversity Framework and of the EU Biodiversity Strategy will be key to achieve the EU's climate objectives, including the 2040 target.
   - Climate change will nevertheless impact our societies for years to come, so we must prepare and adapt in parallel. Stepping up risk prevention and preparedness measures and implementing policies like water-efficiency or nature-based solutions in a coordinated manner will improve the resilience of the whole of our economy and reduce the costs.

ANNEX 5

Empowerment of the Agent and Co-Agents of the European Union

EUROPEAN COMMISSION

LEGAL SERVICE

Brussels,

(Internal Case Reference: IADS-3/23CTI)

AUTHORITY

The European Commission has appointed, pursuant to Article 42 of the Statute of the International Court of Justice as well as Article 40 in conjunction with Article 102 of the Rules of Court,

André BOUQUET as Agent

and

Margherita BRUTI LIBERATI

Bernhard HOFSTÖTTER

Josephine NORRIS

and

Klára TALABÉR-RITZ as co-agents

to represent it, on behalf of the European Union, as agents in the proceedings before the International Court of Justice in the framework of the request for Advisory Opinion on the *Obligations of States in respect of Climate Change*.

For the Commission,

Daniel CALLEJA CRESPO
Director-General
of the Legal Service Service