INTERNATIONAL COURT OF JUSTICE

OBLIGATIONS OF STATES IN RESPECT OF CLIMATE CHANGE

(REQUEST FOR AN ADVISORY OPINION)

WRITTEN STATEMENT

SUBMITTED BY

WORLD WIDE FUND FOR NATURE (WWF) INTERNATIONAL

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I. INTRODUCTION

1. On 29 March 2023, the United Nations General Assembly ("**UNGA**") adopted Resolution 77/276, requesting that the International Court of Justice ("**ICJ**" or the "**Court**") render an Advisory Opinion on the following questions (the "**Questions**"):

> *"Having particular regard to the Charter of the United Nations, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, the United Nations Framework Convention on Climate Change, the Paris Agreement, the United Nations Convention on the Law of the Sea, the duty of due diligence, the rights recognized in the Universal Declaration of Human Rights, the principle of prevention of significant harm to the environment and the duty to protect and preserve the marine environment,*
>
> *(a) What are the obligations of States under international law to ensure the protection of the climate system and other parts of the environment from anthropogenic emissions of greenhouse gases for States and for present and future generations?*
>
> *(b) What are the legal consequences under these obligations for States where they, by their acts and omissions, have caused significant harm to the climate system and other parts of the environment, with respect to:*
>
> *(i) States, including, in particular, small island developing States, which due to their geographical circumstances and level of development, are injured or specially affected by or are particularly vulnerable to the adverse effects of climate change?*
>
> *(ii) Peoples and individuals of the present and future generations affected by the adverse effects of climate change?"*

2. On 12 April 2023, the Secretary General of the United Nations transmitted the request to the Court. On 20 April 2023, the Court fixed time-limits for Member States of the United Nations and international organisations to submit written statements and written comments on the written statements. On 15 December 2023, the Court extended the time-limits to 22 March 2024 and 24 June 2024 respectively. On 30 May 2024, the Court again extended the time-limits of the second submissions to 15 August 2024.

3. Clarity on the Questions posed to the Court is needed urgently. As the UN Special Rapporteur on Human Rights and the Environment David R. Boyd recently warned, "*[w]e are in the midst of an unprecedented environmental crisis*" with the most pressing

environmental risk being climate change.[1]

4. The threat to biodiversity posed by climate change is particularly stark. As this Statement elaborates further in Section III, the great majority of indicators of ecosystems and biodiversity are already showing rapid decline,[2] and this decline has been exacerbated by climate change.[3] If further measures are not taken now to limit global warming beyond 1.5ºC, climate change is likely to become the main cause of the loss of species.[4] Given the vital importance of nature for humanity,[5] this is a fundamental global concern.

5. In the words of the UN Secretary General António Guterres, "*advisory opinions can provide much-needed clarification on existing international legal obligations*" and an opinion on the Questions will assist the UN, the UNGA and States "*to take bolder and stronger climate action that our world so desperately needs*."[6] It is against this background that WWF respectfully presents this Statement, in order to assist the Court in particular with regard to States' obligations to protect and preserve biodiversity (which, as explained below, forms part of "*the climate system and other parts of the environment*"),[7] as well as the consequences stemming from such obligations.

6. WWF structures its Statement as follows:

   (a) **Section II** details WWF's expertise and the relevance to the Court of this Statement;

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1 UNGA, *Report of the Special Rapporteur on the Issue of Human Rights Obligations relating to the Environment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2019, A/74/161, ¶ 1.

2 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services ("**IPBES Report 2019**"), *Report on the Plenary of Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services on the work of its seventh session*, 22 May 2019, IPBES/7/10/Add.1, p. 4.

3 IPBES Report 2019, p. 4.

4 WWF, *Living Planet Report – Building A Nature-Positive Society*, 2022 ("**WWF, Living Planet Report 2022**"), https://wwflpr.awsassets.panda.org/downloads/lpr_2022_full_report_1.pdf [last accessed 12 June 2024], p. 4.

5 *See infra*, Section III.4.

6 United Nations Secretary General, *Secretary-General's remarks to the General Assembly on the Request of an Advisory Opinion of the International Court of Justice on the Obligations of States in Respect of Climate Change*, 29 March 2023, https://www.un.org/sg/en/content/sg/statement/2023-03-29/secretary-generals-remarks-the-general-assembly-the-request-of-advisory-opinion-of-the-international-court-of-justice-the-obligations-of-states-respect-of-climate [last accessed 12 June 2024].

7 *See infra*, Section IV.2.

(b) **Section III** sets out WWF's view of the critical interaction between climate change and biodiversity;

(c) **Section IV** addresses States' obligations under international law to ensure the protection of biodiversity for States and for present and future generations; and

(d) **Section V** addresses the legal consequences for States which have caused significant harm to biodiversity through their acts and omissions, with respect to other States, in particular small island developing States, and present and future generations.

II. WWF'S EXPERTISE AND RELEVANCE TO THE COURT OF ITS STATEMENT

II.1 WWF's Expertise

7. WWF is one of the world's largest independent international conservation organisations, with more than 100 offices worldwide and a track record of more than 60 years. Its mission is to build a future in which people live in harmony with nature. To deliver on this mission, it works to conserve and restore biodiversity, reduce the environmental footprint of people and ensure the sustainable use of natural resources to support current and future generations.

8. In the face of the climate crisis, a core part of WWF's work is now related to this issue. Recognising the critical role of climate change in threatening biodiversity, WWF advocates for: (i) sustainable policies and practices to reduce greenhouse gas ("**GHG**") emissions (*e.g.*, the energy transition from fossil fuels to renewable energy); and (ii) awareness of nature-based solutions to climate change (*e.g.*, the conservation and restoration of ecosystems which act as carbon sinks, such as forests and wetlands). It also collaborates with local communities, governments and others to help people and nature prepare for the impacts of climate change.

9. WWF's work is grounded in science. Working with partners, WWF scientists lead global and regional analyses across multiple disciplines. WWF draws on biology, hydrology, oceanography and the social sciences to advance cutting-edge conservation tools and methods, connect natural and social systems and tackle emerging threats. WWF scientists track conservation needs and lead regional and global analyses to

identify and set priorities for the world's valuable habitats and species. WWF also relies on scientific processes to ensure that its on-the-ground conservation programs are effective and produce measurable results. In addition, with the support of its scientists, WWF publishes regular reports and studies addressing issues including the impact on biodiversity of climate change.[8]

10. In partnership with the Zoological Society of London ("**ZSL**"), WWF also manages the Living Planet Index ("**LPI**"), a globally acknowledged indicator that shows trends in the abundance of vertebrate populations around the world. Published first in 1998, the LPI was previously adopted by the Conference of Parties to the 1992 Convention on Biological Diversity ("**CBD**")[9] to measure progress towards the Aichi Biodiversity Targets of the Strategic Plan for Biodiversity 2011-2020.[10] It is currently accepted as a component indicator for Target 4 (Halt Species Extinction, Protect Genetic Diversity, and Manage Human-Wildlife Conflicts) of the Kunming-Montreal Global Biodiversity Framework ("**KMGBF**").[11]

11. In general, WWF is recognised as an authority on global biodiversity trends. It is also an active participant in the international law sphere with regard to nature and biodiversity. For example, WWF presented an amicus submission to the International Tribunal for the Law of the Sea ("**ITLOS**") for consideration as part of its recent Advisory Opinion on *Climate Change and International Law* (the **"ITLOS Advisory Opinion"**),[12] arguing that climate-related obligations include rapidly reducing

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8 *See e.g.*, WWF, *Our Climate's Secret Ally*, November 2022, https://wwfint.awsassets.panda.org/downloads/wwf_our_climates_secret_ally_uncovering_the_story_of_nature_in_the_ipcc_ar6.pdf [last accessed 12 June 2024]; WWF, *Greenhouse Gas Accounting Efforts Undermined by Disparate Tools & Frameworks*, 16 February 2023, https://files.worldwildlife.org/wwfcmsprod/files/Publication/file/4wia10x22l_Standardized_GHG_Accounting_Business_Case_07_22_v8.pdf?_ga=2.74688018.140730581.1715605969-1221905153.1710090103 [last accessed 12 June 2024]. *See also* the study commissioned by WWF to the Institute for European Environmental Policy, *Climate mitigation potential of large-scale nature restoration in Europe*, 7 February 2022, https://ieep.eu/publications/climate-mitigation-potential-of-large-scale-nature-restoration-in-europe/ [last accessed 12 June 2024].

9 Convention on Biological Diversity ("**CBD**") (adopted 5 June 1992, entered into force 29 December 1993) 1760 UNTS 79. The CBD has 196 Parties as of 8 July 2024.

10 *See e.g.*, Convention on Biological Diversity, *Strategic Plan Indicator Factsheet*, https://www.cbd.int/sp/indicators/factsheets?id=27 [last accessed 12 June 2024].

11 UNEP, Conference of the Parties to the CBD, Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity, Kunming-Montreal Global Biodiversity Framework (**"KMGBF"**), 19 December 2022, CBD/COP/DEC/15/4.

12 *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)*, Advisory Opinion, 21 May 2024, ITLOS Case No. 31.

emissions while conserving and restoring the marine environment.[13]

II.2 The Relevance to the Court of WWF's Statement

12. WWF makes this Statement pursuant to the Court's Practice Direction XII, which accepts that an international non-governmental organisation ("**NGO**") may submit a written statement in an advisory opinion proceeding on its own initiative.[14]

13. While such a statement is not to be considered part of the case file of the Court, it may "*be referred to by States and intergovernmental organisation presenting written and oral statements in the case*"[15] and will be placed "*in a designated location in the Peace Palace*" which shall be notified to States and intergovernmental organisations making written and oral statements under Article 66 of the Court's Statute.[16]

14. WWF also urges the Court independently to take note of the contents of this Statement. The Court's Advisory Opinion will answer questions which are important not just for States, but for the planet as a whole. As former Vice-President of the Court Judge Weeramantry stated in his separate opinion in *Gabčíkovo-Nagymaros*: "[w]*e have entered an era of international law in which international law subserves not only the interests of individual States, but looks beyond them and their parochial concerns to the greater interests of humanity and planetary welfare*."[17] That is certainly the case here. The Court's answers to the Questions posed by UNGA will likely shape environmental law and policy for years to come. In order to ensure the accuracy of those answers, and their legitimacy in the public eye, it is therefore important that they take into account not only the position of States but also NGOs such as WWF, which, as outlined above, has significant expertise in matters relevant to the Advisory Opinion, and represents the broader interests of people and the planet.

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13 *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)*, Amicus Brief Filed on Behalf of World Wide Fund for Nature (WWF) International, 16 June 2023, ITLOS Case No. 31, https://itlos.org/fileadmin/itlos/documents/cases/31/written_statements/4/C31-WS-4-7-WWF.pdf.

14 Practice Direction XII, promulgated 30 July 2004, ¶ 1.

15 Practice Direction XII, ¶ 2.

16 Practice Direction XII, ¶ 3.

17 *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, Separate Opinion of Vice-President Weeramantry, 25 September 1997, ICJ Rep. 1997, p. 118.

III. THE CRITICAL INTERACTION BETWEEN CLIMATE CHANGE AND BIODIVERSITY

III.1 Executive Summary

15. "*Biodiversity*" is defined under Article 2 of the CBD (which has near universal membership[18]) as *"the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part*" (emphasis added). The Questions before the Court centre on the obligations of States under international law to ensure "*the protection of the climate system and other parts of the environment*" from anthropogenic emissions of GHGs (hereinafter **"GHG emissions**" or **"emissions of GHGs**"). It should be uncontroversial that biodiversity (which includes all of the organisms and ecosystems which constitute such biodiversity) forms part of "*the climate system and other parts of the environment*". Given WWF's particular expertise in relation to biodiversity, that is therefore the focus of this Statement.

16. By way of context to WWF's answers to the Questions, this section explains why – from a scientific standpoint – harm to biodiversity caused by GHGs should be viewed as a fundamental global concern. It provides the context for WWF's position in this Statement, namely that the obligations of States with regard to the protection of biodiversity form an essential component of the obligations of States under international law to ensure the protection of the climate system and other parts of the environment from emissions of GHGs for States and for present and future generations.

17. It is organised as follows:

    (a) Section III.2 sets out alarming statistics regarding biodiversity decline;

    (b) Section III.3 explains how GHG emissions are impacting and exacerbating this disastrous trend;

[18] No Party to the CBD has made any declaration or reservation in respect of this definition. For the Status of the Convention *see* also https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-8&chapter=27&clang=_en#1.

(c) Section III.4 explains why a loss of biodiversity is a loss for humanity at large, both due to humanity's essential need for biodiversity and because biodiversity offers a sustainable means to mitigate climate change; and

(d) Section III.5 presents a conclusion on the importance of obligations on States to protect biodiversity as part of their general obligations under international law to protect the climate system from GHGs for States and for present and future generations.

III.2 Biodiversity is in alarming decline

18. The 2019 Global Assessment Report by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services ("**IPBES**")[19] revealed concerning data about the state of global biodiversity. The IPBES Report highlighted that around 1 million animal and plant species are at risk of extinction, many within decades, at a rate unprecedented in human history.[20] It further found that 75% of the land environment and about 66% of the marine environment have been significantly altered by human actions, leading to the degradation of most of the Earth's ecosystems.[21] The report concluded that transformative changes (including sustainable agriculture, reductions in consumption and waste and equitable resource governance) are necessary to protect and restore biodiversity and ensure sustainable futures for humans and wildlife alike.[22]

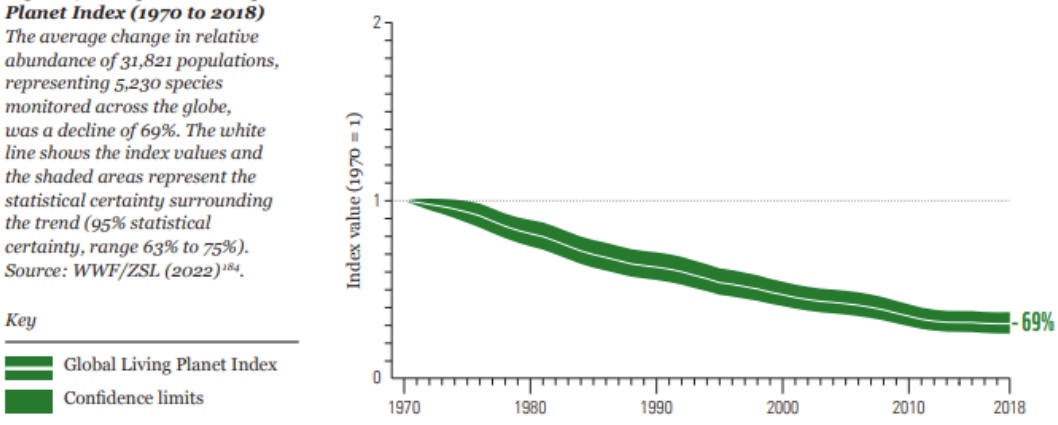
19. As explained above, WWF, in conjunction with the ZSL, publishes the Living Planet Report every other year to take the pulse of the health of the planet. The report scrutinises global biodiversity trends (such as species population sizes, habitat extent and degradation) to reveal how human activities have affected natural environments.

20. The LPI is a key element of the Living Planet Report and a tool to understand what is happening to the Earth's biodiversity on a global scale.[23] The LPI takes into account data from species that have been observed at least twice since 1970 and traces how almost 32,000 species in 5,230 populations are faring.[24] The 2022 LPI paints a bleak

19 IPBES Report 2019, p. XVI.
20 IPBES Report 2019, p. XVI.
21 IPBES Report 2019., p. XV.
22 IPBES Report 2019, pp. XVIII-XIX.
23 WWF, Living Planet Report 2022, p. 5.
24 WWF, Living Planet Report 2022, p. 11.

picture: between 1970 and 2018 there was an average decline of 69% in the abundance of monitored populations worldwide.[25] This fall is most pronounced in Latin America where population abundance dropped by an average of 94%.[26] Freshwater species have fared worst with numbers down by 83% across the globe.[27]

Figure 3: The global Living Planet Index (1970 to 2018)
The average change in relative abundance of 31,821 populations, representing 5,230 species monitored across the globe, was a decline of 69%. The white line shows the index values and the shaded areas represent the statistical certainty surrounding the trend (95% statistical certainty, range 63% to 75%). Source: WWF/ZSL (2022)[184].



Source: WWF, *Living Planet Report 2022*, p. 32.

21. The Biodiversity Intactness Index ("**BII**") evaluates to what degree original biodiversity persists within ecosystems following human interference.[28] This index is scaled from 100% (which represents an untouched, pristine environment) to 0% (where biodiversity is completely depleted).[29] If an area operates as a robust ecosystem, it will have a BII score of 90% or higher.[30] Conversely, if the level drops below 90%, it means that there has been a significant enough decline in biodiversity to impair ecosystem functions.[31] A score below 30% indicates that an ecosystem is so biologically impoverished that it is at risk of imminent collapse.[32] Currently, the global average BII is 77%,[33] indicating that human actions have significantly affected natural

25 WWF, Living Planet Report 2022, p. 5.
26 WWF, Living Planet Report 2022, p. 12.
27 WWF, Living Planet Report 2022, p. 12.
28 WWF, Living Planet Report 2022, p. 47.
29 WWF, Living Planet Report 2022, p. 47.
30 WWF, Living Planet Report 2022, p. 47.
31 WWF, Living Planet Report 2022, p. 47.
32 WWF, Living Planet Report 2022, p. 47.
33 WWF, Living Planet Report 2022, p. 46.

environments worldwide.[34] In the United Kingdom, the BII score hovers near 40%.[35] There is scientific evidence that the biodiversity crisis is now more advanced than the climate crisis.[36]

III.3 GHG emissions have a devastating impact on biodiversity

22. Land-use change is the greatest current threat to global biodiversity.[37] Global warming caused by GHG emissions is, however, a significant aggravating factor.[38] Moreover, studies show that if global warming rises beyond 1.5°C, climate change will surpass land change to become the main cause of the loss of species.[39]

23. Indeed, there is an exponential relationship between temperature rise and extinction: each additional degree of warming potentially multiplies losses manifold.[40] In terrestrial ecosystems, up to 14% of species assessed will likely face a very high risk of extinction at global warming levels of 1.5°C, increasing to 18% at 2°C, 29% at 3°C, 39% at 4°C and 48% at 5°C.[41]

24. In ocean and coastal ecosystems, the risk of biodiversity loss ranges between moderate and very high at 1.5°C global warming levels and increases from high to very high across most ocean and coastal ecosystems at 3°C.[42] For instance, half of warm-water corals have been lost due to a combination of factors including warming seas.[43] Dire outcomes result from further warming: a 1.5°C increase could result in the loss of 70-90% of warm-water corals, while a 2°C increase might lead to a loss of more than 99%.[44]

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34 WWF, Living Planet Report 2022, p. 46.

35 WWF, Living Planet Report 2022, p. 46.

36 J. Rockström, J. Gupta, D. Qin, et al., *Safe and Just Earth System Boundaries*, 31 May 2023, https://www.nature.com/articles/s41586-023-06083-8, [last accessed 13 June 2024].

37 WWF, Living Planet Report 2022, p. 4.

38 WWF, Living Planet Report 2022, p. 4.

39 WWF, Living Planet Report 2022, p. 4.

40 WWF, Living Planet Report 2022, p. 17.

41 Intergovernmental Panel on Climate Change, *Climate Change 2022: Impacts, Adaptation and Vulnerability, Summary for Policymakers*, 2022 ("**IPCC Summary for Policymakers 2022**"), <https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf> , p. 14.

42 IPCC Summary for Policymakers 2022, <https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf>, p. 14.

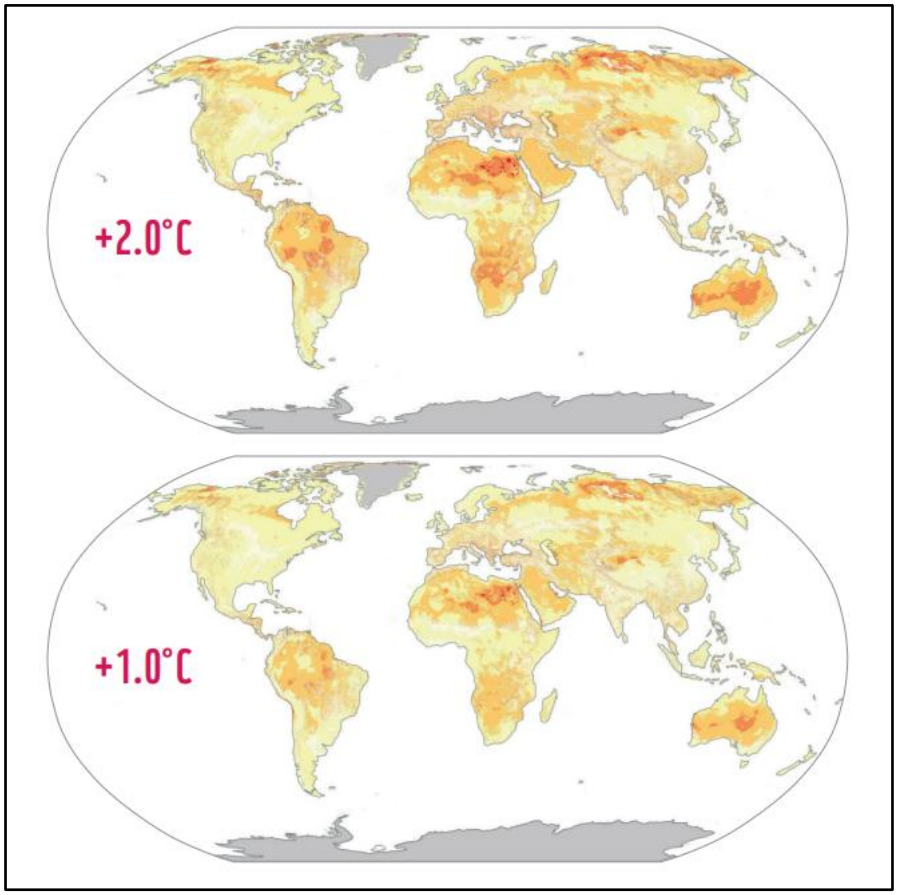
43 WWF, Living Planet Report 2022, pp. 18-19.

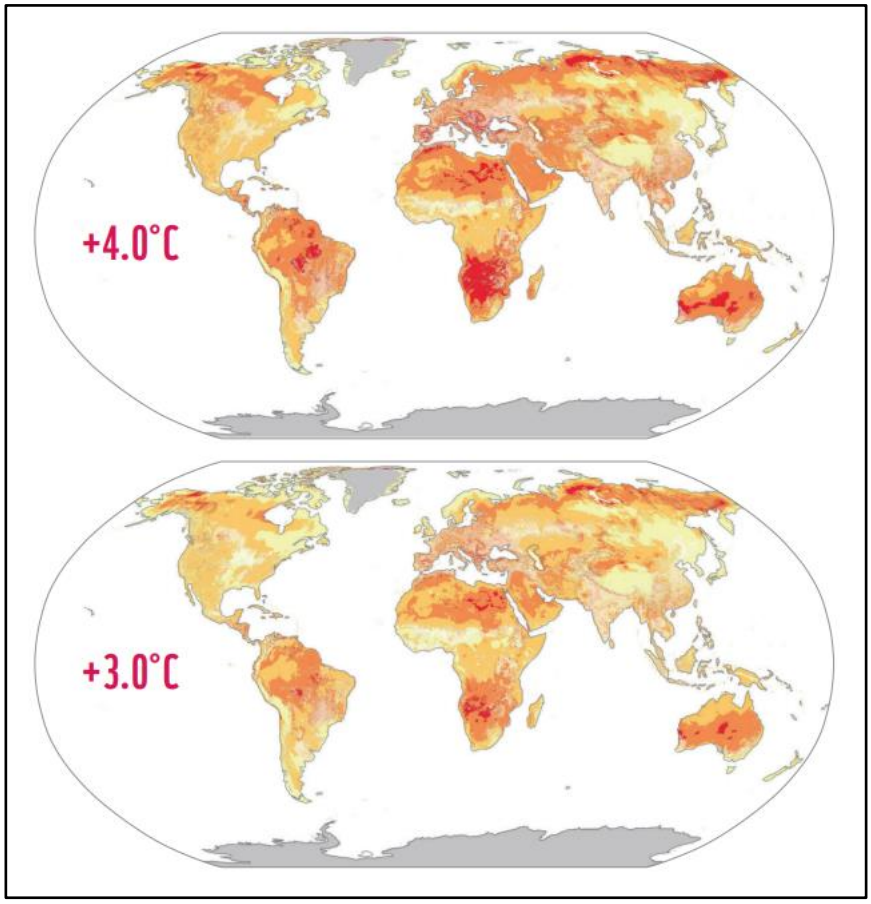
44 WWF, Living Planet Report 2022, p. 17.

25. Global species loss caused by climate change is well-indicated by the diagram below. It is clear from the darkening colours the impact that increased temperatures will have.

Figure 1: Projected loss of terrestrial and freshwater biodiversity compared to pre-industrial period

Biodiversity loss with increasing global warming. The higher the percentage of species projected to be lost (due to loss of suitable climate in a given area), the higher the risk to ecosystem integrity, functioning and resilience to climate change. Colour shading represents the proportion of species for which the climate is projected to become sufficiently unsuitable that the species becomes locally Endangered (sensu International Union for the Conservation of Nature, IUCN) and at high risk of local extinction within a given area at a given global warming level. Source: Reprinted from Figure 2.6 in Parmesan et al. (2022)[11], based on data from Warren et al (2018)[178].





Source: WWF, Living Planet Report 2022, pp. 18-19.

26. Part of the reason for this trend is the impact that climate change has on the ecosystems which support biodiversity, as well as weather patterns. Prominent examples include the following:

A. Melting glaciers, ice caps and sea-level rise

27. The Antarctic ice sheet is the largest single mass of ice on Earth, accounting for around 90% of all fresh water on the Earth's surface, equivalent to a 70 metre rise in the global sea level.[45] Even small-scale melting is likely to have significant effects on global sea level rise. The West Antarctic Ice Shelf glaciers contain enough ice to raise global mean sea-level by 5.3 m, and are already actively melting.[46] In the Arctic, average air temperatures have increased by about 5°C over the last 100 years and the extent of

45 British Antarctic Survey, *Polar Geography – Ice*, https://www.bas.ac.uk/about/antarctica/geography/ice/ [last accessed 13 June 2024].

46 K.A. Naughten, P.R. Holland and J. De Rydt, *Unavoidable Future Increase in West Antarctic Ice-Shelf Melting Over the Twenty-First Century*, https://www.nature.com/articles/s41558-023-01818-x [last accessed 13 June 2024].

summer sea ice has decreased by about 40% since 1979.[47] Projections indicate that nearly ice-free summers in the Arctic Ocean could occur by 2050 (and almost certainly by the end of the century) if current trends continue.[48] Around the world, over the last two decades, the global glacier mass loss rate has been the highest since the glacier mass balance measurements began a century ago.[49] Detailed satellite measurements of sea levels have observed a consistent increase in sea level, which rose approximately 7.5 cm between 1993 and 2017, with an average 31 mm rise per decade.[50] By 2100, the global mean sea level is projected to rise by 0.44 metres if warming is limited to 1.5°C and over half of a metre if limited to 2°C.[51]

28. This has a devastating effect on coastal ecosystems. For example, increased salinity caused by sea water encroaching into coastal areas is already affecting the health of mangroves worldwide. This includes the Sundarbans, the largest mangrove forest in the world. It is estimated that a one metre sea-rise would entirely submerge the Sundarbans.[52] This would be a tragic loss of ecosystem, and threaten the various species, including the Bengal tiger, that depend upon it.[53]

29. Sea levels in the Mekong Delta are also rising at a rate of about 3-5 mm per year.[54] It is estimated that almost 32% of the Delta could be inundated by the end of the century.[55] Salinity intrusion has already affected large portions of land. In 2020, parts of the

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47 National Oceanic Atmospheric Administration ("**NOAA**") in the Arctic, *Arctic Report Card*, 2023, https://arctic.noaa.gov/report-card/report-card-2023/ [last accessed 13 June 2024].

48 IPCC, *Climate Change 2022: Impacts, Adaptation and Vulnerability*, Full Report, ("**IPCC Climate Change Report 2022**"), https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf, p. 391; European Space Agency ("**ESA**"), *Climate Office, Simulations suggest ice-free Arctic summers by 2050*, 13 May 2020, https://climate.esa.int/en/projects/sea-ice/news-and-events/news/simulations-suggest-ice-free-arctic-summers-2050/ [last accessed 13 June 2024].

49 IPCC Climate Change Report 2022, p. 50.

50 C.M. Domingues, S. Dangendorf, L. Cheng, *Global Sea-Level Budget 1993–Present, Earth System Science Data*, https://figshare.utas.edu.au/articles/journal_contribution/Global_sea-level_budget_1993-present/23011214 [last accessed 13 June 2024], p. 5 of the PDF.

51 National Aeronautics and Space Administration ("**NASA**"), *Sea Level Change, Projected Sea-Level Rise Under Different SSP Scenarios*, https://sealevel.nasa.gov/ipcc-ar6-sea-level-projection-tool?type=global [last accessed 13 June 2024].

52 World Bank Group, *Bangladesh – Climate Change and Sustainable Development*, 19 December 2000, https://documents.worldbank.org/en/publication/documents-reports/documentdetail/906951468743377163/bangladesh-climate-change-and-sustainable-development [last accessed 13 June 2024].

53 United Nations Educational, Scientific and Cultural Organization ("**UNESCO**"), *The Sundarbans*, https://whc.unesco.org/en/list/798/ [last accessed 13 June 2024].

54 Vietnam Plus, *Mekong Delta Most Vulnerable to Flooding Because of Sea Level Rise*, 25 February 2022, https://en.vietnamplus.vn/mekong-delta-most-vulnerable-to-flooding-because-of-sea-level-rise-post222629.vnp [last accessed 13 June 2024].

55 Vietnam Plus, *Mekong Delta Most Vulnerable to Flooding Because of Sea Level Rise*, 25 February 2022.

Mekong Delta declared emergencies due to increased salinity affecting over 100,000 hectares of rice crop production as salt water intruded 70 km inland.[56] These changes threaten the livelihoods of millions of people who depend on the Delta for agriculture and fisheries.

30. Species are in other areas likewise affected by disappearing ice caps and rising sea-levels. Taking some examples: a recent casualty is the Bramble Cay melomys, a small rodent which lived on an island between Australia and Papua New Guinea and was declared extinct in 2016 after sea level rise and a series of heavy storms flooded its home, killing its food plant and destroying its nesting sites.[57] Polar Bear populations in 12 out of 13 subpopulations could decline by more than 30% over the next 35-40 years.[58] 80% of Emperor penguin colonies are projected to be quasi-extinct by 2100 under current levels of emissions,[59] while some Adélie Penguin colonies have experienced declines of up to 65% over the past 25 years due to changes in sea ice conditions.[60]

B. Extreme weather: wildfires, heatwaves and droughts

31. According to the World Meteorological Organization, climate change-related disasters have increased by a factor of five over the last 50 years.[61] In Australia, the devastating effects of this trend were starkly highlighted during the 2020 wildfires, which resulted in the deaths of between 500 million and 1.5 billion native animals and the destruction of 97,000 km^2 of vegetation.[62] On the other side of the world, five of California's 20 most severe wildfires on record occurred between 1920 and 2000, another five between

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56 B. Kaveney et al, *Inland Dry Season Saline Intrusion in the Vietnamese Mekong River Delta is Driving the Identification and Implementation of Alternative Crops to Rice*, *Agricultural Systems*, Volume 207, April 2023, https://www.sciencedirect.com/science/article/pii/S0308521X23000379?via%3Dihub [last accessed 13 June 2024].

57 WWF, Living Planet Report 2022, p. 19.

58 P. K. Molnar, C.M. Bitz, et al, *Fasting Season Length Sets Temporal Limits for Global Polar Bear Persistence*, *Nature Climate Change*, 2020, https://www.nature.com/articles/s41558-020-0818-9 [last accessed 13 June 2024]; IPBES Report 2019, p. 641.

59 WWF, *World Penguin Day: WWF Warn Climate Crisis Could Lead Emperor Penguins Towards Extinction Unless Urgent Action is Taken*, https://www.wwf.org.uk/press-release/emperor-penguins-risk-extinction-climate-crisis [last accessed 13 June 2024]; IPBES Report 2019, p. 641.

60 WWF, *Adelie Penguin – Antarctic Birds with Attitude*, https://www.wwf.org.uk/learn/wildlife/adelie-penguins [last accessed 13 June 2024].

61 World Meteorological Organization, *Atlas of Mortality and Economic Losses from Weather, Climate and Weather Extremes* (1970-2019), 2021, https://oneplanetschool.wwf.it/system/files/pubblicazioni/1267_Atlas_of_Mortality_en-final_-_26.07.2021.pdf [last accessed 13 June 2024], p. 15.

62 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 9.

2001 and 2010 and the remaining 10 all in the last 10 years.[63]

32. Wildfires not only cause an immediate loss of wildlife, but there is a risk that some species will never recover. Depending on species and growth speed, vegetation needs between 25 to 250 years to reach its full sequestration potential.[64] As the interval between fires shortens, this becomes harder to achieve.[65] Wildfires also generate up to one-third of ecosystem carbon emissions globally. They therefore not only present a risk to biodiversity, but significantly contribute to the climate change crisis.[66]

33. Increasing heatwaves are also causing widespread mortality events across various species.[67] For instance, a single extremely hot day in Australia resulted in the deaths of more than 45,000 flying foxes.[68] In addition, in 2015, a heat wave caused the death of over 200,000 Saiga Antelopes in Kazakhstan, representing more than 60% of the global population at that time.[69]

34. Prolonged drought conditions have also had a devastating effect on ecosystems across different regions. Between 1945 and 2007, up to 20% of trees were lost in three regions across Africa and North America due to drought stress, affecting not only forests but the species of plants and animals that live within them.[70] In the Mediterranean, the drought that began in 1998 in the eastern Mediterranean Levant region is likely the worst drought in 900 years.[71]

C. Warming oceans

35. Marine environments are particularly impacted by reduced oxygen levels and ocean acidification caused by climate change. Warming reduces the ventilation of the ocean

63 WWF, *Fires, Forests, and the Future: A Crisis Ranging Out of Control?*, 2020, https://wwfeu.awsassets.panda.org/downloads/wwf_fires_forests_and_the_future_report.pdf [last accessed 13 June 2024], p. 9.

64 WWF, *Fires, Forests, and the Future: A Crisis Ranging Out of Control?*, 2020, p. 10.

65 WWF, *Fires, Forests, and the Future: A Crisis Ranging Out of Control?*, 2020, p. 10.

66 IPCC Climate Change Report 2022, p. 201.

67 WWF, Living Planet Report 2022, p. 18.

68 WWF, Living Planet Report 2022, p. 18.

69 A.K. Richard, et al, *Saigas on the Brik: Multidisciplinary Analysis of the Factors Influencing Mass Mortality Events*, Science Advances, 17 January 2018, https://www.science.org/doi/full/10.1126/sciadv.aao2314 [last accessed 13 June 2024] .

70 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 15.

71 K. B. Hille, *NASA Finds Drought in Eastern Mediterranean Worst of Past 900 Years*, NASA, https://www.nasa.gov/technology/nasa-finds-drought-in-eastern-mediterranean-worst-of-past-900-years/ [last accessed 13 June 2024].

and solubility of oxygen, which in turn leads to deoxygenation.[72] This is compounded by carbon dioxide ("**CO_2**") being dissolved in the water column and leading to acidification and a mass extinction of species.[73]

36. Marine heatwave events – which have doubled in frequency since the 1980s[74] – also have led to widespread, abrupt and extensive mortality of key habitat-forming species including tropical corals, kelps, seagrasses and mangroves, as well as the mass mortality of wildlife.[75] As noted above, if global temperatures rise by 1.5°C, it is projected that 70-90% of coral reefs will decline. At 2°C of warming, more than 99% of coral reefs could be lost.[76] Already between 2016 and 2017, about 50% of the coral cover of the Great Barrier Reef was lost due to rising sea temperatures. Staghorn coral populations have declined by over 97% since the 1980s, primarily due to climate change and associated impacts.[77]

37. As regards other species, leatherback sea turtle populations in the Pacific have declined by over 90% since the 1980s due to climate change, with some nesting sites seeing nearly complete nest failures in recent years.[78] Climate change is altering the distribution of great white sharks as they follow prey species that are shifting their ranges due to warming ocean temperatures. This leads to changes in shark behaviour and migration patterns.[79] Blue mussels are affected by ocean acidification, which weakens their shells and reduces their ability to survive and reproduce, with declining populations already observed along the Atlantic coasts of North America and Europe.[80]

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72 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 10.

73 WWF, *Our Climate's Secret Ally 2022*, November 2022, pp. 10, 13.

74 IPCC Climate Change Report 2022, p. 47.

75 IPCC Climate Change Report 2022, p. 47.

76 World Economic Forum, *99% Of Coral Reefs Could Disappear If We Don't Slash Emissions This Decade, alarming new study shows*, 4 February 2022, https://www.weforum.org/agenda/2022/02/coral-reefs-extinct-global-warming-new-study/#:~:text=Now%2C%20with%20models%20capable%20of%20examining%20temperature%20differences,that%20are%20too%20frequent%20for%20them%20to%20recover [last accessed 13 June 2024].

77 IPBES Report 2019, Chapter 2, Section 2.2.5; International Union for Conservation of Nature ("**IUCN**"), *Red List of Threatened Species*, https://www.iucnredlist.org/ [last accessed 13 June 2024].

78 NOAA Fisheries, *Leatherback Turtle*, https://www.fisheries.noaa.gov/species/leatherback-turtle [last accessed 13 June 2024].

79 NOAA Fisheries, *Sharks, Rays, and Climate Change: Impacts on Habitat, Prey Distribution, and Health*, https://www.fisheries.noaa.gov/feature-story/sharks-rays-and-climate-change-impacts-habitat-prey-distribution-and-health [last accessed 13 June 2024].

80 European Commission, *A Hard Shell: How Mussels Are Affected By Ocean Acidification*, https://cordis.europa.eu/article/id/122769-a-hard-shell-how-mussels-are-affected-by-ocean-acidification [last accessed 13 June 2024].

D. Migration patterns and life cycles of species

38. As the temperatures of their native habitats increase, species migrate to higher elevations or closer to the poles to find climates where they can survive.[81] However, not all species have the ability to adapt to rapid climate change. For example, over the course of more than a century, research in North America and Europe has documented that bumblebees are not evolving in response to climate change and, as a result, are disappearing from southern areas of their historical range.[82] Studies also indicate that populations of the Alpine Ibex could decline by up to 30% by 2050 due to warming temperatures reducing their available range.[83] In North America, American Pikas, small mammals found in mountainous regions, face reduced food availability as they move to higher elevations and in some regions, their populations have declined by up to 50% over the past few decades.[84]

39. Significant life cycle events for both plants and animals are also dependent on changes in temperature. For example, Atlantic salmon are now facing the threat of extinction because they are significantly impacted by climate change at every stage of their life cycle: climate variations disrupt the growth and development of young salmon, diminish the availability of their prey and facilitate the spread of invasive species into their habitats.[85] Another example is phytoplankton. By 2100, a large portion of the ocean will very likely undergo a change of more than 20 days in the start of the phytoplankton growth period. This altered timing increases the risk of temporal mismatches between plankton blooms and fish spawning seasons and seriously threatens the future fish population.[86] A similar risk is posed by ocean acidification affecting embryo development of krill, with potentially far-reaching consequences to

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81 IPCC Climate Change Report 2022, p. 45.

82 J. T. Kerr., A. PindAr, P. Galpern, et al. *Climate Impacts On Bumblebees Coverage Across Continent*, Science, Vol. 349, Issue 6244, p. 177; J. Ashworth, *Europe's Bumblebees Threatened With Extinction As Their Habitats Shrink*, Natural History Museum, 2023, https://www.nhm.ac.uk/discover/news/2023/september/europes-bumblebees-threatened-with-extinction-as-habitats-shrink.html [last accessed 13 June 2024].

83 S. Piao, N. Cong, G. Zhang, I. Jassens, *Precipitation impacts on vegetation spring phenology on the Tibetan Plateau*, 21(1) Global Change Biology, 3647.

84 WWF, *Disappearance of North American Mammal Linked to Global Warming*, 25 February 2003, https://wwf.panda.org/wwf_news/?5965/Disappearance-of-North-American-mammal-linked-to-global-warming [last accessed 13 June 2024].

85 ENDS Report, *'Very Grim': Atlantic Salmon Now At Risk Of Extinction*, 12 December 2023, https://www.endsreport.com/article/1850777/very-grim-atlantic-salmon-risk-extinction [last accessed 13 June 2024].

86 IPCC Climate Change Report 2022, p. 57.

food webs in the Polar regions.[87] In North America, the Eastern North American population of monarch butterflies has declined by approximately 80-90% over the past two decades due to changes in migratory patterns and breeding cycles caused by shifts in climate, while the Western population has experienced an even more dramatic decline of over 99%.[88]

E. Particular dangers to Small Island Developing States

40. Climate change poses a severe existential threat to Small Island Developing States ("**SIDS**") due to their geographic and economic characteristics. Many SIDS have solely or mostly low-lying land areas.[89] Rising sea levels threaten to inundate coastal areas, erode beaches and contaminate freshwater resources. In addition, since 90% of SIDS are in the tropics, many are seasonally affected by extreme weather events, such as tropical storms hurricanes and cyclones.[90]

41. At the same time, SIDS are renowned for their rich biodiversity. Despite encompassing approximately 2% of the Earth's surface, oceanic islands harbour substantial proportions of existing species, including around 25% of global flora, 12% of birds and 10% of mammals.[91] SIDS' marine environments are equally diverse. For example, SIDS host 40% of the world's coral reefs, which are among the most biodiverse ecosystems globally.[92]

42. In addition, SIDS, more than other geographies, have a high number of species that are endemic only to them.[93] For instance, the Caribbean islands alone are home to over 11,000 plant species, of which about 72% are endemic.[94] The loss of those unique species poses a significant risk to global biodiversity; if these species become extinct, it would lead to a disproportionate decrease in the world's overall biological diversity.

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87 IPCC Climate Change Report 2022 p. 432.

88 Xerxes Society for Invertebrate Conservation, *Monarch Butterfly Conservation*, https://xerces.org/monarchs [last accessed 13 June 2024].

89 UNFCC, *Climate Change, Small Island Developing States*, 2005, https://unfccc.int/resource/docs/publications/cc_sids.pdf [last accessed 8 July 2024], p. 5.

90 UNFCC, *Climate Change, Small Island Developing States*, 2005, https://unfccc.int/resource/docs/publications/cc_sids.pdf [last accessed 8 July 2024], p. 5.

91 IPCC Climate Change Report 2022, p. 2060.

92 UN, *About Small Island Developing States (SIDS)*, https://sdgs.un.org/smallislands/about-small-island-developing-states [last accessed 23 June 2024].

93 IPCC Climate Change Report 2022 p. 2060.

94 Critical Ecosystem Partnership Fund, *Caribbean Islands – Species*, https://www.cepf.net/our-work/biodiversity-hotspots/caribbean-islands/species [last accessed 23 June 2024].

Already today, just under half of all species considered to be at risk of extinction are endemic to oceanic islands.[95]

43. GHG emissions and climate change pose a severe existential threat to the biodiversity of SIDS even in a scenario involving a global temperature rise of 1.5°C,[96] in particular due to drought, sea level rise and coral bleaching. As temperatures rise, freshwater systems on small islands are among the most threatened on the planet.[97] Marine flooding is expected to destroy habitats of coastal species, with many already listed as at least threatened by the International Union for Conservation of Nature.[98] Coral bleaching caused by elevated water temperatures likewise destroys coral reefs around SIDS.[99] Even if global warming remains below 1.5°C above pre-industrial levels, SIDS will suffer devastating effects and any progression to higher levels of warming will be fatal to them and the biodiversity they support.[100]

III.4 A loss of biodiversity is a loss for humanity

44. A loss of biodiversity is not just a crisis for the species affected. It is a fundamental concern for humanity at large. As explained below in subsection A, as biodiversity is depleted, so too is the Earth's capacity to meet the needs of human life. As set out in subsection B, it also impacts humanity's ability to mitigate the effects of climate change itself.

A. Nature as a critical human need

45. As the IPBES Report 2019 confirmed, "*[n]ature is essential for human existence and good quality of life*."[101] It plays a critical role in providing food and feed, energy, medicines and genetic resources and a variety of materials fundamental for people's physical well-being and maintaining culture.[102] For example, as the IPBES Report

95 IPCC Climate Change Report 2022, p. 2060.

96 IPCC Climate Change Report 2022, p. 2046.

97 IPCC Climate Change Report 2022, p. 2045.

98 IPCC Climate Change Report 2022, p. 2060.

99 IPCC Climate Change Report 2022, p. 2056.

100 European Commission, *Even at 1.5°C warming, small island developing states risk flooding from sea level rise*, 5 December 2023, https://joint-research-centre.ec.europa.eu/jrc-news-and-updates/even-15degc-warming-small-island-developing-states-risk-flooding-sea-level-rise-2023-12-05_en [last accessed 8 July 2024]; see also UNEP, *New research predicts the future of coral reefs under climate change*, 5 January 2017, https://www.unep.org/news-and-stories/story/new-research-predicts-future-coral-reefs-under-climate-change [last accessed 8 July 2024].

101 IPBES Report 2019, p. XIV.

102 IPBES Report 2019, p. XIV.

outlined:[103]

(a) More than 2 billion people rely on wood fuel to meet their primary energy needs;

(b) An estimated 4 billion people rely primarily on natural medicines for their health care;

(c) Approximately 70% of drugs used for cancer are natural or are synthetic products inspired by nature;

(d) Nature sustains the quality of the air, fresh water and soils on which humanity depends;

(e) Nature provides pollination, which is essential for agriculture (indeed, 75% of global food crop types, including fruits and vegetables and some of the most important cash crops, such as coffee, cocoa and almonds, rely on animal pollination), and provides pest control; and

(f) Nature contributes to non-material aspects of quality of life – inspiration and learning, physical and psychological experiences and supporting identities – that are central to cultural integrity.

46. Given this, it is self-evident why the United Nations Environment Programme ("**UNEP**") concluded in 2019 that biodiversity is "*critical for human well-being, as are ecosystem services more broadly*," and that a major species extinction event is "*compromising planetary integrity and Earth's capacity to meet human needs*."[104] Similarly, the findings of the Intergovernmental Panel on Climate Change ("**IPCC**") recognise that climate change is a threat to human wellbeing and planetary health, and that safeguarding biodiversity and ecosystems is fundamental to climate resilient development.[105] In essence, losing biodiversity poses a risk to human life itself.

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103 IPBES Report 2019, p. XIV.

104 UN Environment Programme ("**UNEP**"), *Global Environmental Outlook: GEO 6 – Healthy Planet, Healthy People*, 2019, https://www.unep.org/resources/global-environment-outlook-6 [last accessed 13 June 2024], p. 8; UNEP, *Global Environmental Outlook: GEO 6 – Summary for Policymakers*, 2019, https://www.unep.org/resources/assessment/global-environment-outlook-6-summary-policymakers [last accessed 13 June 2024], p. 8.

105 IPCC Climate Change Report 2022, Sections B.2.1 and D.5.3.

B. Biodiversity as an effective and sustainable climate change mitigation measure

47. In addition to all of the benefits brought by biodiversity outlined in subsection A above, biodiversity offers an effective and sustainable means of mitigating climate change. This is the case, in particular, as a result of (i) utilising natural processes and ecosystems to remove and sequester CO_2; and (ii) mitigating other negative impacts of climate change reducing the risks associated with natural disasters exacerbated by climate change.

(1) Role of biodiversity in climate regulation

48. While there is no doubt that climate change prevention efforts should prioritise cutting GHG emissions, there is also a need for the removal of CO_2 from the atmosphere to balance residual emissions from sectors that are difficult to decarbonise, such as agriculture, shipping, and aviation.[106] Additionally, if targets for net-zero are not met, CO_2 removal will become crucial to compensate for the exceeded carbon budget.[107] Ecosystems can play an important role in this process, absorbing and sequestering CO_2 to reduce the acceleration of the climate change process.

49. By way of example, the effectiveness of natural forests, wetlands, grasslands and marine ecosystems as carbon sinks are described below. Other ecosystems, however, are also important.

(i) Natural forests

50. Forests, particularly tropical rainforests, act as major carbon sinks by absorbing CO_2 from the atmosphere during photosynthesis and storing it in biomass and soils. Indeed, it is estimated that forests absorb approximately 2.6 billion metric tonnes of CO_2 annually, with tropical forests alone sequestering about 25% of the world's carbon emissions from fossil fuels.[108]

51. Forests with more biodiversity store more carbon than those with less diversity because different species of plants grow at various rates and have different life spans and wood densities which collectively contribute to more robust and efficient carbon capture and

106 IPCC Climate Change Report 2022 p. 2689.

107 IPCC Climate Change Report 2022, p. 2689.

108 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 22.

storage capacities across the ecosystem.[109] Natural forests also assist in mitigating the direct effects of climate change on the health of people and wildlife. For example, a study found that trees and forests in the United States removed 17.4 million tonnes of air pollution in 2010. The improved air quality alone led to an estimated reduction of more than 670,000 incidences of acute respiratory symptoms.[110]

(ii) Wetlands

52. Wetlands can store more carbon for every unit area than any other type of ecosystem due to their oxygen-free, water-logged soils which hinder organic matter decomposition and enable substantial carbon accumulation.[111] Despite taking up only 3% of Earth's land surface, peatlands (a specific variety of wetlands) contain around 30% of all soil carbon found globally.[112] Once locked into such swamps through prolonged decay processes, organic compounds do not break down easily and the carbon stays stored for a long time. This makes peatlands better carbon sinks than forests, where faster decomposition rates are more common.

(iii) Grasslands

53. Grasslands occupy about 40.5% of the Earth's land surface, with the largest expanses in Sub-Saharan Africa and Asia.[113] Grassland soils are estimated to contain nearly 50% more carbon than terrestrial forests.[114] The reason for the greater ability to store carbon is largely due to their deep root systems, which deposit carbon far beneath the surface where it cannot easily be eroded or washed away.

(iv) Marine ecosystems

54. Oceans absorb about 23% of human-emitted CO_2 by methods that are both biological

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109 Climate ADAPT, *Role of Biodiversity in Climate Change Mitigation (ROBIN)*, 2016, https://climate-adapt.eea.europa.eu/en/metadata/projects/role-of-biodiversity-in-climate-change-mitigation [last accessed 13 June 2024].

110 WWF, *COVID 19: Urgent Call to Protect People and Nature*, 2022, https://files.worldwildlife.org/wwfcmsprod/files/Publication/file/4ts1zx54w7_FINAL_REPORT_EK_Rev_2X.pdf?_ga=2.13543671.1786120103.1716802324-1221905153.1710090103 [last accessed 13 June 2024], p. 11.

111 World Economic Forum, *Wetlands, The Forgotten Carbon Sink That Can Help Mitigate Impact of Climate Change*, 21 December 2023, https://www.weforum.org/agenda/2023/12/wetlands-carbon-sink-climate-change-mitigation/ [last accessed 13 June 2024].

112 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 18.

113 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 22.

114 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 22.

(such as marine photosynthesis) and physical (like CO_2 dissolving in seawater).[115] The oceans have also absorbed around 90% of the heat the warming that has occurred due to GHG emissions.[116] According to a recent report, the ocean has the power to provide one-fifth of the emissions reductions needed to meet the Paris Agreement and limit global temperature rise to 1.5°C.[117]

55. Marine plants and animals also have a role to play. For example, seagrasses store carbon at rates over 30 times that of tropical rainforests,[118] and mangroves along coasts also absorb CO_2 several times faster than terrestrial forests on land.[119] Krill also contribute to carbon sequestration by sinking their faeces and shedding their exoskeletons, a process that results in the sinking of about 23 megatonnes of carbon into the ocean depths every year.[120] Whales also store significant amounts of carbon in their bodies. For example, one whale can capture an average of 33 tons of CO_2 over its lifespan.[121] By contrast, a live oak tree, one of the most efficient carbon-capturing tree species, captures roughly 12 tons of CO_2 over a maximum 500-year lifespan.[122]

(2) Role of biodiversity in protecting humans against natural disasters caused by GHG emissions

56. Natural habitats are also key to mitigating the natural disasters and extreme weather caused by climate change. For example, coastal wetlands and coral reefs serve as effective barriers against coastal threats, absorbing storm surges and decreasing wave energy which would otherwise lead to floods or erosion in neighbouring habitats, farmlands or urban settlements.[123] This natural buffering effect reduces the risk of saltwater flooding and coastal collapse, which protects lives, crops and key facilities

115 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 12.

116 NASA, *Ocean Warming*, December 2023, https://climate.nasa.gov/vital-signs/ocean-warming/?intent=121 [last accessed 27 June 2024].

117 WWF, *Oceans*, https://www.wwf.org.uk/philanthropy/oceans [last accessed 10 July 2024].

118 WWF, *Oceans*, https://www.wwf.org.uk/philanthropy/oceans [last accessed 10 July 2024].

119 WWF, *Mangroves As A Solution To The Climate Crisis*, https://www.worldwildlife.org/stories/mangroves-as-a-solution-to-the-climate-crisis [last accessed 13 June 2024].

120 WWF, *Antarctic Krill Provide Carbon Storage Services Worth US$15.2 Billion*, https://wwfwhales.org/news-stories/wwf-antarctic-krill-report-2022 [last accessed 13 June 2024].

121 NOAA Fisheries, *Whales and Carbon Sequestration: Can Whales Store Carbon?*, 13 February 2024, https://www.fisheries.noaa.gov/feature-story/whales-and-carbon-sequestration-can-whales-store-carbon#:~:text=One%20whale%20can%20capture%20an,a%20maximum%20500%2Dyear%20lifespan [last accessed 13 June 2024].

122 NOAA Fisheries, *Whales and Carbon Sequestration: Can Whales Store Carbon?*, 13 February 2024.

123 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 23.

from storms and rising sea levels.[124]

57. Ecosystems also influence regional climates by adjusting the balance of energy and water within the atmosphere through biophysical processes. For example, forests are dark in colour and therefore absorb heat from the sun,[125] and the rough texture of forest canopies helps warm air rise upwards, which cools down the surface and redistributes moisture across the air.[126] Oceans also absorb around 90% of the Earth's excess heat,[127] and wetlands act as natural sponges, soaking up rain into the soil for groundwater replenishment and providing water reserves during droughts.[128]

III.5 Protecting the climate system from GHGs for States and for present and future generations involves protecting biodiversity

58. For reasons set out above, a loss of biodiversity would not just be a crisis for natural species and systems. Humanity stands to suffer – both now and in future. It is undeniable that emissions of GHGs and climate change are producing serious and detrimental impacts on biodiversity today. Since biodiversity (including the species and natural systems which underpin biodiversity) forms part of the climate system, it follows that protecting the climate system from GHGs for States and present and future generations involves protecting biodiversity.

59. Moreover, natural systems can be harnessed to combat climate change. While reducing emissions must be the priority of States in order to have a chance of achieving the global warming limit contained in the Paris Agreement[129] of 1.5°C or well below 2°C, emissions reductions on their own may not be sufficient. As explained above, there will likely be a need for the removal of CO_2 from the atmosphere to balance residual emissions from sectors that are difficult to decarbonise.

60. Biodiverse ecosystems act as major carbon sinks by absorbing CO_2 from the atmosphere and storing it in biomass, soils and waters. Biodiverse natural habitats are also key to mitigating the natural disasters and extreme weather caused by climate

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124 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 13.

125 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 13.

126 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 13.

127 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 9.

128 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 13.

129 Paris Agreement (adopted 12 December 2015, entered into force 14 November 2016) 3156 UNTS 79. The Paris Agreement has 195 Parties as of 30 June 2024.

change. The preservation and restoration of these ecosystems are therefore critical for maintaining their carbon sequestration capabilities and mitigating the adverse effects of climate change.

54. By failing to take steps to stem the degradation of nature caused by climate change, States and other actors undermine efforts to tackle the climate crisis and, in fact, accelerate its onset and exacerbate its impacts. Therefore, protecting biodiversity is central to addressing the climate crisis, as well as being a vital undertaking in its own right, given the intrinsic value of biodiversity and the importance of the many benefits it brings to humanity, today and in the future.

IV. STATES' OBLIGATIONS UNDER INTERNATIONAL LAW TO ENSURE THE PROTECTION OF BIODIVERSITY FOR OTHER STATES AND FOR PRESENT AND FUTURE GENERATIONS

61. The Court's answers to the Questions have the potential to shape States' actions (and consequently those of private actors which States regulate) in the climate sphere. Against that backdrop, it is imperative that the Court considers and clarifies States' obligations in respect of biodiversity.

62. It is on that basis that WWF considers Question (a) of Resolution 77/276, without prejudice to its position that the obligations encompassed in Question (a) are much wider than obligations in respect of the protection of biodiversity:

> *"What are the obligations of States under international law to ensure the protection of the climate system and other parts of the environment from anthropogenic emissions of greenhouse gases for States and for present and future generations."*

63. WWF's analysis of Question (a) is structured as follows:

(a) Section IV.1 provides an executive summary of WWF's answer to Question (a);

(b) Section IV.2 sets out WWF's preliminary observations on the scope of Question (a);

(c) Section IV.3 addresses international law obligations which relate to the protection of biodiversity and fall within the scope of Question (a); and

(d) Section IV.4 addresses further obligations on States to prevent harm to biodiversity from emissions of GHGs for present and future generations.

IV.1 Executive Summary

64. States have obligations under customary international law (i) to prevent transboundary harm to biodiversity; and (ii) to cooperate and exercise vigilance in preventing such harm, including (iii) by conducting Environmental Impact Assessments ("**EIAs**") and (as increasingly recognised) Strategic Environmental Assessments ("**SEAs**").

65. These obligations are all relevant in the context of Question (a) because (i) biodiversity forms part of "*the climate system and other parts of the environment*"; (ii) biodiversity is harmed by GHG emissions (either directly or by virtue of climate change); and (iii) biodiversity is directly linked to the protection of the climate system and other parts of the environment. Indeed, as outlined above in Section III, biodiversity plays a crucial role in regulating the climate system, in absorbing CO_2 from the atmosphere and in avoiding further emissions of GHGs.

66. The obligation to prevent harm to biodiversity is an obligation of due diligence. Accordingly, States must take all measures necessary to mitigate the impact of climate change on biodiversity. This includes, at the very least, taking measures to limit the global temperature increase to 1.5°C. It also encompasses the obligation to take other steps, informed by current scientific knowledge, such as preventing deforestation, restoring forests and land and conserving biologically sensitive environments. Relatedly, States have the duty to cooperate, including by sharing information, when taking such measures and steps, and by conducting EIAs and SEAs.

67. Those obligations are derived from general principles of international law. They also feature prominently in specific treaties which contain obligations to prevent harm to biodiversity caused by GHG emissions and climate change more broadly. Such treaties include those which address climate change specifically, such as the 1992 United Nations Framework Convention on Climate Change ("**UNFCCC**")[130] and the Paris Agreement. They also include treaties which are focused on biodiversity, such as the CBD, which contains specific obligations directly relevant to the mitigation of the effect

130 United Nations Framework Convention on Climate Change ("**UNFCCC**") (adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107. The UNFCC has 198 parties (including the European Union) as of 30 June 2024.

of climate change on biodiversity, including obligations of detailed monitoring by the Parties of the components of biological diversity and the duty to cooperate in respect of the protection of biodiversity.

68. Obligations relevant to Question (a) are also contained in a number of treaties aimed at protecting specific ecosystems, which are crucial to mitigating climate change. For instance:

(a) The Convention on Wetlands of International Importance Especially as Waterfowl Habitat (the "**Ramsar Convention**"),[131] which addresses the importance protecting natural sinks and reservoirs to mitigate climate change;

(b) The United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (the "**Convention to Combat Desertification**"),[132] the preamble to which recognises the importance of the Convention in achieving the objectives of the UNFCCC, the CBD and other related environmental conventions;

(c) The Protocol on Environmental Protection to the Antarctic Treaty (the "**Antarctic Protocol**"),[133] which addresses the importance of protecting the Antarctic, which is at severe risk from climate change and must also be preserved to mitigate the effect of climate change on other ecosystems;

(d) The United Nations Convention on the Law of the Sea ("**UNCLOS**"),[134] which addresses the importance of protecting and preventing harm to marine biodiversity which is critical to mitigating climate change;[135]

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131 Convention on Wetlands of International Importance especially as Waterfowl Habitat ("**Ramsar Convention**") (adopted 2 February 1971, entered into force 21 December 1975) 996 UNTS 245. The Ramsar Convention has 172 Parties as of 30 June 2024.

132 United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa ("**Convention to Combat Desertification**") (adopted 14 October 1994, entered into force 26 December 1996) 1954 UNTS 3. The Convention has 197 parties (including the European Union), as of 30 June 2024.

133 Protocol on Environmental Protection to the Antarctic Treaty ("**Antarctic Protocol**") (adopted 4 October 1991, entered into force 14 January 1998) 2941 UNTS 3. The Antarctic Protocol has 32 Parties as of 30 June 2024.

134 UN Convention on the Law of the Sea ("**UNCLOS**") (adopted 10 December 1982, entered into force 16 November 1994) 1833 UNTS 3. UNCLOS has 169 parties (including the European Union) as of 30 June 2024.

135 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 12.

(e) 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 ("**BBNJ**"),[136] which addresses marine biodiversity and includes the obligation to conduct SEAs; and

(f) The Convention on the Conservation of European Wildlife and Natural Habitats (the "**Bern Convention**"),[137] which is a regional treaty directed at the conservation of biodiversity both at threat from climate change and important to mitigating its effects.

69. Other treaties include obligations to protect specific species which are particularly at risk of significant harm from climate change and/or play an important role in mitigating the harmful effects of climate change. Those include the Convention on the Conservation of Migratory Species of Wild Animals,[138] Agreement on the Conservation of Polar Bears (the "**Polar Bear Agreement**"),[139] and International Convention for the Regulation of Whaling ("**ICRW**").[140]

70. In addition to customary international law and treaty obligations of States directed to the prevention of harm to biodiversity, international human rights law, as a body of international law that governs the relationship of the State to persons on the State's territory and/or within the State's jurisdiction, constitutes an essential part of the international legal framework directed at the protection of present and future generations from harm caused by the adverse effects of GHG emissions on biodiversity. The inextricable link between a healthy environment and thriving biodiversity has been widely recognised in the context of human rights. The rights potentially affected by biodiversity loss caused by the adverse effects of GHG emissions include rights to a healthy environment; life; health; an adequate standard of living; food; water, culture;

136 UN Depository Notification C.N.203.2023.TREATIES-XXI.10 of 20 July 2023. The BBNJ has 91 signatories and 8 Parties as of 30 June 2024.

137 Convention on the Conservation of European Wildlife and Natural Habitats (the "**Bern Convention**") (adopted 19 September 1979, entered into force 1 June 1982). 1284 UNTS 209.

138 Convention on the Conservation of Migratory Species of Wild Animals (adopted 23 June 1979, entered into force 1 November 1983) 1651 UNTS 333. The Convention has 133 parties (including the European Union) as of 30 June 2024.

139 Agreement on the Conservation of Polar Bears (adopted 15 November 1973, entered into force 26 May 1976) 2898 UNTS 243. The Agreement has five Parties as of 30 June 2024.

140 UN International Convention for the Regulation of Whaling ("**ICRW**") (adopted 2 December 1946, entered into force 10 October 1948) 161 UNTS 72. The ICRW has 20 State Parties as of 30 June 2024.

and non-discrimination. States' obligations to respect and ensure these various human rights as they relate to biodiversity crises are both substantive and procedural. Of particular importance is the obligation, widely recognised as integral to the right to a healthy environment, to ensure access to clean air, safe and sufficient water, a safe climate, healthy and sustainably produced food, adequate sanitation, non-toxic environments and healthy ecosystems and biodiversity.[141] In addition, regional human rights courts and treaty-body mechanisms have held that the rights to life and to the enjoyment of private and family life require States to take positive measures to prevent and mitigate against the adverse effects caused by GHG emissions, since these effects pose direct threats to life or the enjoyment of the right to life with dignity.

IV.2 Preliminary Observations

71. WWF makes four preliminary observations regarding the scope of the Question (a).

72. *First*, Question (a) requires the Court to consider States' obligations under all sources of international law. It is not restricted to the law applicable to climate change. This is clear from the question itself as well as the text of Resolution 77/276:

(a) Question (a) refers to "*the obligations of States under international law*" without qualifying the expression "*international law*," which suggests that the Question encompasses all sources of international law.

(b) The chapeau of the operative part of Resolution 77/276 contains a non-exhaustive list of treaties and principles of international law to which the Court is asked to "*have particular regard*". These include human rights treaties, UNCLOS, treaties specifically relating to climate change as well as customary international law principles.[142]

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141 UN Human Rights Council, *Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*, 30 December 2019, A/HRC/43/53, ¶¶ 8-18; UNGA, *Report of the Special Rapporteur on the Issue of Human Rights Obligations relating to the Environment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2019, A/74/161, ¶ 33; UN Human Rights Council, *Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*, A/HRC/55/41, 2 January 2024, p. 7; UN Committee on the Rights of the Child ("**UNCRC**"), *General Comment No. 26 on Children's Rights and The Environment, with a Special Focus on Climate Change*, 22 August 2023, CRC/C/GC/26, ¶ 64.

142 UNGA, Resolution 77/276, Chapeau ("…*the Charter of the United Nations, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, the United Nations Framework Convention on Climate Change, the Paris Agreement, the United Nations Convention on the Law of the*

(c) The preamble of Resolution 77/276 also refers to a number of treaties and principles of international law in a non-exhaustive manner. In addition to the treaties mentioned in the chapeau of the operative part of Resolution 77/276, the preamble contains an express reference to customary international law and includes references to treaties addressing biodiversity and nature, including the CBD and the Convention to Combat Desertification.[143]

73. *Second*, as set out in Section III, "*the protection of the climate system and other parts of the environment*" referred to in Question (a) includes the protection of biodiversity:

(a) It is well-established that the climate system means "*the totality of the atmosphere, hydrosphere, biosphere and geosphere and their interactions*," (emphasis added) pursuant to Article 1(3) of the UNFCCC.[144] The IPCC refers to an essentially similar definition of climate system in its glossary to its Sixth Assessment Report (the "**IPCC Glossary**") which also explicitly includes "*biosphere*" in the climate system.[145]

(b) The protection of the biosphere comprises the protection of all ecosystems and living organisms. Indeed, the IPCC Glossary defines "*biosphere*" as "*the part of the Earth system comprising all ecosystems and living organisms, in the atmosphere, on land (terrestrial biosphere) or in the oceans (marine biosphere), including derived dead organic matter, such as litter, soil organic matter and oceanic detritus*" (emphasis added).[146]

Sea, the duty of due diligence, the rights recognized in the Universal Declaration of Human Rights, the principle of prevention of significant harm to the environment and the duty to protect and preserve the marine environment…").

143 UNGA, Resolution 77/276, Preamble ("…*the importance of the Charter of the United Nations, the Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, the Convention on the Rights of the Child, the United Nations Convention on the Law of the Sea, the Vienna Convention for the Protection of the Ozone Layer, the Montreal Protocol on Substances that Deplete the Ozone Layer, the Convention on Biological Diversity and the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, among other instruments, and of the relevant principles and relevant obligations of customary international law, including those reflected in the Declaration of the United Nations Conference on the Human Environment and the Rio Declaration on Environment and Development, to the conduct of States over time in relation to activities that contribute to climate change and its adverse effects*…" (emphasis added)).

144 No Party to the UNFCCC has made any reservation or declaration in respect of this definition. What is more, this definition applies to the 1998 Kyoto Protocol to the UNFCCC and the 2015 Paris Agreement.

145 IPCC Glossary ("*The global system consisting of five major components: the atmosphere, the hydrosphere, the cryosphere, the lithosphere and the biosphere and the interactions between them. The climate system changes in time under the influence of its own internal dynamics and because of external forcings such as volcanic eruptions, solar variations, orbital forcing, and anthropogenic forcings such as the changing composition of the atmosphere and land-use change*." (emphasis added)), https://apps.ipcc.ch/glossary/ [last accessed 13 June 2024].

146 IPCC Glossary.

(c) It follows that the protection of the biosphere encompasses the protection of biodiversity given the definition of "biodiversity", included at Article 2 of the CBD as "*the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems*" (emphasis added).

(d) In any event, even if that were not the case, the reference to the "*other parts of the environment*" in Question (a) includes the protection of biodiversity. Thus, in the *Iron Rhine Arbitration*, the arbitral tribunal considered that "*environment*" could be "*broadly referred to as including air, water, land, flora and fauna, natural ecosystems and sites, human health and safety, and climate*"[147] (emphasis added). Relatedly, where treaties and jurisprudence refer to the notion of "environment" rather than "climate system," such references should be read as encompassing "biodiversity."

74. *Third*, the reference to "*anthropogenic emissions of greenhouse gases*" means emissions of GHGs caused by human activities, consisting primarily of H_2O, CO_2, N_2O, CH_4 and O_3 as well as of human made GHGs such as SF_6, HFCs, CFCs and PFCs. This is supported by the respective definitions of "*anthropogenic emissions*" and "*GHGs*" in the IPCC Glossary:

> *"GHGs" are "Gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and emit radiation at specific wavelengths within the spectrum of radiation emitted by the Earth's surface, by the atmosphere itself, and by clouds. This property causes the greenhouse effect. Water vapour (H2O), carbon dioxide (CO2), nitrous oxide (N2O), methane (CH4) and ozone (O3) are the primary GHGs in the Earth's atmosphere. Human-made GHGs include sulphur hexafluoride (SF6), hydrofluorocarbons (HFCs), chlorofluorocarbons (CFCs) and perfluorocarbons (PFCs); several of these are also O3-depleting (and are regulated under the Montreal Protocol)."* [148]
>
> *"Anthropogenic emissions" are "Emissions of greenhouse gases (GHGs), precursors of GHGs and aerosols caused by human activities. These activities include the burning of fossil fuels, deforestation, land use and land use changes*

147 *Iron Rhine Arbitration (Belgium/Netherlands)*, PCA Case No. 2003-02, Award, 24 May 2005, ¶ 58.

148 IPCC Glossary.

(LULUC), livestock production, fertilisation, waste management, and industrial processes."[149]

75. *Fourth*, the expression "*for States and for present and future generations*" acknowledges that the protection of the climate system (and other parts of the environment) from GHG emissions caused by human activities necessarily affects the human population born and unborn. This is in keeping with the Court recognising in its Advisory Opinion on the *Legality of the Threat or Use of Nuclear Weapons* that "*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*."[150]

76. As such, it is to be understood that all the obligations referred to in Question (a) affect the human population born and unborn. Furthermore, these obligations need to be interpreted in light of the relevant international instruments of protection of human rights as they give individual and concrete meaning to the obligations enshrined in other treaties. WWF addresses the particular connection between human rights, climate change and biodiversity in Section IV.5 of this Statement.

IV.3 International Law Obligations of States to Protect Biodiversity from GHG Emissions

77. States have a positive general obligation to take measures to avoid causing transboundary harm under customary international law. As this Section explains, such harm includes harm to biodiversity in other States. The scope of the obligation is one of due diligence, meaning that States must use all means at their disposal to ensure that it is not breached. The duty to cooperate and to conduct EIAs flows from this obligation. Since GHG emissions pose a significant risk of transboundary harm to biodiversity, these obligations fall squarely within the scope of Question (a).

A. The obligation to prevent transboundary harm applies to biodiversity

78. The obligation to prevent transboundary harm has long been recognised as a principle of customary international law, finding its origin in States' territorial sovereignty, the corollary of which is a duty, incumbent upon all States, to protect within their own

149 IPCC Glossary.

150 *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 8 July 1996, ICJ Rep. 1996, ¶ 29.

territory the rights of other States to integrity and inviolability.[151] In other words, States are obliged not to cause harm to other States.

79. The customary obligation to prevent transboundary harm was applied by the Court in the context of the prevention of environmental harm in the *Trail Smelter* case in 1941,[152] and confirmed in *Legality of the Threat or Use of Nuclear Weapons*,[153] *Pulp Mills*[154] and, more recently, *Silala*.[155] The Court also confirmed, in *Gabčíkovo-Nagymaros*,[156] that the underlying rationale for the obligation to prevent transboundary harm in the environmental context arises out of the often irreversible character of damage to the environment.

80. The obligation in the context of the protection of the environment is also enshrined in Principle 21 of the 1972 Stockholm Declaration and reiterated (with a minor modification)[157] in Principle 2 of the 1992 Rio Declaration, which reads:

> *"States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."* (Emphasis added)

81. In light of the above, there can be no doubt that the obligation to prevent transboundary harm applies to damage to the environment, and therefore to the biodiversity of other States.

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151 *Island of Palmas case (Netherlands v. USA)*, PCA Case No. 1925-01, 4 April 1928, Reports of International Arbitral Awards, Vol. II, p. 839.

152 *Trail Smelter Case (USA v. Canada)*, 11 March 1941, Reports of International Arbitral Awards, 1938-1941, Vol. III, p. 1965.

153 *Legality of the Threat or Use of Nuclear Weapons*, ¶ 29.

154 *Pulp Mills on the River Uruguay (Argentina v. Uruguay)*, Judgment, ICJ Rep. 20 April 2010, ¶ 101.

155 *Dispute over the Status and Use of the Waters of the Silala (Chile v. Bolivia)*, Judgment, ICJ Rep.2022, ¶¶ 83, 99.

156 *Gabčíkovo-Nagymaros*, ¶ 140. This is the understanding behind the obligation to prevent transboundary harm more generally as well. *See* ILC Articles on Prevention on Transboundary Harm, 2001 and their commentary (the "**ILC Articles on Transboundary Harm**"), General Commentary, p. 148, ¶ 2.

157 UNGA, *Report of the UN Conference on Environment and Development* ("**Rio Declaration**"), 12 August 1992, A/CONF.151/26 (Vol 1) ("*States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction*." (modification highlighted)).

(1) GHGs caused by human activities constitute a risk of significant transboundary harm to biodiversity, such that the obligation to prevent harm is engaged

82. The obligation to prevent harm is engaged when there is a risk of significant transboundary harm to biodiversity.

83. *First*, in respect of the establishment of a significant risk of harm:

(a) The obligation is triggered by the mere risk of causing transboundary harm; there is no requirement that damage is actually caused.[158]

(b) The question is whether the combined effect of "*risk*" and "*harm*" reaches a level that is deemed significant.[159] Such a combined effect encompasses "*a high probability of causing significant transboundary harm and a low probability of causing disastrous transboundary harm.*"[160]

(c) The term "*significant*" is something more than detectable but need not be at the level of "*serious*" or "*substantial*."[161]

(d) A determination in the latter respect is case and fact specific[162] taking into account the scientific knowledge at the time when the determination is made.[163] It is made by considering whether the harm leads to a real detrimental effect on matters, such as for example, human health, industry, property, environment or agriculture in other States.[164] Such detrimental effects must be susceptible to being measured by factual and objective standards.[165]

84. *Second*, the transboundary nature of the harm means harm to the environment of "*other States*" as well as "*areas beyond the limits of national jurisdiction*." As to which:

158 *See* the ILC Articles on Transboundary Harm, p. 149, Arts. 1 and 2(a). *See* also, *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) and Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica)*, Judgment, ICJ Rep. 2015, p. 720, ¶ 155 where the Court considered the risk of transboundary harm caused by a road project.

159 ILC Articles on Transboundary Harm, Commentary to Article 2, p. 152, ¶ 2.

160 ILC Articles on Transboundary Harm, Commentary to Article 2, p. 152, ¶ 3.

161 ILC Articles on Transboundary Harm, Commentary to Article 2, p. 152, ¶ 4.

162 ILC Articles on Transboundary Harm, Commentary to Article 2, p. 152, ¶ 4.

163 ILC Articles on Transboundary Harm, Commentary to Article 2, p. 152, ¶ 7.

164 ILC Articles on Transboundary Harm, Commentary to Article 2, p. 152, ¶ 4.

165 ILC Articles on Transboundary Harm, Commentary to Article 2, p. 152, ¶ 4.

(a) "*Other states*" are States other than the State in the territory or jurisdiction of which the relevant conduct originates whether or not the States concerned share a common border.[166]

(b) "*Areas beyond the limits of national jurisdiction*" means that the obligation to prevent harm also applies to areas that are not part of the territory of any specific State.[167] This thus applies to "*shared resources*" that are the common heritage of mankind.[168] Notably, the Court recognised in *Legality of the Threat or Use of Nuclear Weapons*[169] and *Gabčíkovo-Nagymaros*[170] that the environment (and thus biodiversity) forms part of the common heritage of mankind.

85. Applying the test above:

(a) There is <u>at the very least</u> a risk that GHGs caused by human activities cause significant harm to biodiversity. As explained in Section III above, the scientific evidence is clear that GHG emissions have caused devastating harm to biodiversity and that if the emissions remain unchanged further such harm will be caused. In light of the crucial role of biodiversity in combatting climate change, there is a further significant risk that States' failure to protect biodiversity will further increase the volume of GHG emissions caused by human activities, which in turn will cause further devastating harm to biodiversity.

(b) There is no doubt that the harm is of a transboundary nature given that it affects biodiversity, which forms part of the environment, which in turn constitutes a shared resource of mankind.

86. It follows that the obligation to prevent harm to biodiversity is engaged in the context of the climate crisis which forms part of States' obligations included in Question (a).

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166 ILC Articles on Transboundary Harm, Arts. 2(c)-(d), p. 152.

167 *Legality of the Threat or Use of Nuclear Weapons*, p. 226, ¶ 29.

168 *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)*, Advisory Opinion, 1 February 2011, ITLOS Case No. 17, ¶ 148.

169 *Legality of the Threat or Use of Nuclear Weapons*, ¶ 29.

170 *Gabčíkovo-Nagymaros*, ¶ 140, where the Court insisted on the "*often irreversible character of damage to the environment*" and on the "*growing awareness of the risks for mankind – for present and future generations – of pursuit of* [interference with nature]."

(2) States are obliged to use all the means at their disposal to mitigate climate change

87. The obligation of States to prevent harm is an obligation of due diligence.[171]

88. The standard of due diligence is a stringent one, namely the obligation is for States to use all the means at their disposal to prevent harm.[172]

89. Whether the due diligence standard is met depends on the point in time when the conduct is assessed, particularly in light of the scientific and technological knowledge at the relevant time[173] and the seriousness of the potential harm if no action is taken.[174] This duty applies to activities conducted within a State's jurisdiction or control regardless of whether public or private conduct is involved.[175]

90. The "*use of all means*" at the State's disposal includes the adoption of appropriate legal and administrative frameworks and their monitoring[176] and the formulation of policy measures consistent with international standards.[177]

91. In the context of mitigating harm to biodiversity caused by climate change specifically, such frameworks and measures must, at a minimum, address:

(a) Limiting temperature increase to 1.5°C above pre-industrial levels (the significant harm that will be caused to biodiversity at temperatures above this level are addressed in Section III); and

(b) The protection, restoration and conservation of ecosystems.

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171 *Pulp Mills*, ¶ 101. *See* also *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)*, Advisory Opinion, 1 February 2011, ITLOS Case No. 17, ¶ 115; *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission*, Advisory Opinion, 2 April 2015, ITLOS Case No. 21, ¶ 131; *South China Sea (Philippines v. China)*, PCA Case No. 2013-19, Award, 12 July 2016, ¶ 944. *See* further ILC Articles on Transboundary Harm, Art. 3, p. 152.

172 *Pulp Mills*, ¶ 101.

173 *Gabčíkovo-Nagymaros*, ¶ 140; *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)*, ¶¶ 111, 15; *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission*, ¶ 132.

174 *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)*, ¶¶ 111, 15; *Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission*, ¶ 132.

175 *Pulp Mills*, ¶ 197.

176 ILC Articles on Transboundary Harm, Commentary to Article 3, p. 154, ¶ 10.

177 *Gabčíkovo-Nagymaros*, ¶ 140. *See* also *South China Sea (Philippines v. China)*, PCA Case No. 2013-19, Award, 12 July 2016, ¶¶ 941, 956, 959.

92. As regards (b) above, in particular:

(a) Deforestation must be halted. As set out in Section III, the value that forests offer in terms of mitigating the effects of climate change is significant. In the Amazon, the Amazon Region Protected Areas ("**ARPA**") program has successfully protected approximately 128 million hectares of the Amazon rainforest, an area nearly the size of France.[178] ARPA's achievements include the establishment and effective management of numerous protected areas, which have significantly reduced deforestation rates within these zones. Studies indicate that deforestation rates in protected areas under ARPA are 75% lower.[179] Additionally, these efforts have enhanced carbon storage, sequestering an estimated 4.6 billion metric tonnes of CO_2, thus playing a critical role in mitigating climate change.[180]

(b) Forests and land must be restored. Restoring vegetation and rehabilitating agricultural lands are critical steps for carbon management. For example, studies show that rewetting drained organic soils currently used for agriculture within the European Union could cut down emissions by more than 104 million metric tonnes of CO_2, which is equivalent to Austria's or Romania's annual GHG emissions.[181] Projects to restore peatlands, such as the one implemented by WWF in Indonesia, also provide a huge carbon bonus.[182] Similarly, re-wetting peatlands could considerably cut down GHG emissions.[183] Other initiatives, such as WWF's Eastern Himalayas Program[184] and the Atlantic

178 WWF, *The Amazon Region Protected Areas Program is The Single Largest Tropical Forest Conservation Program in History*, Summer 2014, https://www.worldwildlife.org/magazine/issues/summer-2014/articles/the-amazon-region-protected-areas-program-is-the-single-largest-tropical-forest-conservation-program-in-history [last accessed 14 June 2024].

179 WWF, *The Amazon Region Protected Areas Program is The Single Largest Tropical Forest Conservation Program in History*.

180 WWF, *Reduction of Carbon Emissions Associated with Deforestation in Brazil: The Role of the Amazon Region Protected Areas Program (ARPA)*, https://assets.wwf.org.uk/downloads/arpa_report.pdf [last accessed 13 June 2024], pp. 3, 19.

181 WWF, *Nature Restoration – the Missing Piece in the EU Climate Action Puzzle*, 2022, https://wwfeu.awsassets.panda.org/downloads/wwf_briefing_paper_nature_restoration_missing_piece_in_eu_climate_action_puzzle_feb_2.pdf [last accessed 13 June 2024], p. 6.

182 WWF, *Peatland restoration in Indonesia*, 8 July 2019, https://forestsolutions.panda.org/case-studies/peatland-restoration-in-indonesia [last accessed 18 June 2024].

183 WWF, *Peatland Restoration in Indonesia*.

184 WWF, *Eastern Himalayas*, https://www.worldwildlife.org/places/eastern-himalayas [last accessed 14 June 2024].

Forest Restoration Pact,[185] have led to the establishment and management of hundreds of thousands of square kilometres of protected areas, and the reforestation of over 700,000 hectares of land. The Atlantic Forest Restoration Pact alone is estimated to sequester over 45 million metric tonnes of CO_2 by 2030.[186]

(c) Biologically sensitive land must be conserved. Conserving biologically sensitive land by minimising human interference is essential for maintaining ecological balance. Protecting these areas from degradation allows them to operate naturally and support diverse species. This enables them to absorb GHG emissions effectively, which supports global ecological stability. For example, the Global Mangrove Alliance, co-founded by WWF, aims to increase the global area of mangrove habitat by 20% by 2030 through restoration and conservation efforts. Since its inception, the Alliance has restored over 30,000 hectares of mangrove forests in various States, including Indonesia, Madagascar and Mexico. These efforts have enhanced coastal protection, increased carbon sequestration (estimated at 3.5 million metric tonnes of CO_2 annually) and improved fisheries productivity, benefiting local communities.[187]

(d) Marine environments must be conserved and restored. For the reasons set out in Section III, maintaining healthy marine environments is key to mitigating the effects of climate change. Projects like the Seeds of Hope programme, led by WWF with Project Seagrass and Swansea University aims to re-establish 2,500 hectares of seagrass meadows in the UK's coastal waters by 2030, increasing their carbon storage capacity.[188] In addition, the WWF Blue Forests Rising initiative aims to protect and restore 8.3 million hectares of mangroves, seagrasses, saltmarshes and seaweeds (so-called "blue forests") globally by

185 WWF, *Atlantic Forest declared UN World Restoration Flagship*, https://www.worldwildlife.org/stories/atlantic-forest-declared-un-world-restoration-flagship [last accessed 13 June 2024].

186 WWF, *Atlantic Forest declared UN World Restoration Flagship*, https://www.worldwildlife.org/stories/atlantic-forest-declared-un-world-restoration-flagship [last accessed 13 June 2024].

187 WWF, *The Global Mangrove Alliance: Uniting to Conserve and Restore Valuable Coastal Forests*, https://www.worldwildlife.org/projects/the-global-mangrove-alliance-uniting-to-conserve-and-restore-valuable-coastal-forests [last accessed 14 June 2024].

188 WWF, *Oceans*, https://www.wwf.org.uk/philanthropy/oceans [last accessed 10 July 2024].

2030.[189] These biodiverse habitats are natural carbon sinks, as well as being home to a multitude of other species that are put at risk if they are not protected.

93. Other appropriate legal and administrative frameworks and policies, and policy measures consistent with international standards, may include measures specifically envisaged in the treaties set out below.

(3) Duty to cooperate

94. The duty to cooperate establishes that States must cooperate in the achievement of their obligation to prevent transboundary harm to biodiversity caused by GHG emissions.

95. The duty to cooperate is enshrined in the UN Charter as a purpose of the United Nations Organisation (Article 1(3)) as well as a principle governing the relations between State Members and the Organisation itself (Article 2(5)). It has also been recognised repeatedly as a rule of international law by the Court, in particular in the context of environmental matters and shared resources.[190]

96. The duty is most fully articulated in the 1970 Friendly Relations Declarations,[191] as well as, *inter alia*, Principle 7 of the Rio Declaration,[192] Principle 24 of the Stockholm Declaration,[193] Guideline 8 of the ILC Draft Guidelines on the Protection of the Atmosphere[194] and the UNFCCC, the preamble of which expressly refers to the duty of cooperation.[195]

97. As to the nature and content of the duty to cooperate, the relevant principles are as follows:

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189 WWF, *Oceans*, https://www.wwf.org.uk/philanthropy/oceans [last accessed 10 July 2024].

190 *Pulp Mills*, ¶ 77; *Dispute over the Status and Use of the Waters of the Silala (Chile v. Bolivia)*, ¶¶ 100–101. *See* also *Gabčíkovo-Nagymaros*, ¶ 140.

191 UNGA Resolution 2625 (XXV), *Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations*, 24 October 1970, Annex.

192 Rio Declaration, Principle 7 ("*States shall cooperate in a spirit of global partnership to conserve, protect, and restore the integrity and health of the Earth's ecosystem*.").

193 UNGA, *Report of the United Nations Conference on the Human Environment, Declaration of the United Nations Conference on the Human Environment*, Stockholm, 5-16 June 1972, A/CONF.48/14/Rev.1.

194 International Law Commission ("**ILC**"), *Draft Guidelines on the Protection of the Atmosphere, Provisional text adopted by the ILC at its seventy-third session*, 13 July 2021, submitted to the General Assembly as a part of the Commission's report covering the work of that session, A/76/10.

195 UNFCCC, Preamble, ¶ 6 ("*Acknowledging that the global nature of climate change calls for the widest possible cooperation by all countries* […]").

98. *First*, the duty to cooperate is an "*obligation of conduct*."[196] It does not inherently mandate a specific substantive outcome resulting from cooperation. However, the outcomes derived from cooperative efforts can serve as indicators of a State's fulfilment of its duty to cooperate.[197]

99. *Second,* the duty to cooperate is of a continuing nature, necessitating sustained engagement rather than a one-time act. It is essential in designing and implementing effective policies to prevent significant environmental harm (including harm to biodiversity) or in any event to minimise the risk thereof. The requirement of cooperation extends to all phases of planning and of implementation of such policies.[198]

100. *Third,* the duty to cooperate encompasses a range of procedural obligations, including obligations to monitor, notify and consult.

101. The obligations to notify and consult are expressly recognised in Principle 19 of the Rio Declaration, which confirms that "*States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith*."[199] The Court has also recognised that the duty to cooperate includes the obligation to notify and consult,[200] as well as to monitor.[201]

102. States therefore have an obligation to cooperate to prevent harm to biodiversity, which includes the obligations to notify, consult and monitor. In practice, this means that when

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196 *North Sea Continental Shelf*, Judgment, ICJ Rep. 1969, ¶ 85; *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*, Judgment, ICJ Rep. 2002, ¶ 244; *Gabčíkovo-Nagymaros*, ¶ 141.

197 *North Sea Continental Shelf*, Judgment, ICJ Rep. 1969, ¶ 85; *Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening)*, Judgment, ICJ Rep. 2002, ¶ 244; *Gabčíkovo-Nagymaros*, ¶ 141.

198 ILC Articles on Transboundary Harm, Art. 4.

199 Rio Declaration, Principle 19.

200 *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*, ¶ 104 ("*if the environmental impact assessment confirms that there is a risk of significant transboundary harm, the State planning to undertake the activity is required, in conformity with its due diligence obligation, to notify and consult in good faith with the potentially affected State, where that is necessary to determine the appropriate measures to prevent or mitigate that risk.*").

201 *Pulp Mills*, ¶ 122 ("*Uruguay, by means of its monitoring programmes and regulatory measures, must ensure that no significant pollution is caused by the pulp mill installations, in order to prevent harm to Argentina's environment and that of the River Uruguay.*").

States implement the measures referred to above, they must cooperate.

(4) States' obligations to exercise vigilance and conduct environmental impact assessments

103. The duty to carry out EIAs and exercise vigilance in the context of activities that may lead to environmental harm is well-established under general international law, and is understood to be a corollary of States' customary obligations to act with due diligence to prevent significant transboundary harm and to cooperate.[202] As the Court has confirmed, the obligation to undertake EIAs requires States to ascertain if there is a risk of significant transboundary harm "*before embarking on an activity having the potential adversely to affect the environment of another State*".[203]

104. With respect to the minimum content required for an EIA to fulfil the customary obligation, WWF notes that the UN Convention on Environmental Impact Assessment in a Transboundary Context ("**Espoo Convention**") defines an EIA as "*a national procedure for evaluating the likely impact of a proposed activity on the environment*,"[204] and provides that the impacts to be assessed include "*any effect caused*

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202 In *Pulp Mills*, the ICJ observed that "*the duty of vigilance and prevention . . .would not be considered to have been exercised, if a party planning works liable to* [significantly] *affect . . . the quality of* [the environment] *. . . did not undertake an environmental impact assessment on the potential effects of such works*." Further, it noted that the obligation to carry out an environmental impact assessment is a continuous one, and that monitoring of the project's effects on the environment shall be undertaken, where necessary, throughout the life of the project. Nevertheless, The obligation to conduct an environmental impact assessment requires an ex ante evaluation of the risk of significant transboundary harm, and thus "*an environmental impact assessment must be conducted prior to the implementation of a project*." *Ibid.*, ¶ 205. Notably, in *Gabčíkovo-Nagymaros*, the Court underlined that, in assessing environmental risks, States should take into consideration "*current standards*." It observed that "[o]*wing to new scientific insights and to a growing awareness of the risks for mankind—for present and future generations—of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past*." *See supra Gabčíkovo-Nagymaros*, ¶ 140.

203 In *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*, the Court confirmed that "*[…] to fulfil its obligation to exercise due diligence in preventing significant transboundary environmental harm, a State must, before embarking on an activity having the potential adversely to affect the environment of another State, ascertain if there is a risk of significant transboundary harm, which would trigger the requirement to carry out an environmental impact assessment.*", ¶ 104.

204 Convention on Environmental Impact Assessment in a Transboundary Context (adopted 25 February 1991, entered into force 10 September 1997) 1989 UNTS 309, Art. 1(vi). The Espoo Convention has 45 Parties. The European Community signed the Espoo Convention on 25 February 1991 and ratified it on 24 June 1997. EU Directive 92/11/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (the "**EIA Directive**"), noted at preamble (15) that it was *"desirable to lay down strengthened provisions concerning environmental impact assessment in a transboundary context to take account of developments at the international level"*, referencing the Espoo Convention. On 20 June 2024, the United Kingdom (*"UK"*) Supreme Court handed down judgment on the scope of the requirement to conduct an EIA, pursuant to the legislation in the UK which implemented the EIA Directive. The legislation requires an EIA to identify, describe and assess the likely *"direct and indirect significant effects"* of a project on the environment including, among other factors, the impact on climate, such as the nature and magnitude of GHG emissions. The case concerned an application by a developer to Surrey County Council for planning permission to expand oil production. The Council accepted that the EIA should be limited to direct releases of GHGs from within

by a proposed activity on the environment including human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors."[205] The Espoo Convention confirms that EIAs "*shall, as a minimum requirement, be undertaken at the project level of the proposed activity*."[206]

105. WWF further notes with approval the growing recognition in the practice of States and international institutions of a more expansive form of EIA, commonly labelled a Strategic Environmental Assessment ("**SEA**").[207] SEAs evaluate not only the environmental impact of an individual project but also the impacts of broader public plans, policies or programmes, and are often understood to require cumulative environmental assessments ("**CEAs**").[208] The Protocol on Strategic Environmental Assessment to the Espoo Convention ("**SEA Protocol**") requires Parties to evaluate the environmental consequences of their official draft plans and programmes, and obliges them to integrate environmental assessment into their decision-making process at the

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the project site boundary during the lifetime of the project and should not include an assessment of the GHG emissions that would occur when the extracted oil was ultimately burnt elsewhere as fuel. The Supreme Court held (by majority) that the Council's approach was unlawful and that that the GHG emissions that will occur when the oil produced is burnt as fuel are within the scope of the EIA: see *R (Finch on behalf of the Weald Action Group) v Surrey County Council & Ors* [2024] UKSC 20, ¶¶ 101-103 & 174 (per Lord Leggatt). The Court affirmed that the EIA Directive does not impose any geographical limit on the scope of environmental effects of a project that must be assessed, and that the impact of GHG emissions on climate does not depend on where the release occurs: ¶¶ 93-94 (*"The fact that an environmental impact will occur or have its immediate source at a location away from the project site is not a reason to exclude it from assessment. There is no principle that, if environmental harm is exported, it may be ignored. That is no less true if the effect will be produced or felt outside the territorial jurisdiction of the state (here, the UK) whose national law requires the EIA to be carried out"*).

205 Espoo Convention, Art. 1(vii).

206 Espoo Convention, Art. 2(7)

207 While SEAs are not defined in the treaties under consideration (*e.g.*, BBNJ, *see* further below), they have been defined as follows in other relevant international instruments:
The Kyiv Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context' defines SEAs at Art. 2(6) as "*Strategic environmental assessment" means the evaluation of the likely environmental, including health, effects, which comprises the determination of the scope of an environmental report and its preparation, the carrying out of public participation and consultations, and the taking into account of the environmental report and the results of the public participation and consultations in a plan or programme.*"
The United Nations Educational, Scientific and Cultural Organization, 'Operational Guidelines for the Implementation of the World Heritage Convention', WHC.23/01 (24 September 2023) define SEAs at Art 118bis as "*These assessments should serve to identify development alternatives, as well as both potential positive and negative impacts on the Outstanding Universal Value of the property and to recommend mitigation measures against degradation or other negative impacts on the cultural or natural heritage within the property or its wider setting. This will ensure the long-term safeguarding of the Outstanding Universal Value, and the strengthening of heritage resilience to disasters and climate change.*"

208 *See* for instance Environmental Protective Agency ("**EPA**"), *Good Practice Guidance on Cumulative Effects Assessment in Strategic Environmental Assessment*, 2020, https://www.epa.ie/publications/monitoring--assessment/assessment/strategic-environmental-assessment/EPA-Good-Practice-Guidelines-SEA.pdf.

earliest possible stage.[209]

106. Such an obligation was implicitly acknowledged by ITLOS in the ITLOS Advisory Opinion, when it found that EIAs need to take into account the effect of GHG emissions arising from planned activities on the pollution of the marine environment cumulatively rather than to consider the impact of each activity in isolation.[210]

IV.4 Obligations with respect to the protection of biodiversity from GHGs imposed on States by specific treaties

107. In addition to the customary international law obligations outlined above, States have obligations to prevent harm to biodiversity from GHG emissions and climate change in accordance with specific treaties to which they are part. The core obligations – namely, the duties to prevent, cooperate and exercise vigilance (including by conducting EIAs) – feature prominently in such treaties.

108. This section provides an overview of the obligations imposed on States by specific treaties aimed at protecting: (i) against the impacts of climate change; (ii) biodiversity generally; (iii) specific ecosystems, habitats or geographic areas; and (iv) specific species. It should be read in conjunction with the Annex to this Statement, which contains a table of the treaties presented in this section, as well as others, and a detailed list of the principal obligations they impose relevant to Question (a). In the Annex, for the Court's ease of reference, the obligations are categorised as relating to "*protection, conservation and prevention*", "*cooperation*" and/or "*vigilance*."

A. Treaties specifically dealing with climate change

109. It is notable that key treaties addressing climate change recognise the critical role of

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209 Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (adopted 21 May 2003, entered into force 11 July 2010) 2685 UNTS 140. The Protocol has 34 Parties as of 30 June 2024.

210 ITLOS Advisory Opinion, ¶¶ 365-366 ("*Concerning the content of an environmental impact assessment, the Tribunal considers that the broad wording of article 206 of the Convention does not preclude such assessment from embracing not only the specific effects of the planned activities concerned <u>but also the cumulative impacts of these and other activities on the environment</u>. In the context of pollution of the marine environment from anthropogenic GHG emissions, planned activities may not be environmentally significant if taken in isolation, whereas they may produce significant effects if evaluated in interaction with other activities. Moreover, the broad wording of article 206 does not preclude the assessment from including the socio-economic impacts of the activities concerned.*" (emphasis added).

biodiversity.

110. Thus, the UNFCCC acknowledges in its preamble that the "*average additional warming of the Earth's surface and atmosphere*" caused by increased GHGs "*may adversely affect natural ecosystems and humankind*" as well as the "*role and importance in terrestrial and marine ecosystems of sinks and reservoirs of greenhouse gases*."

111. The treaty sets out the obligation of Parties to "*protect the climate system for the benefit of present and future generations*" (Article 3(1)). Given that the climate system is defined to include "*the totality of the atmosphere, hydrosphere, biosphere and geosphere*" (Article 1(3), emphasis added), this obligation includes protection of biodiversity.

112. Relevant measures of protection include "*precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects*" (Article 3(3)). Examples of such measures are further elaborated in Articles 4 (Commitments), 5 (Research and Systematic Observation) and 6 (Education, Training and Public Awareness). These include a number of measures related to the protection and enhancement of carbon sinks. For example, Parties are required:

(a) In Article 4(1)(d) to "[p]*romote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems*"; and

(b) In Article 4(2)(a) to "*adopt national policies and take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs*".

113. The UNFCCC also recognises the need for and obliges Parties to "[c]*ooperate in preparing for adaptation to the impacts of climate change; develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in Africa,*

affected by drought and desertification, as well as floods" (Article 4(1)(e)). The areas affected by drought, desertification and floods include the biodiversity of those areas.

114. In addition, the Paris Agreement recognises in its preamble the "*importance of the conservation and enhancement… of sinks and reservoirs of greenhouse gases referred to in the [UNFCCC]*" and notes "*the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity, recognized by some cultures as Mother Earth…when taking action to address climate change*."

115. The Paris Agreement imposes the obligation to "*take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases as referred to in Article 4, paragraph 1(d) of the [UNFCCC], including forests*" (Article 5(1)) and encourages Parties to implement and support frameworks for activities relating to the reducing emissions from deforestation and forest degradation, conservation of forests and the sustainable management of forests. Article 5(2) states that Parties are encouraged to:

> *"take action to implement and support, including through results-based payments, the existing framework as set out in related guidance and decisions already agreed under the Convention for: policy approaches and positive incentives for activities relating to reducing emissions from deforestation and forest degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries; and alternative policy approaches, such as joint mitigation and adaptation approaches for the integral and sustainable management of forests, while reaffirming the importance of incentivizing, as appropriate, non-carbon benefits associated with such approaches."*

B. Treaties aimed at protecting biodiversity generally

116. The CBD is the most comprehensive agreement available addressing the protection of biodiversity generally.

117. It contains substantive, extraterritorial obligations on State Parties to ensure that activities within their jurisdiction *or* control do not cause damage to the environment of other States (Articles 3-4) and to take action where a significant adverse effect on biological diversity has been identified (Article 8). State Parties are also bound by a set of procedural obligations to develop national strategies, plans or programmes, as well as appropriate policies and procedures, for the conservation and sustainable use of biological diversity and to prevent adverse impacts on biological diversity (Articles 6 and 14).

118. The obligation to cooperate features in a pivotal manner in the CBD by requiring State Parties to cooperate in conservation: "*Each Contracting Party shall, as far as possible and as appropriate, cooperate with other Contracting Parties, directly or, where appropriate, through competent international organisations, in respect of areas beyond national jurisdiction and on other matters of mutual interest, for the conservation and sustainable use of biological diversity.*"[211] Good faith similarly features in the CBD by requiring State Parties to cooperate in providing financial and other support to developing States.[212] The substantive obligations to cooperate are backed by a set of procedural obligations to cooperate in respect of notification, exchange of information, and consultation on activities within a State's jurisdiction or control "*which are likely to significantly affect adversely the biological diversity of other states or areas beyond the limits of national jurisdiction*."[213]

119. The obligations set out in the CBD include detailed provisions in respect of EIAs. State Parties have clear obligations to ensure consultative processes are in place in the context of EIAs. Further, the obligation to exercise vigilance is central to the CBD by requiring detailed monitoring of the components of biological diversity, "*paying particular attention to those requiring urgent conservation measures and those which offer the greatest potential for sustainable use.*"[214]

108. In light of the impacts on biodiversity caused by climate change, the obligation to prevent transboundary harm to biodiversity contained in the CBD must be read as addressing, *inter alia*, activities in States which result in GHG emissions and therefore climate change impacts in other States. It must also be read as prohibiting activities, such as deforestation, which result in the degradation of carbon sinks (such degradation having the effect of increasing the transboundary harmful impacts of climate change).

120. Indeed, in 2022, the Conference of Parties to the CBD adopted the KMGBF, which expressly includes recognition of the harmful impact of climate change on biodiversity and the role of nature-based solutions in mitigating its impacts.

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211 CBD, Art. 5.

212 CBD, Art. 8. *See also* CBD Art. 20.

213 CBD, Art. 14(c). *See also* CBD Arts. 17-18.

214 CBD, Art. 7.

121. The KMGBF sets out the vision that *"by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people."*[215] With a view to progressing towards that vision, the KMGBF states that the immediate mission, for the period up to 2030, is "*to take urgent action to halt and reverse biodiversity loss to put nature on a path to recovery for the benefit of people and planet by conserving and sustainably using biodiversity and by ensuring the fair and equitable sharing of benefits from the use of genetic resources, while providing the necessary means of implementation*."[216] Among its other key elements, the KMGBF provides four long-term goals for 2050,[217] and 23 "*action-oriented global targets for urgent action over the decade to 2030*."[218] Eight of these actions seek to reduce threats to biodiversity. Of particular importance in this context is Target 8, which sets out the target to:

> *"Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity."*

122. While the KMGBF is not legally binding per se, the Parties to the Framework have committed to setting national targets to implement its goals and have agreed to establish a monitoring framework to enhance implementation. These actions are also necessary to achieve compliance with the obligations under the CBD which are binding on all of its State Parties.

C. Treaties aimed at protecting specific ecosystems, habitats or geographic areas

123. A number of treaties impose obligations on States aimed at the protection of specific ecosystems, habitats or geographic areas. Taken as a whole, States' observance of these specific obligations in relation to biodiversity would play a major role in reducing and mitigating the effects of climate change, and strengthening States' obligations under customary international law to prevent harm to biodiversity from GHG emissions. Those treaties include the following:

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215 KMGBF, ¶ 10.

216 KMGBF, ¶ 11.

217 KMGBF, ¶ 12.

218 KMGBF, ¶ 13.

(1) Antarctic Protocol

124. The Antarctic Protocol builds upon the international agreement incorporated in the Antarctic Treaty of 1959,[219] which established Antarctica as a zone of peace and scientific cooperation. It enshrines a commitment by State Parties to protect and prevent the degradation of the Antarctic environment, and dependent and associated ecosystems, and designates Antarctica as a natural reserve, devoted to peace and science.

125. Antarctica (an ecosystem, forming part of biodiversity) is at severe risk from climate change. At the same time, preventing harm to Antarctica is crucial to mitigating the effect of climate change on other ecosystems. As explained in Section III, the melting of the Antarctic ice sheet is likely to have significant effects on global sea level rise which would have a devastating effect on coastal biodiversity.

126. Article 3 contains obligations to plan and conduct activities to limit adverse impacts on the Antarctic environment and dependent and associated ecosystems. It includes express references to conducting activities to avoid adverse effects on climate and weather patterns; atmospheric, terrestrial (including aquatic), glacial, and marine environments; and animal and plant species.[220] Article 15 includes an obligation to

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219 The Antarctic Treaty (adopted 1 December 1959, entered into force 23 June 1961) 402 UNTS 71. The Treaty has 57 Parties as of 30 June 2024.

220 Antarctic Protocol, Art. 3 ("*1. The protection of the Antarctic environment and dependent and associated ecosystems and the intrinsic value of Antarctica, including its wilderness and aesthetic values and its value as an area for the conduct of scientific research, in particular research essential to understanding the global environment, shall be fundamental considerations in the planning and conduct of all activities in the Antarctic Treaty area. 2. To this end: (a) activities in the Antarctic Treaty area shall be planned and conducted so as to limit adverse impacts on the Antarctic environment and dependent and associated ecosystems; (b) activities in the Antarctic Treaty area shall be planned and conducted so as to avoid: (i) adverse effects on climate or weather patterns; (ii) significant adverse effects on air or water quality; (iii) significant changes in the atmospheric, terrestrial (including aquatic), glacial or marine environments; (iv) detrimental changes in the distribution, abundance or productivity of species or populations of species of fauna and flora; (v) further jeopardy to endangered or threatened species or populations of such species; or (vi) degradation of, or substantial risk to, areas of biological, scientific, historic, aesthetic or wilderness significance; (c) activities in the Antarctic Treaty area shall be planned and conducted on the basis of information sufficient to allow prior assessments of, and informed judgments about, their possible impacts on the Antarctic environment and dependent and associated ecosystems and on the value of Antarctica for the conduct of scientific research; such judgments shall take account of: (i) the scope of the activity, including its area, duration and intensity; (ii) the cumulative impacts of the activity, both by itself and in combination with other activities in the Antarctic Treaty area; (iii) whether the activity will detrimentally affect any other activity in the Antarctic Treaty area; (iv) whether technology and procedures are available to provide for environmentally safe operations; (v) whether there exists the capacity to monitor key environmental parameters and ecosystem components so as to identify and provide early warning of any adverse effects of the activity and to provide for such modification of operating procedures as may be necessary in the light of the results of monitoring or increased knowledge of the Antarctic environment and dependent and associated ecosystems; and (vi) whether there exists the capacity to respond promptly and effectively to accidents, particularly those with potential environmental effects; (d) regular and effective monitoring shall take place to allow assessment of the impacts of ongoing activities, including the verification of predicted impacts; (e) regular and effective monitoring shall take place to facilitate early detection*

provide prompt response and effective action to emergencies which might arise in the performance of scientific research programmes, tourism and other governmental and non-governmental activities in the Antarctic Treaty area and to establish contingency plans to respond to incidents with potential adverse effects on the Antarctic environment or dependent and associated ecosystems.

127. Lastly, the Antarctic Protocol provides for the use of EIAs. Article 8 requires the Parties to conduct EIAs in accordance with Annex I for scientific research programs, tourism and all activities for which advance notice is required under the Antarctic Treaty.[221] The content of the EIA varies according to the level of impact on the Antarctic environment and its ecosystems:[222]

(a) If a proposed activity is determined, in a preliminary stage of assessment, to have less than a minor or transitory impact, the activity may proceed without an EIA.[223]

(b) If a proposed activity is determined as likely to have a minor or transitory impact, an Initial Environmental Evaluation ("**IEE**") must be prepared.[224]

(c) If an IEE indicates the potential for a more than minor or transitory impact, or if such an impact is otherwise determined to be likely, a Comprehensive Environmental Evaluation ("**CEE**") must be prepared.[225] The CEE is made publicly available and circulated to all State Parties for comment.[226] The activity may only proceed once the CEE has been considered by the Antarctic Treaty Consultative Meeting under the Antarctic Treaty.[227]

128. The use of EIAs under the Antarctic Protocol has been robust. In the period 2023-2024, 135 EIAs were published on the Antarctic Treaty website, ranging from assessments of cruises to seismic surveys, air operations and the continued operation of research

of the possible unforeseen effects of activities carried on both within and outside the Antarctic Treaty area on the Antarctic environment and dependent and associated ecosystems.").

221 Antarctic Protocol, Art. 8(2).

222 Antarctic Protocol, Art. 8(1).

223 Antarctic Protocol, Annex I, Art. 1(2).

224 Antarctic Protocol, Annex I, Art. 2.

225 Antarctic Protocol, Annex I, Art. 3(1).

226 Antarctic Protocol, Annex I, Art. 3(3).

227 Antarctic Protocol, Annex I, Art. 3(5).

stations.[228]

(2) Ramsar Convention

129. The Ramsar Convention is particularly important to mitigating climate change given the vital role of wetlands. As set out in Section III, wetlands can store more carbon for every unit area than any other type of ecosystem due to their oxygen-free, water-logged soils which hinder organic matter decomposition and enable substantial carbon accumulation. Despite taking up only 3% of Earth's land surface, peatlands (a specific variety of wetlands) contain around 30% of all soil carbon found globally.[229]

130. The Ramsar Convention established a global framework dedicated to the conservation and sustainable use of wetlands, aiming to stem the loss of these critical ecosystems and promote sustainable management practices. The State Parties to the Ramsar Convention are urged to collaborate "*in the case of a wetland extending over the territories of more than one Contracting Party or where a water system is shared by Contracting parties*," and generally to encourage research and exchange of data and publications on wetlands.[230]

131. Article 5 of the Ramsar Convention requires State Parties to consult one another about implementing Convention obligations, especially where a wetland extends over the territory of more than one state. The Convention also imposes obligations to: (i) promote the conservation of wetlands and waterfowl by establishing natural reserves;[231] (ii) compensate for any loss of wetland resources by creating additional nature reserves for waterfowl and for the protection of the original habitat;[232] and (iii) promote the training of personnel competent in the fields of wetlands research, management and wardening.[233]

(3) Convention to Combat Desertification

132. The preamble to the Convention to Combat Desertification recognises the importance

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228 *See* Secretariat of the Antarctic Treaty, *EIA Database*, https://www.ats.aq/devAS/EP/EIAList?lang=e [last accessed 14 June 2024].

229 WWF, *Our Climate's Secret Ally 2022*, November 2022, p. 18.

230 Ramsar Convention, Arts. 4-5.

231 Ramsar Convention, Art. 4(1).

232 Ramsar Convention, Art. 4(2).

233 Ramsar Convention, Art. 4(5).

of combatting desertification to achieving the objectives of the UNFCCC, the CBD and other related environmental conventions. In July 2022, the UNGA also explicitly recognised the importance of combatting desertification in its Resolution on The Human Right to a Clean, Healthy and Sustainable Environment. [234]

133. Drought conditions have had severe effects on ecosystems across different regions. In addition to those mentioned above, a striking example is the California drought that lasted between 2012 and 2016 and was one of its most severe droughts in its recorded history, leading to an estimated $3.8 billion in losses in the agricultural sector.[235] The drought also contributed to intense wildfires, which further exacerbated environmental and economic damage. Scientists estimate that for every 0.5°C the atmosphere warms, noticeable increases in the intensity and frequency of droughts that harm agriculture and ecosystems will occur.[236]

134. The Convention sets forth a number of relevant obligations including to: (i) give due priority to combating desertification and mitigating the effects of drought, and to allocate adequate resources in accordance with a State Party's circumstances and capabilities;[237] (ii) address the underlying causes of desertification and pay special attention to the socioeconomic factors contributing to desertification processes; [238] and (iii) provide an enabling environment by strengthening, as appropriate, relevant existing legislation and, where they do not exist, enacting new laws and establishing long-term policies and action programmes.[239]

135. The Convention similarly embeds the requirement to cooperate in good faith. Article 4 obliges State Parties to "*implement their obligations under this Convention, individually or jointly*," with an express emphasis on the need for both cooperation and a coherent long-term strategy, providing for the gap in needs and resources between

234 UNGA, *Resolution on the Human Right to a Clean, Healthy and Sustainable Environment*, 28 July 2022, A/RES/76/300 (*"environmental degradation, climate change, biodiversity loss, desertification and unsustainable development constitute some of the most pressing and serious threats to the ability of present and future generations to effectively enjoy all human rights."*).

235 Union of Concerned Scientists, *Causes of Drought: What's the Climate Connection?*, 18 May 2021, https://www.ucsusa.org/resources/drought-and-climate-change [last accessed 18 June 2024].

236 IPCC, *Climate Change Report – The Physical Science Basis*, 2021, https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_FullReport_small.pdf [last accessed 24 June 2024], p. 15.

237 Convention to Combat Desertification, Art. 5(a).

238 Convention to Combat Desertification, Art. 5(c).

239 Convention to Combat Desertification, Art. 5(e).

"*developed*" and "*developing*" State Parties.[240]

136. Articles 16-18 set out State Parties' undertaking to cooperate with respect to: (i) information collection, analysis, and exchange;[241] (ii) research and development;[242] and (iii) transfer, acquisition, adaptation and development of technology,[243] setting out detailed guidelines in each Article. These provisions also oblige State Parties to promote capacity building, education and public awareness;[244] make every effort to ensure adequate financial resources are available for programmes to combat desertification (with more onerous undertakings levied on developed State Parties);[245] and promote the availability of financial mechanisms to maximise the availability of funding for affected developing State Parties.[246]

(4) UNCLOS

137. ITLOS recently confirmed in its Advisory Opinion the primary importance of preserving the marine environment, "*in that it promotes the conservation and resilience of living marine resources, while also mitigating anthropogenic GHG emissions by enhancing carbon sequestration*."[247]

138. The protection of the marine environment from GHG emissions is crucial because marine ecosystems have already suffered considerable harm as a result of climate change in the form of ocean acidification (which is destroying coral reefs and decimating marine ecosystems), increased ocean temperatures (which contribute to sea level rise, marine heat waves and coral bleaching) and sea level rise (which has already caused the extinction of certain species and has disrupted human habitats, in particular in small island States). What is more, the protection of marine ecosystems is at the very heart of the solution to climate change given their ability to absorb and sequester CO_2. Compliance with States' obligations is therefore of crucial importance in order to mitigate the effects of GHG emissions. The bulk of these obligations is contained in

240 Convention to Combat Desertification, Art. 4.
241 Convention to Combat Desertification, Art. 16.
242 Convention to Combat Desertification, Art. 17.
243 Convention to Combat Desertification, Art. 18.
244 Convention to Combat Desertification, Art. 19.
245 Convention to Combat Desertification, Art. 20.
246 Convention to Combat Desertification, Art. 21.
247 ITLOS Advisory Opinion, ¶ 390.

UNCLOS (or the "**Convention**").

139. UNCLOS contains specific obligations, in particular in Part XII of the Convention, in respect of the prevention of harm to the "*marine environment*," which includes marine biodiversity.[248] The UNGA recently emphasised the importance of the obligations under Part XII of UNCLOS in its Resolution on Oceans and the Law of the Sea, "*in order to protect and preserve the marine environment and its living marine resources against pollution and physical degradation*."[249]

140. The key obligations to protect and preserve the marine environment, contained in Part XII of UNCLOS, include:[250]

(a) Article 192, which contains a general obligation to protect and preserve the marine environment, encompassing a positive obligation to protect and preserve and a negative obligation not to degrade the same.[251] This general obligation is not limited to the duties to combat pollution but also to conserve the living resources of the sea (which ITLOS recognised as "*an element in the protection and preservation of the marine environment*"[252]), and to preserve the marine environment (which ITLOS found "*may include restoring marine habitats and ecosystems*"[253]). Its broad nature means that Article 192 "*can be invoked to combat any form of degradation of the marine environment*."[254]

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248 The term "*marine environment*" is generally understood as encompassing "*all maritime areas*," as well as all the dimensions, living and non-living. *See Request for an Advisory Opinion Submitted by the Sub-Regional Fisheries Commission*, Advisory Opinion, 2 April 2015, ITLOS Case No. 21, ¶¶ 111, 120; In the matter of the *South China Sea Arbitration before and Arbitral Tribunal constituted under Annex VII of the United Nations Convention on the Law of the Sea*, PCA Case No. 2013-19, Award, 2 July 2016, ¶ 927; *Dispute Concerning Coastal State Rights in the Black Sea, Sea of Azov, and Kerch Strait (Ukraine v. Russian Federation)*, PCA Case No. 2017-06, Award concerning the preliminary objections of the Russian Federation, 21 February 2020, ¶ 295. In its recent Advisory Opinion issued on 21 May 2024, ITLOS specified that the term 'marine environment' "*should be understood broadly*" to encompass "*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, as well as the seabed and ocean floor and subsoil thereof*." *See* ITLOS Advisory Opinion, ¶¶ 170-171, citing to the definition of 'marine environment' of the International Seabed Authority.

249 UNGA, *Resolution on Ocean and The Law of The Sea*, 28 November 2023, A/78/L.15, ¶ 190.

250 Other obligations relevant to the protection of the marine environment and biodiversity in the ocean context stemming from UNCLOS are highlighted in the Annex to this Statement..

251 *South China Sea (Philippines v. China)*, PCA Case No. 2013-19, Award, 12 July 2016, ¶ 941.

252 ITLOS Advisory Opinion, ¶ 12.

253 ITLOS Advisory Opinion, ¶ 386.

254 ITLOS Advisory Opinion, ¶ 388.

(b) Article 194, which concerns the obligation of all States to take the necessary measures to prevent, reduce and control "*pollution of the marine environment*," a term which is defined in Article 1(4) of the Convention to mean "*the introduction by man, directly or indirectly, of substances ... into the marine environment ... which results or is likely to result in such deleterious effects as harm to living resources and marine life [and] hindrance to ... legitimate uses of the sea.*"[255] It encompasses:

(i) The obligation to take "*all measures… necessary…to prevent, reduce and control pollution of the marine environment from any source*", pursuant to Article 194(1). ITLOS confirmed that "*anthropogenic GHG emissions ... constitute pollution of the marine environment*".[256] It further confirmed that Article 194(1) comprises an obligation to prevent <u>future</u> pollution from occurring.[257]

ITLOS further interpreted Article 194(1) as requiring States to act with due diligence in "*tak[ing] all necessary measures with a view to reducing and controlling existing marine pollution from [GHG] emissions and eventually preventing such pollution from occurring at all*."[258] ITLOS emphasised that the "*standard of due diligence under article 194, paragraph 1, of the Convention is stringent, given the risks of serious and irreversible harm to the marine environment from [GHG] emissions*."[259]

ITLOS stressed that the obligations under the Convention would not "*be satisfied simply by complying with the obligations and commitments under the Paris Agreement*" and stressed that UNCLOS "*imposes upon States a legal obligation to take all necessary measures to prevent, reduce and control marine pollution from anthropogenic GHG emissions, including measures to reduce such emissions*."[260] This means

255 UNCLOS, Art. (4).

256 ITLOS Advisory Opinion, ¶ 197.

257 ITLOS Advisory Opinion, ¶ 198.

258 ITLOS Advisory Opinion, ¶ 199. *See also* ¶ 234.

259 ITLOS Advisory Opinion, ¶ 243.

260 ITLOS Advisory Opinion, ¶ 223.

that obligations arising from other treaties, in particular those relating to the protection of biodiversity, are also relevant for evaluating States' compliance with their obligations under UNCLOS.

(ii) The obligation to "*take all measures necessary to ensure that* activities *under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment*", pursuant to Article 194(2). This provision reflects the customary obligation to prevent transboundary harm, described in Section IV.3(1) above. ITLOS clarified that Article 194(2) applies to marine pollution from GHG emissions[261] and that this article "*imposes upon States a particular obligation in the context of transboundary pollution*."[262] Again, ITLOS held that this obligation is one of due diligence, which it found to be "*even more stringent*" in the context of transboundary pollution,[263] and one which can be *"highly demanding."*[264]

(iii) The obligation to take measures which are "*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*," pursuant to Article 195(5). ITLOS clarified that the "*necessary measures*" contemplated by this provision "*are those which make it possible to achieve this objective*",[265] that States "*do not have absolute discretion with respect to the action that is required*" under this provision, and that States must, in good faith, take into account "*the relevant options in a manner that is reasonable, relevant and conducive to the benefit of mankind as a whole*."[266]

Article 194(5) was expressly considered by ITLOS in the *South China Sea Arbitration*, in which it held that Article 194(5) informed the

261 ITLOS Advisory Opinion, ¶ 252.
262 ITLOS Advisory Opinion, ¶ 253.
263 ITLOS Advisory Opinion, ¶ 256.
264 ITLOS Advisory Opinion, ¶ 257.
265 ITLOS Advisory Opinion, ¶ 402.
266 ITLOS Advisory Opinion, ¶ 405.

obligation under Article 192.[267] As a result, ITLOS found that "*in addition to preventing the direct harvesting of species recognised internationally as being threatened with extinction, Article 192 extends to the prevention of harms that would affect depleted, threatened, or endangered species indirectly through the destruction of their habitat*."[268]

ITLOS explained that the Convention on International Trade in Endangered Species of Wild Fauna and Flora[269] provides "*guidance in interpreting the term 'depleted, threatened and endangered species' in article 194, paragraph 5*."[270]

141. ITLOS confirmed that the duty to cooperate, which is central to combating the effects of GHG emissions "*is reflected in and permeates*" the Convention and is "*given a concrete form in a wide range of specific obligations of States Parties, which are central to countering marine pollution from anthropogenic GHG emissions at the global level*."[271] ITLOS further observed that the duty to cooperate "*is an integral part of the general obligations under articles 194 and 192 of the Convention* [*see infra*] *given that the global effects of [GHG] emissions necessarily require States' collective action*."[272] In particular, ITLOS found that Article 197 of the Convention, which contains a general duty to cooperate "*for the protection and preservation of the marine environment*,"[273] must be read in conjunction with Article 194(1).[274] Similarly, ITLOS established that Article 197 obliges States "*to participate meaningfully in the formulation and elaboration of rules, standards and recommended practices and procedures for the protection and preservation of the marine environment*."[275]

142. In order to achieve such substantive outcomes, UNCLOS imposes a wide range of

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267 *South China Sea (Philippines v. China)*, PCA Case No. 2013-19, Award, 12 July 2016, ¶ 959.

268 *South China Sea (Philippines v. China)*, PCA Case No. 2013-19, Award, 12 July 2016, ¶ 959.

269 Convention on international trade in endangered species of wild fauna and flora (adopted 3 March 1973, entered into force 1 July 1975) 993 UNTS 243. The Convention has 184 parties as of 30 June 2024.

270 ITLOS Advisory Opinion, ¶ 404.

271 ITLOS Advisory Opinion, ¶ 297.

272 ITLOS Advisory Opinion, ¶ 299.

273 UNCLOS, Art. 197.

274 ITLOS Advisory Opinion, ¶ 301.

275 ITLOS Advisory Opinion, ¶ 307.

procedural obligations to cooperate, including: requirements to share and exchange scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks,[276] obligations to consult in respect to fishing beyond the outer limits of the exclusive economic zone,[277] obligations to notify other states where the "*marine environment is in imminent danger*,"[278] and a set of detailed rules on the sharing of information, monitoring and notification in respect of the prevention of marine pollution.[279]

139. Lastly, ITLOS made clear that the Convention, is a "*living instrument*" that must be interpreted in coordination and harmonisation with external rules that can give meaning to its provisions.[280] ITLOS stressed the "*openness*" of Part XII of UNCLOS "*to other treaty regimes*",[281] including the UNFCCC, the Kyoto Protocol,[282] the Paris Agreement, the International Convention for the Prevention of Pollution from Ships ("**MARPOL**"),[283] the Chicago Convention[284] and the Montreal Protocol.[285] Accordingly, UNCLOS cannot be interpreted in isolation and must be understood in the context of other obligations that arise in the context of climate change.

(5) BBNJ

143. The third implementing agreement to UNCLOS, the BBNJ, further illustrates the obligations on States to prevent harm to the environment. Once it enters into force, it will impose a number of obligations relating to the conservation and sustainable use of the marine biodiversity.[286]

144. The BBNJ will also strengthen obligations to cooperate, in good faith, in the sharing of

276 UNCLOS, Art. 61(5).

277 UNCLOS, Art. 66(3).

278 UNCLOS, Art. 197.

279 UNCLOS, Arts. 200, 204-205, 211.

280 ITLOS Advisory Opinion, ¶ 130.

281 ITLOS Advisory Opinion, ¶ 134.

282 Kyoto Protocol to the United Nations Framework Convention on Climate Change (adopted 11 December 1997, entered into force 16 February 2005) 2303 UNTS 162. The Protocol has 192 parties as of 30 June 2024.

283 Protocol of 1978 relating to the International Convention for the prevention of pollution from ships, 1973 (adopted 2 November 1973, entered into force 2 October 1983) 1340 UNTS 61, 1341 UNTS 3.

284 Convention on International Civil Aviation (adopted 7 December 1944, entered into force 4 April 1947) 15 UNTS 295. The Protocol has 193 parties as of 30 June 2024.

285 Montreal Protocol on Substances that Deplete the Ozone Layer (adopted 16 September 1987, entered into force 1 January 1989) 1522 UNTS 3. The Protocol has 198 parties as of 30 June 2024.

286 BBNJ opened for signature on 20 September 2023 and remains open for signature until 20 September 2025 (Art. 65). It will enter into force 120 days after the date of deposit of the sixtieth instrument of ratification (Art. 68).

resources and benefits of marine biological diversity in areas beyond national jurisdiction. States must share the benefits arising from activities with respect to marine genetic resources "*in a fair and equitable manner*" and the monetary benefits from the utilisation of such resources "*fairly and equitably*."[287] A mechanism "*for the provision of adequate, accessible, new and additional and predictable financial resources under this Agreement*" is established under Article 52 of the Agreement, and its objective is to "*assist developing States Parties in implementing this Agreement, including through funding in support of capacity-building and the transfer of marine technology, and perform other functions as set out in this article for the conservation and sustainable use of marine biological diversity*."[288]

145. State Parties will also be required to exercise vigilance, and to monitor planned activities "*by using the best available science and scientific information and, where available, the relevant traditional knowledge of Indigenous Peoples and local communities, keep under surveillance the impacts of any activities in areas beyond national jurisdiction that they permit or in which they engage in order to determine whether these activities are likely to pollute or have adverse impacts on the marine environment.*"[289] Such obligations to exercise vigilance are accompanied by obligations to notify and report to the Conference of the Parties.[290]

146. Finally, the BBNJ expressly provides for SEAs, at Article 39,[291] emphasising, at Article 27, that one of the objectives of Part IV is to "*provide for strategic environmental assessments*."

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287 BBNJ, Arts. 14(1) and 14(5). *See* also Arts. 2, 8, 10 and 11.

288 BBNJ, Art. 15(2).

289 Art. 28(2), Art. 35.

290 Art. 55.

291 Art. 39, under the heading "Strategic environmental assessments" provides that: *"1. Parties, individually or in cooperation with other Parties, shall consider conducting strategic environmental assessments for plans and programmes relating to activities under their jurisdiction or control, to be conducted in areas beyond national jurisdiction, to assess the potential effects of that plan or programme, as well as alternatives, on the marine environment. 2. The Conference of the Parties may conduct a strategic environmental assessment of an area or region to collate and synthesize the best available information about the area or region, assess current and potential future impacts and identify data gaps and research priorities. 3. When undertaking environmental impact assessments pursuant to this Part, Parties shall take into account the results of relevant strategic environmental assessments carried out under paragraphs 1 and 2, where available. 4. The Conference of the Parties shall develop guidance on the conduct of each category of strategic environmental assessment described in this article."*

(6) Bern Convention

147. An example of a regional treaty protecting a specific geographic area from the harmful impacts of climate change is the Convention on the Conservation of European Wildlife and Natural Habitats (the "**Bern Convention**").[292] State Parties include almost all of the members of the Council of Europe, as well as Belarus, Burkina Faso, Morocco, Senegal and Tunisia.[293]

148. The Bern Convention contains substantive and binding obligations for its Contracting Parties to "*take steps to promote national policies for the conservation of wild flora, wild fauna and natural habitats*" (Article 3(1)). It also requires Contracting Parties to take legislative and administrative measures to ensure such conservation (Article 4(1)) and "*in their planning and development policies*" to have regard to "*the habitats of the wild flora and fauna species*" (Article 4(2)).

149. Like other treaties mentioned above, it places a strong emphasis on cooperation among Contracting Parties. Indeed, pursuant to Article 11(1)(a) of the Bern Convention, Contracting Parties undertake "*to co-operate wherever appropriate and in particular where this would enhance the effectiveness of measures taken under other articles of this Convention*."

140. The obligations contained in the Bern Convention have been implemented in the European Union by directives including Council Directive 92/43/EEC (the "**Habitats Directive**")[294] and Directive 2009/147/EC (the "**Birds Directive**").[295]

D. Treaties aimed at protecting specific species

150. Several treaties also impose obligations on States aimed at the protection of specific species which are particularly at risk from climate change, and some of which also play

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292 Convention on the Conservation of European Wildlife and Natural Habitats (adopted 19 September 1979, entered into force 1 June 1982) 1284 UNTS 209. Other examples of regional treaties, included in the Annex to this Statement, include the African Convention on the Conservation of Nature and Natural Resources 1969 (1001 UNTS 3), the Convention on the Protection of the Alps 1991 (1917 UNTS 135), and the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere 1940 (161 UNTS 193).

293 Council of Europe, *Chart of Signature and Ratifications of Treaty 104*, https://www.coe.int/en/web/conventions/full-list?module=signatures-by-treaty&treatynum=104 [last accessed 24 June 2024].

294 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, OJ L 206, 22.7.1992, p. 7–50.

295 Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds, OJ L 20, 26.1.2010, p. 7–25.

a particularly important role in maintaining the ecosystem and in absorbing GHG emissions.

151. *First*, the Convention on Migratory Species requires cooperation of the State Parties primarily in respect of the conservation of migratory species that have unfavourable conservation status. It encourages State Parties to cooperate in research relating to migratory species[296] and to prevent further harm to migratory species by: (i) taking action to avoid any migratory species becoming endangered; (ii) implementing conservation measures geared towards the protection of endangered species from extinction; and/or (iii) restoring migratory species whose status has been deemed unfavourable to favourable conservation status.

152. *Second*, the Polar Bear Agreement is similarly intended to protect (and prevent further harm to) populations of polar bears through coordinated national measures taken by the States of the Arctic Region. Article II focuses on the obligation for the State Parties to take appropriate action to protect the polar bear's ecosystem, rather than the polar bears themselves. This obliges the State Parties to "*take appropriate action*" with regard to threats to such ecosystems, such as climate change. Under Article VII, State Parties are encouraged to cooperate and coordinate in implementing their obligations.

153. *Third*, whales as a species play an important role in combatting climate change because they store significant amounts of carbon in their bodies. As also outlined in Section III, one whale can capture an average of 33 tons of CO_2 over its lifespan.[297] By contrast, a live oak tree, one of the most efficient carbon-capturing tree species, captures roughly 12 tons of CO_2 over a maximum 500-year lifespan.[298] Accordingly, the ICRW indirectly mitigates the effects of GHG emissions.

154. The preamble to the ICRW confirms the objective of "*ensur[ing] proper and effective conservation and development of whale stocks*."[299] Article IX obliges State Parties to take appropriate measures to ensure that the provisions of the Convention are applied.[300]

296 Convention on Migratory Species, Art. II (Fundamental Principles).

297 NOAA Fisheries, *Whales and Carbon Sequestration: Can Whales Store Carbon?*, 13 February 2024.

298 NOAA Fisheries, *Whales and Carbon Sequestration: Can Whales Store Carbon?*, 13 February 2024.

299 ICRW, Preamble.

300 ICRW, Art. IX.1.

IV.5 Further obligations on States to prevent harm to biodiversity from anthropogenic emissions of GHGs for present and future generations

155. States' obligations to ensure the protection of biodiversity are also increasingly recognised as an important facet of international human rights law. The fundamental reliance of humans on biodiversity described in Section III above – from food security to medicine and cultural identity – means that protecting biodiversity is an important, if not essential, part of a State's obligations to respect and ensure the enjoyment of a wide range of human rights by individuals in the State's jurisdiction.

156. This position is supported by the UNGA's July 2022 Resolution on The Human Right to a Clean, Healthy and Sustainable Environment, which emphasised that "*environmental degradation, climate change, biodiversity loss, desertification and unsustainable development constitute some of the most pressing and serious threats to the ability of present and future generations to effectively enjoy all human rights*."[301] (Emphasis added)

157. State Parties to the KMGBF also embedded the promotion of human rights into their plan to protect and restore biodiversity.[302] While not legally binding, the KMGBF gives States clear markers to guide their ambition.

158. In addition, the risk an unhealthy biosphere poses to human rights and wellbeing has been addressed in guidance issued by the UN Human Rights Council's current and former Special Rapporteurs on human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment. In 2020, the report of Special Rapporteur David R. Boyd noted that without healthy, functioning ecosystems, which depend on healthy biodiversity, there would be no clean air to breathe, safe water to drink or nutritious food to eat; healthy ecosystems also regulate the Earth's climate, filter air and water, recycle nutrients and mitigate the impact of natural disasters. [303] The

301 UNGA, *Resolution on The Human Right to a Clean, Healthy and Sustainable Environment*, 28 July 2022, A/RES/76/300.

302 UNEP, Conference of the Parties to the CBD, *Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity*, GBF, 19 December 2022, CBD/COP/DEC/15/4, ¶¶ 1, 7.

303 UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2020, A/75/161, ¶¶ 3-4.

2017 report of John H. Knox set out many similar considerations.[304]

159. In short, it is increasingly becoming a matter of common ground that international human rights law is relevant to considering the lawful limitations of State action on biodiversity.

160. Just some of the rights potentially affected include rights to a healthy environment; life; health; an adequate standard of living; food; water; culture; and non-discrimination. A number of these are summarised below.

161. *First*, the right to a healthy environment is manifestly threatened by the nature and extent of the biodiversity crisis, as it is by the climate crisis. The right to a healthy environment is enshrined in several major treaties and agreements, such as the Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights ("**Protocol of San Salvador**"),[305] which is binding on parties to the American Convention on Human Rights ("**ACHR**")[306] that have ratified the Protocol.

162. The right is also protected as a widespread emerging norm of customary international law, having regard to evidence of both state practice and *opinion juris*.[307]

163. As Professor William Schabas notes, "*there is compelling evidence for a human right to a safe, clean, healthy, and sustainable environment under customary international law*."[308] This evidence includes: the vast number of diplomatic statements made by states explicitly or implicitly endorsing the right; the fact that more than 80% of UN Member States (161 out of 193 States) have recognised the right through constitutions, legislation and regional treaties; and the repeated instances of constitutional courts

304 UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 19 January 2017, A/HRC/34/49, ¶ 5.

305 Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights: Protocol of San Salvador (adopted 17 November 1988, entered into force 16 November 1999) E/CN.4/2004/WG.21/5.

306 American Convention on Human Rights "Pact of San José, Costa Rica" (adopted 22 November 1969, entered into force 18 July 1978) 1144 UNTS 123.

307 UNGA, ILC, *Second Report on Identification of Customary International Law*, 22 May 2014, A/CN.4/672, ¶ 17.

308 W. A. Schabas, The Customary International Law of Human Rights (OUP 2021), p. 337.

around the world routinely enforcing the right.[309]

164. Multiple UN entities and experts have recognised the existence of the right. Critically, the UNGA itself has adopted a resolution which unambiguously recognises the human right to a clean, healthy and sustainable environment right,[310] as has the UN Human Rights Council.[311] In 2021, UNEP delivered on behalf of 15 UN entities a joint statement supporting the global recognition of the right and welcoming a pledge signed by over 1,100 civil society, child, youth and indigenous peoples' organisations calling for Member States to recognise the right.[312]

165. The substantive elements of the right are widely recognised to include the protection of the rights to clean air, safe and sufficient water, a safe climate, healthy and sustainably produced food, adequate sanitation, non-toxic environments and healthy ecosystems and biodiversity.[313] The Inter-American Court of Human Rights (the "**IACtHR**") has gone further, holding the right is an "*autonomous right*", that, unlike other rights, protects the components of the environment, such as forests, rivers and seas, as legal interests in themselves, even in the absence of the certainty or evidence of a risk to individuals.[314]

166. Violations of the right to a healthy environment argued or found in prominent court decisions have included the following cases highlighted by César Rodríguez-Garavito

309 UNGA, *Report of the Special Rapporteur on the Issue of Human Rights Obligations relating to the Environment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2019, A/74/161; D. R. Boyd, UN Special Rapporteur on the Human Right to a Clean, Healthy and Sustainable Environment, *The Right to A Healthy Environment – A User's Guide, 2024*, p.8.; UNEP, *Joint Statement of United Nations Entities on the Right to Healthy Environment*, 8 March 2021, https://www.unep.org/news-and-stories/statements/joint-statement-united-nations-entities-right-healthy-environment [last accessed 14 June 2024].

310 UNGA, *Resolution on the Human Right to a Clean, Healthy and Sustainable Environment*, 28 July 2022, A/RES/76/300.

311 UN Human Rights Council, *Resolution on the Human Right to a Clean, Healthy and Sustainable Environment*, 18 October 2021, A/HRC/RES/48/13.

312 UNEP, *Joint Statement of United Nations Entities on the Right to Healthy Environment*, 8 March 2021, https://www.unep.org/news-and-stories/statements/joint-statement-united-nations-entities-right-healthy-environment [last accessed 14 June 2024].

313 UN Human Rights Council, *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 30 December 2019, A/HRC/43/53 ¶¶ 8-18; UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2020, A/75/161, ¶ 33; UN Human Rights Council, *Report of the Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of A Safe, Clean, Healthy and Sustainable Environment*, A/HRC/55/41, 2 January 2024, p.7; UNCRC, *General Comment No. 26 (2023) on Children's Rights and the Environment, With A Special Focus On Climate Change*, 22 August 2023, CRC/C/GC/26, ¶ 64.

314 UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2020, A/75/161, ¶ 33; *Inter-American Court of Human Rights*, Advisory Opinion OC-23/17, 15 November 2017, ¶ 62.

and David R. Boyd:[315]

(a) Damaging the habitat of an endangered species (Costa Rica);[316]

(b) Deforestation (Brazil, Colombia, India and the Philippines);[317]

(c) Shrimp farming in coastal wetlands (India);[318]

(d) Tourism development in mangrove forests (Mexico);[319]

(e) Fossil fuel development in biodiversity-rich areas (South Africa, Norway and East Africa);[320]

(f) Pesticide spraying (Colombia and Costa Rica);[321] and

315 C. Rodríguez-Garavito, D. R. Boyd, *A Rights Turn in Biodiversity Litigation?*, 7 December 2023, https://www.cambridge.org/core/journals/transnational-environmental-law/article/rights-turn-in-biodiversity-litigation/2AA06A4A690C4B6E97D5E4EDD293005E [last accessed 14 June 2024]; *see* also . R. Boyd, UN Special Rapporteur on the Human Right to a Clean, Healthy and Sustainable Environment, *The Right to A Healthy Environment – A User's Guide*, 2024, p. 36.

316 *Costa Rican Association of Natural Reserves v. Ministry of Environment and Energy*, Judgment, Sentencia No. 20-012530-0007-CO, Supreme Court of Justice, Constitutional Chamber, Costa Rica, 2 September 2008.

317 *T.N. Godavarman Thirumulpad v. Union of India* [1995], W.P.(C) No. 171/96 (Supreme Court, India), https://indiankanoon.org/doc/298957/ [last accessed 14 June 2024]; *PSB et al. v. Brazil (on Amazon Fund)*, Sabin Center for Climate Change Law, Climate Change Litigation Databases, https://climatecasechart.com/non-us-case/psb-et-al-v-brazil/ [last accessed 14 June 2024]; *Institute of Amazonian Studies v. Brazil*, Sabin Center for Climate Change Law, Climate Change Litigation Databases, https://climatecasechart.com/non-us-case/institute-of-amazonian-studies-v-brazil/ [last accessed 14 June 2024]; *Castilla Salazar v. Colombia*, Decision C-035/16, 8 February 2018 (Constitutional Court, Colombia), https://www.corteconstitucional.gov.co/relatoria/2016/c-035-16.htm [last accessed 14 June 2024]; *Opasa v. Factoran* [1993], G.R. No. 101083, 30 July 1993 (Supreme Court of the Philippines), https://leap.unep.org/sites/default/files/court-case/Oposa%2520v%2520Factoran.pdf [last accessed 14 June 2024] .

318 *Jagannath v. India*, Judgment, [1996] INSC 1952 (Supreme Court, India), https://indiankanoon.org/doc/507684/#:~:text=Keeping%20with%20the%20international%20commitments,and%20protect%20the%20coastal%2Denvironments [last accessed 14 June 2024].

319 *Amparo en Revisión*, Judgment, No. 307/2016, 14 November 2018 (Supreme Court, First Chamber, Mexico), https://www.scjn.gob.mx/derechos-humanos/sites/default/files/sentencias-emblematicas/sentencia/2020-01/AR%20307-2016.pdf [last accessed 14 June 2024].

320 *Sustaining the Wild Coast NPC & Ors v. Minister of Mineral Resources and Energy & Ors* [2022] ZAECMKHC 55 (South Africa), https://www.saflii.org/za/cases/ZAECMKHC/2022/55.html [last accessed 14 June 2024]; *Greenpeace Nordic Association v. Ministry of Energy & Petroleum*, Judgment, HR-2020-2472-P, 22 December 2020 (Supreme Court, Norway), https://climatecasechart.com/non-us-case/greenpeace-nordic-assn-and-nature-youth-v-norway-ministry-of-petroleum-and-energy/ [last accessed 14 June 2024]; *Centre for Food and Adequate Living Rights v. Attorney General of Uganda*, Petition, App. No. 29/2020 (East African Court of Justice), https://climatecasechart.com/non-us-case/center-for-food-and-adequate-living-rights-et-al-v-tanzania-and-uganda/ [last accessed 2024].

321 *Narváez Gómez v. Colombia*, Judgment T-080/17 (Constitutional Court, Colombia), https://www.corteconstitucional.gov.co/relatoria/2017/t-080-17.htm [last accessed 14 June 2024]; *Flórez-Estrada v. Ministry of Agriculture and Livestock*, Sentence No. 2019-24513, 6 December 2019 (Supreme Court of Justice, Constitutional Chamber, Costa Rica).

(g) Mining (Colombia).[322]

167. *Second***,** the nature and extent of the biodiversity crisis also threatens the rights to life and health. These are widely recognised rights around the world. For example:

(a) The Universal Declaration of Human Rights ("**UDHR**") (Article 3) and the International Covenant on Civil and Political Rights ("**ICCPR**") (Article 6) include the right to life, as do the ACHR (Article 4) and the European Convention on Human Rights ("**ECHR**") (Article 2).

(b) The Constitution of the World Health Organization ("**WHO**")[323] and Article 12 of the International Covenant on Economic, Social and Cultural Rights ("**ICESCR**") recognise the right to the highest attainable standard of physical and mental health. The right to health is also found in the Protocol of San Salvador (Article 10).

168. The UN Human Rights Committee ("**UNHRC**") has emphasised that the right to life should not be interpreted narrowly and includes protection from threats resulting from environmental degradation.[324] Its General Comment No. 36 in 2019 on the right to life reiterated the link between environmental protection in general and the duty to protect life, noting that:

(a) The duty to protect life requires State Parties to take appropriate measures to address general conditions that may give rise to direct threats to life or prevent individuals from enjoying their right to life with dignity, and these general conditions may include degradation of the environment. [325]

(b) Environmental degradation, climate change and unsustainable development "*constitute some of the most pressing and serious threats to the ability of present*

322 *Center for Social Justice Studies v. President*, Judgment T-622/16, 10 November 2016 (Constitutional Court, Colombia), https://www.corteconstitucional.gov.co/relatoria/2016/t-622-16.htm [last accessed 14 June 2024].

323 The Constitution was adopted by the International Health Conference held in New York 1946 and entered into force on 7 April 1948 and is registered as a Treaty under the UN system, with 59 signatories and 193 parties. See also World Health Organization ("**WHO**"), Constitution, https://www.who.int/about/accountability/governance/constitution [last accessed 14 June 2024].

324 UN Human Rights Committee ("**UNHRC**"), *General Comment No. 6 (1982) on the Right to Life*, 30 April 1982, ¶ 5; UNHRC, *General Comment No. 36, Article 6: Right to Life*, 3 September 2019, CCPR/C/GC/36, ¶ 3.

325 UNHRC, *General Comment No. 36, Article 6: Right to Life*, 3 September 2019, CCPR/C/GC/36, ¶ 26.

and future generations to enjoy the right to life," generating obligations under the ICCPR and informing obligations under international environmental law.[326]

169. Specifically, there are clear links between the right to health and loss of biodiversity and nature. The WHO recognises that biodiversity is "*a key environmental determinant of human health*."[327] IPBES' findings include that nature underpins all dimensions of human health and that decline of nature's contributions to people threatens a good quality of life.[328] The CBD's Draft Global Action Plan for Biodiversity and Health recognises, *inter alia*: that biodiversity is a key environmental determinant of human health, and the conservation and sustainable use of biodiversity can benefit human health by maintaining ecosystem services; and that halting the loss of biodiversity contributes to respecting, protecting and fulfilling the human right to health.[329] The complex interdependence of the rights to life and health and a healthy biosphere can be illustrated in a number of ways. For example:

(a) Damage to ecosystems and biodiversity can threaten these rights by increasing vulnerability to slow and fast-onset natural disasters and by exacerbating climate change. For example, the removal of coastal mangroves increases the risk of death from storms, and deforestation increases the frequency and severity of flood-related disasters.[330]

(b) Healthy ecosystems are a vital source of medicines and medical insights, with billions of persons relying on natural medicines for health care.[331] One

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326 UNHRC, *General Comment No. 36, Article 6: Right to Life*, 3 September 2019, CCPR/C/GC/36, ¶ 62.

327 WHO and Secretariat of the Convention on Biological Diversity, *Connecting Global Priorities: Biodiversity and Human Health – A State of Knowledge Review*, 2015, p. 1.

328 IPBES/7/10/Add.1, ¶ A1. *See* also recent guidance of the UN Economic and Social Council ("**ECOSOC**"), Permanent Forum on Indigenous Issues, *Indigenous Determinant of Health in the 2030 Agenda for Sustainable Development*, E/C.19/2023/5, ¶ 32 ("*The health of the land and Peoples are synonymous, nurtured through relationships with the physical and social environments, providing a strong basis for health and overall well-being" and further recognises the interdependence of humans and the environment, noting an "equilibrium of spirituality, traditional medicine, biodiversity, and interconnectedness of all that exists*.").

329 *See* CBD, *Draft of the Global Action Plan on Biodiversity and Health*, https://s3.amazonaws.com/cbddocumentspublic-imagebucket-15w2zyxk3prl8/c79fd8314a0266a1d4fe2a4556a63717 [last accessed 14 June 2024].

330 UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2020, A/75/161, ¶¶ 37-38, citing S. Das and J. R. Vincent, *Mangroves protected villages and reduced death toll during Indian super cyclone*, Proceedings of the National Academy of Sciences, vol. 106, No. 18, 5 May 2009; C.J.A. Bradshaw and others, *Global evidence that deforestation amplifies flood risk and severity in the developing world*, Global Change Biology, vol. 13, No. 11, November 2007.

331 UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2020, A/75/161, ¶¶ 6, 41.

important consequence of biodiversity loss is lost opportunities for medical breakthroughs.[332]

170. There is, further, a relationship between biodiversity loss and damage to ecosystems and the emergence and spread of communicable and noncommunicable disease.[333]

171. For example, in *La Oroya Population v Peru*,[334] the IACtHR found that by failing to protect the inhabitants of La Oroya from exposure to toxic pollution, Peru had violated the rights to life of two victims; the rights of 80 people to a healthy environment, health, personal integrity, life with dignity, access to information and political participation; and the rights of the children of 57 victims.

172. The UNHRC in *Portillo Cáceres v. Paraguay*[335] also found a breach of the right to life: heavily spraying the area in question with toxic agrochemical posed a reasonably foreseeable threat to the authors' lives, given that such large-scale fumigation "*has contaminated the rivers in which the authors fish, the well water they drink and the fruit trees, crops and farm animals that are their source of food*."[336]

173. *Third***,** linked closely to the right to a healthy environment and the rights to life and health, degradation of nature threatens the right to an adequate standard of living,

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332 UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2020, A/75/161, ¶ 41; UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 19 January 2017, A/HRC/34/49, ¶¶ 12-14, citing WHO and Secretariat of the Convention on Biological Diversity, *Connecting Global Priorities: Biodiversity and Human Health — A State of Knowledge Review*, 2015, p.11.

333 CBD, *Draft Global Action Plan for Biodiversity and Health*, referring to: IPBES Report 2019; WHO and Secretariat of the Convention on Biological Diversity, *Connecting Global Priorities: Biodiversity and Human Health — A State of Knowledge Review*, 2015, p.11; UNGA, *Resolution on Political Declaration of the Third High-Level Meeting of the General Assembly on the Prevention and Control of the Non-Communicable Diseases*, 17 October 2018, A/RES/73/2; UNEP, *Resolution on Environmental Aspects of Minerals and Metals*, 5 March 2024, UNEP/EA.5/Res.6; UNEP, *Resolution on the Environment and Health*, 30 January 2018, UNEP/EA.3/Res.4; UNEP, Conference of the Parties to the CBD, *Decision Adopted by the Conference of the Parties to the Convention on Biological Diversity, Health and Biodiversity*, 30 November 2018, CBD/COP/DEC/14/4; World Health Assembly, *Report on Health, Environment, and Climate Change: Human Health and Biodiversity*, 9 April 2018, A71/10. *See* also UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2020, A/75/161, ¶¶ 11, 40 and the studies cited therein.

334 Inter-American Court of Human Rights ("**IACtHR**"), *La Oroya Population v. Peru*, Preliminary Objections, Merits, Reparations and Costs Judgment, 27 November 2023, Series C No. 511.

335 *Portillo Cáceres v. Paraguay*, Communication No. 2751/2016, CCPR/C/126/D/2751/2016, 20 September 2019, https://ccprcentre.org/files/decisions/Norma_Portillo_C%C3%A1ceres_and_others_v__Paraguay.pdf [last accessed 14 June 2024].

336 *Portillo Cáceres v. Paraguay*, Communication No. 2751/2016, CCPR/C/126/D/2751/2016, 20 September 2019, https://ccprcentre.org/files/decisions/Norma_Portillo_C%C3%A1ceres_and_others_v__Paraguay.pdf [last accessed 14 June 2024], ¶ 7.5.

including rights to food and water.

174. The right to an adequate standard of living is recognised in both the UDHR (Article 25) and ICESCR (Article 11). The Committee on Economic, Social and Cultural Rights has explained that a number of rights emanate from, and are indispensable for, the realisation of the right.[337] These include the rights to food and housing, to which the ICESCR explicitly refers, and the rights to safe and clean water and sanitation, which have been recognised in resolutions by the UNGA and UN Human Rights Council.[338] Some also consider that the right to a healthy environment is a component of the right to an adequate standard of living.[339] The right to food is also independently recognised in the Protocol of San Salvador (Article 10).

175. As set out in Section III, ecosystems provide services that are essential for human wellbeing such as food, water, medicines and shelter. Biodiversity is critical to these functions: for example, enhancing soil fertility and aiding in pest control.

176. Biodiversity is particularly important to protecting and securing the right to food, as it makes agricultural systems more resilient and secure and plays a key role in increasing food production (for example, through pollination and providing habitat for species).[340] Genetic diversity within species increases the yield of commercial crops, and species richness in freshwater fisheries is associated with greater productivity.[341]

177. Biodiversity also helps to support the right of access to clean and safe water. For example, forests improve water flow and regulation, and molluscs can play and

337 ECOSOC, *General Comment No. 15 (2002) on the Right to Water*, 20 January 2003, E/C.12/2002/11, ¶ 3.

338 UNGA, *Resolution 64/292 on the Human Right to Water and Sanitation*, 3 August 2010, A/RES/64/292; UN Human Rights Council, *Resolution 15/9 on Human Rights and Access to Safe Drinking Water and Sanitation*, 6 October 2010, A/HRC/RES/15/9.

339 *See* the UK Government's statement on its decision to vote against the UNGA resolution on the right to a healthy environment, which states: "…*our understanding is that the right to a clean, healthy and sustainable environment derives from existing international economic and social rights law - as a component of the right to an adequate standard of living, or the right to the enjoyment of the highest attainable standard of physical and mental health*," https://www.gov.uk/government/speeches/explanation-of-vote-on-resolution-on-the-right-to-a-clean-healthy-and-sustainable-environment [last accessed 24 June 2024].

340 UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2020, A/75/161 ("**A/75/161 Report**"), ¶¶ 43, 45; UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 19 January 2017, A/HRC/34/49 ("**A/HRC/34/49 Report**"), ¶ 20.

341 UNGA, A/HRC/34/49 Report, ¶ 19.

important role in water purification.[342]

178. *Fourth*, while it is clear that the nature emergency threatens a wide range of human rights, impacts on different groups are and will be unequal.[343] Yet, States have obligations, including under the ICCPR and regional human rights treaties such as the ECHR and ACHR, to ensure that rights are enjoyed without discrimination.

179. IPBES has observed that areas of the world projected to experience significant effects from changes in climate, biodiversity and ecosystem functions are home to large concentrations of indigenous peoples and many of the world's poorest communities, and that "*because of their strong dependency on nature and its contributions for subsistence, livelihoods and health,*" those communities will be "*disproportionately hard hit*."[344] Deforestation, the loss of biodiversity and ecosystem degradation can also exacerbate gender inequalities, for example, by increasing the amount of time spent by women and girls to obtain food, water, firewood and fodder.[345]

180. *Fifth*, linked to the disproportionate impact on vulnerable populations, rights of children and future generations are also particularly threatened by degradation of ecosystems.[346] The Rio Declaration has long made clear as a core principle of international environmental law that the right to development must be fulfilled in such a way as to meet needs of both present and future generations.[347] This is also the core of international conceptions of sustainable development, which requires an integrated approach that takes into consideration environmental concerns along with economic development. In 1987, the UN Brundtland Commission defined sustainability as "*meeting the needs of the present without compromising the ability of future generations to meet their own needs*."[348] The KMGBF states that implementation should be guided by the principle of intergenerational equity, which aims to meet the needs of the present without compromising the ability of future generations to meet

342 UNGA, A/HRC/34/49 Report, ¶ 21 and the studies cited therein.

343 UNGA, A/HRC/34/49 Report, ¶¶ 22, 24.

344 IPBES Report 2019, Chapter 3.

345 UNGA, A/75/161 Report, ¶ 58.

346 UNGA, A/75/161 Report, ¶ 49.

347 Rio Declaration, Principle 3.

348 UNGA, *Report of the World Commission on Environment and Development, Annex "Our Common Future*," 4 August 1987, A/42/427.

their own needs.[349] The IACtHR has held that the right to a healthy environment constitutes a universal value that is owed to both present and future generations.[350]

181. The UN Committee on the Rights of the Child ("**UNCRC**") has expressed particular concerns about the decline of nature and the impact of biodiversity loss on children and their rights,[351] noting that "*[t]he extent and magnitude of the triple planetary crisis, comprising the climate emergency, the collapse of biodiversity and pervasive pollution, is an urgent and systemic threat to children's rights globally.*"[352]

182. As regards the closely linked climate crisis, in *Sacchi v Argentina*, the UNCRC acknowledged that children are "*particularly impacted by the effects of climate change*" both in terms of the manner in which they experience the health and other effects, as well as the potential of climate change to affect them throughout their lifetime.[353] The same considerations apply *mutatis mutandis* to the nature crisis. For example, the UNCRC has noted that indigenous children are disproportionately affected by biodiversity loss, and that the effects of loss in biodiversity and the degradation of ecosystems include reductions in microbial diversity, which is critical to the development of children's immune systems.[354] The IACtHR has held that, in general, children are, amongst other groups, especially vulnerable to environmental degradation.[355]

183. The UNCRC also recognises the interests of future generations.[356] The European Court of Human Rights (the "**ECtHR**") in *Verein KlimaSeniorinnen Schweiz* recently noted that these are likely to bear an increasingly severe burden of the consequences of

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349 KMGBF, ¶ 7.

350 IACtHR, *Request for an Advisory Opinion by the Republic of Colombia on the Environment and Human Rights*, Advisory Opinion, 15 November 2017, ¶ 59.

351 *See e.g.*, UNCRC, *Concluding Observations about the on the Combined Third to Sixth Periodic Reports of the Lao People's Democratic Republic*, 1 November 2018, CRC/C/LAO/CO/3-6, ¶ 36. *See* also UNCHR, *Report on Realizing the Rights of the Child Through a Healthy Environment*, 3 January 2020, A/HRC/43/30, ¶¶ 2, 48 ("*all children should enjoy...the certainty that the biodiversity of the natural world will remain for future generations*.").

352 UNCRC, *General Comment No. 26 on Children's Rights and The Environment, with a Special Focus on Climate Change*, 22 August 2023, CRC/C/GC/26, ¶ 1.

353 UNCRC, *Sacchi v Argentina and others*, UN Doc. CRC/C/88/D/104/2019 (2021), ¶ 10.13.

354 UNCRC, *General Comment No. 26 on Children's Rights and The Environment, with a Special Focus on Climate Change*, 22 August 2023, CRC/C/GC/26, ¶¶ 39, 58.

355 IACtHR, *Request for an Advisory Opinion by the Republic of Colombia on the Environment and Human Rights*, Advisory Opinion, OC-23/17, 15 November 2017, ¶ 67.

356 UNCRC, *General Comment No. 26 on Children's Rights and The Environment, with a Special Focus on Climate Change*, 22 August 2023, CRC/C/GC/26, ¶ 11.

present failures and omissions to combat climate change; yet at the same time, they have no possibility of participating in the relevant current decision-making processes.[357] The German Constitutional Court has similarly held that one-sided burdening of future generations in relation to GHG emission reductions is unconstitutional, ordering the German government to issue revised legislation that reduces the emission reduction burden on future generations.[358] Again, the same considerations must apply to the impact on future generations of failures to combat the global destruction of nature: future generations may be disproportionately burdened not only by nature's breakdown, but also by the disproportionate cost of taking action in future.

184. While this Statement does not set out detailed policy recommendations, it is clear that States' obligations in respect of individual human rights as they relate to the biodiversity and nature crises are both substantive and procedural, and positive and negative, as they also are in respect of the climate emergency.[359]

185. States' procedural obligations to facilitate access to information,[360] public participation[361] and access to justice[362] are essential to the substantive realisation of a healthy environment and are well-established in international human rights and environmental law.[363] Procedural obligations are specifically recognised under the UNECE Convention on Access to Information, Public Participation in Decision-

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357 *Verein KlimaSeniorinnen Schweiz and Others v Switzerland*, ECtHR, App. 53600/20, 9 April 2024 ("***Verein KlimaSeniorinnen Schweiz***"), ¶¶ 410, 420.

358 *Neubauer, et al. v Germany*, Judgement, German Federal Constitutional Court, 1 BvR 2656/18, 24 March 2021.

359 As the ECtHR made clear in *Verein KlimaSeniorinnen Schweiz*. *See* also IACtHR, *Request for an Advisory Opinion by the Republic of Colombia on the Environment and Human Rights*, Advisory Opinion, OC-23/17, 15 November 2017 for discussion of the procedural and substantive distinction.

360 Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (adopted 27 September 2018, entered into force 22 April 2021) 3398 UNTS (the "**Escazú Agreement**"), Arts. 5(1) and 5(2); Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (adopted 25 June 1998, entered into force 30 October 2001) 2161 UNTS 447 ("**Aarhus Convention**"), Art. 4; UNCLOS, Art. 244(1); UNEP, *Guidelines for Development of National Legislation on Access to Information, Public Participation and Access to Justice in Environmental Matters*, 26 February 2010, https://wedocs.unep.org/bitstream/handle/20.500.11822/22925/Bali%20Guidelines%20for%20the%20Development%20of%20National%20Legislation%20on%20Access%20to%20information%2c%20Public%20Participation%20and%20Access%20to%20Justice%20in%20Environmental%20Matters.pdf?sequence=1&isAllowed=y [last accessed 14 June 2024], Guideline 5.

361 ACHR, Art. 23(1)(a); Escazú Agreement, Art. 7; Aarhus Convention, Art. 6. The obligation to perform Environmental Impact Assessments ("**EIA**") with respect to proposed actions with the potential to have significant effects on the environment arises also as a matter of customary international law. *See e.g.*, *Pulp Mills*.

362 *See e.g.*, ACHR, Arts. 25, 8(1) and 1(1); Aarhus Convention, Art. 9; Escazú Agreement, Art. 8.

363 *See e.g.*, UNHRC, *Resolution on the Human Right to a Clean, Healthy and Sustainable Environment*, 18 October 2021, A/HRC/RES/48/13.

making and Access to Justice in Environmental Matters (the "**Aarhus Convention**")[364] and the Economic Commission for Latin American & Caribbean Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (the "**Escazú Agreement**").[365] They are mirrored in international human rights instruments and form part of customary international law.

186. States' human rights obligations in these areas are also informed and shaped by international environmental law commitments by way of canons of interpretation. The ECtHR and IACtHR in interpreting human rights treaties have applied the standards of dynamic and evolutive interpretation, interpreting the treaties as "*living instruments*" within their factual and legal context, which includes other international law (such as the Paris Agreement).[366] Article 31(3)(c) of the Vienna Convention provides that context and applicable rules of international law should be taken into account in interpreting treaties.

187. In summary, States have clear obligations to act in respect of the nature and biodiversity crises, as they do in respect of the climate emergency, deriving from internationally recognised human rights. States are obligated to comply with individual human rights in such a way for them to be effective, and doing so is critical to the future of human life and wellbeing. As UNEP has held, "*[u]rgent action at an unprecedented scale is necessary to arrest and reverse this situation, thereby protecting human and environmental health and maintaining the current and future integrity of global ecosystems*."[367]

V. LEGAL CONSEQUENCES WITH RESPECT TO OTHER STATES, IN PARTICULAR SMALL ISLAND DEVELOPING STATES, AND PRESENT AND FUTURE GENERATIONS

188. This section addresses Question (b) of Resolution 77/276, concerning the legal

364 Signed on 25 June 1998, entered into force on 30 October 2021.

365 Signed on 4 March 2018, entered into force on 22 April 2021.

366 *See e.g., Verein KlimaSeniorinnen Schweiz*, at ¶¶ 434, 455-456; IACtHR, *Request for an Advisory Opinion by the Republic of Colombia on the Environment and Human Rights*, Advisory Opinion, OC-23/17, 15 November 2017, ¶¶ 40-45 ("[the IACtHR] *must take international law on environmental protection into consideration when defining the meaning and scope of the obligations assumed by the States* [under the ACHR]"); UNHRC, *Views Adopted by the Committee under Article 5(4) of the Optional Protocol*, Concerning Communication No. 3624/2019 ("***Billy v Australia***"), 22 September 2022, CCPR/C/135/D/3624/2019, ¶ 7.5 in which the UNHRC referred to the 2015 Paris Agreement in interpreting a State Party's obligations under the ICCPR.

367 UNEP, *Global Environmental Outlook: GEO6 – Summary for Policymakers*, 4 March 2019, p. 4.

consequences that flow for a State that is in breach of its international obligations to ensure the protection of biodiversity from GHG emissions in circumstances where the breach has caused significant harm to biodiversity. Question (b) asks:

> *(b) What are the legal consequences under these obligations for States where they, by their acts or omissions, have caused significant harm to the climate system and other parts of the environment, with respect to:*
>
> *(i) States, including, in particular, small island developing States, which due to their geographical circumstances and level of development, are injured or specially affected by or are particularly vulnerable to the adverse effects of climate change?*
>
> *(ii) Peoples and individuals of the present and future generations affected by the adverse effects of climate change?"*

189. This section is structured as follows:

(a) Section V.1 provides an executive summary of WWF's answer to Question (b);

(b) Section V.2 sets out WWF's preliminary observations on the scope of Question (b);

(c) Section V.3 addresses the variability of enforcement mechanisms;

(d) Section V.4 addresses the principles underpinning the determination of legal consequences;

(e) Section V.5 addresses the legal consequences with respect to other States, in particular SIDS; and

(f) Section V.6 addresses the legal consequences with respect to peoples and individuals of the present and future generations.

V.1 Executive Summary

190. As set out in Sections III and IV, the world has reached a critical juncture. The devastating effect of GHG emissions on biodiversity is well documented and the risks to present and future generations, if action is not taken, is well understood.

191. The inextricable link between biodiversity and climate means that developing States, SIDS and States with low-lying coastal areas, and States with arid and semi-arid areas

or areas liable to flood, drought and desertification, are especially vulnerable to the adverse effects of climate change and GHG emissions on biodiversity.[368]

192. While States' obligations to protect and preserve biodiversity are established as a matter of customary international law and by specific treaties, outlined in Section IV, the efficacy of the legal framework requires robust and efficient enforcement mechanisms.

193. In WWF's view, two significant challenges to mitigating the consequences of those effects, and to preventing future harm, are (i) the lack of international fora for States and, in particular, individuals to pursue enforcement of States' obligations; and therefore the consequential lack of enforcement of some international obligations; and (ii) the risk of irreversible loss or damage to biodiversity which cannot be "put right" through reparations. It is against that background that WWF considers Question (b).

194. The significant damage and loss already caused to nature and biodiversity by GHG emissions is testament to a persistent failure by States to meet their obligations to prevent environmental damage and protect nature. The law of State Responsibility (considered further below) requires, as a minimum, wrongdoing States immediately to cease the commission of internationally wrongful acts, immediately to implement measures to comply with their obligations to protect, preserve and restore nature and biodiversity and to provide full reparation for the damage caused. Restitution will not be possible in many cases of irreversible loss to nature and biodiversity. Nevertheless, States must cease the commission of the violation and take all measures available to mitigate the harm caused, prevent future harm and compensate injured States for the significant harm caused. WWF strongly supports the adoption of the "*polluter pays*" principle in the compensation of States, and their populations, vulnerable to the adverse effects of climate change, and that have suffered significant, often irreversible damage, resulting from pollution by GHG emissions. States that, through their operations and activities, actually produce pollution should be required to compensate others who suffer the harmful effects of those polluting activities.

195. Some States are undertaking compensatory and remediation efforts on a voluntary basis, or supporting initiatives driven by WWF and other environmental NGOs by the

368 UNFCCC, Preamble, ¶ 18.

contribution of funds. However, these initiatives are not occurring on a scale sufficient to mitigate further significant damage caused by GHG emissions. What is required is immediate concerted action by States, in cooperation with one another, in the implementation of measures to restore and protect nature and biodiversity, and to ensure injured States are properly and fairly compensated.

196. Strategic international cooperation is fundamental to preventing significant and irreversible damage to nature and biodiversity. This is not voluntary. As detailed above in Section IV, multiple treaties impose obligations on States to cooperate specifically in the preservation and protection of nature, natural resources and biodiversity. WWF encourages all States to take immediate measures to ensure their compliance with their international obligations to preserve, protect and restore nature and biodiversity, and the compliance of other States. Where States are failing to comply with those obligations, such measures may include, but are not limited to, the invocation of the responsibility of wrongdoing States by injured States individually or in coordination as a group of States, including the most vulnerable States specially affected by the relevant breach,[369] on their own accord and/or on behalf of their nationals for significant damage caused by the breach. The invocation of the responsibility of wrongdoing States will ensure those wrongdoing States immediately implement measures to comply with their obligations and to provide reparation. Without the concerted, collective effort of States, there is little prospect for the prevention of irreversible harm to nature and biodiversity, and in turn to the climate system.

197. Human rights law can be a powerful part of the legal toolkit that seeks to arrest the biodiversity and nature emergency. While enforcement of international environmental law poses significant difficulties for individuals, national and regional courts have found on multiple occasions that degradation of the environment, including destruction of species and/or ecosystems which are essential to biodiversity, has resulted in a breach of human rights law, including violations of the right to a healthy environment. International environmental law thereby has the power to shape the scope of States' human rights obligations, when courts such as the ECtHR and IACtHR interpret human rights treaties as living instruments, providing some routes to a degree of indirect enforcement. In some of these human rights cases, reparations have gone beyond

369 Articles on Responsibility of States for Internationally Wrongful Acts ("**ARSIWA**"), Art. 42(b)(i).

payment of compensation and required significant restoration of the damage caused.

V.2 Preliminary Observations

198. WWF observes that the Question (b) proceeds on the basis that the relevant acts or omissions are (i) attributable to the State, and that those acts or omissions are (ii) in breach of a binding obligation under an international treaty or customary international law; and have (iii) caused significant harm. In other words, Question (b) concerns only those internationally wrongful acts or omissions committed by or attributable to States which cause significant harm. WWF will address the Question accordingly.

199. WWF recognises that, in most situations, the legal consequences for causing environmental harm are determined by the application of the general law of State Responsibility. The rules comprising the law of State Responsibility are set out in the International Law Commission's ("**ILC**") Articles on the Responsibility of States for Internationally Wrongful Acts ("**ARSIWA**"), most of which are accepted to reflect the rules of customary international law.[370]

200. As a basic rule of State Responsibility, every internationally wrongful act of a State entails the international responsibility of that State.[371] The ITLOS Advisory Opinion acknowledges this basic principle of international responsibility.[372] Accordingly, in the context of significant harm "*to the climate and other parts of the environment*," a State may only be held internationally responsible if its act or omission has caused or is causing that harm "*in circumstances where the act or omission constitutes an internationally wrongful act by the State*," namely:[373] the relevant act or omission is (i) attributable to the State and (ii) constitutes a breach of an international obligation to which the State is bound at the time the act or omission occurred.[374]

201. Therefore, unless otherwise specified in special rules of international law that are applicable to any given case,[375] where a State has failed to comply with its international

370 *See e.g., Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia and Herzegovina v. Serbia and Montenegro)*, Judgment, ICJ Rep. 2007, ¶¶ 385, 398, 401, 420, 431.

371 ARSIWA, Art. 1.

372 ITLOS Opinion, ¶¶ 223, 286.

373 ARSIWA, Art. 1.

374 ARSIWA, Arts. 2, 13. For the purposes of State responsibility, the characterization of an act as lawful under a State's internal laws does not affect its characterization as an internationally wrongful act. *See* ARSIWA, Art. 3.

375 ARSIWA, Art. 55.

obligations to ensure the protection of biodiversity, as considered in Section IV of this Statement, and that breach has resulted in significant harm to biodiversity, legal consequences will follow.

202. WWF will not address in detail in this Statement the applicable principles for establishing causation as a matter of international law, but stresses that climate and attribution science should play an important role in identifying the factors to be taken into consideration with respect to causation. In this regard, there have been significant advances in attribution science generally[376] and, as explained in Section III above, of the understanding of the impact of GHG emissions on biodiversity, the role of biodiversity in mitigating the damaging effects of GHGs on our climate and the identification of GHG emissions that cause damage to biodiversity, as well as the nature and degree of such damage.[377]

V.3 Variability of Enforcement Mechanisms

203. The ability of States and, in particular, individuals to enforce States' obligations to ensure the protection of biodiversity from GHG emissions for the benefit of States and present and future generations is variable.

204. In terms of mechanisms available to States, specific treaties provide for access to international fora to resolve disputes arising under those treaties. UNCLOS provides for four alternative means for the settlement of disputes, including this Court as well as the ITLOS pursuant to Section 5 of the Convention, an arbitral tribunal constituted in accordance with Annex VII to the Convention and a special arbitral tribunal constituted in accordance with Annex VIII to the Convention. Other environmental protection treaties provide for States to submit disputes to this Court, including the CBD, at Article 27; the International Convention for the Regulation of Whaling, at Article VIII; and the

376 *See e.g.*, C. Harvey, *Attribution Science Linking Warming to Disasters Is Rapidly Advancing*, Scientific American, 3 June 2022, <https://www.scientificamerican.com/article/attribution-science-linking-warming-to-disasters-is-rapidly-advancing/> [last accessed 14 June 2024]; M. Burger, J. Wentz, R. Horton, *The Law and Science of Climate Change Attribution*, [2020] 45 Columbia Journal of Environmental Law, <https://journals.library.columbia.edu/index.php/cjel/article/view/4730/2118> [last accessed 14 June 2024]; T. Knutson, J.P. Kossin, C. Mears, J. Perlwitz, and M.F. Wehner, *Detection and Attribution of Climate Change*, in Wuebbles et al (eds.), *Climate Science Special Report: Fourth National Climate Assessment*, Volume I, U.S. Global Change Research Program, Washington, DC, USA [2017], pp. 114-132, <https://science2017.globalchange.gov/downloads/CSSR_Ch3_Detection_and_Attribution.pdf> [last accessed 14 June 2024]; P. Stott, N. Christidis et al, *Attribution of Extreme Weather and Climate-Related Events*, 16 December 2015, <https://wires.onlinelibrary.wiley.com/doi/epdf/10.1002/wcc.380> [last accessed 14 June 2024].

377 *See e.g.*, IPCC Summary for Policymakers 2022, p. 14; WWF, Living Planet Report 2022, pp. 18-19.

Convention to Combat Desertification, at Article 28.

205. By contrast, other "sector specific" treaties do not provide for dispute resolution at the international level. For example, enforcement of the Polar Bear Agreement is delegated to the Contracting Parties at the national level pursuant to Article 6; and the Ramsar Convention does not provide for any specific enforcement mechanism.

206. In the absence of treaty specific measures, there are other mechanisms which States can use in the international fora. For example, a State may exercise diplomatic protection by invoking the international responsibility of another State for an injury caused by an internationally wrongful act of that State to a national of the invoking State.[378] In such cases, the extent of the injury suffered by individuals may play a significant role in assessing the injury to the claimant State.[379] However, the exercise of diplomatic protection is a discretionary power of the State, and, as the Court has recognised,[380] the decision whether to exercise it may be determined by political or other considerations that are unrelated to the specific case, or indeed a determination that the other State is in breach of its international obligations to protect biodiversity.

207. The mechanisms for individuals to enforce their rights at the international level are far more limited, though certain human rights bodies have provided a forum for individuals to invoke their rights as well as national courts (as addressed in Section V.6 below).

208. This is well illustrated by the operation of enforcement mechanisms at the regional level, before the Court of Justice of the European Union ("**CJEU**"), where some successful biodiversity-related claims have been brought before the court, deploying the EU's stricter legislative provisions for nature.[381]

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378 *See e.g.*, *Barcelona Traction Light and Power Company Limited (Belgium v Spain)*, Second Phase, Judgment, ICJ Rep. 5 February1970, ¶ 79; ILC, Draft Articles on Diplomatic Protection, 2006, A/61/10.

379 *Eritrea-Ethiopia Claims Commission*, Final Award, Ethiopia's Damage Claims, 17 August 2009, 26 RIAA 631, p. 634.

380 *Barcelona Traction Light and Power Company Limited (Belgium v Spain)*, ¶ 79.

381 For example, in 2023 in *Commission v Germany*, the CJEU found that Germany's failure adequately to protect and conserve hundreds of EU-identified nature reserves infringed provisions of the Habitats Directive: C-116/22 *European Commission v Federal Republic of Germany* ("***Commission v Germany***"), Judgment of 21 September 2023, ECLI:EU:C:2023:687 ¶ 149. The CJEU has also made similar findings in respect of Ireland: C-444/21 *European Commission v Ireland*, Judgment of 29 June 2023, ECLI:EU:C:2023:524, ¶ 180. In 2019 the CJEU handed down judgment in *Luonnonsuojeluyhdistys Tapiola*, which concerned a preliminary reference from the Supreme Administrative Court of Finland on Art. 16(1)(e) of the Habitats Directive, which allows some derogations from the system of strict protection for animal and plant species. The CJEU emphasised a series of strict limitations to the use of derogations for the hunting of large carnivores, including a guarantee that the derogation would not harm the

209. There is also extensive CJEU case law, including preliminary references from national courts, on how the Habitats and Birds Directives should be applied strictly when assessing the impacts of a new project or plan on a protected site.[382]

210. There are, however, strict standing requirements for individuals seeking to annul acts or decisions of the EU itself relating to the environment before the EU courts, as applicants must demonstrate individual concern. In 2017, the Aarhus Convention Compliance Committee ("**ACCC**") criticised the EU's restrictive approach to legal standing as not complying with Article 9(3) of the Aarhus Convention.[383] In 2021, an annulment action concerning climate change was rejected by the CJEU on this basis:[384]

> "*[N]atural or legal persons satisfy the condition of individual concern only if the contested act affects them by reason of certain attributes which are peculiar to them or by reason of circumstances in which they are differentiated from all other persons, and by virtue of these factors distinguishes them individually just as in the case of the person addressed*…"

211. The CJEU refused to infer individual concern on the basis that the effects of climate change had infringed fundamental rights in a way that was unique to and different for each individual.[385] The lack of standing is one of the main obstacles to individuals accessing the EU courts.

212. When considering national courts, while Member States must generally provide individuals and NGOs with effective access to national courts to enforce procedural and substantive rights bestowed by EU environmental law, they have considerable discretion as to the specific rules on standing.[386] This creates divergence between

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favourable conservation status of the species: C-674/17, *Luonnonsuojeluyhdistys Tapiola Pohjois-Savo – Kainuu ry v Risto Mustonen and Others* ("***Luonnonsuojeluyhdistys Tapiola***"), Judgment of 10 October 2019, ECLI:EU:C:2019:851, ¶ 80.

382 *See e.g.*, C-293/17 & 294/17, *Coöperatie Mobilisation for the Environment and Vereniging Leefmilieu*, Judgment of 7 November 2018, ECLI:EU:C:2018:882 (**"the Dutch Nitrogen case"**); C-323/17, *People Over Wind and Sweetman*, Judgment of 12 April 2018, ECLI:EU:C:2018:244.

383 ECOSOC, *Findings and Recommendations of the Compliance Committee with Regard to Communication ACCC/C/2008/32 (part II) Concerning Compliance by the European Union*, 2 June 2017 ECE/MP.PP/C.1/2017/7, ¶¶ 121-122.

384 C-565/19, *Armando Carvalho and Others v European Parliament and Council of the European Union,* Judgment of 25 March 2021, ECLI:EU:C:2021:252, ¶ 46.

385 *Armando Carvalho and Others*, ¶ 49.

386 *See* Treaty on the Functioning of the EU ("**TFEU**"), Art. 288; the Treaty on the European Union ("**TEU**"), Arts. 4, 19; Aarhus Convention (which the EU ratified in 2005), Art. 9(3); Charter of Fundamental Rights of the European Union (OJ 2012/C 326), Art. 47. See also C-873/19, *Deutsche Umwelthilfe eV v Bundesrepublik Deutschland,* Judgment of the Grand Chamber of 8 November 2022, ECLI:EU:C:2022:857, ¶¶ 65-68.

countries and inevitably results in unequal access to justice in environmental matters.

V.4 Principles Underpinning the Determination of Legal Consequences

213. The rules of State Responsibility that govern the legal consequences to States for the commission of internationally wrongful acts that cause environmental harm are applicable to all types of international obligations, regardless of their source or content. However, the suitability and efficacy of this framework is limited when applied in connection with breaches of international obligations of environmental protection. Two limitations warrant emphasis: first, the rules of State Responsibility cannot determine legal consequences for other entities whose activities may cause or contribute to environmental damage, since the rules are applicable only to States; second, clarification is required as to the forms and degrees of environmental damage which can be remedied by application of these rules.

A. States as bearers of responsibility

214. A key feature of the State Responsibility framework is that States are the primary bearers of responsibility under international law for causing environmental harm. This remains the case despite the fact that a significant percentage of GHG emissions are produced by activities undertaken by commercial operators or private entities. These non-state actors are only indirectly affected by international environmental standards, insofar as they may be required to comply with domestic regulations which States introduce to comply with their own binding obligations under treaties and customary international law. Thus, if emissions from a commercial facility cause significant transboundary harm, the State on whose territory that polluting facility is located may be responsible for an internationally wrongful act, having failed to comply with its obligation under customary international law to exercise due diligence to prevent that transboundary environmental harm occurring. In that situation, the State – but not the commercial operator – will be subject to legal consequences, as determined by application of the rules of State Responsibility.

215. On its face, the system of State Responsibility does not reflect the "polluter pays principle", for which WWF has been a long-standing and vigorous advocate. According to this principle, which has been widely recognised as a principle of international

environmental law[387] and is enshrined in numerous treaties and conventions,[388] those actors which, through their operations and activities, actually produce pollution, should themselves be required to compensate others who suffer the harmful effects of those polluting activities. Rather, the system of State Responsibility applies only to States. However, WWF considers that effective implementation and enforcement of environmental standards at the inter-state level will enhance efforts to fulfil the "polluter pays principle", as the prospect of enforcement action can be expected to motivate States to introduce, supervise and apply domestic regulations to control the polluting activities of non-state commercial operators and to allocate to those actors the responsibility for financing the costs associated with repairing the harm their polluting activities cause.

B. The concept of harm or injury

216. The concept of harm, injury or damage also poses difficulties when applying the general principles of State Responsibility in the context of environmental protection. There are two difficulties in particular: the first concerns the threshold of harm or damage which must be produced for an internationally wrongful act to occur; the second concerns which environmental impacts may properly be characterised as harm, injury or damage for the purposes of determining the appropriate reparations.

217. *First*, the general rules of State Responsibility do not distinguish between acts or omissions by a State that cause "*harm*" and those that cause "*significant harm*", and are, therefore of general application.[389] As discussed in Section IV above, however, States' primary obligation under customary international law is to act with due

387 Rio Declaration, Principle 16.

388 The polluter pays principle is found in the preambles of numerous treaties, including the 1980 Athens Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (1328 UNTS 105); the 1992 Helsinki Convention on the Transboundary Effects of Industrial Accidents (2105 UNTS 457); the 1993 Lugano Convention on Civil Liability for Damage Resulting From Activities Dangerous to the Environment (ETS No. 150); and the 2000 London Protocol on Preparedness, Response, and Co-operation to Pollution Incidents by Hazardous and Noxious Substances (IMO(092)/O41). The principle is also given binding effect in the operative provisions of other instruments, including the 1985 ASEAN Agreement on the Conservation of Nature and Natural Resources; the 1991 Convention on the Protection of the Alps (1917 UNTS); the 1992 Convention for the Protection of the Marine Environment of the North-East Atlantic (OJ L 104, 3.4.1998, p. 2–21); the 1992 Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area (1507 UNTS 166); the 1994 Convention on Co-operation for the Protection and Sustainable Use of the Danube River; the 1996 London Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (1046 UNTS 120); and the 1998 Rotterdam Convention on the Protection of the Rhine (1840 UNTS 372).

389 G. Le Moli, *State Responsibility and the Global Environmental Crisis*, in F. Paddeu, C.J. Tames, *The ILC Articles at 20, Glasgow Centre for International Law & Security, Working Paper Group*, December 2021, https://gcils.org/wp-content/uploads/2021/12/25352-The-ILC-Articles-at-20.pdf [last accessed 14 June 2024], p. 51.

diligence to prevent significant environmental damage. It is generally accepted that only harm of a certain magnitude amounts to breach of this due diligence obligation. This minimal threshold has been described, including in the question put before the Court in this matter, as "*significant harm*."[390]

218. Not all breaches of a State's international obligations to protect biodiversity will result in "*significant harm to the climate system or other parts of the environment*" and therefore not all harm caused by a State's breach of its international obligations will fall within the scope of Question (b)(i). For the reasons set out in Section III above, however, GHG emissions caused by human activities constitute a risk of significant transboundary harm to biodiversity, such that the obligation to prevent harm is engaged.

219. Moreover, international law does not provide special rules that differentiate between injured States, *i.e.*, whether the State is injured or specially affected or is particularly vulnerable to injury because of the attributes of that State. However, the secondary rules are sufficiently broad to be applied taking into consideration the circumstances of the injured State and the level of harm suffered, and how the legal consequences for a wrongdoing State will apply will depend on the facts of each case. The below analysis of the general rules that govern the legal consequences for States under the law of State Responsibility, are applicable to circumstances where significant harm is caused to any State, including States that are particularly vulnerable to the adverse effects of climate change because of their geographical circumstances or level of development.

220. *Second*, States which violate their international obligations owe a duty to make full reparation for the damage or injury caused by their wrongful act. But there remains some uncertainty as to the types of damage which fall within the scope of this duty to provide reparations. Article 31(2) of ARSIWA states that the "*injury*" for which States must provide reparation encompasses both material and moral damage. Material damage refers to damage to persons or property, or to other interests that are assessable in financial terms. Accordingly, in cases where compensation has been awarded or agreed following an internationally wrongful act that causes environmental damage, payments have been ordered to reimburse the injured State for expenses incurred in preventing or remedying pollution, or providing compensation for a reduction in the

390 *Pulp Mills*, ¶ 101.

value of damaged property.[391]

221. WWF submits that the contemporary conception of environmental damage has expanded to encompass damage to the intrinsic value of the environment (what is sometimes referred to as "*purely environmental loss*") and is not confined to impacts which are assessable in terms of their direct economic value. The ILC acknowledged that actual environmental damage could be expected to extend to "*purely environmental*" values (or so-called "*nonuse values*") such as biodiversity existence and amenity, since these effects are "*as a matter of principle, no less real and compensable than damage to property, though they may be difficult to quantify*."[392]

222. The recent international case law supports this wider conception of harm.[393] In the *Border Activities* cases, the ICJ noted that "*damage to the environment, and the consequent impairment or loss of the ability of the environment to provide goods and services, is compensable under international law*."[394] Further support can be found in the practice of the UN Security Council, which affirmed Iraq's liability under international law for any "*direct loss, damage, including environmental damage and the depletion of natural resources*" occurring as a result of Iraq's unlawful invasion and occupation of Kuwait.[395]

223. *Third*, WWF considers that the broader conception of environmental harm or injury set out above is consistent with the more expansive understanding of environmental "loss and damage" which has developed in the context of the Paris Agreement. In particular, a wider understanding of the "loss and damage" which results from climate change has been recognised by the Warsaw International Mechanism on Loss and Damage associated with Climate Change Impacts ("**WIM**") which was established by the

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391 *Trail Smelter case (United States, Canada)*, p. 1905, ¶ 1911. *See* also J. Crawford, *The International Law Commission's Articles on State Responsibility, Introduction: Text and Commentaries*, Cambridge University Press, 2002, p. 223, ¶ 15.

392 J. Crawford, *The International Law Commission's Articles on State Responsibility, Introduction: Text and Commentaries*, Cambridge University Press, 2002, p. 223.

393 *Nuclear Tests (Australia v. France)*, Judgment, ICJ Rep. 1974, p. 353; *Nuclear Tests (New Zealand v. France)*, Judgment, ICJ Rep.1974, p. 457; *Request for an Examination of the Situation in Accordance with Paragraph 63 of the Court's Judgment of 20 December 1974 in the Nuclear Tests (New Zealand v. France) Case*, Order, 22 September 1995, ICJ Rep. 1995, p. 288; *Legality of the Threat or Use of Nuclear Weapons*, p. 226; *Pulp Mills*; *Gabčíkovo-Nagymaros*.

394 *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*, Compensation Judgment, ICJ Rep. 2018, p. 15 at p. 28, ¶ 42.

395 UN Security Council Resolutions 687 [1991] and 692 [1991].

Conference of the Parties to the Paris Agreement as the main vehicle in the UNFCCC process to address loss and damage associated with climate change impacts in developing States that are particularly vulnerable to the adverse effects of climate change. The WIM's Executive Committee's implementation activities address all types of loss resulting from climate change, including non-economic losses: that is, those losses which are not easily quantifiable in financial terms. These non-economic losses are understood within the WIM to include losses which may affect the environment (such as the loss of biodiversity or ecosystem services), society (such as loss of territory, cultural heritage, social or cultural identity, or indigenous or local knowledge), or individuals (such as loss of life, health or mobility).[396] Furthermore, WWF welcomes the decision of the Conference of the Parties to the UNFCCC to establish funding arrangements for responding to loss and damage associated with the adverse effects of climate change.[397] But WWF observes that implementation mechanisms like the WIM are additional to the general law of State Responsibility: they do not displace or prevent the operation of the usual rules for determining the legal consequences for a State which has caused significant harm to the environment in breach of its binding international obligations.

V.5 Legal Consequences with respect to other States, in particular small island developing States

224. It is generally accepted that four legal consequences will flow from an internationally wrongful act of a State:[398]

(a) Duty of continued performance of the obligation;

(b) Duty to cease commission of the internationally wrongful act or omission;[399]

(c) Duty to provide guarantees of non-repetition, if circumstances so require;[400]

396 UNFCCC, *Non-Economic Losses in the Context of the Work Programme on Loss and Damage: Technical Paper*, 9 October 2013, FCCC/TP/2013/2.

397 UNFCCC, Decisions on Funding Arrangements for Responding to Loss and Damage Associated with the Adverse Effects of Climate Change, Including a Focus On Addressing Loss And Damage, FCCC/CP/2022/10/Add.1, 17 March 2023, Decisions 2/CP.27 and 2/CMA.4.

398 ARSIWA, Art. 55.

399 ARSIWA, Art. 30(a); *Jurisdictional Immunities of the State (Germany v Italy: Greece intervening)*, Judgment, ICJ Rep. 2012, ¶ 138.

400 ARSIWA, Art. 30(b).

(d) Duty to provide reparation.[401]

A. Duties of performance, cessation and guarantees of non-repetition

225. The duties of performance, of cessation, and to provide guarantees of non-repetition are closely linked and may be considered the principal ways (in addition to compensation), in which damage to and the loss of biodiversity may, in time, be repaired.

226. The wrongdoing State's obligation to comply with its international obligation is enduring and is not affected by its breach of that obligation, and therefore the wrongdoing State must take immediate steps to ensure its compliance with the obligation.[402] The duty to cease the wrongful act in such cases is intimately tied to the ongoing duty to perform the primary obligation.[403] Compliance with the obligation requires the immediate cessation of the commission of the internationally wrongful act that has given rise to the breach, in order that the validity and effectiveness of the underlying primary obligation is preserved.[404] As the ILC explains, the duty of cessation "*thus protects both the interests of the injured State or States and the interests of the international community as a whole in the preservation of, and reliance on, the rule of law.*"[405] The duty of cessation will also protect the interests of the international community in "*ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity*"[406] and in taking action to address climate change.

227. Guarantees of non-repetition are essential to ensuring the continued compliance of States with their obligations to preserve, protect and restore biodiversity. In this regard, cessation and guarantees of non-repetition may take the same form.[407] In the context of significant damage to biodiversity, cessation of a breach arising out of a failure to implement measures to ensure protection of biodiversity will involve the wrongdoing State immediately taking steps to implement the measures necessary to ensure

401 ARSIWA, Art. 31.

402 ARSIWA, Art. 29.

403 *See e.g., Whaling in the Antarctic (Australia v Japan: New Zealand intervening)*, Judgment, ICJ Rep. 2014, ¶¶ 245-246, concerning Japan's obligations under the International Convention for the Regulation of Whaling.

404 ARSIWA, Commentary to Art. 30(a).

405 ARSIWA, Commentary to Art. 30(a).

406 Paris Agreement, 2015, Preamble, ¶ 13.

407 *See e.g., La Grand (Germany v United States of America)*, Judgment, ICJ Rep. 2001, ¶ 124 ("*the commitment expressed by the United States to ensure implementation of the specific measures adopted in performance of its obligations . . . must be regarded as meeting Germany's request for a general assurance of non-repetition*").

compliance with its international obligations. For example, where a State has failed to implement measures to promote the preservation, protection, or restoration of carbon sinks, for example by its failure to formulate and implement its planning to promote the conservation of wetlands and their wise use in accordance with Article 3 of the Wetlands Treaty – an internationally wrongful act committed by an omission, being the failure to implement measures – the State must immediately implement such measures in accordance with the duty of cessation. The implementation of such measures, in compliance with the State's obligations, may in turn provide sufficient guarantee of non-repetition and serve to prevent future violations by that State.[408]

B. Reparation

228. In addition to its ongoing duties of compliance with the primary obligation, of cessation and of providing guarantees of non-repetition, the wrongdoing State must ensure adequate and effective reparations for the injury *caused by* the internationally wrongful act. The wrongdoing State must "*as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed*."[409]

229. The duty to provide reparation is a corollary of the State's responsibility resulting from the breach of its international obligations and is not a right of the injured State or States. As the ILC Commentary explains, the duty to provide reparation arises automatically upon the breach and is not contingent upon a demand or protest by any State, even if the form in which reparation should take may depend on the circumstances of the injured State or States.[410] This explanation suggests that compliance with the duty to provide reparation therefore requires the constant vigilance and self-evaluation of States in performance of their international obligations. In other words, States should not wait for their responsibility to be invoked by an injured State or group of States that includes the State specially affected by the breach[411] before taking measures to repair damage caused by their internationally wrongful acts.

230. As outlined above, for the purposes of reparation, "injury" includes "*any damage,*

408 *See* ARSIWA, Commentary to Art. 30, ¶ 11.

409 *Factory at Chorzów, Merits*, PCIJ Series A. No. 17, p. 47.

410 ARSIWA, Commentary to Art. 31, ¶ 4.

411 ARSIWA, Art. 42(b)(i).

whether material or moral."[412]

231. "Material" damage includes damage to property or other interests of the State or its nationals i.e., environmental damage; damage to biodiversity; and consequential damage to the State's nationals as a result of the loss of access to food, water, medicine, and clean air, and to their property.[413] Such injury may entail a wide range of costs to repair the injury, such as the costs of relocation and reconstruction, health services and infrastructure, as well as the cost of, for example, measures taken to restore natural assets such as carbon sinks that are important to ensuring the protection of the climate system and other parts of the environment from anthropogenic emissions.

232. "Moral" damage includes "*individual pain and suffering, the loss of loved ones or personal affront associated with an intrusion on one's home and private life*."[414] Moral damage may include, therefore, pain and suffering caused by the loss of biodiversity.

233. The law of State Responsibility provides for circumstances where several States suffer significant damage caused by a State's failure to comply with its obligations to protect biodiversity.[415] In this regard, the Court has advised that two or more injured States each making a claim against a wrongdoing State should coordinate their claims to avoid double recovery.[416]

234. Equally, the law of State Responsibility provides for circumstances in which multiple factors, in addition to the wrongful act of the State, contribute to the harm. As a general rule, where there are causes of the injury concurrent to the internationally wrongful act of the State, for example, where the acts of private actors or natural event are also identified as causes of loss of biodiversity (for example, by forest fires or flood) or damage to nature, the duty of the wrongdoing State to provide reparation is not reduced, except in cases of contributory fault.[417] As the ILC Commentary explains, such a result

412 ARSIWA, Arts. 31(2) and 36; ARSIWA, Commentary to Art. 36, ¶ 3.

413 ARSIWA, Commentary to Art. 31(2), ¶¶ 5 and 7.

414 ARSIWA, Commentary to Art. 31(2), ¶¶ 5, 7; *See Case Concerning the Difference Between New Zealand and France Concerning The Interpretation or Application of Two Agreements, Concluded On 9 July 1986 Between The Two States and Which Related to the Problems Arising from the Rainbow Warrior Affair*, 30 April 1990, 10 RIAA 215, ¶¶ 107, 109.

415 ARSIWA, Art. 46.

416 *Reparations for Injuries Suffered in the Service of the United Nations*, Advisory Opinion, ICJ Rep. 1949, ¶ 186; ARSIWA, Commentary to Art. 46, ¶ 4.

417 *Corfu Channel (United Kingdom of Great Britain and Northern Ireland v Albania), Assessment of the Amount of Compensation*, Judgment, ICJ Rep. 15 December 1949, pp. 244-250; *United States Diplomatic and Consular Staff*

should follow in cases where there are concurrent causes of the damage that are not the acts of another State (which may be held jointly and separately responsible):

> "*Unless some part of the injury can be shown to be severable in causal terms from that attributed to the responsible State, the latter is held responsible for all the consequences, not being too remote, of its wrongful conduct.*"[418]

235. In the *Tigray Case*, the Eritrea-Ethiopia Claims Commission considered the duty of a State to provide reparation for the internal displacement of civilians where concurrent causes existed – international armed conflict (resulting from the unlawful use of force by Eritrea against Ethiopia) and drought.[419] In that case, the Commission held:

> "*A further complication is that some areas in Tigray were plagued at the relevant times both by war and by drought, and both afflictions caused displacement. The evidence did not distinguish between persons who left their homes on account of the war, and those who left for other reasons. However, it was clear that the war was by far the most significant cause of internal displacement, and the Commission has not taken drought into account in seeking to assess the numbers of persons displaced on account of the jus ad bellam violation.*"

236. There must, however, be a sufficient causal connection between the breach and the damage, and in this regard, factors such as proximity and foreseeability will be taken into consideration. As held by the Eritrea-Ethiopia Claims Commission, "*[a] breach of the jus ad bellum by a State does not create liability for all that comes after.*"[420] Questions of proximity or remoteness, and of foreseeability, are questions of fact and will depend on the circumstances of each case.[421]

237. What will constitute adequate and effective reparation will also depend on the circumstances of each case.[422] Reparation can take the form of restitution, compensation and satisfaction, either individually or in combination.[423] It is therefore not appropriate to be prescriptive on the form reparation should take in circumstances

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in Tehran (United States of America v Iran), Judgment, ICJ Rep. 24 May 1980, ¶¶ 31-33; ARSIWA, Commentary to Art. 31, ¶ 12.

418 ARSIWA, Commentary to Art. 31, ¶ 13.

419 *Eritrea-Ethiopia Claims Commission*, Final Award, Ethiopia's Damage Claims, 17 August 2009, 26 RIAA 631, p. 733.

420 *Eritrea-Ethiopia Claims Commission*, p.722. *See* also ARSIWA, Commentary to Art. 31, ¶¶ 9-10.

421 *Eritrea-Ethiopia Claims Commission*, p.722. *See* also ARSIWA, Commentary to Art. 31, ¶¶ 9-10.

422 *Avena and Other Mexican Nationals (Mexico v United States of America)*, Judgment, ICJ Rep. 31 March 2004, ¶¶ 119, 123.

423 *Factory at Chorzów, Merits*, PCIJ Series A. No. 17, p. 47.

where a State or States are responsible for significant damage to nature and biodiversity. It is possible, however, to identify certain factors that should be taken into consideration when determining what reparation would be adequate and effective in any given case.

238. One of the particular challenges in determining the appropriate form of reparation in the circumstances where there has been significant damage to biodiversity, is that such damage may result in irreversible loss of biodiversity. As we set out below, restitution of the situation as it would have existed if the act or omission had not been committed will likely be impossible for a single wrongdoing State or even multiple wrongdoing States to achieve. In those circumstances, it is WWF's view that the assessment of compensation must be adjusted accordingly, to take into account that States cannot fully "put right" the damage done.

(i) Restitution

239. Restitution requires the wrongdoing State to re-establish *as far as possible* the situation which existed before the commission of the internationally wrongful act, "*to the extent that any changes that have occurred may be traced to that act*."[424] The responsible State must provide restitution, unless doing so is "*not materially possible*" or "*involves burden out of all proportion to the benefit deriving from the restitution instead of compensation*."[425]

240. As explained above, WWF supports large-scale nature restoration projects, such as rewetting peatlands and the restoration of natural forests, as valuable measures to address the adverse effects of climate change. Such initiatives could provide more than one third of the climate change mitigation efforts needed before 2030.[426] In cases of significant damage to biodiversity even well-meaning attempts at restitution will be inadequate or impossible. A clear example of this is restitution for internationally wrongful acts that have caused deforestation or desertification. As explained above in Section III, afforestation and the restoration of natural forests are valuable means of increasing carbon sequestration in both vegetation and soils, protecting and restoring

424 ARSIWA, Commentary to Art. 35.

425 ARSIWA, Art. 35.

426 WWF, *Nature Restoration: Helping People, Biodiversity and Climate*, 3 February 2021, https://www.wwf.eu/?2118966/Nature-restoration-Helping-people-biodiversity-and-climate [last accessed 14 June 2024].

biodiversity and mitigating against the adverse effects of climate change. However, these initiatives have a long "payback" time. When deforestation and degradation is halted it can take decades to fully recover the biomass that was initially present in native ecosystem, and to achieve carbon sequestration equal to that experienced before deforestation.[427] The climate crisis, and the biodiversity crisis, do not allow for decades of delay in re-establishing the situation to what it was or would probably have been if internationally wrongful acts causing that damage had not been committed. Moreover, science indicates that certain significant damage to nature, such as the melting of the ice sheets of the West Antarctic and Greenland, is reaching the prospect of irreversible tipping points.[428] It will not be possible for a single wrongdoing State or a group of wrongdoing States to restore the ice sheets of the West Antarctic or Greenland to pre-1960s status.[429]

241. Another example is the potentially irreversible damage to marine biodiversity caused by anthropogenic GHGs. Anthropogenic GHGs, in particular CO_2 emissions, are a key driver of ocean acidification and ocean warming, and, as a consequence, deoxygenation that presents significant risk, if left unabated, of irreversible loss of marine biodiversity and life, and permanent change to the ocean ecosystem.[430] It will likely be impossible for a single wrongdoing State or even multiple wrongdoing States whose acts have caused such harm to achieve restitution of the ocean ecosystem to the state in which it would have existed had the relevant internationally wrongful act or omission not been committed.

242. These are clear examples of the circumstances in which restitution will likely be impossible to achieve. In these circumstances, the assessment of compensation must be adjusted to take into account that wrongdoing States cannot fully restore the situation to what it would have been had the relevant internationally wrongful act not been committed.

243. In all circumstances, and in particular where restoration will be impossible or

427 IPCC, *Special Report: Climate Change and Land*, 2019, https://www.ipcc.ch/site/assets/uploads/2019/11/SRCCL-Full-Report-Compiled-191128.pdf [last accessed 14 June 2024], ¶ 2.6.2.

428 IPCC Climate Change Report 2022, p. 47.

429 *See* WWF, *The Antarctic*, https://www.wwf.org.uk/where-we-work/antarctic#challenges-affecting-the-antarctic [last accessed 14 June 2024].

430 C. Heinze et al, *The Quiet Crossing of Ocean Tipping Points*, PNAS, 22 February 2021, https://www.pnas.org/doi/full/10.1073/pnas.2008478118 [last accessed 24 June 2024].

inadequate, States should, in any event, be required to undertake measures to protect and conserve biodiversity and mitigate against further loss, in compliance with their international obligations.

(ii) Compensation

244. In circumstances where restitution is impossible, inadequate or for other reasons not appropriate, the wrongdoing State is required to compensate the injured State for the damage or injury caused by the internationally wrongful act.[431] This should be in addition to the requirement that the State immediately ceases violation of its international obligation, complies with the obligation and takes mitigation measures and measures to prevent further loss and damage.

245. Compensation should cover any financially assessable damage. It includes compensation for damage suffered directly by the State and damage or injury suffered by the State's nationals on whose behalf the injured State makes the claim in the exercise of diplomatic protection, including "moral" damage such as mental suffering, loss of enjoyment of life and habitat.

246. What constitutes appropriate heads of compensation for significant damage to nature and biodiversity will depend on the content of the primary obligation breached by the wrongdoing State.[432] With respect to environmental damage, compensation may include compensation for the loss of biodiversity, and with it the resulting loss of food, energy, medicine, drinking water and clean air. As the ILC explains in its Commentary to Article 36 ARSIWA with respect to cases of environmental damage:

> *"In cases where compensation has been awarded or agreed following an internationally wrongful act that causes or threats environmental damage, payments have been directed to reimbursing the injured State for expenses reasonably incurred in preventing or remedying pollution, or to providing compensation for a reduction in the value of the polluted property. However, environmental damage will often extend beyond that which can be readily quantified in terms of clean-up costs or property devaluation. Damage to such environmental values (biodiversity, amenity, etc. – sometimes referred to as "non-use values") is, as a matter of principle, no less real and compensable than damage to property, though it may be difficult to quantify."*[433]

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431 *Factory at Chorzów Merits*, PCIJ Series A. No. 17, p. 47.

432 ARSIWA, Commentary to Art. 36, ¶ 7.

433 ARSIWA, Commentary to Art. 36, ¶ 15.

(iii) Satisfaction

247. Insofar as significant damage to nature and biodiversity cannot be made good by restitution or compensation, the wrongdoing State is required to give satisfaction.[434] This may consist of acknowledgment of the breach, apology or expression of regret or other measure,[435] with respect to significant harm caused that is not financially assessable, such as the loss of culture that is intimately tied to nature. However, in circumstances of significant damage to nature and biodiversity, satisfaction alone will not constitute adequate reparation.

V.6 Legal consequences with respect to peoples and individuals of the present and future generations

248. There are few mechanisms at the international level for individuals to take action to enforce international environmental law directly, especially for the people of those States who are suffering the gravest consequences of the nature and climate crises.

249. At the same time, there are some mechanisms available to individuals to enforce international law as it pertains to nature and climate, including in the context of international human rights law in relation to the right to a healthy environment.

250. It is important to highlight, however, that depending on the jurisdiction in question (and as set out in relation to the CJEU at paragraphs 210-211 above), rules on standing can pose challenges for individuals or organisations seeking to bring claims. In particular, requirements for victim status can pose significant difficulties in the context of a general environmental crisis that affects everyone.

251. For example, in the context of international human rights law:

(a) The UNHRC may consider individual communications in relation to all States that are parties to the First Optional Protocol to the ICCPR.[436] However, communicants must show they are *personally* victims of the law, policy or act of the State party claimed to be violating their rights.[437] It is not sufficient simply

434 ARSIWA, Art. 37.

435 ARSIWA, Art. 37.

436 Optional Protocol to the International Covenant on Civil and Political Rights ("**First Optional Protocol to the ICCPR**") (adopted 16 December 1966, entered into force 23 March 1976) 999 UNTS 171.

437 *See* First Optional Protocol to the ICCPR, Arts. 1-2.

to challenge a law or State policy or practice in the abstract (*i.e.*, on the basis of *actio popularis*).

(b) Under the ACHR, only the State Parties and the Inter-American Commission on Human Rights have the right to submit a case to the IACtHR (Article 61 ACHR).

(c) Under the ECHR, individuals generally must establish victim status to bring a claim. The ECtHR clarified the position recently in respect of the climate emergency in *Verein KlimaSeniorinnen Schweiz*, where one of the applicants was a non-profit association and the other four applicants were women living in Switzerland who claimed that their health and daily routines were impacted by heatwaves. The ECtHR held that the individual applicants did not have sufficient victim status, but the organisation did.[438] The exclusion of *actio popularis* from the ECHR system (Article 34) meant that the threshold for individual victim status was high. To claim victim status, an individual must establish:[439]

> "*(a) the applicant must be subject to a high intensity of exposure to the adverse effects of climate change, that is, the level and severity of (the risk of) adverse consequences of governmental action or inaction affecting the applicant must be significant; and*
>
> *(b) there must be a pressing need to ensure the applicant's individual protection, owing to the absence or inadequacy of any reasonable measures to reduce harm*."

252. What is clear is that to give *effect utile* to biodiversity-related obligations, rules on standing should be interpreted broadly. Restrictive rules on standing prevent the enforcement of the important human rights that pertain to both the climate and nature crises and strip individuals of the right of access to justice. In contrast, more open rules on standing allow bringing of greater diversity of claims. For example, the Dutch Civil Code, which allows for representative actions, was relied upon recently by the NGO Fossielvrij to file a writ against KLM for "greenwashing."[440]

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438 *Verein KlimaSeniorinnen Schweiz*, ¶ 502, in which there are the findings in relation to organisational victim status.

439 *Verein KlimaSeniorinnen Schweiz*, ¶ 487.

440 *Fossielvrij-Beweging v. Koninklijke Luchtvaart Maatschappij N.V.*, District Court of Amsterdam, 7 July 2022 (Netherlands).

V.7 Legal consequences for direct breaches of obligations

253. While there are limited mechanisms for individuals to enforce environmental obligations in international fora, most legal systems strive to interpret constitutional rights (and other rights enshrined in domestic law) in conformity with international law and obligations.

254. The techniques deployed by national courts are varied but include: (i) express commitments in constitutions to interpret rights in conformity with international law; (ii) other interpretive principles of consistent interpretation or *effet utile*; and (iii) domestic administrative/public laws and the ability to bring judicial reviews/constitutional challenges to public decision-making on the grounds that it violates international law.

255. Such techniques have been used as a mechanism by individuals to enforce States' environmental obligations, and to seek reparation for harm.[441]

256. In addition, decisions of regional courts and bodies will trickle down onto the municipal plane, such that regional courts have a significant opportunity through their decisions to establish the legal consequences for breaches of such environmental obligations.

257. In the context of the EU, the legal consequences for breaches of EU environmental law depend on the mode by which a case has reached that court but will often require action

441 In the courts of England and Wales, such mechanisms have been used (i) by the family and estate of Ella Adoo-Kissi-Debrah ("**Ella**") to bring a private claim for damages against UK authorities (including the Mayor of London; Transport for London; the Department for Environment, Food and Rural Affairs; the Department for Transport; and the Department of Health and Social Care) for breaches of, inter alia, EU law relating to air quality and violation of rights under the ECHR. The claim arose as a result of Ella's illness and subsequent death on 15 February 2013 from causes that were found to have included exposure to air pollution. The Mayor of London settled the claim on 6 November 2023, <https://www.london.gov.uk/md3183-settlement-relating-legal-claim-family-and-estate-ella-adoo-kissi-debrah?ac-204023=204006> [last accessed 14 June 2014]. *See* also the decisions of the French courts in TA Paris, 4e sect. - 2e ch., 16 juin 2023, n° 2019924 and TA Paris, 4e sect. - 2e ch., 16 juin 2023, n° 2019925; and (ii) by environmental NGOs and campaign organisations in an administrative law challenge against the Secretary of State for Energy Security and Net Zero for a failure to comply with its obligations under the Climate Change Act 2008 ("**CCA 2008**"). The Court observed that section 1 CCA 2008 was "amended to incorporate the net zero target because of the recognition internationally and in the UK of the need for action to be taken to reduce GHG emissions more urgently" and that "[t]*he UK's contribution to addressing the global temperature target in the Paris Agreement depends critically on meeting the net zero target for 2050 set by the CCA 2008 through the carbon budgets*:" *Friends of the Earth & Others v Secretary of State for Energy Security and Net Zero* [2024] EWHC 995 (Admin), at §79 (per Sheldon J) citing *R (Friends of the Earth Ltd) v Secretary of State for Business, Energy and Industrial Strategy* [2023] 1 WLR 225, at §202 (per Holgate J). The Secretary of State is now required to prepare a revised Carbon Budget Delivery Plan within 12 months. In *PSB et al. v Brazil* 2020 (ADPF 708), a case which relates to the Brazilian Government's failure to disburse payments from a Climate Fund that derives from Brazil's international commitments, the Supreme Court held that: environmental law treaties constitute a type of human rights treaty with "supranational" status (¶17); there is a duty to mitigate climate change considering the State's international commitments (¶37); and the State was required to make the Climate Fund work and allocate its resources (¶36).

by the relevant Member State. For example, in 2019, the CJEU in *Commission v Poland*[442] found that Poland's ongoing logging and other activities in the Białowieża Forest breached the Habitats Directive, including by failing to guarantee the strict protection of certain beetles, and breached the provisions of the Birds Directive by failing to establish necessary conservation measures and failing to guarantee the protection of certain bird species. In an interim order, the CJEU required Poland to stop logging immediately.[443] Following this decision, Poland announced a 6-month moratorium on all logging activity in key forested areas in January 2024.[444]

V.8 Legal consequences for breaches of human rights

258. Courts all around the world have grappled with the connection between human rights and biodiversity (*see*, *e.g.*, the domestic legal cases listed above). Between them, the cases demonstrate that States' acts or omissions in respect of the biosphere/ecosystem/nature can violate international law.

259. The consequences for States in these cases range widely but can include requirements for cessation, reparations and restoration.

260. *First*, UN treaty bodies have adjudicated upon human rights issues in the climate change context in *Billy v Australia*,[445] *Sacchi v Argentina and others*,[446] and *Teitiota v New Zealand*.[447] By way of this case law, UN bodies have established that the rights to life, minority culture, and family and home under the ICCPR may all be threatened by damage to the environment through climate change, generating States' preventative

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442 C-441/17, *European Commission v Republic of Poland* ("***Commission v Poland***"), Judgment of 17 April 2018, ECLI:EU:C:2018:255.

443 C-441/17, *Commission v Poland*, Order of 20 November 2017, ECLI:EU:C:2017:877.

444 *See* Forest Defenders Alliance, *Poland Initiates 6 Months Logging Ban in High-Value Forest*, https://forestdefenders.eu/big-news-poland-initiates-6-month-logging-ban-in-high-value-forests/#:~:text=Poland's%20new%20Minister%20of%20Climate,areas%2C%20including%20the%20Carpathian%20Woodlands [last accessed 14 June 2024]. In the case of a decision following a preliminary reference from a national court, the implications of the CJEU's findings on the law in respect of the factual case will typically be a matter for the referring domestic court. See e.g., cases on damages see C-201/02, *The Queen on the Application of Delena Wells v Secretary for Transport, Local Government and the Regions*, Judgment of 7 January 2004, ECLI:EU:C:2004:12, ¶¶ 66-69 and C-420/11, *Jutta Leth v Republik Österreich, Land Niederösterreich*, Judgment of 14 March 2013, ECLI:EU:C:2013:166, ¶¶ 30 to 36 above; on preliminary reference C-674/17 *Luonnonsuojeluyhdistys Tapiola*, Judgment of 10 October 2019, ECLI:EU:C:2019:851.

445 UNHRC, *Billy v Australia*, 22 September 2022, CCPR/C/135/D/3624/2019.

446 UNCRC, *Decision adopted by the Committee under the Optional Protocol to the Convention on the Rights of the Child on a communications procedure, concerning communication No. 104/2019* ("***Sacchi v Argentina and others***"), 11 November 2019, CRC/C/88/D/104/2019.

447 UNHRC, *Views adopted by the Committee under article 5 (4) of the Optional Protocol, concerning communication No. 2728/2016* ("***Teitiola v New Zealand***"), 23 September 2020, CCPR/C/127/D/2728/2016.

obligations.[448]

261. In *Billy v Australia*, the UNHRC found that the authors' Article 17 and Article 27 ICCPR rights (to privacy, family, home and the enjoyment of minority culture) had been violated by Australia's failure to implement adequate climate adaptation measures, in light of the serious impacts that included flooding of ancestral burial lands.[449] The authors' ability to enjoy their culture was closely associated with traditional fishing and farming, and Australia's failure to adopt effective and timely adaptation measures (such as building seawalls) was held to have violated that right.[450]

262. The UNHRC held that, pursuant to Article 2(3)(a) of the ICCPR, Australia was under an obligation to provide the authors with an effective remedy, requiring it to "*make full reparation*" to those whose rights had been violated, including:[451]

> "*to provide adequate compensation, to the authors for the harm that they have suffered; engage in meaningful consultations with the authors' communities in order to conduct needs assessments; continue its implementation of measures necessary to secure the communities' continued safe existence on their respective islands; and monitor and review the effectiveness of the measures implemented and resolve any deficiencies as soon as practicable. The State party is also under an obligation to take steps to prevent similar violations in the future*."

263. Australia appears to have declined the UNHRC's recommendation to award compensation.[452]

264. In the nature context, as set out above, the UNHRC in *Portillo Cáceres v. Paraguay*[453] held that Paraguay had violated the authors' right to life by heavily spraying toxic agrochemicals, resulting in contamination to rivers, water and food.[454] As in *Billy v*

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448 UNHRC, *Billy v Australia*, ¶¶ 8.3-8.14.

449 UNHRC, *Billy v Australia*, ¶ 8.12.

450 UNHRC, *Billy v Australia*, ¶ 8.14.

451 UNHRC, *Billy v Australia*, ¶ 11.

452 *See* Australia Government, *Attorney-General's Department, Billy et al v Australia (3624/2019) Australian Government Response*, 30 March 2023, https://www.ag.gov.au/rights-and-protections/publications/billy-et-al-v-australia-36242019-australian-government-response [last accessed 14 June 2024]; *see* also Client Earth, *One Year on From Historic Torres Strait UN Climate Victory – No Compensation Despite Legal Finding*, https://www.clientearth.org/latest/press-office/press/one-year-on-from-historic-torres-strait-un-climate-victory-no-compensation-despite-legal-finding/ [last accessed 14 June 2024].

453 *Portillo Cáceres v. Paraguay*, Communication No. 2751/2016, CCPR/C/126/D/2751/2016, 20 September 2019, https://ccprcentre.org/files/decisions/Norma_Portillo_C%C3%A1ceres_and_others_v__Paraguay.pdf [last accessed 14 June 2024].

454 *Portillo Cáceres v. Paraguay*, ¶ 7.5.

Australia, the UNHRC recommended Paraguay provide the authors with full reparation, including adequate compensation.[455]

265. *Second*, regional human rights courts have adjudicated on a wide range of claims relating to environmental degradation, again with varying consequences for State Parties found to have violated human rights.

266. The IACtHR in particular has found on a number of occasions that States have violated the right to a healthy environment.[456] For example, in *La Oroya Population v Peru*[457] (see above), following its findings that by failing to protect the inhabitants of La Oroya from exposure to toxic pollution, Peru had violated rights to a healthy environment, health, personal integrity, life, access to information, and political participation, the Court ordered Peru to adopt comprehensive reparation measures, including preparing an environmental remediation plan; a public apology; free medical care to the victims; and environmental and monetary compensation.[458]

267. While not recognising an independent right to a healthy environment, the ECtHR has recognised on many occasions that an individual's rights to life and to private and family life rights may be negatively impacted by an unsafe or disruptive environment, finding that States which have failed to take appropriate measures (such as implementing land-planning and emergency-relief) have breached the ECHR.[459] Very recently, in *Verein KlimaSeniorinnen Schweiz*, the ECtHR determined that Switzerland had failed to implement and enforce adequate legislative and administrative measures to protect against the impacts of climate change, and had therefore breached Article 8 of the ECHR (the right to respect for private and family life).[460] The applicant did not submit a claim for damages, and the ECtHR did not require any particular measures to be implemented in order to comply with the judgement, holding that Switzerland was

455 *Portillo Cáceres v. Paraguay*, ¶ 9.

456 *See e.g.*, IACtHR, *Case of the Indigenous Communities of the Lhaka Honhat (Our Land) Association v. Argentina*, Merits, Reparations and Costs, 6 February 2020, (Ser. C), No. 400.

457 IACtHR, *La Oroya Population v. Peru*, Preliminary Objections, Merits, Reparations and Costs Judgment, 27 November 2023, Series C No. 511.

458 IACtHR, *La Oroya Population v. Peru*, ¶¶ 11-26.

459 *See e.g., Cordella v Italy*, No.54414/13 and 54264/15, ECtHR, 24 January 2019; *Fadeyeva v Russia*, No.55723/00, ECtHR, 9 June 2005, ¶¶ 68-69, 133-134; *López Ostra v Spain*, No.16798/90, ECtHR, 9 December 1994, ¶ 51; *Budayeva v Russia*, No. 15339/02, ECtHR, 20 March 2008, ¶¶ 147-158.

460 *Verein KlimaSeniorinnen Schweiz*, ¶¶ 548-552.

best placed to identify how it would comply.[461]

268. *Third*, national courts around the world have long taken a leading role in decisions that recognise the right to a healthy environment, the threat posed by climate change to human rights,[462] and violations of rights linked to the nature crisis (see the list of cases cited above).[463]

269. The legal consequences can be significant. In 2018, the Supreme Court of Mexico held that citizens' constitutional right to a healthy environment had been violated by the Government's approval of a major tourism development, as the project would damage a mangrove ecosystem.[464] The Supreme Court ordered that construction of the project be stopped and the mangrove ecosystem and environmental services be restored.[465]

270. The Constitutional Court of Colombia found in 2016 that the negative effects of illegal logging and mercury contamination from mining on ecosystems and the health of the inhabitants of the Atrato river region violated their rights to life, health, water, food security, a healthy environment and culture.[466] The court's orders included a requirement to design and implement a plan to decontaminate the River basin and its tributaries, recover ecosystems and prevent additional environmental damage, which should involve measures such as reforesting impacted zones.[467] The court's Seventh Order required a comprehensive action plan for the recovery of traditional forms of subsistence and food.

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461 *Verein KlimaSeniorinnen Schweiz*, ¶¶ 647-657.

462 *See e.g.*, *Demanda Generaciones Futuras v. Minambiente*, Decision, Supreme Court of Colombia, 5 April 2018; *Leghari v. Federation of Pakistan*, W.P. No. 25501/201, Decision, 4 April 2015; *Urgenda Foundation v The Netherlands*, No. 19/00135, Supreme Court of the Netherlands ECLI:NL:HR:2019:2007 (2019); *Neubauer et al v Federal Republic of Germany*, German Federal Constitutional Court, 1 BvR 2656/18, 24 March 2021.

463 *See e.g.*, *Demanda Generaciones Futuras v. Minambiente*; *Amparo en Revisión*, No. 307/2016, Decision, Supreme Court of Mexico, First Chamber, 14 November 2018; UNGA, *Report of the Special Rapporteur on Human Rights and the Environment Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, 15 July 2020, A/75/161, ¶¶ 35-36.

464 C. Rodríguez-Garavito, D. R. Boyd, *A Rights Turn in Biodiversity Litigation?*, 7 December 2023, https://www.cambridge.org/core/journals/transnational-environmental-law/article/rights-turn-in-biodiversity-litigation/2AA06A4A690C4B6E97D5E4EDD293005E [last accessed 14 June 2024], p. 514; *Amparo en Revisión*, No. 307/2016, Decision, Supreme Court of Mexico, First Chamber, 14 November 2018, p. 44.

465 *See Amparo en Revisión*, No. 307/2016, ¶¶ 272-284.

466 Center for Social Justice Studies et al. v. Presidency of the Republic et al. Judgment T-622/16 Constitutional Court of Colombia (November 10, 2016), Third Order.

467 Center for Social Justice Studies et al. v. Presidency of the Republic et al. Judgment T-622/16 Constitutional Court of Colombia (November 10, 2016), Fifth Order.

271. In *Mendoza v National Government,*[468] the Supreme Court of Argentina found violations of the constitutional right to a healthy environment and developed a comprehensive court order requiring environmental restoration of the river basin and prevention of future reasonably foreseeable harm.

VI. CONCLUSION

272. Biodiversity, as a critical component of the environment, is essential to human life and existence. As such, harm to and loss of biodiversity caused by GHG emissions is a matter of global concern both for present and future generations. Biodiverse ecosystems also act as major carbon sinks by absorbing CO_2 from the atmosphere and storing it in biomass, soils and waters. In addition, biodiverse natural habitats are key to mitigating the natural disasters and extreme weather caused by climate change. The preservation and restoration of the Earth's ecosystems is therefore critical to carbon sequestration and to mitigating the adverse effects of climate change. A rise in global temperatures above 1.5°C pre-industrial levels, caused by GHG emissions, will result in extensive loss of terrestrial, freshwater and marine biodiversity, and, as a consequence, a significant weakening in the integrity of the planet's ecosystems and resilience to climate change.[469] For SIDS, the consequences will be catastrophic. Even if global warming does not reach above 1.5°C pre-industrial levels, SIDS will suffer devastating effects and any progression to higher levels of warming will be fatal to them and the biodiversity they support.

273. States will only be effective in meeting the Paris Agreement goals, and to mitigating the urgent threat of climate change to the environment and, consequently, to human existence, if they actively implement measures to preserve and protect biodiversity. Those measures must be informed by the best available climate science and must be taken in coordination with other States and international organisations. This is not simply a plea to the good will of States. As detailed in this Statement, customary international law requires States to use all means at their disposal to prevent transboundary harm to biodiversity; cooperate specifically in the preservation and

468 *Beatriz Silvia Mendoza and others v. National Government and Others*, Supreme Court of Justice of Argentina, 8 July 2008, M. 1569 XL, https://www.escr-net.org/sites/default/files/Sentencia_CSJN_2008_english.pdf [last accessed 14 June 2024]; UNHRC, *Report of the Special Rapporteur on the Issue Of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, A/HRC/55/41, 2 January 2024, p. 37.

469 WWF, Living Planet Report 2022, p. 17.

protection of nature, natural resources and biodiversity; and exercise vigilance, including by conducting EIAs with respect to planned activities. States' commitments pursuant to multiple treaties specifically directed at the protection and preservation of biodiversity reinforce and extend the scope of these obligations.

274. It is vital that all States take immediate measures to ensure their compliance with their international obligations to preserve, protect and restore nature and biodiversity, and that there are effective mechanisms to enforce those obligations. Without the concerted, collective effort of States, there is little prospect of preventing irreversible harm to nature and biodiversity, and in turn to the climate system. Where States fail to comply with those obligations, injured States, whether individually or as a group of States, should invoke the responsibility of wrongdoing States, and claim reparation for significant damage caused by the breach in the form of restitution, and, where appropriate, compensation and satisfaction. Importantly, in all cases, wrongdoing States should immediately cease their wrongdoing acts or omissions; implement measures to comply with their obligations; and provide reparation.

275. International human rights law also recognises that healthy, functioning ecosystems, which depend on biodiversity, are essential to human existence. National and regional human rights courts have found on multiple occasions that degradation of the environment, including destruction of species and/or ecosystems which are essential to biodiversity, has resulted in a breach of human rights law, including violations of the right to life and the right to a healthy environment. In the event of a breach, States must, in accordance with the obligation to provide an effective remedy, ensure the victims' right to reparation, and provide redress to the victims.