INTERNATIONAL COURT OF JUSTICE

OBLIGATIONS OF STATES IN RESPECT OF CLIMATE CHANGE

(REQUEST FOR ADVISORY OPINION)

WRITTEN STATEMENT OF THE COMMONWEALTH OF THE BAHAMAS

22 March 2024

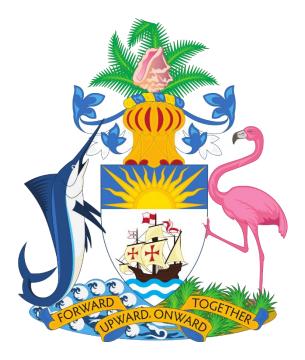


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I. INTRODUCTION

1. Like many people around the world, present and future inhabitants of The Bahamas face an existential threat from climate change, which continues to kill, displace, and destroy livelihoods with worse still to come. The Bahamas contributes a meagre 0.01% of greenhouse gas ("*GHG*") emissions to the global total but continues to be battered by the effects of other States' actions—and inaction. The Bahamas makes this statement to draw the Court's attention to the plight of Small Island States which depend on the international community—and international law—for their survival.

2. The Intergovernmental Panel on Climate Change ("*IPCC*"), which has since 1988 collated and analysed thousands of pages of the latest scientific research on climate change, stated with unambiguous urgency in its 2023 Synthesis Report:

The cumulative scientific evidence is unequivocal: climate change is a threat to human well-being and planetary health (*very high confidence*). Any further delay in concerted anticipatory global action on adaptation and mitigation will miss a brief and rapidly closing window of opportunity to secure a liveable and sustainable future for all (*very high confidence*).¹

3. At the opening of the COP28 conference in November 2023, the United Nations Secretary-General António Guterres warned that: "We are living through climate collapse in real time—and the impact is devastating".² There has been no shortage of urgent warnings in the last two decades that unless States take rapid and radical action, the severe consequences of climate change will continue to destroy the environment and human life.

4. According to the latest data, 2023 was the hottest year in the 174-year observational record.³ The world is hurtling towards crossing the key 1.5°C threshold, with most data suggesting that last year's average was either at or very near it.⁴ On 17 November 2023, the

¹ Intergovernmental Panel on Climate Change, *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (March 2023) (hereinafter "**IPCC 2023 Synthesis Report**"), p. 89.

² "Science points to 'climate collapse' as UN chief calls COP28 to action", UN News (30 November 2023), *available at* https://news.un.org/en/story/2023/11/1144147.

³ World Meteorological Organization, *Provisional State of the Global Climate 2023* (30 November 2023), p. 2, *available at* https://wmo.int/files/provisional-state-of-global-climate-2023 (hereinafter "WMO 2023 Provisional Report on the State of the Climate").

⁴ "World's first year-long breach of key 1.5C warming limit", *BBC News* (8 February 2024), *available at* https://www.bbc.com/news/science-environment-68110310; WMO 2023 Provisional Report on the State of the Climate, p. 2.

daily global surface air temperature for the first time exceeded pre-industrial levels by more than 2°C.⁵ This warming has led to an unprecedented confluence of extreme weather, including heatwaves, drought, and flooding, which caused a significant loss of life.⁶ In a single year, Canada doubled its previous record of wildfire emissions, Greece broke records, and Hawaii suffered the fifth deadliest wildfire in United States history.⁷ Tropical Cyclone Freddy in February and March 2023 was one of the world's longest-lived tropical cyclones, leading to extremely heavy rain and flooding in Mozambique and Malawi—with 679 reported deaths and nearly 660,000 internally displaced persons just in Malawi.⁸ In September 2023, Mediterranean Cyclone Daniel led to extreme rainfall and flooding in Greece, Bulgaria, Türkiye, and Libya, with nearly 5,000 people confirmed dead and 8,500 still missing in Libya alone.⁹ The Amazon rainforest was struck by a devastating drought, in many areas the worst on the record, hitting the maximum "exceptional" level on the scientific scale.¹⁰ Antarctic sea ice reached an absolute record low and glaciers in western North America and the European Alps experienced an extreme melt season, with Switzerland's glaciers losing 10% of their remaining volume in just the past two years.¹¹ The list goes on.

5. As an archipelagic State in the Atlantic "Hurricane Belt", The Bahamas is particularly vulnerable to the severe effects of climate change. Between 2015 and 2019, it was struck by four category 4 to 5 hurricanes, including Hurricane Dorian in 2019—the strongest ever to hit The Bahamas.¹² It left 200 people dead, with many others still missing, nearly 10,000

⁵ Copernicus Climate Change Service, *Global temperature exceeds 2°C above pre-industrial average on* 17 November (21 November 2023), available at https://climate.copernicus.eu/global-temperature-exceeds-2degc-above-pre-industrial-average-17-november.

⁶ WMO 2023 Provisional Report on the State of the Climate, pp. 21–24.

⁷ See Copernicus Climate Change Service, Greece sees its most intense wildfire emissions for July on record (25 July 2023), available at https://atmosphere.copernicus.eu/greece-sees-its-most-intense-wildfireemissions-july-record; Copernicus Climate Change Service, 2023 Canada wildfires emissions have already doubled previous annual record (3 August 2023), available at https://atmosphere.copernicus.eu/2023canada-wildfires-emissions-have-already-doubled-previous-annual-record; WMO 2023 Provisional Report on the State of the Climate, pp. 22–23.

⁸ WMO 2023 Provisional Report on the State of the Climate, pp. 22, 25.

⁹ *Id.*, pp. 2, 22.

¹⁰ "Devastating drought in Amazon result of climate crisis, study shows", *The Guardian* (24 January 2024), *available at* https://www.theguardian.com/environment/2024/jan/24/devastating-drought-in-amazon-result-of-climate-crisis-study-shows.

¹¹ WMO 2023 Provisional Report on the State of the Climate, p. 2.

¹² Government of the Commonwealth of The Bahamas, *The Bahamas 2022 Updated NDC* (November 2022) (hereinafter "**The Bahamas 2022 Updated NDC**"), pp. 10–11.

displaced, over 9,000 homes destroyed, and severely damaged critical infrastructure.¹³ Dorian inflicted massive economic damage, estimated at approximately US\$3 billion, and caused the national GDP to shrink by 1%. The Bahamas is still feeling its consequences today.

6. As an island State, The Bahamas also relies heavily on the resources of the ocean, which have been under acute threat as a result of climate change. Ocean warming and ocean acidification have damaged and destroyed critical ecosystems including coral reefs, mangrove forests and seagrass. During one of the latest such events, record-high temperatures in Bahamian territorial waters in July 2023 caused massive coral bleaching.¹⁴ Such events occur with increasing frequency. Globally, nearly 50% of coastal wetlands have been lost over the last 100 years, and live coral reefs have nearly halved in the past 150 years.¹⁵ Even limiting global warming to 1.5°C would mean that up to 14% of the world's species would face a very high risk of extinction, and coral reefs would decline by a further 70–90%.¹⁶ Many of these changes are "irreversible on centennial to millennial time scales."¹⁷

7. The climate crisis is a global challenge that no State can meet on its own. It requires urgent, ambitious, and coordinated action to stop the warming of the planet caused by the ever-increasing GHGs emitted into the atmosphere through human activity. These pollutants know no borders and can cause damage thousands of miles away. Despite the complexity of the challenge, there is a clear path forward. The IPCC has set out the blueprint for ambitious mitigation and adaptation action which promotes planetary health and sustainable development. The scientific consensus is clear—a liveable future requires a rapid and wholesale transition to low or zero GHG technologies "across all sectors and systems" including energy, agriculture, industry, and transport.¹⁸ The only way to get to that future is by achieving and maintaining a deep, rapid, and sustained reduction of global GHG emissions

¹³ See The Bahamas High Commission London, NEMA Briefing by Prime Minister Minnis (4 September 2019), available at https://www.bahamashclondon.net/nema-briefing-by-prime-ministerminnis/; Inter-American Development Bank, Assessment of the Effects and Impacts of Hurricane Dorian in the Bahamas (August 2020), pp. 1, 18, 47–49, 57, 65, 71, 81, 93.

¹⁴ Perry Institute for Marine Science, *Coral Bleaching Crisis: Massive Bleaching Demands Major Response*, (7 October 2023), *available at* https://www.perryinstitute.org/coral-bleaching-crisis-massive-bleachingdemands-major-response/.

¹⁵ IPCC 2023 Synthesis Report, p. 46; United Nations, *Biodiversity – our strongest natural defense against climate change, available at* https://www.un.org/en/climatechange/science/climate-issues/biodiversity.

¹⁶ IPCC 2023 Synthesis Report, p. 71.

¹⁷ *Id.*, p. 69.

¹⁸ *Id.*, p. 102.

and eventually reaching "net zero", where the GHG emissions we emit through human activity are offset by their removals from the atmosphere.¹⁹

8. International law plays an important role in helping States confront global problems like the climate crisis. The Court has on multiple occasions recognised the importance of the environment as a shared resource of humankind, which "represents the living space, the quality of life and the very health of human beings, including generations unborn."²⁰ International law has long been concerned with the protection of that shared resource. In 1972, the United Nations Conference on the Human Environment was the first world conference focused on environmental issues. It led to the adoption of the Stockholm Declaration, which proclaimed inter alia that "a point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well-being depend".²¹ Over 50 years later, the United Nations General Assembly, describing climate change as "an unprecedented challenge of civilizational proportions", has sought the Court's opinion 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 greenhouse gases for States and for present and future generations".²²

9. International law imposes a wide range of obligations on States to protect the environment, converging around two key principles: the duty to prevent environmental harm such as that caused by GHG emissions, and the duty to cooperate with other States in taking effective mitigation and adaptation measures on a global scale. As The Bahamas sets out below, international environmental law, the law of the sea, and international human rights law all give rise to mitigation, adaptation, and cooperation obligations. They reaffirm and

¹⁹ *Id.*, p. 68.

²⁰ See, e.g., Gabčíkovo-Nagymaros Project (Hungary v. Slovakia), Judgment, I.C.J. Reports 1997 (hereinafter "Gabčíkovo-Nagymaros Judgment"), p. 41, para. 53 (quoting Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, I.C.J. Reports 1996 (hereinafter "Nuclear Weapons Advisory Opinion"), pp. 241–242, para. 29).

²¹ Stockholm Declaration on the Human Environment, United Nations Conference on the Human Environment, Stockholm (June 1972), document A/CONF.48/14/Rev.1 (hereinafter "Stockholm Declaration"), preamble, para. 6.

²² United Nations General Assembly resolution 77/276, Request for an advisory opinion of the International Court of Justice on the obligations of States in respect of climate change, document A/RES/77/276 (29 March 2023) (hereinafter "Request for an Advisory Opinion on the obligations of States in respect of climate change").

reinforce each other and provide a clear normative framework for States as they order their societies and international affairs.

10. International law provides the only prospect of justice and accountability for Small Island States like The Bahamas, who suffer the brunt of the climate crisis. It is vitally important that the Court seizes this opportunity to deliver a robust and authoritative opinion, which clearly and precisely articulates the obligations of States to protect the environment from anthropogenic GHG emissions and climate change, and the legal consequences for States that fail to do so.

11. This written statement is divided into seven sections. Section II describes the impact of climate change—both in The Bahamas and globally—and the scientific consensus around the need to limit it to sustainable levels. Section III explains why the Court should exercise its jurisdiction to entertain the request. Section IV analyses the three key areas of international law—international environmental law, the law of the sea, and international human rights law—that give rise to the obligations of States to protect the climate system from the harmful effects of anthropogenic GHG emissions; and it also discusses how those obligations apply not only to present but also future generations. Section V sets out the States' core obligations designed to ensure the effective implementation of their mitigation, adaptation, and cooperation obligations. Section VI sets out the consequences of the breach of an obligation in respect of climate change. Section VII explains the circumstances under which a State is entitled to invoke the responsibility of another State.

II. FACTUAL BACKGROUND

12. The question before the Court seeks clarification of the obligations of States to protect the environment "from anthropogenic emissions of greenhouse gases". This section sets out the necessary context to this question. It addresses: (*i*) the scientific consensus around the harmful impact of anthropogenic GHG emissions on the environment and human life (Section A); (*ii*) the severe impact of climate change on The Bahamas (Section B); and (*iii*) the scientific consensus around the action needed to limit climate change to sustainable levels (Section C).

13. There is an abundance of scientific research documenting the destructive effects of GHG emissions generated by human activity ("*anthropogenic GHG emissions*") on the environment and human life. In this submission, The Bahamas relies principally on the

assessment reports prepared by the IPCC, the international body under the auspices of the United Nations charged with providing States with scientific information relating to climate change. In 2023, the IPCC concluded its sixth reporting cycle, issuing a number of lengthy reports, which provide a comprehensive overview of the science on climate change, its drivers, impacts, and future risks, and how adaptation and mitigation can reduce those risks. In each reporting cycle, the IPCC assesses thousands of scientific papers reflecting a diverse range of views and expertise, and identifies the strength of scientific agreement in different areas.²³ As such, its reports are recognised as presenting the best available science on climate change.

A. ANTHROPOGENIC GHG EMISSIONS CAUSE SIGNIFICANT HARM TO THE CLIMATE SYSTEM AND OTHER PARTS OF THE ENVIRONMENT

14. Human activity has had a profound effect on the climate, and consequently the environment. Human activity generates GHG emissions, which alter the composition of the Earth's atmosphere and lead to the warming of the planet. Such warming, in turn, leads to more frequent and more intense extreme weather events, widespread and often irreversible damage to or loss of ecosystems, sea level rise, and other changes with severe adverse implications for the environment and human life.

15. Irrefutable scientific evidence confirms that anthropogenic GHG emissions are overwhelmingly the principal cause of climate change.²⁴ GHGs such as carbon dioxide (CO₂), methane, or ozone exist naturally in the Earth's atmosphere in certain quantities,²⁵ but human activity has caused a significant increase in their concentration.²⁶ GHGs absorb and emit radiation at specific wavelengths, including radiation coming from the sun which is reflected off the Earth's surface.²⁷ In other words, GHGs trap heat. If their concentrations in the atmosphere increase significantly, as has happened through human activity, it leads to an

²³ Intergovernmental Panel on Climate Change, *About the IPCC, available at* https://www.ipcc.ch/about/.

²⁴ See IPCC 2023 Synthesis Report, p. 42 et seq.

²⁵ The primary GHGs in the Earth's atmosphere are: water vapour (H₂O), carbon dioxide (CO₂), nitrous oxide (N₂O), methane (CH₄) and ozone (O₃). In addition, human-made GHGs include sulphur hexafluoride (SF₆), hydrofluorocarbons (HFCs), chlorofluorocarbons (CFCs) and perfluorocarbons (PFCs). *See id.*, Annex I (Glossary), p. 124.

²⁶ See id., p. 42 et seq.

²⁷ *Id.*, Annex I (Glossary), p. 124.

increase in the average surface temperature of the Earth, referred to commonly as global warming.²⁸

16. In the period between 2011 and 2020, the average surface temperature of the Earth was 1.1°C above the baseline in 1850–1900 (also referred to as "pre-industrial levels"), the first period for which sufficient records exist.²⁹ 2023 was the hottest year on record, with the global mean temperature 1.4–1.5°C above 1850–1900 levels, pushing the immediately preceding 10-year average to 1.2°C above 1850–1900 levels.³⁰

17. This warming corresponds with a sharp increase in anthropogenic GHG emissions generated through industrial and other human activity. Since 1990, humans generated nearly as many GHG emissions as for the preceding *140 years*.³¹ In 2019, anthropogenic GHG emissions were 12% above 2010 and 54% above 1990 levels.³² This has hugely altered the natural concentrations of GHGs in the atmosphere. According to the IPCC, current CO₂ concentrations (CO₂ being the main GHG) "are higher than at any time over at least the past *two million years*", increasing by 47% over 1750 levels, and concentrations of methane and nitrous oxide "have increased to levels unprecedented in at least *800,000 years*".³³

18. In 2019, approximately 34% of GHG emissions came from the energy sector, 24% from industry, 22% from agriculture, forestry and other land use, 15% from transport and 6% from buildings.³⁴ The burning of fossil fuels is the single largest contributor to global warming, accounting for over 75% of GHG emissions and almost 90% of all CO₂ emissions.³⁵

19. The IPCC has confirmed that "[h]uman activities, principally through emissions of greenhouse gases, have unequivocally caused global warming".³⁶

²⁸ *Ibid*.

²⁹ IPCC 2023 Synthesis Report, p. 42.

³⁰ WMO 2023 Provisional Report on the State of the Climate, p. 2.

³¹ See IPCC 2023 Synthesis Report, p. 44.

³² *Ibid*.

³³ *Id.*, p. 42 (emphasis added).

³⁴ *Id.*, p. 44.

³⁵ United Nations, Climate Action: Causes and Effects of Climate Change, available at https://www.un.org/en/climatechange/science/causes-effects-climate-change. See also IPCC 2023 Synthesis Report, p. 8.

³⁶ IPCC 2023 Synthesis Report, p. 42.

20. Global warming has devastating, and potentially catastrophic, impacts on the environment, human life, and our ability to sustain life on Earth. The following are just some of its impacts on the climate system:

- (a) Ocean warming and acidification. Approximately 20–30% of anthropogenic CO₂ emissions are ultimately absorbed by the ocean, due to its large mass and the capacity of seawater to absorb heat better than air.³⁷ Ocean warming accounts for 91% of the heating in the climate system, and ice loss for an additional 3%.³⁸ The absorption of CO₂ from the atmosphere not only warms the ocean, but also reduces the ocean's pH and renders it more acidic over time.³⁹ That, in turn, adversely impacts coastal ecosystems and marine life including coral reefs, mangroves, seagrass, and fisheries.⁴⁰
- (b) Sea level rise. The global mean sea level increased by 0.2m between 1901 and 2018, with the pace of increase doubling between 2006 and 2018.⁴¹ As a result, Small Island States such as The Bahamas have already experienced severe flooding, coastal erosion, and disappearance of reef islands, mangrove forest loss, and freshwater contamination⁴²—as discussed further in the next section. The effect of past and present GHG emissions is such that *even in the lowest GHG emissions scenario* modelled by the IPCC, which limits global warming to 1.5°C, "[s]ea level rise is *unavoidable* for centuries to millennia due to continuing deep ocean warming and ice sheet melt, and sea levels will remain elevated for thousands of years".⁴³ Even 1.5°C warming may see sea levels rise by 2–3m in the next 2,000 years,⁴⁴ leading to the near-total disappearance

³⁷ Intergovernmental Panel on Climate Change, *The Ocean and Cryosphere in a Changing Climate* (2019) (hereinafter "**IPCC 2019 Special Report on Ocean and Cryosphere in a Changing Climate**"), p. 9.

³⁸ IPCC 2023 Synthesis Report, p. 46.

³⁹ See Secretariat of the Convention on Biological Diversity, Scientific Synthesis of the Impacts of Ocean Acidification on Marine Biodiversity, CBD Technical Series No. 46 (2009), pp. 9–10; IPCC 2023 Synthesis Report, p. 46.

⁴⁰ IPCC 2019 Special Report on Ocean and Cryosphere in a Changing Climate, p. 55.

⁴¹ IPCC 2023 Synthesis Report, p. 46.

⁴² See Intergovernmental Panel on Climate Change, Climate Change: Impacts, Adaptation and Vulnerability (2022) (hereinafter "IPCC 2022 Report on Impacts, Adaptation and Vulnerability"), pp. 2053–2063 (discussing the impacts of climate change on small islands).

⁴³ IPCC 2023 Synthesis Report, p. 77.

⁴⁴ *Ibid*.

of The Bahamas as well as many other Small Island States. In fact, low-lying atoll islands such as the Marshall Islands or Kiribati are at risk of being submerged by the year 2100, with some becoming uninhabitable long before that happens.⁴⁵

- (c) Extreme weather events. Global warming has led to a marked increase in the frequency and intensity of extreme weather events in every region across the globe, including heatwaves, heavy rain, droughts, and tropical cyclones.⁴⁶ The next section describes the effect of recent extreme weather events on The Bahamas, which will only increase in frequency, intensity, and scale as global warming increases, and will more often take place concurrently.⁴⁷ Extreme sea level events such as storm surges that occurred once per century in the recent past are projected to occur *every year* by 2100.⁴⁸
- (d) **Irreversible damage to and loss of ecosystems**. Global warming has led or significantly contributed to the loss of species, desertification, and land degradation, the melting of glaciers and the ice sheet, and the thawing of the permafrost.⁴⁹ Nearly 50% of coastal wetlands have been lost over the last 100 years, and live coral reefs have nearly halved in the past 150 years.⁵⁰ Even limiting global warming to 1.5°C would mean that 3–14% of (the tens of thousands of) species would face a very high risk of extinction, and coral reefs would decline by a further 70–90%.⁵¹ Many of these changes are "irreversible on centennial to millennial time scales."⁵²

21. At the opening of the COP28 conference in November 2023, the United Nations Secretary-General stated, "[w]e are living through climate collapse in real time—and the

⁴⁵ "Sink or swim: Can island states survive the climate crisis?", UN News (31 July 2021), available at https://news.un.org/en/story/2021/07/1096642.

⁴⁶ See IPCC 2023 Synthesis Report, p. 46.

⁴⁷ See id., pp. 69, 97–100.

⁴⁸ *Id.*, p. 77.

⁴⁹ *See id.*, p. 46.

⁵⁰ *Id.*, p. 46; United Nations, *Biodiversity – our strongest natural defense against climate change, available at* https://www.un.org/en/climatechange/science/climate-issues/biodiversity.

⁵¹ IPCC 2023 Synthesis Report, p. 71.

⁵² *Id.*, p. 69.

impact is devastating".⁵³ Indeed, climate change has <u>direct and severe implications for human</u> <u>life now and in the future</u>, including:

- (a) Food and water insecurity. Climate change, including extreme weather events, ocean warming, and acidification, has impacted harvests, fishing, freshwater resources, and other means of subsistence and thus exposed millions of people to food and water insecurity.⁵⁴ For instance, the global land area affected by extreme drought increased from 18% in 1951–1960 to 47% in 2013–2022, jeopardizing water security, sanitation, and food production.⁵⁵ About half of the world's population currently experiences severe water scarcity for some part of the year as a result of a combination of climatic and other causes.⁵⁶
- (b) Increased morbidity and mortality, and other negative health effects. Thousands of people die or become sick as a direct result of heatwaves, flooding, drought, and climate-related diseases such as Lyme disease, West Nile virus, Valley fever, and water-borne diseases caused by the Vibrio pathogen.⁵⁷ Heat-related deaths among those 65 and older have risen by 85% in two decades.⁵⁸ The World Health Organisation estimates that between 2030 and 2050, climate change will cause approximately 250,000 additional deaths per year from undernutrition, malaria, diarrhoea, and heat stress alone.⁵⁹ In addition, climate change likely increases the risk and prevalence of a number

⁵³ "Science points to 'climate collapse' as UN chief calls COP28 to action", UN News (30 November 2023), *available at* https://news.un.org/en/story/2023/11/1144147.

⁵⁴ See IPCC 2023 Synthesis Report, p. 50; WMO 2023 Provisional Report on the State of the Climate, p. 25.

⁵⁵ M. Romanello et al., "The 2023 report of the *Lancet* Countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms", 402 *The Lancet* (2023) 2346 (hereinafter "**The Lancet 2023 Health and Climate Change Report**"), p. 2346.

⁵⁶ IPCC 2023 Synthesis Report, p. 50.

⁵⁷ Id., pp. 50–51; IPCC 2022 Report on Impacts, Adaptation and Vulnerability, pp. 11, 291; Centers for Disease Control and Prevention, *Climate Change and Infectious Diseases, available at* https://www.cdc.gov/ncezid/what-we-do/climate-change-and-infectious-diseases/index.html.

⁵⁸ The Lancet 2023 Health and Climate Change Report, p. 2346.

⁵⁹ World Health Organisation, *Climate Change* (12 October 2023), *available at* https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health.

of common diseases including cardiovascular and respiratory illnesses, as well as cancer.⁶⁰

- Large-scale displacement. Climate change also (c) drives large-scale displacement within States and across borders. The IPCC found that extreme weather is increasingly driving displacement in Africa, Asia, North America, and Central and South America, with Small Island States in the Caribbean and South Pacific disproportionately affected relative to their small population size.⁶¹ In 2022 alone, disasters triggered the displacement of 32.6 million people, 41% higher than the annual average of the past decade.⁶² Ninety-eight percent of those displaced were a result of weather-related hazards such as storms, floods, and droughts.⁶³ The next section describes the serious effects of the prolonged displacement of some of The Bahamas' population following recent extreme weather events.
- (d) Large-scale economic, property, and other material losses. Climate change is affecting peoples' livelihoods and causing economic and societal impacts globally,⁶⁴ with lower income countries being more vulnerable than others.⁶⁵ The global aggregate economic damage caused by climate change for the 2008 to 2200 period is estimated to be US\$48.7 trillion for approximately 1.5°C global warming and US\$60.7 trillion for 2°C.⁶⁶
- (e) **Compounding of humanitarian effects**. Climate change and its effects, such as food and water scarcity, can lead or significantly contribute to the outbreak and escalation of conflict and other humanitarian emergencies, including by worsening and compounding the impact of other risk factors such as poverty

⁶⁰ See IPCC 2022 Report on Impacts, Adaptation and Vulnerability, pp. 1071–1072.

⁶¹ IPCC 2023 Synthesis Report, p. 51.

⁶² Migration Data Portal, *Environmental Migration* (20 December 2023), *available at* https://www.migrationdataportal.org/themes/environmental_migration_and_statistics.

⁶³ *Ibid*.

⁶⁴ See IPCC 2023 Synthesis Report, p. 51.

⁶⁵ See International Monetary Fund, *Climate Change: Climate and the Economy, available at* https://www.imf.org/en/Topics/climate-change/climate-and-the-economy.

⁶⁶ R. Warren et al., "Global and regional aggregate damages associated with global warming of 1.5 to 4°C above pre-industrial levels", 168 *Climatic Change* (2021) 23, p. 24.

and inequality.⁶⁷ Conflict in turn undermines States' capacity to mitigate and adapt to climate change, and feeds a vicious circle of humanitarian crises.⁶⁸

22. While these adverse effects are felt globally, they most severely impact those who contribute the least to global GHG emissions. Regionally, the Least Developed Countries and Small Island States such as The Bahamas have much lower per capita GHG emissions than the global average, yet bear much of the burden of climate change due to their geography, topography, limited resources, and their dependence on fishing, agriculture, and forestry.⁶⁹ Even within States and regions, certain groups and individuals are disproportionately affected by climate change as a result of their socio-economic and other status, including women and in particular female-headed households, children, persons with disabilities, indigenous peoples, ethnic minorities, and other socially marginalised groups.⁷⁰

B. THE SPECIFIC IMPACT OF CLIMATE CHANGE ON THE BAHAMAS

23. The Bahamas is an island nation located at the northwestern edge of the West Indies, in the Atlantic Ocean. Its land territory comprises more than 700 coral islands and 2,400 cays, and extends over an area of approximately 5,358 square miles,⁷¹ making it one of the world's largest archipelagic States.⁷² The country gained independence in 1973, and has since been a vibrant parliamentary democracy and an active member of the Commonwealth of Nations and the United Nations.

⁶⁷ See United Nations Framework Convention on Climate Change Secretariat, Conflict and Climate (12 July 2022), available at https://unfccc.int/news/conflict-and-climate; H. Buhaug, "Armed conflict and climate change: how these two threats play out in Africa", The Conversation (9 November 2022), available https://theconversation.com/armed-conflict-and-climate-change-how-these-two-threats-play-out-inat africa-193865; United Nations Secretary-General António Guterres, Climate Change 'a Multiplier Effect', Aggravating Instability, Conflict, Terrorism, Secretary-General Warns Security Council (9 December 2021), available at https://press.un.org/en/2021/sgsm21074.doc.htm; L. Jaramillo et al., "Climate Challenges in Fragile and Conflict-Affected States", International Monetary Fund Staff Climate Note No. 2023/001 (30 August 2023).

⁶⁸ See H. Buhaug, "Armed conflict and climate change: how these two threats play out in Africa", *The Conversation* (9 November 2022), *available at* https://theconversation.com/armed-conflict-and-climate-change-how-these-two-threats-play-out-in-africa-193865; N. von Uexkull et al., "Drought, Resilience, and Support for Violence: Household Survey Evidence from DR Congo", 64 *Journal of Conflict Resolution* (2020) 1994.

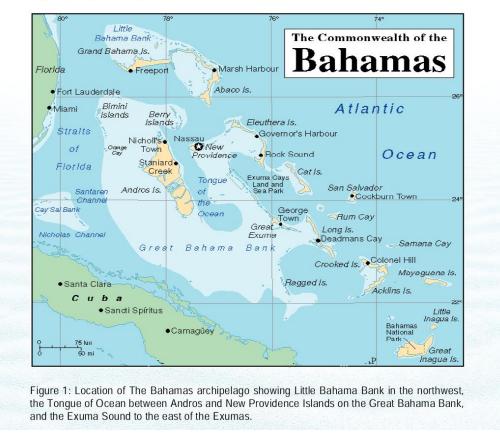
⁶⁹ IPCC 2023 Synthesis Report, pp. 44, 51. *See generally* N. Taconet et al., "Influence of climate change impacts and mitigation costs on inequality between countries", 160 *Climatic Change* (2020) 15.

⁷⁰ See IPCC 2023 Synthesis Report, p. 51; World Bank, *Social Dimensions of Climate Change* (1 April 2023), *available at* https://www.worldbank.org/en/topic/social-dimensions-of-climate-change.

⁷¹ The Commonwealth of The Bahamas, *Overview of The Bahamas, available at* https://tinyurl.com/The-Bahamas-Overview. *See also* The Bahamas 2022 Updated NDC, p. 9.

⁷² See The Bahamas 2022 Updated NDC, p. 9.

Map of the Commonwealth of The Bahamas



24. The population of The Bahamas is approximately 409,984, with nearly 90% of its inhabitants residing on the islands of New Providence, Grand Bahama, and Abaco, and the remainder inhabiting twenty-six other islands.⁷³ Most infrastructure and human settlements are located near the coasts, where they are vulnerable to periodic flooding and the evergrowing threat of sea level rise.⁷⁴

25. Much of the Bahamian archipelago is made up of shallow, submerged carbonate platforms, typically less than 10 metres deep.⁷⁵ All of the country's coastal rockland and sand land-mass, and 80% of the overall land-mass, lies less than 1.5 meters above sea level.⁷⁶

⁷³ *Id.*, pp. 8–9.

⁷⁴ *Id.*, pp. 9–11.

⁷⁵ See World Bank Group Climate Change Knowledge Portal, Climate Change Overview: The Bahamas, available at https://climateknowledgeportal.worldbank.org/country/bahamas; Annex 1, The Commonwealth of The Bahamas, National Policy for the Adaptation to Climate Change (March 2005), p. 1.

⁷⁶ Annex 2, The Commonwealth of The Bahamas, First Biennial Update Report (BUR1) of The Commonwealth of The Bahamas to the United Nations Framework Convention on Climate Change (UNFCCC) (December 2022) (hereinafter "The Bahamas First Biennial Update Report"), pp. 25, 61.

26. The Bahamas has no true rivers, only ponds and lakes. The only means of replenishing groundwater reserves of fresh water is rainfall.⁷⁷ Declining rainfall in the southeast has led to freshwater contamination, damage to hydrological infrastructure, and an overall decline in the supply of potable water. These challenges to water security are also linked to climate change.⁷⁸

27. Coastal and marine areas and habitats include sandy beaches, rocky shorelines, beds of seagrass, coral reefs, and mangroves; a mangrove vegetation buffer separates the land from the coastal and marine environment.⁷⁹ The environmental and economic resilience of the country depends on these geographical features.⁸⁰ Coastal and marine ecosystems contain a high degree of biological diversity and are recognised as areas of outstanding natural beauty. These features help form the foundation of a tourism-based economy, providing ample opportunities for ecotourism, sustainable harvest, and human livelihoods.⁸¹

28. Tourism is the largest sector of the Bahamian economy, accounting for approximately half of the annual GDP. Just under half of the labour force is directly employed in tourism; the figure rises to 70% if indirect employment from tourism is taken into account. ⁸² Accommodation is the key component of the tourism industry, with ancillary components being the provision of food and beverages, recreation, transportation, tourist attractions, and conferences. The tourism sector is highly vulnerable to changes in weather and to unusual or extreme weather events. For example, the impacts of Hurricane Dorian in 2019, combined with the global onset of COVID-19 pandemic, meant that stopover visitors to the country dropped by 75% in 2020.⁸³

29. Agriculture and fisheries are other key components of the Bahamian economy. Fisheries contribute about US\$80 million in foreign currency annually to the economy, also providing full-time employment to 9,300 commercial fishers and thousands of additional jobs in recreational fisheries, fish processing, retail and trade, and ancillary services.⁸⁴ Sports and

⁷⁷ *Id.*, p. 63.

⁷⁸ See id., pp. 25, 64–66.

⁷⁹ See id., pp. 63, 94.

⁸⁰ See id., p. 94.

⁸¹ See id., p. 92.

⁸² *Id.*, p. 76.

⁸³ *Id.*, pp. 25–26, 80.

⁸⁴ *Id.*, p. 26.

recreational fisheries contribute an estimated US\$500 million annually to the national economy, providing employment for over 18,000 Bahamians.⁸⁵ The country also has a financial sector (comprising about 15% of GDP) and a manufacturing sector (which, together with agriculture, contributes 7% to GDP).⁸⁶

30. As outlined below, all social, human, and natural systems in The Bahamas face an existential threat from the climate crisis. Like other Small Island States, The Bahamas has and will continue to be disproportionately affected by climate change. The territory's geography, climate, and environmental characteristics make it acutely vulnerable to the negative impacts associated with climate change,⁸⁷ including from associated phenomena such as tropical cyclones, storm surges, sea level rise, coastal erosion, and the destruction of habitats and ecosystems.⁸⁸ The magnitude of this threat is underscored by the fact that The Bahamas is ranked third in the world on the 2021 Climate Risk Index, which analyses the extent to which countries are affected by the impacts of weather-related events.⁸⁹ This is all despite the fact that The Bahamas has made *de minimis* contributions to climate change, and its share of global GHG emissions is estimated to be no higher than 0.01%.⁹⁰

1. Impacts on the Weather System: Hurricanes, Tropical Cyclones, and Other Extreme Weather Events

31. Climate change has significantly altered weather patterns in the Atlantic, making hurricanes more destructive to infrastructure and the built environment,⁹¹ with severe effects on the Bahamian economy and the physical and mental health of coastal populations.⁹²

⁸⁵ *Id.*, p. 84.

⁸⁶ *Id.*, pp. 27, 75.

⁸⁷ See The Commonwealth of The Bahamas, Intended Nationally Determined Contribution (NDC) Under the United National Framework Convention on Climate Change (17 November 2015) (hereinafter "The Bahamas 2015 NDC"), p. 1.

⁸⁸ See IPCC 2023 Synthesis Report, p. 51; IPCC 2022 Report on Impacts, Adaptation and Vulnerability, p. 2045.

⁸⁹ Germanwatch, *Global Climate Risk Index 2021* (January 2021), p. 8; Annex 2, The Bahamas First Biennial Update Report, p. 25.

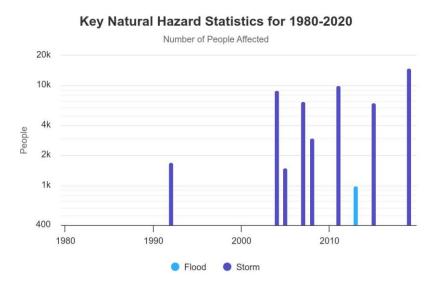
⁹⁰ The Bahamas 2022 Updated NDC, p. 16.

⁹¹ The term "hurricane" is a regionally-specific name for "tropical cyclone" in the North Atlantic and Northeast Pacific Oceans.

⁹² See, e.g., J. M. Shultz et al., "Double Environmental Injustice – Climate Change, Hurricane Dorian, and the Bahamas", 382 New England Journal of Medicine (2020) 1, p. 1.

The IPCC has concluded with "*high confidence*" that anthropogenic climate change is the cause of the increased intensity of these tropical cyclones and associated impacts.⁹³

32. The location of the Bahamian archipelago—in the area meteorologists refer to as the "Hurricane Belt"—makes it particularly vulnerable to the risks posed by an increase in extreme weather events.⁹⁴ From the beginning of the 20th century to 2020, The Bahamas faced 55 hurricane events, 13 of which were categorised as "high intensity".⁹⁵ Since 1990 it has experienced an increase in tropical storms linked to changes in the El Niño pattern⁹⁶ and increased heat waves.⁹⁷ Between 2015 and 2019, the country was struck by four category 4 to 5 hurricanes.⁹⁸ The graph below, published by the World Bank, illustrates the marked increase in the intensity and frequency of extreme weather events in The Bahamas over the last four decades.⁹⁹



⁹³ IPCC 2019 Special Report on Ocean and Cryosphere in a Changing Climate, p. 11.

⁹⁴ See A. Wright, N. Rolle, A. Clarke, Global Warming and the Bahamas, Central Bank of The Bahamas Working Paper (30 March 2023), p. 1.

⁹⁵ Inter-American Development Bank, *Impact of Hurricane Dorian in The Bahamas: A View from the Sky* (January 2020), pp. 3–4.

⁹⁶ El Niño Southern Oscillation ("ENSO") is a naturally-occurring large-scale climatic phenomenon involving fluctuating ocean temperatures in the central and eastern equatorial Pacific, coupled with changes in the atmosphere above. See World Health Organisation, El Niño Southern Oscillation (ENSO), (9 November 2023) available at https://www.who.int/news-room/fact-sheets/detail/el-nino-southernoscillation-(enso).

⁹⁷ The Bahamas 2022 Updated NDC, p. 10.

⁹⁸ *Id.*, pp. 10–11.

⁹⁹ World Bank Group, *The Bahamas: Natural Hazard Statistics* (2021), *available at* https://climateknowledgeportal.worldbank.org/country/bahamas/vulnerability.

33. In 2019, Hurricane Dorian brought severe winds and devastating storm surges.¹⁰⁰ It was the strongest ever hurricane to hit The Bahamas: it left at least 200 people dead, and many more missing, and nearly 10,000 displaced from their homes and communities.¹⁰¹ It also destroyed over 9,000 homes and severely damaged critical infrastructure, including the second largest public hospital in The Bahamas; dozens of schools; roads, airports, and sea ports; as well as power generation and transmission networks.¹⁰² On Abaco Island, which was especially hard hit, more than 75% of dwellings were affected, a third of which were completely destroyed.¹⁰³ The photo below shows an aerial view of the destruction caused by Hurricane Dorian in Marsh Harbour and Great Abaco Island on 4 September 2019.¹⁰⁴



34. Hurricane Dorian continues to place a staggering burden on the Bahamian economy.Hurricane damage reached approximately US\$3 billion, causing national GDP to shrink by1%. To finance disaster relief, The Bahamas had no choice but to reallocate public spending

¹⁰⁰ Inter-American Development Bank, Assessment of the Effects and Impacts of Hurricane Dorian in the Bahamas (August 2020), p. 14.

¹⁰¹ See The Bahamas High Commission London, NEMA Briefing by Prime Minister Minnis, (4 September 2019), available at https://www.bahamashclondon.net/nema-briefing-by-prime-ministerminnis/; Inter-American Development Bank, Assessment of the Effects and Impacts of Hurricane Dorian in the Bahamas (August 2020), pp. 18, 47–49.

¹⁰² Inter-American Development Bank, Assessment of the Effects and Impacts of Hurricane Dorian in the Bahamas (August 2020), pp. 57, 65, 71, 81, 93.

¹⁰³ *Id.*, p. 59.

¹⁰⁴ Photo by Scott Olson, Getty Images.

from critical infrastructure and social assistance programmes, ¹⁰⁵ and undertake high levels of international debt—including a US\$100 million loan from the Inter-American Development Bank¹⁰⁶ and a US\$50 million loan from the Caribbean Development Bank.¹⁰⁷ Repayments are ongoing and continue to encumber the ability of The Bahamas to achieve its macroeconomic and economic growth targets.

35. Because the Bahamian economy is heavily reliant on tourism, the country is especially vulnerable to the growing intensity of tropical cyclones and storm surges. Thirty-four percent of tourism-related businesses in New Providence and Paradise Island are located in a category 1 storm surge zone, putting them at risk when a category 1 storm hits. More than 83% of those businesses are located in a category 5 storm surge zone.¹⁰⁸ It is currently estimated that extreme weather events caused by climate change will cause a loss of up to 9% of The Bahamas' GDP annually by 2030, and a 34% loss in coastal value in a 50-year timeframe.¹⁰⁹

36. The impact of extreme weather events is not limited to economic harm. These events also leave behind "a trail of *heartbreak, sorrow and death.*"¹¹⁰ The human cost includes cultural loss and the displacement of communities from their ancestral lands. For example, the entire population of Ragged Island was displaced following Hurricane Irma in 2017, when the island was submerged and left uninhabitable. Most of its infrastructure, including schools, health clinics, and essential utilities, was reduced to rubble.¹¹¹ The resulting disruption and

¹⁰⁵ See International Monetary Fund, *IMF Staff Concludes Visit to The Bahamas* (4 February 2020), *available at* https://www.imf.org/en/News/Articles/2020/02/04/pr2032-bahamas-imf-staff-concludes-visit.

¹⁰⁶ Inter-American Development Bank, *Hurricane Dorian: IDB provides \$100 million in emergency funding line to The Bahamas* (6 September 2019), *available at* https://www.iadb.org/en/news/hurricane-dorian-idb-provides-100-million-emergency-funding-line-bahamas.

¹⁰⁷ Caribbean Development Bank, *CDB to provide USD50 million loan to The Bahamas for recovery and reform after Hurricane Dorian* (17 December 2019), *available at* https://www.caribank.org/newsroom/ news-and-events/cdb-provide-usd50-million-loan-bahamas-recovery-and-reform-after-hurricane-dorian-0.

¹⁰⁸ A. Pathak et al., "Impacts of climate change on the tourism sector of a Small Island Developing State: A case study for the Bahamas", 37 *Environmental Development* (2021) 1, p. 10.

¹⁰⁹ K. Sealey & E. Strobl, "A hurricane loss risk assessment of coastal properties in the Caribbean: Evidence from the Bahamas", 149 *Ocean & Coastal Management* (2017) 42, pp. 2–3.

¹¹⁰ Inter-American Development Bank, *Assessment of the Effects and Impacts of Hurricane Dorian in the Bahamas* (August 2020), Foreword (emphasis added).

¹¹¹ See IPCC 2022 Report on Impacts, Adaptation and Vulnerability, p. 1206.

displacement threatened the community's identity and sense of cohesion, ¹¹² and destroyed important social structures.¹¹³

37. While loss of human life is undoubtedly the greatest cost of extreme weather, the thousands who survive often suffer significant harm to their physical and mental health. For example, lack of access to clean water, toilets and washing facilities, and medications puts thousands at risk for disease in the aftermath of hurricanes and tropical storms. Large volumes of stagnant and untreated water left in the wake of these events are also a prime breeding ground for mosquitos, giving rise to outbreaks of diseases like dengue, chikungunya, and Zika.¹¹⁴ Because the Bahamian economy is very reliant on foreign imports, when access and connections to external markets are reduced due to natural disasters, the economic and humanitarian consequences can be catastrophic.¹¹⁵ The mental health consequences are also dire. For example, studies show survivors exposed to extreme storm hazards during and after Hurricane Dorian faced an "elevated risk for developing post-traumatic stress disorder" and those who suffered massive losses faced "major depression or anxiety disorders".¹¹⁶ This accords with the IPCC's "high confidence" findings that rapidly increasing climate change poses a rising threat to mental health and psychosocial well-being, including emotional distress, anxiety, depression, grief, and suicidal behaviour.¹¹⁷

2. Impacts on the Land Territory: Sea Level Rise, Territorial Inundation, and Threats to Socio-economic Systems

38. The low-lying nature of the Bahamian islands means that it is extremely susceptible to the effects of sea level rise. Alarmingly, it is estimated that global mean sea level will rise between 0.43 to 0.84 metres by 2100,¹¹⁸ which would spell disaster for The Bahamas. In comparison to neighbouring island nations, The Bahamas confronts "*by far*" the greatest

¹¹² *Id.*, p. 2069.

¹¹³ *Ibid*.

¹¹⁴ International Federation of Red Cross and Red Crescent Societies, *Emergency Plan of Action Operation Update No. 2, The Bahamas: Hurricane Dorian* (8 October 2019), p. 13.

¹¹⁵ International Monetary Fund, *The Bahamas*, Country Report No. 24/039 (January 2024), pp. 29, 38–39; World Bank, *Macro Poverty Outlook: The Bahamas* (April 2023), pp. 1–2.

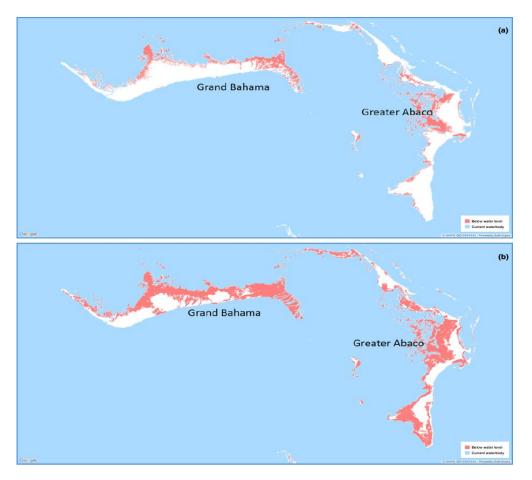
¹¹⁶ J. M. Shultz et al., "Double Environmental Injustice – Climate Change, Hurricane Dorian, and the Bahamas," 382 *New England Journal of Medicine* (2020) 1, p. 2.

¹¹⁷ See IPCC 2022 Report on Impacts, Adaptation and Vulnerability, pp. 1076–1078.

¹¹⁸ IPCC 2019 Special Report on Ocean and Cryosphere in a Changing Climate, p. 324.

proportional threat from sea level rise given that 32% of its land, 25% of its population, and 13% of its internet infrastructure are less than 0.5 metres above sea level.¹¹⁹

39. Northern islands, such as Grand Bahama and Abaco Islands, are most at risk from sea level rise, in comparison to the central and southern islands, which have higher elevation terrains and lower levels of infrastructure development.¹²⁰ The maps below indicate in **red** the land area projected to be below annual flood levels by 2100, due to flooding and sea level rise, based on probabilistic modelling scenarios.¹²¹



40. Long before these swathes of territory are submerged, sea level rise will pose major risks to The Bahamas, including from coastal erosion, flooding, salinization, and associated risks to water and food security. Adaptations have already been made to compensate for the contamination and loss of major aquifers after previous storm events. Reverse osmosis is

¹¹⁹ B. Strauss & S. Kulp, *Sea-level rise threats in the Caribbean: Data, tools, and analysis for a more resilient future,* Inter-American Development Bank (2018), p. 1 (emphasis added).

¹²⁰ See F. Martin del Campo et al., "The Bahamas at risk: Material stocks, sea-level rise, and the implications for development", 27 Journal of Industrial Ecology (2023) 1165, p. 1172.

¹²¹ R. Martyr-Koller et al., "Loss and damage implications of sea-level rise on Small Island Developing States", 50 *Current Opinion in Environment Sustainability* (2021) 245, p. 250.

currently the largest single-source of potable water in The Bahamas, a technology that is energy intensive and expensive to maintain. The IPCC has concluded with "*very high confidence*" that the incidence and severity of these risks will only continue to significantly increase by the end of the century without major adaptation efforts.¹²²

41. The risk of salinization of freshwater sources is a major concern for The Bahamas, with saline intrusion being the most significant threat to water security in the country.¹²³ Freshwater sources are scarce, given that surface water runoff is moderately low and the Bahamian islands have no freshwater rivers.¹²⁴ Thin "lenses" of freshwater are deposited through precipitation on the top of hypersaline waters found in deep sub-surfaces or lakes and ponds.¹²⁵ More than 90% of the freshwater lenses are within five feet of the ground surface.¹²⁶ This scarcity is compounded by the limestone bedrock and composition of Bahamian soil, which is extremely porous and allows saltwater to saturate and damage groundwater resources.¹²⁷ As sea level rises, the water table also rises and results in saline intrusion into important freshwater sources, such as wells.¹²⁸ Wells are particularly at risk of saltwater contamination during storm surges and hurricanes.¹²⁹

42. Coastal erosion and flooding caused by rising sea levels poses another serious threat. The Bahamas is predicted to suffer the largest loss of shore in the Caribbean region by 2050, estimated at between 55% to 59%.¹³⁰ It is also estimated that by 2100 there will be a total loss

¹²⁶ *Ibid*.

¹²² IPCC 2019 Special Report on Ocean and Cryosphere in a Changing Climate, p. 324.

¹²³ See Annex 3, The Commonwealth of The Bahamas, The Second Communication of The Commonwealth of The Bahamas under the United Nations Framework Convention on Climate Change (September 2014) (hereinafter "Second Communication of The Bahamas under the UNFCCC"), p. 137; Annex 2, The Bahamas First Biennial Update Report, pp. 64–65.

¹²⁴ ICF Consulting, *The Bahamas National Report Integrating Management of Watersheds and Coastal Areas in Small Island Developing States (SIDS) of the Caribbean* (31 October 2012), pp. 9–10.

¹²⁵ *Ibid*.

¹²⁷ See B. Strauss & S. Kulp, Sea-level rise threats in the Caribbean: Data, tools, and analysis for a more resilient future, Inter-American Development Bank (2018), pp. 2, 9; Annex 3, Second Communication of The Bahamas under the UNFCCC, pp. 136–137.

¹²⁸ See Annex 3, Second Communication of The Bahamas under the UNFCCC, p. 137; O. McNair Nixon, Impact of climate change in precipitation and potable water resources in The Bahamas (2022), p. 57.

¹²⁹ The Bahamas 2022 Updated NDC, p. 11.

¹³⁰ N. Spencer, E. Strobl & A. Campbell, "Sea level rise under climate change: Implications for beach tourism in the Caribbean", 225 *Ocean & Coastal Management* (2022) 1, p. 7.

of all sandy beaches in the country.¹³¹ These deleterious effects on the coastline are already evident, with reports of significant signs of erosion (including undercutting, exposed beach, and exposed vegetation) on islands such as New Providence.¹³²

43. This loss of the coastline will have significant adverse socio-economic and cultural consequences for the Bahamian people. For example, the natural harbours along waterfronts are the site for major commercial developments, such as shops, high scale hotels, and residential buildings.¹³³ There are "serious economic and social implications" for the tourism sector (which constitutes more than 50% of GDP), and for communities where the coastline becomes uninhabitable due to sea level rise.¹³⁴ It is currently predicted that even one metre of sea level rise would place 36% of major tourism properties, 38% of airports, 14% of road networks, and 90% of seaports at risk.¹³⁵ In addition, up to 51% of tourism-related properties in New Providence and Paradise Island would be vulnerable to a category 1 storm and up to 90% to a category 5 storm in a one metre of sea level rise scenario.¹³⁶ Coastal inundation and loss will also have adverse effects on cultural heritage and the way of life of the Bahamian people, who will invariably be deprived of the traditional, economic, and recreational uses of their coastal territory.

44. Finally, unmitigated sea level rise and coastal erosion will have cascading effects on the territorial integrity of The Bahamas. As an archipelagic state, its maritime baselines and zones are of essential importance to the exercise of its sovereignty and ability to harness the natural resources within its jurisdiction. As sea levels rise and the coastlines erode, baselines will move inwards and outlying islets, reefs, and island landmass will be submerged. While this has a catastrophic socio-economic impact on housing, infrastructure, and tourism, it may

¹³¹ A. Pathak et al., *Impacts of climate change on the tourism sector of a Small Island Developing State: A case study for the Bahamas*, 37 *Environmental Development* (2021) 1, p. 10.

¹³² J. Petzold, B. M. W. Ratter & A. Holdschlag, "Competing knowledge systems and adaptability to sea-level rise in the Bahamas", *Royal Geographical Society* 50 (2018) 91, p. 94.

¹³³ See Annex 3, Second Communication of The Bahamas under the UNFCCC, pp. 138–139; Annex 2, The Bahamas First Biennial Update Report, p. 76.

¹³⁴ See Annex 2, The Bahamas First Biennial Update Report, pp. 75–76.

¹³⁵ K. H. Wyatt et al., "Integrated and innovative scenario approaches for sustainable development planning in The Bahamas", 26 *Ecology and Society* (2021), pp. 3–4.

¹³⁶ A. Pathak et al., "Impacts of climate change on the tourism sector of a Small Island Developing State: A case study for the Bahamas", 37 *Environmental Development* (2021) 1, p. 10.

also lead to a loss of territory and reduction in the maritime entitlements recognised under international law.¹³⁷

45. The exertion of sovereignty over its maritime zones is vital to The Bahamas' ability to protect its marine environment and ensure its economic rights over marine resources. For instance, it has enacted legislation to prohibit the fishing of ecologically important or rare species and designated marine protected areas.¹³⁸ It has also preserved fishing in its exclusive economic zone solely for Bahamian nationals in order to secure its national interests and provide a livelihood for its citizens.¹³⁹ However, unmitigated sea level rise threatens to cause serious and irreparable harm to these and other interests of The Bahamas with respect to territorial and maritime integrity.

3. Impacts on the Marine Environment: The Destruction of Marine Ecosystems, Habitats, and Species

46. Rising sea temperatures, heat waves, and other climate-induced changes to the physical and chemical makeup of the ocean have had significant impacts on the marine environment, and increase the risk of irreversible loss of ecosystems that support aquatic life and economic activity. As outlined below, many of these changes are impacting and will continue to impact The Bahamas.

(a) Ocean acidification

47. Ocean acidification—the process whereby the absorption of carbon dioxide from the atmosphere leads to reduction in the oceans' pH and renders it more acidic over time¹⁴⁰—is another major threat to the marine environment. Scientific research from The Bahamas has confirmed that ocean acidification is moving at an unabated pace and is expected to "increase significantly in the Caribbean in coming decades."¹⁴¹

¹³⁷ See Section V.B.3, below; International Law Commission, Sea-level rise in relation to international law, document A/CN.4/740 (28 February 2020), para. 76.

¹³⁸ See, e.g., Fisheries Act of The Bahamas (2020), arts. 30, 35, *available* at https://nfabahamas.org/resources.

¹³⁹ See, e.g., The Government of The Bahamas, ACP Secretariat: The Department of Marine Resources, available at https://www.bahamas.gov.bs/wps/portal/public/.

¹⁴⁰ Secretariat of the Convention on Biological Diversity, *Scientific Synthesis of the Impacts of Ocean Acidification on Marine Biodiversity*, CBD Technical Series No. 46, 2009, pp. 9–10.

¹⁴¹ G. Carroll et al., "A participatory climate vulnerability assessment for recreational tidal flats fisheries in Belize and The Bahamas", 10 *Frontiers in Marine Science* (2023) 1, p. 11.

48. Increasing ocean acidification has had a significant impact on ecosystems in Bahamian territory, including coral reefs, mangroves, and seagrass, as well as vital fish stock. As explained above, The Bahamas relies heavily on fisheries, as commercial fishing generates US\$80 million annually and recreational fishing contributes up to US\$500 million annually alongside sports and related activities, offering employment to tens of thousands of Bahamians.¹⁴² With fisheries negatively impacted by the exponential acidification of the ocean, the economic consequences for The Bahamas are likely to be massive.

(b) Damage to coral reefs

49. The IPCC has reported that coral reefs are "the marine ecosystem most threatened by climate-related ocean change, especially ocean warming and acidification".¹⁴³ As the home to 5% of the world's coral reefs and the world's third-longest barrier reef,¹⁴⁴ The Bahamas has experienced severe bleaching and mass coral mortality.¹⁴⁵ For example, in July 2023, scientists recorded ocean temperatures in Bahamian territorial waters as high as 33°C.¹⁴⁶ These exceptionally high water temperatures lasted for several months, and caused a devastating mass bleaching event.¹⁴⁷

¹⁴² *See* para. 29 above.

¹⁴³ IPCC 2019 Special Report on Ocean and Cryosphere in a Changing Climate, p. 379.

¹⁴⁴ The Bahamas 2022 Updated NDC, p. 9.

¹⁴⁵ C. Bove, L. Mudge & J. Bruno, "A century of warming on Caribbean reefs," 1 *PLOS Climate* (2022) 1, p. 8.

¹⁴⁶ T. Burrows, Coral Bleaching Crisis: Massive Bleaching Demands Major Response, Perry Institute for Marine Science (7 October 2023), available at https://www.perryinstitute.org/coral-bleaching-crisismassive-bleaching-demands-major-response/.

¹⁴⁷ *Ibid*.



50. The photographs above show a gigantic elkhorn coral cluster located off of northwest Rose Island in The Bahamas.¹⁴⁸ Both photos were taken in 2023 just a few weeks apart, and demonstrate the severity of the bleaching, as seen in the photo on the right.¹⁴⁹ Scientists have documented other examples of severe coral bleaching in major reef systems around southern New Providence, Rose Island, Bimini, Exuma, Abaco, and Andros.¹⁵⁰

51. Coral reefs are important to The Bahamas' biodiversity and act as a vital part of the country's natural defence system against storm surges and erosion.¹⁵¹ Anthropogenic ocean warming alters the biodiversity and ecosystemic functioning of coral reefs,¹⁵² causing severe ecosystem loss due to coral bleaching.¹⁵³ The destruction of coral reef ecosystem has

¹⁴⁸ Photographs property of the Perry Institute of Marine Science.

¹⁴⁹ T. Burrows, *Coral Bleaching Crisis: Massive Bleaching Demands Major Response*, Perry Institute for Marine Science (7 October 2023), *available at* https://www.perryinstitute.org/coral-bleaching-crisismassive-bleaching-demands-major-response/.

¹⁵⁰ Ibid.; see also id. ("Sadly, even in-situ coral restoration projects have suffered. The Reef Rescue Network has received reports of bleaching on coral nurseries and artificial reefs from over 50% of partners throughout the archipelago. To make matters worse, bleaching and mortality has also been observed in wild colonies of the Acropid species elkhorn, staghorn and fused staghorn corals.").

¹⁵¹ See Annex 3, Second Communication of The Bahamas under the UNFCCC, p. 140; Annex 2, The Bahamas First Biennial Update Report, p. 96.

¹⁵² C. Bove, L. Mudge & J. Bruno, "A century of warming on Caribbean reefs," 1 *PLOS Climate* (2022) 1, p. 8. This article concludes that "[w]e urgently need to reduce greenhouse gas emissions while simultaneously addressing these and other local and regional stressors to protect the remnant Caribbean coral reefs and similarly at-risk global ecosystems." *Id.*, p. 11.

¹⁵³ Annex 3, Second Communication of The Bahamas under the UNFCCC, p. 162; NASA Earth Observatory, *Stressful Summer for Coral Reefs* (16 October 2023), *available at* https://earthobservatory.nasa.gov/images/151945/stressful-summer-for-coral-reefs; Coral Reef Watch,

significant environmental as well as economic implications for The Bahamas. The array of coral reefs in Bahamian waters are a central attraction for diving and other activities, and accordingly draws tourists and supports the tourism economy.¹⁵⁴ Coral destruction also impacts fishstock, which is vital for employment and nutritional sustenance.

(c) Damage to mangroves

52. The Bahamas has also suffered an assault on its mangrove ecosystems due to climate change. The ecosystems are composed of salt-tolerant trees or large shrubs found in the intertidal zones of tropical coastal shorelines, which play important ecological and social functions for coastal communities.¹⁵⁵ They are complex ecosystems that protect shorelines from erosion, replenish coastal soils, and reduce the impact of storms on coastal populations.¹⁵⁶ They are interdependent with other proximate ecosystems, such as coral reefs and seagrass,¹⁵⁷ and provide habitats for marine, bird, vertebrate, and invertebrate species.¹⁵⁸ Mangroves also play the essential role of capturing large amounts of carbon dioxide by removing it from the air and burying it in sediment through their roots, actively contributing to reducing climate change.¹⁵⁹

53. The Bahamas is home to some of the largest mangrove ecosystems in the Caribbean, with the total estimated at 612,000 acres.¹⁶⁰ They are a tourist attraction and are a source of provisions to locals,¹⁶¹ with an estimated value of about US\$3.2 million per square mile per year.¹⁶² However, these ecosystems are also under attack from the deleterious impacts of

Northern Bahamas 5 km Regional Bleaching Heat Stress Maps and Gauges, available at https://coralreefwatch.noaa.gov/product/vs/gauges/northern_bahamas.php.

See A. Strauch et al., "Environmental Influences on the Distribution of Mangroves on Bahamas Island",
 6 Journal of Wetlands Ecology (2012) 16, p. 16.

- ¹⁵⁷ See R. Wilson, "Impacts of Climate Change on Mangrove Ecosystems in the Coastal and Marine Environments of Caribbean Small Island Developing States (SIDS)", Caribbean Marine Climate Report Card: Science Review (2017) 60, pp. 60–61.
- See A. Strauch et al., "Environmental Influences on the Distribution of Mangroves on Bahamas Island",
 6 Journal of Wetlands Ecology (2012) 16, p. 16.

¹⁶¹ R. Wilson, "Impacts of Climate Change on Mangrove Ecosystems in the Coastal and Marine Environments of Caribbean Small Island Developing States (SIDS)", *Caribbean Marine Climate Report Card: Science Review* (2017) 60, p. 60.

¹⁵⁴ See Annex 3, Second Communication of The Bahamas under the UNFCCC, p. 140.

¹⁵⁶ *Ibid*.

¹⁵⁹ Perry Institute for Marine Science, *Mangrove Report Card for The Bahamas* (2022), pp. 6–7.

¹⁶⁰ *Id.*, p. 3.

¹⁶² Perry Institute for Marine Science, *Mangrove Report Card for The Bahamas*, 2022, pp. 6–7.

climate-induced changes to the weather and the marine environment. For example, over 90% of viable mangroves have been lost in The Bahamas due to an extreme weather event,¹⁶³ with 73.8% of mangrove ecosystems in Grand Bahama and 40.1% in Abaco Island classified as "[d]amaged" or "[d]estroyed".¹⁶⁴ The photograph below shows the destruction to significant sections of mangrove forests in Grand Bahama in the aftermath of Hurricane Dorian.¹⁶⁵



Figure 6. Oblique photo of the northern part of the mangrove area classified as Damaged or destroyed looking north to the small cays. Note the abundance of green mangrove vegetation in the interior of this area with dead mangroves limited to the seaward margin and fringes of creeks.

54. Climate change is expected to cause significant further damage to mangroves through rise in sea level and sea surface temperature, decreases in rainfall, increase in hurricanes and extreme weather, loss of protection from waves and storms provided by the nearest coral reefs, and ocean acidification.¹⁶⁶

(d) Destruction of seagrass

55. Seagrass ecosystems, comprising angiosperms (plants that produce flowers and bear their seeds in fruits¹⁶⁷) found in coastal areas, are also suffering. These organisms constitute

¹⁶³ *Id.*, p. 12.

¹⁶⁴ C. Dahlgren, *Preliminary Report: Post Dorian Mangrove Assessments for Grand Bahama and Abaco (July 24–August 8, 2021)* (2021), p. 1.

¹⁶⁵ Photo sourced from C. Dahlgren, Preliminary Report: Post Dorian Mangrove Assessments for Grand Bahama and Abaco (July 24–August 8, 2021) (2021), p. 8.

¹⁶⁶ R. Wilson, "Impacts of Climate Change on Mangrove Ecosystems in the Coastal and Marine Environments of Caribbean Small Island Developing States (SIDS)", *Caribbean Marine Climate Report Card: Science Review* (2017) 60, pp. 62–66.

¹⁶⁷ Britannica, "Angiosperm", *available at* https://www.britannica.com/plant/angiosperm ("Angiosperms are plants that produce flowers and bear their seeds in fruits. They are the largest and most diverse group within

important carbon sinks, and crucially support biodiversity, water quality, fisheries, and coastal protection, along with providing recreational and cultural value.¹⁶⁸ The Bahamas holds the world's largest seagrass ecosystem in the ocean, covering an estimated area of 67,000–92,500 km².¹⁶⁹ Bahamian seagrass can store between 35.7 million and 3.9 billion megagrams of carbon and between 103 and 123 metric tons of carbon dioxide annually.¹⁷⁰ The Bahamas is thus viewed as "a global hot spot of seagrass distribution and blue carbon pool"¹⁷¹ and is one of only 13 countries that incorporate seagrass in their Nationally Determined Contributions under the Paris Agreement.¹⁷² In fact, seagrass ecosystems in The Bahamas have been recognised as playing a critical role in climate change mitigation.¹⁷³ However, seagrass has been declining globally at a rate of 1 to 2% per year, partially due to climate change.¹⁷⁴ The evidence suggests that carbon capture has been decreasing in The Bahamas since the 1980s, reducing coastal protection against sea level rise and hurricanes.¹⁷⁵

56. The absorption of atmospheric carbon by seagrass beds and mangroves is also of economic significance to The Bahamas. Seagrass beds are an important basis of the Blue Carbon Credits, ¹⁷⁶ a programme enabling entities to offset their carbon emissions by purchasing blue carbon credits equivalent to stocks of carbon dioxide sequestered in seagrass

the kingdom Plantae, with about 300,000 species. Angiosperms represent approximately 80 percent of all known living green plants.").

¹⁷⁵ C. Fu et al., "Substantial blue carbon sequestration in the world's largest seagrass meadow", 4 *Earth & Environment* (2023) 1, pp. 6–7.

¹⁶⁸ See C. Fu et al., "Substantial blue carbon sequestration in the world's largest seagrass meadow", 4 Earth & Environment (2023) 1, p. 2.

¹⁶⁹ *Ibid*.

¹⁷⁰ Its sequestration is valued at \notin 178,296 per km per year, which translates to a total sequestration potential value of between \notin 6.99 billion to \notin 8.34 billion per year. *See* A. Blume et al., "Bahamian seagrass extent and blue carbon accounting using Earth Observation", 10 *Frontiers in Marine Science* (2023) 1, p. 5.

¹⁷¹ *Id.*, p. 8. "Blue carbon" refers to carbon captured by ocean and coastal ecosystems, like mangroves and seagrass. *Id.*, p. 2.

¹⁷² *Ibid*.

¹⁷³ C. Fu et al., "Substantial blue carbon sequestration in the world's largest seagrass meadow", 4 *Earth & Environment* (2023) 1, p. 5.

¹⁷⁴ A. Blume et al., "Bahamian seagrass extent and blue carbon accounting using Earth Observation", 10 *Frontiers in Marine Science* (2023) 1, p. 2.

¹⁷⁶ "Frequently Asked Questions", *Carbon Management, available at* https://carbonmgmt.bs/faqs/.

beds in The Bahamas.¹⁷⁷ It is anticipated that Blue Carbon Credits on the open market can generate hundreds of millions of dollars a year in critical revenue to The Bahamas.¹⁷⁸ The destruction of seagrass beds in The Bahamas will put this opportunity at risk.

* * *

57. The picture described above is desperately bleak. It makes clear that The Bahamas faces an existential and catastrophic threat from the impacts of climate change. The country's natural and built environment, social and economic structures, cultural practices, and territorial integrity face irreparable damage unless the international community takes effective action against climate change.

C. ACTION NEEDED TO LIMIT CLIMATE CHANGE TO SUSTAINABLE LEVELS

58. What the international community is required to do to mitigate further crises from climate change is clear. There is broad scientific consensus around the two main pillars of effective climate action: mitigation and adaptation.¹⁷⁹ That scientific consensus is directly relevant to the scope and content of States' climate change obligations under international law and therefore to the question posed to the Court.

1. The Primacy of Environmental Science

59. The impact of anthropogenic GHG emissions on the climate system and other parts of the environment, as well as the available pathways to mitigation and adaptation, are matters of scientific evidence. As such, the States' obligations "to ensure the protection of the climate system and other parts of the environment from anthropogenic [GHG emissions]"¹⁸⁰ must be

¹⁷⁷ "Bahamas Blue Carbon Principles", *Carbon Management, available at* https://carbonmgmt.bs/bahamasblue-carbon/.

¹⁷⁸ Blue carbon ecosystem assets are valued at approximately US\$300 million. See "The Bahamas Plans to Sell 'Blue' Carbon Credits in 2022, PM Says", Bloomberg (28 April 2022), available at https://www.bloomberg.com/news/articles/2022-04-28/the-bahamas-plans-to-sell-blue-carbon-credits-in-2022-pm-says.

¹⁷⁹ Intergovernmental Panel on Climate Change, *Climate Change 2024: Synthesis Report* (2014), *available at* https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf (hereinafter "IPCC 2014 Synthesis Report"), p. 17; IPCC 2023 Synthesis Report, p. 24. *See also* Intergovernmental Panel on Climate Change, *Climate Change 2022: Impacts, Adaptation and Vulnerability*, Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (2022), *available at* https://www.ipcc.ch/report/sixth-assessment-report-working-group-3/ (hereinafter "IPCC 2022 Report on Mitigation of Climate Change").

¹⁸⁰ Request for an advisory opinion of the International Court of Justice on the obligations of States in respect of climate change, p. 3.

informed and led by the latest scientific understanding. This is well established as a matter of international law.

60. International courts and tribunals have regularly recognised the importance of science when considering the content and scope of States' environmental obligations. For example, the Court in *Gabčíkovo-Nagymaros* stressed that "current standards must be taken into consideration" when evaluating environmental risks, ¹⁸¹ and new scientific insights and growing awareness of risks must be considered and "given proper weight".¹⁸² The ITLOS Seabed Disputes Chamber in *Activities in the Area* has also acknowledged that due diligence standards "may change over time" and may be dependent on "*new scientific or technological knowledge*".¹⁸³

61. The principle is also reflected in a number of environmental treaties, including climate treaties. For instance:

(a) the United Nations Framework Convention on Climate Change (the "UNFCCC") and the Paris Agreement make clear that States' climate obligations are underpinned by the "best available science" ¹⁸⁴ or "best available scientific knowledge"¹⁸⁵;

¹⁸¹ Gabčikovo-Nagymaros Judgment, p. 78, para. 140 ("Owing 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. This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development"). See also Indus Waters Kishenganga Arbitration (Pakistan v. India), PCA, Partial Award (20 December 2013), para. 452.

¹⁸² Gabčíkovo-Nagymaros Judgment, p. 78, para. 140.

¹⁸³ Responsibilities and obligations of States sponsoring persons and entities with respect to activities in the Area, Case No. 17, Advisory Opinion, 2011 ITLOS Reports 10 (1 February) (hereinafter "Activities in the Area Advisory Opinion"), p. 43, para. 117 (emphasis added).

Paris Agreement to the United Nations Framework Convention on Climate Change, December 12 2015, 3156 UNTS 219 (hereinafter "Paris Agreement"), art. 4.1 ("In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter *in accordance with best available science*, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.") (emphasis added), art. 7.5 ("Parties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems, and should be *based on and guided by the best available science* and, as appropriate, traditional knowledge, knowledge of indigenous peoples and local knowledge systems, with a view to integrating adaptation into relevant socioeconomic and environmental policies and

- (b) the United Nations Convention on the Law of the Sea ("UNCLOS") requires States to adopt measures for the protection of the marine environment which are "designed[] on the best scientific evidence available";¹⁸⁶
- (c) the most recent multilateral environmental law treaty, the Convention on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction ("*BBNJ Treaty*"), incorporates the "use of the best available science and scientific information" as one of its key principles;¹⁸⁷ and
- (d) the Vienna Convention for the Protection of the Ozone Layer provides that States' obligations shall be underpinned by "relevant scientific and technical

See e.g., UNCLOS, art. 119(1)(a) ("States shall ... take measures which are designed, on the best scientific evidence available to the States concerned, to maintain or restore populations of harvested species at levels ...") (emphasis added); art. 61(2) ("The coastal State, taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation") (emphasis added); art. 234 ("Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence") (emphasis added).

¹⁸⁷ 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, 19 June 2023, document A/CONF.232/2023/4 (hereinafter "BBNJ Treaty"), art. 7(i) ("In order to achieve the objectives of this Agreement, Parties shall be guided by the following principles and approaches . . . (i) The use of the *best available science and scientific information*") (emphasis added).

actions, where appropriate.") (emphasis added), art. 14.1 ("The Conference of the Parties serving as the meeting of the Parties to this Agreement shall periodically take stock of the implementation of this Agreement to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals (referred to as the 'global stocktake'). It shall do so in a comprehensive and facilitative manner, considering mitigation, adaptation and the means of implementation and support, and *in the light of equity and the best available science.*") (emphasis added).

¹⁸⁵ United Nations Framework Convention on Climate Change, 9 May 1992, 1771 UNTS 107 (hereinafter "UNFCCC"), art. 4.2(c) ("Calculations of emissions by sources and removals by sinks of greenhouse gases for the purposes of subparagraph (b) above *should take into account the best available scientific knowledge*, including of the effective capacity of sinks and the respective contributions of such gases to climate change.") (emphasis added); Paris Agreement, preamble, para. 4 ("Recognizing the need for an effective and progressive response to the urgent threat of climate change on the basis of the *best available scientific knowledge*") (emphasis added). *See also* Kyoto Protocol to the United Nations Framework Convention on Climate Change, 11 December 1997, 2303 UNTS 162 (hereinafter "Kyoto Protocol"), art. 13.4(b) ("Periodically examine the obligations of the Parties under this Protocol, giving due consideration to any reviews required by Article 4, paragraph 2 (d), and Article 7, paragraph 2, of the Convention, in the light of the objective of the Convention, the experience gained in its implementation and *the evolution of scientific and technological knowledge*, and in this respect consider and adopt regular reports on the implementation of this Protocol") (emphasis added).

considerations"¹⁸⁸ and States shall facilitate and encourage the exchange of scientific information.¹⁸⁹

62. The commentary to the International Law Commission ("*ILC*") Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities, in the context of the precautionary principle, also notes that there is a "need for States to review their obligations of prevention in a continuous manner to keep abreast of the advances in scientific knowledge."¹⁹⁰

63. International human rights instruments, such as the Universal Declaration of Human Rights¹⁹¹ and the International Covenant on Economic, Social and Cultural Rights¹⁹² also establish the right of individuals to "enjoy the *benefits* of scientific progress", including the right to benefit from the material results of scientific progress (*e.g.*, new technologies) and the development and dissemination of scientific knowledge.¹⁹³ International human rights law thus requires that States align government policies and programmes "with the best available, generally accepted scientific evidence".¹⁹⁴

¹⁸⁸ Vienna Convention for the Protection of the Ozone Layer, 22 September 1988, 1513 *UNTS* 293 (hereinafter "**Vienna Convention for the Protection of the Ozone Layer**"), art. 2(4) ("The application of this article shall be based *on relevant scientific and technical considerations.*") (emphasis added).

¹⁸⁹ Id., art. 4(1) ("The Parties shall facilitate and encourage the exchange of scientific, technical, socioeconomic, commercial and legal information relevant to this Convention as further elaborated in annex II. Such information shall be supplied to bodies agreed upon by the Parties. Any such body receiving information regarded as confidential by the supplying Party shall ensure that such information is not disclosed and shall aggregate it to protect its confidentiality before it is made available to all Parties.") (emphasis added).

¹⁹⁰ Draft Articles on Transboundary Harm from Hazardous Activities, *Yearbook of the International Law Commission*, 2001, Vol. II (Part Two), document A/56/10 (hereinafter "**ILC Draft Articles on Transboundary Harm**"), commentary to Art. 10, para. 7. *See also* Stockholm Declaration, principle 18; Rio Declaration on Environment and Development, adopted at the United Nations Conference on Environment and Development, Rio de Janeiro, document A/CONF.151/26/Rev.1 (Vol. I) (14 June 1992) (hereinafter "**Rio Declaration**"), principle 9.

¹⁹¹ United Nations General Assembly resolution 217 A (III), Universal Declaration of Human Rights, document A/811 (10 December 1948) (hereinafter, "**UDHR**"), art. 27.

¹⁹² International Covenant on Economic, Social and Cultural Rights, 16 December 1966, 993 UNTS 3 (hereinafter "ICESCR"), art. 15(b).

¹⁹³ CESCR, General comment No. 25 on science and economic, social and cultural rights (article 15 (1) (b), (2), (3) and (4) of the International Covenant on Economic, Social and Cultural Rights), document E/C.12/GC25 (30 April 2020), para. 8 (emphasis added).

¹⁹⁴ *Id.*, para. 52.

64. The need to refer to "best available" science means that the precise content and scope of States' obligations to protect the environment must reflect and evolve with our scientific understanding.¹⁹⁵

2. Limiting Climate Change to Sustainable Levels Requires Urgent and Ambitious Mitigation and Adaptation Action

65. Mitigation and adaptation measures are at the core of the IPCC's recommendations for effective climate action.¹⁹⁶ Mitigation refers to the reduction of GHG emissions and the enhancement of so-called GHG "sinks" (*i.e.*, environments and processes that remove GHGs from the atmosphere), and adaptation refers to adjustment measures aimed at moderating harm from actual or expected climate effects.¹⁹⁷

(a) Mitigation

66. The science on mitigation is clear: in order to limit global warming to an environmentally sustainable level, humans need in the very near term to stop adding any more GHGs into the atmosphere. This is referred to as "net zero", meaning that the total GHGs emitted by humans are equal to or lower than the GHGs removed from the atmosphere through, *e.g.*, reforestation or technology. In turn, having a realistic prospect of reaching net zero in time to limit global warming to sustainable levels requires *deep*, *rapid*, *and sustained reduction in GHG emissions starting now*.¹⁹⁸

67. The scientific rationale behind net zero is self-evident. As noted above, GHG emissions concentrate in the atmosphere and increase the global temperature.¹⁹⁹ Key among them is CO₂, which constitutes approximately 75% of anthropogenic GHG emissions and has the highest "global warming potential".²⁰⁰ Because of that, CO₂ emissions act as a basic benchmark and each temperature threshold (*e.g.*, 1.5°C or 2°C) is associated with a specific finite "carbon budget", *i.e.*, the maximum total amount of net CO₂ emissions which cannot be exceeded *cumulatively over all time periods* in order to limit temperature rise to that

¹⁹⁵ See Gabčíkovo-Nagymaros Judgment, p. 78, para. 140; Activities in the Area Advisory Opinion, p. 43, para. 117.

¹⁹⁶ IPCC 2014 Synthesis Report, p. 17; IPCC 2023 Synthesis Report, p. 24; *see also* IPCC 2022 Report on Mitigation of Climate Change.

¹⁹⁷ IPCC 2023 Synthesis Report, Annex I (Glossary), pp. 120, 126.

¹⁹⁸ See id., p. 68.

¹⁹⁹ *See* para. 15 above.

²⁰⁰ IPCC 2022 Report on Mitigation of Climate Change, p. 7, Figure SPM.1.

threshold.²⁰¹ A carbon budget refers to "net" emissions because a portion of CO_2 emissions can be removed from the atmosphere through human processes (*e.g.*, reforestation or so-called "carbon capture and storage"). However, only a small portion of CO_2 emissions can be removed this way, at least with today's technology.²⁰²

68. The IPCC estimates that as of 2020 humans have exhausted: (*i*) 4/5ths of their carbon budget if they are to limit global warming to 1.5° C; or (*ii*) 2/3rds of their carbon budget if they are to limit global warming to 2° C.²⁰³ Therefore, limiting global warming to sustainable levels requires humankind to reach "net zero" **CO₂ emissions** in the near term, followed by net zero **GHG emissions** shortly thereafter.²⁰⁴

- (a) Due to the inherent limitations of CO_2 removals,²⁰⁵ reaching net zero CO_2 in the near term requires: (*i*) deep, rapid, and sustained reduction in gross anthropogenic CO_2 emissions; and (*ii*) the deployment of CO_2 removal technology "to counterbalance hard-to-abate *residual* emissions (*e.g.*, some emissions from agriculture, aviation, shipping, and industrial processes)".²⁰⁶
- (b) Reaching net zero GHG emissions requires strong reduction in other non-CO₂ GHG emissions, in particular methane, coupled with net *negative* CO₂ emissions (as we are currently unable to effectively remove non-CO₂ GHG emissions from the atmosphere).²⁰⁷

69. **Deep reduction**. The IPCC is clear that, in order to stand a chance at limiting global warming to 1.5° C, global GHG emissions need to be cut by **at least 43% by 2030**, reach **net zero CO₂ by 2050**, and net zero GHG shortly thereafter.²⁰⁸ Yet at this point, global GHG emissions keep *rising*. Even if all national mitigation targets announced under the Paris Agreement were fully achieved—which is unlikely due to the continued implementation

²⁰¹ IPCC 2023 Synthesis Report, Annex I (Glossary), p. 121.

²⁰² IPCC 2022 Report on Mitigation of Climate Change, p. 38, Figure SPM.7.

²⁰³ IPCC 2023 Synthesis Report, pp. 82–83.

²⁰⁴ Id., pp. 82–85 ("From a physical science perspective, limiting human-caused global warming to a specific level requires limiting cumulative CO₂ emissions, reaching net zero or net negative CO₂ emissions, along with strong reductions of other GHG emissions.").

²⁰⁵ *Id.*, p. 87.

²⁰⁶ *Id.*, p. 85 (emphasis added).

²⁰⁷ *Id.*, p. 85.

²⁰⁸ *Id.*, pp. 59, Figure 2.5, 82–85.

gap—we would only achieve a wholly insufficient reduction of 4% by 2030.²⁰⁹ That pace of reduction would lead to a warming of the planet by 2.8°C by 2100, and when taking into account the observed implementation gap, by 3.2°C by 2100.²¹⁰ If climate sensitivity is higher than currently estimated, the warming in that scenario could exceed 4°C.²¹¹ At that level of global warming, the adverse impacts on the environment and human life would be a multiple of the risks identified above. For instance, global warming of 4°C and above would "lead to far-reaching impacts on natural and human systems . . . ; local extinction of ~50% of tropical marine species . . . ; and about 4 billion people [] projected to experience water scarcity".²¹²

70. **Rapid reduction**. The extent of the reduction needed by 2030 and 2050 makes clear that radical action is needed *now*. The IPCC-modelled scenarios which limit global warming to 1.5°C or even 2°C assume "immediate action" towards deep reduction by 2030, *i.e.*, "adoption between 2020 and *at latest before 2025* of climate policies intended to limit global warming to a given level".²¹³ If we continue on the current trajectory until 2030, *i.e.*, action is limited to announced reduction targets under the Paris Agreement, we will exceed 1.5°C warming in the near term, and limiting warming to 2°C "would imply an unprecedented acceleration of mitigation efforts during 2030–2050".²¹⁴ In other words, there is no allowance for delay. As the IPCC has summarised:

Any further delay in concerted anticipatory global action on adaptation and mitigation **will miss a brief and rapidly closing window** of opportunity to secure a liveable and sustainable future for all (*very high confidence*).²¹⁵

71. Exceeding significant thresholds such as 1.5°C (referred to as "overshooting"), even slightly and for a limited time, comes with more adverse impacts and additional risks, including around so-called "tipping points".²¹⁶ Tipping points are critical thresholds which, when crossed, lead to large, accelerating, and often abrupt and irreversible changes in the

²⁰⁹ *Id.*, p. 59, Figure 2.5.

²¹⁰ *Id.*, pp. 57–59, 68.

²¹¹ *Id.*, p. 68.

²¹² *Id.*, p. 71.

²¹³ *Id.*, pp. 57, 82–86 (emphasis added).

²¹⁴ *Id.*, pp. 57, 68.

²¹⁵ *Id.*, p. 89 (emphasis added).

²¹⁶ *Id.*, p. 87.

climate system.²¹⁷ Many parts of the climate system may be subject to a tipping point, triggering large-scale changes such as the melting and eventual loss of the Greenland or the Antarctic ice sheets, the thawing of the permafrost, and the dieback of the Amazon rainforest.²¹⁸ Ice loss increases the global temperature as well as sea levels; permafrost stores a massive amount of carbon from plants and animals that died thousands of years ago, which would be released into the atmosphere as CO₂ and methane as it thaws; and the Amazon rainforest absorbs and stores a large proportion of anthropogenic CO₂ emissions.²¹⁹ Large changes in these systems are self-reinforcing, as they lead to further increases in global temperature which in turn leads to further decline in the protective capacity of, for instance, the oceans or the rainforests, which further accelerates warming.²²⁰ While scientists cannot tell with precision what temperature increase would trigger specific tipping points, there is increasing evidence that some may already have been crossed, while others would be crossed near or at the 1.5°C temperature increase threshold.²²¹ According to the IPCC:

Overshooting 1.5°C will result in irreversible adverse impacts on certain ecosystems with low resilience, such as polar, mountain, and coastal ecosystems, impacted by ice-sheet melt, glacier melt, or by accelerating and higher committed sea level rise (*high confidence*). **Overshoot increases the risks of severe impacts**, such as increased wildfires, mass mortality of trees, drying of peatlands, thawing of permafrost and weakening natural land carbon sinks; **such impacts could increase releases of GHGs making temperature reversal more challenging** (*medium confidence*).²²²

²¹⁷ T. Lenton et al., "Climate tipping points – too risky to bet against", *Nature* (2019) 575, pp. 592–595; IPCC 2023 Synthesis Report, Annex I (Glossary), p. 129.

²¹⁸ See D. McKay et al., "Exceeding 1.5°C global warming could trigger multiple climate tipping points" Science (2022) 377; Intergovernmental Panel on Climate Change, Special Report: Global Warming of 1.5°C (2018) (hereinafter "IPCC 2018 Special Report on 1.5°C"), pp. 262–265.

²¹⁹ IPCC 2023 Synthesis Report, pp. 46, 77; IPCC 2018 Special Report on 1.5°C, pp. 262–265; Intergovernmental Panel on Climate Change, *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (2021) (hereinafter "IPCC 2021 Physical Science Basis Report"), pp. 202–203, 739–742; D. McKay et al., "Exceeding 1.5°C global warming could trigger multiple climate tipping points" Science (2022) 377.

²²⁰ IPCC 2023 Synthesis Report, p. 82; IPCC 2018 Special Report on 1.5°C, pp. 262–265; IPCC 2021 Physical Science Basis Report, pp. 202–203, 739–742; D. McKay et al., "Exceeding 1.5°C global warming could trigger multiple climate tipping points" *Science* (2022) 377, p. 1.

²²¹ D. McKay et al., "Exceeding 1.5°C global warming could trigger multiple climate tipping points" *Science* (2022) 377, p. 1; IPCC 2023 Synthesis Report, p. 77.

²²² IPCC 2023 Synthesis Report, p. 87 (emphasis added).

72. Finally, one must account for the fact that climate science has been shown to be conservative in its predictions when compared to observed impacts of climate change. For instance, the rate of melting of the Arctic ice sheet is at least 100 years ahead of projections made in the first three IPCC reports,²²³ with Greenland and Antarctic ice melt also well ahead of modelled scenarios.²²⁴

73. **Sustained reduction**. The necessary implication of "net zero" is that the deep reduction in GHG emissions needs to be sustained over time. As such, limiting global warming to sustainable levels requires a wholesale and sustainable transition to low-GHG technologies "in all sectors", including energy, industry, transport, land use, and buildings.²²⁵ For instance, the IPCC has stated that "[i]n global modelled pathways that limit warming to 2°C or below, almost all electricity is supplied from zero or low-carbon sources in 2050, such as renewables or fossil fuels with CO₂ capture and storage, combined with increased electrification of energy demand."²²⁶

(b) Adaptation

74. Irrespective of mitigation, environmental science confirms that "global warming will continue to increase in the near term in nearly all considered scenarios and modelled pathways".²²⁷ The adverse environmental effects of past, present, and future anthropogenic GHG emissions (even with the required reduction) will continue to a degree, with some changes being "irreversible on a centennial to millennial time scale", such as rising sea levels.²²⁸

75. According to the IPCC, adaptation is an effective tool to reduce climate risk, especially in certain sectors and regions, and there are "significant synergies" with

²²³ Intergovernmental Panel on Climate Change, Climate Change: The 1990 and 1992 IPCC Assessments. IPCC First Assessment Report Overview and Policymaker Summaries and 1992 IPCC Supplement (June 1992), pp. 110–111; Intergovernmental Panel on Climate Change, Climate Change 1995: IPCC Second Assessment, A Report of the Intergovernmental Panel on Climate Change (1995), p. 30; Intergovernmental Panel on Climate Change, Climate Change 2001: Synthesis Report (2001), p. 84; G. Scherer, "IPCC Predictions: Then Versus Now", Climate Central (December 11 2012), available at https://www.climatecentral.org/news/ipcc-predictions-then-versus-now-15340.

²²⁴ G. Scherer, "IPCC Predictions: Then Versus Now", *Climate Central* (December 11 2012), *available at* https://www.climatecentral.org/news/ipcc-predictions-then-versus-now-15340.

²²⁵ IPCC 2023 Synthesis Report, pp. 86–87.

²²⁶ *Ibid*.

²²⁷ *Id.*, p. 68.

²²⁸ *Id.*, p. 69.

mitigation.²²⁹ For instance, adaptation measures in agriculture such as improved cultivars, agroforestry, and changes in crop patterns help preserve ecosystems and their natural protective capacity.²³⁰ Other measures such as early warning systems and effective disaster risk management will save lives and improve wellbeing especially for vulnerable populations.²³¹ However, the IPCC has warned that many adaptation responses tend to prioritise short-term risks, are fragmented, small in scale, and sector-specific—reducing the opportunity for "transformational adaptation".²³² More needs to be done, including accelerating implementation of comprehensive adaptation action and improving the availability of finance.²³³

* * *

76. Despite this broad scientific consensus, States have failed to take effective action against climate change. The alleged lack of clarity about States' international legal obligations can no longer be used as an excuse for State inaction and prevarication. That would certainly lead to environmental and human catastrophe. It is therefore paramount that the Court takes the lead in clarifying States' obligations under international law, which is the motivating rationale for the requested Advisory Opinion.

III. THE COURT SHOULD EXERCISE ITS JURISDICTION TO ENTERTAIN THE REQUEST

77. The Bahamas respectfully submits that the Court should exercise its jurisdiction to issue the Advisory Opinion requested by the United Nations General Assembly. The Court is empowered to render an advisory opinion if: (*i*) a request is made by an authorised body, (*ii*) it raises legal questions, and (*iii*) there are no reasons for the Court to decline to exercise jurisdiction.²³⁴ All three requirements are met in this case.

²³² *Id.*, p. 61.

²²⁹ *Id.*, pp. 52, 55–56.

²³⁰ *Id.*, pp. 106–108.

²³¹ *Id.*, p. 55–56.

²³³ *Id.*, pp. 95–96.

Statute of the International Court of Justice, art. 65(1). See also Nuclear Weapons Advisory Opinion, p. 231, para. 10.

78. *First*, the present request was submitted to the Court by resolution 77/276 of the United Nations General Assembly,²³⁵ which is duly authorised to request an advisory opinion from the Court. Pursuant to Article 65(1) of the Statute of the Court, the Court "may give an advisory opinion on any legal question at the request of whatever body may be authorised by or in accordance with the Charter of the United Nations to make such a request." In turn, Article 96(1) of the United Nations Charter provides that "[t]he General Assembly... may request the International Court of Justice to give an advisory opinion on any legal question." The Court has repeatedly reaffirmed the General Assembly's competence to request an Advisory Opinion.²³⁶

79. Second, the request squarely raises legal questions. In the Advisory Opinion on Legal Consequences of the Separation of the Chagos Archipelago from Mauritius in 1965, the Court explained that a request "to examine a situation by reference to international law concerns a legal question."²³⁷ In this case, the United Nations General Assembly requested the Court to clarify "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" and "the legal consequences under these obligations".²³⁸ The United Nations General Assembly specifically requested the Court to answer these questions "[h]aving particular regard to" multiple international law instruments and other sources, including the United Nations Charter, international treaties on human rights, environmental law, the law of the sea, and customary international law.²³⁹

²³⁵ Request for an Advisory Opinion on the obligations of States in respect of climate change, p. 1.

²³⁶ Legal Consequences of the Separation of the Chagos Archipelago from Mauritius in 1965, Advisory Opinion, I.C.J. Reports 2019 (hereinafter "Separation of the Chagos Archipelago from Mauritius Advisory Opinion"), p. 95, para. 56. See also Application for Review of Judgment No. 273 of the United Nations Administrative Tribunal, Advisory Opinion, I.C.J. Reports 1982, p. 325, para. 21; Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory, Advisory Opinion, I.C.J. Reports 2004 (hereinafter "Construction of a Wall Advisory Opinion"), p. 136, para 15; Nuclear Weapons Advisory Opinion, p. 233, para. 11; Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, Advisory Opinion, I.C.J. Reports 2010, p. 403, para. 21.

²³⁷ Separation of the Chagos Archipelago from Mauritius Advisory Opinion, p. 112, para. 58; see also Western Sahara, Advisory Opinion, I.C.J. Reports 1975, p. 12, para. 15 (questions that are "framed in terms of law and raise problems of international law . . . are by their very nature susceptible of a reply based on law"); Accordance with International Law of the Unilateral Declaration of Independence in Respect of Kosovo, Advisory Opinion, I.C.J. Reports 2010, p. 403, para. 25; Nuclear Weapons Advisory Opinion, p. 234, para. 13.

²³⁸ Request for an Advisory Opinion on the obligations of States in respect of climate change, p. 3.

²³⁹ *Ibid.*

80. *Third*, there are no reasons for the Court to decline to exercise its advisory jurisdiction. The Court's advisory jurisdiction "represents its participation in the activities of the [United Nations], and, in principle, should not be refused" absent "compelling reasons" to do so.²⁴⁰ The Court has never declined to render an advisory opinion on a discretionary grounds,²⁴¹ and there are no compelling reasons to do so here. To the contrary, there are compelling reasons to render the Advisory Opinion. An Advisory Opinion from the Court would provide the United Nations General Assembly with the necessary legal guidance and framework to address the critical issue of climate change induced by anthropogenic GHG emissions, a matter that has long been at the top of the General Assembly's priorities. For example, resolution 77/276 "not[es] with profound alarm" the consequences of the continued emissions of greenhouse gases, and "recall[s] ... all its other resolutions and decisions relating to the protection of the global climate", which go as far back as 1988.²⁴² By rendering the Advisory Opinion, the Court would be "participat[ing] in the activities of the [United Nations]"²⁴³, thus remaining "faithful to the requirements of its judicial character" and discharging "its functions as the principal judicial organ of the United Nations".²⁴⁴

81. That the Court may have to consider complex issues of fact does not weigh against exercising jurisdiction. As the Court previously explained, it may analyse questions of fact as long as it has "sufficient information and evidence to enable it to arrive at a judicial conclusion upon any disputed questions of fact".²⁴⁵ As in past advisory proceedings that implicated factual questions, ²⁴⁶ the Court in these proceedings will receive substantial

²⁴⁰ Separation of the Chagos Archipelago from Mauritius Advisory Opinion, p. 113, para. 65; Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase, Advisory Opinion, I.C.J. Reports 1950, p. 65, p. 71.

²⁴¹ Construction of a Wall Advisory Opinion, p. 156, para. 44.

²⁴² Request for an Advisory Opinion on the obligations of States in respect of climate change, pp. 1–2. *See also* United Nations General Assembly resolution 77/165, Protection of global climate for present and future generations of humankind, document A/RES/77/165 (21 December 2022), p. 1.

 ²⁴³ Separation of the Chagos Archipelago from Mauritius Advisory Opinion, p. 113, para. 65; Interpretation of Peace Treaties with Bulgaria, Hungary and Romania, First Phase, Advisory Opinion, I.C.J. Reports 1950, p. 65, p. 71.

²⁴⁴ Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971, p. 16, para. 41.

²⁴⁵ Western Sahara, Advisory Opinion, I.C.J. Reports 1975, p. 12, para. 46.

²⁴⁶ See, e.g., Separation of the Chagos Archipelago from Mauritius Advisory Opinion, pp. 114–115, para. 73; see also Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971, p. 16, para. 40; Construction of a Wall Advisory Opinion, pp. 161–162, paras. 57–58.

information on the facts before it, including an eight-part dossier of documents from the Secretariat of the United Nations, written submissions from at least ten international organizations, and written submissions from a large number of States.

82. Accordingly, the Court should exercise its jurisdiction and render the Advisory Opinion requested by the United Nations General Assembly.

IV. STATES' OBLIGATIONS IN RESPECT OF CLIMATE CHANGE

83. There are three key areas of international law that give rise to obligations of States to protect the climate system from the harmful effects of anthropogenic GHG emissions. In this section, The Bahamas addresses States' obligations under international environmental law (Section A), the law of the sea (Section B), international human rights law (Section C), and the interpretation of those obligations in accordance with the principle of intergenerational equity (Section D). There is a remarkable symmetry in how these three substantive areas of international law address climate change, in that the basic principles and obligations are common to all three and are echoed throughout them. Each body of law gives rise to independent and robust obligations in respect of climate change, but they also reinforce each other and may be viewed as forming a coherent normative regime.

A. OBLIGATIONS OF STATES UNDER INTERNATIONAL ENVIRONMENTAL LAW

84. The central aim of international environmental law is to regulate the conduct of States so as to ensure the effective protection of the environment for the common good. As such, it governs States' obligations to protect the climate system from the deleterious impacts of anthropogenic GHG emissions through a combination of specific and general rules. As early as 1972, the Stockholm Declaration represented a broad consensus that "protection and improvement of the human environment" was a "major issue which affects the well-being of peoples and economic development throughout the world", and called upon States to "halt[]" the discharge of toxic substances and "the release of heat" in harmful quantities "in order to ensure that serious or irreversible damage is not inflicted upon ecosystems."²⁴⁷ Climate treaties adopted since then include the 1992 UNFCCC, the 1997 Kyoto Protocol, and the 2015

²⁴⁷ Stockholm Declaration, proclamation 2, principle 6.

Paris Agreement, in addition to a host of treaties governing specific subjects such as the depletion of the ozone layer or the protection of biodiversity.²⁴⁸

1. Climate Treaties

85. The adoption of the UNFCCC in 1992 marked the beginning of serious concerted efforts on the international plane to combat climate change. The stated objective of the UNFCCC was the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."²⁴⁹ As a framework agreement, the UNFCCC set up some of the basic infrastructure needed to combat climate change by requiring States to maintain national inventories of GHG emissions, adopt plans for their mitigation, and promote technological and scientific research.²⁵⁰ In 1997, the parties adopted the Kyoto Protocol where certain developed countries undertook specific quantified commitments to limit and reduce anthropogenic GHG emissions when compared to their base level in 1990, "with a view to reducing their overall emissions of such gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012",²⁵¹ and by 18% in the period 2013 to 2020.²⁵²

86. Despite the more specific commitments embedded in the Kyoto Protocol, the evolving scientific understanding, especially with respect to the urgency and severity of climate change, resulted in a call for more ambitious and far-reaching obligations. The Paris Agreement, adopted in 2015, thus aimed to strengthen the global response to climate change by taking steps towards limiting global warming to well below 2°C above pre-industrial levels, with a desired target of 1.5°C.²⁵³ In pursuit of that objective, the parties to the Paris Agreement each agreed to "undertake and communicate ambitious nationally determined

See The Convention on International Trade in Endangered Species of Wild Fauna and Flora, 3 March 973, 993 UNTS 243; Montreal Protocol on Substances that Deplete the Ozone Layer, 16 September 1987, 1522 UNTS 3; Vienna Convention for the Protection of Ozone Layer; Convention on Biological Diversity, 5 June 1992, 1760 UNTS 79; Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, 22 March 1989, 1673 UNTS 57; Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 17 March 1992, 1936 UNTS 269; Stockholm Convention on Persistent Organic Pollutants, 2 May 2001, 2256 UNTS 119.

²⁴⁹ UNFCCC, art. 2 ("Objective").

²⁵⁰ *Id.*, arts. 3(3), 4(1), 5, 9.

²⁵¹ Kyoto Protocol, art. 3(1).

²⁵² Doha Amendment to the Kyoto Protocol, 8 December 2021, document C.N.718.2012.TREATIES-XXVII.7.c, art. 3(1) *bis*.

²⁵³ Paris Agreement, art. 2(1)(a).

contributions" ("*NDCs*")—*i.e.*, unilaterally determined specific pledges to reduce their national GHG emissions by a defined percentage.²⁵⁴ Each State is required to prepare, publish, maintain, and update (in five-year intervals) their NDCs, which should show progression over time "and reflect [the State's] highest possible ambition", with the goal of achieving net zero GHG emissions at around 2050.²⁵⁵ NDCs are thus critical in reinforcing the goals of the Paris Agreement, promoting transparency, facilitating cooperation between States and ensuring accountability by States to reduce their GHG emissions.

87. The climate treaties have near-universal membership ²⁵⁶ and impose important obligations on States to take action in response to climate change. They reaffirm and seek to operationalize the States' fundamental obligations of prevention and cooperation that exist under customary international law with respect to the protection of the environment, discussed in more detail below.²⁵⁷ In particular:

(a) The UNFCCC expressly notes in its preamble the obligation of States to prevent transboundary harm, *i.e.*, to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States.²⁵⁸ The climate treaties impose a number of obligations on States with a view to preventing transboundary harm caused by GHG emissions. For instance, the Paris Agreement requires States to communicate NDCs and "pursue domestic mitigation measures, with the aim of achieving the objectives of such [NDCs]", including "economy-wide absolute emission reduction targets" in case of developed States.²⁵⁹ It expressly incorporates a net zero objective to be reached at around 2050, mandating that parties "shall aim to reach global peaking of greenhouse gas emissions as soon as possible" and "achieve a balance between anthropogenic emissions by sources and removals

²⁵⁴ *Id.*, art. 3.

²⁵⁵ *Id.*, art. 4.

²⁵⁶ For example, the Paris Agreement has 198 signatories and 195 parties, as set out in the United Nations Treaty Collection.

²⁵⁷ See Sections IV.A.2 and IV.A.3 below.

²⁵⁸ UNFCCC, preamble ("Recalling also that 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").

²⁵⁹ Paris Agreement, art. 4.

by sinks of greenhouse gases by the second half of this century".²⁶⁰ In order to help States achieve those objectives, the Paris Agreement requires that they, *inter alia*: (*i*) develop long-term low GHG emission strategies; ²⁶¹ (*ii*) encourage enhanced public and private sector participation in the implementation of NDCs; ²⁶² and (*iii*) engage in adaptation planning and implementation, including by means of national plans, economic diversification, and sustainable management of natural resources.²⁶³

(b) Recognising that climate change is a global crisis and the harmful effects of GHG emissions do not conform to national boundaries, the climate treaties all include **extensive provisions on cooperation**. For instance, the UNFCCC expressly acknowledges that the "global nature of climate change calls for the widest possible cooperation by all countries", and that "efforts to address climate change may be carried out cooperatively".²⁶⁴ The Paris Agreement similarly affirms the importance of cooperation "at all levels", ²⁶⁵ and recognises the importance of cooperation by States in the implementation of NDCs, as well as with respect to information sharing and the scientific knowledge on climate change.²⁶⁶ Parties to the Paris Agreement have also undertaken to strengthen cooperation on adaptation, including by "taking into account the needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change."²⁶⁷

88. In addition, climate treaties recognise that both the burden of climate change and the responsibility for action is not equally distributed among States. On one hand, the treaties recognise that certain States and regions are more vulnerable to experiencing the severe effects of climate change, including Small Island States and developing countries. At the same time, certain States and regions have greater capacity—in particular, financial, scientific

²⁶⁰ *Id.*, art. 4(1).

²⁶¹ *Id.*, art. 4(19).

²⁶² *Id.*, art. 6(8)(b).

²⁶³ *Id.*, art. 7.

²⁶⁴ UNFCCC, preamble, art. 3(3).

²⁶⁵ Paris Agreement, preamble.

²⁶⁶ *Id.*, art. 7(7).

²⁶⁷ *Id.*, art.7(6).

and technological capacity—to lead the transition towards a net zero world. The UNFCCC, the Kyoto Protocol, and the Paris Agreement all enshrine the "principle of equity and common but differentiated responsibilities and respective capabilities, in the light of different national circumstances,"²⁶⁸ and require developed States to take the lead in combating climate change and its adverse effects.²⁶⁹

89. The climate treaties are not, however, the only source of States' obligations with respect to climate change. Instead, they exist alongside two fundamental rules of customary international law: the obligations of prevention of transboundary harm and cooperation. States' obligations under customary international law and climate treaties are complementary, and apply in full within their respective scope. In particular, the obligation under customary international law to prevent transboundary harm by effecting a deep, rapid, and sustained reduction in GHG emissions applies alongside the mitigation obligations contained in the climate treaties, even if they differ in scope.

90. As a matter of principle, the Court has confirmed that customary international law continues to apply alongside treaty provisions regulating the same subject-matter. In *Costa Rica* v. *Nicaragua*, the Court confirmed that where a State is subject to "procedural obligations with regard to transboundary harm which may exist in . . . customary international law" such an obligation remains binding even if it does not appear in an applicable treaty.²⁷⁰ The same principle applies squarely in the present circumstances.

91. Indeed, nothing in the existing climate treaties suggests an intention to circumscribe the scope and effect of customary rules. To the contrary, the treaties reaffirm and expressly refer to the customary law obligation to prevent transboundary harm ²⁷¹ and seek to operationalise that obligation by agreeing more specific quantified reduction targets—both collective and individual. The mere fact that there may not exist sufficient political consensus to enact more aggressive reduction targets in the form of a treaty does not preclude the existence of a separate obligation to do so under customary international law.

²⁶⁸ *Id.*, preamble.

²⁶⁹ UNFCCC, preamble, arts. 3, 4, 5, 6; Kyoto Protocol, arts. 2, 3, 10, 11; Paris Agreement, arts. 2(1), 2(2).

²⁷⁰ Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica), Judgment, I.C.J. Reports 2015, p. 708, para. 108.

²⁷¹ Convention on Long-range Transboundary Air Pollution, 13 November 1979, 1302 UNTS 217, preamble, 2, 4, 5; Convention on Environmental Impact Assessment in a Transboundary Context (hereinafter "Espoo Convention"), 25 February 1991, 1989 UNTS 309, arts. 2(1), 2(2), 2(5) 2(10); Rio Declaration, principles 2, 19.

2. Obligation to Prevent Transboundary Harm Under Customary International Law

92. Under customary international law, a State cannot knowingly allow its territory to be used for acts contrary to the rights of other States.²⁷² This broad principle has been adapted and extended in the context of international environmental law, requiring each State "to use all means at its disposal in order to avoid activities which take place in its territory, or in any area under its jurisdiction, causing significant damage to the environment of another State" (the "*prevention obligation*").²⁷³ The Court has described the obligation as follows:

The... principle of prevention, as a customary rule, has its origins in the due diligence that is required of a State in its territory. It is 'every State's obligation not to allow knowingly its territory to be used for acts contrary to the rights of other States' (*Corfu Channel (United Kingdom* v. *Albania)*, Merits, Judgment, I.C.J. Reports 1949, p. 22). A State is thus obliged to use all the means at its disposal <u>in order to avoid activities</u> which take place in its territory, or in any area under its jurisdiction, <u>causing significant damage to the environment of another States.²⁷⁴</u>

93. Three preliminary observations may be made at this juncture with regard to the scope and content of the prevention obligation.

94. *First*, The Bahamas accepts that the prevention obligation, in its general formulation, is an obligation of conduct, *i.e.*, it requires a State to exercise due diligence by acting or not acting in a certain way, but may be discharged even if harm to the environment ultimately occurs.²⁷⁵ However, in exercising due diligence, a State may be required to take a specific action or even achieve a specific result. For instance, it is widely accepted that States have an

²⁷² The Corfu Channel Case, Judgment of April 9th 1949, I.C.J. Reports 1949, p. 22, para. 2.

²⁷³ Pulp Mills on the River Uruguay (Argentina v. Uruguay), Judgment, I.C.J. Reports 2010 (hereinafter "Pulp Mills Judgment"), p. 14, para. 101; Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica), Judgment, I.C.J. Reports 2015 p. 665, para. 104; Activities in the Area Advisory Opinion, p. 41, para. 110; Convention on Biological Diversity, 5 June 1992, 1760 UNTS 79, art. 3 (which provides that whilst States have a right to exploit their own resources they also bear "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.").

²⁷⁴ *Pulp Mills* Judgment, p. 14, para. 101.

²⁷⁵ *Id.*, p. 77, para. 187.

obligation to conduct an environmental impact assessment as part of the due diligence required where a proposed new activity may cause significant environmental harm.²⁷⁶

95. Second, it is an onerous obligation, requiring a State to "use all means at its disposal".²⁷⁷ The obligation is not qualified by terms used commonly in this type of clauses, such as "reasonable means" or "appropriate means". While the obligation to "use all means" has to be interpreted consistently with other international norms, it clearly places a heavy burden on States when seeking to balance measures for the protection of the environment with measures aimed at, *e.g.*, economic development. What constitutes "all means at [the State's] disposal" depends on the State's individual capacity but must be aimed at actually achieving the overarching objective, *i.e.*, "to avoid activities . . . causing significant damage to the environment of another State".²⁷⁸ In other words, the State's actions must be ambitious and effective enough to have at least a reasonable chance of preventing significant environmental damage. That assessment has to be informed by the evolving scientific consensus as to the impacts of human activity on the environment, and the necessary mitigation and adaptation measures.²⁷⁹

96. *Third*, the obligation emphasizes prevention rather than reparation when it comes to the protection of the environment. The Court has recognised that:

vigilance and prevention are required on account of the often irreversible character of damage to the environment and the limitations inherent in the very mechanism of reparation of this type of damage.²⁸⁰

97. This requires, *inter alia*, a proactive vigilant approach to identifying and assessing environmental risks, and taking protective action as soon as there is a *threat* of serious and irreversible damage.²⁸¹

²⁷⁷ *Pulp Mills* Judgment, p. 14, para. 101.

²⁷⁶ *Id.*, pp. 82–83, paras. 203–205; Espoo Convention, arts. 1, 2(2), 2(3); ILC Draft Articles on Transboundary Harm, commentary to art. 7, paras. 4–8.

²⁷⁸ *Ibid*.

²⁷⁹ See Gabčíkovo-Nagymaros Judgment, p. 78, para. 140.

²⁸⁰ *Ibid*.

²⁸¹ Gabčíkovo-Nagymaros Judgment, p. 78, para. 140 ("in the field of environmental protection, vigilance and prevention are required"); see also Pulp Mills on the River Uruguay (Argentina v. Uruguay), Order on Provisional Measures 13 July 2006, Dissenting Opinion of Judge Ad Hoc Vinuesa, I.C.J. Reports 2006, p. 292, paras. 98–99.

98. The prevention obligation applies *mutatis mutandis* in the context of climate change. Historically, the rules on transboundary harm have developed in the context of pollution that can be traced from one State to another, such as water pollution that spreads through a shared water source²⁸² or fumes from a factory that affected air quality across an international border.²⁸³ However, there is no principled reason why the prevention obligation should not apply equally to transboundary harm caused by GHG emissions. While it may often not be possible to correlate a specific portion of anthropogenic GHG emissions to a specific environmental harm (though the science is quickly catching up²⁸⁴), it is clear that GHG emissions do not respect national borders and each additional unit adds to the serious environmental harm that is occurring at pace globally. In fact, in light of the potentially catastrophic effects of climate change on the environment and human life, the obligation to prevent transboundary harm from GHG emissions is even more exacting and States must exercise an especially high degree of diligence. As the ILC noted in its commentary to the Draft Articles on Transboundary Harm:

The required degree of care is proportional to the degree of hazard involved.... The higher the degree of inadmissible harm, the greater would be the duty of care required to prevent it.²⁸⁵

99. As noted above, the dual mitigation and adaptation action lies at the core of IPCC's recommendations for effective action.²⁸⁶ On that basis, it is clear that the prevention obligation requires States, collectively and individually: (*i*) to effect a deep, rapid, and

²⁸² Pulp Mills Judgment, pp. 74, 76–77, paras. 177, 183, 185; ILC Draft Articles on Transboundary Harm, general commentary, para. 5.

²⁸³ Trail Smelter Case (United States of America, Canada), Award of 11 March 1941, Report of the International Arbitral Awards Volume III (hereinafter "Trail Smelter Case"), pp. 1960, 1966, 1968; see also ILC Draft Articles on Transboundary Harm, general commentary, commentary to art. 7, para. 2.

²⁸⁴ Since 2004, scientists have been correlating the degree to which climate change contributes to weather events through attribution analyses, covering changes in the global climate system, the probability and characteristics of extreme events, the impact on humans and ecosystems, as well as the relative contributions of different sectors, activities and entities. *See* Climate Attribution, *Climate Attribution Database, available at* https://climateattribution.org/. The UNFCCC Conference of the Parties established the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts in 2013, which aims at addressing loss and damage linked to climate change, including extreme weather and slow onset events in developing countries, which are especially vulnerable to the impacts of climate change. *See* United Nations Climate Change, *Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM), available at* https://unfccc.int/topics/adaptation-and-resilience/workstreams/loss-and-damage/warsaw-international-mechanism.

²⁸⁵ ILC Draft Articles on Transboundary Harm, commentary to art. 3, para. 18.

²⁸⁶ IPCC 2014 Synthesis Report, p. 17; IPCC 2023 Synthesis Report, p. 19; see also IPCC 2022 Report on Mitigation of Climate Change.

sustained reduction in anthropogenic GHG emissions with a view to reaching net zero in the near term; and (*ii*) to put in place adaptation measures in order to address the environmental harm that will occur from past, present, and future GHG emissions.

(a) Mitigation

100. As discussed above, limiting global warming to sustainable levels requires a deep, rapid, and sustained reduction in global anthropogenic GHG emissions from today's levels, reaching net zero CO_2 and eventually net zero GHG emissions in the near term. The global levels of anthropogenic GHG emissions are not outside of States' control; on the contrary, regulating human activity is one of the core functions of a State and a key "means at its disposal". As such, States can only comply with the prevention obligation and the due diligence required of them if they *actually* effect deep, rapid, and sustained reduction in global anthropogenic GHG emissions. States have a variety of means at their disposal in order to achieve the required reduction, including adopting and enforcing legislation on climate change, taking steps to regulate the conduct of private actors (including abroad where appropriate), and promoting transparency and broad public participation in environmental decision-making.²⁸⁷ As the Court noted in *Pulp Mills*, the prevention obligation:

entails not only the adoption of appropriate rules and measures, but also ... the exercise of administrative control applicable to ... private operators, such as the monitoring of activities undertaken by such operators.²⁸⁸

101. The obligation to use "all means" at the State's disposal—including ambitious regulatory action—must be interpreted consistently with other norms of international law. For instance, there is need for some GHG-generating human activity in the near term in order to safeguard many human rights, as States are currently unable to produce the required amounts of energy, food, or drinking water, or provide adequate housing, schooling, or healthcare without generating GHG emissions. The need for some form of balancing exercise

²⁸⁷ Pulp Mills Judgment, p. 69, para. 197. See also ILC Draft Articles on Transboundary Harm, commentary to art. 3, para. 10 (noting States have an obligation to take measures to prevent significant transboundary harm and that such measures must be implemented and enforced); Activities in the Area Advisory Opinion, paras. 115, 131, 239; Request for an Advisory Opinion submitted by the Sub-Regional Fisheries Commission (SRFC), Advisory Opinion of 2 April 2015, ITLOS Reports 2015 (hereinafter "SRFC Advisory Opinion"), p. 41, para. 131; South China Sea (Philippines v. China), PCA Case No. 2013-19, Award on the Merits, 12 July 2016, (hereinafter "South China Sea Award"), p. 375, para. 944.

²⁸⁸ Pulp Mills Judgment, p. 79, para. 197.

has long been recognised, ²⁸⁹ including as reflected in the concept of "sustainable development". However, the balancing exercise must take full account of the serious damage that climate change is already inflicting and will continue to inflict on the enjoyment of human rights.²⁹⁰ As the IPCC has clearly stated, the only way forward is a rapid and comprehensive transition towards low or zero GHG technology in energy generation and all other areas of human life.²⁹¹

102. The fact that the ultimate objective of limiting global warming to sustainable levels requires collective action does not in any way dilute each individual State's mitigation obligations.²⁹² On the contrary, a State exercises regulatory power primarily within its territory and jurisdiction—both as a matter of law²⁹³ and practical ability—and therefore has an obligation to take action in the first place within its territory and jurisdiction to achieve and maintain an environmentally sustainable level of anthropogenic GHG emissions. While it would not be possible or appropriate, and The Bahamas does not propose, that the Court determine what constitutes an environmentally sustainable level of anthropogenic GHG emissions in respect of individual States, the assessment should be guided by the following principles:

- (a) The primacy of environmental science. As noted above, the assessment of what is a sustainable level of GHG emissions and what action is required to achieve that level needs to be based on environmental science.²⁹⁴
- (b) Net zero as the ultimate objective. As noted above, limiting global warming to sustainable levels requires humans to reach net zero anthropogenic CO₂ emissions in the near term, followed shortly by net zero GHG emissions.²⁹⁵ This is a clear measurable objective which should guide the determination of individual mitigation obligations.

²⁸⁹ Gabčíkovo-Nagymaros Judgment, p. 78, para. 140.

²⁹⁰ See Section IV.C below.

²⁹¹ IPCC 2023 Synthesis Report, pp. 104–107.

²⁹² See, e.g., State of the Netherlands v. Urgenda Foundation, The Supreme Court of the Netherlands (20 December 2019), para. 7.3.6; Future Generations v. Ministry of Environment and Others, Supreme Court of Justice of Colombia, STC4360-2018 (5 April 2018), paras. 6, 11.3.

²⁹³ Case Concerning Military and Paramilitary Activities in and Against Nicaragua (Nicaragua v. United States of America), Judgment of 27 June 1986, I.C.J Reports 1986, p. 14, para. 212.

²⁹⁴ See Section II.C.1 above.

²⁹⁵ See Section II.C.2.(a) above.

- **Proportionality**. The prevention obligation requires that the level of reduction (c) required of individual States be broadly proportional to their contribution to the environmental harm, *i.e.*, the level of GHG emissions they generate. In 2022 (in line with preceding periods), over 60% of global anthropogenic GHG emissions were generated by five States (China, the United States, India, Russia, and Brazil) together with the EU27 countries (which are typically treated as one bloc as they undertook to reduce GHG emissions at the EU level).²⁹⁶ These emissions, however, cause serious harm far beyond the boundaries of those States, including in Small Island States such as The Bahamas, often thousands of miles away. The reality is that States cannot achieve the necessary global reduction in anthropogenic GHG emissions without the most polluting States taking radical action on an individual level. While most States need to effect some reduction to reach global net zero, the biggest emitters are undeniably under an obligation to exercise high levels of due diligence, and to effect deep, rapid, and sustained reduction of GHG emissions within their territory and jurisdiction.²⁹⁷ In other words, the more GHG emissions a State contributes, the more onerous its obligation to act.
- (d) Continuing obligation. The Court has affirmed that in the field of environmental protection, "vigilance . . . [is] required on account of the often irreversible character of damage to the environment".²⁹⁸ Compliance by a State therefore requires constant monitoring and staying abreast of evolving scientific and technological standards, as well as making adjustments to national plans, policies, and actions when the assessment of what constitutes a sustainable level of GHG emissions and what action is required to achieve that level changes.

²⁹⁶ The list of biggest emitters is relatively stable over the years. See Emissions Database for Global Atmospheric Research, GHG emissions of all world countries: 2023 Report, available at https://edgar.jrc.ec.europa.eu/report_2023.

²⁹⁷ See also IPCC 2023 Synthesis Report, pp. 45 (Figure 2.2 showing how "[e]missions have grown in most regions but are distributed unevenly . . . cumulatively since 1850"), 60 ("The adoption and implementation of net zero emission targets by countries and regions also depend on equity and capacity considerations."); Emissions Database for Global Atmospheric Research, *GHG emissions of all world countries: 2023 Report, available at* https://edgar.jrc.ec.europa.eu/report_2023.

²⁹⁸ Gabčíkovo-Nagymaros Judgment, p. 78, para. 140.

(b) Adaptation

103. As noted above, the adverse environmental effects of past, present, and future anthropogenic GHG emissions (even with aggressive mitigation action) will continue to a degree, with some changes such as rising sea levels being "irreversible on a centennial to millennial time scales".²⁹⁹ This foreseeable harm includes loss of and damage to life, property and the physical environment caused by extreme weather events such as storms and droughts, extinction of plant and animal species affecting local and global ecosystems, including means of subsistence such as agriculture, fishing and tourism, and long-term displacement of affected populations.

104. Therefore, in addition to reducing anthropogenic GHG emissions, States must exercise due diligence and use all means at their disposal to put in place adaptation measures in response to climate change, *i.e.*, to address harm that will occur from past, present, and future GHG emissions on the environment. Examples of adaptation measures include disaster risk management, early warning systems and climate services, water storage, soil moisture conservation and irrigation, sustainable food production, implementation of climate finance, and social safety nets.³⁰⁰

3. Obligation to Cooperate Under Customary International Law

105. In addition, given the global nature of climate change and the need for strong collective action, a State is under a customary law obligation to cooperate with other States, international organizations, and other stakeholders in designing and implementing effective mitigation and adaptation action.

106. The customary obligation of States to cooperate in solving global problems is a core principle of international law (the "*cooperation obligation*"). ³⁰¹ Article 56 of the United Nations Charter provides that States "pledge themselves to take joint and separate action in cooperation with the Organization for the achievement of the purposes set forth in Article 55", which include "a. higher standards of living ...; b. solutions of international

²⁹⁹ See Section II.C.2.(b) above; IPCC 2023 Synthesis Report, p. 69.

³⁰⁰ *Id.*, pp. 55–56.

³⁰¹ Nuclear Tests (Australia v. France), Judgment, I.C.J. Reports 1974, p. 253, para. 46; Nuclear Weapons Advisory Opinion, p. 26, para. 102; Pulp Mills Judgment, p. 67, para. 145.

economic, social, health, and related problems; ... and c. universal respect for, and observance of, human rights and fundamental freedoms".³⁰²

107. The landmark Declaration on Principles of International Law Concerning Friendly Relations and Cooperation among States also recognises that:

States have the duty to cooperate with one another, irrespective of the differences in their political, economic and social systems, in the various spheres of international relations, in order to maintain international peace and security and to promote international economic stability and progress, the general welfare of nations and international cooperation free from discrimination based on such differences.³⁰³

108. The cooperation obligation has been widely recognised in the specific context of international environmental law,³⁰⁴ which deals with the protection of a shared resource that no State is able to achieve on its own.³⁰⁵ The Court has repeatedly recognised the need for cooperation in environmental matters, noting that "it is by co-operating that the States concerned can jointly manage the risks of damage to the environment"³⁰⁶ and shared resources

³⁰² United Nations Charter, arts. 55–56; *see also* art. 1(3) ("The Purposes of the United Nations are: . . . 3. To achieve international cooperation in solving problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms").

³⁰³ United Nations General Assembly resolution 2625 (XXV), Declaration on Principles of International Law Concerning Friendly Relations and Cooperation among States in accordance with the Charter of the United Nations, document A/RES/2625(XXV) (24 October 1970); UNFCCC, arts. 4(1)(c) (calling on States parties to "cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases"), 4(1)(e) (calling on States parties to "[c]ooperate in preparing for adaptation to the impacts of climate change").

³⁰⁴ MOX Plant (Ireland v. United Kingdom), Provisional Measures, Order of 3 December 2011, ITLOS Reports 2001, p. 95, para. 82 ("the duty to cooperate is a fundamental principle in the prevention of pollution of the marine environment under Part XII of the Convention and general international law"); see also Separate Opinion of Judge Wolfrum, Order of 3 December 2011, ITLOS Reports 2001, p. 135; P. Okowa, "Procedural Obligations in International Environmental Agreements", 67 British Year Book of International Law (1997) 275, p. 333; M. Koyano, "The Significance of Procedural Obligations in International Environmental Law: Sovereignty and International Co-Operation", 45 Japanese Year Book of International Law (I2011) 97, pp. 115-117, 147; J. Rudall, "The Obligation to Cooperate in the Fight against Climate Change", 23 International Community Law Review (2021), 184, p. 188; United Nations General Assembly resolution 3129 (XXVIII) Co-operation on the Field of the Environment Concerning Natural Resources Shared by Two or More States, document A/RES/3129 (13 December 1973), resolutions 1 and 3; United Nations General Assembly resolution 76/300, The Human Right to a Clean, Healthy and Sustainable Environment, document A/RES/76/300 (28 July 2022), resolution 4; United Nations General Assembly resolution 77/165, Protection of Global Climate for Present and Future Generations of Humankind, document A/RES/77/165 (14 December 2022), resolution 10.

³⁰⁵ The ozone layer is one such example. *See* The Vienna Convention for the Protection of the Ozone Layer (which achieved universal ratification in 2009) provides that the States parties shall cooperate along several dimensions set out in art. 2(2) to both study and protect the ozone layer, in the interests of human health and the environment.

³⁰⁶ *Pulp Mills* Judgment, p. 49, para. 77.

"can only be protected through close and continuous co-operation".³⁰⁷ Writing separately in *Whaling in the Antarctic*, then-Judge *ad hoc* Charlesworth noted that:

The concept of a duty to co-operate is the foundation of legal régimes dealing (*inter alia*) with shared resources and with the environment. It derives from the principle that the conservation and management of shared resources and the environment must be based on shared interests, rather than the interests of one party.³⁰⁸

109. The customary law cooperation obligation is reflected in a number of environmental treaties, including:

- (a) The UNFCCC, the Kyoto Protocol, and the Paris Agreement, which provide for a number of cooperation obligations specifically with respect to climate change and the reduction of anthropogenic GHG emissions. For example:
 - (i) Article 4 of the UNFCCC provides that States should "cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases"³⁰⁹ and "[c]ooperate in preparing for adaptation to the impacts of climate change".³¹⁰ Article 5 mandates States to "cooperate in improving [the] endogenous capacities and capabilities" of developing countries.³¹¹ Article 6 also requires States to "[c]ooperate in and promote, at the international level" with respect to "the development and exchange of educational and public awareness material on climate change and its effects" and "the and implementation of education development and training programmes".³¹²

³⁰⁷ Dispute over the Status and Use of the Waters of the Silala (Chile v. Bolivia), Judgment, I.C.J. Reports 2022, p. 614, paras. 100–101. See also Gabčíkovo-Nagymaros Judgment, p. 78, para. 140.

³⁰⁸ Whaling in the Antarctic (Australia v. Japan: New Zealand intervening), Separate Opinion of Judge Ad Hoc Charlesworth, I.C.J. Reports 2014, p. 453, para. 13.

³⁰⁹ UNFCCC, art. 4(1)(c).

³¹⁰ *Id.*, art. 4(1)(e).

³¹¹ *Id.*, art. 5(c).

³¹² *Id.*, art. 6(b).

- (ii) The Paris Agreement provides for "voluntary cooperation in the implementation of . . . nationally determined contributions" and for engagement in "cooperative approaches that involve the use of internationally transferred mitigation outcomes". ³¹³ Further, the Paris Agreement "recognize[s] the importance of support for and international cooperation on adaptation efforts and the importance of taking into account the needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change."³¹⁴ It also mandates that parties should cooperate with respect to information sharing, good practices, strengthening institutional arrangements, scientific knowledge on climate, identifying effective adaptation practices, and improving "the effectiveness and durability of adaptation actions."³¹⁵
- (iii) Similarly, Article 2 of the Kyoto Protocol requires States to cooperate with other States parties to "enhance the individual and combined effectiveness" of policies and measures implemented to reduce GHG emissions.³¹⁶
- (b) International cooperation was already a key pillar in the 1972 Stockholm Declaration, which provides that "[i]international matters concerning the protection and improvement of the environment should be handled in a co-operative spirit" through multilateral or bilateral arrangements, or other "appropriate means".³¹⁷

³¹³ Paris Agreement, art. 6.

³¹⁴ *Id.*, art. 7(6).

³¹⁵ Id., art.7(7). See also id., article 8 on cooperation and facilitation to "enhance understanding, action and support" with respect to early warning systems, emergency preparedness, slow onset events, events that may involve irreversible and permanent loss and damage, comprehensive risk assessment and management, risk insurance facilities, climate risk pooling and other insurance solutions, non-economic losses and resilience of communities, livelihoods and ecosystems.

³¹⁶ Kyoto Protocol, art. 2(1)(b).

³¹⁷ Stockholm Declaration, principle 24.

- (c) Principle 7 of the 1992 Rio Declaration requires States to "cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem".³¹⁸
- (d) The BBNJ Treaty provides that States "shall cooperate . . . for the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction".³¹⁹

110. Several resolutions of the United Nations General Assembly have also affirmed the need for broad cooperation in addressing climate change:

- (a) Resolution 76/300 adopted 28 July 2022 called upon States to enhance international cooperation in order to increase efforts to ensure a "clean, healthy and sustainable environment for all."³²⁰
- (b) Resolution 61/222 adopted 20 December 2006 expressed concern over the effects of climate change on the oceans and marine environment, and called upon States to "cooperate and take measures" consistent with UNCLOS to protect and preserve the marine environment.³²¹
- (c) Resolution 43/53 adopted 6 December 1988 urged States and the international community to "collaborate in making every effort to prevent detrimental effects on climate and activities which affect the ecological balance."³²²

111. Importantly, the IPCC has also emphasised the need for international cooperation as a critical enabler of effective mitigation and adaptation action.³²³ The IPCC considers that "[t]he transboundary nature of many climate change risks . . . increases the need for climate-informed transboundary management, cooperation, responses and solutions through multi-

³¹⁸ Rio Declaration, principle 7.

³¹⁹ BBNJ Treaty, art. 8(1).

³²⁰ United Nations General Assembly resolution 76/300, The Human Right to a Clean, Healthy and Sustainable Environment, document A/RES/76/300 (28 July 2022), resolution 4.

³²¹ United Nations General Assembly resolution 61/222, Oceans and the Law of the Sea, document A/RES/61/222 (20 December 2006), para. 74.

³²² United Nations General Assembly resolution 43/53, Protection of Global Climate for Present and Future Generations of Mankind (6 December 1988), para. 9.

³²³ IPCC 2023 Synthesis Report, p. 111.

national or regional governance processes"³²⁴ and reaffirms that "[i]nternational cooperation on innovation systems and technology development and transfer, accompanied by capacity building, knowledge sharing, and technical and financial support can accelerate the global diffusion of mitigation technologies, practices and policies".³²⁵ Cooperation is required in all areas of climate action, but key examples include financial, scientific, and technological cooperation with a view to accelerating the transition to low or zero GHG technologies; cooperation in negotiating in good faith effective measures to reduce the levels of GHG emissions and address their effects; cooperation in developing international law norms around novel issues such as sea level rise and the continuity of statehood; and cooperation with respect to peoples displaced by climate change.

B. OBLIGATIONS OF STATES UNDER INTERNATIONAL LAW OF THE SEA

112. Like other branches of international law concerned with environmental welfare, UNCLOS imposes obligations on States parties to protect against the deleterious effects of climate change. In particular, Part XII of UNCLOS imposes detailed and robust legal obligations requiring States to protect the marine environment from pollution and its harmful effects, including pollution from anthropogenic GHG emissions.

113. It is unsurprising that UNCLOS should address issues of climate change. The ocean serves as the largest heat and carbon sink on Earth, and is a critical part of the climate system. Climate change has led to the absorption of excessive CO₂ and heat into the marine environment, causing significant changes to the physical and chemical properties of the ocean.³²⁶ The IPCC has concluded, for example, that it "is *virtually certain* that the uptake of anthropogenic CO₂ was the main driver of the observed acidification of the global surface open ocean".³²⁷ As noted above, ocean warming and ocean acidification have led to damage and loss of marine ecosystems, including coral reefs, mangroves, and seagrass, with particularly acute impacts on Small Island States such as The Bahamas.³²⁸

114. Part XII of UNCLOS requires States to take concrete steps to address these and other sources of harm to the marine environment. This includes measures to effect deep, rapid, and

³²⁴ *Id.*, p. 112.

³²⁵ *Id.*, p. 113.

³²⁶ IPCC 2019 Report on Ocean and Cryosphere in a Changing Climate, p. 450.

³²⁷ IPCC 2021 Physical Science Basis Report, p. 427.

³²⁸ See Section II.B.3 above.

sustained reductions in anthropogenic GHG emissions and address their harmful effects on the marine environment.

1. UNCLOS Requires States to Protect the Marine Environment

115. Article 192 of UNCLOS imposes a general obligation on States to "protect and preserve the marine environment". This obligation applies to *all* marine zones and areas, both within States' national jurisdiction and beyond, and includes "living resources of the sea" which form part of the marine environment.³²⁹ As the tribunal in the *South China Sea Arbitration* has explained:

This 'general obligation' extends both to 'protection' of the marine environment from future damage and 'preservation' in the sense of maintaining or improving its present condition. Article 192 thus entails the positive obligation to take active measures to protect and preserve the marine environment, and by logical implication, entails the negative obligation not to degrade the marine environment. ³³⁰

116. The tribunal also held that this obligation is "informed by the other provisions of Part XII and other applicable rules of international law."³³¹ The more specific provisions in Part XII must therefore be read alongside this general obligation.

2. UNCLOS Requires States to Prevent and Control Pollution of the Marine Environment, Including Transboundary Pollution

117. Article 194(1) imposes more specific obligations on States to protect the marine environment, in particular to effectively tackle the issue of marine pollution. It provides:

States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection.³³²

³²⁹ Southern Bluefin Tuna (New Zealand v. Japan; Australia v. Japan) Provisional Measures, Order of 27 August 1999, ITLOS Reports 1999, p. 280, para. 70. See also SRFC Advisory Opinion, para. 216 ("living resources and marine life are part of the marine environment"); South China Sea Award, para. 945.

³³⁰ *South China Sea* Award, para. 941.

³³¹ *Ibid*.

³³² UNCLOS, art. 194(1) (emphasis added).

118. This obligation is aimed at achieving the prevention, reduction, and control of "pollution of the marine environment," which is defined in Article 1(1)(4) of UNCLOS as:

[T]he introduction by man, <u>directly or indirectly, of substances</u> or energy into the marine environment, including estuaries, which results or is <u>likely to result in such deleterious effects</u> as . . . impairment of quality for use of sea water and reduction of amenities.³³³

119. Article 194(1) undoubtedly encompasses an obligation to prevent and protect against harm to the marine environment caused by anthropogenic GHG emissions. As explained above, the best available scientific evidence confirms that anthropogenic GHG emissions directly introduce carbon (a "substance") and indirectly introduce heat (which amounts to "energy") into the ocean and marine environment.³³⁴ The science also confirms that this has clear "deleterious effects" on the marine environment.³³⁵

120. In *South China Sea* the tribunal concluded that the use of cyanide and dynamite in the fishing industry constituted "pollution of the marine environment" within the meaning of Article 194(1), because it "threaten[ed]" the ecosystem of coral reefs and the habitats of endangered species.³³⁶ The impacts of anthropogenic GHG emissions on marine ecosystem are far more deleterious, and cause grave "harm to living resources and marine life, hazards to human health, hindrance to marine activities . . . and other legitimate uses of the sea".³³⁷

121. Article 194(1) imposes an obligation on States to adopt and implement "all necessary measures" using "best practicable means at their disposal", to prevent, reduce, and control pollution of the marine environment through anthropogenic GHG emissions. ³³⁸ The obligation is a robust and demanding one. The Court has held that an obligation to take "all measures . . . necessary" to achieve a result requires direct and immediate action, where that result is not "materially impossible . . . or [where] it would [not] involve a burden . . . out of

³³³ *Id.*, art. 1(1)(4) (emphasis added).

³³⁴ See Section II.A above.

³³⁵ *Id*.

³³⁶ South China Sea Award, para. 970.

³³⁷ UNCLOS, art. 1(1)(4).

³³⁸ *Id.*, art. 194(1) ("States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection").

all proportion to the benefit deriving from it".³³⁹ States have a general discretion when deciding on the specific policy tools to be employed, and may consider the full range of permissible preventative and remedial measures, including policies, legislation, regulations and adjudication.

122. However, while a State must use "best practical means at [its] disposal" in accordance with its "capabilities", that does not mean that compliance with Article 194(1) is a matter of "the subjective judgment of the party."³⁴⁰ It is an objective question whether measures are "necessary" to prevent marine pollution and whether all such measures have been taken. In the context of climate change, Article 194(1) requires the prompt adoption and implementation of all measures that are objectively "necessary"—according to the best available science³⁴¹—to mitigate pollution from GHG emissions.

123. The second limb of Article 194 codifies the customary law obligation to prevent transboundary harm in the context of the marine environment. It provides that States must "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".³⁴² As noted above, that obligation applies *mutatis mutandis* to transboundary harm generated by anthropogenic GHG emissions, and requires States to exercise due diligence in respect of GHG-generating activities within their jurisdiction or control.³⁴³ The IPCC has noted, for example, that "[t]here is increasing recognition of the risks to small islands from climate-related processes originating well beyond the borders of an individual nation or island. Such transboundary processes already have a negative impact on small islands (*high confidence; robust evidence, medium agreement*)."³⁴⁴ The due diligence obligation may be satisfied

³³⁹ Jurisdictional Immunities of the State (Germany v. Italy: Greece intervening), Judgment, I.C.J. Reports 2012, p. 99, para. 137.

³⁴⁰ See Certain Iranian Assets (Islamic Republic of Iran v. United States of America), Judgment of 30 March 2023, para. 106 (noting "whether a given measure is 'necessary' is not purely a question for the subjective judgment of the party").

³⁴¹ See Section II.C.1 above.

³⁴² UNCLOS, art. 194(2).

³⁴³ *See* para. 98 above.

 ³⁴⁴ Intergovernmental Panel on Climate Change, *Climate Change 2014: Impacts, Adaptation and Vulnerability* (2014) (hereinafter "IPCC 2014 Report on Impacts, Adaptation and Vulnerability"), p. 1616.

through a wide variety of measures, including the adoption of legislation, the regulation of private actors, and vigilant implementation and enforcement of the applicable rules.³⁴⁵

3. Other Obligations with Respect to the Regulation of GHG Emissions

124. In addition to States parties' general obligations to prevent, reduce, and control marine pollution, Part XII imposes other direct obligations on States which complement (but are independent of) those enshrined in Articles 192 and 194. As the Seabed Disputes Chamber of ITLOS noted in the *Activities in the Area* Advisory Opinion, States parties' compliance with the other obligations under Part XII is a relevant factor in meeting the due diligence obligation under Articles 192 and 194.³⁴⁶ Together the various obligations function as a comprehensive framework for the prevention and control of marine pollution.

(a) States must, at a minimum, adopt legislative and regulatory measures aimed at eliminating GHG emissions

125. UNCLOS Article 207(1) mandates that States "adopt <u>laws and regulations</u> to prevent, reduce and control pollution of the marine environment."³⁴⁷ This obligation requires, at a minimum, that States parties enact legally binding rules to prevent and control GHG emissions within their jurisdiction. Regardless of the choice of legislative design, the overriding requirement under Part XII is that the various measures adopted must represent the State's "utmost"³⁴⁸ and "best possible effort"³⁴⁹ at preventing and controlling GHG emissions, and constitute the "best practicable"³⁵⁰ means of doing so, given the State's capabilities.

126. While the enactment of legislative and regulatory measures is a core obligation under UNCLOS, it is a minimum requirement. Part XII makes clear that States must also "take other measures as may be necessary to prevent, reduce and control . . . pollution".³⁵¹ Such other measures may include, *e.g.*, budgetary measures, which are particularly important to the fulfilment of the States' obligations under Part XII, not least because financial resources are

³⁴⁵ *See* Section IV.A above.

³⁴⁶ Activities in the Area Advisory Opinion, para. 123.

³⁴⁷ UNCLOS, art. 207(1) (emphasis added).

Activities in the Area Advisory Opinion, para. 110; SRFC Advisory Opinion, para. 128.

³⁴⁹ *Ibid*.

³⁵⁰ UNCLOS, art. 194(1).

³⁵¹ *Id.*, arts. 207(2), 208(2), 210(2), 212(2).

indispensable for effectively reducing pollution of the marine environment from GHG emissions³⁵² and promoting adaptation and resilience of the marine environment.³⁵³

(b) Legislative and other measures must regulate the GHG emissions of both State and non-state actors

127. Private actors generate the majority of anthropogenic GHG emissions³⁵⁴ and States must therefore engage with them as mitigation agents if they are to comply with their obligation to prevent and control marine pollution.³⁵⁵ It is <u>not</u> adequate or "satisfactory to rely on mere application of the principle that the conduct of private persons or entities is not attributable to the State under international law." ³⁵⁶ As the Seabed Disputes Chamber explained in the *Activities in the Area* Advisory Opinion, the due diligence obligations imposed under Part XII create an "obligation[] which States Parties must fulfil by exercising their power over entities of their nationality and under their control."³⁵⁷

128. Due diligence under Part XII requires that States parties take appropriate steps to regulate non-state actors and ensure that they do not cause "pollution of the marine environment from any source". ³⁵⁸ This in turn requires, *inter alia*, that States adopt and enforce an appropriate mix of laws, regulations and policies that encourage or oblige private actors to reduce GHG emissions and take other measures to prevent their adverse impacts on the marine environment.

(c) Legislative and regulatory measures with respect to marine pollution from GHG emissions must be vigilantly enforced under domestic law

129. States are also required to "enforce their laws and regulations" ³⁵⁹ regarding the prevention, reduction, and control of marine pollution. In other words, they must ensure that

³⁵² ILC Draft Articles on Transboundary Harm, commentary to art. 3, para. 14 ("An efficient implementation of the duty of prevention may well require upgrading the input of technology in the activity as well as the allocation of adequate financial and manpower resources with necessary training for the management and monitoring of the activity").

³⁵³ IPCC 2023 Synthesis Report, pp. 9, 11.

³⁵⁴ CDP, CDP Carbon Majors Report (July 2017), p. 7.

³⁵⁵ *Pulp Mills* Judgment, para. 197.

³⁵⁶ Activities in the Area Advisory Opinion, para. 112.

³⁵⁷ *Id.*, para. 108.

³⁵⁸ UNCLOS, art. 194(1).

³⁵⁹ *Id.*, arts. 213–218, 220, 222.

entities and individuals failing to comply with environmental laws or regulations can be brought into compliance or sanctioned through civil, administrative, or criminal action. As ITLOS explained in the *SRFC Advisory Opinion*:

While the nature of the laws, regulations and measures that are to be adopted by the... State is left to be determined by each... State in accordance with its legal system, the ... State nevertheless has the obligation to include in them enforcement mechanisms to monitor and secure compliance with these laws and regulations. Sanctions applicable ... must be sufficient to deter violations and to deprive offenders of the benefits accruing from ... [unlawful conduct].³⁶⁰

130. Effective enforcement will depend on, among other things, well-developed laws and regulations, a sufficient institutional framework, training, sufficient enforcement capabilities, and public environmental awareness and education. It is well documented that environmental regulators often suffer from lack of funding, training, and capacity to perform important tasks, particularly in less developed countries.³⁶¹ This further underscores the importance of international cooperation, which is discussed immediately below.

(d) UNCLOS requires States to engage in international cooperation

131. The obligation to prevent harm to the marine environment cannot be fully realized without the corollary obligation of cooperation. The duty of international cooperation has been recognised by ITLOS as a "*fundamental principle* in the prevention of pollution of the marine environment under Part XII of [UNCLOS] and general international law".³⁶²

132. Broadly speaking, UNCLOS imposes three categories of cooperation obligations on States, namely (*i*) obligations to harmonize laws and policies; (*ii*) obligations to take cooperative action through international organisations; and (*iii*) obligations to grant assistance to Developing States. Each is addressed in turn below.

³⁶⁰ SFRC Advisory Opinion, para. 138. See also Activities in the Area Advisory Opinion, paras. 111–120; South China Sea Award, para. 944.

³⁶¹ United Nations Environment Programme, Environmental Rule of Law: First Global Report (January 2019), p. viii.

³⁶² MOX Plant (Ireland v. United Kingdom), Provisional Measures, Order of 3 December 2011, ITLOS Reports 2001, p. 95, para. 82 (emphasis added). See also Pulp Mills Judgment, pp. 49, 105, paras. 77, 281 ("it is by co-operating that the States concerned can jointly manage the risks of damage to the environment"); Whaling in the Antarctic (Australia v. Japan: New Zealand intervening), Separate Opinion of Judge Ad Hoc Charlesworth, I.C.J. Reports 2014, p. 452, para. 13 ("the conservation and management of shared resources and the environment must be based on shared interests, rather than the interests of one party").

i. <u>The obligation to harmonise laws and policies</u>

133. Article 194(1) of UNCLOS requires States to "individually or jointly" take all measures necessary to prevent, reduce, and control marine pollution, and to work "<u>to</u> <u>harmonize their policies in this connection</u>." This obligation (which is also reflected in Articles 207 and 208) requires States to collectively formulate and direct policies to address marine pollution,³⁶³ including in the context of climate change.

134. The requirement for global policy coordination is crucial for full compliance with UNCLOS Part XII. Climate change is a quintessential collective action problem. If States adopt divergent or conflicting standards and regulatory approaches, the international community will fail to effectively address climate-induced harm to the marine environment.

ii. International cooperation through international organisations

135. Part XII mandates that States take steps at the international level, including through international organisations, with respect to standard-setting and the progressive development of international law addressing the issue of marine pollution and transboundary harm to the marine environment. This includes the obligation to formulate and elaborate international rules, standards and recommended practices.³⁶⁴ For example, Article 207(4) provides that States must act through "competent international organizations or diplomatic conference", and shall endeavour "to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources". Such organisations can include the United Nations, the UNFCCC secretariat, or various regional bodies.

136. Part XII imposes specific obligations regarding State's engagement and activities in international organisations, including duties to:

- (a) undertake programmes of scientific research and encourage the "exchange of information and data acquired about pollution of the marine environment" (Article 200);
- (b) participate in regional and global programmes to "acquire knowledge for the assessment of the nature and extent of pollution, exposure to it, and its pathways, risks and remedies" (Article 200);

³⁶³ UNCLOS, arts. 194(3), 207(3), 208(4).

³⁶⁴ *Id.*, art. 197.

- (c) establish appropriate scientific criteria for the formulation and elaboration of rules, standards and recommended practices and procedures for the prevention, reduction and control of pollution of the marine environment (Article 201); and
- (d) promote programmes of scientific, educational, technical and other assistance to developing States for the protection and preservation of the marine environment and the prevention, reduction and control of marine pollution (Article 202(a)).

137. In all these contexts, States' due diligence obligations require that they "deploy adequate means . . . exercise best possible efforts . . . [and] do the utmost" in the context of the various organs and activities within relevant international organisations, to achieve the substantive aims outlined above.³⁶⁵

iii. <u>The obligation to grant assistance to Developing States</u>

Finally, the States parties to UNCLOS rightly recognised that tackling global 138. environmental problems requires international solidarity, and the need for common but differentiated responsibilities among States. Consistent with that approach, Articles 202 and 203 of UNCLOS impose binding obligations on States parties to assist Developing States in their efforts to protect and preserve the marine environment. For example, Article 202(a) mandates that States parties "promote programmes of scientific, educational, technical and other assistance to developing States for the . . . prevention, reduction and control of marine pollution."366 It also specifies that this assistance must include, for example, "training of their scientific and technical personnel," "supplying them with necessary equipment and facilities" and "enhancing their capacity to manufacture such equipment".³⁶⁷ The duties of scientific and technological assistance are further reinforced in Articles 266, 276, and 277 of UNCLOS. For example, Articles 276 and 277 require States to "promote the establishment of regional marine scientific and technological research centres, particularly in developing States," including to promote "study programmes related to the protection and preservation of the marine environment and the prevention, reduction and control of pollution."368

³⁶⁵ Activities in the Area Advisory Opinion, para. 110.

³⁶⁶ UNCLOS, art. 202(a).

³⁶⁷ *Ibid*.

³⁶⁸ *Id.*, arts. 276–277.

139. In addition to technical and scientific assistance, States parties are also required under Part XII to provide financial assistance to Developing States in relation to the preservation and protection of the marine environment. The provision of financial assistance to Developing States is one of the many measures envisaged under Article 194(1). In addition, Article 203 expressly grants Developing States "preference" in "the allocation of appropriate funds."

140. It is important to note that UNCLOS does not impose a hierarchy with regard to the different forms of assistance. States parties are required—working jointly—to adopt all measures necessary to protect the marine environment. This will require different forms of international assistance, financial and non-financial, as is appropriate in each case.

C. OBLIGATIONS OF STATES UNDER INTERNATIONAL HUMAN RIGHTS LAW

141. As the United Nations General Assembly has acknowledged "the impacts of climate change . . . interfere with the enjoyment of a clean, healthy and sustainable environment and . . . ha[ve] negative implications, both direct and indirect, for the effective enjoyment of all human rights."³⁶⁹

142. The overriding aim of international human rights law is "to achieve . . . the promotion of universal respect for and observance of human rights and fundamental freedoms".³⁷⁰ As such, international human rights law imposes detailed and robust legal obligations on States to take *all* actions required to eliminate the harmful effects of climate change on the enjoyment of human rights. These obligations necessarily include effecting deep, rapid, and sustained reductions in anthropogenic GHG emissions.

143. This section addresses the obligations of States under international human rights law (specifically, under the two international covenants, the Universal Declaration of Human Rights, and customary international law). It provides (i) a general illustration of the ways in which climate change adversely impacts internationally protected human rights; and (ii) an overview of the nature and scope of States' legal obligations to protect and guarantee human rights that are or might be impaired by climate change.

³⁶⁹ United Nations General Assembly resolution 76/300, The Human Right to a Clean, Health and Sustainable Environment, document A/RES/76/300 (28 July 2022), recital, p. 2.

³⁷⁰ UDHR, preamble.

1. The Direct Adverse Impact of Climate Change on the Enjoyment of Human Rights

144. Climate change poses a significant threat to the enjoyment and protection of a broad range of internationally protected human rights. For example:

(a) The Right to Life

145. The International Covenant on Civil and Political Rights ("*ICCPR*"), in Article 6, affirms that "[e]very human being has the inherent right to life".³⁷¹ The right protects, among other things, the entitlement of "individuals to enjoy a life with dignity and to be free from acts or omissions that would cause their unnatural or premature death."³⁷² States' obligation under the ICCPR to respect and protect the right to life "goes beyond injury to bodily or mental integrity" and "extends to reasonably foreseeable threats and life-threatening situations that can result in loss of life".³⁷³ The right is recognised as "the supreme right from which no derogation is permitted" under international law.³⁷⁴

146. As the United Nations Human Rights Committee ("*HRC*") has noted, the climate crisis is among "the most pressing and serious threats to the ability of present and future generations to enjoy the right to life".³⁷⁵ This is because climate change has and will continue

³⁷¹ International Covenant on Civil and Political Rights, 19 December 1966, 999 UNTS 171 (hereinafter "ICCPR"), art. 6. See also UDHR, art. 3; American Convention on Human Rights, 22 November 1969, 1144 UNTS 17955 (hereinafter "ACHR"), art. 4; European Convention on Human Rights, 4 November 1950 (hereinafter "ECHR"), Art. 2; African Charter on Human and Peoples' Rights, 21 October 1986, 1520 UNTS 217 (hereinafter "African Charter"), art. 4.

³⁷² Daniel Billy et al. v. Australia – Torres Strait Islanders Petition, Communication No. 3624/2019, Decision, document CCPR/C/135/D/3624/2019 (2022), para. 8.3; Teitiota v. New Zealand, Communication No. 2728/2016, Decision, document CCPR/C/127/D/2728/2016 (2020), para. 9.4. See also HRC, General Comment No. 36 on Article 6: the right to life, document CCPR/C/GC/36 (2019), para. 2; Toussaint v. Canada, Communication No. 2348/2014, Decision, document CCPR/C/123/D/2348/2014 (24 July 2018), para. 11.3 (finding that the "the obligation of States parties to respect and ensure the right to life extends to reasonably foreseeable threats and life-threatening situations that can result in loss of life" and that "States parties may be in violation of article 6 even if such threats and situations do not result in loss of life"); African Commission on Human and Peoples' Rights, General Comment No. 3 (18 November 2015), para. 6 ("The right to life should not be interpreted narrowly. In order to secure a dignified life for all, the right to life requires the realisation of all human rights recognised in the Charter, including civil, political, economic, social and cultural rights and peoples' rights, particularly the right to peace").

³⁷³ Daniel Billy et al. v. Australia – Torres Strait Islanders Petition, Communication No. 3624/2019, Decision, document CCPR/C/135/D/3624/2019 (2022), para. 8.3.

³⁷⁴ HRC, *General Comment No. 36 on Article 6: the right to life*, document CCPR/C/GC/36 (2019), para. 2.

 ³⁷⁵ Id., para. 62. See also Human Rights Council resolution 10/4, Human Rights and Climate Change, document A/HRC/Res/10/4 (2009), recitals; OHCHR, Report on the Relationship Between Climate Change and Human Rights, document A/HRC/10/61 (15 January 2009), paras. 21–24; Daniel Billy et al. v. Australia – Torres Strait Islanders Petition, Communication No. 3624/2019, Decision, document

to have a significant deleterious impact on the dignity and living conditions of human beings around the world. As noted earlier, the irrefutable scientific consensus is that human mortality and morbidity will increase as a result of climate change-induced phenomena such as heatwaves, floods, and other climate extremes; increased exposure to various diseases; food and water insecurity; destruction of ecosystems necessary for human subsistence and survival; and humanitarian crises, conflict, and forced displacement.³⁷⁶ In light of this, the HRC has concluded that "the effects of climate change may expose individuals to a violation of their rights under Article 6 [of the ICCPR]" if States do not urgently adopt necessary mitigation and adaptation measures.³⁷⁷

(b) The Right to Health

147. The International Covenant on Economic, Social and Cultural Rights ("*ICESCR*") enshrines "the right of everyone to the enjoyment of the highest attainable standard of physical and mental health."³⁷⁸ The ICESCR expressly acknowledges that the environment is an underlying determinant of human health; and that the "full realization" of the right to health requires the general improvement of environmental conditions.³⁷⁹ The Court has also recognised the vital link between the environment and the right to health, noting in the *Nuclear Weapons* Advisory Opinion that the environment represents "the very health of human beings, including generations unborn." ³⁸⁰ In a similar vein, the Committee on Economic, Social and Cultural Rights ("*CESCR*") has noted that the right to health comprises,

³⁷⁸ ICESCR, art. 12(1). *See also* UDHR art. 25; African Charter, art. 16; Additional Protocol to the American Convention in the Area of Economic, Social and Cultural Rights, 17 November 1988, art. 10; European Social Charter, 18 October 1961, arts. 3, 11.

³⁷⁹ ICESCR, art. 12(2)(b) ("The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for . . . [t]he improvement of all aspects of environmental . . . hygiene").

CCPR/C/135/D/3624/2019 (2022), para. 8.3; Committee on the Rights of the Child, *General Comment No. 26 (2023) on children's rights and the environment, with a special focus on climate change*, document CRC/C/GC/26 (2023), para. 20.

³⁷⁶ *See* para. 21 above.

 ³⁷⁷ Daniel Billy et al. v. Australia – Torres Strait Islanders Petition, Communication No. 3624/2019, Decision, document CCPR/C/135/D/3624/2019 (2022), para. 8.7 (citing Teitiota v. New Zealand, Communication No. 2728/2016, Decision, document CCPR/C/127/D/2728/2016 (2020), para. 9.9). See also Portillo Caceres v. Paraguay, Communication No. 2751/2016, Decision, document CCPR/C/126/D/2751/2016 (2019) (finding a violation of ICCPR art. 6 in an individual communication on environmental pollution).

³⁸⁰ Nuclear Weapons Advisory Opinion, p. 241, para. 29. See also Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, Dissenting Opinion of Judge Weeramantry, I.C.J. Reports 1996, pp. 461–462 ("The intergenerational effects of nuclear weapons mark them out from other classes of weapons... This is a considerable human rights problem, appearing long after the bomb and destined to span the generations.").

among other things, the obligation to reduce and prevent "detrimental environmental conditions that directly or indirectly impact upon human health."³⁸¹

148. As the World Health Organisation has observed, "[c]limate change presents a fundamental threat to human health".³⁸² Climate-induced weather and environmental hazards affect health both directly and indirectly, increasing food and water insecurity, injury, and trauma from extreme weather events, and the risk of deaths from noncommunicable diseases, the emergence and spread of infectious diseases, and health emergencies.³⁸³ Such phenomena also affect the physical environment and natural and human systems—including social and economic conditions and the functioning of health systems.³⁸⁴ Thus, if States fail to adequately address climate change, there will be impairment of right to health, including impairment of the "conditions in which people can lead a healthy life, and . . . the underlying determinants of health, such as food and nutrition, housing, access to safe and potable water and adequate sanitation, safe and healthy working conditions, and a healthy environment".³⁸⁵

(c) Right to an Adequate Standard of Living

149. The ICESCR also recognises "the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the

³⁸¹ CESCR, General Comment No. 14 on the Right to the Highest Attainable Standard of Health (Art. 12), document E/C.12/2000/4 (2000), para. 15. The United Nations Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health has also underscored that the right to health extends to the underlying determinants of health, such as safe water, adequate sanitation, and healthy environmental conditions generally. See Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, document A/62/214 (8 August 2007), para. 104.

³⁸² World Health Organisation, *Climate Change Fact Sheet* (12 October 2023), *available at* https://www.who.int/news-room/fact-sheets/detail/climate-change-and-health.

³⁸³ The Lancet 2023 Health and Climate Change Report, p. 2346.

³⁸⁴ *Ibid*.

³⁸⁵ CESCR, General Comment No. 14 on the Right to the Highest Attainable Standard of Health (Art. 12), document E/C.12/2000/4, para. 4.

continuous improvement of living conditions." ³⁸⁶ The right is similarly reflected in Article 25(1) of the Universal Declaration of Human Rights.³⁸⁷

150. With regards to food, the United Nations Human Rights Council has warned that "environmental degradation, desertification and global climate change are factors contributing to destitution and desperation and have a negative impact on the realization of the right to food, in particular in developing countries." ³⁸⁸ Extreme heat, drought, changes in precipitation, and ecosystem degradation pose a severe threat to agricultural production.³⁸⁹ In addition, warming and acidification of the marine environment caused by anthropogenic GHG emissions also adversely affect fisheries, shellfish, and seaweed, all of which are a major source of nutrition for individuals and communities around the globe.³⁹⁰

151. With regards to housing, the Office of the United Nations High Commissioner for Human Rights ("*OHCHR*") has noted that the right to an adequate standard of living entails the right to: be free from arbitrary interference with one's home, privacy, and family and to choose one's residence, to determine where to live, and to have freedom of movement.³⁹¹ Extreme weather events, such as cyclones and typhoons, and slow-onset events, such as sea level rise and increasing temperatures, can all have implications for the habitability and affordability of housing.³⁹² They are also increasingly driving displacement globally, with Small Island States in the Caribbean and the South Pacific disproportionately affected relative

³⁸⁶ ICESCR, art. 11(1). See also Convention on the Elimination of All Forms of Discrimination against Women, 18 December 1979, 1249 UNTS 13 (hereinafter "CEDAW"), art. 14(2); Convention of the Rights of the Child, 20 November 1989, 1577 UNTS 3 (hereinafter "CRC"), art. 27. Cf. Additional Protocol to the American Convention in the Area of Economic, Social and Cultural Rights, 17 November 1988, art. 12; European Social Charter, 18 October 1961, arts. 30, 31.

³⁸⁷ UDHR, art. 25(1) ("Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services").

³⁸⁸ Human Rights Council resolution 13/4, The Right to Food, document A/HRC/RES/13/4 (2010), recitals.

³⁸⁹ United States Department of Agriculture, *Fifth U.S. National Climate Assessment* (November 2023), p. 23. The United Nations Special Rapporteur on the right to food has emphasised that agricultural productivity could undergo "significant declines" in the future if the climate change and unsustainable agricultural practices continue at their current pace; *see Report of the Special Rapporteur on the right to food, Olivier De Schutter*, document A/HRC/13/33/Add.2 (28 December 2009), para. 21.

³⁹⁰ IPCC 2022 Report on Impacts, Adaptation and Vulnerability, pp. 456–460. *See also* Sections II.A and II.B above.

³⁹¹ United Nations High Commissioner for Human Rights, *The Right to Adequate Housing: Fact Sheet No.* 21/Rev.1 (2009), p. 3

³⁹² IPCC 2023 Synthesis Report, p. 6.

to their small population size.³⁹³ Without adaptation, the IPCC projects with high confidence that "hundreds of millions of people will be affected by coastal flooding and will be displaced due to land loss by year 2100."³⁹⁴

(d) The Right to Water

152. The right to water is an autonomous human right under international law,³⁹⁵ and is also recognised as a distinct element of the rights to an adequate standard of living and health enshrined in the ICESCR.³⁹⁶ The CESCR has noted that compliance with this obligation requires States parties to "adopt comprehensive and integrated strategies and programmes to ensure that there is sufficient and safe water for present and future generations", including "assessing the impacts of actions that may impinge upon water availability and natural-ecosystems watersheds, such as climate changes, desertification and increased soil salinity, deforestation and loss of biodiversity."³⁹⁷

153. Climate change impairs individuals' access to "sufficient, safe, acceptable, and affordable water for personal and domestic uses" ³⁹⁸—a core component of the right to water. As the United Nations Special Rapporteur on the rights to safe drinking water and sanitation has observed, "[c]limate change contributes to breaking the sustainability of aquatic ecosystems, altering rainfall patterns with disproportionate impacts on those living in poverty"³⁹⁹ and other vulnerable communities. The impacts of climate change also include reduction in snow cover, desertification, and increased contamination of water sources, all of which may compromise the right to water.⁴⁰⁰

³⁹³ *Id.*, p. 6.

³⁹⁴ IPCC 2014 Report on Impacts, Adaptation and Vulnerability, p. 364.

³⁹⁵ *See, e.g.*, CEDAW, art. 14(2)(h); CRC, art. 24(2)(c); Convention on the Rights of Persons with Disabilities, 13 December 2006, 2515 *UNTS* 3, art. 28.

³⁹⁶ CESCR, *General Comment No. 15 on the right to water*, document E/C.12/2002/11 (2003), paras. 3, 8.

³⁹⁷ *Id.*, para. 28.

³⁹⁸ CESCR, General Comment No. 15 on the right to water, document E/C.12/2002/11 (2003), para. 2.

³⁹⁹ Statement by the Special Rapporteur on the human rights to safe drinking water and sanitation, Pedro Arrojo-Agudo (14 September 2023), available at https://www.ohchr.org/sites/default/files/documents/ issues/water/statements/stm-sr-watsan-14-september-2023.pdf.

⁴⁰⁰ Human Rights Council resolution 10/4, Human Rights and Climate Change, document A/HRC/RES/10/4 (2009), recitals; OHCHR, *Report on the Relationship Between Climate Change and Human Rights*, document A/HRC/10/61 (15 January 2009), para. 29.

(e) The Right to Self-determination

154. The right of peoples to self-determination—to "freely determine their political status and freely pursue their economic, social and cultural development"⁴⁰¹—has been recognised by the Court as a "fundamental human right" and a norm of customary international law giving rise to State obligations *erga omnes*.⁴⁰² The right is enshrined in a number of international treaties, including the ICESCR, the ICCPR, and the United Nations Charter.⁴⁰³

155. Climate change has profound effects on the exercise of peoples' right to selfdetermination, including by destroying human habitats, undermining social structures, threatening the habitability and, in the long term, the territorial integrity of many States.⁴⁰⁴ Rising sea levels can inundate and overtake in particular low-lying island States, a reality recognised by the United Nations High Commissioner for Human Rights as having "implications for the right to self-determination" as well as for the full range of human rights for which individuals depend on the State for their protection.⁴⁰⁵ Climate change also has implications for the customary right of peoples to permanent sovereignty over their natural resources, which is another key component of the right to self-determination.⁴⁰⁶ Both the ICESCR and the ICCPR explicitly tie the right of self-determination to the right of peoples to, among other things, "freely dispose of their natural wealth and resources"⁴⁰⁷—a fundamental right which is threatened by the process of climate change.

⁴⁰¹ ICESCR, art. 1(1); ICCPR, art. 1(1).

 ⁴⁰² See Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) Notwithstanding Security Council Resolution 276 (1970), Advisory Opinion, I.C.J. Reports 1971, p. 16, para. 52; Western Sahara, Advisory Opinion, I.C.J. Reports 1975, pp. 31–32, paras. 54–59; Separation of the Chagos Archipelago from Mauritius Advisory Opinion, p. 131, para. 144; Case Concerning the Barcelona Traction, Light and Power Company, Ltd. (Belgium v. Spain), Judgment, I.C.J. Reports 1970, p. 32, para. 33.

⁴⁰³ United Nations Charter, art. 1(2) (emphasizing "respect for the principle of equal rights and selfdetermination of peoples"), art. 55 (recognising "conditions of stability and well-being" are necessary for the self-determination of peoples); ICESCR, art. 1(1) ("All peoples have the right of self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development."); ICCPR, art. 1; African Charter, art. 20.

⁴⁰⁴ See generally T. Frere et al., "Climate Change and Challenges to Self-Determination: Case Studies from French Polynesia and the Republic of Kiribati", 129 Yale Law Journal Forum (2020) 648.

⁴⁰⁵ OHCHR, *Report on the Relationship Between Climate Change and Human Rights*, document A/HRC/10/61 (15 January 2009), para. 41.

⁴⁰⁶ United Nations General Assembly resolution 1314 (XVIII), Recommendations concerning international respect for the right of peoples and nations to self-determination, document A/RES/1314(XIII) (12 December 1958) ("Noting that the right of peoples and nations to self-determination . . . includes 'permanent sovereignty over their natural wealth and resources"").

⁴⁰⁷ ICESCR, art. 1(2); ICCPR, art. 1(2). *See also* African Charter, art. 21.

156. Rights to land and land-based ecosystems and resources are also endangered by the effects of climate change. In its Special Report on Climate Change and Land, the IPCC noted that increased GHG emissions have led to desertification, land degradation, and increasingly adverse impacts on terrestrial ecosystems.⁴⁰⁸ Rising sea levels further reduce available arable and habitable land.⁴⁰⁹ The CESCR has also observed that "[1]and degradation owing to overuse, poor management and unsustainable agricultural practices has caused food insecurity and water degradation and is directly linked to climate change and environmental degradation, escalating the risk of widespread, abrupt and irreversible environmental changes, including massive desertification."⁴¹⁰ Moreover, climate change is likely to "increase tensions over the access to and use and tenure of land, with negative implications for human rights."⁴¹¹

(f) The Right to Development

157. The international community has long recognised an "inalienable" human right to development, "by virtue of which every human person and all peoples are entitled to participate in, contribute to, and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be fully realized."⁴¹² Both the ICCPR and ICESCR also incorporate the right to development as a dimension of the right to self-determination, providing for the right of peoples to "freely pursue their economic, social and cultural development."⁴¹³ Article 55 of the United Nations Charter provides that States should

⁴¹² United Nations General Assembly resolution 41/128, Declaration on the Right to Development, document A/RES/41/128 (4 December 1986), art. 1(1).

⁴⁰⁸ Intergovernmental Panel on Climate Change, *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems (2019), p. 7, para. A.2 ("Since the pre-industrial period, the land surface air temperature has risen nearly twice as much as the global average temperature (<i>high confidence*). Climate change, including increases in frequency and intensity of extremes, has adversely impacted food security and terrestrial ecosystems as well as contributed to desertification and land degradation in many regions (*high confidence*).").

 ⁴⁰⁹ See, e.g., Climate Central, Sinking Tax Base: Land & Property at Risk from Rising Seas (9 August 2022), p. 2.

⁴¹⁰ CESCR, General Comment No. 26 on land and economic, social and cultural rights, document E/C.12/GC/26 (2023), para. 2(d).

⁴¹¹ *Id.*, para. 2(f).

⁴¹³ ICCPR, art. 1(1); ICESCR, art. 1(1). *See also* African Charter, art. 22 ("All peoples shall have the right to their economic, social and cultural development with due regard to their freedom and identity and in the equal enjoyment of the common heritage of mankind."); Organization of American States resolution AG/RES. 2878, Social Charter of the Americas (4 June 2012), art. 1 ("The peoples of the Americas have the right to development in the framework of solidarity, equity, peace, and freedom, and member states have the responsibility to promote it with a view to eliminating poverty, especially extreme poverty, and achieving a decent standard of living for all."); Charter of Fundamental Rights of the European Union, art. 37 ("A high level of environmental protection and the improvement of the quality of the environment

promote "conditions of economic and social progress and development."⁴¹⁴ In recognition of its importance, the right to development is a key pillar of The Bahamas' human rights policy.⁴¹⁵

158. Various human rights bodies have recognised that the environment is inextricably linked with economic, social, and cultural development.⁴¹⁶ Climate change and its effects on the environment can thus significantly impair the right to development. As the Inter-American Court for Human Rights has noted, this is especially true for "communities that, essentially, depend economically or for their survival on environmental resources from the marine environment, forested areas and river basins, or run a special risk of being affected owing to their geographical location, such as coastal or small island communities." ⁴¹⁷ The United Nations' 2030 Agenda for Sustainable Development has accordingly recognised that the adverse impacts of climate change "undermine the ability of all countries to achieve sustainable development," and specifically that "[i]ncreases in global temperature, sea level rise, ocean acidification and other climate change impacts are seriously affecting coastal areas and low-lying coastal countries, including many least developed countries and small island

must be integrated into the policies of the Union and ensured in accordance with the principle of sustainable development."); *cf.* African Charter, art. 24 ("All peoples shall have the right to a general satisfactory environment favourable to their development.").

⁴¹⁴ United Nations Charter, art. 55.

⁴¹⁵ See, e.g., Annex 4, The Commonwealth of The Bahamas, Human Rights 75 High-Level Climate and Environment Roundtable: The Future of Human Rights, the Environment and Climate: Advancing the right to a healthy environment, including a safe and stable climate for all (12 December 2023), available at https://znsbahamas.com/wp-content/uploads/2023/12/un-high-level-roundtable-climate-change-dec-11.pdf (noting that climate change causes a "material threat to our people's basic human rights, including a right to a healthy environment; right to life; right to development; right to water, and right to self-determination"). See also Ministry of Foreign Affairs of The Commonwealth of The Bahamas, "Candidature of the Bahamas for Election to the Human Rights Council (2019-2021)" available at https://ishr.ch/wp-content/uploads/ 2021/08/Bahamas-Voluntary-pledges-SGC-FINAL.pdf; Ministry of Foreign Affairs of The Commonwealth of The Bahamas, "Ministry of Foreign Affairs Observes 75th Anniversary of The Universal Declaration of Human Rights," available at https://mofa.gov.bs/ministry-of-foreign-affairs-observes-75th-anniversary-ofthe-universal-declaration-of-human-rights/.

⁴¹⁶ See, e.g., The Social and Economic Rights Action Center and the Center for Economic and Social Rights v. Nigeria, African Commission on Human and Peoples' Rights, Decision (27 October 2001), para. 51 (noting that "an environment degraded by pollution and defaced by the destruction of all beauty and variety is as contrary to satisfactory living conditions and [to] development as the breakdown of the fundamental ecologic equilibria is harmful to physical and moral health") (internal citations omitted); Inter-American Court of Human Rights, *The Environment and Human Rights*, Advisory Opinion OC-23/17 (15 November 2017) (hereinafter "IACtHR Advisory Opinion (2017)"), para. 52 ("[T]here is extensive recognition of the interdependent relationship between protection of the environment, sustainable development, and human rights in international law."); Organization of American States resolution AG/RES. 2878, Social Charter of the Americas (4 June 2012), preamble ("Recognizing that a safe environment is essential to integral development").

⁴¹⁷ IACtHR Advisory Opinion (2017), para. 67.

developing States."⁴¹⁸ In recognition of this reality, Sustainable Development Goal 13 of the 2030 Agenda for Sustainable Development is to "[t]ake urgent action to combat climate change and its impacts."⁴¹⁹

2. International Human Rights Law Requires that All States Respect, Protect, and Guarantee Human Rights Impaired by Climate Change

159. International human rights law imposes an obligation on all States to *protect* the range of internationally protected human rights that are threatened by the impact of climate change. However, the nature and scope of each obligation may vary depending on the specific right implicated.

(a) General Obligations Imposed under the ICCPR

160. The ICCPR requires a State "<u>to respect and to ensure</u> to all individuals within its territory and subject to its jurisdiction the rights recognized in the present Covenant".⁴²⁰ This general obligation is consistent with that found in other human rights treaties.⁴²¹ It is well-established that the obligation gives rise to three types of inter-connected obligations: an obligation to *respect*, an obligation to *protect*, and an obligation to *fulfil* human rights.⁴²²

161. The duty to respect is a *negative* obligation, requiring States to refrain from taking actions that would interfere with or curtail the enjoyment of human rights.⁴²³ The duty to protect imposes the obligation to protect human rights against violations by third parties.⁴²⁴

⁴¹⁸ United Nations General Assembly resolution 70/1, Transforming Our World: The 2030 Agenda for Sustainable Development, document A/RES/70/1 (25 September 2015), para. 14.

⁴¹⁹ *Id.*, p. 23.

⁴²⁰ ICCPR, art. 2(1) (emphasis added).

⁴²¹ ACHR, art. 1(1) ("The States Parties to this Convention undertake to respect the rights and freedoms recognized herein and to ensure to all persons subject to their jurisdiction the free and full exercise of those rights and freedoms[.]"); CRC, art. 2(1) ("States Parties shall respect and ensure the rights set forth in the present Convention to each child within their jurisdiction without discrimination of any kind[.]"); ECHR, art. 1 ("The High Contracting Parties shall secure to everyone within their jurisdiction the rights and freedoms defined in Section I of this Convention.").

⁴²² See generally HRC, General Comment No. 31 on the nature of the general legal obligation imposed on States Parties to the Covenant, document CCPR/C/21/Rev.1/Add.13 (2004); P. Hunt et al., "Climate Change and the Right to the Highest Attainable Standard of Health" in Human Rights and Climate Change (Cambridge University Press, 2009), p. 252.

⁴²³ See HRC, General Comment No. 31 on the nature of the general legal obligation imposed on States Parties to the Covenant, document CCPR/C/21/Rev.1/Add.13 (2004), para. 6.

⁴²⁴ *Id.*, para. 8.

Finally, the duty to fulfil human rights, a positive obligation, requires States to undertake measures to ensure the realisation of rights for all members of society.

162. Climate change implicates each element of States' obligations—both negative and positive. States' *negative* obligations require that they refrain from actions which are inconsistent with achieving sustained reductions in anthropogenic GHG emissions and neutralizing their harmful effects on the enjoyment of human rights. State's *positive* obligations require that they take positive steps to protect the enjoyment of human rights from the harmful effects of climate change.⁴²⁵ For example, the right to life includes "the right of individuals to enjoy a life with dignity and to be free from acts or omissions that would cause their unnatural or premature death".⁴²⁶ There is therefore an important forward-looking

⁴²⁵ Human Rights Council resolution 10/4, Human Rights and Climate Change, document A/HRC/Res/10/4 (2009); OHCHR, Report on the Relationship Between Climate Change and Human Rights, document A/HRC/10/61 (2009); HRC, Views Adopted by the Committee Under Article 5(4) of the Optional Protocol, Concerning Communication No. 3624/2019, document CCPR/C/135/D/3624/2019 (2023); Committee on the Rights of the Child, General Comment No. 26 (2023) on children's rights and the environment, with a special focus on climate change, document CRC/C/GC/26 (2023); OHCHR, Framework Principles on Human Rights and the Environment, document A/HRC/37/59 (2018), p. 6, framework principle 1. See also, e.g., Jonah Ghemre v. Shell Petroleum Development Co. Nigeria Ltd et al., Federal High Court of Nigeria, AHRLR 151 (2005), pp. 6-7, para. 5; Subhash Kumar v. State of Bihar, Supreme Court of India 240 (1991), p. 2 (holding that the right to a safe environment was integral to the right to life under Article 21 of the Indian Constitution); Neubauer and Others v. Germany, Federal Constitutional Court of Germany, Nr. 31/2021 (2021), para. 144 (finding that "[t]he fundamental right to the protection of life and health ... obliges the state to afford protection against the risks of climate change. The state must combat the considerable potential risks emanating from climate change by taking steps which—with the help of international involvement-contribute to stopping human-induced global warming and limiting the ensuing climate change"); Klimaatzaak v. L'État Belge, Court d'appel Bruxelles, 2eme chambre-Affaires Civiles, No. 2021/AR/1589, 2022/AR/737, 2022/AR/891 (2023), pp. 157-159; Sharma and Others v. Minister for the Environment, Federal Court of Australia, VID 607/2020 (2021), paras. 253-254; Ashgar Leghari v. Federation of Pakistan, High Court of Lahore Order W.P. No. 22501/2015 (2015); Urgenda Foundation v. The State of the Netherlands, Supreme Court of The Netherlands, No. 19/00135 (2020), paras. 5.6.2–5.6.3 (finding that the State must take more action to reduce greenhouse gas emissions); PSB et al. v. Brazil, Supreme Court of Brazil, ADPF 708 (2022), paras. 36-37.

⁴²⁶ Daniel Billy et al. v. Australia - Torres Strait Islanders Petition, Communication No. 3624/2019, Decision, document CCPR/C/135/D/3624/2019 (2022), para. 8.3; Teitiota v. New Zealand, Communication No. 2728/2016, Decision, document CCPR/C/127/D/2728/2016 (2020), para. 9.11 ("given that the risk of an entire country becoming submerged under water is such an extreme risk, the conditions of life in such a country may become incompatible with the right to life with dignity before the risk is realized."). See also IACtHR, Yakye Axa Indigenous Community v. Paraguay, Judgment on Merits, Reparations and Costs (17 June 2005), paras. 161–162 ("[The right to life] includes not only the right of every human being not to be arbitrarily deprived of his life, but also the right that conditions that impede or obstruct access to a decent existence should not be generated.... One of the obligations that the State must inescapably undertake as guarantor, to protect and ensure the right to life, is that of generating minimum living conditions that are compatible with the dignity of the human person and of not creating conditions that hinder or impede it."); African Commission on Human and Peoples' Rights, Social and Economic Rights Action Center (SERAC) and Center for Economic and Social Rights (CESR) v. Nigeria, decision on complaint 155/96 (2001), para. 67; African Commission on Human and Peoples' Rights, General Comment No. 3 on the African Charter on Human and Peoples' Rights: The Right to Life (Article 4) (2015), para. 6; Kolyadenko & Others v. Russia, European Court of Human Rights (hereinafter "ECtHR"), Application

element of prevention in the States' obligation to respect and ensure the right to life, requiring States to "take <u>all</u> appropriate measures to address the general conditions in society that may give rise to direct threats to the right to life or prevent individuals from enjoying their right to life with dignity."⁴²⁷ In this way, human rights obligations are akin to, and reinforce, the general due diligence obligation under international environmental law and the law of the sea.⁴²⁸

163. Given the enormous risk that unmitigated anthropogenic GHG emissions poses to human life, a State's obligation to respect, protect, and fulfil human rights within its territory and jurisdiction must necessarily include an obligation to "take all appropriate measures"⁴²⁹ and use all means at its disposal to achieve and maintain an environmentally sustainable level of GHG emissions and address the harmful effects of past, present, and future GHG emissions. This in turn requires that States effect deep, rapid, and sustained reductions in anthropogenic GHG emissions and address their harmful effects on the enjoyment of human rights.

(b) General Obligations Imposed under the ICESCR

164. While obligations under the ICESCR are cast in somewhat different terms than the ICCPR (reflecting the particular characteristics of economic, social, and cultural rights), the ICESCR nonetheless contains robust and concrete obligations with respect to climate change. States have an obligation under Article 2(1) of the ICESCR "to take steps . . . to the *maximum of* its *available resources*, with a view to achieving progressively the full realization of the rights recognized in the . . . Covenant by all appropriate means".⁴³⁰ This duty of "progressive realization" does not, however, allow States to delay urgent climate action.

165. The ICESCR imposes obligations of both conduct and result.⁴³¹ For example, States' undertaking "to take steps" in Article 2(1) is an obligation "of immediate effect", which

⁴²⁸ See Sections IV.A and IV.B above.

Nos. 17423/05, 20534/05, 20678/05, 23263/05, 24283/05 and 35673/05, Judgment dated 28 February 2012, paras. 157, 188, 202–203.

⁴²⁷ Daniel Billy et al. v. Australia – Torres Strait Islanders Petition, Communication No. 3624/2019, Decision, document CCPR/C/135/D/3624/2019 (2022), para. 8.3 (emphasis added); see also HRC, General Comment No. 36 on Article 6: right to life, document CCPR/C/GC/36 (2019), paras. 26, 62.

⁴²⁹ Daniel Billy et al. v. Australia – Torres Strait Islanders Petition, Communication No. 3624/2019, Opinion, document CCPR/C/135/D/3624/2019 (2022), para. 8.3 (emphasis added); see also HRC, General Comment No. 36 on Article 6: right to life, document CCPR/C/36 (2019), paras. 26, 62.

⁴³⁰ ICESCR, art. 2(1) (emphasis added).

⁴³¹ CESCR, General Comment No. 3 on the nature of States Parties' obligations (Art. 2, Para. 1, of the Covenant), document E/1991/23 (1990), para. 1.

requires that States take steps "within a reasonably short time".⁴³² The CESCR has explained that the steps taken by States must be "deliberate, concrete and targeted as clearly as possible" towards meeting the obligations in the ICESCR using "all appropriate means".⁴³³ This necessarily includes adopting legislative, regulatory and fiscal measures.⁴³⁴ Further, "[m]easures such as limiting fossil fuel use, reducing transboundary pollution and greenhouse gas emissions and promoting the transition to renewable energy sources are regarded as crucial steps in mitigating climate change and the negative human rights impacts of the adverse effects of climate change and disasters globally."⁴³⁵

166. Each State is required to take appropriate steps to mitigate climate change according to the "maximum of its available resources".⁴³⁶ In the context of climate change, this is not dissimilar to the prevention obligation under international environmental law, which requires States to "use all means at their disposal".⁴³⁷ While States have different levels of economic and financial resources, which affect to some degree the scope of their respective obligations under ICESCR to protect the environment from climate change, each State must act and mobilise all means at its disposal towards the protection of human rights. At a minimum, the obligations require each State to regulate anthropogenic GHG emissions (including through "the adoption of legislative measures"⁴³⁸), with an aim of achieving and maintaining an environmentally sustainable level of GHG emissions within its territory and jurisdiction, and to use all means at its disposal to address their harmful effects on the dignity and human rights of individuals. The ICESCR has explained that each State's obligation "to take steps ... to the maximum of its available resources" to achieve the full realisation of human rights, should

⁴³² CESCR, General Comment No. 3 on the nature of States Parties' obligations (Art. 2, Para. 1, of the Covenant), document E/1991/23 (1990), paras. 1–2.

⁴³³ *Id.*, paras. 2–3; ICESCR, art. 2(1).

⁴³⁴ See CESCR, General Comment No. 3 on the nature of States Parties' obligations (Art. 2, Para. 1, of the Covenant), document E/1991/23 (1990), paras. 2–3; ICESCR, art. 2(1) (Each State party "undertakes to take steps . . . to the maximum of its available resources . . . by all appropriate means, including particularly the adoption of legislative measures.").

⁴³⁵ Committee on the Elimination of Discrimination against Women, General Recommendation No. 37 on the gender-related dimensions of disaster risk reduction in the context of climate change, document CEDAW/C/GC/38 (2018), para. 43.

⁴³⁶ ICESCR, art. 2(1).

⁴³⁷ *See* Sections IV.A.2 and IV.B.2 above.

⁴³⁸ Article 2(1) of the ICESCR specifically requires States to take steps with a view to achieving progressively the full realisation of economic, social and cultural rights "by all appropriate means, *including particularly the adoption of legislative measures*" (emphasis added). *See also* CESCR, *General Comment No. 3 on the nature of States Parties' obligations (Art. 2, Para. 1, of the Covenant)*, document E/1991/23 (1990), para. 3.

take account of "both the resources existing within a State and those available from the international community through international cooperation and assistance."⁴³⁹

(c) States Have an Obligation to Regulate the Climate Impact of Non-State Actors

167. Human rights obligations with regard to climate change are binding on States and do not, as such, have horizontal effect as a matter of international law.⁴⁴⁰ However, because significant anthropogenic GHG emissions result from the activities of non-state actors, States' positive obligations to ensure fulfilment of rights will *not* be fully discharged if individuals are only protected against human rights violations by agents of the State. If human rights are to be fully realised, individuals must also be protected from "acts committed by private persons or entities that would impair the enjoyment of . . . rights."⁴⁴¹ A State's duty to "take all appropriate measures to address . . . direct threats"⁴⁴² from climate change must therefore encompass an obligation to regulate the GHG emissions from non-state actors within their jurisdiction. As the HRC has noted:

There may be circumstances in which a failure to ensure ... rights ... would give rise to violations by States Parties of those rights, as a result of States Parties' permitting or failing to take appropriate measures or to exercise due diligence to prevent, punish, investigate or redress the harm caused by such acts by private persons or entities.⁴⁴³

168. States' obligation under the ICESCR to *protect* economic, social, and cultural rights also requires that they take measures that prevent third parties from interfering with the various rights protected under the Covenant. As the CESCR has explained in General Comment No. 24:

⁴³⁹ CESCR, General Comment No. 3 on the nature of States Parties' obligations (Art. 2, Para. 1, of the Covenant), document E/1991/23 (1990), para. 13.

⁴⁴⁰ HRC, General Comment No. 31 on the nature of the general legal obligation imposed on States Parties to the Covenant, document CCPR/C/21/Rev.1/Add.13 (2004), para. 8.

⁴⁴¹ *Ibid*.

⁴⁴² Daniel Billy et al. v. Australia – Torres Strait Islanders Petition, Communication No. 3624/2019, Opinion, document CCPR/C/135/D/3624/2019 (2022), para. 8.3; see also HRC, General Comment No. 36 on Article 6: right to life, document CCPR/C/GC/36 (2019), paras. 26, 62.

⁴⁴³ HRC, General Comment No. 31 on the nature of the general legal obligation imposed on States Parties to the Covenant, document CCPR/C/21/Rev.1/Add.13 (2004), para. 8.

The obligation to protect means that States parties must prevent effectively infringements of economic, social and cultural rights in the context of business activities. This requires that States parties adopt legislative, administrative, educational and other appropriate measures, to ensure effective protection against Covenant rights violations linked to business activities, and that they provide victims of such corporate abuses with access to effective remedies.⁴⁴⁴

169. The obligation to protect entails a positive duty to adopt a legal framework requiring business entities to "exercise human rights due diligence in order to identify, prevent, and mitigate the risks of violations of Covenant rights, to avoid such rights being abused, and to account for the negative impacts caused or contributed to by their decisions".⁴⁴⁵

(d) States Have Extra-Territorial Obligations Regarding Climate Change

170. The obligations imposed by international human rights law to respect, protect, and fulfil human rights are primarily territorial in scope. The ICCPR expressly obligates States to guarantee civil and political rights to "all individuals within [their] territory and subject to [their] jurisdiction",⁴⁴⁶ and many other human rights treaties define their scope of application by reference to the State's "jurisdiction".⁴⁴⁷ The Court has also affirmed that the scope of States' obligations under the ICESCR is "essentially territorial" in nature.⁴⁴⁸ However, the Court has recognised that a State's "jurisdiction" extends beyond its sovereign territory,⁴⁴⁹ and therefore the obligations under the ICCPR ⁴⁵⁰ and the ICESCR ⁴⁵¹ may extend to

⁴⁴⁴ CESCR, General Comment No. 24 on State obligations under the International Covenant on Economic, Social and Cultural Rights in the context of business activities, document E/C.12/GC/24 (2017), para. 14.

⁴⁴⁵ *Id.*, para. 16.

⁴⁴⁶ ICCPR, art. 2(1).

⁴⁴⁷ See e.g., ECHR, art. 1 ("The High Contracting Parties shall secure to everyone within their jurisdiction the rights and freedoms defined in . . . this Convention."); ACHR, art. 1(1); CRC, art. 2(1); Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, 10 December 1984, 1465 UNTS 85, art. 2(1); Convention on the Elimination of All Forms of Racial Discrimination, 21 December 1965, 660 UNTS 195, art. 3.

⁴⁴⁸ *Construction of a Wall* Advisory Opinion, p. 180, para. 112.

⁴⁴⁹ Id., p. 179, para. 109 ("The Court would observe that, while the jurisdiction of States is primarily territorial, it may sometimes be exercised outside the national territory."). See also Application of the International Convention on the Elimination of All Forms of Racial Discrimination (Georgia v. Russian Federation), Order on Provisional Measures of 15 October 2008, I.C.J. Reports 2008, p. 386, para. 109 (where the Court was not referring specifically to the concept of "jurisdiction", but accepted that the relevant treaty applies "to the actions of a State party when it acts beyond its territory").

⁴⁵⁰ Construction of a Wall Advisory Opinion, pp. 179–180, paras. 109–111; Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda), Judgment, I.C.J. Reports 2005, pp. 242–243, para. 216.

individuals outside the State's own territory but over which the State exercises effective control.⁴⁵² This is consistent with the findings of the HRC⁴⁵³ and the CESCR,⁴⁵⁴ to whose practices the Court ascribes "great weight",⁴⁵⁵ as well as other human rights bodies and courts.⁴⁵⁶

171. As it concerns the extra-territorial scope of the ICESCR, the CESCR has confirmed on multiple occasions that States are obligated to refrain from interfering with the enjoyment of economic, social, and cultural rights "in other countries"⁴⁵⁷ or in respect of "populations outside their territories".⁴⁵⁸ This obligation has particular relevance to climate change, given

⁴⁵³ HRC, General Comment No. 31 on the nature of the general legal obligation imposed on States Parties to the Covenant, document CCPR/C/21/Rev.1/Add.13 (2004), para. 10.

⁴⁵⁴ CESCR, Consideration of reports submitted by States parties under articles 16 and 17 of the Covenant, Concluding observations of the Committee on Economic, Social and Cultural Rights, document E/C.12/ISR/CO/3 (2011), ("The Committee, reminds the State party, while noting its serious security concerns, of its obligation to report and to fully guarantee and implement the Covenant rights for all persons in all territories under its effective control.").

⁴⁵⁵ Ahmadou Sadio Diallo (Republic of Guinea v. Democratic Republic of the Congo), Judgment, I.C.J. Reports 2010, p. 664, para. 66. See also id., p. 664, para. 67 ("Likewise, when the Court is called upon, as in these proceedings, to apply a regional instrument for the protection of human rights, it must take due account of the interpretation of that instrument adopted by the independent bodies which have been specifically created, if such has been the case, to monitor the sound application of the treaty in question.").

⁴⁵¹ Construction of a Wall Advisory Opinion, pp. 180–181, para. 112.

⁴⁵² See, e.g., HRC, General Comment No. 36 on Article 6: right to life, document CCPR/C/GC/36 (2019), para. 63 ("a State party has an obligation to respect and ensure the rights under article 6 of all persons who are within its territory and all persons subject to its jurisdiction, that is, all persons over whose enjoyment of the right to life it exercises power or effective control. This includes persons located outside any territory effectively controlled by the State whose right to life is nonetheless affected by its military or other activities in a direct and reasonably foreseeable manner"); Committee on the Rights of the Child, Decision adopted by the Committee under the Optional Protocol to the Convention on the Rights of the Child on a communications No. 104/2019, procedure, concerning communication document CRC/C/88/D/104/2019 (2021), para. 10.12; IACtHR Advisory Opinion (2017), paras. 79, 81, 102–103.

⁴⁵⁶ See, e.g., Al-Skeini and others v. United Kingdom, ECtHR, Application No. 55721/07, Judgment dated 7 July 2011, para. 138; Committee Against Torture, General Comment No. 2 on the implementation of Article 2 by States parties, document CAT/C/GC/2 (2008), para. 16; Committee Against Torture, Consideration of reports submitted by States parties under Article 19 of the Convention, Conclusions and recommendations of the Committee Against Torture: United Kingdom of Great Britain and Northern Ireland, Crown Dependencies and Overseas Territories, document CAT/C/CR/33/3 (2004), para. 4(b); IACtHR Advisory Opinion (2017), paras. 81, 104; Loizidou v. Turkey, ECtHR, Application No. 15318/89, Judgment dated 23 March 1995, para. 62; Saldaño v. Argentina, Inter-American Commission on Human Rights, Report No. 38/99 (11 March 1999), para. 17.

 ⁴⁵⁷ See, e.g., CESCR, General Comment No. 14 on the Right to the Highest Attainable Standard of Health (Art. 12), document E/C.12/2000/4 (2000), para. 39; CESCR, General Comment No. 12 on the Right to Adequate Food (Art. 11), document E/C.12/1999/5 (1999), para. 36; CESCR, General Comment No. 15 on the Right to Water (Arts. 11 and 12 of the Covenant), document E/C.12/2002/11 (2003), para. 31.

that the acts and omissions which drive climate change implicate not only the territory where the acts or omissions originate, but also other areas outside that State's jurisdiction.

(e) States Have Obligations to Cooperate and Grant International Assistance

172. Each State has an obligation to cooperate with others in order to secure the promotion and full realisation of human rights. As noted above, the obligation to cooperate in solving global problems is a core principle of international law,⁴⁵⁹ which has also been recognised in the context of international human rights law.⁴⁶⁰ For example, Article 2(1) of the ICESCR provides that:

Each State Party to the present Covenant undertakes to take steps, individually *and through international assistance and co-operation*, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures.⁴⁶¹

173. Article 2(1) of the ICESCR specifically recognises the importance of "international assistance and co-operation" in achieving the full realisation of economic, social, and cultural rights. Thus, it has been noted that, "[a]lthough the primary obligation must be seen to be upon the State to do everything within its power to realize . . . [human rights], [the] lack of resources might oblige some states to look to the international community for assistance to

⁴⁵⁸ CESCR, Climate change and the International Covenant on Economic, Social, and Cultural Rights, document E/C.12/2018/1* (2018), para. 5. See also M. den Heijer and R. Lawson, "Extraterritorial Human Rights and the Concept of 'Jurisdiction'" in Global Justice, State Duties: The Extraterritorial Scope of Economic, Social, and Cultural Rights in International Law (Cambridge University Press, 2013), p. 189.

⁴⁵⁹ *See* Section IV.A.3 above.

⁴⁶⁰ United Nations Charter, arts. 55–56; *see also* art. 1(3) ("The Purposes of the United Nations are: ... 3. To achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms"); UDHR, preamble; United Nations General Assembly resolution 2625, Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations, document A/RES/2625(XXV) (24 October 1970); Human Rights Council, *The duty to cooperate and non-State actors*, document A/HRC/EMRTD/7/CRP.3 (2023), para. 3; United Nations General Assembly resolution S-24/2, Further initiatives for social development, document A/RES/S-24/2 (15 December 2000), p. 13; CESCR, *General Comment No. 3 on the nature of States Parties' obligations (Art. 2, Para. 1, of the Covenant)*, document E/1991/23 (1990), para. 13.

⁴⁶¹ ICESCR, art. 2(1) (emphasis added).

that end."⁴⁶² The CESCR has emphasised the need for States to "recognize the essential role of international cooperation and comply with their commitment to take joint and separate action to achieve the full realization of . . . [economic, social and cultural rights]".⁴⁶³

174. The obligation of States to cooperate with a view to achieving the full realisation of rights is especially relevant in the context of climate change, where GHG emissions originating in one State or region can have devastating effects on individuals thousands of miles away. As noted above, climate change induced by anthropogenic GHG emissions adversely affects a broad array of economic, social and cultural rights, which cannot be "fully realised" without a deep, rapid, and sustained reduction in global GHG emissions and the adoption of measures aimed at addressing their continued harmful impacts, which requires broad international cooperation. On the issue of climate change, the CESCR has noted that:

international cooperation is essential because the most acute risks to the world related to science and technology, such as climate change... are transnational and cannot be adequately addressed without robust international cooperation. States should promote multilateral agreements to prevent these risks from materializing or to mitigate their effects.⁴⁶⁴

175. The United Nations Human Rights Council has also called on all States "to continue to enhance international dialogue and cooperation in relation to the adverse impact of climate change on the enjoyment of human rights".⁴⁶⁵ The Inter-American Court of Human Rights has similarly noted that in the environmental context, compliance with the duty to cooperate "is an important element in the evaluation of [a State's] obligation to respect and to ensure the human rights of the persons outside its territory who may be affected by activities executed

⁴⁶² M. Craven, *The International Covenant on Economic, Social, and Cultural Rights: Perspective on Its Development* (Oxford, 1995), pp. 144–145.

⁴⁶³ CESCR, General Comment No. 14 on the Right to the Highest Attainable Standard of Health (Art. 12), document E/C.12/2000/4 (2000), para. 38.

 ⁴⁶⁴ CESCR, General Comment No. 25 on science and economic, social and cultural rights (article 15 (1) (b), (2), (3) and (4) of the International Covenant on Economic, Social and Cultural Rights), document E/C.12/GC/25 (2020), para. 81.

⁴⁶⁵ Human Rights Council resolution 26/27, Human Rights and Climate Change, document A/HRC/RES/26/27 (2014), para. 5.

within its territory".⁴⁶⁶ Other international bodies have also reiterated the centrality of the cooperation obligation to climate change action in the human rights context.⁴⁶⁷

D. OBLIGATIONS OF STATES IN RESPECT OF FUTURE GENERATIONS

176. The various obligations outlined above do not only protect the interests of individuals currently inhabiting the Earth, but also of generations not yet born who have a legitimate interest in the common environmental heritage and ecological patrimony that will be passed on to them. In this way, international law reflects a normative commitment to principles of intergenerational equity. It recognises that States must act to effect a deep, rapid, and sustained reduction in global GHG emissions, so as not to place an unfair and disproportionate burden on today's children and future generations.

177. The principle of intergenerational equity has long informed the interpretation of norms of international environmental law and human rights law. In the *Nuclear Tests Case*, Judge Weeramantry noted that intergenerational equity was an "important and rapidly developing principle of contemporary international law."⁴⁶⁸ By 2010, in a separate opinion in *Pulp Mills*, Judge Cançado-Trindade stated, "it can hardly be doubted that the acknowledgment of intergenerational equity forms part of conventional wisdom in International Environmental Law."⁴⁶⁹ The Court has also taken account of future generations when assessing catastrophic

⁴⁶⁶ IACtHR Advisory Opinion (2017), para. 182.

⁴⁶⁷ See Human Rights Council resolution 26/27, Human Rights and Climate Change, document A/HRC/RES/26/27 (2014), p. 2 ("[T]he global nature of climate change calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response[.]"); OHCHR, Report on the Relationship Between Climate Change and Human Rights, document A/HRC/10/61 (2009), para. 99 (noting that cooperation to combat climate change "is not only expedient but also a human rights obligation and that its central objective is the realization of human rights"); 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, document A/HRC/31/52 (2016), para. 42 ("States have consistently treated climate change as a global problem that requires a global response. This approach not only makes the most practical sense. It is also in accord with, and can be seen as an application of, the duty of international cooperation."); Human Rights Council resolution 44/7, Human Rights and Climate Change, document A/HRC/RES/44/7 (2020), pp. 2, 5 (emphasising the duty of the "widest possible cooperation by all countries" in the climate context and calling on States to "continue and enhance international cooperation and assistance, in particular in financing, the transfer of technology and capacity-building, for mitigation and adaptation measures to assist developing countries, especially those that are particularly vulnerable to the adverse effects of climate change"). See also generally, J. Rudall, "The Obligation to Cooperate in the Fight against Climate Change", 23 International Community Law Review (2021), pp. 184–196.

⁴⁶⁸ 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 Case (New Zealand v. France) Case, Dissenting Opinion of Judge Weeramantry, I.C.J. Reports 1995, p. 341, para. 341.

⁴⁶⁹ Pulp Mills on the River Uruguay (Argentina v. Uruguay), Separate Opinion of Judge Trindade, I.C.J. Reports 2010, p. 181, para. 122.

risks to the environment. For example, in *Nuclear Weapons*, the Court recognised the relevance of the environment for future generations, noting that the environment represents the "living space, the quality of life and the very health" of human beings, "including generations unborn."⁴⁷⁰ In *Gabčíkovo-Nagymaros*, the Court similarly stated it was "mindful that, in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of damage to the environment" and that the risks for "present and future generations" must be considered as a component of developing norms and standards.⁴⁷¹

178. States have also taken account of principles of intergenerational equity when concluding environmental treaties and instruments such as the UNFCCC,⁴⁷² the Stockholm Declaration,⁴⁷³ the Rio Declaration,⁴⁷⁴ or the Convention on Biological Diversity.⁴⁷⁵ More recently, in the 2022 UNFCCC Implementation Plan, States parties emphasised intergenerational equity as a relevant consideration when assessing obligations with respect to the environment, particularly in the context of climate change.⁴⁷⁶

179. Many rights enshrined in international human rights law have an inherent intergenerational component, and require States to consider their positive and negative obligations both with respect to existing generations as well as those not yet born. For example, the right to culture entails an obligation on the State to conserve and transmit cultural practices and artefacts across generations.⁴⁷⁷ Indeed, a State's failure to adequately take account of the cross-generational dimensions of its human rights obligations, may place it

⁴⁷⁰ *Nuclear Weapons* Advisory Opinion, pp. 241–242, para. 29.

⁴⁷¹ *Gabčikovo-Nagymaros* Judgment, p. 78, para. 140 ("Owing 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.").

⁴⁷² UNFCCC, art. 3(1).

⁴⁷³ Stockholm Declaration, recital 6, principles 1, 2.

⁴⁷⁴ Rio Declaration, principle 3.

⁴⁷⁵ Convention on Biological Diversity, 5 June 1992, 1760 *UNTS* 79, arts. 1–2 (including future generations as part of the definition of sustainable use, which is listed as an objective of the Convention).

⁴⁷⁶ UNFCCC, Sharm el-Sheikh Implementation Plan, Decision -/CP.27 (20 November 2022), p. 9.

⁴⁷⁷ D. Bertram, "For You Will (Still) Be Here Tomorrow: The Many Lives of Intergenerational Equity", 12 Transnational Environmental Law (2023) 121, p. 132. See also CESCR, General Comment No. 12 on the Right to Adequate Food (Art. 11), document E/C.12/1999/5 (1999), para. 7 (describing the contours of the right to food and noting that "sustainability" requires food to be accessible for both present and future generations).

in breach of international law. For instance, the HRC found in *Billy* that Australia's failure to adopt timely adaptation measures with a view to mitigating future threats to the indigenous peoples of Torres Strait Islands' culture constituted a breach of its positive obligations to protect cultural rights in the face of climate change.⁴⁷⁸ The rights of children also have significant future-focused elements, with the Convention on the Rights of the Child imposing an obligation on States to give "primary consideration" "in all actions concerning children . . . [to] the best interests of the child".⁴⁷⁹

180. Domestic courts have also invoked the principle of intergenerational equity in their environmental jurisprudence. For example, the Colombian Supreme Court applied the principle of intergenerational equity to extend the protection of fundamental rights to future generations, and found that deforestation in the Amazon had caused imminent and serious damage to all Colombians of present and future generations by causing significant GHG emissions. ⁴⁸⁰ The German Constitutional Court similarly applied the principle of intergenerational equity in assessing Germany's Federal Climate Protection Act, stating:

It follows from the principle of proportionality that one generation must not be allowed to consume large portions of the CO_2 budget while bearing a relatively minor share of the reduction effort, if this would involve leaving subsequent generations with a drastic reduction burden and expose their lives to serious losses of freedom.⁴⁸¹

181. The court ultimately mandated Germany to update its climate action plan to reflect a proportional distribution of resources and burdens across generations.⁴⁸² Other courts around the world have similarly applied the principle of intergenerational equity as an interpretive

⁴⁷⁸ Daniel Billy et al. v. Australia – Torres Strait Islanders Petition, Communication No. 3624/2019, Decision, document CCPR/C/135/D/3624/2019 (2022), para. 8.14. See also id., Concurring Opinion by Committee Member Gentian Zyberi, para. 6 (noting that "the Committee should have linked the State obligation to 'protect the authors' collective ability to maintain their traditional way of life, to transmit to their children and future generations their culture and traditions and use of land and sea resources' more clearly to mitigation measures") (internal citations omitted).

⁴⁷⁹ Human Rights Council resolution 35/20, Human Rights and Climate Change, document A/HRC/RES/35/20, recitals (22 June 2017) ("[C]hildren . . . are among the groups most vulnerable to the adverse impacts of climate change, which may seriously affect their enjoyment of the highest attainable standard of physical and mental health, access to education, adequate food, adequate housing, safe drinking water and sanitation.").

⁴⁸⁰ *Future Generations* v. *Ministry of Environment and Others*, Supreme Court of Justice of Colombia, STC4360-2018 (5 April 2018).

⁴⁸¹ *Neubauer and Others* v. *Germany*, Federal Constitutional Court of Germany, Nr. 31/2021 (2021), para. 192.

⁴⁸² *Id.*, para. 266.

tool in analysing States' obligations and balancing the interests of present and future generations.⁴⁸³ The principle is also enshrined in national constitutions including in Brazil, Germany, Guyana, Norway, South Africa, and Vanuatu and also finds expression in the domestic environmental legislation in a number of States.⁴⁸⁴

182. The principle of intergenerational equity seeks to achieve a fair and equitable distribution of burdens, interests, and resources across the generations that will inhabit the Earth. The principle is particularly apposite in the context of climate change which threatens future generations and their rights even more acutely than the rights of present generations. Due to the often irreversible damage wrought by climate change, States' continued failure to act today will effectively guarantee that the world in 2100 and beyond will be uninhabitable for the generations that follow. That is patently unjust. In order to comply with their obligations under international environmental and human rights law, States must adequately account for the impact of their actions on today's children and on future generations.

V. THE CORE CROSS-CUTTING OBLIGATIONS

183. The overview of States' obligations in respect of climate change under international environmental law, the law of the sea, and international human rights law makes clear that each body of law requires States: (*i*) to effect deep, rapid, and sustained reduction in anthropogenic GHG emissions; and (*ii*) use all means at their disposal to put in place adaptation measures in order to address the environmental harm that will foreseeably occur from past, present, and future GHG emissions.

184. The science is clear on what needs to be done to achieve that: the IPCC confirms that achieving and maintaining deep and sustained GHG emission reductions requires "[r]apid and far-reaching transitions across all sectors and systems",⁴⁸⁵ including for example:

⁴⁸³ See D. Bertram, "For You Will (Still) Be Here Tomorrow: The Many Lives of Intergenerational Equity", 12 Transnational Environmental Law (2023) 121, pp. 133–137 (analysing the application of the principle of intergenerational equity in domestic litigations globally); see also M. Wewerinke-Singh et al., "In Defence of Future Generations: A Reply to Stephen Humphreys", 34 European Journal of International Law (2023) 651, pp. 657–666.

⁴⁸⁴ L. Slobodian, "Defending the Future: Intergenerational Equity in Climate Litigation", 32 Georgetown Environmental Law Review (2020) 569, p. 572.

⁴⁸⁵ IPCC 2023 Synthesis Report, p. 102.

- (a) In the **energy** sector, a substantial reduction in the use of fossil fuels, transitioning to net zero CO_2 electricity generation, and the use of renewable energy sources, energy conservation, and efficiency.⁴⁸⁶
- (b) In the **industry** sector, there is need for "coordinated action . . . to promote all mitigation options" including energy and material efficiency, circularity (*e.g.*, recycling, upcycling and re-use), electrification, the use of alternative fuels, and decarbonisation of cement production and use.⁴⁸⁷
- (c) In the **urban** sector, integrated building, transport, and other urban planning, including the promotion of urban forestry and green spaces, electrification, and policies to encourage cycling, walking, and other changes in consumer behaviour.⁴⁸⁸
- (d) In the **agriculture, forestry and other land use** sector, conservation ("reduced deforestation in tropical regions having the highest total mitigation potential"), reforestation, shifting to sustainable and healthy diets and reducing food waste.⁴⁸⁹

185. In addition, addressing the harmful effects of past, present, and future GHG emissions on the environment and human life requires a multitude of **adaptation** measures from effective disaster risk management, early warning systems, agroforestry, and land use diversification, to restoring wetlands and rivers and promoting responsible forest management in order to strengthen flood defences.⁴⁹⁰

186. International law imposes a number of core cross-cutting obligations on States, designed to ensure the effective implementation of their mitigation, adaptation, and cooperation obligations. Without purporting to be exhaustive, this section discusses some of those core and cross-cutting obligations as they apply within a State's territory and jurisdiction (Section A), and as they apply to States' global cooperative action (Section B). What is common to all these cross-cutting obligations is that they find expression in more

⁴⁸⁶ *Id.*, p. 104.

⁴⁸⁷ *Id.*, pp. 104–105.

⁴⁸⁸ *Id.*, p. 105.

⁴⁸⁹ *Id.*, p. 106.

⁴⁹⁰ *Id.*, pp. 102–109.

than one—and often all—of the areas of law discussed above in Section IV, and as such reflect some of the core aspects of States' effective action on climate change.

A. CORE OBLIGATIONS APPLICABLE WITHIN A STATE'S TERRITORY

187. As noted above, States have an obligation to adopt and implement effective mitigation and adaptation action in the first place within their territory and jurisdiction.⁴⁹¹ International law imposes a number of core and cross-cutting obligations in that respect, including: (*i*) an obligation to adopt and maintain a national climate strategy; (*ii*) an obligation to regulate the conduct of private actors; (*iii*) an obligation to implement and enforce legislative and regulatory measures; and (*iv*) an obligation to promote transparency and broad public participation in environmental decision-making.

1. States Must Adopt and Maintain a Comprehensive National Climate Strategy

188. As stated by the IPCC, "[e]ffective climate action requires political commitment, wellaligned multi-level governance and institutional frameworks, laws, policies and strategies".⁴⁹² At the national and sub-national level (*e.g.*, regions, cities), there is a need for comprehensive, integrated action in order to reduce anthropogenic GHG emissions and address their harmful effects.⁴⁹³ As such, The Bahamas submits that the obligation to adopt and maintain a comprehensive national climate strategy is a necessary corollary to the States' mitigation and adaptation obligations. It is also reflected in a number of climate treaties and other instruments, including:

(a) Article 4(1)(b) of the UNFCCC, which provides that States shall "[f]ormulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change . . . and measures to facilitate adequate adaptation to climate change";⁴⁹⁴ and

⁴⁹¹ See Section IV.A.2 above.

⁴⁹² IPCC 2023 Synthesis Report, p. 110.

⁴⁹³ *Id.*, pp. 110–111, 114–115.

⁴⁹⁴ *See also* UNFCCC, art. 4(2)(a) (a separate obligation of developed States parties to "adopt national policies and take corresponding measures on the mitigation of climate change").

(b) Article 4(19) of the Paris Agreement, which provides that "[a]ll Parties should strive to formulate and communicate long-term low greenhouse gas emission development strategies".⁴⁹⁵

189. The importance of national strategies and programmes has also been recognised in the context of human rights. For instance, the CESCR noted in its General Comment No. 15 on the Right to Water that "States parties should adopt comprehensive and integrated strategies and programmes to ensure that there is sufficient and safe water for present and future generations."⁴⁹⁶

190. With respect to adaptation, the IPCC noted that "[m]ost observed adaptation is fragmented, small in scale, incremental, sector-specific, and focused more on planning rather than implementation".⁴⁹⁷ Instead, "[i]ntegrated, cross-cutting multi-sectoral solutions" are required,⁴⁹⁸ and that cannot be achieved without a comprehensive national climate strategy.

2. States Must Regulate the Conduct of Private Actors, Including Their Conduct Abroad Where Appropriate

191. A State's obligation to regulate conduct of private actors that generate GHG emissions is a key one, because a very considerable portion of global GHG emissions is attributable to private activities.⁴⁹⁹

192. As noted above, legislative and regulatory measures are the key means at the State's disposal in order to reduce anthropogenic GHG emissions and address their harmful effects. The Court has recognised in *Pulp Mills* that the due diligence required of a State to comply with environmental protection obligations includes an obligation to adopt "appropriate rules and measures", ⁵⁰⁰ and a large number of environmental treaties require States to adopt laws

⁴⁹⁵ See Kyoto Protocol, arts. 5(1), 10(a), (b); Vienna Convention for the Protection of the Ozone Layer, art. 2(2)(b); BBNJ Treaty, arts. 14(3), 53; United Nations, *Report of the World Summit on Sustainable Development*, document A/CONF.199/20* (2002), paras. 162–163.

⁴⁹⁶ CESCR, General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant), document E/C.12/2002/11 (2003), para. 28. See also CESCR, Climate change and the International Covenant on Economic, Social, and Cultural Rights, document E/C.12/2018/1* (2018), para. 7 ("States parties should adopt measures to adapt to the negative consequences of climate change, and integrate such measures within existing social, environmental and budgetary policies at national level").

⁴⁹⁷ IPCC 2023 Synthesis Report, p. 61.

⁴⁹⁸ *Id.*, p. 78.

⁴⁹⁹ Carbon Disclosure Project ('CDP'), CDP Carbon Majors Report 2017 (July 2017), pp. 5–7.

⁵⁰⁰ Pulp Mills Judgment, pp. 79–80, para. 197.

and regulations for the protection of the environment.⁵⁰¹ UNCLOS and international human rights treaties including the ICCPR⁵⁰² and the ICESCR,⁵⁰³ also require States to adopt appropriate legislative measures.⁵⁰⁴ For instance, under Article 2(1) ICESCR, States Parties undertake to take steps with a view to achieving progressively the full realisation of ICESCR rights "by all appropriate means, including particularly the adoption of legislative measures." Under UNCLOS, States have extensive obligations to "adopt laws and regulations to prevent, reduce and control pollution of the marine environment".⁵⁰⁵

193. It is widely accepted that the State's duty to regulate extends to private conduct. In *Pulp Mills*, the Court recognised that a State's environmental protection obligations entail "the exercise of administrative control applicable to public *and private* operators". ⁵⁰⁶ Similarly, in the *Trail Smelter* arbitration, the tribunal found that it was Canada's responsibility to ensure that the private operator's conduct was "in conformity with the obligation of [the State] under international law".⁵⁰⁷ The obligation is also reflected in a number of environmental treaties.⁵⁰⁸

See, e.g., UNCLOS, arts. 207–212; Rio Declaration, principle 11; Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region (Cartagena Convention), 11 October 1986, 1506 UNTS 158 (accession on 24 June 2010), art. 12(1); Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean (Nairobi Convention), 31 March 2010, art. 14(1); Convention for Cooperation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan Convention), 5 August 1984, art. 4; Framework Convention for the Protection of the Marine Environment of the Caspian Sea (Tehran Convention), 12 August 2006, arts. 15, 18, 19(4); Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic area (ACCOBAMS), 1 June 1 2001, art. II(3); Convention for the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention), 17 January 2000, arts. 3(1), 6(2) and 16(1)(a); and Convention for the Protection of the Marine Environment of the Vorth-East Atlantic (OSPAR), 25 March 1998, 2354 UNTS 67, art. 22(a).

⁵⁰² ICCPR, art. 2(2) ("each State Party to the present Covenant undertakes to take the necessary steps . . . to adopt such legislative or other measures as may be necessary to give effect to the rights recognized in the present Covenant").

⁵⁰³ ICESCR, art. 2(1).

⁵⁰⁴ In addition to ICCPR and ICESCR, *see, e.g.*, IACtHR Advisory Opinion (2017), paras. 146–151 ("Given the relationship between protection of the environment and human rights . . . all States must regulate this matter and take other similar measures to prevent significant damage to the environment.").

⁵⁰⁵ UNCLOS, art. 207(1).

⁵⁰⁶ *Pulp Mills* Judgment, pp. 79–80, para. 197 (emphasis added).

⁵⁰⁷ Trail Smelter Case, pp. 1965–1966. See also Activities in the Area Advisory Opinion, p. 41, para. 112; ILC Draft Articles on Transboundary Harm, commentary to art. 5, para. 3 (noting that the obligation to adopt "legislative, administrative or other action" to fulfil the obligations in the Articles necessarily entails regulating private actors involved in those operations).

⁵⁰⁸ See, e.g., UNCLOS, arts. 117, 207–212; UNFCCC, art. 4(2)(a); Rio Declaration, principle 11.

194. Under UNCLOS, the obligation to adopt laws and regulations includes "exercising [the State's] power over entities of [its] nationality and under [its] control".⁵⁰⁹ Similarly, under international human rights law, States have a positive obligation to ensure that individuals within their territory and jurisdiction are protected against violations of their human rights by private persons—which includes an obligation to effectively regulate the conduct of private persons.⁵¹⁰ The CESCR's General Comment No. 24 on State obligations under the ICESCR in the context of business activities states that:

The obligation to protect means that States parties must prevent effectively infringements of economic, social and cultural rights in the context of business activities. This requires that States parties adopt legislative, administrative, educational and other appropriate measures, to ensure effective protection against Covenant rights violations linked to business activities, and that they provide victims of such corporate abuses with access to effective remedies.⁵¹¹

195. The CESCR considered that the requisite measures may include the adoption of legislation and regulations, the imposition of criminal or administrative sanctions and penalties, provision for civil claims by victims against businesses, or requiring businesses to exercise human rights due diligence in order to identify, prevent, and mitigate risks of violations of social, economic, and cultural rights.⁵¹²

196. The State's duty to regulate may extend to private conduct *abroad* in appropriate cases. For instance, under the ICESCR, as discussed above, States assumed an obligation to take progressive steps towards the full realisation of economic, social, and cultural rights of the global community of people, rather than merely individuals within their territory and jurisdiction.⁵¹³ Consistent with this universal ambition, the CESCR considers that "States parties [are] required to take the steps necessary to prevent human rights violations abroad by

⁵⁰⁹ Activities in the Area Advisory Opinion, para. 112.

⁵¹⁰ IACtHR Advisory Opinion (2017), paras. 118, 151; HRC, General Comment No. 31: the nature of the general legal obligation imposed on States Parties to the Covenant, document CCPR/C/21/Rev.1/Add.13 (2004), para. 8; Case of Öneryildiz v. Turkey, ECtHR Application No. 48939/99, Judgment dated 30 November 2004, para. 90; Case of Budayeva and Others v. Russia, ECtHR Application Nos. 15339/02, 21166/02, 20058/02, 11673/02 and 15343/02, Judgment dated 20 March 2008, para. 132; ICESCR, art. 2(1); ICCPR, art. 2(2).

⁵¹¹ CESCR, General Comment No. 24 on State obligations under the International Covenant on Economic, Social and Cultural Rights in the context of business activities, document E/C.12/GC/24 (2017), para. 14.

⁵¹² *Id.*, paras. 14–22.

⁵¹³ See Sections IV.C.2.(b) and IV.C.2.(d) above.

corporations domiciled in their territory and/or jurisdiction", while respecting the sovereignty of the host State.⁵¹⁴ The Committee on the Elimination of Racial Discrimination has made the same conclusion with respect to States' obligations under the Convention for the Elimination of All Forms of Racial Discrimination.⁵¹⁵

197. Accordingly, a State's obligation to achieve and maintain an environmentally sustainable level of GHG emissions and to address their harmful effects requires a State to regulate the conduct of private actors which generate GHG emissions. In practice, that may include the prohibition or limitation of GHG-intensive activities,⁵¹⁶ the imposition of effective sanctions for breach, or disclosure and reporting duties with respect to the actor's GHG-generating activities.⁵¹⁷

3. States Must Effectively Implement and Enforce Legislation and Regulations

198. While it is essential to regulate State and non-State conduct that generates GHG emissions, the adoption of strategies, laws, and regulations is not sufficient. States must also take steps to actively implement their mitigation and adaptation strategies and enforce the underlying legislation and regulations.

199. As the Court confirmed in *Pulp Mills*, environmental due diligence entails "not only the adoption of appropriate rules and measures, but also a certain level of *vigilance in their*

⁵¹⁴ CESCR, General Comment No. 24 on State obligations under the International Covenant on Economic, Social and Cultural Rights in the context of business activities, document E/C.12/GC/24 (2017), para. 26. See also id., para. 16; CESCR, General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12), document E/C.12/2000/4 (2000), para. 39; CESCR, General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant), document E/C.12/2002/11 (2003), para. 33.

⁵¹⁵ Committee on the Elimination of Racial Discrimination, Concluding observations of the Committee on the Elimination of Racial Discrimination: United States of America, document CERD/C/USA/CO/6 (2008), para. 30 (encouraging States "to take appropriate legislative or administrative measures to prevent acts of transnational corporations registered in the State party which negatively impact" the human rights of individuals outside its territory).

⁵¹⁶ For instance, the IPCC confirms that maintaining an environmentally sustainable level of global GHG emissions entails "a substantial reduction in overall fossil fuel use, minimal use of unabated fossil fuels, and use of Carbon Capture and Storage in the remaining fossil fuel systems". *See* IPCC 2023 Synthesis Report, p. 104. *See also* CESCR, *General Comment No. 24 on State obligations under the International Covenant on Economic, Social and Cultural Rights in the context of business activities*, document E/C.12/GC/24 (2017), para. 32.

⁵¹⁷ See, e.g., United Nations High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities, *Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions* (2022), pp. 12–13 (recommending disclosure of net zero business plans, setting public emissions reductions targets, due diligence obligations to assess climate-related impacts along the supply chain and devise netzero plans through the supply chain, and public disclosure of GHG emissions data).

enforcement and the exercise of administrative control applicable to public and private operators".⁵¹⁸ In the context of climate change where the harm is often irreversible, the obligation is particularly onerous.⁵¹⁹ The IPCC has specifically noted an "implementation gap" between States' intended reductions in GHG emissions and actual results, and that "without a strengthening of policies, emissions are projected to rise, leading to a median global warming of 2.2°C to 3.5°C".⁵²⁰

200. Under UNCLOS, States have extensive obligations to enforce their laws and regulations for the protection of the marine environment, including from land-based pollution and pollution through the atmosphere.⁵²¹

201. An equivalent obligation has been recognised in the human rights context. For instance, the HRC considers that a failure to investigate, punish, or redress harm caused by private persons or entities could amount to a violation of the State's obligations under the ICCPR,⁵²² and the CESCR has taken the same view in the context of States' obligations under ICESCR.⁵²³ The CESCR has stated that "States parties should regularly review the adequacy of laws and identify and address compliance and information gaps, as well as emerging problems".⁵²⁴

202. One key measure which underpins the effective implementation and enforcement of laws and regulations concerning GHG emissions is the continuous active monitoring of GHG

⁵²⁰ IPCC 2023 Synthesis Report, p. 57.

⁵¹⁸ Pulp Mills Judgment, pp. 79–80, para. 197 (emphasis added). See also ILC Draft Articles on Transboundary Harm, commentary to art. 3, para. 10 (noting States have an obligation to take measures to prevent significant transboundary harm and that such measures must be implemented and enforced); Activities in the Area Advisory Opinion, pp. 42, 73, paras. 115, 239; SRFC Advisory Opinion, p. 41, para. 131; South China Sea Award, pp. 375–376, para. 944.

⁵¹⁹ *Gabčikovo-Nagymaros* Judgment, p. 78, para. 140 ("The Court is mindful that, in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage.").

⁵²¹ UNCLOS, arts. 213–222.

⁵²² HRC, General Comment No. 31: the nature of the general legal obligation imposed on States Parties to the *Covenant*, document CCPR/C/21/Rev.1/Add.13 (2004), para. 8.

⁵²³ CESCR, General Comment No. 24 on State obligations under the International Covenant on Economic, Social and Cultural Rights in the context of business activities, document E/C.12/GC/24 (2017), para. 15.

⁵²⁴ *Id. See also* IACtHR Advisory Opinion (2017), paras. 152–155.

emissions and their impacts on the environment, as the Court recognised in *Pulp Mills*.⁵²⁵ Monitoring GHG emissions and enabling scientific research has long been recognised as an essential aspect of climate policies, including in the UNFCCC and the Paris Agreement, which require States parties to produce and maintain national inventories of their GHG emissions,⁵²⁶ and to "strengthen[] scientific knowledge on climate" such as through research and "systematic observation".⁵²⁷ Similarly, UNCLOS requires States to "observe, measure, evaluate and analyse . . . the risks or effects of pollution of the marine environment".⁵²⁸

203. Secondly, the effective implementation of climate strategies and policies requires finance,⁵²⁹ and States should make adequate provisions in national budgetary processes to support the implementation of their mitigation and adaptation strategies, as well as to put in place measures that mobilise private capital and other financing mechanisms. The IPCC estimates that investment in climate action needs to increase three to six-fold if we are to limit global warming to 1.5° C or even 2° C.⁵³⁰

4. States Must Promote Transparency and Broad Public Participation in Environmental Decision-making

204. The obligations of States to promote transparency and broad public participation in environmental decision-making have their basis primarily in international human rights law and climate treaties. They also promote the adoption, implementation, and enforcement of effective climate policies and as such facilitate the State's compliance with all of the other obligations set out above. For instance, the IPCC concluded that the dissemination of information about risks and available mitigation and adaptation actions facilitates behaviour

⁵²⁵ Pulp Mills Judgment, pp. 76, 77, paras. 185, 188. See also B. Mayer, International Law Obligations on Climate Change Mitigation (Oxford University Press, 2022), pp. 295–296; IPCC 2023 Synthesis Report, foreword, p. v.

⁵²⁶ UNFCCC, art. 4(1)(a); Paris Agreement, art. 13(7)(a).

⁵²⁷ UNFCCC, art. 4(1)(g); Paris Agreement, art. 7(7)(c). *See also* Espoo Convention, arts. 2(2)–(3), 9(a); Rio Declaration, principle 17; International Law Association, *Declaration of Legal Principles Relating to Climate Change*, Resolution No. 2/2014 (2014), draft art. 5.

⁵²⁸ UNCLOS, art. 204(1).

⁵²⁹ IPCC 2023 Synthesis Report, p. 111.

⁵³⁰ *Ibid*.

and lifestyle changes, which can help significantly reduce global GHG emissions and be an important accountability tool.⁵³¹

205. It has been widely recognised that the rights of individuals under international human rights law to seek and receive information, ⁵³² to participate in environmental decision-making, ⁵³³ to express one's views freely, ⁵³⁴ and to peacefully assemble and associate with others ⁵³⁵ are vital to the protection of the environment and enable individuals to exercise a wide-range of other human rights, including their right to life and health. ⁵³⁶ States are obligated not only to refrain from interfering with those rights, but also to take positive steps to actively promote transparency and participation.

206. In addition, the obligation to promote transparency and public participation falls squarely within a State's general prevention obligation,⁵³⁷ and is also reflected in a number of climate treaties including the UNFCCC and the Paris Agreement,⁵³⁸ as well as UNCLOS.⁵³⁹

207. In light of the disproportionate effect of climate change on certain groups, including children, minorities, indigenous peoples, and socio-economically vulnerable populations, the States' obligation to take positive steps to guarantee their right to information and effective participation is particularly exacting.⁵⁴⁰

⁵³¹ Id., p. 107. See also Committee on the Rights of the Child, General Comment No. 26 (2023) on children's rights and the environment, with a special focus on climate change, document CRC/C/GC/26 (2023), para. 8 ("The exercise by children of their rights to freedom of expression, peaceful assembly and association, to information and education, to participate and be heard and to effective remedies can result in more rights-compliant, and therefore more ambitious and effective, environmental policies.").

⁵³² UDHR, art. 19; ICCPR, art. 19.

⁵³³ UDHR, art. 21; ICCPR, art. 25.

⁵³⁴ ICCPR, art. 19; UDHR, art. 19; CRC, art. 12.

⁵³⁵ ICCPR, arts. 21, 22; UDHR, art. 20; CRC, art. 15.

⁵³⁶ OHCHR, *Framework Principles on Human Rights and the Environment*, document A/HRC/37/59 (2018), para. 4 ("[T]he exercise of human rights, including rights to freedom of expression and association, to education and information, and to participation and effective remedies, is vital to the protection of the environment."); Human Rights Council, *Report of the Independent Expert on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment*, document A/HRC/22/43 (2012), para. 25.

⁵³⁷ See Section IV.A.2 above.

⁵³⁸ UNFCCC, arts. 4(1)(i), 6; Paris Agreement, arts. 6(8), 7(5). See also Rio Declaration, principle 10; United Nations Economic Commission, Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (2003), art. 8(1).

⁵³⁹ UNCLOS, art. 244.

⁵⁴⁰ *See*, *e.g.*, an obligation to consult with indigenous people and obtain their free, prior, and informed consent before adopting measures that may affect them, including their ability to enjoy and exploit natural resources;

B. CORE OBLIGATIONS ON GLOBAL COOPERATION

208. As noted above, States have a broad general duty to cooperate with others in order to achieve deep, rapid, and sustained reduction in global anthropogenic GHG emissions, and to put in place adaptation measures to address their harmful effects on the environment and human life.⁵⁴¹ Without purporting to be exhaustive, The Bahamas focuses its submission on four specific manifestations of the cooperation obligation: (*i*) the obligation of financial, technological, and scientific cooperation; (*ii*) the obligation to negotiate in good faith with respect to global climate action, including on binding climate treaties; (*iii*) the obligation to cooperate with respect to the effects of sea level rise on a State's territory; and (*iv*) the obligation to cooperate with respect to persons displaced by climate change.

1. States Must Grant Financial, Technological, and Scientific Cooperation and Assistance

209. The duty to cooperate on financial, technological, and scientific matters is a necessary corollary to the States' mitigation and adaptation obligations.

210. A number of treaties already envision obligations of **financial cooperation**. For example, as noted above, UNCLOS requires States to provide financial assistance in connection with the preservation and protection of the marine environment, which includes protection from harm caused by GHG emissions, and to grant Developing States preferential treatment in the allocation of funds.⁵⁴² Likewise, the Paris Agreement, the UNFCCC, and the Kyoto Protocol expressly require developed parties to provide financial resources to developing parties in respect of climate change mitigation and GHG emissions objectives.⁵⁴³

United Nations Declaration on the Rights of Indigenous Peoples, document A/RES/61/295 (2007), arts. 18, 19, 29, 32. *See also* Human Rights Council resolution 52/23, The Human Right to a Clean, Healthy and Sustainable Environment, document A/HRC/RES/52/23 (2023), para. 4(c) (calling on States to "facilitate public awareness and participation in environmental decision-making, including of civil society, women, children, youth, Indigenous Peoples, local communities, peasants, older persons, persons with disabilities and others who depend directly on biodiversity and ecosystem services, by protecting all human rights, including the rights to freedom of expression and to freedom of peaceful assembly and association").

⁵⁴¹ See Sections IV.A.3, IV.B.3.(d).ii, and IV.C.2.(e) above.

⁵⁴² See Section IV.B.3.(d).iii above.

See Paris Agreement, art. 9(1) ("Developed country Parties shall provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention"). See also, UNFCCC, art. 4(3) ("developed country Parties . . . shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations"); Kyoto Protocol, art. 11(2)(b) ("developed Parties . . . shall . . . provide such financial resources . . . needed by the developing country Parties to meet the agreed full incremental costs of advancing the implementation of existing commitments").

Consistent with this duty, for example, States should begin or continue to contribute to multilateral efforts such as the loss and damage fund for developing States vulnerable to climate change that the UNFCCC Conference of the Parties established in its most recent meetings.⁵⁴⁴

211. Duties of international cooperation in respect of **science and technology** are also widely applicable,⁵⁴⁵ and especially important in the context of climate change.⁵⁴⁶ For example, the UNFCCC requires *all parties* to cooperate in the development and transfer of technologies that can reduce, control, or prevent anthropogenic GHG emissions.⁵⁴⁷ More recent instruments such as the Paris Agreement emphasise the need to strengthen cooperation on the exchange of scientific knowledge and the provision of technical support and guidance to enhance climate change adaptation efforts.⁵⁴⁸ Likewise, UNCLOS requires States to "promote programmes of scientific, educational, technical and other assistance to developing

⁵⁴⁴ See UNFCCC decision 2/CP.27, Funding arrangements for responding to loss and damage associated with the adverse effects of climate change, including a focus on addressing loss and damage, document FCCC/CP/2022/10/Add.1.

⁵⁴⁵ For example, treaties concerning the environment often impose duties of international cooperation on the dissemination of scientific advancements or research. *See, e.g.*, BBNJ Treaty, art. 8(3) ("Parties shall promote international cooperation in marine scientific research and in the development and transfer of marine technology"); UNCLOS, art. 201 ("States shall cooperate, directly or through competent international organizations, in establishing appropriate scientific criteria for the formulation and elaboration of rules, standards and recommended practices and procedures for the prevention, reduction and control of pollution of the marine environment").

⁵⁴⁶ CESCR, General Comment No. 25 on science and economic, social and cultural rights (article 15 (1) (b), (2), (3) and (4) of the International Covenant on Economic, Social and Cultural Rights), document E/C.12/GC/25 (2020), para. 81 ("international cooperation is essential because the most acute risks to the world relate[] to science and technology, such as climate change"). See also Rio Declaration, principle 9 ("States should cooperate to strengthen . . . sustainable development by improving scientific understanding through exchanges of scientific and technological knowledge").

⁵⁴⁷ UNFCCC, art. 4(1)(a) ("All Parties . . . shall . . . [d]evelop, periodically update, publish and make available . . . national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases"), art. 4(1)(d) ("All Parties . . . shall . . . [p]romote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases"). *See also*, Kyoto Protocol, art. 10(c) ("All Parties . . . shall . . . [c]ooperate in the promotion of effective modalities for the development, application and diffusion of, and take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies, know-how, practices and processes pertinent to climate change"), art. 10(d) ("All Parties . . . shall . . . [c]ooperate in scientific and technical research and promote the maintenance and the development of systematic observation systems and development of data archives to reduce uncertainties related to the climate system").

See, e.g., Paris Agreement, art. 7(7)(c) ("Parties should strengthen their cooperation on enhancing action on adaptation . . . with regard to: . . . (c) [s]trengthening scientific knowledge on climate, including research"), art. 10(6) ("Support, including financial support, shall be provided to developing country Parties for the implementation of this Article, including for strengthening cooperative action on technology development and transfer at different stages of the technology cycle").

States for the . . . prevention, reduction and control of marine pollution."⁵⁴⁹ This obligation falls primarily on developed countries, who have the technical know-how to share and the means to fund scientific and technological development.⁵⁵⁰

212. Moreover, as noted above in Section II.C.1, the ICESCR protects the right to benefit from the material results of scientific progress (*e.g.*, new technologies) and the development and dissemination of scientific knowledge.⁵⁵¹ This mandate cannot be made effective absent robust cooperation between all States, because scientific progress is not evenly distributed.⁵⁵²

2. States Must Negotiate in Good Faith on Effective Measures to Achieve a Deep, Rapid, and Sustained Reduction in Global GHG Emissions and Address Their Harmful Effects

213. The obligation to negotiate in good faith with respect to global climate action is a logical and critical extension of the duties to reduce global GHG emissions and to cooperate in doing so.⁵⁵³ As noted above, achieving a deep, rapid, and sustained reduction in global GHG emissions is a global challenge that no State can meet on its own. While all States have individual obligations, including to achieve and maintain an environmentally sustainable level of GHG emissions within their territory and jurisdiction, it is also essential to the success of the global efforts that the exact allocation of mutual rights and obligations among States and

⁵⁴⁹ UNCLOS, art. 202(a); *see also id.*, art. 276–277; Section IV.B.3.(d).iii above.

⁵⁵⁰ *See, e.g.*, IPCC 2023 Synthesis Report, p. 112 ("Accelerated support from developed countries and multilateral institutions is a critical enabler to enhance mitigation and adaptation action and can address inequities in finance, including its costs, terms and conditions, and economic vulnerability to climate change.").

⁵⁵¹ CESCR, General Comment No. 25 on science and economic, social and cultural rights (article 15 (1) (b), (2), (3) and (4) of the International Covenant on Economic, Social and Cultural Rights), document E/C.12/GC/25 (2020), para. 8 ("The term 'benefits' refers first to the material results of the applications of scientific research . . . Secondly, benefits refer to the scientific knowledge and information directly deriving from scientific activity . . . Lastly, benefits refer also to the role of science in forming critical and responsible citizens who are able to participate fully in a democratic society").

⁵⁵² *Id.*, para. 79 ("Second, international cooperation is essential because of the existence of deep international disparities among countries in science and technology.").

See also B. Mayer, International Law Obligations on Climate Change Mitigation (Oxford University Press, 2022), p. 285 ("the duty of cooperation is merely a corollary of general mitigation obligations"); id., p. 287 ("A first application of the duty of cooperation is that a state must negotiate with other states in good faith with the objective of promoting effective mitigation action. A State, having emphatically recognized that effective responses to climate change require international cooperation, would be negligent if it did not promote such cooperation by playing an active and constructive role in international negotiations.").

the specific modalities of their global cooperation be agreed at an international level.⁵⁵⁴ For instance, while the UNFCCC, the Kyoto Protocol, and the Paris Agreement are steps in the right direction, there is broad scientific agreement that the national GHG reduction policies implemented in pursuance of those agreements are wholly insufficient to limit climate change to sustainable levels. As noted above, the continued implementation of current policies would lead to a warming of the planet by 3.2°C by 2100, with disastrous consequences.⁵⁵⁵ A significantly more ambitious, coordinated, and accountable action is needed to change that, ⁵⁵⁶ and is likely to require and include the adoption of binding multilateral climate treaties.

214. The Court has provided helpful guidance on how to interpret obligations to negotiate. States must act so that "the negotiations are meaningful" and not "merely to go through a formal process" without contemplating modifications of their positions. ⁵⁵⁷ Indeed, negotiations require "a mutual willingness to discuss in good faith actual and potential environmental risks", ⁵⁵⁸ and for States to "give due regard" to other positions and recommendations from expert or technical bodies.⁵⁵⁹ Various international instruments reflect the obligation to conduct *meaningful* negotiations. For example, Principle 13 of the Rio Declaration provides for States' cooperation to develop international law regarding

⁵⁵⁴ IPCC 2023 Synthesis Report, p. 112 ("International cooperation is a critical enabler for achieving ambitious climate change mitigation goals and climate resilient development"); *see also* B. Mayer, *International Law Obligations on Climate Change Mitigation* (Oxford University Press, 2022), p. 287.

⁵⁵⁵ IPCC 2023 Synthesis Report, p. 68.

⁵⁵⁶ See Section V.A above.

⁵⁵⁷ North Sea Continental Shelf (Germany/Denmark, Germany/Netherlands), Judgment, I.C.J. Reports 1969, p. 47, para. 85; see also Pulp Mills Judgment p. 67, paras. 146–147.

⁵⁵⁸ Gabčíkovo-Nagymaros Judgment, p. 68, para. 112. See also Construction of a Road in Costa Rica along the San Juan River (Nicaragua v. Costa Rica), Judgment, I.C.J. Reports 2015, p. 707, para. 104 (noting that in the context of activities that have a risk of causing significant transboundary harm, States must "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").

⁵⁵⁹ Whaling in the Antarctic (Australia v. Japan: New Zealand intervening), Judgment, I.C.J. Reports 2014, p. 257, para. 83. See also Lac Lanoux Arbitration (France v. Spain), Award of 16 November 1957, 24 I.L.R. 101, pp. 31–32, paras. 21–22 (interpreting a treaty provision which required each State to safeguard the other State's interests when undertaking works which may affect the course or volume of a watercourse: the acting States must employ good faith to consider "the various interests involved, to seek to give them every satisfaction compatible with the pursuit of its own interests, and to show that in this regard it is genuinely concerned to reconcile the interests of the other riparian State with its own"); Chagos Marine Protected Area Arbitration (Mauritius v. United Kingdom), PCA, Award of 18 March 2015, p. 202, para. 519 (interpreting the requirement to have "due regard" to another State's rights and obligations: "the extent of the regard required by the Convention will depend upon the nature of the rights held by Mauritius, their importance, the extent of the anticipated impairment, the nature and importance of the activities contemplated by the United Kingdom, and the availability of alternative approaches").

liability and compensation for the adverse effects of environmental damage in an "expeditious and more determined manner".

215. In addition, if States consider that binding multilateral climate treaties are an essential tool to achieving a deep, rapid, and sustained reduction in global GHG emissions, the Court's *Nuclear Weapons* Advisory Opinion confirms that the obligation to negotiate such treaties is one of result, and not conduct. In the context of a treaty obligation to negotiate in good faith "on a treaty on general and complete disarmament", the Court opined that the relevant treaty provision imposed an obligation "to achieve a precise result . . . by adopting a particular course of conduct, namely, the pursuit of negotiations on the matter in good faith." ⁵⁶⁰ The Court noted in this context the near-universal membership of the Treaty on the Non-Proliferation of Nuclear Weapons and the broad support of the international community for the United Nations General Assembly resolutions on nuclear disarmament. ⁵⁶¹ That reasoning applies with equal force to global action on climate change, which also "necessitates the cooperation of all States" and the urgent need for which is widely recognised by States⁵⁶² as well as the scientific community⁵⁶³.

216. Beyond the core obligation to negotiate in good faith, the precise modalities of negotiations are for States and other stakeholders to decide. For instance, negotiations may be carried out on a State-to-State basis as well as through or with international organisations.⁵⁶⁴ They may result in a series of agreements on distinct issues or a single global treaty. Regional agreements can be used to effectively supplement global efforts. However, the modalities of negotiations need at all times to be informed by the States' collective obligation (in addition to individual obligations) to achieve and maintain a deep, rapid, and sustained reduction in anthropogenic GHG emissions and to address their harmful effects.

⁵⁶⁰ *Nuclear Weapons* Advisory Opinion, pp. 263–264, para. 99.

⁵⁶¹ *Id.*, p. 264, para. 100.

⁵⁶² For instance, the UNFCCC, the Kyoto Protocol, and the Paris Agreement have 198, 192, and 195 States Parties respectively and multiple United Nations General Assembly (as well as other United Nations bodies) resolutions recognise the urgent need for global coordinated action on climate change; *see*, *e.g.*, United Nations General Assembly resolution 77/165, Protection of global climate for present and future generations of humankind, document A/RES/77/165 (21 December 2022), p. 1 (listing recent United Nations General Assembly resolutions).

⁵⁶³ IPCC 2023 Synthesis Report, p. 112 ("International cooperation is a critical enabler for achieving ambitious climate change mitigation goals and climate resilient development").

⁵⁶⁴ See, e.g., ILC Draft Articles on Transboundary Harm, art. 4.

3. States Must Cooperate with Respect to the Effects of Sea Level Rise

217. As noted above, the ever-worsening threat of sea level rise is likely to lead to the submersion of coasts and islands, the regression of land space, and, in the long term, may provoke the complete submergence and disappearance of States—with Small Island States being most at risk.⁵⁶⁵ These climate change-induced phenomena have the potential to effectively extinguish States' sovereign and territorial entitlements under international law.

218. Given the above, The Bahamas submits that States' obligation to cooperate to address the harmful effects of GHG emissions necessarily extends to cooperation to establish a clear and equitable legal framework to address and mitigate the effects of sea level rise on a State's territory and statehood. This is not least because the effective exercise of jurisdiction and sovereignty over maritime zones is critical to States' ability to adequately discharge their obligation to protect the marine environment, as well as their general duty to promote economic development and protect human welfare.

219. Maritime zones—*i.e.*, the territorial sea, contiguous zone, exclusive economic zone, and continental shelf—create important rights and obligations for coastal States.⁵⁶⁶ Pursuant to UNCLOS, these zones are established by reference to "baselines", which reflect the low water line along the State's coast.⁵⁶⁷ For archipelagic States such as The Bahamas, baselines follow "the outermost points of the outermost islands and drying reefs".⁵⁶⁸ When the sea level rises, it pushes the low water line inwards and could also submerge outlying islets and reefs, potentially eroding a State's established maritime entitlements.⁵⁶⁹

220. The erosion of coastal States' jurisdiction over maritime zones also undermines their ability to protect and regulate the environment in those zones, consistent with their obligations under UNCLOS and international law generally. For example, The Bahamas regulates the pollution of its territorial waters and maritime zones pursuant to an extensive legislative regime, including under the Merchant Shipping (Oil Pollution) Act 1976.⁵⁷⁰ It has also designated protected marine areas and implemented protective measures for ecologically

⁵⁶⁵ See para. 20(a) and Section II.B.2 above.

⁵⁶⁶ UNCLOS, arts. 25(1), 33(1), 57, 77.

⁵⁶⁷ *Id.*, art. 5.

⁵⁶⁸ *Id.*, arts. 5, 47(1).

 ⁵⁶⁹ International Law Commission, Sea-level rise in relation to international law, document A/CN.4/740 (28 February 2020) (hereinafter "ILC First Issues Paper 2020"), p. 27, para. 76.

⁵⁷⁰ See Merchant Shipping (Oil Pollution) Act 1976 of The Commonwealth of The Bahamas, Part II.

important and rare species under legislation like the Fisheries Act 2020.⁵⁷¹ The exercise of this form of environmental regulation could be significantly curtailed, unless States' marine and territorial entitlements remain intact notwithstanding coastal erosion and other physical effects of climate change.

221. The principle that States' baselines (and correlative marine entitlements) remain fixed despite physical changes due to sea level rise is consistent with the terms of UNCLOS. The Convention defines baselines by reference to certain physical features such as the low-water line "as marked" on official charts, and does not envisage any changes to baselines or charts to reflect subsequent changes in the physical environment.⁵⁷² Thus, the terms of UNCLOS suggest that baselines remain legally fixed despite the effects of sea level rise.⁵⁷³

222. This is consistent with the practice among Small Island States, whose practice is particularly relevant in this context, given that they are "specially affected" by sea level rise and climate-induce coastal erosion and territorial inundation. ⁵⁷⁴ The position is also

⁵⁷¹ See Fisheries Act 2020 of The Commonwealth of The Bahamas, arts. 30, 35.

⁵⁷² UNCLOS, arts. 5, 16.

⁵⁷³ International Law Association, *Report of the International Law Association Committee on International Law and Sea Level Rise*, Sydney Conference (2018), p. 18; International Law Association, *Report of the Committee on International Law and Sea Level Rise*, Lisbon Conference (2022), p. 21.

⁵⁷⁴ North Sea Continental Shelf (Federal Republic of Germany/Denmark), Judgment, I.C.J Reports 1969, p. 3, para. 73. See also Pacific Islands Forum, Declaration on Preserving Maritime Zones in the Face of Climate Change-related Sea-Level Rise, Fifty-First Pacific Islands Forum (6 August 2021), available at https://forumsec.org/publications/declaration-preserving-maritime-zones-face-climate-change-related-sealevel-rise ("[UNCLOS] imposes no affirmative obligation to keep baselines and outer limits of maritime zones under review ... we do not intend to review and update the baselines and outer limits of our maritime zones as a consequence of climate change-related sea-level rise."); Alliance of Small Island States, Leaders' Declaration, 2021 (22 September 2021), para. 41, available at https://www.aosis.org/launch-ofthe-alliance-of-small-island-states-leaders-declaration; Climate Vulnerable Forum, Dhaka-Glasgow Declaration of the Climate Vulnerable Forum (2 November 2021), Key Priority 8, available at https://thecvf.org/our-voice/statements/dhaka-glasgow-declaration-of-the-cvf/; Organisation of the African Caribbean and Pacific States, Declaration of the Seventh Meeting of the Organization of African, Caribbean and Pacific States Ministers in Charge of Fisheries and Aquaculture (8 April 2022), available at https://www.oacps.org/wp-content/uploads/2022/05/Declaration -7thMMFA EN.pdf, p. 8; Statement by the Maldives On Agenda Item 80 (5 November 2020), available at https://www.un.org/en/ga/sixth/75/pdfs/ statements/ilc/13mtg_maldives.pdf, p. 4; Report of the International Law Commission on the Work of Its Seventy-Second Session (5 November 2020), document A/76/10 (8 October 2021), p. 4; Antigua and Barbuda's submission on the effects of sea-level rise on the law of the sea (2021), available at https://legal.un.org/ilc/sessions/72/pdfs/english/slr_antigua_barbuda.pdf, para. 10; Submission of the Federated States of Micronesia to the ILC (27 December 2019), available at https://legal.un.org/ilc/ sessions/72/pdfs/english/slr_micronesia.pdf, p. 2; Statements on Agenda Item 82: Cluster II Report of the International Law Commission, from Samoa on behalf of the Pacific Island Developing States (28 October 2021), p. 2, Papua New Guinea (28 October 2021), p. 3, Tonga (28 October 2021), para. 4, Solomon Islands (29 October 2021), p. 1.

supported by coastal States from various geographical regions.⁵⁷⁵ For example, Germany's position is that "a contemporary reading of [UNCLOS] gives the coastal State the right to update its baselines when the sea level rises or falls or the coastline moves, *but it does not require the Coastal State to do so*",⁵⁷⁶ and the United States has declared that it "*will not challenge such baselines and maritime zone limits that are not subsequently updated* despite sea-level rise caused by climate change".⁵⁷⁷ The ILC has noted that "*there was no objection* from any State" to this interpretation of UNCLOS.⁵⁷⁸

223. The principle of fixed baselines is also consistent with the principles of legal stability and equity. The stability and finality of land and maritime boundaries has long been affirmed by the Court and international arbitral tribunals.⁵⁷⁹ States too have repeatedly emphasised the need for legal stability in the context of maritime zones and baselines.⁵⁸⁰ This is reflected, for example, in the long-standing recognition of rights over "historic bays" and other waters over which States have historically exercised sovereignty, ⁵⁸¹ including in the context of

⁵⁷⁵ See, e.g., Statements on Agenda Item 82: Cluster II Report of the International Law Commission, from Argentina (1 November 2021), p. 3, Chile (29 October 2021), p. 6, Estonia (29 October 2021), p. 4, Greece (October 2021), p. 5; Submission by Germany to the ILC on Sea-level rise in relation to international law (30 June 2022), *available at* https://legal.un.org/ilc/sessions/74/pdfs/english/slr_germany.pdf, p. 2; Submission of France to the ILC relating to the subtopic of sea-level rise in relation to the law of the sea (29 November 2022), *available at* https://legal.un.org/ilc/sessions/74/pdfs/english/slr_france.pdf, p. 3; Statement by Croatia on Agenda Item 77: Cluster I and II Report of the International Law Commission (26 October 2022), p. 3; Statement by the European Union on Sea Level Rise in Relation to International Law (UNGA 6th Committee, 77th Session, 2022), para. 8.

⁵⁷⁶ Statement by Germany on Agenda Item 77 – II Report of the International Law Commission (28 October 2022), p. 1 (emphasis added).

⁵⁷⁷ Statement by the United States on Agenda Item 77: Report of the International Law Commission on the work of its seventy-third session (27 October 2022), p. 2 (emphasis added).

⁵⁷⁸ International Law Commission, *Sea-level rise in relation to international law*, document A/CN.4/761 (13 February 2023) (hereinafter "**ILC First Issues Paper 2023**"), paras. 93, 98(b) (emphasis added).

⁵⁷⁹ Territorial and Maritime Dispute (Nicaragua v. Colombia), Preliminary Objections, Judgment, I.C.J. Reports 2007, p. 832, para. 89; Case concerning the Temple of Preah Vihear (Cambodia v. Thailand), Merits, Judgment of 15 June 1962: I.C.J. Reports 1962, p. 6, at p. 34; Territorial Dispute (Libyan Arab Jamahiriya/Chad), Judgment, I.C.J. Reports 1994, p. 6, at p. 37, para. 72; Bay of Bengal Maritime Boundary Arbitration (Bangladesh v. India), PCA Case 2010–16, Award of 7 July 2014, para. 217.

⁵⁸⁰ ILC First Issues Paper 2023, para. 83, n. 148. See e.g., Statement by New Zealand on Agenda Item 82– Cluster II Report of the International Law Commission (29 October 2021), pp. 4, 5; Statement by Thailand on Agenda Item 77–Cluster II Report of the International Law Commission (28 October 2022), para. 7.

⁵⁸¹ The North Atlantic Coast Fisheries Case (Great Britain / United States of America), Final Award (7 September 1910), p. 25; The Republic of El Salvador v. The Republic of Nicaragua, Central American Court of Justice, Opinion and Decision of the Court, 11 AJIL (1917) p. 693; Fisheries Case (United Kingdom v. Norway), Judgment, I.C.J report 1951, p. 130; Land, Island and Maritime Frontier Dispute (El Salvador/Honduras: Nicaragua intervening), Judgment, I.C.J report 1992, p. 116, paras. 394, 405; South China Sea Arbitration between the Philippines and the Peoples' Republic of China, Case No. 2013-19, PCA, Award, 12 July 2016, p. 96, para. 225.

UNCLOS.⁵⁸² The legal recognition of historic title reflects the desire by States to equitably preserve existing entitlements over waters which were often "vital" to the coastal State's interests, ⁵⁸³ since ignoring such realities may be "arbitrary, and capable, if applied in practice, of causing international difficulties."⁵⁸⁴

224. While there is a clear rationale and support for the stability and preservation of maritime entitlements in the face of sea level rise, the law in this area must be placed on firmer footing.⁵⁸⁵ International cooperation is critical in this regard. The Bahamas submits that States have an obligation to cooperate in establishing a clear, predictable, and fair legal framework that preserves maritime entitlements from the potential effects of sea level rise and addresses issues of continued statehood. This obligation flows from, among other sources, UNCLOS—which requires that States cooperate to prevent harm to the marine environment by adopting and harmonising laws and policies (*see* Section IV.B above). The obligation also flows from States' duty to cooperate with a view to mitigating the effects of small Island States is primarily attributable to the actions of other States (particularly major emitters of GHGs), the duty of international cooperation takes on reparative significance.

225. States already recognise the duty to cooperate to establish a fair and predictable legal framework with regard to the effects of sea level rise on States' baselines and existing maritime entitlements. For example, Germany has noted that "sea-level rise cannot but be addressed by all States on the basis of cooperation" and therefore States should "work together with others to preserve their maritime zones and the rights and entitlements that flow

⁵⁸² UNCLOS, arts. 10(6), 15.

⁵⁸³ Yearbook of the International Law Commission 1962, vol. II, document A/CN.4/SER.A/1962, p. 7, para. 38. See also Land, Island and Maritime Frontier Dispute (El Salvador/Honduras: Nicaragua intervening), Judgment, I.C.J Reports 1992, p. 591, para. 391.

⁵⁸⁴ United Nations Conference on the Law of the Sea, Geneva, 24 February–27 April 1958, Official Records of the United Nations Conference on the Law of the Sea, Volume I (Preparatory Documents), document A/CONF.13/1, p. 3, para. 10. See also Continental Shelf (Tunisia/Libyan Arab Jamahiriya), Dissenting Opinion of Judge Oda, I.C.J. Reports 1982, pp. 209–210, para. 86; Yearbook of the International Law Commission 1962, vol. II, document A/CN.4/SER.A/1962, p. 7, paras. 38, 39

⁵⁸⁵ International Law Commission, Report on the seventy-fourth session (24 April–2 June and 3 July– 4 August 2023), document A/78/10, para. 209; ILC First Issues Paper 2023, para. 168; D. Caron, "When law makes climate change worse: rethinking the law of baselines in light of a rising sea level", 17 Ecology Law Quarterly (1990) 4, pp. 650–651; E. Sobenes Obregon, "Historic waters regime: a potential legal solution to sea level rise", 7 International Journal of Maritime Affairs and Fisheries (2015) 1, pp. 17–32.

from them in a manner consistent with [UNCLOS]".⁵⁸⁶ Pacific Island States have similarly called for collective efforts to secure international recognition of the integrity of maritime zones from the impacts of sea level rise.⁵⁸⁷

226. The duty of cooperation extends beyond the preservation of baselines. Because territory is an essential aspect of statehood, sea level rise poses a threat to the very survival of States as legal subjects.⁵⁸⁸ States have recognised that the existential threat of climate-induced sea level rise will require a more flexible and equitable approach to statehood.⁵⁸⁹ However, there is need for cooperation to ensure the continued recognition of the statehood of vulnerable Small Island States. This principle has been affirmed most recently by the Pacific Islands Forum's 2023 Declaration on Statehood which calls upon the international community "to support this Declaration and cooperate in achieving its purposes, consistent with the duty to cooperate and principles of equity and fairness".⁵⁹⁰

4. States Must Cooperate with Respect to Persons Displaced by Climate Change

227. Climate change is a key driver of displacement across the world.⁵⁹¹ As explained by the HRC, "[b]oth sudden-onset events, such as intense storms and flooding, and slow-onset processes, such as sea level rise, salinization and land degradation, can propel cross-border

⁵⁸⁶ Submission by Germany to the ILC on Sea-level rise in relation to international law (30 June 2022), *available at* https://legal.un.org/ilc/sessions/74/pdfs/english/slr_germany.pdf, p. 1 (emphasis added).

 ⁵⁸⁷ 48th Pacific Islands Forum, 5–8 September 2017, Forum Communiqué (September 2017), para. 10;
 ^{50th} Pacific Islands Forum, 13–16 August 2019, Forum Communiqué (August 2019), paras. 24–25.

See, e.g., Montevideo Convention on Rights and Duties of States, 26 December 1933, 165 LNTS 19; D. Freestone and D. Çiçek, "Legal Dimensions of Sea Level Rise: Pacific Perspectives" (World Bank Group, 2021), p. 51.

⁵⁸⁹ The White House, "FACT SHEET: Energizing the U.S.-Pacific Islands Forum Partnership" (10 November 2023), *available at* https://www.whitehouse.gov/briefing-room/statements-releases/2023/11/ 10/fact-sheet-energizing-the-u-s-pacific-islands-forum-partnership/; Pacific Islands Forum, 2023 Declaration on the Continuity of Statehood and the Protection of Person in the Face of Climate Change-Related Sea-Level Rise (9 November 2023), paras. 9, 11–13; Submission by the Principality of Liechtenstein to the International Law Commission on the topic of "Sea Level Rise in relation to International Law" (29 June 2023), p. 3; Submission by New Zealand to the International Law Commission regarding sea-level rise in relation to statehood and the protection of persons (30 June 2023), p. 1; Submission by Antigua and Barbuda responding to the International Law Commission's Second Paper on Sea Level Rise and the effect on Statehood and Protection of Persons A/CN.4/752 (30 June 2023), paras. 39–40; Statements on Agenda Item 82: Cluster II Report of the International Law Commission, from Cuba (29 October 2021), para. 32, Solomon Islands (29 October 2021), p. 2, Samoa on behalf of the Pacific Small Island Developing States (28 October 2021), pp. 2–3.

⁵⁹⁰ Pacific Islands Forum, 2023 Declaration on the Continuity of Statehood and the Protection of Person in the Face of Climate Change-Related Sea-Level Rise (9 November 2023), paras. 15–16.

⁵⁹¹ *See* para. 21(c) above.

movement of individuals seeking protection from climate change-related harm."⁵⁹² As noted above, in 2022 alone disasters triggered the displacement of 32.6 million people, 41% higher than the annual average of the past decade.⁵⁹³ Ninety-eight percent of those displaced were a result of weather-related hazards such as storms, floods, and droughts.⁵⁹⁴

228. These occurrences are too well-known for The Bahamas. As noted above, in 2019 Hurricane Dorian, the strongest hurricane on record to hit the region, displaced 9,840 people, killed over 200, and left behind an estimated US\$3 billion in damage.⁵⁹⁵ Almost half of the displaced Bahamians relocated to New Providence as internally displaced persons; hundreds of others dispersed to other islands, and several hundred went to the United States and Canada.⁵⁹⁶

229. Displacement severely and directly impairs the displaced persons' human rights, including the right to an adequate standard of living, which includes the right to adequate housing and food. It is also likely to interfere with their right to a dignified life, right to private and family life, right to education, right to health, and others. Thus, the territorial States will have an obligation to take positive steps to secure the affected persons' enjoyment of human rights, *e.g.*, by providing shelters, temporary schooling and health facilities, and food, water and electricity supplies.⁵⁹⁷

230. In addition, States' obligation to cooperate in addressing the harmful impacts of climate change includes cooperation with respect to displaced persons, including beyond their territorial jurisdiction.⁵⁹⁸ According to the ILC's Draft Articles on the Protection of Persons in the Event of Disasters, "States shall... cooperate among themselves, with the United

⁵⁹² HRC, Views adopted by the Committee under article 5 (4) of the Optional Protocol, concerning communication No. 2728/2016, document CCPR/C/127/D/2728/2016 (2020), para. 9.11.

⁵⁹³ See para. 21(c) above; Migration Data Portal, 'Environmental Migration' (last updated 20 December 2023), available at https://www.migrationdataportal.org/themes/environmental_migration_and_statistics.

⁵⁹⁴ *Ibid*.

⁵⁹⁵ *See* para. 33 above.

⁵⁹⁶ J. Marazita, *Displacement in Paradise: Hurricane Dorian Slams the Bahamas*, Thematic report of the Internal Displacement Monitoring Center (May 2020), p. 11.

⁵⁹⁷ See Section IV.C above. See also ILC, Draft articles on the protection of persons in the event of disasters, with commentaries (2016) (hereinafter "ILC Draft Articles on Protection of Persons in the Event of Disasters"), art. 5; United Nations Office for the Coordination of Humanitarian Affairs, Guiding Principles on Internal Displacement (1998), principle 18.

⁵⁹⁸ See Sections IV.C.2.(d)–(e) above. See also HRC, General Comment No. 36 on Article 6: right to life, document CCPR/C/GC/36 (2019), para. 62 ("States parties should therefore . . . provide notification to other States concerned about natural disasters and emergencies and cooperate with them").

Nations, with the components of the Red Cross and Red Crescent Movement, and with other assisting actors" in protecting the human rights of displaced persons.⁵⁹⁹ The Sydney Declaration of Principles on the Protection of Persons Displaced in the Context of Sea Level Rise, which is "based on and derived from relevant international legal provisions, principles, and frameworks", provides that States shall cooperate in responding to disaster and climate change-related risks, including by "efforts to ensure that persons moving across borders are admitted and received with respect for their safety, dignity, and human rights".⁶⁰⁰ At the regional level, African Union States are already subject to similar duties under the Kampala Convention.⁶⁰¹

- 231. In practice, this may include:
 - (a) the provision and coordination of immediate humanitarian relief, including provision of relief personnel, equipment, goods and resources;⁶⁰²
 - (b) offering legal status and benefits, including the right to reside and work, to persons displaced by climate change (through national legislation or international agreements, such as the recently concluded treaty between Australia and Tuvalu);⁶⁰³

⁵⁹⁹ See ILC Draft Articles on Protection of Persons in the Event of Disasters, art. 7.

⁶⁰⁰ ILA Committee on International Law and Sea Level Rise, *Resolution 6/2018: Sydney Declaration of Principles on the Protection of Persons Displaced in the Context of Sea Level Rise* (19–24 August 2018) (hereinafter "**Sydney Declaration**"), principle 4(2)(b).

⁶⁰¹ See, e.g., African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa (Kampala Convention), 23 October 2009, art. 5(2), (4) ("States Parties shall cooperate with each other upon the request of the concerned State Party or the Conference of States Parties in protecting and assisting internally displaced persons . . . States Parties shall take measures to protect and assist persons who have been internally displaced due to natural or human made disasters, including climate change.").

⁶⁰² See ILC Draft Articles on Protection of Persons in the Event of Disasters, commentary to art. 8, para. 2. See also United Nations General Assembly resolution 69/283, Sendai Framework for Disaster Risk Reduction 2015–2030, document A/RES/69/283 (23 June 2015), Annex II, para. 33(h); Sydney Declaration, principle 4.

⁶⁰³ The Nansen Initiative, Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change Volume I (December 2015), pp. 7–8, 36; Australia–Tuvalu Falepili Union Treaty, 9 November 2023, arts. 2–3; "Australia to offer residency to Tuvalu citizens displaced by climate change", The Guardian (10 November 2023), available at https://www.theguardian.com/australianews/2023/nov/10/australia-to-offer-residency-to-tuvalu-residents-displaced-by-climate-change. See also Sydney Declaration, principle 4.

(c) developing common legal frameworks to secure the rights of displaced persons and facilitate international cooperation.⁶⁰⁴

232. Ultimately, "[t]he forms that cooperation may take will necessarily depend upon a range of factors, including... the needs of the affected persons". ⁶⁰⁵ At any rate, in discharging their duties, States must act "in accordance with the principles of humanity, neutrality and impartiality, and on the basis of non-discrimination, while taking into account the needs of the particularly vulnerable."⁶⁰⁶

VI. CONSEQUENCES OF BREACH OF THE RELEVANT OBLIGATIONS

233. It is trite principle that "[e]very internationally wrongful act of a State entails the international responsibility of that State."⁶⁰⁷ This principle applies to breaches of *all* of the climate change obligations outlined in these submissions, whether they be characterised as obligations of conduct, obligations of result, procedural obligations, or some other designation. It follows from well-established rules of customary international law and treaty provisions regarding State responsibility. For example, Article 235(1) of UNCLOS provides that "States are responsible for the fulfilment of their international obligations concerning the protection and preservation of the marine environment . . . [and] shall be liable in accordance with international law".

234. The issue of State responsibility will necessarily depend on (*i*) the scope and formulation of the primary rule of international law invoked; and (*ii*) whether a relevant breach is attributable to the putative non-compliant State. Where it is alleged multiple States are responsible for the same internationally wrongful act, the responsibility of each State may be invoked in relation to the act.⁶⁰⁸ Where several States independently commit separate acts that contribute to an indivisible harm, responsibility may be allocated in accordance with

⁶⁰⁴ Intergovernmental Conference to Adopt the Global Compact for Safe, Orderly and Regular Migration, *Draft outcome document of the Conference*, document A/CONF.231/3 (2018), Annex: Global Compact for Safe, Orderly and Regular Migration, para. 18(k). *See also* Sydney Declaration, principle 4.

⁶⁰⁵ ILC Draft Articles on Protection of Persons in the Event of Disasters, commentary to art. 8, para. 6.

⁶⁰⁶ *Id.*, art. 6.

⁶⁰⁷ International Law Commission, *Responsibility of States for Internationally Wrongful Acts* (2001) (hereinafter "**ILC Articles on State Responsibility**"), art. 1.

⁶⁰⁸ *Id.*, art. 47.

either the principles of equity and proportionality, or general principles of joint and several liability, as appropriate to the circumstances of the particular case.⁶⁰⁹

235. Where a State contravenes a relevant climate change obligation, three main legal consequences follow: *first*, the State is under a continued duty to perform the obligation breached; *second*, the State has an obligation to cease the wrongful act; and *third*, the State is required to make full reparation for any injury caused.

A. THE DUTY OF PERFORMANCE

236. If a State breaches its international obligations regarding climate change, the underlying duty of performance is not extinguished; the State has a continuing obligation to perform the obligation.⁶¹⁰ Thus, for example, where a State fails to observe the obligations set forth in Sections IV and V above, that in no way diminishes or disrupts the State's legal obligation to affect a deep, rapid, and sustained reduction in net global anthropogenic GHG emissions, and to use all means at its disposal to address the harmful effects of anthropogenic GHG emissions on the environment and human life.⁶¹¹

B. THE DUTY TO CEASE THE WRONGFUL ACT

237. The responsible State must also cease the internationally wrongful act⁶¹² and offer appropriate assurances and guarantees of non-repetition if the circumstances so require.⁶¹³ Cessation is an inherent obligation of the responsible State. Therefore, the responsible State must cease the wrongful conduct, even if the injured State has not made a demand of

⁶⁰⁹ See C. Voigt, "State Responsibility for Climate Change Damages", 77 Nordic Journal of International Law (2008), p. 20.

⁶¹⁰ ILC Articles on State Responsibility, art. 29 ("The legal consequences of an internationally wrongful act under this Part do not affect the continued duty of the responsible State to perform the obligation breached.").

⁶¹¹ *See* para. 183 above.

⁶¹² An "act" encompasses both acts and omissions. See Commentary to art. 30, Draft Articles on the Responsibility of States for Internationally Wrongful Acts, Yearbook of the International Law Commission, 2001, Vol. II (Part Two) (hereinafter "ILC Commentaries on the Articles on State Responsibility"), pp. 88–89, para. 2.

⁶¹³ ILC Articles on State Responsibility, art. 30.

cessation. ⁶¹⁴ The duty of cessation is generally not subject to a requirement of proportionality.⁶¹⁵

238. Therefore, where a State breaches any of the climate change obligations outlined above⁶¹⁶, it is obligated to cease the offending action or omission. This may mean, for example, that the State is obligated to cease activities within its border which are inconsistent with international obligations and cause an excess of GHG emissions, and/or take affirmative steps to regulate the effective reduction of GHG emissions.⁶¹⁷ Even though a State may not be able to accomplish an effective reduction in GHG emissions or adaptation measures in a short period of time, the obligation of cessation persists, and the State must work in good faith to meet that goal.⁶¹⁸ If there are repeated violations, and the circumstances so require, the responsible State may also be required to give appropriate assurances and guarantees of non-repetition.

C. THE DUTY TO MAKE REPARATION

239. The third general obligation is the obligation to make full reparation. Upon commission of an internationally wrongful act, the responsible State is obligated to make "full reparation" for any injury caused by the internationally wrongful act,⁶¹⁹ whether the damage be material and moral in nature.⁶²⁰ In general, reparation is designed to place the aggrieved party in the same position as if no wrongful act had occurred, without respect to the cost or consequences for the wrongdoer.⁶²¹ The responsible State must endeavour to "wipe out all

⁶¹⁴ See D. Shelton, "Reparations", Max Planck Encyclopaedia of International Law, Oxford Public International Law, (last updated August 2015), para. 22, available at https://opil.ouplaw.com/display/10.1093/law:epil/9780199231690/law-9780199231690-e392.

⁶¹⁵ ILC Commentaries on the Articles on State Responsibility, commentary under art. 30, p. 89, para. 7.

⁶¹⁶ See Sections IV and V above.

⁶¹⁷ See, e.g., Urgenda Foundation v. The State of the Netherlands, The Hague Court of Appeal (9 October 2018), para. 73; State of the Netherlands v. Urgenda Foundation, The Supreme Court of the Netherlands (20 December 2019), para. 8.3.5 (requiring The Netherlands to further reduce GHG gas emissions). See also Trail Smelter Case, pp. 1965–1966 (requiring Canada to stop transboundary pollution).

⁶¹⁸ See C. Voigt, "State Responsibility for Climate Change Damages", 77 Nordic Journal of International Law (2008), p. 18.

⁶¹⁹ ILC Articles on State Responsibility, art. 31; Factory at Chorzów, Jurisdiction, Judgment No. 8, 1927, P.C.I.J., Series A, No. 9, p. 21; Factory at Chorzów, Merits, Judgment No. 13, 1928, P.C.I.J., Series A, No. 17, p. 47.

⁶²⁰ ILC Commentaries on the Articles on State Responsibility, commentary under art. 31, pp. 91–92, para. 5.

⁶²¹ D. Shelton, "Reparations", Max Planck Encyclopaedias of International Law, Oxford Public International Law, (last updated August 2015), available at https://opil.ouplaw.com/display/10.1093/law:epil/978019 9231690/law-9780199231690-e392, para. 3.

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."⁶²²

240. There are three ways in which the duty of "full reparation" may be fulfilled: through measures of restitution, compensation, or satisfaction.

1. Restitution

241. Restitution involves the reestablishment of the situation prior to the breach in so far as restitution is not materially impossible or wholly disproportionate.⁶²³ This may include the establishment or reestablishment of the situation that would have existed if the wrongful act had not been committed.⁶²⁴ Restitution has a broad meaning and can encompass any action that needs to be taken by the responsible State to restore the situation resulting from its internationally wrongful act.⁶²⁵ Typically restitution concerns some form of conduct on the part of the responsible State.⁶²⁶ However, what specifically is required will depend on the nature of the breach.

242. Given the serious and irreversible damage caused by climate change, it may be physically impossible for a responsible State to restore the situation prior to the breach. Financial compensation for the costs associated with the damage may be more appropriate.⁶²⁷

2. Compensation

243. The responsible State has an obligation to compensate the injured party for material or moral damage caused as result of a wrongful act, to the extent the damage is not addressed by restitution.⁶²⁸ Compensation is meant to address the "actual losses" and is therefore limited to

⁶²² Factory at Chorzów, Merits, Judgment No. 13, 1928, P.C.I.J., Series A, No. 17, p. 47 ("[R]eparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed"); ILC Commentaries on the Articles on State Responsibility, commentary under art. 31, p. 91, para. 3.

⁶²³ ILC Articles on State Responsibility, art. 35; ILC Commentaries on the Articles on State Responsibility, commentary under art. 35, pp. 96, 98, paras. 1, 7.

⁶²⁴ ILC Articles on State Responsibility, art. 35; ILC Commentaries on the Articles on State Responsibility, commentary under art. 35, p. 96, para. 2.

⁶²⁵ ILC Commentaries on the Articles on State Responsibility, commentary under art. 35, pp. 97–98, para. 5.

⁶²⁶ *Id.*, p. 96, para. 1.

 ⁶²⁷ See C. Voigt, "State Responsibility for Climate Change Damages", 77 Nordic Journal of International Law (2008), p. 18.

⁶²⁸ ILC Articles on State Responsibility, art. 36(1); *Factory at Chorzów, Merits, Judgment No. 13, 1928, P.C.I.J., Series A, No. 17*, p. 48 (the responsible State was under "the obligation to restore the undertaking and, if this be not possible, to pay its value at the time of the indemnification, which value is designed to take the place of restitution which has become impossible."). See also Gabčíkovo-Nagymaros Judgment,

damages actually suffered as a result of the internationally wrongful act, and does not operate to punish the responsible State.⁶²⁹ Compensation is aimed at remedying both the damage suffered by the State itself as well as damage suffered by nationals on whose behalf the State is claiming within the framework of diplomatic protection.⁶³⁰

244. Given that restitution is likely to be impossible in the context of climate change, the responsible States will likely be obligated to pay compensation for material and moral damages flowing from their wrongful acts. Material damages would include potential loss of infrastructure, property, and other clearly defined economic assets, including costs incurred in responding to climate change, such as the costs associated with climate adaptation measures.⁶³¹ Moral damage would include such injuries as individual pain and suffering, loss of life, or the sense of affront caused by the relevant wrongful act.⁶³²

3. Satisfaction

245. A responsible State will be obligated to give satisfaction for the injury caused by its wrongful act insofar as it cannot be made good by restitution or compensation.⁶³³ Satisfaction can take the form of an acknowledgement of the breach, an expression of regret, a formal apology, or another appropriate modality.⁶³⁴ However, the measure must be proportional to the injury caused.⁶³⁵ Satisfaction may be the appropriate remedy for climate change injuries that are not financially assessable and that amount to an affront to the injured State.⁶³⁶

p. 81, para. 152 ("It is a well-established rule of international law that an injured State is entitled to obtain compensation from the State which has committed an internationally wrongful act for the damage caused by it.").

⁶²⁹ ILC Commentaries on the Articles on State Responsibility, commentary under art. 36, p. 99, para. 4; *id.*, commentary under art. 34, p. 96, para. 5.

⁶³⁰ ILC Commentaries on the Articles on State Responsibility, commentary under art. 36, p. 99, para. 5.

⁶³¹ Id., commentary under art. 31, pp. 91–92, para. 5; C. Voigt, "State Responsibility for Climate Change Damages", 77 Nordic Journal of International Law (2008), p. 18.

⁶³² ILC Commentaries on the Articles on State Responsibility, commentary under art. 31, pp. 91–92, para. 5.

⁶³³ ILC Articles on State Responsibility, art. 37(1).

⁶³⁴ *Id.*, art. 37(2).

⁶³⁵ *Id.*, art. 37(3).

⁶³⁶ ILC Commentaries on the Articles on State Responsibility, commentary under art. 37, p. 106, para. 3.

VII. INVOCATION OF INTERNATIONAL RESPONSIBILITY

246. A State is entitled to invoke the international responsibility of another State for breach of climate change obligations when the obligation breached is owed to the injured State individually.⁶³⁷ States are also entitled to invoke the international responsibility for violations of climate change obligations which are owed *erga omnes*.⁶³⁸ The invocation of responsibility *erga omnes* does not require a showing that the invoking State has itself suffered an "injury".⁶³⁹

247. The Court has described *erga omnes* obligations as those that "each State . . . has an interest in compliance with . . . in any given case".⁶⁴⁰ Thus, for example, in *Application of the Genocide Convention*, the Court noted that the obligations under the Genocide Convention were *erga omnes* because there was a "common interest" in ensuring compliance with the obligation to prevent, suppress, and punish genocide.⁶⁴¹ In *Obligation to Prosecute or Extradite*, the Court concluded that certain obligations under the Convention Against Torture were of an *erga omnes* character because they engaged the "shared values" of the States parties.⁶⁴² And in *Barcelona Traction*, the Court concluded that all States had a legal interest in the obligations owed to the international community as a whole "[i]n view of the importance of the rights involved" in that case.⁶⁴³

⁶³⁷ ILC Articles on State Responsibility, art. 42(a).

⁶³⁸ *Id.*, art. 48.

⁶³⁹ See Application of the Convention on the Prevention and Punishment of the Crime of Genocide (The Gambia v. Myanmar), Preliminary Objections, Judgment, I.C.J. Reports 2022, p. 477, paras. 106–112.

⁶⁴⁰ Application of the Convention on the Prevention and Punishment of the Crime of Genocide (The Gambia v. Myanmar), Preliminary Objections, Judgment, I.C.J. Reports 2022, p. 516, para. 107 (citing Questions relating to the Obligation to Prosecute or Extradite (Belgium v. Senegal), Judgment, I.C.J. Reports 2012, p. 442, para. 68); see also Resolution of the Institut de Droit International, Obligations and rights erga omnes in international law, Krakow Session (2005), art. 1 ("an obligation erga omnes is (a) an obligation under general international law that a State owes in any given case to the international community, in view of its common values and its concern for compliance, so that a breach of that obligation enables all States to take action; or (b) an obligation under a multilateral treaty that a State party to the treaty owes in any given case to all the other States parties to the same treaty, in view of their common values and concern for compliance, so that a breach of that obligation.").

 ⁶⁴¹ Application of the Convention on the Prevention and Punishment of the Crime of Genocide (The Gambia v. Myanmar), Preliminary Objections, Judgment, I.C.J. Reports 2022, p. 515, para. 107.

⁶⁴² *Questions relating to the Obligation to Prosecute or Extradite (Belgium v. Senegal), Judgment, I.C.J. Reports 2012, p. 449, para. 68.*

⁶⁴³ Barcelona Traction, Light and Power Company, Limited (New Application: 1962) (Belgium v. Spain), Second Phase, Judgment, I.C.J. Reports 1970, p. 32, para. 33.

248. The Bahamas submits that the various climate change obligations set out in Sections IV and V are also owed erga omnes because underlying them are "shared values" and a "common interest" in compliance.⁶⁴⁴ The common interest of the international community in complying with the obligations is well-established, both as a matter of science, law, and In Gabčíkovo-Nagymaros, the Court noted that "safeguarding the political consensus. ecological balance has come to be considered an 'essential interest' of all States" and that it attaches "great significance...to respect for the environment...for the whole of mankind".⁶⁴⁵ In his Separate Opinion in that case, Judge Weeramantry argued that international norms regarding environmental protection were analogous to other erga omnes obligations (e.g., under international human rights law) and suggested that cases involving "environmental damage of a far-reaching and irreversible nature" implicated erga omnes obligations.⁶⁴⁶ In the law of the sea context, ITLOS has held that the obligations regarding the preservation of the marine environment constitute erga omnes obligations.⁶⁴⁷ Various States⁶⁴⁸ and distinguished publicists⁶⁴⁹ have also affirmed that obligations regarding the protection of the environment, including from GHG emissions have erga omnes character.

⁶⁴⁴ Cf. Application of the Convention on the Prevention and Punishment of the Crime of Genocide (The Gambia v. Myanmar), Preliminary Objections, Judgment, I.C.J. Reports 2022, para. 107; Questions relating to the Obligation to Prosecute or Extradite (Belgium v. Senegal), Judgment, I.C.J. Reports 2012, p. 449, para. 68.

⁶⁴⁵ Gabčíkovo-Nagymaros Judgment, p. 41, para. 53. See also Paris Agreement, preamble ("Acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations"); UNFCCC, preamble ("Acknowledging that change in the Earth's climate and its adverse effects are a common concern of humankind"); ILC, Report on the Work of its Seventieth Session, document A/73/10 (2008), Guidelines on the Protection of the Atmosphere, preamble.

Gabčikovo-Nagymaros Project (Hungary v. Slovakia), Separate Opinion of Vice-President Weeramantry, I.C.J. Reports 1997, pp. 91–92 ("The protection of the environment is likewise a vital part of contemporary human rights doctrine, for it is a sine qua non for numerous human rights such as the right to health and the right to life itself . . . [D]amage to the environment can impair and undermine all the human rights spoken of in the Universal Declaration and other human rights instruments."); id., pp. 117–118 ("An important conceptual problem arises when, in such a dispute inter partes, an issue arises regarding an alleged violation of rights or duties in relation to the rest of the world. The Court, in the discharge of its traditional duty of deciding between the parties, makes the decision which is in accordance with justice and fairness between the parties. The procedure it follows is largely adversarial. Yet this scarcely does justice to rights and obligations of an erga omnes character—least of all in cases involving environmental damage of a farreaching and irreversible nature . . . There has been conduct on the part of Hungary which, in ordinary inter partes litigation, would prevent it from taking up wholly contradictory positions. But can momentous environmental issues be decided on the basis of such inter partes conduct? In cases where the erga omnes issues are of sufficient importance, I would think not.").

⁶⁴⁷ Activities in the Area Advisory Opinion, para. 180.

⁶⁴⁸ ILC, Protection of the Atmosphere: Comments and Observations Received from Governments and International Organizations, document A/CN.4/735, pp. 21–22 (noting that Antigua and Barbuda and Germany stated that the obligation to protect the atmosphere is *erga omnes*).

249. Given the *erga omnes* character of the climate change obligations outlined herein, The Bahamas submits that States are entitled to invoke responsibility for violations of those obligations, and need not prove a special interest or injury to do so.⁶⁵⁰

See, e.g., Resolution of the Institut de Droit International, Obligations and rights erga omnes in international law, Krakow Session (2005), preamble (noting that the "wide consensus to the effect that . . . obligations relating to the environment of common spaces are examples of obligations reflecting [the] fundamental values" of the international community); ILC, Third Report of the Special Rapporteur James Crawford on State Responsibility, document A/CN/4/507/Add.4 (2000), p. 100, para. 379; Patrick Daillier et al, Droit International Public (9th ed. 2022), p. 1750 ("Il n'en reste pas moins que l'environnement est de plus en plus perçu comme une valeur commune à l'humanité tout entière dont la préservation est l'affaire de la communauté internationale dans son ensemble, et que l'on retrouve dans les règles qui lui sont applicables la plupart des principes relatifs au patrimoine commun de l'humanité : absence de réciprocité et nature erga omnes des obligations des États, principes de gestion rationnelle, non-appropriation."). See also O. Quirico, "Towards a Peremptory Duty to Curb Greenhouse Gas Emissions", 44 Fordham International Law Journal (2021) 923, p. 937.

⁶⁵⁰ See Questions relating to the Obligation to Prosecute or Extradite (Belgium v. Senegal), Judgment, I.C.J. Reports 2012, p. 450, para. 69; Resolution of the Institut de Droit International, Obligations and rights erga omnes in international law, Krakow Session (2005), art. 1 (a breach of an obligation erga omnes "enables all States to take action").

Respectfully submitted,

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