INTERNATIONAL COURT OF JUSTICE

OBLIGATIONS OF STATES IN RESPECT OF CLIMATE CHANGE

(REQUEST FOR ADVISORY OPINION)

Written statement of the Republic of Peru

20 MARCH 2024

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I. Introduction

1. On 29 March 2023, the United Nations General Assembly (UNGA) adopted by consensus Resolution 77/276 entitled "Request for an advisory opinion of the International Court of Justice on the obligations of States in respect of climate change." The resolution was communicated to the International Court of Justice (ICJ) on 12 April 2023. The question submitted to the Court is as follows:

   "*Having particular regard to the Charter of the United Nations, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, the United Nations Framework Convention on Climate Change, the Paris Agreement, the United Nations Convention on the Law of the Sea, the duty of due diligence, the rights recognized in the Universal Declaration of Human Rights, the principle of prevention of significant harm to the environment and the duty to protect and preserve the marine environment,*

   (a) What are the obligations of States under international law to ensure the protection of the climate system and other parts of the environment from anthropogenic emissions of greenhouse gases for States and for present and future generations;

   (b) What are the legal consequences under these obligations for States where they, by their acts and omissions, have caused significant harm to the climate system and other parts of the environment, with respect to:

   (i) States, including, in particular, small island developing States, which due to their geographical circumstances and level of development, are injured or specially affected by or are particularly vulnerable to the adverse effects of climate change?

   (ii) Peoples and individuals of the present and future generations affected by the adverse effects of climate change?"

2. As established in the Order of the President of the Court of 20 April 2023, the Republic of Peru presents its written statement on the questions related to the advisory opinion requested by the UNGA 77/276, adopted by consensus on 29 March 2023.

3. Peru participates in this advisory proceeding at a multilateral level by presenting this written statement for consideration by the Court. This written statement is structured in four sections. The first section addresses questions relating to the ICJ's jurisdiction to render an advisory opinion, as requested, and the admissibility of the request, as adopted by consensus in the UNGA. The second section describes background information about Peru's situation with regard to climate change. The third section presents Peru's views on the issues submitted to the Court. Finally, there is a section on the conclusions drawn.

II. Jurisdiction and Admissibility

4. The jurisdiction of the International Court of Justice is enshrined in Article 96(1) of the Charter of the United Nations, which states that:

   "The General Assembly or the Security Council may request the International Court of Justice to give an advisory opinion on any legal question".

5. Also, Article 65(1) of the Statute of the International Court of Justice states that:

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

6. On the basis of these provisions, the UNGA is expressly empowered by Article 96(1) of the UN Charter to request an advisory opinion of the International Court of Justice "on any legal question".

7. The two questions posed by the UNGA are clearly "legal questions", one focusing on the "obligations of states under international law" and the other on "the legal consequences under these obligations".

8. Resolution 77/276 was adopted by consensus by the UNGA. This shows that there is broad agreement among Member States that the questions raised are legal issues and that it is urgent and relevant for the International Court of Justice to address them within the framework of its advisory jurisdiction.

III. Climate Change, Cause, Impacts and Actions in Peru

A. Scientific Consensus regarding Climate Change, its Cause and Impacts

9. The Synthesis Report (SYR) of the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (AR6) states that human activities, principally through emissions of greenhouse gas, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above the 1850-1900 period in 2011-2020. The report also indicates that global greenhouse gas emissions have continued to increase, with unequal historical and current contributions arising from unsustainable energy use, land use and land-use change, lifestyles and patterns of consumption and production across regions, between and within countries, and among individuals.[1]

10. According to the IPCC's Sixth Assessment Report, it is unequivocal that climate change has already affected human and natural systems. Worldwide, past and current development pathways have not advanced climate resilient development. Social actions implemented in this decade will determine the extent to which future trends will generate greater or lesser climate impacts. It also points out that widespread adverse impacts and related losses and damages to nature and people have occurred, and that vulnerable communities who have historically contributed the least to current climate change are disproportionately affected.[2]

11. The IPCC report highlights that human and ecosystem vulnerability are interdependent, especially in developing countries, stating: *"Regions and people with considerable development constraints have high vulnerability to climatic hazards. Increasing weather and climate extreme events have exposed millions of people to acute food insecurity and reduced water security, with the largest adverse impacts observed in many locations and/or communities in Africa, Asia, Central and South America, the [the least developed countries] LDCs, Small Islands and the Arctic, and globally for Indigenous Peoples, small-scale food producers and low-income households. Between 2010 and 2020, human mortality from floods, droughts and storms was 15 times higher in highly vulnerable regions, compared to regions with very low vulnerability.*[3]"

[1] IPCC. Synthesis Report of the IPCC Sixth Assessment Report, Summary for Policymakers, 2023, paragraph A.1, available at: https://www.ipcc.ch/report/sixth-assessment-report-cycle/

[2] Ibid., paragraph A.2.

[3] Ibid., paragraph A.2.2.

12. The report also recognises that hundreds of local losses of species have been driven by increases in the magnitude of heat extremes, with mass mortality events recorded on land and in the ocean. Some losses are irreversible, such as the extinction of the first species caused by climate change. Other impacts are approaching irreversibility, such as the impacts of hydrological changes resulting from the retreat of glaciers, or the changes in some mountain and Arctic ecosystems driven by permafrost thaw.[4]

13. Climate change will put increasing pressure on food production and access to food, especially in vulnerable regions, undermining food security and nutrition. Increases in frequency, intensity and severity of droughts, floods and heatwaves, and continued sea level rise will increase risks to food security.[5]

14. With regard to public health impacts, the IPCC recognises that the occurrence of climate-related food-borne and water-borne diseases and the incidence of vector-borne diseases have increased.[6]

15. A regional analysis of the vulnerability and climate risk analysis of the Amazon biome and its natural protected areas found that there is evidence to indicate that the quality and quantity of ecosystem services provided by the Amazon biome are likely to be adversely affected by climate change.[7]

16. Over the past two decades, greenhouse gas emissions accelerated the rate of ocean warming and its heat content, with 2022 as the highest year on record up to 2023. Ocean warming and accelerated loss of ice mass from the ice sheets contributed to the rise of the global mean sea level by 4.62 mm per year between 2013 and 2022, reaching a new record high in 2022.[8]

17. Sea levels continued to rise at a higher rate in the South Atlantic and the subtropical North Atlantic compared to the global mean, threatening the continental coastal areas of several Latin American and Caribbean countries.[9]

18. The IPCC concludes that without rapid, deep, and sustained mitigation and accelerated adaptation actions, losses and damages will continue to increase, including projected adverse impacts in Africa, LDCs, small island developing States (SIDS), Central and South America, Asia and the Arctic, and will disproportionately affect the most vulnerable populations.[10]

19. Peru has historically contributed less than 0.5% of global greenhouse gas emissions for the period 1994 to 2019[11]. According to this latest measurement,

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[4] Ibid., paragraph A.2.3.

[5] Ibid., paragraph A.2.1, A.2.2.

[6] Ibid., paragraph A.2.5.

[7] Prüssmann J. et al. *Análisis de vulnerabilidad y riesgo climático del bioma amazónico y sus áreas protegidas* [*Vulnerability and climate risk analysis of the Amazon biome and its protected areas].* Cali (Colombia): WWF, REDPARQUES Colombia Natural National Parks, Ministry of the Environment - Ecuador, Ministry of the Environment - Peru/ National Service of Natural Protected Areas, 2016, p. 48, available at: https://www.researchgate.net/publication/309920729_Analisis_de_Vulnerabilidad_y_Riesgo_Climatico_del_Bioma_Amazonico_y_sus_Areas_Protegidas

[8] World Meteorological Organization (WMO). *State of the Climate in Latin America and the Caribbean in 2022*. WMO, No. 1322, 2023, Geneva: WMO, 2023, p. 5.

[9] Ibid., p. 11.

[10] IPCC. Synthesis Report, (Cf. footnote 1 above), paragraph C.2.2

[11]Climate Watch, Historical GHG Emissions, available at: https://www.climatewatchdata.org/ghg-emissions?end_year=2019&source=Climate%20Watch&start_year=1994

Peru's net greenhouse gas emissions accounted for only 0.42% of global emissions.[12]

B. Peru's Risks and Vulnerability to the Adverse Effects of Climate Change

20. Peru is a developing country adversely affected by climate change, despite having historically contributed less than 0.5 percent of global greenhouse gas emissions. It has over 33 million inhabitants, including 55 Indigenous Peoples, four of them in the Andean region, and 51 in the Amazon, some of them in voluntary isolation and initial contact.[13] Over 60 percent of its territory is covered by the Amazon rainforest. It is crossed by the Andes mountain range, which holds 68 percent of the world's tropical glaciers. It has 3,080 km of coastline bordering the Pacific Ocean. This coastal area includes elevations in the 0 to 500 m.a.s.l. range. The coast accounts for 10 percent of the territory and is home to over 50 percent of Peru's population and its economic activities.

21. Peru is one of the world's 17 megadiverse countries, hosts 70 percent of the planet's biodiversity of flora and fauna, it is one of the world's largest genetic resources centres and comprises 84 of the 104 life zones on the planet. Some 25,000 species of flora occur in Peru (10 percent of the world's total), of which 30 percent are endemic. Peru ranks first in the world number of fish species; second in bird fauna; third in amphibians and in mammals, and fifth in reptiles.

22. Climate change is a global phenomenon, however its consequences affect countries, regions and populations differently, depending on structural socio-environmental factors, among other variables.

23. Considering current trends in greenhouse gas concentrations, the climate scenarios projected for 2050 show that minimum and maximum temperatures throughout Peru will reach values higher than 2°C compared to those of the 1981-2005 reference period.[14] In particular, maximum temperature increases will occur in the Andes and the Amazon regions, which host very fragile ecosystems. As for the minimum temperature, the largest above-average increases will occur in the Andes.[15]

24. Peru meets seven of the nine special circumstances described in Article 4.8 of the United Nations Framework Convention on Climate Change (UNFCCC)[16]:

    - Country with low-lying coastal areas;
    - Country with arid and semi-arid areas, forested areas and areas liable to forest decay;

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[12] Ministry of the Environment (MINAM). *National Greenhouse Gas Inventory reported in the Third Biennial Update Report of Peru*. Lima: MINAM, 2019, available at: https://unfccc.int/sites/default/files/resource/Tercer%20BUR_Per%C3%BA_Jun2023.pdf

[13] Ministry of Culture (MINCUL, acronym in Spanish), n.d. Indigenous or Native Peoples Database [*Base de Datos de Pueblos Indígenas u Originarios*], available at: https://bdpi.cultura.gob.pe/pueblos-indigenas

[14] Llacza, A. et al. *Escenarios climáticos al 2050 en el Perú: Cambios en el clima promedio* [*Climate scenarios by 2050 for Peru: Changes in average weather]*. Lima: SENAMHI, 2021, pp.67-69, available at: https://hdl.handle.net/20.500.12542/1470.

[15] Ibid., p. 29; United Nations Development Program (UNDP). *Análisis de Riesgo al Cambio Climático. Riesgo ecosistémico y social frente al cambio climático para el bioma amazónico en seis departamentos del Perú: Cusco, Huánuco, Junín, Madre de Dios, Pasco y Ucayali* [*Risk Analysis of Climate Change. Ecosystemic and Social Risk in the face of climate change for the Amazonian biome in six departments of Peru: Cusco, Huánuco, Junín, Madre de Dios, Pasco, and Ucayali]*. Lima: UNDP, 2021, p. 87.

[16] Ministry of the Environment of Peru (MINAM, acronym in Spanish). *Estrategia Nacional ante el Cambio Climático* [*National Strategy on Climate Change* (ENCC, acronym in Spanish)]. Lima: MINAM, 2015, p.20.

- Country with areas prone to natural disasters;
- Country with areas liable to drought and desertification;
- Country with areas of high urban atmospheric pollution;
- Country with areas with fragile ecosystems, including mountainous ecosystems;
- Country whose economy is highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products.

25. According to the IPCC, displacement of people will increase in the medium to long term with the intensification of extreme weather events, heat waves, heavy precipitation and associated floods, tropical cyclones, droughts, and sea level rise, among other adverse effects.[17]

26. The adverse effects of climate change are present throughout Peru and include both extreme and slow-onset events. In Peru, events related to climate phenomena trigger 67 percent of the disasters recorded in its territory.[18]

27. Over the past two decades, Peru has made progress in economic growth and implemented a sustainable development process to reduce poverty and extreme poverty and address the social needs of its population. It also promotes the reduction of infrastructure gaps. Despite Peru's economic growth, the resources of the Peruvian government are insufficient to meet all the needs of climate change adaptation and mitigation, which is why international investment and cooperation and compliance with international climate finance goals are so necessary.

28. During 2003-2020, the National Institute for Civil Defence (INDECI, acronym in Spanish) recorded 67,836 climate related emergencies in Peruvian territory.[19] The consequences of these events have devastating effects on people, including the loss of housing, school facilities, and health centres, and damaging crops. Such material losses can lead to the displacement of people.[20]

29. Specifically, 27 percent of the Peruvian territory has high/very high susceptibility to mass movements, among the most frequent hazards that mainly affect the Andean areas. Recurring floods are another type of hazard that affects the lower Amazon areas with dynamic fluvial processes and the final stretches of rivers as they approach the Peruvian coast. On the other hand, drylands represent 40 percent of Peru's surface area, and 30 million hectares are undergoing a process of desertification, accelerated by climate change.[21]

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[17] IPCC. Synthesis Report, 2023 (Cf. footnote 1 above), paragraphs A.2.1, A.2.5.

[18] United Nations Development Programme (UNDP) *Cambio Climático y Territorio: En busca de sostenibilidad para el desarrollo humano en el Perú [Climate Change and Territory: Searching Human Development and Sustainability in Peru]*. Lima: UNDP, 2014. p. 13.

[19] National Institute for Civil Defence (INDECI). *Compendio Estadístico del INDECI 2020 en la Preparación, Respuesta y Rehabilitación de la GRD* [S*tatistical Digest: DRM- Preparedness, Response, and Recovery].* vol. II. Lima: INDECI, 2020, pp.67-117, available at: https://portal.indeci.gob.pe/wp-content/uploads/2021/02/CAPITULO-II-Estad%C3%ADsticas-GR-2019.pdf

[20] International Organization for Migration (IOM). *Documento Técnico: Plan de Acción para Prevenir y Atender la Migración Forzosa por Efectos del Cambio Climático* [*Technical Document: Plan of Action to Prevent and Address Forced Migration due to Climate Change]*. Lima: IOM, 2023, p.73.

[21] Ministry of the Environment of Peru (MINAM). *Plan Nacional de Adaptación al Cambio Climático del Perú: Un insumo para la actualización de la Estrategia Nacional de Cambio Climático* [*Peru's National Adaptation Plan (NAP): An input to update the National Climate Change Strategy].* Lima: MINAM, 2021, p.89.

C. Impacts of climate change in Peru

30. Peru is significantly exposed to climate change impacts, hence its high vulnerability. Extreme and slow-onset events, such as frosts, heavy rains, floods, glacial retreat, droughts, among others, adversely impact ecosystems, biodiversity, water and fisheries resources, agriculture and food security, health and infrastructure. In this regard, evidence of the different impacts is presented below.

i. Composition, Resilience or Productivity of Natural Ecosystems

- **Amazon Region**

31. If anthropogenic emissions do not decrease globally by 2050, biomes in Peru are expected to reduce their territorial extent by at least 18 percent. These changes will particularly affect glaciers and wetlands (marshes), which are the most vulnerable biomes and will likely lose more than 50 percent of their current area. Approximately 70 percent of plant species in the Amazon could disappear by 2080 due to climate change, leading also to a loss of genetic diversity, with the risk of extinction of many more species of plants and animals.[22]

32. In recent decades, the impact of global warming has led to changes in weather conditions in the Amazon region. Among such changes are increases in average annual temperature, reductions in average annual rainfall, droughts, and heat waves.[23] If these trends continue, tropical rainforests cover would dwindle significantly and would be replaced by savannas. Endemic species would be replaced by those of tropical and subtropical savannas, which would profoundly affect the ecological diversity of the Peruvian Amazon and impact native communities.[24]

33. It would be of great concern that the balance of peatland ecosystems were to be affected. Such ecosystems cover more than 62,000 km^2 of the Peruvian Amazon rainforest and are extremely important as carbon sinks and sources of resources that contribute to the food security of Amazonian rural communities. They account for 15 to 22 percent of rural families' monthly income, generating direct benefits for the local population, keeping the forest standing, and reducing greenhouse gas emissions.[25] Climate change may cause rapid losses of these carbon reservoirs and turn them into carbon emitting sources.

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[22] Zevallos, J; Lavado-Casimiro, W. "Climate change impact on Peruvian biomes." Forests, 13(2), 2022, p. 12, available at: https://doi.org/10.3390/f13020238;Smith, C. et al. "Secondary forests offset less than 10 percent of deforestation-mediated carbon emissions in the Brazilian Amazon." *Global Change Biology*, 26(12), 2020, pp. 7006-7017, available at: https://doi.org/10.1111/gcb.15352; Miles, L. et al. "The impact of global climate change on tropical forest biodiversity in Amazonia". *Global Ecology and Biogeography*, 13(6), 2004, pp.553-565.

[23] National Service of Natural Areas Protected by the State (SERNANP, acronym in Spanish). Análisis de la vulnerabilidad y estrategias para la adaptación del cambio climático en la Reserva Comunal El Sira-Perú [*Vulnerability analysis and strategies for climate change adaptation in the El Sira Community Reserve]*. Lima: MINAM, 2011, p. 7.

[24] Salazar L. et al. "Climate change consequences on the biome distribution in tropical South America". *Geophysical Research Letters*, 34(9), 2007, pp. 1-5, available at: https://doi.org/10.1029/2007GL029695

[25] Hastie, A. et al. "Risks to carbon storage from land-use change revealed by peat thickness maps of Peru". *Nature Geoscience*, 15, 2022, pp. 369–374, available at: https://doi.org/10.1038/s41561-022-00923-4;

34. In addition, other hazards associated with climate change, such as increased frequency and intensity of wildfires, may directly impact biodiversity loss and generate higher greenhouse gas emissions.[26]

- **Oceans**

35. The ocean acts as a climate regulator, acting as a sink for excess heat caused by climate change, and is the main source of carbon dioxide uptake. This uptake, however, alters the chemical, physical, biological, and geological composition of the ocean, leading to various negative effects. The most evident impacts of climate change on the ocean are warming, acidification, and sea level rise.[27]

36. Sea surface temperature variability increased by 20 percent in the eastern and central equatorial Pacific from 1901-1960 to 1961-2020.[28] Sea surface temperature near the Peruvian coast would increase by 2 to 4°C by the end of the 21st century under a pessimistic climate scenario.[29]

37. Between 1951-1980 and 1991-2020, an average increase in sea surface temperature off the northern coast of Peru of about 0.5°C, and a slight cooling in the central-southern coastal strip have been observed. However, the cooling trend has not remained in recent years, with some areas showing an advance of warm ocean waters towards the coast since 2008.[30]

38. According to regionalised global models, if current conditions of greenhouse gas emissions continue, sea surface temperatures (reaching 2 to 4 °C) and thermal stratification of the water column are expected to significantly increase by 2100.[31]

39. Offshore winds would weaken by up to 5 to 10 percent during the summer months, particularly in the north of the country[32] resulting in weak coastal upwelling, which would decrease biological production, and in turn, lead to lower fisheries production.[33] In addition, this would increase the likelihood of anomalous

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Hidalgo, C. et al. "Sustainable palm fruit harvesting as a pathway to conserve Amazon peatland forests". *Nature Sustainability*, 5, 2022, pp. 479–487, available at: https://doi.org/10.1038/s41893-022-00858-z

[26] Ministry of the Environment of Peru (MINAM). *Peru National Adaptation Plan (NAP).* (Cf. footnote 20 above), pp. 60-63.

[27] Cf., for example, the reports of the United Nations Secretary-General on "The effects of climate change on oceans", (A/72/70), 6 March 2017; and "Sea-level rise and its impacts", (A/75/70), 16 March 2020. Also, on this issue, see the work of the Study Group of the International Law Commission of the United Nations. International Law Commission. *Analytical Guide to the Work of the International Law Commission: Sea-level rise in relation to international law*, available at: https://legal.un.org/ilc/guide/8_9.shtml

[28] Cai, W. et al. "Changing El Niño–Southern Oscillation in a warming climate". *Nature Review Earth and Environment*, 2, 2021, pp. 628-644, available at: https://doi.org/10.1038/s43017-021-00199-z.

[29] Oerder, V. et al. "Peru-Chile upwelling dynamics under climate change". JGR Oceans, 120(2), 2015, pp. 1152-1172, available at: https://doi.org/10.1002/2014JC010299.

[30] Gutiérrez, D. et al. "Productivity and Sustainable Management of the Humboldt Current Large Marine Ecosystem under climate change". *Environmental Development*, 17(1), 2016, pp.134-135.

[31] Echevin, V. et al. "Physical and biogeochemical impacts of RCP8.5 scenario in the Peru upwelling system". *Biogeosciences,* 17(12), 2020, pp. 3317-3341.

[32] Chamorro, A. et al. "Projection of upwelling-favorable winds in the Peruvian upwelling system under the RCP8.5 scenario using a high-resolution regional model". *Climate Dynamics*, 57, 2021, pp.1-16.

[33] Ramos, J. *Ecological risk assessment (ERE) of the impacts of climate change on Peruvian anchovy and other fishery and aquaculture key species of the coastal marine ecosystem of Perú. Project: Adaptation to Climate Change of the Fishing Sector and the Marine-Coastal Ecosystem of Perú*. Lima: PRODUCE-IMARPE-MINAM, 2017, pp.50-55.

warm events, consistent with global predictions of increased precipitation associated with El Niño events.[34]

40. Increased stratification, on the other hand, could decrease the dissolved oxygen content of the water, and CO2 uptake could increase ocean acidification.[35]

41. These changes could decrease concentrations of phytoplankton and zooplankton in the surface and negatively affect populations of species associated with marine fisheries and aquaculture. This impact, in turn, would have a number of negative effects on humans, particularly on the population's diet and on vulnerable populations that depend on marine resources, such as artisanal fishermen.

- **Cryosphere:**

42. Peru holds 68 percent of the world's tropical glaciers and has lost 1,348.75 km^2 of its glacier surface- *i.e.* a 56 percent loss in just 58 years.[36] In some mountain ranges, this loss is as high as 100 percent.[37] By 2050, all Peruvian glaciers are at very high risk of retreat.[38] Indeed, the IPCC estimates that, in the coming decades, in a scenario of high greenhouse gas emissions, changes in the cryosphere would increase even more.

43. Glacial retreat, due to the increase in temperature, affects the water supply for various uses. It also reduces the possibility of hydropower production, the main source of energy in the Peru (nearly 65 percent).[39]

44. Glacial retreats due to the increased temperatures in recent decades have alsoresulted in the formation of new glacial lagoons, increasing the potential of a glacial lake outburst flood, known as GLOF (Glacier Lake Outburst Flood) and subsequently cause devastating floods.[40]

ii. Operation of the socio-economic systems

45. Peru is a developing country with high levels of poverty (22.5 percent) and extreme poverty (5 percent). In Peru, 9 of 25 regions have poverty rates between 30 percent and 44 percent. It is estimated that four out of ten Peruvians remain at risk of falling into poverty if they are hit by an adverse weather event.[41]

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[34] Zavala, R. et al (eds.). *Avances del Perú en la adaptación al cambio climático del sector pesquero y del ecosistema marino-costero [Progress in Adaptation to the Impacts of Climate Change on Peru's Coastal Marine Ecosystem and Fisheries].* Lima: Interamerican Development Bank (IDB), 2019 p. 50.

[35] Gutiérrez, D. et al. Productivity and Sustainable Management of the Humboldt Current (Cf. footnote 30 above), p.136.

[36] National Institute for Research in Glaciers and Mountain Ecosystems of Peru (INAIGEM). *Memoria Descriptiva del Inventario Nacional de Glaciares y Lagunas de Origen Glaciar [National Inventory of Glaciers and Glacial Lagoons]*. Huaraz: INAIGEM, 2023, pp. 42-45.

[37] Ibid.

[38] Ministry of the Environment of Peru (MINAM). *Peru National Adaptation Plan (NAP)* (Cf. footnote 20 above), p. 25.

[39] Economic Operation Committee of the National Interconnected Power Grid (COES, acronym in Spanish). *Producción de energía [Energy production]*. Report as of 4 March 2024. Available at: https://www.coes.org.pe/Portal/portalinformacion/VisorPowerBI.

[40] National Institute for Research in Glaciers and Mountain Ecosystems of Peru (INAIGEM). *National Inventory of Glaciers and Glacial Lagoons*. (Cf. footnote 36 above), p. 36.

[41] Bergmann, J. et al. *Assessing the Evidence: Climate Change and Migration in Peru*. Geneva: IOM, 2021, pp.19-23.

46. In this context, global failure to act on climate change would cost Peru a 11 to 20 percent GDP loss by 2050 and a loss in per capita income of around 9 percent by 2050, and 22 percent by 2100.[42]

- **Agriculture and Food Security**

47. In 2014, the Inter-American Development Bank (IDB) estimated that climate change would result in economic losses in the agricultural sector of PEN 5-6 billion (approximately USD 1.5 billion) by the end of the 21st century.[43]

48. Regarding Peru's agricultural production area, about 123,292 km² (32 percent) and 99,901 km² (26 percent) are highly and very highly exposed, respectively, to events associated with climate change such as floods, mass movements, glacial retreat, changes in arid land conditions, among others.[44]

49. In this context, an estimated 50 percent of agricultural producers have a high vulnerability to climate change-related hazards, and 40 percent have a medium level of vulnerability.[45]

50. Peru has experienced ten episodes of severe drought between 1981 and 2018, affecting between 12.9 percent and 78.5 percent of high Andean land areas used for different purposes.[46].

51. In Peru, 16.6 million people (over 50 percent of the population) are food insecure.[47] These figures could be further exacerbated by climate change and negatively affect all dimensions of the population's food security, given the sensitivity of agri-food systems to climate change and the fact that a large proportion of the Peruvian population depends on agriculture.[48]

52. Climate change has led to the appearance and increased frequency and/or intensity of pests, resulting in financial losses in the agricultural sector. In recent years, the economic loss of Peruvian agricultural production, due to 202 types of pests, has increased. In 2012, the annual loss caused by pests was 14.7 percent,

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[42] Chirinos, R. *Efectos económicos del cambio climático en el Perú* [*Economic Effects of Climate Change in Peru]*, Working Paper Series (DT. No. 2021-009). Lima: Central Bank of Peru, 2021, pp. 1-15. Available at: https://www.bcrp.gob.pe/docs/Publicaciones/Documentos-de-Trabajo/2021/documento-de-trabajo-009-2021.pdf.

[43] Inter-American Development Bank (IDB). *La economía del cambio climático en el Perú* [*The Economics of Climate Change in Peru]*. Lima: IDB, 2014, pp. 80-88, available at: https://repositorio.cepal.org/server/api/core/bitstreams/2eb4c778-4761-4972-b9b3-8d21f8a2f334/content

[44] Ministry of the Environment of Peru (MINAM). *Peru National Adaptation Plan (NAP)* (Cf. footnote 20 above), p. 23.

[45] Vulnerability classification criteria (very high, high, medium, and low) are taken from the Climate Change Risk Management and Adaptation Plan in Agriculture prepared in 2012 by the then Ministry of Agriculture of Peru (now the Ministry of Agrarian Development and Irrigation) and the Food and Agriculture Organization of the United Nations (FAO) Office in Peru.

[45] National Weather and Water Services of Peru (SENAMHI, acronym in Spanish). *Caracterización espacio temporal de la sequía en los departamentos altoandinos del Perú (1981 - 2018)* [*Spatial–temporal characterization of droughts in high Andean departments of Peru (1981–. 2018)]*. Lima: SENAMHI, 2019, p. 4.

[47] FAO. *The State of Food Security and Nutrition in the World. Repurposing food and agricultural policies to make healthy diets more affordable*. Rome: FAO, 2022, p. 206.

[48] FAO. *The State of Food Security and Nutrition in the World. Building climate resilience for food security and nutrition*. Rome: FAO, 2018, p. 35.

while in 2014 it was 15.4 percent, with an increasing trend of 0.35 percent of economic loss per year.[49]

- **Health**

53. In 2021, the Peruvian National Weather and Water Services (SENAMHI, acronym in Spanish) reported that changes in temperature, rainfall, and extreme weather events directly and indirectly impact human health. Temperature variability can raise the risk of mortality due to several cardiovascular, renal, and respiratory diseases. Likewise, floods and droughts impact the quality and quantity of water available for human consumption, which increases morbidity from gastrointestinal, metaxenic, and zoonotic diseases.[50]

54. An estimated 5.5 million people live in flood-prone areas, which exposes them to vector-borne diseases (such as malaria or dengue fever), zoonotic diseases, and skin infections, as well as increasing drowning risks.[51]

55. Spatial distribution of diseases, particularly outbreaks of dengue and malaria in the Peruvian Amazon, is also expected to change by 2050.[52]

56. In addition to the impact on people, health services will face further pressures as precipitation increases over the Andes. Thus, in terms of basic health services, 70 percent of health facilities are at high risk of mass movements.[53]

D. Peru's actions to address the adverse effects of climate change

57. For decades, the international community has sought to address global climate change through political negotiations, with Peru's active involvement. These efforts have led to the adoption of the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, and the Paris Agreement.

58. Peru is a party to these multilateral treaties and is firmly committed to achieving the goals of the Paris Agreement, including holding the increase in the global average temperature to well below 2°C above pre-industrial levels, and continuing efforts to limit global warming to 1.5°C.[54]

59. In 2020, Peru updated its Nationally Determined Contribution (NDC), increasing its greenhouse gas emissions reduction target from 30 to 40 percent by 2030 in the following sectors: energy, industrial processes and product use, agriculture, land use, land-use change and forestry, and waste. The adaptation component establishes adaptation targets and measures in two new thematic areas: i)

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[49] National Agricultural Health Service of Peru (SENASA, acronym in Spanish). *Plan Estratégico Institucional 2017 – 2019 [Institutional Strategic Plan 2017 – 2019].* Lima: SENASA, 2016, p.51, available at: https://www.senasa.gob.pe/senasa/descargasarchivos/2019/11/PEI-2017-2022.pdf

[50] National Weather and Water Services of Peru (SENAMHI). *Identificación de parámetros para el análisis de vulnerabilidad en el sector salud por peligros climáticos [Identifying Criteria to Assess Health Vulnerability to Climate Hazards]*. Lima: SENAMHI, 2021, p. 13, available at: https://repositorio.senamhi.gob.pe/handle/20.500.12542/1351

[51] Ministry of the Environment of Peru (MINAM*). Peru National Adaptation Plan (NAP): An input to update the National Climate Change Strategy*. (Cf. footnote 20 above), p. 88.

[52] National Weather and Water Services of Peru (SENAMHI). *Nota técnica: Escenarios de ocurrencia de dengue y malaria a nivel nacional en clima futuro [Technical Fact Sheet: Outlook on Climate Change and Domestic Spread of Malaria and Dengue]*. Lima: SENAMHI, 2021, pp. 6-8.

[53] Ministry of the Environment (MINAM*). Peru National Adaptation Plan (NAP)* (Cf. footnote 20 above), p. 113.

[54] Peru signed the Paris Agreement on 21 April 2016 in New York City and ratified it on 22 July 2016, through Supreme Decree No. 058-2016-RE.

Tourism and ii) Transportation, in addition to the five thematic areas prioritised in the NDC submitted in 2015: i) Agriculture; ii) Forests; iii) Fisheries and aquaculture; iv) Health; and, v) Water; all of which were developed with gender mainstreaming, coupled with intercultural and intergenerational approaches.

60. Currently, Peru has 150 measures related to climate change that are part of its NDC. Different ministries, agencies, and subnational governments are presently implementing such measures, of which 84 are related to adaptation, and 66 deal with mitigation. Full compliance with these measures requires international cooperation and funding from various sources, – both public and private –, including committed international funds.

61. In addition, Peru has been implementing a number of regulatory instruments, thus creating a solid foundation on climate change-related matters that enables the formulation, implementation, and monitoring of NDC indicators. Such regulatory instruments include Law No. 30754, Framework Law on Climate Change (LMCC, acronym in Spanish), Regulation of the LMCC, and National Adaptation Plan (NAP).

62. Peru's long-term strategy is currently under review. This document, known as the National Climate Change Strategy, is a key and comprehensive instrument on climate change management, which provides guidance and facilitates the State's actions to achieve its vision by 2050.

63. As a matter of urgency, in order to implement measures leading to achieve Peru's NDC by 2030, the Peruvian government declared the climate emergency as a matter of national interest in early 2022. These priority measures focus on climate governance, climate change education, monitoring and tracking, climate finance, and human rights and climate justice.

64. These measures, in light of our national capacities and circumstances, contribute to limiting global temperature rise, reducing risks and vulnerability to the adverse effects of climate change, in line with the Sustainable Development Goals.

IV. Comments on the questions put forward to the Court

A. Peru's Overall Position on the questions put forward to the Court

65. Peru considers the questions posed to the International Court of Justice to be relevant and appropriate given the current impacts of anthropogenic greenhouse gas emissions on the climate system.

66. The International Court of Justice's advisory opinion on the questions raised is relevant to the international community, given the threat posed by climate change to States and the need for States to take urgent actions in this decade.

67. Peru also considers that the International Court of Justice, as the principal judicial organ of the United Nations, has the authority to provide guidance on this matter, which will help to clarify the obligations of States concerning climate change under international law.

68. In this regard, Peru considers that there are obligations arising from international treaties, customary international law, general principles of law, and other sources of international law, which must be fulfilled by States. Peru's position will be explained in the following paragraphs.

B. Applicable Law

69. Peru agrees with Resolution 77/276 of the United Nations General Assembly "Request for an advisory opinion of the International Court of Justice on the obligations of States in respect of climate change" and believes special consideration should be given to the Charter of the United Nations, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, the United Nations Framework Convention on Climate Change, the Paris Agreement, the United Nations Convention on the Law of the Sea, the duty of due diligence, the rights recognised in the Universal Declaration of Human Rights, the principle of prevention of significant harm to the environment and the duty to protect and preserve the marine environment.

70. Furthermore, the aforementioned UN General Assembly resolution specifically requests the International Court of Justice to identify the relevant obligations and related consequences from the entire body of international law, which includes the various sources of international law, and especially international treaties, customary international law, and general principles of law.

71. Peru also understands that the International Court of Justice shall not limit itself to construe and apply the legal provisions expressly mentioned in paragraph 69 above, but shall also resort to all those other sources it may deem necessary to substantiate its advisory opinion. Some of those other sources are mentioned in preambular paragraphs 2, 3, 4 and 5 of Resolution 77/276.

72. Peru also trusts that the International Court of Justice shall take into account the international community's need to conserve the environment and look after the interests of peoples and nations and succeeding generations, considering that contemporary international law is not only based on the principles of good faith and *pacta sunt servanda*, but also deems essential to "(...) *reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small* (...)".[55]

73. With regard to the rise in sea level, a multidimensional global phenomenon caused by climate change that affects various regions of the world differently, Peru considers it appropriate to emphasize the existential character posed by this phenomenon for low-lying coastal States, small island States and small island developing States (SIDS). In this respect, Peru highlights the relevance of the work being done by the Study Group on sea-level rise in relation to international law of the United Nations International Law Commission.[56]

74. In addition, concerning the legal framework applicable to the oceans, Peru highlights the "special consideration" that the United Nations Convention on the Law of the Sea has –inter alia– and reiterates that "*Peru accepts and applies the rules of customary international law of the sea as reflected in the Convention*".[57]

[55] Charter of the United Nations, Preamble.

[56] International Law Commission. *Analytical Guide to the Work of the International Law Commission: Sea-level rise in relation to international law, a*vailable at: https://legal.un.org/ilc/guide/8_9.shtml.

[57] *Maritime Dispute (Peru v. Chile)*, Public sitting held on Monday 3 December 2012, at 3 p.m., at the Peace Palace, President Tomka presiding, statement made by the Agent of the Republic of Peru (CR 2012/27), para.27.

C. Obligations of States under international law regarding climate change

75. The first question posed to the Court is:

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

76. These obligations are mainly established in the United Nations Framework Convention on Climate Change (UNFCCC), adopted on 9 May 1992. It is crucial to consider the principles enshrined in Article 3 of said Convention, particularly Article 3.1 which refers to the principles of equity and common but differentiated responsibilities, stating that "(...) *the Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities*".

77. The same UNFCCC Article 3.1 concludes by mentioning specific obligations for developed countries, stating that, as a consequence of the above, "(...) *the developed country Parties should take the lead in combating climate change and the adverse effects thereof.*".

78. As regards the principle of common but differentiated responsibilities, this principle is addressed in Article 3.2. This article establishes the need to take into account the specific needs and special circumstances of developing countries, especially those that are particularly vulnerable to the adverse effects of climate change, which include countries like Peru, that would have to bear a disproportionate or abnormal burden.

79. Developed states have also recognised the principle of common but differentiated responsibilities. An example thereof is the adoption of the Copenhagen Accord, through which developed countries, which have historically been the largest emitters of greenhouse gases, committed to jointly mobilise USD 100 billion per year, starting in 2020, to address the needs of developing countries.[58]

80. The UNFCCC also stipulates the principles of international cooperation and precaution. With regard to the principle of international cooperation, reflected in Article 3.5, it states that Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties, particularly developing countries.

81. Furthermore, Article 3.3 of the UNFCCC indicates that Parties shall take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects. Since each State is responsible for controlling its greenhouse gas emissions, and considering their global effects and historical contribution, States are obligated to reduce such emissions generated within the territory under their jurisdiction or control.

82. On the other hand, in enhancing the implementation of the UNFCCC, it is worth recalling Article 2.2 of the Paris Agreement, adopted on 12 December 2015, which states that this Agreement "*will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances*". This underpins the existence of a

[58] United Nations Framework Convention on Climate Change, Conference of the Parties. Decision 2/CP.15.

willingness for a dynamic and evolving interpretation of international obligations for States regarding the environment.

83. The principle of equity in international environmental law considers that decisions and measures taken now may have significant impacts on the living conditions and well-being of future generations of humankind. It therefore implies that present generations of humankind have a responsibility to protect and conserve resources so that they can be used sustainably and inherited for the benefit of future generations. In the context of climate change, this principle, among other aspects, requires States to take measures to mitigate and adapt to the effects of global warming in order to prevent its impacts on the well-being and rights of present and future generations of humankind.

84. Furthermore, national policies and negotiations on climate change should also be based on the best available science, including traditional knowledge and wisdom.

85. Concerning international law, there is consensus on the importance of guaranteeing the protection of the climate system, for which it is particularly relevant to identify the obligations of States as enshrined in the different sources of international law, as well as to consider the guidelines and commitments that may arise from soft law instruments on the matter.

86. Peru emphasises the general obligation to protect and conserve the marine environment as a rule of customary international law, the effects of which are *erga omnes*.[59] Peru further submits that such provision refers to measures that lead to maintaining or improving present conditions of the marine environment, as well as measures aimed at preventing future damage.

87. It is essential to take into account the principles and obligations enshrined in the Rio Declaration on Environment and Development (1992), among which it is worth highlighting, once again, the principles of common but differentiated responsibilities, precaution, and international cooperation.

88. Given that there is a clear international trend to recognise the interdependent relationship between protection of the environment, sustainable development, and human rights, Peru recognises that it is essential for the advisory opinion of the International Court of Justice to consider a human rights approach. Several fora within the United Nations system have been contributing significantly to this matter and reaffirming the link between climate change and its effects on the enjoyment and the effective realisation of human rights.[60]

89. Likewise, consideration should be given to the special situation of risk faced by certain groups and people in vulnerable situations due to the effects of climate

[59] Tanaka, Y. *The International Law of the Sea*, 4th edition. Cambridge: Cambridge University Press, 2023, p.363.

[60] Cf., inter alia, United Nations, General Assembly, "The human right to a clean, healthy and sustainable environment", A/RES/76/300, 1 August 2022; United Nations, Human Rights Council, "The human right to a clean, healthy and sustainable environment", A/HRC/RES/48/13, 8 October 2021; United Nations, Human Rights Council, "Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment", A/HRC/37/59, 24 January 2018; United Nations, High Commissioner for Refugees (UNHCR), "Legal considerations regarding claims for international protection made in the context of the adverse effects of climate change and disasters", 1 October 2020, available at: https://www. refworld.org/docid/5f75f2734.html; United Nations Framework Convention on Climate Change, Conference of the Parties; United Nations Environment Programme (UNEP); Food and Agriculture Organization of the United Nations (FAO); among others.

change, such as Indigenous Peoples, children, women, older persons, people living in extreme poverty, minorities, persons with disabilities, migrants, refugees and internally displaced persons.[61]

D. Legal consequences under these obligations of the conduct of States which have caused climate change and its impacts

90. The second question posed to the International Court of Justice is:

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

91. The question focuses on the legal consequences of specific behaviours, whereby States, by their acts and omissions, have caused significant harm to the climate system and other elements of the environment.

92. The general framework governing the legal consequences of breaches of international obligations is contained in the "Draft Articles on Responsibility of States for Internationally Wrongful Acts", adopted by the United Nations International Law Commission in 2001, and contained in the Annex to Resolution 56/83 of the United Nations General Assembly of 12 December of the same year, which took note of the Commission's work.

93. Among other relevant aspects, the said Draft Articles adopted in 2001 provide for general principles concerning the legal consequences of an internationally wrongful act, including the obligation of reparation (Article 31), the forms that reparation may take (Articles 34-37) and the scope of international obligations concerning international responsibility (Article 33), as well as consider certain circumstances under which the wrongfulness of an internationally wrongful act may be precluded (Articles 20-27). The application of such principles and rules has to be consistent with the principle of good faith in international law and take into account the general principle of law according to which abuse of law cannot be upheld.

94. It is worth noting that the aforementioned Draft Articles on Responsibility of States for Internationally Wrongful Acts constitute a general legal framework of a subsidiary nature, in so far as the articles "*(...) do not apply where and to the extent that the conditions for the existence of an internationally wrongful act or the content or implementation of the international responsibility of a State are governed by special rules of international law*" (Article 55).

95. Considering that international responsibility is assessed on a case-by-case basis, when determining the legal consequences of the international obligations breached, the applicable rules of international responsibility should be taken into account, as well as the principles governing international environmental law. Likewise, it is relevant to consider the appropriate forms of reparation provided for in international law.

96. An example of a financial mechanism is the establishment of the Loss and Damage Fund to address climate change impacts in developing countries that are particularly vulnerable to the adverse effects of climate change, created in

[61] Bergmann, J. et al. *Assessing the Evidence* (Cf. footnote 41 above), pp.88-91.

2022, during the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27), which took place in Sharm el-Sheikh and operationalized during the COP28, which took place in Dubai, in 2023.[62]

97. Another example is the mechanism established by the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage of 1992 and its 2003 Protocol, which provides for a Supplementary Fund. The Funds provide compensation for oil pollution damage resulting from spills from tankers.

98. For these reasons, Peru requests the International Court of Justice to answer the questions raised, taking into account what has been stated in paragraph 95 above.

V. Conclusions

99. Global warming, caused by anthropogenic action, is a serious threat to the entire international community, and specifically to developing States and territories that are particularly vulnerable to the adverse effects of climate change.

100. Peru is a developing State and highly vulnerable to the adverse effects of climate change.

101. Failure to globally reduce anthropogenic emissions will further affect the composition, resilience, and productivity of ecosystems and biodiversity of States and territories like Peru.

102. Peru has historically contributed less than 0.5 percent of global greenhouse gas emissions.

103. Peru is committed to the international legal framework on climate change and has been taking measures to comply with its international commitments.

104. Peru recalls the central role that the principle of common but differentiated responsibilities has in the analysis to be carried out by the International Court of Justice.

105. The implementation of adaptation and mitigation measures in developing States and territories particularly vulnerable to climate change, such as Peru, requires solid and consistent action in terms of international cooperation, to be provided by developed States with greater economic capacity and experience, and by international organisations, which can be channelled by various means, including the creation and strengthening of earmarked funds.

106. The international community has recognised the need to take measures to favour a balanced climate system, as set out in various sources of international law.

107. Likewise, actions taken by States on climate change issues must be substantiated with the best available science.

108. International law allows for an evolutionary interpretation of international climate change obligations that favours a balanced climate system.

109. Peru considers the International Court of Justice, the principal judicial organ of the United Nations, to be a tribunal of the highest authority in international law. The Court can greatly contribute to clarify the scope of

[62] United Nations Framework Convention on Climate Change, Conference of the Parties. Decision 2/CP.27.

international obligations related to climate change and the legal consequences of failing to comply with these obligations.

110. Peru understands that the Court has the opportunity to set out in its advisory opinion the path towards a balanced interpretation of international environmental obligations, which is not limited to assessing the commitments undertaken through conventions, but may develop them along with the needs of justice of the international community, in particular with the need for effective reparation of damage caused to third States.

111. Peru argues that in the current state of development of international law, the Court is in a position to determine general obligations of States with respect to the reduction of greenhouse gas emissions.

112. Finally, Peru underscores that the actions of States must be guided by the principles and provisions of international law as mentioned in this written statement, considering that the global climate system will be inherited by future generations of humankind.