

Climate Crisis Advisory Opinions: An Urgent Call for Swift Action at COP30

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The Pace Energy and Climate Center (“PECC”), in consultation with the Global Center for Environmental Legal Studies (“GCELS”), Brazil American Institute for Law and Environment (“BAILE”), and Land Use Law Center (“LULC”) and together with PECC, GCELS, and BAILE, the “Pace Haub Law Research Centers”), has prepared this position paper for consideration at the IUCN World Conservation Congress (“IUCN Congress”), and the 2025 United Nations Climate Change Conference to be held in Belem, Brazil (“COP30”).

The Climate Crisis is Accelerating

The United Nations World Meteorological Organization (“WMO”) has concluded that 2024 was the warmest year in the 175-year observational record, topping only the previous record set in 2023.¹ While noting that the long-term temperature goals of the Paris Agreement are not yet out of reach, despite a 2024 temperature that was 1.55 degrees above the 1850-1900 average, the WMO rightfully referred to its report as a “wake-up call that we are increasing the risks to our lives, economies and the planet”.² The Pace Haub Law Research Centers share the WMO’s concerns and believe the time for decisive action is now.

Over the last year, ocean temperatures continued to warm, and ocean acidification increased, which has resulted in widespread coral bleaching. Ice sheets in Greenland and Antarctica continue to melt at an alarming rate, with Antarctic Sea ice reaching the second-lowest level ever recorded, and sea levels continuing to rise all over the planet.³ Climate change has significantly contributed to the extreme weather that has had devastating consequences around the world. Hurricanes and other storms have grown in intensity and frequency in certain regions, while droughts and floods have been amplified in others. Meanwhile, wildfires have destroyed ecosystems in regions that were previously spared the most direct impacts of climate change.⁴

Despite these dramatic repercussions of climate change, fossil fuel continues to be the dominant energy source in many countries. While renewable energy has experienced significant growth in 2024, its expansion is not occurring fast enough to keep up with the increasing energy demand that the planet is experiencing. Renewable energy is effectively expanding alongside fossil fuel use, rather than supplanting and replacing fossil fuel.⁵

¹ UN World Meteorological Organization, MO, State of the Global Climate 2024, at <https://library.wmo.int/records/item/69455-state-of-the-global-climate-2024>

² Id. at Foreword.

³ Id. at 5-9.

⁴ Id. at 19-20.

⁵ See International Energy Agency, World Energy Outlook 2024, at <https://www.iea.org/reports/world-energy-outlook-2024>

As a result, global progress has been slow to meet the carbon reduction targets set forth in the Paris Agreement, and the world is on track to exceed the 1.5-degree threshold without more aggressive action to limit carbon emissions.⁶ Such an increase would have catastrophic impacts on human's health risks, biodiversity loss, and food security. While the chance for avoiding climate catastrophe lessens every moment that collective action is avoided, success is possible through rapid decarbonization, technological innovation, subnational engagement, and multilateral cooperation to support those most in need of climate mitigation and adaptation support.

The Pace Haub Law Research Centers have contributed significant scholarship to address these concerns, and this position paper will highlight certain recommendations borne from this scholarship to propose strategies to compel States to implement laws in response to the recent Advisory Opinions from the International Tribunal for the Law of the Sea ("ITLOS")⁷ on climate change and international law delivered on March 21, 2024, the Inter-American Court on Human Rights ("IACtHR") on the obligations of States responding to the climate emergency delivered on July 3, 2025,⁸ and the International Court of Justice ("ICJ") on the legal consequences of climate change delivered on July 23, 2025.⁹

Advisory Opinions

I. ITLOS Opinion

On May 21, 2024, ITLOS unanimously ruled that anthropogenic greenhouse gas ("GHG") emissions contribute to the pollution of the marine environment. The opinion states that all GHG emissions introduced either directly or indirectly to the ocean, regardless of the emission source or proximity to the ocean, have harmful effect on marine ecosystems and marine life. As a result, ITLOS concluded that all GHG emissions constitute a form of ocean pollution that must be prevented, controlled, mitigated, and reduced to the maximum extent possible.¹⁰

ITLOS determined that United Nations Convention for the Laws of the Sea ("UNCLOS"), article 194, paragraph 1, requires States to take all "necessary" measures to "prevent, reduce and control of the marine environment", which covers GHG emissions from any source of pollution, including from land-based sources, seabed activities, and maritime vessels. Further, "all necessary measures" includes identifying anthropogenic GHG emissions reduction into the atmosphere utilizing the best available science, including the Intergovernmental Panel on Climate Change

⁶ WMO, Global temperature is likely to exceed 1.5 degrees above pre-industrial levels temporarily in the next 5 years, June 5, 2024, at <https://wmo.int/news/media-centre/global-temperature-likely-exceed-15degc-above-pre-industrial-level-temporarily-next-5-years>

⁷ International Tribunal for the Law of the Sea, Case 31, requested by the Commission of Small Island States, at https://www.itlos.org/fileadmin/itlos/documents/cases/31/Advisory_Opinion/C31_Adv_Op_21.05.2024_orig.pdf (the "ITLOS Opinion").

⁸ The Inter-American Court on Human Rights, Advisory Opinion 32, requested by the governments of the Republic of Chile and the Republic of Colombia, at <https://jurisprudencia.corteidh.or.cr/en/vid/1084981967> (the "IACtHR Opinion").

⁹ International Court of Justice, Advisory Opinion of 23 July 2025, Obligations of States in respect of Climate Change, at <https://www.icj-cij.org/sites/default/files/case-related/187/187-20250723-adv-01-00-en.pdf> (the "ICJ Opinion").

¹⁰ See British Institute of International and Comparative Law, Reflections on the ITLOS Advisory Opinion, at https://www.biicl.org/documents/184_reflections_on_the_itlos_advisory_opinion_final.pdf

(“IPCC”) reports and relevant international rules and standards set forth in international treaties. As such, ITLOS noted that the States are bound by the IPCC statement that “[l]imiting warming to 1.5°C implies reaching net zero CO₂ emissions globally around 2050 and concurrent deep reductions in emissions of non-CO₂ forcers, particularly methane.”¹¹

Importantly, ITLOS identified specific measures that States could implement in meeting its obligations pursuant to UNCLOS, including: (i) setting quantified GHG emission reduction targets;¹² (ii) limiting GHG emissions from aviation and marine bunker fuels;¹³ (iii) making finance flows consistent with a pathways toward low GHG emissions and climate resilient development;¹⁴ (iv) reducing GHG emission from ships through regulations concerning energy efficiency;¹⁵ (v) establishing carbon offsetting and reduction schemes for aviation;¹⁶ and (vi) phasing out the use of chemicals that deplete the ozone layer.¹⁷ In implementing such policies, States are directed to “endeavor to harmonize their policies” in a manner where each State’s action affected every other State’s.¹⁸

ITLOS further concluded that “States are required to take all necessary measures, including individual actions as appropriate” and that it is insufficient to merely “participat[e] in the global efforts to address climate change.”¹⁹ This means that UNCLOS “impos[es] an obligation to adopt laws and regulations and to take measures necessary to implement, among other, rules and standards set out in climate change treaties and other relevant instruments.”²⁰

ITLOS makes clear that under UNCLOS and customary international law, all States must undertake environmental assessment, to monitor their activities, and to report the results.²¹ This duty applies to both land-based, and sea-based activities,²² since each are “an essential part of a comprehensive environmental management system.”²³ Relatedly, ITLOS mandates that states with capacity must provide technical assistance to other States.²⁴

The ITLOS Opinion was the first in a powerful trilogy of recent international jurisprudence establishing States’ obligation to affirmatively act in response to climate change. States must now take all measures necessary to prevent, reduce, and control all GHG emissions from any source,

¹¹ ITLOS Opinion, paragraph 210.

¹² ITLOS Opinion, paragraph 70.

¹³ ITLOS Opinion, paragraph 71.

¹⁴ ITLOS Opinion, paragraph 76.

¹⁵ ITLOS Opinion, paragraph 79.

¹⁶ ITLOS Opinion, paragraph 81.

¹⁷ ITLOS Opinion, paragraph 82.

¹⁸ See Cymie Payne, Find Light in Dark Places, Climate Law, A Sabin Center Blog, June 4, 2024, at <https://blogs.law.columbia.edu/climatechange/2024/06/04/finding-light-in-dark-places-specific-obligations-for-climate-change-and-ocean-acidification-mitigation/> (quoting ITLOS Opinion, paragraph 441).

¹⁹ ITLOS Opinion, paragraph 202.

²⁰ ITLOS Opinion, paragraph 286.

²¹ See Cymie Payne, Find Light in Dark Places, Climate Law, A Sabin Center Blog, June 4, 2024, at <https://blogs.law.columbia.edu/climatechange/2024/06/04/finding-light-in-dark-places-specific-obligations-for-climate-change-and-ocean-acidification-mitigation/>

²² ITLOS Opinion, paragraph 360.

²³ ITLOS Opinion, paragraph 353.

²⁴ ITLOS Opinion, paragraphs 322-339.

whether land-based, or sea-based, though they may vary according to a State's capabilities and available resources.²⁵ While the mandate is bold, States' actions in response to this mandate, is likely to be less so.

II. IACtHR Opinion

On July 3, 2025, the IACtHR issued a landmark Advisory Opinion affirming that the scale and impacts of climate change constitute a climate emergency and sets forth States' obligations in response, which emphasizes an elevated standard of due diligence in addressing the climate emergency and protecting people from its impacts.²⁶ The IACtHR held that the right to a healthy environment includes specific obligation to mitigate GHG emissions by setting mitigation targets based on a State's: (i) current and historical emissions; (ii) capabilities; and (iii) circumstances.²⁷ Importantly, The IACtHR affirms the right to a healthy climate as falling within the scope of human rights under the American Convention on Human Rights and its Advisory Opinion outlines the responsibilities of States to prevent and remedy climate-related harms, protect vulnerable groups and future generations, and ensure procedural rights such as access to information, public participation, and access to justice.²⁸

The IACtHR Advisory Opinion is the first instance where a stable and safe climate system are recognized as being protected under the Inter-American human rights framework.²⁹ The IACtHR reasoned that a stable climate is essential to certain fundamental rights, such as the rights of to life, health, water, food, and housing.³⁰ The IACtHR went further, noting that the right to a healthy climate is inherently intertwined with the protection of the rights of nature.³¹ Therefore, the IACtHR concluded, States have an obligation to adopt measures to ensure the protection, restoration, and regeneration of natural ecosystems.³²

Consistent with the arguments that GCELS advanced in its Amicus Brief,³³ the IACtHR acknowledged that climate change "creates extraordinary and increasingly serious risks to the human rights of certain population groups whose situation of vulnerability is increased by the confluence of intersectional and structural factors of discrimination."³⁴ In response, States must

²⁵ See Cymie Payne, Find Light in Dark Places, Climate Law, A Sabin Center Blog, June 4, 2024, at <https://blogs.law.columbia.edu/climatechange/2024/06/04/finding-light-in-dark-places-specific-obligations-for-climate-change-and-ocean-acidification-mitigation/>

²⁶ See Center for Gender and Refugee Studies The IACtHR's Advisory Opinion on the Climate Emergency: An Important Step for the Protection of Climate-Displaced Individuals, July 7, 2025, at <https://cgrs.uclawsf.edu/our-work/publications/iacthrs-advisory-opinion-climate-emergency-important-step-protection-climate>

²⁷ IACtHR Opinion, paragraphs 328-330.

²⁸ See Marie Antonia Tigre, et al., A Blueprint for Rights-Based Climate Action: The Inter-American Court of Human Rights' Advisory Opinion on the Climate Emergency, Climate Law, A Sabin Center Blog, July 8, 2025, at <https://blogs.law.columbia.edu/climatechange/2025/07/08/a-blueprint-for-rights-based-climate-action-the-inter-american-court-of-human-rights-advisory-opinion-on-the-climate-emergency/>

²⁹ Id.

³⁰ IACtHR Opinion, Section VI.B.2.2.

³¹ IACtHR Opinion, paragraph 315.

³² IACtHR Opinion, paragraph 323.

³³ GCELS, et al, Amicus Brief on the scope of state obligations to respond to climate-related displacement in the Advisory Opinion request on the Climate Emergency and Human Rights, December 15, 2023, at https://cgrs.uclawsf.edu/sites/default/files/IACtHR%20Amicus%20Brief_FINAL_To%20Share_0.pdf

³⁴ IACtHR Opinion, paragraph 594.

adopt measures in response to the climate emergency that takes into account the specific contexts and vulnerabilities of certain regions and populations, which are “necessary to guarantee real equality in the enjoyment of rights in the context of the climate emergency.”³⁵ This includes the possibility of international protection for individuals displaced across borders due to the impacts of climate change,³⁶ and the obligation to provide comprehensive health services to children that address the health impacts that climate change has on them.³⁷

As it relates to access to information, States have an obligation to: (i) produce climate information to protect human rights, including warning on disaster risks, and data necessary to establish, implement, and update mitigation and adaptation goals;³⁸ (ii) publish and disseminate their progress on achieving climate goals;³⁹ and (iii) refraining from disseminating information that is not supported by the best available science,⁴⁰ or local, traditional or Indigenous knowledge.⁴¹

States must also ensure meaningful public participation in climate mitigation goals, adaptation and risk management plans, finance, international cooperation, and redress for damages.⁴² Further, States must ensure access to justice by: (i) providing ongoing climate training and resources to judicial bodies;⁴³ (ii) developing climate specific evidentiary standards;⁴⁴ (iii) enabling victims to have full redress against climate-related human rights violations.⁴⁵ Crucially, States have an obligation to address transboundary climate-related harm by presuming that persons residing outside that State’s borders have standing to sue for climate-related harms.⁴⁶

The IACtHR’s findings that are likely to cause controversy in many countries relates to States’ obligations to regulate companies operating within its borders. The IACtHR mandates that States directly regulate companies to prevent climate-related human rights violations.⁴⁷ This obligation includes: (i) requiring companies to disclose GHG emissions throughout their value chain; (ii) requiring companies to reduce their emissions; and (iii) setting standards to discourage greenwashing and undue influence on the political and regulatory sphere.⁴⁸

The IACtHR Opinion builds upon the principles affirmed by the ITLOS Opinion to extend States’ obligations to the climate crisis into the field of human rights. Questions remain as to whether States will actually adopt measures in conformity with the IACtHR’s mandate, but the ICJ recently set forth potential consequences if States fail to do so.

³⁵ IACtHR Opinion, paragraph 596.

³⁶ IACtHR Opinion, paragraph 433.

³⁷ IACtHR Opinion, paragraph 599.

³⁸ IACtHR Opinion, paragraph 505.

³⁹ IACtHR Opinion, paragraph 521.

⁴⁰ IACtHR Opinion, paragraph 486.

⁴¹ IACtHR Opinion, paragraph 525.

⁴² IACtHR Opinion, paragraph 535.

⁴³ IACtHR Opinion, paragraph 549.

⁴⁴ IACtHR Opinion, paragraph 552-555.

⁴⁵ IACtHR Opinion, paragraphs 556-558.

⁴⁶ IACtHR Opinion, paragraph 551.

⁴⁷ IACtHR Opinion, paragraph 345.

⁴⁸ IACtHR Opinion, paragraph 347.

III. ICJ Opinion

On March 29, 2023, the United Nations General Assembly (“UNGA”) adopted, by consensus, a resolution⁴⁹ requesting the ICJ to render an Advisory Opinion on the following questions:

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

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

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

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

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

This request for an Advisory Opinion provided the opportunity for a clarification of States’ legal obligations concerning climate change and issues of climate justice for present and future generations.⁵⁰ As noted by Pace Haub Law students and scholars, this is significant because “the concern for present and future generations presents an intemporal element calling upon the ICJ to opine on intergenerational justice and equity.”⁵¹

⁴⁹ G.A. Res. 77/276, *supra* note **Error! Bookmark not defined.**

⁵⁰ Maria Antonia Tigre & Jorge Alejandro Carrillo Bañuelos, “The ICJ’s Advisory Opinion on Climate Change: What Happens Now?”, CLIMATE LAW, MAR. 29, 2023, <https://blogs.law.columbia.edu/climatechange/2023/03/29/the-icjs-advisory-opinion-on-climate-change-what-happens-now/>

⁵¹ Natalia Urzola, Nicholas A. Robinson, Léonore Gaboardi Carandell, Daye Chen, Bryce Clark, Tucker Ecke, Madison Routledge Pettus, State Responsibility for Disrupting Earth’s Climate System: Anticipating the International Court of Justice’s Advisory Opinion, 55 ELR 10073, January 2025, at <https://digitalcommons.pace.edu/lawfaculty/1287/>

On July 23, 2025, the ICJ delivered its Advisory Opinion affirming that all States have binding obligations to prevent significant environmental harm, and that the environment must be protected for present and future generations. The guiding principle of intergeneration equity requires that States consider future generations' interest in fulfilling their obligations under international law because of, according to the Court, "the idea that present generations are trustees of humanity tasked with preserving dignified living conditions and transmitting them to future generations."⁵² These climate obligations are not aspirational, but rather legal, substantive, and enforceable.⁵³

The ICJ made clear that States' obligations under international law not only encompass those set forth in climate treaties but extends to customary international law duties to prevent significant harm to the environment,⁵⁴ and the duty to cooperate for environmental protection.⁵⁵ In reaching this conclusion, the ICJ rejected the argument advanced by certain states, including the United States, that climate change treaties constitute *lex specialis*, thereby rendering other rules of international law inapplicable.⁵⁶ Therefore, the duty to prevent significant harm to the environment applies to all States, including those that are not parties to certain climate treaties.

The ICJ mandates that States act urgently in light of scientific consensus and utilize a stringent due diligence standard in addressing climate change. According to the ICJ, due diligence includes: (i) adopting appropriate legal and regulatory measures to reduce GHG emissions; (ii) acquiring and analyzing scientific and technological information; and (iii) considering the relevance of both binding and non-binding norms, including decisions interpreting climate treaties and recognized technical standards and best practices.⁵⁷ While States have discretion, exercised in good faith, in how to regulate GHG emissions, they will not be exempt from legal accountability if they fail to do so.⁵⁸

In fulfilling their obligation to protect the environment for future generations,⁵⁹ States must consider the "common but differentiated responsibilities and respective capabilities" principle that states with greater resources are expected to exercise a higher standard of care.⁶⁰ Equally critical in this regard is the "polluter pays" principle. Although, as noted by the ICJ⁶¹, this principle is not contained in the climate change treaties, it is expressed in Principle 16 of the Rio Declaration and has become an integral part of the climate change conversations.

⁵² See World's Youth for Climate Justice, Historic Climate Ruling at the International Court of Justice, July 23, 2025, at https://static1.squarespace.com/static/5f063a0c8f53b604aed84729/t/6881877a1936881fe85bd8a0/1753319292895/Daily+Debrief+Reading_July+23.pdf (quoting ICJ Opinion, paragraph 156).

⁵³ See Marie Antonia Tigre, et al., The ICJ's Advisory Opinion on Climate Change: An Introduction, Climate Law, A Sabin Center Blog, July 24, 2025, at <https://blogs.law.columbia.edu/climatechange/2025/07/24/the-icjs-advisory-opinion-on-climate-change-an-introduction/>

⁵⁴ ICJ Opinion, paragraphs 132-139.

⁵⁵ ICJ Opinion, paragraphs 140-142.

⁵⁶ ICJ Opinion, paragraphs 162-171.

⁵⁷ ICJ Opinion, paragraphs 281-299.

⁵⁸ ICJ Opinion, paragraph 306.

⁵⁹ ICJ Opinion, paragraph 273.

⁶⁰ ICJ Opinion, paragraphs 148-151.

⁶¹ ICJ Opinion, paragraphs 55-56.

Further, States must take preventive action, even in the face of scientific uncertainty,⁶² and undertake thorough risk assessments for activities within their jurisdiction that may impact the climate, based on the best available science.⁶³ The ICJ also emphasized the customary duty to cooperate as an essential obligation when addressing a global problem such as climate change.⁶⁴

The ICJ affirmed the ITLOS Opinion's view that GHG emissions fall within the definition of "marine pollution" under UNCLOS.⁶⁵ As such, the ICJ held that States must take affirmative steps to protect the marine environment and avoid degrading it.⁶⁶ As it related to sea level rise, the ICJ found that sea level rise does not legally affect the maritime borders of States due to coastal recession⁶⁷ and the complete submergence of a state would necessarily entail the loss of a State's legal status.⁶⁸

The ICJ also affirmed the principles set forth by the IACtHR Opinion in describing a clean and healthy environment as a precondition for the enjoyment of human rights, that "results from the interdependence between human rights and the protection of the environment."⁶⁹ The ICJ acknowledged that a stable climate is necessary for the enjoyment of certain rights, such the right to life, health, food, water, and housing,⁷⁰ and echoed the IACtHR's position that vulnerable groups, such as children and Indigenous peoples must be given special attention when formulating climate mitigation and adaption policies.⁷¹

Perhaps the most consequential aspect of the ICJ Opinion is its holding that any breach of a State's legal obligations under the opinion will trigger "a panoply of legal consequences"⁷² under the law of state responsibility.⁷³ One such remedy is full reparation, restitution, or compensation if a State fails "to take appropriate action to protect the climate system from [GHG] emissions – including through fossil fuel production, fossil fuel consumption, the granting of fossil fuel exploration licenses or the provision of fossil fuel subsidies – which may constitute an internationally wrongful act which is attributable to that State."⁷⁴ These remedies can include to wrong acts caused by cumulative GHG emissions⁷⁵ or a failure to regulate private actors.⁷⁶

The ICJ's forceful application of States' legally binding obligations under international law provides the international community with clear guidance regarding States' duty to reduce GHG emissions. The clear consequences of non-compliance elucidated by the ICJ should put to rest any bad faith arguments that Advisory Opinions lack legally binding ramifications. States must now

⁶² ICJ Opinion, paragraph 158.

⁶³ ICJ Opinion, paragraphs 295-298.

⁶⁴ ICJ Opinion, paragraphs 301-302.

⁶⁵ ICJ Opinion, paragraphs 339-340.

⁶⁶ ICJ Opinion, paragraphs 342-343.

⁶⁷ ICJ Opinion, paragraph 362.

⁶⁸ ICJ Opinion, paragraph 363.

⁶⁹ ICJ Opinion, paragraph 393.

⁷⁰ ICJ Opinion, paragraph 373.

⁷¹ ICJ Opinion, paragraph 382.

⁷² ICJ Opinion, paragraph 445.

⁷³ ICJ Opinion, paragraph 444.

⁷⁴ ICJ Opinion, paragraph 427.

⁷⁵ ICJ Opinion, paragraph 429.

⁷⁶ ICJ Opinion, paragraph 438.

utilize their time wisely at COP30 to ensure that an international consensus on climate action is put forward.

Pace Haub Law Research Centers' Recommendations in Response to the Advisory Opinions

The Pace Haub Law Research Centers have dedicated substantial time and effort researching the issues raised by the Advisory Opinions. Below, we briefly discuss certain recommendations borne from this research and our interpretation of the Advisory Opinions. We will continue to analyze the best paths forward and engage in further scholarship and action to ensure that States comply with their obligations to address the climate crisis.

I. Adopt Regulations of GHG Emissions Based on Best Available Science

To effectively apply the “common but differentiated responsibilities and respective capabilities” and “polluter pays” principles, we must now look beyond State parties. While it is correct that certain countries have contributed significantly to climate change over the years, we must also look at some private sector players who have also contributed to global emissions at an almost equal degree. For example, according to Richard Heede, nearly two-thirds of carbon dioxide emitted since the 1750s can be traced to the 90 largest fossil fuel and cement producers, most of which still operate today.⁷⁷ Heede’s research also attributes 63 percent of the carbon dioxide and methane emitted between 1751 and 2010 to just 90 entities, out of which fifty are investor-owned companies such as Chevron, Peabody, Shell, and BHP Billiton. A 2020 report by the Climate Accountability Institute⁷⁸ also shows that the top twenty oil companies in the world have contributed 34.89% of total global emissions between 1965 to 2018. In spite of the “polluter pays” principle not having explicit recognition in the applicable treaties, the ICJ Opinion makes it very clear that State parties are equally responsible not only for the state-developed mitigation measures but also for activities carried out by private actors.⁷⁹ Most emphatically, ITLOS established that the State parties’ obligation of due diligence “is particularly relevant in a situation in which the activities in question are mostly carried out by private persons or entities.”⁸⁰ Therefore, it is important to note that if State parties fail to exercise due diligence in supervising the activities of private actors within their jurisdiction, they may end up “paying” for the global emissions and harm inflicted by those actors in light of potential litigation seeking to enforce the State parties’ obligations.

The lack of national climate legislation, and related regulations, aimed at emission reduction in some major countries like the United States means that accountability is almost non-existent, both in the public and private sectors. This cannot continue if the world is serious about climate change and emission reduction. The real polluters here are clearly not paying. One way out of this is to impose sanctions on any State that fails to regulate the activities of high-emitting private corporations within its jurisdiction. The most logical way for States to do this is to adopt legally binding regulations to limit GHG emissions based on the best available science. The United

⁷⁷ Richard Heede; <https://climateaccountability.org/carbon-majors/> [last accessed on August 1, 2025].

⁷⁸ Climate Accountability Institute, Press release- 9 December 2020- Update of Carbon Majors 1965-2018. <https://climateaccountability.org/pdf/CAI%20PressRelease%20Dec20.pdf> [last accessed on August 1, 2025].

⁷⁹ ICJ Opinion, paragraph 252.

⁸⁰ ITLOS Opinion, paragraph 236.

States Environmental Protection Agency's ("EPA") pending proposal to rescind the endangerment finding,⁸¹ which serves as the backbone of the EPA's authority to regulate GHG emissions flies in the face of the best available science and is in direct conflict with the Advisory Opinions' mandates to address climate change. However, the proposal's adoption is not a *fait accompli*, and academic institutions, including the Pace Haub Law Research Centers, should publicly oppose the EPA's proposal and continue to educate the public regarding the EPA's abdication of its duties.

II. Identify, and Publish, GHG Emissions Sources, Targets, & Reduction Status

GHG disclosure requirements are a relatively new advancement. In the past few years, the United States, European Union, and United Kingdom have developed their own regulatory mechanisms alongside a growing voluntary GHG disclosure system offered by private organizations. However, the United States has effectively retreated from its efforts to mandate GHG emissions disclosure and other governmental GHG disclosure regulation regimes are underdeveloped.⁸² While governments can be held responsible under certain international treaties, in the absence of adequate national emission reduction mandates, it becomes almost impossible to hold States and private actors liable for their actions.

As noted by the ICEL, State responsibilities are differentiated: a heavier burden to cooperate is imposed on States with large anthropogenic GHG emissions.⁸³ Identifying such States is essential to achieve the mandates set forth in the Advisory Opinions and the objectives of many international environmental treaties. Accordingly, States must adopt mandatory disclosure regimes that identify and publish GHG emissions information that occurs within their borders and must identify the sources of such emissions. While identification and publication are a good start, States must go further and adopt GHG emissions targets and reductions status updates so that the international community can monitor each State's progress and hold those accountable where progress is lacking.

Identifying and publishing GHG emissions targets and status updates on reductions aligns with the need to actively revise Nationally Determined Contributions ("NDCs") of every State party. NDCs must not only aim to be more specific, but States should also engage in self-revision and give serious consideration to the assessments provided by independent scientific trackers regarding their current NDCs.⁸⁴ As the ICJ Advisory Opinion established that NDCs are not entirely discretionary and must meet certain standards, it is essential to revise them regularly while incorporating feedback from third parties after disclosing GHG emissions information.

III. Incentivize Renewable Energy Technologies

⁸¹ United States Environmental Protection Agency, Proposed Rule: Reconsideration of 2009 Endangerment Finding and Greenhouse Gas Vehicle Standards. <https://www.epa.gov/regulations-emissions-vehicles-and-engines/proposed-rule-reconsideration-2009-endangerment-finding>

⁸² Maggie Pahl, Michael Hamersky, Jason Czarnecki, *Managing Disclosures: ESG Alphabet Soup for Multinational Asset Management Firms* – NYU Journal of Law and Business, Issue 20-1.

⁸³ ICEL, Note on the UN General Assembly Request for an Advisory Opinion on the Legal Obligation of States in Response to Climate Change, September 18, 2023, available at <https://icelinternational.org/wp-content/uploads/2023/09/icel-note-en.pdf>

⁸⁴ Climate Action Tracker (CAT) is an independent scientific project that tracks government climate action in relation to compliance with the Paris Agreement. Available at <https://climateactiontracker.org/>

We cannot adequately address the climate crisis, and States cannot sufficiently respond to the mandates set forth in the Advisory Opinions, unless, and until, we phase out fossil fuels. The only realistic pathway to phase out fossil fuels is by displacing such energy sources with renewable energy technologies. Considering the centuries long head start that fossil fuel infrastructure has over renewables, State action is required to incentivize renewable energy development. The United States recognized this when it adopted the Inflation Reduction Act of 2022.⁸⁵ The significant incentives contained in IRA were expected to significantly assist the United States’s renewable energy to grow.⁸⁶ The IRA contains multiple provisions specifically directed to renewable energy technologies such as the energy investment tax credit, advanced manufacturing production tax credit, clean electricity generation credits, and residential clean energy credits.⁸⁷ However, the current United States administrative outright hostility to renewable energy will likely stymie the trajectory of such growth within the United States. Fortunately, subnational actors in the United States, such as cities and local municipalities can act to mitigate the corrosive impact of the United States’ policies. It is crucial that academic institutions and research centers, such as PECC, engage directly with subnational actors to identify financial incentives that still exist, and to assist municipalities in implementing renewable energy technologies best suited for their particular circumstances.

Of course, the international community should not be hampered by the United States reversal of its support of renewable energy technologies. States should look to the IRA as an example of market-based solutions to support renewable energies that could be adopted domestically. Further, the concept of “common but differentiated responsibilities and respective capabilities” requires that States with advanced capabilities in the renewable energy field share such technologies with less developed States. This is essential to ensure a just energy transition.

A State party’s compliance with its obligations to pursue domestic mitigation can, and must, also be pursued by subnational actors. Subnational actors can meet obligations of both conduct—which require acting with due diligence⁸⁸—and result; therefore, these responsibilities extend to them. To the extent that municipalities and other subnational actors are capable of carrying out clean energy initiatives, they should do so in compliance with the obligations to pursue domestic mitigation.

IV. Provide Financial and Logistical Assistance to Assist Coastal Communities

As noted by the LULC, zoning and land use regulations in most communities were designed to deal with different economic, demographic, and environmental issues than communities face today.⁸⁹ Nowhere is this more evident than in coastal communities where the impacts of climate change are often the most dramatically felt. In addition to adopting updated

⁸⁵ An Act to Provide for Reconciliation Pursuant to Title II of S. Con. Res. 14, 117 H.R. 5376, (2022).

⁸⁶ See John Hensley, *Inflation Reduction Act: It’s a Big Deal for Job Growth and for a Clean Energy Future*, American Clean Power (August 5, 2022), <https://cleanpower.org/blog/its-a-big-deal-for-job-growth-and-for-a-clean-energy-future/>.

⁸⁷ Michael Hamersky, *Here Comes the Sun: How the Inflation Reduction Act of 2022 Helps the Solar Industry Emerge from a Decade of Bankruptcy Darkness* – Texas Environmental Law Journal, Issue 53-2

⁸⁸ ICJ Opinion, paragraph 175.

⁸⁹ John R. Nolon, *Land Use and Climate Change Bubbles: Resilience, Retreat, and Due Diligence*, William and Mary Environmental Law and Policy Review, Volume 39 (2014-2015).

land use regulations that prohibit new development in coastal zones, States must be proactive in providing financial and logistical assistance to communities already residing in coastal areas. In accordance with the IACtHR Opinion on ensuring public participation in adaptation and mitigation efforts,⁹⁰ when prohibiting new development is not feasible, it is crucial to guarantee the rights to access information and public participation in the approval process of new development.

It may be too late to mitigate the impact of climate change for certain coastal communities, so States should begin working with grassroots organizations to identify communities most in need of adaptation assistance. Grassroots organizations are better suited than national governments to identify immediate logistical considerations for coastal communities and react in the timely manner that is required by the climate crisis. Therefore, in addition to providing direct financial and logistical assistance to coastal communities, States should empower grassroots organizations with the resources necessary to identify and assist coastal communities before an already dire situation gets worse. Additionally, States should prioritize incorporating disaster preparedness plans into the adaptation measures for coastal communities, as well as addressing the increasing need for investments in both evacuating and receiving cities in the aftermath of climate-related disasters.

V. Adopt Policies to Assist Climate Refugees

In addition to providing resources for internal coastal communities, States must now adopt policies to accept and assist climate refugees from other States. As noted by GCELS, the Comprehensive Regional Protection and Solutions Framework (Marco Integral Regional para la Protección y Soluciones) is an initiative that seeks to “strengthen protection and develop solutions for refugees, asylum-seekers, internally displaced persons, and returnees with international protection needs.” This framework promotes the idea that all countries have a shared responsibility to protect and provide solutions for displaced populations, which is particularly relevant considering the inevitable creation of more climate refugees in the near future. Considering the cross-national issues raised by climate refugees, States should be proactive in coordinating with other States in order to identify the best means to adopt policies to assist climate refugees.

Ensuring that other States, especially developed ones, work towards accepting climate refugees requires recognizing that, to this day, there is neither a comprehensive international legal framework addressing climate displacement nor a universally accepted definition of “climate refugee”.⁹¹ The international framework needs to evolve so that the 1951 Refugee Convention effectively addresses climate change. Similarly, national asylum and refugee laws must be restructured to recognize climate-related harm as grounds for obtaining humanitarian protection. Climate change is often viewed merely as an accelerator of pre-existing vulnerabilities rather than the primary cause of displacement, making it extremely difficult for an asylum seeker to obtain asylum in countries such as the United States.

The Advisory Opinions repeatedly affirm the special circumstances of children during the climate crisis. While States should adopt far reaching policies, such as universal healthcare, to

⁹⁰ IACtHR Opinion, paragraph 535.

⁹¹ Think Thank European Parliament; The Concept of “Climate Refugee”: Towards a Possible Definition, [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2021\)698753](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2021)698753)

protect children in the face of the climate crisis, at a minimum States must ensure that children displaced due to the climate crisis are given priority as climate refugees. Accordingly, any policies related to accepting climate refugees should emphasize children's health and special circumstances to ensure that children, and their families, receive special assistance.

VI. Adopt Climate Change Specific Judicial Resources and Training

In order for States to enforce their domestic commitments, their judiciaries must be empowered with the education and training necessary to understand and respond to the climate crisis. Fortunately, many States have an existing legal education infrastructure that can assist in developing such resources. Law schools, research centers, and bar associations are ideally suited to craft educational resources and training for judges and their clerks. Lawyers in many jurisdictions must already complete continuing education training in order to maintain their licenses, so expanding this notion to include climate change specific education should not be particularly controversial.

Considering the Advisory Opinion's mandates, and the lack of attention many judges pay to international tribunals, it is crucial that States dedicate resources to educating their judiciaries about the substance of the Advisory Opinions and the consequences for non-compliance. That basic level of competence will be necessary in order to enforce State's compliance with certain mandates, and to hold private actors liable for their actions in furtherance of the climate crisis, including adherence to certain regulations and reporting requirements.

Considering the foreseeable surge of litigation against States for non-compliance—particularly in jurisdictions where the Paris Agreement is incorporated into domestic law—the volume of cases arising from the ICJ Advisory Opinion could be significant. Therefore, it is crucial to educate State judiciaries on the consequences of non-compliance and to remind them of the binding authority of international tribunals.

VII. Adopt Equitable Climate Finance Mechanisms

The realization of the goals set in Article 2 of the Paris Agreement remains a huge concern in light of many fundamental issues that continue to impact the global transition ambition. To begin with, Article 9(1) and (3) of the Paris Agreement *mandate* developed country Parties to provide financial assistance to developing country Parties for both mitigation and adaptation, in continuation of their existing obligations under the Convention.⁹² However, unlike the UNFCCC, the Paris Agreement does not define what countries are developed countries.⁹³ Furthermore, the watering down of the word “shall” in Article 9(1) to “should” in 9(3) also seems to have weakened the provision of the Article, reducing it from the *obligation* envisaged in the Article to a mere moral adjuration. This probably explains why the global climate finance flow has been critically low.

⁹² See Article 9(1) & (3) of the Paris Agreement. United Nations Framework Convention on Climate Change, Art. 4(3) that provides *inter alia* “The developed country Parties and other developed Parties included in Annex II shall provide new and additional financial resources to meet the agreed full costs incurred by developing country Parties in complying with their obligations under Article 12, paragraph 1”

⁹³ Governing international climate finance and investment: the Paris Agreement and related international and transnational mechanisms, p. 299; https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4049282#paper-references-widget

Sadly, COP29 did not produce any major improvement beyond another set of promises with no clarity on adaptation finance.⁹⁴

Climate finance flow has consequently been critically low. According to McKinsey, the capital spending required for net-zero transition between 2021 and 2050 is about \$275 trillion, or \$9.2 trillion per year on average, an annual increase of as much as \$3.5 trillion from January of 2022, but the reported figure from 2023 shows that the global fund stands at \$1.9 trillion.⁹⁵ Both the shortage in the climate finance flow and the application of the limited funds raise critical equity and environmental justice issues. The shortage in the climate finance flow shows that developed countries have not lived up to their obligation under the Paris Agreement, thereby leaving developing countries at the mercy of the profit-driven private sector and their investors. There is also no doubt that the current model of distribution of these funds is not in line with the provision of Article 9 of the Paris Agreement, which encourages a balanced financing toward mitigation and adaptation, thereby leaving hundreds of millions of vulnerable people behind. These issues need to be urgently addressed at COP30 so that appropriate guidance can be provided to States to adopt equitable climate finance mechanisms that support a just energy transition.

VIII. Enforce Binding Climate Commitments

Developed countries have long had access to the best science and technology to decarbonize their economies. It has only been a matter of willingness, influenced by political and economic interests, to use these developments to create an economy independent of oil, gas, and coal. In accordance with the principle of Common but Differentiated Responsibilities and Respective Capabilities, the international community has long urged developed States to fulfill their imperative duty to use such technology to phase out fossil fuels. However, most developed economies are neither making a consistent contribution to the reduction of global GHG emissions nor enforcing their international obligations. Moreover, their domestic policies have not been reflecting the binding nature of these obligations. Now, with the affirmation from the Advisory Opinions that treaty obligations are binding, developed States must adopt effective requirements that seriously pursue a deliberate transition away from a fossil fuel-based economy. Considering the demands voiced for decades by the nations most vulnerable to climate change, the obligations of States to design and implement adaptation and mitigation policies have now been reinforced by the Advisory Opinions. These measures are now mandatory and enforceable, and there will be consequences for failing to comply.

The Advisory Opinions emphasized that States must articulate a progressive, heightened due diligence standard to meet their obligations to reduce emissions and combat climate change. State parties, in the context of COP30, now have an opportunity to revisit the concept of binding obligations and identify ways to articulate and implement the duty of due diligence confirmed by the Advisory Opinions.

⁹⁴ United Nations Climate Change; COP29 UN Climate Conference Agrees to Triple Finance to Developing Countries, Protecting Lives and Livelihoods; <https://unfccc.int/news/cop29-un-climate-conference-agrees-to-triple-finance-to-developing-countries-protecting-lives-and-livelihoods>.

⁹⁵ Global Landscape of Climate Finance, 2025 https://www.climatepolicyinitiative.org/wp-content/uploads/2000/06/compressed_Global-Landscape-of-Climate-Finance-2025.pdf.

The binding obligations to respond to the mandates set forth in the Advisory Opinions must be “bottom-up.” The involvement of cities, provinces, and subnational actors in the NDCs is now more crucial than ever to ensure effective and unified compliance. However, subnational actions can face fundamental obstacles and risk long-term failure without national government support. In cases where national governments are unresponsive in fulfilling their respective obligations, legal accountability will become the necessary tool to enforce binding obligations and ensure that States comply with the progressive improvement of their NDCs.⁹⁶

Conclusion

State action is required in response to the Advisory Opinions, but States are often slow to act. In light of the ICJ Advisory Opinion clarifying that States do not have full discretion in developing their NDCs, it is imperative for States to engage in self-revision of their mitigation and adaptation measures, implementing progressive improvement based on the best available science. COP30 serves as an opportunity to highlight the significance of the Advisory Opinions concerning legally binding obligations. The international community must pursue a unified plan to ensure the enforcement of mandatory obligations on climate change and issues of climate justice for present and future generations, and to address the consequences of non-compliance. Developed countries must also, more than ever before, provide more financing support to their developing counterparts in line with their commitments under Article 9 of the Paris Agreement

Considering the unwillingness, or inability, of States to act quickly in response to the Advisory Opinions, urgent subnational action and engagement must happen now. Subnational entities are nimbler and can implement changes quicker than States, thereby serving as models to implement at the State level. Subnational incentives and regulations can be powerful tools for advancing the decarbonization of economies, even in the presence of fragmented political will at the national level. Local governments are often best positioned to understand the needs of their communities, so whenever possible, mitigation and adaptation measures should be implemented from the ground up.

Subnational engagement can be accomplished through academic institutions and grassroots organizations. Engagement through institutions focused on these issues are the quickest, and most cost-efficient, mechanism for effectuating the change necessary to combat the climate crisis. The Pace Haub Law Research Centers will continue to be at the forefront of addressing international climate change mitigation issues. PECC will work diligently with its international partners at the IUCN Congress, COP30, and beyond, to ensure a just energy transition, since a just energy transition is no longer optional, and its time is now.

⁹⁶ ICJ Opinion, paragraph 240.