CONSTITUTIONAL COURT OF ECUADOR

122-25-IS
NON-COMPLIANCE WITH SENTENCES AND ORDERS
ACTION FOR PROTECTION SENTENCE NO. 21201-2020-00170

AMICUS CURIAE

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14 SEPTEMBER 2026

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I. Introduction

This *amicus curiae* has been prepared by the Human Rights Litigation Clinic and the Frank G. Wells Environmental Law Clinic of the UCLA School of Law, which represent the undersigned international legal scholars with expertise in human rights and environmental rights. The undersigned scholars have years of experience analyzing international law and applying these standards to human rights and environmental issues in countries across the globe. The scholars' interest in this case stems from an understanding of the ongoing human rights and environmental rights violations that the lack of implementation of the 2021 judgment of the Multicompetent Chamber of the Provincial Court of Sucumbíos has allowed to persist, which affects not only the plaintiffs' interests and those of communities in Ecuador, but also nature and future generations beyond the borders of Ecuador. This *amicus curiae* seeks to provide the Court with both factual and legal information concerning the continuing violations of rights and the additional harms caused by lack of implementation of the prior sentence over the past five years, including harms to plaintiffs, broader communities, nature, and future generations.

This case arises from the claims of a group of girls seeking protection from the ongoing harm caused by gas flaring in their communities in the Ecuadorian Amazon, specifically in Sucumbíos and Orellana. Concerned about the significant human rights violations and environmental consequences of gas flaring for oil extraction there, the plaintiffs brought a protection action resulting in a favorable judgment in 2021 by the Multicompetent Chamber of the Provincial Court of Sucumbíos. The judgment recognized that the plaintiffs live in an environment where exposure to toxic substances has become part of daily life: access to safe water is compromised, surrounding ecosystems have been severely degraded, and serious illnesses, including cancer, have become increasingly prevalent among their families and neighbors. But five years after the judicial recognition of the human rights violations and an order to remediate, plaintiffs still await compliance by the government.

In its judgment, the Court recognized and found that gas flaring releases dangerous pollutants into the air, including known carcinogens linked to various health conditions such as leukemia. It acknowledged that, as a result, the Ecuadorian Amazon has experienced alarmingly high cancer rates.[1] These harms are compounded by the broader environmental consequences of gas flaring, which contributes to climate change and leads to significant soil and water contamination. In the affected area, land has become infertile and unsafe for livestock; water sources are polluted, and vegetation and wildlife are destroyed.[2]

The Multi-Competent Chamber of the Provincial Court of Sucumbíos recognized these realities in its judgment. It found grave breaches of the right to life, health, food and water and the right to a healthy environment, and set forth a series of actions the Government of Ecuador must take to remedy the situation, including: (i) the elimination of all gas flares by 2030; (ii) the elimination of gas flares nearby population centers within 18 months of the judgment; (iii) a technical study on access to safe drinking water; (iv) a medical-scientific study to determine the

[1] Herrera Carrion et al v. Ministry of Environment et al (Caso Mecheros), Sala Multicompetente de la Corte Provincial de Justicia de Sucumbíos [Multicompetent Chamber of the Provincial Court of Justice of Sucumbíos] (July 29, 2021), No. 21201-2020-00170, at 9 (Ecuador) [hereinafter Gas Flares Case].

[2] *Id* at 61, 63.

impact of hydrocarbon activity on cancer rates, along with the potential creation of a Specialized Oncological Unit within the 18 months following the judgment; and (v) a requirement that permits for new flares be granted only under the condition that gas be treated in a more technically advanced and environmentally friendly manner. These remedies, however, have failed to be properly implemented, if at all, leading to an increase in the prevalence of gas flaring and exacerbating damage to human rights.

Following the judgment, the State adopted regulatory measures that narrowly interpret key terms such as "nearby" and "population centers," limiting enforcement to gas flares located within 100 meters of settlements consisting of at least 20 homes. As a compliance court has held in reviewing those regulatory measures, those definitions are manifestly inadequate in the context of the affected communities and have resulted in the decommissioning of only a minimal number of gas flares. At the same time, reports from the Ministry of Energy and Mines itself indicate that nearly 100 additional flares have been installed in the region, further exacerbating the harm. In total, there are *more* flares operating in the affected communities today than when the 2021 judgment was issued.

The State's failure to properly enforce the judgment issued by the Municipal Court of Sucumbíos perpetuates serious violations of the rights to life, health, food, water, and a healthy environment, and thereby constitutes a violation of the right to an effective remedy under international human rights law. Despite clear judicial orders aimed at addressing the harm, the lack of implementation has allowed the underlying violations of Ecuadorian and international law to persist, resulting in continued harm to the affected population. This failure is particularly striking given the availability of effective technologies and regulatory frameworks in other jurisdictions that demonstrate that reducing gas flaring is both feasible and necessary.

In light of the above, the Constitutional Court should take immediate action to remedy the State's failure to implement the 2021 judgment issued by the Multi-Competent Chamber of the Provincial Court of Sucumbíos and enforce the judgment, halt ongoing harm, and provide full and effective reparations to the victims. *Amici* recommend that the Court take action to enforce the judgment that includes monetary damages – to be awarded in order to provide restitution and compensation, given the additional and ongoing harms caused to plaintiffs, broader communities, nature and future generations by the failure to implement the sentence for the past 5 years.

II. The Scientific Record Overwhelmingly Demonstrates that Natural Gas Flaring Harms Human Health and the Environment, and that These Harms Worsen with Increased Exposure and Duration

a. Communities Exposed to Gas Flaring Face Significantly Elevated Risks of Cancer, Respiratory Illness, and Reproductive Harm

Gas flaring—which is the combustion of associated natural gas released as a byproduct of oil extraction—poses severe and well-documented risks to human health that increase over time. Flaring is an inefficient process that releases large quantities of carbon dioxide, methane, volatile

organic compounds ("VOCs"), and particulate matter into the atmosphere.[3] Many of these toxins are carcinogens, like benzene, which is a known cause of leukemia.[4] Studies overwhelmingly link the toxins produced during flaring with a host of issues to the respiratory, reproductive, and nervous systems.[5]

Gas flaring poses particularly severe hazards to women and children. Studies conducted in communities near flaring operations have documented statistically significant increases in adverse birth outcomes, including low birth weight and preterm delivery.[6] A study on the Eagle Ford oil and gas region in the United States, for example, found that mothers living near frequent gas flaring were 50% more likely to have preterm births than mothers with no exposure.[7] Epidemiological research has also linked proximity to the release of benzene and other toxins associated with oil and gas development with increased childhood leukemia risk.[8]

Even relatively short exposures to flaring can result in staggering health burdens on communities. Residents of Texas City in the United States who were exposed to benzene for just forty days during a large-scale flaring incident at the nearby British Petroleum refinery showed significant blood and liver abnormalities including elevated white blood cell counts and liver enzyme disruptions, consistent with early markers of cancer risk.[9]

Prolonged human exposure to gas flaring is additionally associated with increased rates of asthma and chronic obstructive pulmonary diseases, among other respiratory issues.[10] A qualitative analysis out of Nigeria found that residents in gas flaring communities reported chest pain at a rate of 9.6% compared to just 1.6% in non-flaring communities – a roughly six-fold increase – as well as higher rates of breathlessness and cough prevalence.[11] Another study of Niger Delta communities found not only that Peak Expiratory Flow Rate (PEFR) – a reliable proxy for lung function – was worse in flaring communities, but that within those communities people who had

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[3] O. Saheed Ismail & G. Ezaina Umukoro, *Global Impact of Gas Flaring*, 4 ENERGY & POWER ENG'G 290, 291 (2012), doi:10.4236/epe.2012.44039.

[4] *Id.* at 292.

[5] Haji Bahadar et al., *Current Understandings and Perspectives on Non-Cancer Health Effects of Benzene: A Global Concern*, 276 TOXICOLOGY & APPLIED PHARMACOLOGY 83, 84 (2014), https://doi.org/10.1016/j.taap.2014.02.012; *see also* Lara Cushing et al., *Flaring from Unconventional Oil and Gas Development and Birth Outcomes in the Eagle Ford Shale in South Texas*,128(7) ENV'T HEALTH PERSPS., at 077003-1, 077003-5 (July 2020), https://pubmed.ncbi.nlm.nih.gov/32673511/; *see also* Wesley Blundell & Anatolii Kokoza, *Natural Gas Flaring, Respiratory Health, and Distributional Effects*, 208 J. PUB. ECON.104601-1, 104601-1, https://doi.org/10.1016/j.jpubeco.2022.104601.

[6] Cushing et al., *supra* note 5, at 077003-4., https://pubmed.ncbi.nlm.nih.gov/32673511/.

[7] *Id.*

[8] Cassandra J. Clark et al., *Unconventional Oil and Gas Development Exposure and Risk of Childhood Acute Lymphoblastic Leukemia: A Case-Control Study in Pennsylvania, 2009-2017*, 130(8) ENV'T HEALTH PERSPS., 087001-1, 087001-1, 087001-5, 087001-8 (Aug. 2022), https://pubmed.ncbi.nlm.nih.gov/35975995/.

[9] Mark A. D'Andrea et al., *Adverse Health Effects of Benzene Exposure Among Children Following a Flaring Incident at the British Petroleum Refinery in Texas City*, 55(3) CLINICAL PEDIATRICS 219, 219 (2016), 10.1177/0009922815594358.

[10] Bahadar et al., *supra* note 5, at 84, https://doi.org/10.1016/j.taap.2014.02.012; *see also* Cushing et al., *supra* note 5, at 077003-1, https://pubmed.ncbi.nlm.nih.gov/32673511/; *see also* Blundell & Kokoza, *supra* note 5, at 104601-1, https://doi.org/10.1016/j.jpubeco.2022.104601.

[11] Ekwere et al., *The Health Impact and Lung Function Indices of Adult Residents of Ibeno Community Exposed to Gas Flaring in South-South Nigeria*, 14(4) IBOM MED. J. 507, 510 (Oct. 2021), https://ibommedicaljournal.org/index.php/imjhome/article/view/30/831.

been exposed to flaring for longer experienced a marked decrease in lung function over time.[12] For example, a female child who lived in a gas flaring community for just one to five years would have a PEFR of about 289.67 L/min, but after more than ten years would have a PEFR of about 170 L/min, or an approximate 40% decrease in lung function.[13] These studies indicate that an additional five years of exposure has a substantial impact on nearby communities' health.

Researchers in the United States have demonstrated a causal relationship between flaring and respiratory illness, comparing the health impacts of communities downwind of gas flares during periods when processing plants were at capacity and thus forced to flare wells to health impacts elsewhere. They found that a 1% increase in upwind flaring within 60 miles of a community increases the respiratory-related hospital visitation rate by 0.73% per month. The authors estimated that if North Dakota's 88% gas capture rate had been in place from the start of their sample period from 2007 through 2015, respiratory-related health costs would have been reduced by approximately $443 million over the nine years of the study.[14]

The available scientific information thus supports the conclusion of the Multi-Competent Chamber of the Provincial Court of Sucumbíos that gas flaring is a violation of the Plaintiffs' right to health. Additionally, these studies demonstrate that longer exposure to pollution from gas flares leads to more significant harms. Every month and every year of additional exposure to gas flaring through lack of implementation of the court's sentence increases both the health and economic harms to the Plaintiffs and their broader communities.

b. Flaring Releases Particulate Matter That Endangers Human Health and the Natural Environment Kilometers Away

Harmful particulates from gas flaring travel significant distances across the landscape, carried by wind into communities and ecosystems that may appear safely removed from the danger. Recent geospatial studies of the Ecuadorian Amazon Rainforest show that the proximity of population centers to gas flaring activities poses a health risk to hundreds of thousands of inhabitants within five kilometers of gas flares.[15] This study confirms the findings of numerous studies that record the greatest health risks to occur within three to five kilometers of flaring sites.[16] Other studies have documented pollutants from gas flares traveling as far as ten to fifteen kilometers away from flares.[17]

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[12] Simon Ovuakporaye et al., *Effect of Gas Flaring on Lung Function Among Residents in Gas Flaring Community in Delta State, Nigeria*, 4(5) RESEARCH J. ENV'T & EARTH SCIS. 525, 527 (2012), https://www.researchgate.net/publication/284465699_Effect_of_Gas_Flaring_on_Lung_Function_among_Residents_in_Gas_Flaring_Community_in_Delta_State_Nigeria.

[13] *Id.*

[14] Blundell & Kokoza, *supra* note 5, *available at* https://doi.org/10.1016/j.jpubeco.2022.104601.

[15] Francesco Facchinelli et al., *The Apaguen los Mecheros Campaign: Supporting Climate Justice in the Amazonian Cities of Ecuador by Estimating the Health Risks of Gas Flaring*, 240 LANDSCAPE URBAN PLAN. 104898, 104898-13 (2023), https://doi.org/10.1016/j.landurbplan.2023.104898.

[16] Solomon O. Giwa et al., *Gas Flaring Attendant Impacts of Criteria and Particulate Pollutants: A Case of Niger Delta Region of Nigeria*, 31(3) J. KING SAUD UNIV. – ENG'G SCIS. 209, 216 (2019), https://doi.org/10.1016/j.jksues.2017.04.003; *see also* Cushing et al., *supra* note 5, at 077003-4, https://pubmed.ncbi.nlm.nih.gov/32673511/.

[17] Giwa et al., *supra* note 16; *see also* Francis Elehinafe et al., *Natural Gas Flaring in Nigeria, its Effects and Potential Alternatives – A Review*, 23(8) J. ECOLOGICAL ENG'G 141, 147 (2022), https://doi.org/10.12911/22998993/149822.

Particulate matter, VOCs, and polycyclic aromatic hydrocarbons released during flaring contribute to dangerous breathing conditions.[18] These emissions include nitrogen oxides and sulfur dioxide, which react in the atmosphere to form pollutants like ground-level ozone, which is a major component of the smog that forms near flaring operations.[19] Atmospheric modeling studies demonstrate that pollutants from flare stacks disperse far beyond the immediate site, elevating ambient pollutant concentrations across surrounding communities for kilometers around.[20]

A case study from Kazakhstan illustrates these dangers. The village of Berezovka experienced the severe impacts of flaring firsthand when a corporation responsible for oil extraction reduced the buffer zone around a sour gas oil and condensate field from five kilometers to three.[21] This oil field routinely flared natural gas.[22] Children and adults in the village, which was located at the edge of three kilometers from the flares, suffered breathing difficulties, skin rashes, nosebleeds, headaches, and other ailments for many years.[23] In 2014, a local school descended into chaos as twenty children and some teachers became dizzy, lost consciousness, and suffered seizures, with some children foaming at the mouth.[24] The government could no longer ignore the harm. It now enforces a five-kilometer separation between flaring and villages.[25]

Buffer zones around human populations alone do not, of course, adequately address harms to ecosystems. And the harms caused by particulates released from gas flares do not end at air

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[18] Giwa et al., *supra* note 16; *see also* Chen Chen et al., *Black Carbon Emissions and Associated Health Impacts of Gas Flaring in the United States*, 13(3) ATMOSPHERE,1, 1 (Feb. 2022), https://doi.org/10.3390/atmos13030385; *see also* Obinna Anejionu et al., *Contributions of Gas Flaring to a Global Air Pollution Hotspot: Spatial and Temporal Variations, Impacts and Alleviations*, 118 ATMOSPHERIC ENV'T 184, 184 (2015), https://doi.org/10.1016/j.atmosenv.2015.08.006.

[19] *Where This Occurs: Air*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/nutrientpollution/where-occurs-air (last updated Aug. 18, 2025).

[20] Olusegun G. Fawole et al., *Dispersion of Gas Flaring Emissions in the Niger Delta: Impact of Prevailing Meteorological Conditions and Flare Characteristics*, 246 ENV'T POLLUTION 284, 284 (Mar. 2019), https://doi.org/10.1016/j.envpol.2018.12.021.

[21] Nicole Sadek, *The Lost Village: Western Oil Companies Enriched Kazakhstan's Power*, THE INT'L CONSORTIUM OF INVESTIGATIVE JOURNALISTS (Nov. 22, 2024), https://www.icij.org/investigations/caspian-cabals/karachaganak-oil-field-kazakhstan-berezovka-chronic-illness/.

[22] Tatyana Kuzmina, *29 School Students and Teachers Faint One After Another in Western Kazakhstan*.TENGRINEWS (Dec. 1, 2014), https://en.tengrinews.kz/emergencies/29-school-students-and-teachers-faint-one-after-another-in-257706/ (contemporaneous reports, recording villagers stating: "We have gas flared all around here. There are so many flares that we don't need streetlights during the night [and] there has been a strong smell lately").

[23] David R. Boyd (Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment), *Additional Sacrifice Zones*, ¶21, U.N. Doc. Annex 1 to A/HRC/49/53 (Feb. 3, 2022), https://www.ohchr.org/sites/default/files/2022-03/Annex1_to_A_HRC_49_53.pdf; Nate Schenkkan, *Kazakhstan: Environmental Dispute Raises Questions about Judicial Authority*, EURASIANET (Mar. 13, 2012), https://eurasianet.org/kazakhstan-environmental-dispute-raises-questions-about-judicial-authority.

[24] Sadek *supra* note 21.

[25] Nicole Sadek, *Going with the Flow: How Scrapping our Itinerary Helped Us Land the Story*, THE INT'L CONSORTIUM OF INVESTIGATIVE JOURNALISTS (Dec. 17, 2024), https://www.icij.org/investigations/caspian-cabals/going-with-the-flow-how-scrapping-our-itinerary-helped-us-land-the-story/.

pollution. Many more pollutants leach into water sources and soil, exacerbating environmental degradation in the natural areas surrounding gas flares.[26]

The impacts on soil quality near flaring sites are particularly devastating. Studies indicate that soil immediately surrounding gas flares loses its fertility, undermining the ability of communities to sustain agriculture.[27] Research conducted near flaring operations has documented significant increases in soil acidity, with pH levels dropping well below the optimal range for crop cultivation, depleting once-fertile farmland.[28] In the Khuzestan region of Iran, soil studies have found elevated levels of heavy metals like lead, arsenic, and chromium in agricultural soil and crops.[29] Several studies from the Niger Delta even exposed a striking pattern, finding a measurably greater decrease in crop yield as distance from flares decreased. The researchers found complete crop failure to be likely within 200 meters of the flares.[30] The contamination is so severe that one study recommends that maize should not be cultivated within two kilometers of the bund wall surrounding flare sites.[31]

Flaring affects both surface water and groundwater sources, contaminating the entire hydrological system. The burning of sour gas – a type of natural gas that contains high levels of hydrogen sulfide, like that found in the Ecuadorian Amazon – releases sulfur oxides that rise into the atmosphere and return to earth as acid rain. This corrosive precipitation contaminates water supplies, destroys vegetation, and erodes roofs and physical infrastructure.[32] Pollutants from acid rain enter rivers, streams, and lakes, while seepage carries contaminants deep into underground aquifers that communities depend on for drinking water.[33] Contamination from gas flaring and other extractive activities is directly linked to declines in water quality, habitat destruction, and reduced fish productivity.[34] In a 2020 study from Nigeria, researchers found elevated pollution levels in water samples taken from sources near flaring sites, including high levels of heavy metals and contaminants. The intensity of pollution decreased with distance from flares, suggesting a causal relationship between flaring and water contamination.[35] Water contamination not only affects humans directly – through impairment of drinking water – but also degrades aquatic

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[26] Ismail & Umukoro, *supra* note 3, at 291; Anejionu, supra note 18, at 185; Francis Elehinafe et al., *Natural Gas Flaring in Nigeria, its Effects and Potential Alternatives – A Review*, 23 J. ECOLOGICAL ENG'G 141, 141-42 (2022), https://doi.org/10.12911/22998993/149822.

[27] Ismail & Umukoro, *supra* note 3, at 292.

[28] *Id.*

[29] Zeinab Gholami et al., *Health Risk Assessment Pb, as and Cr in Corn (Zea Mays) of Behbahan and Dezful from Khuzestan Province, Iran*, SCI. REPS.1, 1, 3 (May 2025),https://doi.org/10.1038/s41598-025-89281-w.

[30] Z. A. Elum et al., *Oil Exploitation and Its Socioeconomic Effects on the Niger Delta Region of Nigeria*, 23 ENV'T SCI. & POLLUTION RESEARCH 12880, 12884 (2016), https://doi.org/10.1007/s11356-016-6864-1.

[31] Ismail & Umukoro, *supra* note 3, at 292; *see also* P.A.O. Odjugo & E.J. Osemwenkhae, *Natural Gas Flaring Affects Microclimate and Reduces Maize (Zea mays) Yield*, 11 INT'L J. AGRIC. & BIOLOGY 408, 411 (2009), https://www.fspublishers.org/published_papers/29342_..pdf.

[32] Ismail & Umukoro, *supra* note 3, at 291-92

[33] *Id.*

[34] *Id.*

[35] Rose Alani et al., *Impact of Gas Flaring on Surface and Underground Water: A Case Study of Anieze and Okwuibome Areas of Delta State, Nigeria*, 192 ENV'T MONITORING & ASSESSMENT1, 3-4 (Feb. 2020) https://doi.org/10.1007/s10661-020-8124-6.

ecosystems and species that many communities depend on for sustenance and economic livelihood.[36]

c. Gas Flaring is a Significant Contributor to Climate Change, with Harms Extending Outside Ecuador

Gas flaring is also a substantial contributor to global climate change, resulting in harms to nature and current and future human populations across the globe, no matter their distance from gas flares in Ecuador. Flaring releases carbon dioxide and methane – two of the most potent greenhouse gases – and undermines the Government of Ecuador's efforts to meet its emissions-reduction commitments under the Paris Agreement.[37] The volume of gas flared in Ecuador is estimated to be at or over 1 billion cubic meters annually.[38] The scale of these emissions worldwide is staggering. According to the World Bank, global gas flaring burns approximately 140 billion cubic meters of natural gas annually, releasing over 300 million tons of carbon dioxide into the atmosphere each year.[39] This is the equivalent of about 70 million gasoline-powered passenger vehicles driven for one year.[40] If this burned natural gas was instead used for power generation, it could provide about 750 billion kWh of electricity, the equivalent of the entire African continent's annual electricity consumption.[41]

Methane is particularly harmful due to its extraordinary potency as a greenhouse gas. In terms of global warming potential over a hundred-year period, every ton of methane released is equivalent to the impact of twenty-one tons of carbon dioxide in driving planetary warming.[42] Flaring releases substantial quantities of methane directly into the atmosphere, without harnessing any of the benefits of energy generation from burning this component of natural gas.[43] Although flaring burns methane from natural gas and therefore reduces the emission of methane as compared with pure (unburned) venting of gas, flaring's deep inefficiencies leave large amounts of methane unburned.[44] Studies have found that the percentage of methane actually combusted varies dramatically, with flares effectively destroying only about ninety percent of methane under real-

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[36] Nathan Andrews et al., *Oil, Fisheries and Coastal Communities: A Review of Impacts on the Environment, Livelihoods, Space and Governance*, ENERGY RESEARCH & SOC. SCI. 1, 5 (May 2021), https://doi.org/10.1016/j.erss.2021.102009.

[37] Ismail & Umukoro, *supra* note 3, at 291; *see also Nationally Determined Contributions (NDCs),* UNITED NATIONS, https://unfccc.int/process-and-meetings/the-paris-agreement/nationally-determined-contributions-ndcs#NDC-Synthesis-Report (last visited Mar. 2, 2026).

[38] Reyes, F. and Ajamil, C. PETRÓLEO, AMAZONÍA Y CAPITAL NATURAL (2005) (estimating 140 million cubic feet – equivalent to 3.96 million cubic meters – of gas flared daily in Ecuador, or 1.4 billion cubic meters annually); *see also* Clínica Ambiental and UDAPT, *Informe: Mecheros en Ecuador* (2020), https://agenciaecologista.info/wp-content/uploads/2020/01/INFORME_MECHEROS_envio.pdf (citing to data from 2018 and 2019 regarding average daily oil production and average volume of associated gas burned per barrel extracted to estimate 2.58 million cubic meters of gas flared daily in Ecuador, or 941 million cubic meters annually).

[39] *Zero Routine Flaring by 2030 Initiative Text*, WORLD BANK GRP., https://www.worldbank.org/en/programs/zero-routine-flaring-by-2030/initiative-text.

[40] *Greenhouse Gas Equivalencies Calculator,* U.S. ENV'T PROT. AGENCY, https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results (last updated Feb. 5, 2026).

[41] *Zero Routine Flaring by 2030 Initiative Text*, *supra* note 39.

[42] Stanley Ngene et al., *Environmental Implications of Flaring and Venting in Crude Oil and Natural Gas Production*, 4 INT'L J. ENV'T MONITORING & ANALYSIS 154, 157 (2016), doi:10.11648/j.ijema.20160406.13.

[43] *Id.*

[44] Ismail & Umukoro, *supra* note 3, at 291., doi:10.4236/epe.2012.44039.

world conditions.[45] This means that significant quantities of non-combusted methane escape into the atmosphere even from operating flares that are supposedly functioning as designed.[46] Incomplete combustion also produces black carbon, a climate pollutant that absorbs sunlight and contributes to warming both in the atmosphere and when deposited on ice and snow, which accelerates the melting of glaciers and polar ice caps.[47] For these reasons, countries around the world—including Ecuador—have endorsed the Zero Routine Flaring initiative, pledging to make every effort to ensure that routine flaring at existing oil fields ends as soon as possible, and no later than 2030.[48]

III. Many Other Countries Have Successfully Adopted Practical and Effective Gas Flaring Mitigation Measures, Underscoring the Availability and Feasibility of Robust Solutions

a. Technological and Regulatory Solutions Successfully Abate and Eliminate Flaring

Many cost-effective solutions can be used to reduce the harms to the environment and human health from routine gas flaring. Indeed, flaring is an immensely wasteful practice that fails to capitalize on the economic potential of the gas produced via oil extraction, sometimes called "associated gas." Jurisdictions around the world—including those with developing economies—have implemented cost-effective regulatory schemes and measures to reduce and eliminate the need to flare associated gas while also promoting national wealth.

Research into effective technological and regulatory approaches has been compiled by international organizations including the International Energy Agency,[49] World Bank,[50] Clean Air Task Force,[51] and others;[52] their reports provide practical implementation solutions to abate flaring.[53] If associated gas is captured and used to produce energy instead of flared, it would solve

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[45] Genevieve Plant et al., *Inefficient and Unlit Natural Gas Flares Both Emit Large Quantities of Methane*, 377 SCI. 1566, 1566 (2022), https://www.science.org/doi/10.1126/science.abq0385.

[46] *Id.*

[47] Chen et al., *supra* note 18, at 11, https://doi.org/10.3390/atmos13030385.

[48] *Zero Routine Flaring by 2030 Initiative Text*, *supra* note 39.

[49] *Gas Flaring*, INT'L ENERGY AGENCY, https://www.iea.org/energy-system/fossil-fuels/gas-flaring (last visited on April 20, 2026).

[50] IPIECA, *Flaring Management Guidance for the Oil and Gas Industry*, WORLD BANK GRP. (Feb. 2, 2022), https://www.worldbank.org/en/programs/gasflaringreduction/publication/flaring-management-guidance-for-the-oil-and-gas-industry.

[51] CoMAT online tool used to assist governments in developing methane mitigation plans for their oil and gas industries, CLEAN AIR TASK FORCE, https://www.catf.us/comat/ (last visited on April 20, 2026).

[52] Andrew Bernstein et al., *Igniting Action to Reduce Gas Flaring: Real Opportunities. Real Projects. Real Results*, COLUM. CTR. ON SUSTAINABLE INV. (CCSI) & CAPTERIO (June 2025), https://ccsi.columbia.edu/sites/ccsi.columbia.edu/files/content/docs/publications/CCSI-Capterio-Igniting-Action-Reduce-Gas-Flaring-Opportunities-Projects-Results-June-2025.pdf.

[53] See IPIECA *supra* note 50; see also Gianni Lorenzato et al., *Financing Solutions to Reduce Natural Gas Flaring and Methane Emissions*, WORLD BANK GRP. (2022), https://openknowledge.worldbank.org/server/api/core/bitstreams/27e9b31f-c8bf-5fa4-aee3-3576d60e1a48/content; *see also* Global Flaring & Methane Reduction Partnership, *GFMR Technology Overview – Utilization of Small-Scale Associated Gas*, WORLD BANK GRP. (Mar. 25, 2024), https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099719503252436553.

several problems at once. It would reduce the harms from flaring, reduce the costs of securing external sources of fuel for remote operations, and could even provide a revenue source.[54]

Nations adopting such techniques have significantly and quickly reduced flaring rates. For example, Colombia reduced its flare volume and intensity by almost 70% from 2012 to 2022 by banning routine flaring; implementing a monitoring and enforcement scheme; requiring leak detection and repair; and mandating the use of associated gas rather than wasting it.[55] Kazakhstan used similar measures to reduce flare volume and intensity by more than 70% from 2012 to 2023.[56] Kazakhstan achieved these flaring declines while oil production remained robust.[57] These examples show realistic enforcement steps Ecuador can take to achieve the goal of zero routine flaring by 2030 and to significantly reduce flaring today, in line with the 2021 judgment.

Rather than flaring associated gas, jurisdictions around the world require its productive use. One potential use is to reinject the gas into underground reservoirs to stimulate or prolong oil production.[58] Kazakhstan reinjects about one-third of its associated gas to generate oil output.[59] Beyond reinjection, well-developed technologies generate energy from gas and are widely used at sites around the globe.[60] For instance, Kazakhstan uses its associated natural gas by capturing and

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[54] *Global Methane Tracker 2025*, INT'L ENERGY AGENCY 12 (May 2025), https://iea.blob.core.windows.net/assets/b83c32dd-fc1b-4917-96e9-8cd918801cbf/GlobalMethaneTracker2025.pdf (showing, in the figure, a positive rate of return for associated gas utilization).

[55] Global Flaring & Methane Reduction Partnership, *Global Methane and Flaring Regulations: Colombia*, WORLD BANK GRP. (DEC. 2023), https://flaringventingregulations.worldbank.org/colombia; L. 10/1961, marzo 16, 1961, Diario Oficial (Colom.), https://www.suin-juriscol.gov.co/viewDocument.asp?id=30019367(prohibiting gas flaring); R. 181495/2009, septiembre 2, 2009, Diario Oficial (Colom.), https://gestornormativo.creg.gov.co/gestor/entorno/docs/resolucion_minminas_181495_2009.htm (main regulatory framework); R. 41251/2016, diciembre 23, 2016, Diario Oficial (Colom.), https://www.minenergia.gov.co/documents/2630/37318-Resolucion-41251-23Dic2016.pdf (measurement and reporting requirements); R. 40066/2022, febrero 14, 2022, Diario Oficial (Colom.), https://gestornormativo.creg.gov.co/gestor/entorno/docs/resolucion_minminas_40066_2022.htm; (updated provisions for flaring, venting, and fugitive methane emissions); see also Zubin Bamji and Adam Pollard, *Case Study 17: Gas Flaring in Colombia*, WORLD BANK P'SHIP ON TRANSPARENCY IN THE PARIS AGREEMENT 119-122, https://transparency-partnership.net/system/files/migrated_document_files/colombiagasflaringworldbank2023.pdf.

[56] Global Flaring and Methane Reduction Partnership, *Global Methane and Flaring Regulations: Kazakhstan*, WORLD BANK GRP. (Dec. 2023), https://flaringventingregulations.worldbank.org/kazakhstan (detailing regulatory framework, monitoring and reporting requirements, penalties, sanction schemes, and enabling legislation); see also Lesley Feldman et al., *Kazakhstan's Progress in Reducing Gas Flaring is a Model for the World*, CLEAN AIR TASK FORCE (June 5, 2025), https://www.catf.us/2025/06/kazakhstans-progress-reducing-gas-flaring-model-world/.

[57] Evgeniya Maiburova*, Unlocking the Value of Flared Gas in Kazakhstan's Upstream Oil and Gas Sector*, S&P GLOBAL (Jun. 26, 2024), https://www.spglobal.com/energy/en/research-analytics/unlocking-value-of-flared-gas-in-kazakhstan-upstream-sector.

[58] *See generally* Fengshuang Du and Nojabaei Bahareh, *A Review of Gas Injection in Shale Reservoirs: Enhanced Oil/Gas Recovery Approaches and Greenhouse Gas Control*, 12(12) 2355 (2019); https://doi.org/10.3390/en12122355 (detailing different gas injection methods); Timothy C. Allison et al., COMPRESSION MACHINERY FOR OIL AND GAS 375, 380-81, (2019), https://doi.org/10.1016/B978-0-12-814683-5.00008-0.

[59] Maiburova *supra* note 57.

[60] *See* Global Flaring and Methane Reduction Partnership, *Report on Small-scale Technologies for Utilization of Associated Gas (English)*, WORLD BANK GRP. (Jan. 10, 2021), https://documents.worldbank.org/en/publication/documents-reports/documentdetail/305891644478108245.

recompressing it for on-site power generation.[61] One conventional oil field uses 99% of its recovered gas for on-site needs.[62] Other countries can learn from these success stories to address their flaring problems.[63]

Additionally, instead of flaring gas, operators can use this valuable resource to generate electricity by using small gas engines. These engines are relatively portable internal combustion machines that spin a generator to produce electricity.[64] The electricity produced could, in turn, be used to power on-site pumps and other extraction activities. Using gas in this way rather than flaring it allows operators to avoid diesel-powered engines, which are especially polluting.[65] Because the engines are small, they have the advantage of being modular and scalable. In fact, Petroecuador is in the early stages of implementing this technology and has reported cost savings and replacement of diesel use.[66] Further implementation efforts are urgently needed beyond these limited steps.

Similarly, microturbines can generate robust amounts of electricity for consumption in oil and gas operations. This mature technology uses natural gas to spin an internal turbine, generating 25 to 500 kW of electricity.[67] Microturbines provide autonomous electrical power generation for a facility.[68] These machines can even run on a variety of natural gases, including sour gases with high hydrogen sulfide content, like those found in Ecuador.[69] These features make them attractive for use in remote locations and avoid the need to transport fuel from elsewhere.

Another option is to create compressed natural gas (CNG) on-site, store it, and transport it from site to site to refuel CNG vehicles. CNG compressors reduce natural gas to less than 1% of its normal volume, allowing large volumes to be stored in special containers for later use, or in cylindrical gas bottles for distribution via trucks.[70] Some compressors can also be mounted on a truck, allowing for mobility from well to well to capture gas or to refuel CNG vehicles.[71] This

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[61] *Id.*; *The National Energy Report 2021*, KAZ. ASS'N OF OIL & GAS & ENERGY SECTOR ORGS. «KAZENERGY» 1, 102-03, https://s3-prod.exia.kz/articles/NationalReport21_en.pdf.

[62] *Id.* at 103 (describing usage at the Kalamkas Field).

[63] *See e.g.* Ghith Biheri et al. *A Field Study: Minimizing Gas Flaring Through Reuse to Produce Electricity and Petrochemical Products* (Oct.2022), https://doi.org/10.2118/211867-MS (analyzing the use of associated gas to reduce flaring and produce electricity in Libya).

[64] Carbon Limits AS & Vygon *Consulting, Report on Small-scale Technologies for Utilization of Associated Gas*, WORLD BANK GRP. 1, 6-7, 20-21 (Oct. 2021), https://documents1.worldbank.org/curated/en/305891644478108245/pdf/Report-on-Small-scale-Technologies-for-Utilization-of-Associated-Gas.pdf.

[65] *Id.*; Mike Mayers & Josh Haugan, *Field Power Generation: Using Associated Gas to Power On-Site Operations Provides Compelling Benefits*, THE AM. OIL & GAS REP. (March 2020), https://www.aogr.com/magazine/cover-story/using-associated-gas-to-power-on-site-operations-provides-compelling-benefits.

[66] Boletín de Prensa Nro. 32, *Petroecuador ahorra 7.7 millones de dólares anuales con el aprovechamiento de gas asociado en los bloques Pucuna y Auca Sur*, EMPRESA PÚB. PETROECUADOR (Jan. 9, 2026), https://www.eppetroecuador.ec/?p=28274.

[67] Carbon Limits *supra* note 64 at 7, 26-31.

[68] *Id.*

[69] *Id.*

[70] *Id.* at 35-38.

[71] *Id.*

technology costs less, is convenient for small or remote sites, and can also become a source of cooking and heating fuel to nearby communities.[72]

In sum, capturing and using natural gas instead of flaring is a standard practice worldwide. These technologies are well-tested and available for immediate adoption. The use of associated natural gas would ensure environmental stewardship, public health protection, and the use of a valuable national resource rather than its senseless waste.

b. Pending the Full Elimination of Flaring, Buffer Zones Can Effectively Mitigate Harms to Human Health—But Only If They Are Sufficient in Size

Human health harms can be partially mitigated by ensuring increased separation between human populations and flaring operations. As detailed in Section II, oil extraction and flaring create widespread human health harms and environmental degradation within five kilometers of populated areas, which experts have called "sacrifice zones."[73] In response, jurisdictions around the world have taken action to safeguard their citizens' rights. Pending the full elimination of flaring, which is the only fully protective remedy, buffer zones are a prominent and common response to help protect citizens' rights to life, health, and clean food and water.

In the United States, the State of California has established a one-kilometer "Health Protection Zone" (HPZ) around a population's sensitive receptors, such as houses and schools, within which no new oil and natural gas development is permitted.[74] This measure reflects a sustained effort by community members—who complained about nosebleeds, chronic migraines, nausea, and other respiratory illnesses—pressuring authorities for health protections.[75] The creation of the HPZ was informed by a series of scientific reports finding higher rates of adverse health outcomes such as respiratory disease, cardiovascular disease, cancer, and reproductive harm closer to extraction

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[72] *Id.*; *see also* Sunny Oluku & Evwiekpamare Fidelis OLORI, *Compressed Natural Gas: A Dual Solution to Nigeria's Environmental and Economic Issues*, 10 INT'L J. OF RSCH. AND INNOVATION IN APPLIED SCI. 1, 1-15 (2025), https://doi.org/10.51584/IJRIAS.2025.10050001 (describing the applicability and potential of Nigeria's creation of CNG from flared gas for transportation and industrial purposes).

[73] David R. Boyd (Special Rapporteur on the Issue of Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment), *The Right to a Clean, Healthy and Sustainable Environment: Non-toxic Environment*, U.N. Doc. A/HRC/49/53 ¶¶26-29 (Jan. 12, 2022), https://docs.un.org/en/A/HRC/49/53; Better Planet Laboratory et al, *Extraction Extinction: Why the Lifecycle of Fossil Fuels Threatens Life, Nature and Human Rights*, AMNESTY INT'L (2025), https://www.amnestyusa.org/wp-content/uploads/2025/11/Extraction-Extinction-Why-the-Lifecycle-of-Fossil-Fuels-Threatens-Life-Nature-and-Human-Rights.pdf; *Global: Fossil Fuel Infrastructure is Putting Rights of 2 Billion People and Critical Ecosystems at Risk*," AMNESTY INT'L (November 12, 2025), https://www.amnesty.org/en/latest/news/2025/11/fossil-fuel-infrastructure-rights-critical-ecosystems-at-risk/.

[74] California Department of Conservation, *Understanding California's Oil and Gas Safety Zones: Senate Bill 1137*, https://www.conservation.ca.gov/calgem/Pages/SB1137.aspx (last visited on April 18, 2026) (prohibiting new drilling of oil and gas wells in HPZs while grandfathering wells in operation, subjecting them to other safety measures, such as leak detection and repair; a sensitive receptor can be residences, schools, health care facilities, community centers, and other public buildings where people gather).

[75] City of L.A., Support for Motion for Land Use and Legal Analysis of Setback Around Oil and Gas Extraction in Los Angeles, Council File #17-0447 (June 2, 2017), https://cityclerk.lacity.org/onlinedocs/2017/17-0447_pc_a_6-2-17.pdf.

activities, including flaring.[76] Health experts concluded with a high level of certainty a causal relationship between fossil fuel development and adverse health outcomes,[77] recommending a *minimum* one-kilometer buffer zone as critical to protecting public health.[78] Legislators subsequently enacted a statewide HPZ that establishes a minimum 3,200-foot buffer zone (approximately one kilometer).[79] Greater distances are needed in areas with denser production levels.[80] Overwhelming scientific evidence concludes that the HPZ is necessary to protect public health.

In another example, states in Australia enact setback distances from oil, gas, and coal seam gas extraction to protect their communities' health. Remote locations in South Australia have a minimum "evaluation distance" radius around high-risk activities; for hydrocarbon production, this distance is at least one kilometer.[81] The state of New South Wales has a two-kilometer buffer zone from residential areas to protect public health.[82]

Thus, countries around the world have taken steps to regulate the geographic location of extractive industry activities – including flaring – in relation to human populations, in recognition of the negative health impacts of those activities. The following section examines how the failure to enforce the 2021 judgment has resulted in significant human rights violations by effectively disregarding gas flaring's deadly effects on health and nature.

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[76] *See* Seth Shonkoff et al., RE: Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel, California Oil and Gas Public Health Rulemaking Scientific Advisory Panel (October 1, 2021), https://www.gov.ca.gov/wp-content/uploads/2021/10/Public-Health-Panel-Memo.pdf; *see also* Seth Shonkoff & Lee Hill, *Human Health and Oil and Gas Development: A Review of the Peer-Reviewed Literature and Assessment of Applicability to the City of Los Angeles*, PSE HEALTHY ENERGY (May 9, 2019), https://www.psehealthyenergy.org/wp-content/uploads/2022/08/Literature-Review.pdf; *see also* Katherine Butler et al., *Public Health and Safety Risks of Oil and Gas Facilities in Los Angeles County,* L.A. CNTY. DEP'T OF PUB. HEALTH (Feb. 2018), http://publichealth.lacounty.gov/eh/docs/ph_oilgasfacilitiesphsafetyrisks.pdf.

[77] Seth Shonkoff et al., *Public Health Dimensions of Upstream Oil and Gas Development in California: Scientific Analysis and Synthesis to Inform Science-Policy Decision Making*, CAL. OIL & GAS PUB. HEALTH RULEMAKING SCI. ADVISORY PANEL ES-2 (June 21, 2024), https://www.conservation.ca.gov/calgem/Documents/Public%20Health%20Panel%20Final%20Report_20240621.pdf (studies "consistently showed increased potential for exposure to air pollution and noise, as well as increased risk for several adverse health outcomes in populations living within and beyond 1 kilometer" of oil and gas development, including flaring).

[78] *Id.* at ES-9; 3-96-98 ("studies consistently demonstrate evidence of harm at distances less than 1 km, and some studies also show evidence of harm linked to [oil and gas development] activity at distances greater than 1 km."); 7-1-4.

[79] S.B. 1137, 2021-2022 Leg., Reg. Sess. (Cal. 2022), https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB1137 (also emphasizing this is a minimum zone).

[80] Shonkoff *supra* note 77 at ES-9-10.

[81] *Evaluation Distances for Effective Air Quality and Noise Management*, S. AUSTL. ENV'T PROT. AGENCY 6-9; 11 (2023), https://www.epa.sa.gov.au/files/15485_eval_distances_2023.pdf.

[82] *State Environmental Planning Policy (Resources and Energy)* 2021 (N.S.W.) reg 2.2 (Austl.), https://legislation.nsw.gov.au/view/html/inforce/current/epi-2021-0731#ch.2-pt.2.2; *see* NSW Chief Scientist & Engineer, *Independent Review of Coal Seam Gas Activities in NSW Information Paper: On Managing the Interface Between Coal Seam Gas Activities and Other Land Uses (Setbacks)*, N.S.W. GOV'T 6-8 (2014), https://www.chiefscientist.nsw.gov.au/__data/assets/pdf_file/0013/1138/140930-Final-Setbacks-info-paper.pdf (detailing the rationale, definitions, and risk assessments for imposing setback and exclusion zones).

c. The 100 Meter Rule Adopted in Ecuador Does Not Reflect the Science of Gas Flaring Harms.

To prevent the ongoing violation of rights, the Multicompetent Chamber of the Provincial Court of Justice of Sucumbíos ordered the extinguishing of all flares "adjacent to population centers" within eighteen months, and all flaring of any kind by 2030.[83] In response, the Ministry of Energy and Mines (MEM) determined that flares would only be deemed "adjacent" to population centers if they are located less than 100 meters away.[84] However, after observing no meaningful elimination of flares, the compliance judge rejected MEM's interpretation and clarified that flares "next to inhabitants of a place" must be eliminated regardless of a specific distance.[85]

The compliance judge was well justified in rejecting MEM's unreasonable approach to implementing the call to eliminate flares next to population centers. To derive its 100 meter measure, MEM adopted a foreign regulation aimed not at protecting communities from the health harms of flaring, but at protecting nearby buildings from fire risks. Directive 060 from Canada, which served as MEM's regulatory model, defines "adjacent" flares and requires that they be "100 m away from surface improvements and surface developments."[86] However, the same directive clarifies that these distances merely serve as a fire safety precaution in facility planning.[87] The 100-meter regulations were instituted to prevent flares or incinerators from causing catastrophic fires to public property.[88] Directive 060 is, fundamentally, a fire code regulation not designed to protect human health from flaring emissions and does not mitigate the health harms of flaring. Using Directive 060 as a model for a health-protective buffer zone, and setting that buffer zone at a mere 100 meters, fails to take the scientific evidence of human health harms from flaring into account.

In light of the scientific studies cited in Section II above, it is evident that serious health effects are felt many kilometers away from flaring sites, not just at 100 meters. Air pollution from flaring affects soil and water quality at significant distances, sometimes up to five or even ten kilometers away, with devastating impacts on human health that increase with each time increment of exposure. The Government of Ecuador's failure to decommission flares within a robust distance of human habitations—measured in kilometers, not meters—violates the rights of the people living in nearby communities.

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[83] Gas Flares Case, *supra* note 1 at ¶VII.

[84] MINISTERIO DE ENERGÍA Y MINAS [MINISTRY OF ENERGY AND MINES], 21201-2020-00170 2023, *Plan para la eliminación gradual y progresiva de los mecheros tradicionales que se utilizan para la quema de gas: Aspectos Técnicos, Sentencia Caso Mecheros* [*Plan for the Gradual and Progressive Elimination of Traditional Gas Flares Used to Burn Gas: Technical Aspects, Ruling in Gas Flares Case*] (2023) (Ecuador) (referencing Directive 060 from Canada).

[85] Unidad judicial familia, mujer, niñez y adolescencia con sede cantón Lago Agrio de la provincia de Sucumbíos [Family, Women, Children, and Adolescents Judicial Unit based in the Canton of Lago Agrio in the Province of Sucumbíos], 1.ª Instancia julio 14, 2023, Sentencia Nro. 21201-2020-00170 ¶1.2 (Ecuador).

[86] *Directive 060: Upstream Petroleum Industry Flaring, Incinerating, and Venting*, ALTA. ENERGY REGUL. at 63-64 (May 12, 2020), https://www.emnrd.nm.gov/ocd/wp-content/uploads/sites/6/AERVF-Directive060_2020.pdf.

[87] *Id.*

[88] *Directive 060: Upstream Petroleum Industry Flaring, Incinerating, and Venting*, ALTA. ENERGY REGUL. 1, 60-61 (April 6, 2022).

IV. The Lack of Enforcement of the Judgment Violates the Right of the Plaintiffs to an Effective Remedy

a. Plaintiffs Have the Right to an Effective Remedy under Ecuadorian and International Law

Both the Constitution of the Republic of Ecuador and international human rights law are relevant sources of authority for the Court to evaluate the violation of the plaintiffs' rights by non-implementation of the sentence for three years,[89] and to assess potential damages against the defendants for these harms.[90] Under Article 75 of the Ecuadorian Constitution, Article 8 of the Universal Declaration of Human Rights (UDHR), Article 2(3) of the International Covenant on Civil and Political Rights (ICCPR), Article 25 of the American Convention on Human Rights (ACHR), and Article 8 of the Escazú Agreement, Plaintiffs have the right to an effective remedy for the human rights violations that the original court decision recognized in 2021, which continue to this day.[91] Ecuador must ensure that people whose rights or freedoms are violated shall have an effective remedy, and competent authorities shall enforce such remedies when granted.[92] In order to guarantee the right of access to justice in environmental matters, each party shall have mechanisms for redress, including payment of a financial penalty and financial instruments to support redress.[93] The inadequate compliance with the 2021 Provincial Court of Justice of Sucumbíos's ruling for the past five years amounts to a clear violation of the constitutional and international legal right to an effective remedy. We ask this Court to enforce Article 75, Ecuador's international legal obligations, and the 2021 court decision.

Whether gas flaring threatens the right to life and a healthy environment has already been judicially determined. In its judgment, the Multicompetent Chamber of the Provincial Court of

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[89] The 2021 judgment gave the defendants 18 months to comply with the most urgent elements of the sentence – the elimination of gas flares "nearby population centers" – meaning that compliance is more than 3 years overdue.

[90] Art. 172 of the Constitution of the Republic of Ecuador provides that: "Judges shall administer justice subject to the Constitution, international human rights instruments and the law." It also states: "The judges **shall** be responsible for damages to the parties as result of delays, neglect, denial of justice, and lawbreaking." [Emphasis added]. See also Arts. 11, 84, 93, 147, 261, 416 and 417 (defining the role of international human rights law and international law in the Ecuadorian legal system). CONSTITUCIÓN DE LA REPÚBLICA DEL ECUADOR (2008), *Registro Oficial N.º 449*, 20 oct. 2008.

[91] G.A. Res. 217 (III) A, Universal Declaration of Human Rights, art. 8 (Dec. 10, 1948); International Covenant on Civil and Political Rights, art. 2, ¶ 3, Dec. 16, 1966, 999 U.N.T.S. 171; Organization of American States, *American Convention on Human Rights*, art. 25, Nov. 22, 1969, O.A.S.T.S. No. 36, 1144 U.N.T.S. 123; Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement), art. 8(3), Sept. 27, 2018, https://treaties.un.org/doc/Treaties/2018/03/20180312%2003-04%20PM/CTC-XXVII-18.pdf, which the Constitutional Court has recognized guarantees the right to "access to justice in environmental matters, *Caso de Los Cedros*, No. 1149-19-JP/21 (Corte Constitucional del Ecuador, ¶ 298, Nov. 10, 2021).

[92] International Covenant on Civil and Political Rights, art. 2, ¶ 3, Dec. 16, 1966, 999 U.N.T.S. 171.

[93] Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement), art. 8(3), Sept. 27, 2018, https://treaties.un.org/doc/Treaties/2018/03/20180312%2003-04%20PM/CTC-XXVII-18.pdf; *see also Climate Emergency and Human Rights,* Advisory Opinion AO-32/25, Inter-Am. Ct. H.R. (ser. A) No. 32, ¶ 556 (May 29, 2025); *Environment and Human Rights (State Obligations in Relation to the Environment in the Context of the Protection and Guarantee of the Rights to Life and Physical Integrity – Interpretation and Scope of Articles 4.1 and 5.1 in Relation to Articles 1.1 and 2 of the American Convention on Human Rights)*, Advisory Opinion AO 23/17, Inter-Am. Ct. H.R. (ser. A) No. 23, ¶¶ 223-24 (Nov. 15, 2017).

Sucumbíos expressly held that gas flaring associated with hydrocarbon extraction violates the constitutional rights of affected communities, stating: "(…) the flaring of gas resulting from hydrocarbon extraction disregards the constitutional rights of the inhabitants living in the area of influence of said activity. Their right to live in a healthy and pollution-free environment, constitutionally guaranteed in Articles 14 and 32 of the Constitution of the Republic of Ecuador, has been disregarded by the flaring of gas, as it is currently practiced in the extractive sector of the oil industry. This practice constitutes the greatest threat to the inhabitants because it is highly polluting to the air and increases the risk of contracting irreversible diseases that are life-threatening to human beings."[94] This is in addition to the recognition of the violation of other fundamental human rights, such as the right to food and water.

Additionally, the Court emphasized the necessity of effective reparations, recognizing comprehensive reparation as both a constitutional right and a guiding principle for the protection of rights. It therefore ordered a series of measures, including: (i) the elimination of all flares by 2030; (ii) the elimination of gas flares nearby population centers within 18 months following the judgment; (iii) a technical study on access to safe drinking water; (iv) a medical-scientific study to determine the impact of hydrocarbon activity on cancer rates, along with the potential creation of a Specialized Oncological Unit within the 18 months following the judgment; and (v) a requirement that permits for new flares be granted only under the condition that the gas is treated in a more technically advanced and environmentally friendly manner.[94] The State has failed to meaningfully comply with any of these mandates.[95]

What remains at issue is the State's ongoing failure to implement these court-ordered remedies. The failure of different state agencies to comply with the judgment and implement the mandated protections amounts to a further violation of the petitioners' right to life, health, and clean food and water, as well as the national and international obligations of the state to provide actual effective remedies, and guarantee the non-repetition of these violations.

The UN General Assembly has delineated what constitutes substantive redress or effective remedy according to the following typology: restitution, compensation, rehabilitation, satisfaction, and guarantees of non-repetition.[95] None of the actions taken by the government so far has satisfied any of these definitions of proper substantive redress, which has in the past led to judgment of higher courts to recognize the violation to the right to remedy. Below, we discuss how ongoing flaring and failures to take the court-mandated steps to remediate the harms themselves constitute human rights violations.

b. The Government's Failure to Comply With the Judgment Violates the Right to an Effective Remedy As It Increases The Harm To Plaintiffs

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[94] Gas Flares Case, *supra* note 1, at ¶67.

[95] United Nations General Assembly (2005), "Resolution 60/147 - UN Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law". Resolution 56/83 also notes State Responsibility to provide full reparation for internationally wrongful acts in the form of "restitution, compensation and satisfaction, either singly or in combination." United Nations General Assemply (2001), "Resolution 56/83, Responsibility of States for internationally wrongful acts". (Adopting International Law Commission, *Responsbility of States for Internationally Wrongful Acts* (2001), Articles 34-39, *available at* https://legal.un.org/ilc/texts/instruments/english/draft_articles/9_6_2001.pdf).

As discussed above, the Ecuadorian government has not complied with core elements of the judgment. Among other things, the Court ordered the Government to study the effects of the flaring on clean water in the community and then to conduct a study to implement a potable water system, to perform a health study, and to shut down flares next to population centers within eighteen months and, by 2030, entirely. Under Inter-American Court precedent, whether a domestic court judgment is an effective remedy "depends on [its] execution, a process that should lead to the materialization of the protection of the rights recognized in the judicial ruling . . . its implementation must be complete, perfect, comprehensive and timely."[96]

In its 2021 ruling, the Provincial Court of Sucumbios found gas flaring to cause violations of the rights of nature (under Art. 71); violations of the rights of plaintiffs and their communities to health and to live in a healthy environment (Art. 32 and Art. 14); and which noted the Constitutional principles of Art. 395 (protecting the rights of present and future generations) and Art. 396 (providing that the State shall adopt "effective and timely measures of protection" even in cases where there is "doubt about the environmental impact stemming from an act or omission")[97] in reaching its conclusions and ordering remedies. The court particularly noted the international commitments of the Government of Ecuador regarding gas flaring and its failure to meet them.[98]

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[96] Case of the Inhabitants of La Oroya v. Peru, Preliminary Objections, Merits, Reparations and Costs, Inter-Am. Ct. H.R. (ser. C) No. 511, ¶ 274-76. (Nov. 27, 2023).

[97] The full text of Article 396 of the Constitution of the Republic of Ecuador is an important frame of reference when considering environmental damages and the potential remedies to be ordered. CONSTITUCIÓN DE LA REPÚBLICA DEL ECUADOR (2008), *Registro Oficial N.° 449*, 20 oct. 2008:

> Article 396. The State shall adopt timely policies and measures to avoid adverse environmental impacts where there is certainty about the damage. In the case of doubt about the environmental impact stemming from a deed or omission, although there is no scientific evidence of the damage, the State shall adopt effective and timely measures of protection.
> Responsibility for environmental damage is objective. All damage to the environment, in addition to the respective penalties, shall also entail the obligation of integrally restoring the ecosystems and compensating the affected persons and communities. Each one of the players in the processes of production, distribution, marketing and use of goods or services shall accept direct responsibility for preventing any environmental impact, for mitigating and repairing the damages caused, and for maintaining an ongoing environmental monitoring system.
> The legal proceedings to prosecute and punish those responsible for environmental damages shall not be subject to any statute of limitations.

[98] Sala Multicompetente de la Corte Provincial de Justicia de Sucumbíos, *supra* note 1, at 65, at section 9.9 of the Judgment:

> "Defendants disregard the various international commitments made by Ecuador in environmental matters, among the most important of which are: Ecuador's Nationally Determined Contributions, made during the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 21) held in 2015. Ecuador, along with 194 other members, adopted the Paris Agreement as a landmark agreement establishing measures for the reduction of greenhouse gas emissions. According to this agreement, the Ecuadorian State aims to reduce emissions from the energy sector by 20.4-25% compared to the current scenario, and among the proposed alternatives is the 'generation of electricity from gas associated with oil exploitation by optimizing its use.' They also disregard the Zero Routine Flaring 2030 Initiative, signed at the Conference of the Parties to the United Nations Framework Convention on Climate Change in 2015. This initiative aims to reduce emissions by more than 100 million tons per year, a significant commitment by the Ecuadorian State in the fight against climate change. These commitments,

Since the 2021 judgment, the international consensus around these rights has only strengthened with the issuance of an Advisory Opinion on *Climate Change and Human Rights* by the Inter-American Court, as discussed below. Nor does the government contest the existence of these rights. The ongoing violation of the rights as found in the 2021 judgment, and the failure to comply with the responsibilities therein, violate the right to an effective remedy.

i. The Ecuadorian Government Has Failed to Effectively Study and Remediate the Harms to Drinking Water Violating Plaintiffs' Right to Food and Water

In its 2021 judgment, the court specifically acknowledged the harmful impacts of flares on entire food chains and water sources, making both unfit for human consumption. Its order that the Ministry of the Environment work together with Decentralized Autonomous Governments (GADs) and public and private companies to evaluate water quality in areas affected by gas flaring and suggest implementable solutions to provide clean drinking water was aimed at remedying these harms. The fact that the Ministry of the Environment – now the Ministry of Environment and Energy – has failed to do so violates the judgment and continues to violate the underlying rights that the court relied on in the judgment.

Accounts from on-site visits conducted in 2023 to measure implementation of these obligations in communities near gas flares reveal that some families depend solely on cement tanks for rainwater collection, residents buy pollutant-contaminated water from tanker trucks, and schoolchildren consume untreated water, exacerbating adverse health effects on local populations.[99] This right has continued to be violated due to the State's failure to urgently provide potable water to populations whose primary water supply is contaminated by nearby gas flares.

This failure means that Ecuador has failed to provide an effective remedy for the continued violation communities' rights to water under Article 12, to food security under Article 13, to food sovereignty under Article 281, and to a healthy environment under Articles 14 and 15 – including the obligation that "[e]nergy sovereignty shall not be achieved to the detriment of food sovereignty nor shall it affect the right to water" – of the Constitution of the Republic of Ecuador. It has also failed to provide a remedy for the international law violations detailed in the judgment, including Article 11 of the ICESCR which requires States to take steps to promote food security and an adequate standard of living for their populations,[100] and Article 24 of the Convention on the Rights of the Child (CRC) which requires States to take measures to ensure children's access to adequate nutritious food and clean water.[101]

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also reflected in the National Climate Change Strategy, demonstrate the State's commitment to improving future conditions for the oil sector, but these commitments have not been fulfilled."

[99] Petición de las Demandantes a la Corte Constitucional de Ecuador, *Herrera Carrión et al. v. Ministerio del Ambiente y otros,* Acción de Incumplimiento de Sentencias, Sentencia de Acción de Protección, Proceso No. 21201-2020-00170, p. 29 (13 ago. 2025).

[100] International Covenant on Economic, Social and Cultural Rights (ICESCR) art. 11, Dec. 16, 1966, 93 U.N.T.S. 3.

[101] Convention on the Rights of the Child (CRC), art. 24, Nov. 20, 1989, 1577 U.N.T.S. 3.

ii. The Ministry of Health Has Failed to Conduct a Proper Medical-Scientific Study on Population Cancer Rates Violating Plaintiffs' Right to a Dignified Life

In its judgment, the Court imposed two binding obligations on the Ministry of Health. First, it ordered the Ministry to conduct a medical-scientific investigation to determine the degree of impact of hydrocarbon activity on the populations residing near gas flares, with particular emphasis on the prevalence of cancer and other serious illnesses. Second, if the study demonstrated a statistically significant impact, the Ministry was required to establish a Clinical Oncological Unit to diagnose and treat affected individuals. The Court imposed strict deadlines: six months to complete the study and eighteen months to create the oncological unit if necessary. These were not recommendations; they were enforceable judicial mandates designed to operationalize the State's constitutional obligations.[102]

The failure to carry out the ordered study has had profound consequences. The absence of information prevents the development of adequate public health responses. Because the study has not been completed, the creation of a Clinical Oncological Unit in the affected territory has not materialized. The absence of accessible oncology services increases the likelihood of delayed diagnoses, interrupted treatment, and preventable mortality.

Such conditions are incompatible with the constitutional guarantee of a dignified life and the constitutional principle of Sumak Kawsay (Buen Vivir), detailed in Article 14, as well as Articles 397 and 414 of the Constitution which additionally require the State to adopt immediate and effective measures in cases of environmental harm and climate-related risk. The recent IACtHR *Climate Change and Human Rights* Advisory Opinion notes that the deaths caused by air pollution violate the long established right to a healthy environment.[103]

The failure of the Ministry of Health to implement the remedies ordered by the 2021 Provincial Court of Sucumbíos – the most immediate of which (the health study) should have been completed within 6 months, potentially leading to the creation of a new Clinical Oncological Unit within 18 months thereafter, or a total of 24 months maximum after the sentence – has thus led to three years of ensuing violations of the plaintiffs' and affected communities' rights to health and to a healthy environment under Art. 14, 32, 66, 397 and 414 of the Constitution of Ecuador; and under international human rights law, according to Art. 12 of the ICESCR and Art. 24 of the CRC.

iii. The Government's Failure to Eliminate Gas Flares and to Implement New Technology on Any New Flares Creates New, Ongoing Human Rights Violations

The Court's judgment set up three specific targets for eliminating flaring: 1) dismantling all gas flares near to population centers within eighteen months of the judgment; 2) dismantling all gas flares by 2030; and 3) ensuring that any permits to install new flares are granted so as to require technological advances that reduce environmental harms. There is little evidence that the state has been working towards achieving these objectives.

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[102] Sala Multicompetente de la Corte Provincial de Justicia de Sucumbíos, *supra* note 1 at 67.

[103] *Climate Emergency and Human Rights*, Advisory Opinion AO-32/25, Inter-Am. Ct. H.R. (ser. A) No. 32, ¶¶270-74, 394 (May 29, 2025).

Firstly, the MEM'S approach to eliminating flares near "population centers" is woefully inadequate. As discussed above, the 100 meter measure does not reflect the best available science. Another flaw in MEM's approach lies in its unreasonable and unsupported interpretation of the term "population center" as "a concentration of at least twenty (20) contiguous, neighboring or adjacent dwellings" in a rural area.[104] To define this phrase, MEM again cherry-picked a too-stringent definition from a foreign jurisdiction.[105] It took this definition from Colombia's National Administrative Department of Statistics (DANE),[106] designed to document and measure statistics within populations, and not meant for environmental or public health risk mitigation.

As plaintiffs point out, in choosing this cramped definition MEM disregarded a much more appropriate approach, one that has been used by Ecuador's own National Institute of Statistics and Census (INEC) for official purposes (based on a proposal of the Andean Community of Nations, or CAN).[107] INEC and Ecuadorian government agencies have used CAN's definition of the term "population centers," which is "any place in the rural or urban national territory identified by a name and inhabited on a permanent basis. Its inhabitants are linked by common economic, social, cultural and historical interests. Depending on their characteristics, population centers can be classified as hamlets, villages, towns, cities or metropolises."[108] INEC's definition more accurately reflects the context of Amazonian structures of the region, where sparsely populated areas are characterized by single homes or schools that may be located well apart from each other, but that still represent cohesive communities.

MEM's unreasonably narrow interpretation of the phrase "adjacent to population centers" thus permits the continued exposure of vulnerable populations to hazardous emissions from gas flaring, in violation of the human rights of many thousands of community members.[109] Many flares remain in place very close to where community members live, work, and play. This is inconsistent with both the objective of the ruling and the constitutional principles of Sumak Kawsay, which is rooted in Indigenous Andean and Quechua traditions of harmony between people and nature, not in urbanized or modern definitions of what a community is. Article 14 affirms the right of the population to live in a healthy and ecologically balanced environment and declares environmental preservation to be a matter of public interest. Under Sumak Kawsay, the right to life includes the ability to inhabit a healthy environment and to build sustainable communities; and in some

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[104] MINISTERIO DE ENERGÍA Y MINAS [MINISTRY OF ENERGY AND MINES], 21201-2020-00170 2022, [*Plan for the Gradual and Progressive Elimination of Traditional Gas Flares Used to Burn Gas: Fourth Report Technical Aspects, Ruling in Gas Flares Case*] (2022) (Ecuador).

[105] *Metodologia Centro Poblado* [Population Center Methodology], DEPARTAMENTO ADMINISTRATIVO NACIONAL DE ESTADÍSTICA [NAT'L ADMIN. DEP'T OF STAT.], https://www.dane.gov.co/files/geoestadistica/Metodologia_Centro_%20Poblado.pdf (Colom.); *Conceptos Basicos*, NATIONAL ADMINISTRATIVE DEPARTMENT OF STATISTICS, DEPARTAMENTO ADMINISTRATIVO NACIONAL DE ESTADÍSTICA [NAT'L ADMIN. DEP'T OF STAT.], https://www.dane.gov.co/files/inf_geo/4Ge_ConceptosBasicos.pdf (Colom.).

[106] *Id.*

[107] INSTITUTO NACIONAL DE ESTADÍSTICA Y CENSOS [NATIONAL INSTITUTE OF STATISTICS AND CENSUS], INEC-SUGEN-2023-0209-O (May 15, 2023) (Ecuador).

[108] *See* INSTITUTO NACIONAL DE ESTADÍSTICA Y CENSOS [NATIONAL INSTITUTE OF STATISTICS AND CENSUS], *INEC-SUGEN-2023-0209-O 22, n3, Marco Maestro de Muestreo de INEC de junio 2020 [INEC Master Sampling Frame of June 2020*] (May,15, 2023) (Ecuador).

[109] Facchinelli *supra* note 15, at 104898-14.

environments, sustainable communities may be small settlements.[110] The principles of Sumak Kawsay do not protect only large or formally organized population groups. By excluding smaller settlements of people that do not satisfy MEM's adopted definition of the phrase "population center", either because they do not meet the specified conditions or because fewer than twenty houses are in proximity, MEM effectively disregards these settlements and the individuals who will nonetheless be exposed to the harmful effects of gas flaring. Sumak Kawsay affirms each individual's right to live with dignity, to remain safe in their homes, and to conduct their lives without being subjected to environmental contamination that threatens their health and wellbeing. The application of a definition must reflect these fundamental principles, recognizing that smaller settlements, such as schools, or collective of homes with less than 20 people, are still population centers and gas flaring should not occur nearby them.

Secondly, the court requires dismantling all gas flaring by 2030, supported not only by the human rights violations caused by flaring but by Ecuador's responsibilities under the Zero Routine Flaring 2030 Initiative, signed and ratified by Ecuador. Yet the record does not reflect efforts reasonably aimed at eliminating flares by 2030. Instead, it indicates the opposite. A 2023 report from the Ministry of Energy and Mines suggests that gas flares in the Amazonian territory *increased*, rather than decreased, after the judgment was issued—rising in number from 354 flares identified in 2021[111] when the ruling came out, to 486 listed in a report over two years later.[112] More flaring results in additional harms to the air, water and soil of the Amazon, and more exposure to vulnerable communities who were promised reparations, representing a further violation of basic human rights protected by the constitution, and Ecuador's obligations set forth in its ratified treaties. This is not an effective remedy.

Lastly, the Court ordered State entities to grant new permits to public and private entities to install new flares only in a way "that allows for the use of gas from hydrocarbon activities in a more technical and environmentally friendly manner."[113] Thus, any new flares installed since the judgment was issued--of which there appear to be more than one hundred--should feature some of the technological solutions to significantly reducing or eliminating flaring that are widely available and used in other jurisdictions. The record does not reflect, however, that such steps have been taken.

iv. These Failures Violate International Law and Require an Additional Remedy from the Court in the Form of Monetary Compensation.

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[110] CONSTITUCIÓN DE LA REPÚBLICA DEL ECUADOR (2008), *Registro Oficial N.º 449*, 20 oct. 2008, art. 14. *See also* Selena Janneth Cabezas Lombeida, *Derecho a la vida en un ambiente sano según los artículos 15 y 66 de la Constitución de la República del Ecuador, en relación con las comunidades indígenas del cantón Cascales*, UNIVERSIDAD HEMISFERIOS, at 18 (Dec. 2021), https://dspace.uhemisferios.edu.ec/items/9b6ee696-2d8a-4eb2-8c4f-acab6bf5cf05.

[111] EP Petroecuador, *Plan para la Eliminación de Mecheros y Optimización de Gas Asociado del Distrito Amazónico*, p.8 (26 nov. 2021) (identificando a 354 mecheros perteneciendo a EP Petroecuador en septiembre de 2021).

[112] Ministerio de Energía y Minas, *Informe Técnico Anual: Plan para la Eliminación Gradual y Progresiva de los Mecheros Tradicionales que se Utilizan para la Quema de Gas*, Sentencia Caso Mecheros 21201-2020-00170 (diciembre 2023) (identificando a 424 mecheros perteneciendo a Petroecuador y a 62 mecheros perteneciendo a empresas privadas – para un total de 486 – como la "línea base de 2022" en un informe de diciembre 2023).

[113] Sala Multicompetente de la Corte Provincial de Justicia de Sucumbíos, , *supra* note 1, at 67.

In sum, the failure to dismantle gas flares near population centers as required three years ago by the initial 2021 judgment, to conduct a health study, and to provide clean water to the affected communities violates the Plaintiffs' right to an effective remedy under international law, as well as other rights and obligations held by the state of Ecuador under international law such as the right to a healthy environment, to clean water, to life, to health, and to a dignified life. As the government has not complied with the judgment, Plaintiffs clearly have not received an effective remedy. In addition to the measures already ordered above, compensation for the three years of additional harms should be provided to the plaintiffs.

Monetary damages can be awarded under Ecuadoran law in order to create an effective remedy for the Plaintiffs. Article 172 of the Ecuadorian Constitution provides that judges "shall be responsible for damages to the parties as a result of delays, neglect, denial of justice and lawbreaking."[114] Given that these elements appear to be present in this case, the Court should grant monetary damages for the ongoing and continuous harm caused to the plaintiffs due to non-compliance with the 2021 judgment in order to ensure their right to an effective remedy.

Similar international cases have found that delayed or reduced implementation of judgments violates the right to an effective remedy. Under international law, these continued harms may warrant monetary damages.

In the case of *La Oroya v Peru*, the Inter-American Court found that Peru had a responsibility to address the severe environmental and public health consequences associated with copper smelting and refining in La Oroya.[115] Despite an initial judgment at the national level ordering a series of remedial measures, including medical assistance programs, monitoring, and new environmental regulations, the Inter American court found that deficient and delayed implementation of those measures warranted compensation of the victims by the Peruvian government.[116] The court further noted that under the precautionary principle, any uncertainty in the science or in technical capabilities should be resolved in favor of providing an effective remedy for victims. [117]

Similarly, in *Indigenous Community v. Paraguay*, decided by the IACHR in 2006, the State was ordered to pay damages to each of the families of 17 deceased community members resulting from a lack of access to healthcare and basic services. [118] When the State failed to fully comply with the judgment by delaying some ordered payments, the Court ordered that the State pay interest on payments still owed. [119]

The Human Rights Committee has also found that the failure to enforce a judgment violates the right to an effective remedy. In *Portillo Cáceres v. Paraguay*, a case of toxic agrochemical poisoning, the Committee found violations of the right to life under ICCPR Article 6, the right to privacy, family, and home under Article 17, and the right to an effective remedy under Article 2(3).[120] The District Court in that case had ordered that the relevant government agencies had failed

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[114] CONSTITUCIÓN DE LA REPÚBLICA DEL ECUADOR (2008), *Registro Oficial N.º 449*, 20 oct. 2008, art. 14.

[115] Case of the Inhabitants of La Oroya, *supra* note 95, at ¶ 67, 78-85, 207-208.

[116] *Id.* at ¶85, 211-14, 361-78.

[117] *Id. at*¶207.

[118] *Sawhoyamaxa v. Paraguay*, Inter-Am. Ct. H.R. (ser. C) No. 146, ¶ 226 (Mar. 29, 2006).

[119] *Id.*

[120] Portillo Cáceres et al. v. Paraguay, Hum. Rts. Comm., Communication No. 2751/2016, U.N. Doc. CCPR/C/126/D/2751/2016 (July 25, 2019).

to oversee the use of agrochemicals and had allowed an ongoing risk of serious health problems for the population.[121] The State's failure to take steps to enforce that decision was a failure to provide an effective remedy. The Committee stated that the State is under an obligation to provide an effective remedy, which entails both criminal and administrative penalties for violators as well as "full reparation for the persons whose rights have been violated," and ordered the State of Paraguay to provide full reparation, including adequate economic compensation, to the affected families.[122]

The European Court of Human Rights has also found a violation of the right to effective remedy in similar circumstances. In *Taşkın and Others v. Turkey*, the Court held that the effective enforcement of judicial decisions is an essential guarantee of rights that overlaps conceptually with the right to an effective remedy.[123] In this case, ten plaintiffs had won a judgment in national courts enjoining gold mining operations using a sodium cyanide leaching process in the nearby territory, which posed serious risks of groundwater contamination and damage to human health.[124] The Turkish government subsequently re-issued permits and allowed mining to restart.[125] The Court found that damages should be awarded for the violation of the right to judicial protection. In particular, the court noted that although the damage from the failure to comply with the judgment could not be precisely calculated, it was appropriate to award damages on an equitable basis.[126]

In sum, international case law supports the notion that without concrete enforcement of judgments that includes monetary damages for the time for which the judgment has been delayed, Plaintiffs will not have received an effective remedy for the human rights violations identified.

V. Conclusion

For the past five years, well past the 18 months specified in the 2021 judgment, Plaintiffs have continued to suffer the harms from gas flaring identified in the judgment. And, for the past three years, there has been a clear violation of the plaintiff's rights to an effective remedy, as the defendants have failed to appropriately follow the court's mandates.

Specifically, these failed mandates include immediately eliminating gas flares near population centers, conducting technical and scientific studies on access to safe drinking water and the impact of hydrocarbon activity on cancer rates, including the potential creation of a Specialized Oncological Unit, and only installing new flares in a more technical and environmentally friendly manner. This failure has had drastic impacts on both the health of the community and the environment.

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[121] *Id*. at 6.
[122] *Id*. at 16.
[123] *Taşkın and Others v. Turkey*, App. No. 46117/99, 2004-X Eur. Ct. H.R. 179 (Mar. 30, 2005), ¶¶ 139-140.
[124] *Id*. at ¶¶ 26-28.
[125] *Id*. at ¶¶ 88-89.
[126] *Id*. at ¶ 144 ("The Court considers that the violation of the Convention has undoubtedly caused the applicants a considerable degree of damage. The judicial decision cancelling the award of a permit was not enforced, in violation of the fundamental principles of a State governed by the rule of law. The applicants were thus obliged to tolerate adverse living conditions and to bring several actions against decisions taken by the central authorities in order to ensure that the authorities would comply with that decision. Damage of this sort cannot be precisely calculated.")

Amici call upon this court to enforce the original ruling through an additional award of monetary compensation for the delay in enforcing the judgment, which caused additional health harms to the plaintiffs and ongoing violations of their human rights. Without a concrete enforcement mechanism, Plaintiffs' right to an effective remedy for the human rights violations identified by the Provincial court will continue to be violated.