# Mandatory Methane Mitigation as a Core Component of the Global Fossil Fuel Transition

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This submission is made in response to the UNFCCC COP30 Presidency invitation to submit contributions to the Roadmap on the Transition Away from Fossil Fuels in a Just, Orderly and Equitable Manner, and is intended to inform the development of a roadmap consistent with the Paris Agreement temperature limits and the outcomes of the first Global Stocktake.

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Methane mitigation in the energy sector is not a supplementary, optional, or late-stage measure, but a foundational, priority component of any fossil fuel transition roadmap. Without its inclusion, global decarbonization strategies are unable are their own to deliver the near-term temperature reductions required to reduce the overshoot of the 1.5°C limit, avoid irreversible tipping points, and protect vulnerable populations and ecosystems. It is essential to reduce, as soon as possible, both carbon dioxide ($CO_2$) by decarbonizing the energy system and methane, which is responsible for up to 45% of warming.[1] Cutting methane this decade, starting with the fossil fuel sector, could avoid nearly 0.3°C of warming by the 2040s and slow the overall rate of warming by 30%.[2]

Moreover, "Methane is the starting point for the end of fossil fuels," as Brazilian scientist Carlos Nobre recently observed.[3] Methane emissions from fossil fuel production and use, including oil, gas, and coal, account for approximately 35% of global anthropogenic methane emissions, representing one of the largest and most readily addressable sources of near-term climate warming.[4]

An immediate, economical, and technically feasible step on the pathway toward reducing fossil fuels is to stop emitting methane gas through routine flaring, venting, and leaks across the oil and gas sector.[5] Eliminating methane waste at an early stage in the fossil fuel transition is a highly-effective, trust-building solution to slow near-term warming, reduce the risk of climate tipping points, and protect vulnerable, frontline communities from the most severe impacts of climate change. Rapid methane mitigation also protects food and energy security, thus providing major development benefits.[6]

Methane mitigation efforts are not only relevant for fossil fuel-producing countries. Countries that are (net) importers of fossil fuels can also directly contribute by setting methane-associated import standards. The European Union Methane Regulation (EU) 2024/1787 takes this approach,[7] establishes robust monitoring, reporting, and verification requirements, and is introducing the world's first methane import standard, demonstrating demand-side measures can drive emissions reductions across supply chains.

While deep reductions in $CO_2$ emissions are indispensable for the long-term stabilization of the climate system, such transformations often require structural economic changes that many developing countries cannot implement overnight. Methane offers a multi-benefit solution that buys time for countries to scale up $CO_2$ strategies and for those reductions to begin turning down warming.

## Mandatory Methane Mitigation as a Critical Lever for Near-Term Climate Stabilization

The climate crisis is defined not only by cumulative emissions but by the rate of warming over the coming decades. Global temperatures have already reached approximately 1.4°C above pre-industrial

levels;[8] the average of the last three years exceeded the 1.5°C guardrail of the Paris Agreement,[9] with the 20-year average temperature expected to lock in long-term 1.5°C by 2030, if not sooner.[10] Calculations relying on the remaining carbon budget show that the remaining 1.5°C carbon budget will be exhausted within as little as three to five years.[11]

In addition to the continuing emission of climate-warming gases and aerosols and the continuing destruction of forests and other carbon sinks that remove pollutants,[12] self-amplifying feedback loops are also starting to push the planet to warm at an accelerating rate.[13] The window of opportunity to limit the magnitude and duration of the overshoot above 1.5°C is rapidly closing. According to the UN's Emissions Gap Report of November 2025, warming is likely to reach 2.8°C by the end of the century under current policies.[14] It could reach 2°C by 2045.[15]

In this context, methane mitigation plays a unique and critical role. Methane is responsible for approximately 45% of current net warming and has a warming potential more than 80 times greater than carbon dioxide over a 20-year period.[16] Unlike $CO_2$, methane has a relatively short atmospheric lifetime of around 12 years, meaning that reductions in emissions translate into rapid decreases in atmospheric concentrations and quickly slow warming in the near-term.[17]

When combined with clean energy expansion and energy efficiency improvements, fast methane mitigation can cut the rate of warming in half by 2040, limiting peak warming to 1.7–1.8°C and reducing the risk of crossing critical tipping points.[18]

Critically, decarbonization strategies that focus on $CO_2$ alone are insufficient to turn the temperature down in the near-term. In fact, decarbonization alone could lead to a temporary increase in warming due to the fast fallout of co-emitted cooling aerosols, potentially adding up to 0.5°C of additional warming by mid-century.[19] This reinforces the necessity of pairing long-term $CO_2$ reductions with immediate methane mitigation to stabilize the climate system.

**An Effective and Integrated Methane Mitigation Approach in the Fossil Fuel Sector**

Methane emissions from the fossil fuel sector represent one of the largest and most tractable sources of climate pollution.[20] Available evidence demonstrates that these emissions can be reduced by up to 75% by 2030 using existing technologies.[21] Moreover, many of these measures are low-cost or even cost-negative, as they involve capturing gas that can be sold rather than wasted. The estimated investment required represents only a small fraction (approximately 2–4%) of the sector's net income, while generating substantial economic returns and co-benefits.[22]

Despite this clear opportunity, methane emissions continue to rise, reflecting the limits of voluntary initiatives.[23] Only a small fraction of global methane emissions is currently subject to mandatory measures, and existing actions fall far short of what is required to align with a 1.5°C pathway.[24] This implementation gap has prompted increasing calls, by governments and institutions, to move beyond voluntary pledges—such as the Global Methane Pledge and the Oil & Gas Decarbonization Charter from COP28—to mandatory and enforceable frameworks capable of delivering the scale and speed of reductions required.

The need to move to mandatory methane mitigation was recognized as early as 2020 and 2021 when the European Commission and European Parliament called for a legally binding international methane framework.[25] In 2024, the European Union agreed on a landmark Methane Regulation that mandates

binding mitigation in the fossil fuel sector, with implementation progressing through 2030.[26] Several countries and sub-national governments have also enacted binding methane mitigation.[27] In addition, Prime Minister Mia Mottley of Barbados and others have picked up the earlier call by the European Commission and Parliament to promote a binding agreement to prevent methane waste in the oil and gas sector.[28] Prime Minister Mottley has referred to the success of the Montreal Protocol as the inspiration for such a methane agreement,[29] and has made a methane agreement a priority of her presidency of the Climate Vulnerable Forum/Vulnerable Twenty Group.[30]

Successfully integrating methane mitigation into fossil fuel transition pathways unlocks a range of levers that can accelerate implementation across multiple dimensions.

a) **Technological levers** are already well-established. Proven measures, such as leak detection and repair, elimination of routine flaring and venting, and deployment of low-emission equipment, can be rapidly scaled using existing technologies.[31] Moreover, advances in monitoring, including satellite and continuous detection systems, further enhance the feasibility of comprehensive mitigation and enforcement.[32] Canada notes that their enhanced methane regulations will create 30,000 new jobs.[33]

b) **Economic and financial levers** are equally compelling. Methane abatement often delivers net economic benefits by capturing gas that would otherwise be wasted, generating revenues while reducing emissions.[34] The relatively low cost of implementation, estimated at a small percentage of industry income, makes methane mitigation one of the most cost-effective climate interventions available.[35] Aligning financial flows, including through carbon finance, methane pricing, investment standards, and buyers' clubs,[36] can further accelerate deployment.

c) **Institutional levers** include the transition from voluntary initiatives to binding methane measures. Mandatory monitoring, reporting, and verification systems (MRV) enable transparency, accountability, and enforcement, while international mandatory measures can harmonize standards and scale action globally. [37] Emerging proposals include the development of a binding international methane agreement, negotiated by a coalition of the willing, as advocated originally by the European Commission and the European Parliament, and more recently by Prime Minister Mia Mottley of Barbados, with support from other world leaders.[38] Such an agreement could build on the EU Methane Regulation to establish mandatory mitigation measures for a coalition of the willing. Like the Montreal Protocol, a mandatory sectoral agreement to mitigate methane should be developed as a sister agreement that complements the Paris Agreement but is outside and independent from the UNFCCC.

d) **Social and political levers** are also significant. Binding methane mitigation can produce visible, near-term results, helping to build public and political confidence in climate action. Early successes can foster trust among stakeholders and demonstrate that cooperative, multi-actor approaches can deliver tangible outcomes.

**Binding Methane Mitigation as the Key Facilitator of the Fossil Fuel Transition**

Incorporating methane mitigation into fossil fuel transition roadmaps provides not only direct and immediate climate benefits but also critical enabling facilitates the broader transition. First, methane abatement delivers rapid and measurable results, making it an effective entry point for accelerating

global climate action in the fossil fuel sector. Early success in reducing methane emissions will build confidence among Parties, demonstrate feasibility, and strengthen political momentum for more ambitious mandatory measures.

Second, methane mitigation supports a cooperative, multi-stakeholder approach. Because many of these methane mitigation measures are technically feasible and economically viable, they can engage a wide range of actors, including governments, industry, and financial institutions, in coordinated action. This can help establish or strengthen shared standards, improve transparency through MRV systems, and foster accountability across the fossil fuel value chain.

Third, methane mitigation contributes to a just and orderly transition. By capturing wasted gas and improving operational efficiency, binding measures can enhance energy access, reduce economic losses, and support stability in fossil fuel-dependent economies. This reduces transition risks and creates a more favorable environment for implementing deeper structural changes.

Fourth, methane abatement enhances energy security and resilience. Capturing gas that is currently flared or leaked could make substantial additional energy available to markets in the near-term, providing immediate relief to supply constraints and reducing exposure to price volatility, according to the International Energy Agency.[39] Taken together, these factors demonstrate that methane mitigation is not only a mitigation measure but a strategic enabler that facilitates the broader fossil fuel transition.

Governments and key stakeholder groups are increasingly recognizing the importance of methane mitigation in the fossil fuel sector in international policy dialogues, such as the Global Methane Pledge.[40] It is also being recognized in the preparations for the Santa Marta Conference on Transitioning Away from Fossil Fuels (TAFF), where it is as a central workstream in the pre-conference science and policy discussions, reflecting its role as a near-term lever within broader fossil fuel transition strategies. As reflected in these ongoing international discussions, methane mitigation is increasingly understood not only as a technical mitigation measure but as a political and institutional bridge—capable of building trust, demonstrating early progress, and catalyzing broader cooperation on the transition away from fossil fuels.[41]

**Legal Imperative for Mandatory Methane Mitigation in Alignment with International Obligations**

The integration of mandatory methane mitigation into fossil fuel transition pathways is also supported by international legal obligations established by the recent climate advisory opinions. Advisory opinions issued by leading international courts, including the International Court of Justice (ICJ) and Inter-American Court of Human Rights (Inter-American Court), affirm that States must base their climate actions on the best available science and take all necessary measures to prevent significant environmental harm and protect human rights.[42]

Given the well-established scientific evidence on the effectiveness and urgency of methane mitigation, failure to implement such measures is inconsistent with these obligations. The ICJ and Inter-American Court Advisory Opinions underscore that States must act with due diligence to reduce emissions in line with the best available science to prevent foreseeable harm to vulnerable populations.[43] Further, the Inter-American Court affirmed that States bear positive obligations to incorporate and operationalize the best available scientific knowledge in climate-related decision-making processes.[44]

These obligations are further reinforced by Parties' commitments under the Paris Agreement to pursue efforts to limit warming to 1.5°C, to implement mitigation actions consistent with the best available

science, and to ensure that mitigation of all greenhouse gases across all sectors is included in countries' Nationally Determined Contributions. Methane mitigation, as one of the fastest and most effective means of reducing near-term warming, is therefore integral to fulfilling these legal duties. Its early inclusion in fossil fuel transition roadmaps is not merely a policy choice but a reflection of States' obligations under international law.

**Conclusion and Recommendations**

As Brazilian climate scientist Carlos Nobre recently wrote in O Globo, Methane Is the Starting Point for the End of Fossil Fuels: "*Without prioritizing this super-pollutant now, the Roadmap will not get us anywhere in time to prevent collapse*."[45] Any viable and just energy transition must take advantage of the most immediate and avoidable source of climate emissions in the fossil fuel sector and stop the waste of methane gas. Stopping routine flaring, venting, and leaks is a practical and cost-effective step that simultaneously reduces powerful climate pollution, supports energy security, and advances the initial stages of the pathway toward a managed and equitable phase-out of fossil fuels.

Parties should explicitly embed mandatory methane mitigation into fossil fuel transition roadmaps as a core and enabling component. This includes transitioning from voluntary initiatives to mandatory methane mitigation, integrating quantitative, time-bound methane targets into national and international strategies, strengthening MRV systems, aligning financial flows, and adopting phased implementation approaches where methane reductions are mandated as an immediate part of the longer-term fossil fuel phase-out.

Any fossil fuel transition roadmap that does not fully integrate methane mitigation risks will be incomplete, ineffective, and misaligned with both scientific evidence and legal obligations.[46] Conversely, embedding methane abatement as a core component of such roadmaps can ensure legal compliance with global obligations, enhance ambition, accelerate progress, and guarantee a more just, stable, and achievable transition.

## References

[1] Intergovernmental Panel on Climate Change (2021) *Summary for Policymakers*, *in* CLIMATE CHANGE 2021: THE PHYSICAL SCIENCE BASIS, *Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Masson-Delmotte V., *et al.* (eds.), Figure SPM.2. *See also* United Nations Environment Programme & Climate & Clean Air Coalition (2022) GLOBAL METHANE ASSESSMENT: 2030 BASELINE REPORT, 5 ("The Intergovernmental Panel on Climate Change (IPCC)'s Sixth Assessment shows that human-driven methane emissions are responsible for nearly 45 per cent of current net warming. The IPCC has continuously emphasized the critical urgency of reducing anthropogenic emissions – from methane and from other climate pollutants – if the world is to stay below 1.5° and 2°C targets.").

[2] United Nations Environment Programme & Climate & Clean Air Coalition (2021) GLOBAL METHANE ASSESSMENT: *BENEFITS AND COSTS OF MITIGATING METHANE EMISSIONS*, 8 ("Reducing human-caused methane emissions is one of the most cost-effective strategies to rapidly reduce the rate of warming and contribute significantly to global efforts to limit temperature rise to 1.5°C. Available targeted methane measures, together with additional measures that contribute to priority development goals, can simultaneously reduce human-caused methane emissions by as much as 45 per cent, or 180 million tonnes a year (Mt/yr) by 2030. This will avoid nearly 0.3°C of global warming by the 2040s and complement all long-term climate change mitigation efforts. It would also, each year, prevent 255 000 premature deaths, 775 000 asthma related hospital visits, 73 billion hours of lost labour from extreme heat, and 26 million tonnes of crop losses globally."). *See also* Ocko I. B., Sun T., Shindell D., Oppenheimer M., Hristov A. N., Pacala S.W., Mauzerall D. L., Xu Y., & Hamburg S. P. (2021) *Acting rapidly to deploy readily available methane mitigation measures by sector can immediately slow global warming*, ENVIRON. RES. LETT. 16(5): 1–11, 1 ("Pursuing all mitigation measures now could slow the global-mean rate of near-term decadal warming by around 30%, avoid a quarter of a degree centigrade of additional global-mean warming by midcentury, and set ourselves on a path to avoid more than half a degree centigrade by end of century. On the other hand, slow implementation of these measures may result in an additional tenth of a degree of global-mean warming by midcentury and 5% faster warming rate (relative to fast action), and waiting to pursue these measures until midcentury may result in an additional two tenths of a degree centigrade by midcentury and 15% faster warming rate (relative to fast action).").

[3] Nobre C. (31 March 2026) *Metano é o ponto de partida do fim dos combustíveis fósseis*, O GLOBO [Translation: *Methane Is the Starting Point for the End of Fossil Fuels*.] Nobre's conclusion is reinforced by an essay by Henrique Bezerra, who stated: "The proposal led by Brazil to build a Global Transition Away From Fossil Fuels Roadmap — the TAFF Roadmap — marks a new level in the international climate debate. For the first time, countries are beginning to confront a question that has long been avoided: in what order should oil, gas, and coal be phased out, and based on which scientific criteria? To turn ambition into concrete action, it is essential to include in this equation what is currently the most overlooked—and paradoxically most powerful—factor in climate policy: methane ($CH_4$). … The most effective emergency brake we still have to slow global warming lies in the immediate mitigation of methane. Aggressive cuts in this super-pollutant over the next few years are among the very few actions capable of producing meaningful impact within the critical window that remains." *See* Bezerra H. (27 March 2026) *O freio de emergência da crise climática tem nome: metano*, VALOR [Translation: *The Climate Crisis Emergency Brake Has a Name: Methane*].

[4] United Nations Environment Programme & Climate and Clean Air Coalition (2021), GLOBAL METHANE ASSESSMENT: 2030 BASELINE REPORT, 28; *see also* Intergovernmental Panel on Climate Change (2021) *Summary for Policymakers*, *in* CLIMATE CHANGE 2021: THE PHYSICAL SCIENCE BASIS, *Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Masson-Delmotte V., *et al.* (eds.), Figure SPM.2 (estimating that methane contributes ~45% of current warming and ~0.5 W/m² forcing, supporting its substantial share of total GHG impact.).

[5] Notably, coal bed methane is another priority for fossil fuel methane. Between 2010 and 2019, a third of fossil fuel methane emissions came from coal mines. Saunois M., *et al.* (2025) *Global Methane Budget 2000–2020*, EARTH SYST. SCI. DATA 17(5): 1873–1958, 1885 (Table 3).

[6] United Nations Environment Programme & Climate & Clean Air Coalition (2022) GLOBAL METHANE ASSESSMENT: 2030 BASELINE REPORT (Global action to reduce methane emissions has additional benefits for human health, food security and ecosystems, as it can curb the formation of tropospheric ozone, an air pollutant with multiple harmful impacts.). *See also* Climate & Clean Air Coalition & International Energy Agency (2023) THE IMPERATIVE OF CUTTING METHANE FROM FOSSIL FUELS, 13 ("Based on the Climate and Clean Air Coalition's models and methodology developed for the Global Methane Assessment, methane abatement in the fossil fuel sector in the NZE Scenario would reduce ozone exposure worldwide, avoiding nearly 1 million premature deaths through 2050, which is equivalent to the current population of Amsterdam, Netherlands. Reduced ozone would also avoid nearly  million asthma-related emergency room visits and between 50 and 60

thousand hospital admissions for persons aged 65 and over. Reduced heat exposure would avert around 85 billion hours of lost labour, which is equivalent to 41 million fulltime jobs. The reduced ozone and the avoided climate change caused by reaching methane reduction targets would avert about 95 million tonnes of crop losses for wheat, rice, soy and maize (corn). These savings are equivalent to roughly 60% of the volume of wheat, rice, soy and maize produced in Africa in 2021.The economic benefits of avoiding these labour and crop losses, as well as additional losses in forestry due to reduced ozone exposure, provide direct economic benefits valued at more than USD 260 billion between 2020 and 2050, in addition to significant health benefits.").

[7] *See* European Union, *Regulation (EU) 2024/1787 of the European Parliament and of the Council of 13 June 2024 on the reduction of methane emissions in the energy sector and amending Regulation (EU) 2019/942*, OJ L, 2024/1787, 15.7.2024.

[8] The global warming level refers to the long-term average of warming, generally calculated over the past 20-years of temperature records. *See* Copernicus Climate Change Service (January 2026) GLOBAL CLIMATE HIGHLIGHTS 2025, 35 ("By the end of 2025 the globe has warmed by about: +1.4°C above the pre-industrial level[.] This number is based on three separate methods that use C3S data and calculations following those illustrated in the WMO Global State of the Climate 2024[.]").

[9] Copernicus Climate Change Service (Jan 2026) GLOBAL CLIMATE HIGHLIGHTS 2025, 10. The World Meteorological Organization (WMO) averages all available datasets, including Copernicus.

[10] Rohde R. (14 January 2026) *Global Temperature Report for 2025*, Berkeley Earth ("Given recent rates of warming is may take only less than 5 years for our long-term trend to reach 1.5 °C (2.7 °F). The Paris Agreement on Climate Change aims to keep the long-term average global temperature rise to well below 2 °C (3.6 °F) and encourages parties to strive for warming of no more than 1.5 °C (2.7 °F)."). *See also* Bevacqua E., Schleussner C.-F., & Zscheischler J. (2025) *A year above 1.5 °C signals that Earth is most probably within the 20-year period that will reach the Paris Agreement limit*, NAT. CLIM. CHANG.: 1–4, 2 ("On the basis of multiple observational datasets, climate model simulations and an idealized experiment, our analyses demonstrate that, unless ambitious emissions cuts are implemented, the world's first year at 1.5 °C warming is virtually certain (~99% on average; Fig. 1b) to fall within the 20-year period that reaches the 1.5 °C warming level."); *and* Hansen J. E., *et al.* (2025) *Global Warming Has Accelerated: Are the United Nations and the Public Well-Informed?*, ENVIRON. SCI. POLICY SUSTAIN. DEV. 67(1): 6–44.

[11] Forster P. M., *et al.* (2025) *Indicators of Global Climate Change 2024: annual update of key indicators of the state of the climate system and human influence*, EARTH SYST. SCI. DATA 17(6): 2641–2680, 2663 ("Note that the 50 % RCB [remaining carbon budget] estimate of 130 Gt $CO_2$ would be exhausted in a little more than 3 years if global $CO_2$ emissions remain at 2024 levels (42 Gt CO2 $yr^{-1}$; see Table 1). This is not expected to correspond exactly to the time that 1.5 °C global warming level is reached … For comparison, our estimate of 2024 anthropogenic warming (1.36 °C) and the recent rate of increase (0.27 °C per decade) would suggest that continued emissions at current levels would cause human-induced global warming to reach 1.5 °C in approximately 5 years.").

[12] Ripple W. J., *et al.* (2026) *The risk of a hothouse Earth trajectory*, ONE EARTH 9(20): 1–6, 2. *See also* Forster P. M., *et al.* (2025) *Indicators of Global Climate Change 2024: annual update of key indicators of the state of the climate system and human influence*, EARTH SYST. SCI. DATA 17(6): 2641–80, 2642–43; *and.* Friedlingstein P., *et al.* (2026) *Emerging climate impact on carbon sinks in a consolidated carbon budget*, NATURE 649: 98–103, 101.

[13] Ripple W. J., *et al.* (2026) *The risk of a hothouse Earth trajectory*, ONE EARTH 9(20): 1–6, 2 ("The fact that the 1.5°C limit was surpassed in 2024 despite many climate projections forecasting a breach later, underscores how rapidly climate change is advancing. Modern historical increases in global surface temperatures have been tightly coupled with increases in carbon dioxide (Figure 1B). But, warming itself appears to be accelerating: the rate has risen from roughly 0.05°C per decade in the mid-20th century to about 0.31°C per decade today (Figure 1C). At this pace, warming may soon cross levels often seen as a limit against severe impacts and tipping cascades.[4] This rapid rise narrows the time frame available to prevent self-reinforcing processes from taking hold. Furthermore, declining aerosol emissions reduce the cooling effect that has masked greenhouse gas warming, potentially adding up to a further ~0.5°C to global temperatures.[1] This loss of aerosol masking explains part of the recent acceleration in warming. Emerging evidence suggests that other feedbacks may also be contributing, including cloud–albedo changes linked to aerosol declines, shifts in land surface reflectivity, and reduced carbon uptake on land, rather than a temporary response to changing external forcings such as greenhouse gases or aerosols.[1,8,9]"). *See also* Forster P. M., *et al.* (2025) *Indicators of Global Climate Change 2024: annual update of key indicators of the state of the climate system*

*and human influence*, EARTH SYST. SCI. DATA 17(6): 2641–2680, 2642–2643 ("Human-induced warming has been increasing at a rate that is unprecedented in the instrumental record, reaching 0.27 [0.2–0.4] °C per decade over 2015–2024.

[14] United Nations Environment Programme (2025) EMISSIONS GAP REPORT 2025, 38 (Figure 4.2).

[15] Hansen J. E., *et al*. (2025) *Global Warming Has Accelerated: Are the United Nations and the Public Well-Informed?*, ENV. SCI. POLICY SUSTAIN. DEV. 67: 6–44, 35 ("[G]lobal warming in the next two decades is likely to be about 0.2-0.3 °C per decade, leading to global temperature +2 °C by 2045.")

[16] Intergovernmental Panel on Climate Change (2021) *Summary for Policymakers*, *in* CLIMATE CHANGE 2021: THE PHYSICAL SCIENCE BASIS, *Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Masson-Delmotte V., *et al.* (eds.), Figure SPM.2. *See also* United Nations Environment Programme & Climate & Clean Air Coalition (2022) GLOBAL METHANE ASSESSMENT: 2030 BASELINE REPORT, 5 ("The Intergovernmental Panel on Climate Change (IPCC)'s Sixth Assessment shows that human-driven methane emissions are responsible for nearly 45 per cent of current net warming. The IPCC has continuously emphasized the critical urgency of reducing anthropogenic emissions – from methane and from other climate pollutants – if the world is to stay below 1.5° and 2°C targets.").

[17] International Energy Agency (2025) GLOBAL METHANE TRACKER 2025, 16 ("Methane (CH4) has a much shorter atmospheric lifetime than carbon dioxide (CO 2) – around 12 years, compared with centuries – but it absorbs much more energy while it remains in the atmosphere.").

[18] Climate Action Tracker (2025) *Three key near-term actions could bend the warming curve; bringing projected warming below 2 °C*, ii, iii ("Unlike any other action taken by, or under, the Paris Agreement, tripling renewable energy by 2030, doubling the rate of energy efficiency improvements, and reducing methane would rapidly reduce the rate of warming in the next decade and result in warming peaking at 1.7–1.8°C. The rate of human-induced warming is currently (in 2025) around ~0.25°C per decade. These actions would reduce this by around 10% by 2030 and, when continued, essentially halve it by 2040. Contrast this with the fact that under governments' current policies, the warming rate even accelerates slightly by 2030 before very slowly declining—but warming will not peak this century and would continue increasing in 2100."; "The combination of reduced $CO_2$ emissions—and the resulting slowdown in $CO_2$ concentration in the atmosphere—together with rapid reductions in methane emissions, would slow and then rapidly reduce the human induced forcing of the climate system.").

[19] Lelieveld J., Klingmüller K., Pozzer A., Burnett R. T., Haines A., & Ramanathan V. (2019) *Effects of fossil fuel and total anthropogenic emission removal on public health and climate*, PROC. NAT'L. ACAD. SCI. 116(15): 7192–7197, 7194 ("Finally, our model simulations show that fossil-fuel-related aerosols have masked about 0.51(±0.03) °C of the global warming from increasing greenhouse gases (Fig. 3)."). *See also* Intergovernmental Panel on Climate Change (2021) *Summary for Policymakers*, *in* CLIMATE CHANGE 2021: THE PHYSICAL SCIENCE BASIS, *Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Masson-Delmotte V., *et al.* (eds.), SPM-2 (Figure SPM.2c shows that Sulfur dioxide ($SO_2$) contributes –0.49 °C (–0.10 to –0.93 °C) to observed warming in 2010–2019 relative to 1850–1900).

[20] International Energy Agency (2025) GLOBAL METHANE TRACKER: *DOCUMENTATION* (energy sector accounts for over one-third of anthropogenic methane emissions and oil and gas operations are the largest source); *See also* United Nations Environment Programme & Climate and Clean Air Coalition (2022) GLOBAL METHANE ASSESSMENT: 2030 BASELINE REPORT (methane emissions arise from oil and gas extraction, processing, and transport, including venting, flaring, and leaks).

[21] International Energy Agency (2023) CREDIBLE PATHWAYS TO 1.5 °C - FOUR PILLARS FOR ACTION IN THE 2020S, 1–15, 11 ("In the NZE Scenario, methane emissions from the energy sector fall by around 75% between 2020 and 2030 and total methane emissions from human activity fall by around 45%. The IEA's latest update of its Global Methane Tracker found that methane emissions from oil and gas alone could be reduced by 75% with existing technologies. Around $100 billion in total investment is needed over the period to 2030 to achieve this reduction—equivalent to less than 3% of oil and gas net income in 2022. To address methane emissions from fossil energy production and consumption, countries covering over half of global gas imports and over one-third of global gas exports released a Joint Declaration from Energy Importers and Exporters on Reducing Greenhouse Gas Emissions from Fossil Fuels at COP27 calling for minimizing flaring, methane, and $CO_2$ emissions across the supply chain to the fullest extent practicable.").

[22] Climate & Clean Air Coalition & International Energy Agency (2023) THE IMPERATIVE OF CUTTING METHANE FROM FOSSIL FUELS, 13 ("Based on the Climate and Clean Air Coalition's models and methodology developed for the Global Methane Assessment, methane abatement in the fossil fuel sector in the NZE Scenario would reduce ozone exposure worldwide, avoiding nearly 1 million premature deaths through 2050, which is equivalent to the current population of Amsterdam, Netherlands. Reduced ozone would also avoid nearly one million asthma-related emergency room visits and **between 50 and 60 thousand hospital admissions for persons aged 65 and over. Reduced heat exposure would avert around 85 billion hours of lost labour, which is equivalent to 41 million fulltime jobs.** The reduced ozone and the avoided climate change caused by reaching methane reduction targets would avert about 95 million tonnes of crop losses for wheat, rice, soy and maize (corn). These savings are equivalent to roughly 60% of the volume of wheat, rice, soy and maize produced in Africa in 2021.The economic benefits of avoiding these labour and crop losses, as well as additional losses in forestry due to reduced ozone exposure, provide direct economic benefits valued at more than USD 260 billion between 2020 and 2050, in addition to significant health benefits." (emphasis added)).

[23] International Energy Agency (2025) GLOBAL METHANE TRACKER: KEY FINDINGS ("energy related methane emissions have still not reached a definitive peak"); see also CSIRO (2025), GLOBAL CARBON DIOXIDE EMISSIONS FROM FOSSIL FUELS RISE IN 2025 (*Global Carbon Budget 2025)*, 13 November 2025 ("Global fossil fuel emissions are projected to rise in 2025 to a new all-time high, with all sources – coal, gas, and oil – contributing to increase.").

[24] Reisinger A. (2024) *Why addressing methane emissions is a non-negotiable part of effective climate policy*, FRONT. SCI. 2: 1–5, 1 ("Deep reductions in future methane (CH4) emissions alongside carbon dioxide (CO2) are non-negotiable if we wish to limit global warming to well below 2°C, let alone 1.5°C, but action on $CH_4$ cannot substitute inaction on $CO_2$: reaching at least net zero $CO_2$ emissions globally remains a prerequisite for limiting warming at any level."); 4 ("The large gap between the potential and currently realized extent of $CH_4$ mitigation makes it clear that stronger and more consistent policies are needed to motivate and regulate companies to reduce $CH_4$ emissions. Strikingly, only about 13% of global $CH_4$ emissions are covered by targeted policies, and a significant share of those policies focus on monitoring rather than reduction and rely on information and voluntary action rather than mandatory pricing or regulation (9). By comparison, more than 53% of global total emissions are covered by climate laws (10).").

[25] In 2020, the European Commission supported the coordination of international actions to rapidly reduce methane emissions as part of the EU Methane Strategy. *See* Communication from the Commission (14 October 2020) *On an EU strategy to reduce methane emissions*, 18 ("The Commission will contribute to a series of key international events in the build up to the UN General Assembly in New York in September 2021, with the objective of securing at that meeting a UN-based pathway to reduce methane emissions in the years 2021-2031. The goal will be to provide support for the coordination of international actions to rapidly reduce global atmospheric methane and promote longer-term action, notably through the creation of a legally-binding framework at international level for methane emission reduction."). The following year, in 2021, the European Parliament passed a resolution calling upon the European Commission "to suggest and negotiate a binding global agreement on methane mitigation at the COP26" in Glasgow. In that resolution, the European Parliament "calls on the Commission to make methane emissions reduction a top priority in its climate diplomacy and to … spearhead an international agreement on methane mitigation, promoting coordinated action to reduce methane emissions . . ." *See* European Parliament (2021) *European Parliament resolution of 21 October 2021 on an EU strategy to reduce methane emissions*, 2021/2006(INI)).

[26] *See* Regulation (EU) 2024/1787 of the European Parliament and of the Council of 13 June 2024 on the reduction of methane emissions in the energy sector and amending Regulation (EU) 2019/942, 2024 O.J. (L 2024/1787).

[27] At the sub-national level, Colorado and New Mexico have implemented stringent methane regulations in the U.S. *See e.g.* Venting or Flaring Natural Gas, 2 COLO. CODE REGS. § 404–1-903 (2022); Drilling units - pooling interests, Colo. Rev. Stat. § 34-60-116 (2024); Venting and Flaring of Natural Gas, 19.15.27.8 N.M. Admin. Code (2022); *and* Hearing Officer's Report, 20.2.50 N.M. Admin. Code (2022). At the national level, Mexico and Canada have established comprehensive national regulations for the oil and gas sector. *See e.g.* Disposiciones Administrativas de carácter general que establecen los Lineamientos para la prevención y el control integral de las emisiones de metano del Sector Hidrocarburos [General Administrative Provisions Establishing Guidelines for the Prevention and Integral Control of Methane Emissions from the Hydrocarbons Sector], Diario Oficial de la Federación [DOF] 06-11-2018 (Mex.); Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector), SOR/2018-66 (Can.); *and* Regulations Amending the Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector), SOR/2025-280 (Can.).

[28] Prime Minister Mia Mottley of Barbados and President Emmanuel Macron of France have led calls for a legally binding international agreement on methane modeled after the Montreal Protocol. During New York Climate Week 2025 at the Climate & Clean Air Coalition High-Level Solutions Dialogue on Methane, Prime Minister Mottley of Barbados stated that: "[A]s we go into COP[30], we … need a legally binding global agreement for methane reduction. … I feel that we do not need to reinvent the wheel. The Montreal Protocol that allowed us to reduce HFCs is the most successful climate agreement in history. We can replicate it…." President Macron of France agreed, stating: "We need binding objectives on methane. We know that this is a reachable goal…. This is the best way to reduce our emissions and it's also a G7 priority." The call for an international methane agreement among a coalition of the willing was echoed by President Wesley W. Simina of the Federated States of Micronesia and Prime Minister Feleti Teo of Tuvalu. At the Climate & Clean Air Coalition High-Level Solutions Dialogue on Methane, President Wesley W. Simina of the Federated States of Micronesia stated: "Voluntary methane pledges are failing to reduce emissions. Markets cannot align and polluters cannot be held accountable without stronger mandatory measures at national, regional, and global level. We need clear, predictable, mandatory approaches to ensure success. … [W]e have done this before. When the ozone layer was in crisis, leaders forged the Montreal Protocol—a binding, enforceable system that saved lives, created markets, and restored balance. We must summon that same courage for methane."; and Prime Minister Teo of Tuvalu stated: "Tuvalu therefore calls on major emitters to … step up methane action with binding commitment. … The ICJ Advisory Opinion on Climate Change has made it crystal clear that inaction is not just immoral, it is unlawful. Together, we must rise to the challenge of honoring both legal and moral responsibility in safeguarding our shared future and pulling the emergency brake on methane. Cutting methane is the fastest scalable way to slow global warming, avoiding up to 0.3 degrees centigrade of warming by 2040 and buying critical time for long-term $CO_2$ decarbonization strategies to take effect.").

[29] Prime Minister of Barbados Mia Mottley (2025) *This is another 'ozone layer' moment. Now, we must urgently target methane* ("The Montreal protocol, signed in 1987, can provide the inspiration. Besides putting the protective ozone layer on the road to recovery, that binding agreement has done more than any other to combat the climate crisis, mainly because the ozone-depleting chemicals it reduces are also powerful warmers. The protocol is on course to avoid 2.5C of warming by the end of the century, a massive contribution. It was negotiated by a small coalition of willing countries, and concluded in less than a year after formal diplomatic negotiations opened…. Preventing methane energy waste makes sense for industry, and it makes sense for people and the planet. As Aristotle taught us, waste is a form of injustice. Preventing it is not too much to ask.").

[30] Climate Vulnerable Forum / Vulnerable Twenty Group (2024) *Prime Minister Mia Mottley Outlines Priorities for Barbados' CVF-V20 Presidency*.

[31] United Nations Environment Programme & Climate & Clean Air Coalition (2021) GLOBAL METHANE ASSESSMENT: *BENEFITS AND COSTS OF MITIGATING METHANE EMISSIONS*, 107 (Table 4.1).

[32] International Energy Agency (2025) GLOBAL METHANE TRACKER: *DOCUMENTATION*, 36 ("Robust measurement-based monitoring regimes combined with additional regulations can encourage additional abatement. Within the IEA methane emissions model, additional measures correspond to the following abatement options: replace with electric motor; continuous leak detection and repair; daily leak detection and repair; monitor and plug abandoned wells; other. These actions can be driven by a combination of different policies, including enhanced technology standards, performance standards, emissions pricing, financing instruments, and monitoring, reporting and verification regimes. More information about these additional measures can be found in Curtailing Methane Emissions from Fossil Fuel Operations.").

[33] Government of Canada (16 December 2025) *Government of Canada delivers on Climate Competitiveness Strategy commitment to lower methane emissions from major sources* ("Reducing methane emissions is one of the fastest, most cost-effective ways to cut pollution and strengthen our economy. It is also an opportunity to create a thriving environment for the clean tech industry. Since Canada's first oil and gas methane regulations came into force in 2018, we have seen significant growth in the clean tech industry. The *Enhanced Methane Regulations* send a clear signal for clean technology investments to reduce methane emissions, supporting over 130 methane abatement companies across Canada. These companies provide jobs in many communities, and they accelerate the use of measurement technologies, including continuous monitors, ground-based measurement vehicles, and aerial and satellite-based sensors. Various skilled clean tech workers have wages that are on par with petroleum engineers. An independent estimate suggests that actions companies take to comply with the regulations could create approximately 34,000 jobs in Canada between 2027 and 2040."); *citing* Intriago L. F. (28 October 2025) *Canada's 34,000-Job Opportunity: Finalizing Canada's Methane Regulations*, ENVIRONMENTAL DEFENSE FUND.

[34] Climate & Clean Air Coalition & International Energy Agency (2023) THE IMPERATIVE OF CUTTING METHANE FROM FOSSIL FUELS, 11 ("Around USD 75 billion in spending is required to 2030 to deploy all methane abatement measures in the oil and gas sector in the NZE Scenario. This is less than 2% of the net income earned by the industry in 2022. The NZE Scenario sees lower natural gas prices than generally observed historically, but the value of the gas that would be saved and sold is still relatively large. Methane abatement would generate revenues of around USD 45 billion to 2030 from the sale of captured gas."). In Canada, an analysis by the Environmental Defense Fund found that Alberta's methane emissions represented over CAD$670 million in lost natural gas revenue in a single year, including over CAD$120 million in uncollected royalties and corporate taxes. *See* Intriago L. F. (20 February 2026) *Canada's Methane Opportunity and Canadian Jobs Hinge on Strong Alberta Implementation of Federal Methane Rules*, ENVIRONMENTAL DEFENSE FUND.

[35] United Nations Environment Programme (2025) GLOBAL METHANE STATUS REPORT, 114 ("Energy sector measures have the highest annual costs in 2030, at nearly US$98 billion, and the required investments are capital intensive, requiring about US$96 billion per year in upfront investment. Of these totals, coal sector measures entail US$11 billion in annual costs and an upfront investment of US$3 billion per year. Upstream oil and gas interventions have estimated annual costs of US$6.6 billion and capital costs of US$6.5 billion per year, while midstream and downstream measures have annual costs of US$80 billion and upstream capital costs of US$87 billion. Relative to MTFR 2030 mitigation potential, upstream oil and gas measures are extremely cost-effective at US$0.12 billion per million tonnes of methane emissions reduced. The IEA provides alternative, lower estimates suggesting that around US$43 billion in total annual spending and around US$35 billion in new capital expenditure is needed annually for 2025–2030 to reduce energy sector methane emissions by 75 per cent (IEA 2025). Primary responsibility for investing in methane mitigation lies with fossil-fuel companies, and the varying estimates of annual costs represent just 2–4 per cent of the sector's US$2.4 trillion in net income in 2023 (IEA 2024).").

[36] Zaelke D. (2026) *How the Montreal Protocol Saved the World Twice and Could Do it Again*, ENV. LAW INST. 56: 10030, 10036 ("A binding agreement to limit methane emissions from fossil fuels could start with the European Methane Regulation,41 which comprises: strict standards for the EU market, including prohibitions on routine venting and flaring; extensive requirements on measuring, reporting, and verification; mandatory leak detection and repair; and robust performance standards. It also will set rigorous standards for imported oil and gas, which has global significance because the EU is their single biggest importer, with the United States as the biggest exporter into the EU. The next step would be to "multilateralize" the European standard to Japan and South Korea. These three jurisdictions represent over half of global natural gas imports.42 Once buyers align their methane gas import standards, such as reporting, data accuracy, and low methane intensity performance standards, they will have the market muscle to require sellers to meet them. A key advantage is that such a "Natural Gas Buyers Club" can exclude traditional blockers that might otherwise slow progress . . . Another step would be to link the Natural Gas Buyers Club to the Oil and Gas Decarbonization Charter.43 Launched at COP28 by 56 oil and gas companies, including 34 national companies, this included promises to cut routine gas flaring by 2030 and to reduce upstream methane leaks to near zero, defined as 0.2% or less methane intensity. These promises by producers representing nearly 40% of the market would match up well with the European Methane Regulation.").

[37] International Energy Agency (2025) GLOBAL METHANE TRACKER: *DOCUMENTATION*, 36 ("Robust measurement-based monitoring regimes combined with additional regulations can encourage additional abatement. Within the IEA methane emissions model, additional measures correspond to the following abatement options: replace with electric motor; continuous leak detection and repair; daily leak detection and repair; monitor and plug abandoned wells; other. These actions can be driven by a combination of different policies, including enhanced technology standards, performance standards, emissions pricing, financing instruments, and monitoring, reporting and verification regimes. More information about these additional measures can be found in Curtailing Methane Emissions from Fossil Fuel Operations."). *See also* International Energy Agency (2022) CURTAILING METHANE EMISSIONS FROM FOSSIL FUEL OPERATIONS: *PATHWAYS TO A 75% CUT BY 2030*, 42–44 ("Monitoring, reporting and verification regimes are a centrepiece of methane abatement strategies and will be key in driving further emissions reductions. We estimate that a global standard based on robust measurement could potentially lead to a reduction in methane emissions of close to 25 Mt if applied across the entire oil and gas industry. This would effectively remove barriers that prevent companies from addressing leaks and emissions that they are unaware of, allowing them to take advantage of the vast extent of cost-effective abatement opportunities (provided companies are able to prioritise capital for abatement and that infrastructure barriers can be addressed). More importantly, a functional and reliable monitoring, reporting and verification regime is a prerequisite for many policy tools that can drive deeper cuts in emissions in an efficient manner, including market-based instruments, performance standards and trade measures.… Better and more accessible data can enable further methane reductions, both in committed countries and other jurisdictions. However, current satellite technology has important limitations – including that they are impaired by cloud coverage and do not provide reliable measures in equatorial, offshore, and northern regions. Thus, a monitoring, reporting and verification regime should rely on a suite of measurement

tools, building from the growing pool of available technologies that includes drone-based and other aerial surveys, ground-based surveys and continuous monitoring devices. These can support the detection of ongoing emissions events, verify the success of repair measures and facilitate enforcement actions.… We estimate that around 2 Mt of methane associated with large emissions events could be reduced using today's instruments and capabilities. This amount is poised to grow over time, as satellite detection matures and new instruments come online.").

[38] Prime Minister Mia Mottley of Barbados and President Emmanuel Macron of France have led calls for a legally binding international agreement on methane modeled after the Montreal Protocol. During New York Climate Week 2025 at the Climate & Clean Air Coalition High-Level Solutions Dialogue on Methane, Prime Minister Mottley of Barbados stated that: "[A]s we go into COP[30], we … need a legally binding global agreement for methane reduction. … I feel that we do not need to reinvent the wheel. The Montreal Protocol that allowed us to reduce HFCs is the most successful climate agreement in history. We can replicate it…." President Macron of France agreed, stating: "We need binding objectives on methane. We know that this is a reachable goal…. This is the best way to reduce our emissions and it's also a G7 priority." The call for an international methane agreement among a coalition of the willing was echoed by President Wesley W. Simina of the Federated States of Micronesia and Prime Minister Feleti Teo of Tuvalu. At the Climate & Clean Air Coalition High-Level Solutions Dialogue on Methane, President Wesley W. Simina of the Federated States of Micronesia stated: "Voluntary methane pledges are failing to reduce emissions. Markets cannot align and polluters cannot be held accountable without stronger mandatory measures at national, regional, and global level. We need clear, predictable, mandatory approaches to ensure success. … [W]e have done this before. When the ozone layer was in crisis, leaders forged the Montreal Protocol—a binding, enforceable system that saved lives, created markets, and restored balance. We must summon that same courage for methane."; and Prime Minister Teo of Tuvalu stated: "Tuvalu therefore calls on major emitters to … step up methane action with binding commitment. … The ICJ Advisory Opinion on Climate Change has made it crystal clear that inaction is not just immoral, it is unlawful. Together, we must rise to the challenge of honoring both legal and moral responsibility in safeguarding our shared future and pulling the emergency brake on methane. Cutting methane is the fastest scalable way to slow global warming, avoiding up to 0.3 degrees centigrade of warming by 2040 and buying critical time for long-term $CO_2$ decarbonization strategies to take effect.").

[39] International Energy Agency (2022) THE ENERGY SECURITY CASE FOR TACKLING GAS FLARING AND METHANE LEAKS, 3 ("Substantial gas resources currently are being produced that do not make it to market because they are lost to flaring and leaks across the oil and gas supply chain. Reducing flaring, venting and methane leaks would offer more immediate relief to gas markets than investing in new supply, bringing a double dividend: relief for very tight gas markets and reduced greenhouse gas emissions.[1] We estimate that nearly 210 billion cubic metres (bcm) of natural gas could be made available to gas markets by a global effort to eliminate non-emergency flaring and reduce methane emissions from oil and gas operations.").

[40] Global Methane Pledge, About the Global Methane Pledge (*last visited* 9 April 2026) ("The Global Methane Pledge (GMP) was launched at COP26 by the European Union and the United States who have been joined by many countries. The GMP today counts 159 participating countries and the European Commission. Since its launch, the GMP has generated unprecedented momentum for methane mitigation, with major work underway in six action areas including: the Energy Pathway, the Waste Pathway, the Food and Agriculture Pathway, Methane Plans and Policies, Data for Methane Action, and Finance for Methane Abatement. Such work is being supported by a broad range of leading international actors such as the Global Methane Initiative (GMI), the Global Methane Hub (GMH), the International Energy Agency (IEA), the United Nations Economic Commission for Europe (UNECE), and the World Bank. Participants joining the Pledge agree to take voluntary actions to contribute to a collective effort to reduce global methane emissions at least 30 percent from 2020 levels by 2030. This is a global, not a national reduction target.").

[41] *See generally* Ozkul-Randles C. A., Papa L., & Stowe R. (April 2026) THE LANDSCAPE OF INTERNATIONAL COOPERATION FOR METHANE MITIGATION, Harvard Initiative on Reducing Global Methane Emissions, Discussion Paper HMI-3.

[42] *Climate Emergency and Human Rights, Advisory Opinion OC-32/25*, Inter-Am. Ct. H.R. (ser. A), ¶¶ 204, 236, 240, 246, 283, 326–27, 331, 336, 343, 362–63, 367, 388, 485, 503, 525, 539, 542, 559, 599–600 (May 29, 2025); *Obligations of States in respect of Climate Change*, I.C.J., Advisory Opinion, Gen. List No. 187, ¶¶ 224, 254, 276, 278–79, 281, 295–99, 388–92 (23 July 2025); *see also* Hunter D. B., Salzman J. E., & Zaelke D. (*updated* 7 October 2025) *Chapter on the Climate Change Advisory Opinions*, *in* INTERNATIONAL ENVIRONMENTAL LAW AND POLICY (6th ed. 2022), UCLA School of Law, Public Law Research Paper, 3 ("A key contribution of the Advisory Opinions is the integration of climate science into the core of legal reasoning. The three Courts repeatedly cite the findings of the Intergovernmental Panel on Climate Change (IPCC), particularly regarding the dangers of passing the 1.5°C guardrail and the risks of crossing planetary tipping points.

These findings are presented as binding benchmarks that shape the scope of States' obligations under international law. Scientific consensus on the serious and irreversible nature of climate damage thus shapes the legal conclusions of all three Opinions.").

[43] *Climate Emergency and Human Rights, Advisory Opinion OC-32/25*, Inter-Am. Ct. H.R. (ser. A), ¶¶ 204, 236, 240, 246, 283, 326–27, 331, 336, 343, 362–63, 367, 388, 485, 503, 525, 539, 542, 559, 599–600 (May 29, 2025); *Obligations of States in respect of Climate Change*, I.C.J., Advisory Opinion, Gen. List No. 187, ¶¶ 224, 254, 276, 278–79, 281, 295–99, 388–92 (23 July 2025).

[44] *Climate Emergency and Human Rights, Advisory Opinion OC-32/25*, Inter-Am. Ct. H.R. (ser. A), ¶ 478 (May 29, 2025).

[45] Nobre C. (31 March 2026) *Metano é o ponto de partida do fim dos combustíveis fósseis*, O GLOBO [Translation: *Methane Is the Starting Point for the End of Fossil Fuels*.]

[46] Bezerra H. (27 March 2026) *O freio de emergência da crise climática tem nome: metano*, VALOR [Translation: *The Climate Crisis Emergency Brake Has a Name: Methane*] ("Ignorar superpoluente de maior impacto no curto prazo enfraquece o TAFF Roadmap e compromete a chance de estabilizar o clima nas próximas décadas." [Translation: "Ignoring the most impactful super-pollutant in the short term weakens the TAFF Roadmap and jeopardizes our chances of stabilizing the climate in the coming decades."]).