Climate Resource

Behind the curves

Comparing 2100 temperature projections and underlying assumptions

A. Talberg, A. Self, J. Lewis, K. Spiller, M. Meinshausen, M. Pflüger, R. Burdon.

27 January 2026

Get in touch

Climate Resource provides climate-science modelling, emissions data and scenario analysis to support decision-makers in navigating the transition to a net-zero world, and responding to the changing climate. We're always open for new engagements and would welcome the opportunity to collaborate with your team. Please contact us to discuss how we can support your climate-risk and transition-analysis needs www.climate-resource.com

Disclaimer

www.climate-resource.com

Image Credit

Sardinia, April 2025, Malte Meinshausen

Copyright

Table of Contents

Acronyms:

APS	Announced Policies Scenario
BAU	Business as usual
CAT	Climate Action Tracker
CAGR	Compound Annual Growth Rate
CPS	Current Policies Scenario
COP	Conference of the Parties
GCAM	Global Change Analysis Model
GHG	Greenhouse gas
Gt	gigatonne
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
LT-LEDS	Long-Term Low-Emission Development Strategies
LULUCF	Land-use, land-use change and forestry
NDC	Nationally Determined Contribution
STEPS	Stated Policies Scenario
UNEP	United Nations Environment Program
UNFCCC	United National Framework Convention on Climate Change
US	United States
WEO	World Energy Outlook

Summary

This briefing reassesses global warming outcomes in light of the latest 2035 Nationally Determined Contributions (NDCs), long-term net-zero strategies (LT-LEDS), and the United States' withdrawal from the Paris Agreement, effective 27 January 2026. It situates updated temperature estimates within the range of projections published by major international assessments and explains why headline numbers differ.

The analysis finds that global emissions are now widely projected to peak within this decade and that, in aggregate, 2035 NDCs broadly reaffirm global commitments to increasing mitigation ambition, and a linear path to stated long-term net-zero goals. When NDCs are combined with LT-LEDS and assumed to be met in full, global warming in 2100 is consistently estimated to fall in the range of approximately 1.8 to 2.2 °C, after accounting for the US withdrawal. By contrast, warming under current policies alone remains clustered around 2.5 to 2.9°C.

Differences across published warming estimates primarily reflect divergent scenarios for policy implementation, post-2035 emissions trajectories, and the treatment of long-term targets, rather than disagreement about climate science. The US withdrawal shifts global outcomes by up to 0.1 to 0.2°C depending on assumptions about its trajectory beyond 2035. Unresolved uncertainties around large emitters, particularly India's pathway, also remain important sensitivities.

The 2035 NDCs send a strong signal. A linear path to long-term targets now plays a central role in shaping global climate outlooks. Scenarios that deliver 1.8 to 2.2 °C are the base case for policy, planning, and investment. Implementation of targets, especially this decade, remains critical to constraining warming. The gap between current-policy outcomes and Paris-aligned pathways defines the scale of policy, investment, and coordination required to determine which future becomes reality. The remaining gap between long-term warming of 1.8–2.2 °C and the 1.5 °C limit therefore represents the critical challenge that must be addressed to keep any overshoot of 1.5 °C short and shallow.

1. Introduction

On 27 January 2026, the US withdrawal from the Paris Agreement formally takes effect. As a large historical emitter and a central influence in the Paris framework, the US decision has symbolic and practical significance. It also raises an important question: to what extent does the US withdrawal affect global temperature outcomes and how are those temperatures tracking?

Estimates of warming are regularly cited by international organisations, research institutions and governments as indicators of whether the world is 'on track' to meet the goals of the Paris Agreement. These estimates often differ in headline numbers, leading to confusion about whether global ambition is improving, stagnating or reversing.

At the same time, the focus of national commitments is shifting from 2030 targets toward 2035 NDCs and LT-LEDS. These longer-dated commitments to mid-century net-zero goals are key, but their role in shaping actual policy, investment and emissions trajectories has been contested. Until now, it was not clear whether they function primarily as aspirational signals or as credible constraints on future emissions.

Multiple global assessments continue to publish projections of future warming based on different interpretations of national policies and targets. These assessments vary in their treatment of current policies, near-term pledges, long-term targets and implementation risks. Their estimates of global warming by 2100 could be seen as alternative views of the future. Understanding the sources of these differences and whether they point to genuine disagreement or to different scenarios and methodological choices is important.

The US withdrawal further complicates this landscape. It remains unclear whether the policies now in place will shape emissions trends both in the near term and in the decades beyond 2035, or whether the US will revert in future and achieve net-zero around mid-century.

This briefing examines these issues by reassessing global warming outcomes based on the full set of 2035 NDCs and long-term strategies in force as at 27 January 2026. It situates these results within the range of projections published by major international assessments, and explores how differences in the scenarios assessed, assumptions and modelling choices shape reported temperature outcomes. In doing so, it aims to clarify what can and cannot be inferred from headline temperature numbers, and to set the stage for a more informed discussion about the policy and investment implications of medium- and long-term climate targets.

2. Implications of 2035 NDCs

Emissions trajectories are broadly linear from 2030 to long-term targets

Global greenhouse gas emissions are now projected to peak within this decade given countries' targets and actions.[1] This is a consistent finding and a shift compared to assessments from the early 2020s, which still projected continued emissions growth to 2035 and beyond under the policies implemented at that time.[2] It is due to the rapid deployment of renewable energy, declining fossil fuel demand in several regions, and improvements in energy efficiency.[3] Although ambition to 2030 has not increased, the emissions outlook to 2035 has become more clearly downward-sloping given the targets submitted in the past year.

Taken together, 2035 NDCs are broadly aligned with a linear path from 2030 NDCs towards countries' long-term net-zero goals. While ambition varies widely across countries, the global aggregate trajectory implied by 2035 targets is generally consistent with a transition towards net-zero targets in the second half of the century.

The primary driver of projected warming across all scenarios remains CO_2 emissions from fossil fuel combustion and industrial processes. Net emissions from land use, land-use change and forestry, and non-CO_2 gases, such as methane, also influence peak warming and near-term temperature outcomes.[4] However, reductions in these do not substitute for deep and sustained reductions in fossil CO_2 emissions over the course of the century.

[1] UNEP (2025). *Emissions Gap Report 2025: Off Target*. UNEP; International Energy Agency. (2025). *World Energy Outlook 2025*. IEA.; Climate Resource. (2025). *Pre-COP30: How are temperatures tracking on the latest climate targets?* Climate Resource.
[2] IPCC (2023). *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (H. Lee & J. Romero, Eds.). IPCC
[3] IEA (2025). *World Energy Outlook 2025*. IEA.
[4] Climate Resource. (2025). *Australian methane targets consistent with the Paris Agreement temperature goal - Insights from integrated assessment models.* Climate Resource.

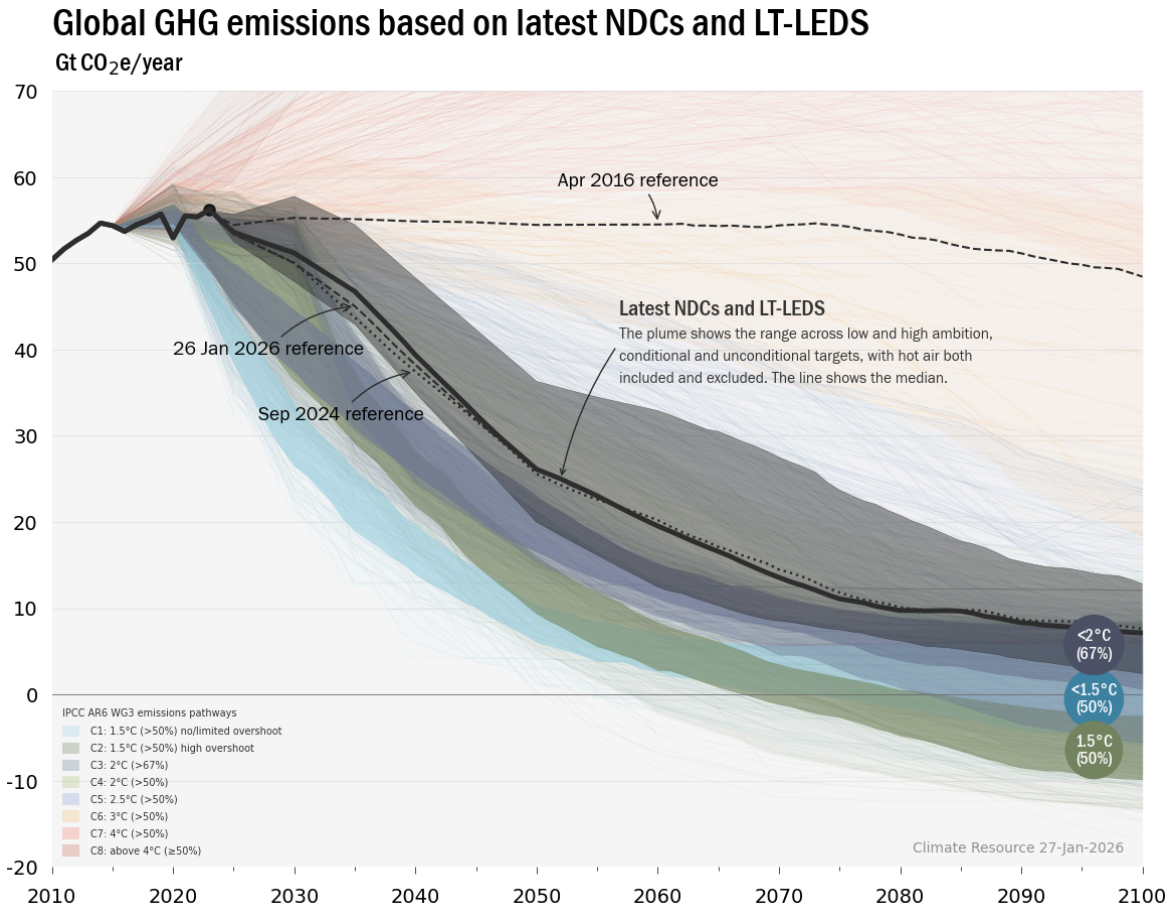


Figure 1: Global emissions pathways implied by NDCs + LT-LEDS

Figure 1 shows global emissions pathways implied by countries' 2035 NDCs and LT-LEDS as of 27 January 2026. The grey plume represents the full range of emissions outcomes implied by these commitments, with the upper and lower bounds reflecting countries' higher and lower targets, which in some cases correspond to unconditional targets and targets conditional on international support.

The black dotted line shows the emissions pathway prior to the submission of most 2035 NDCs. For modelling purposes, this pathway assumed a linear interpolation between countries' 2030 targets and their LT-LEDS. The submission of the majority of 2035 NDCs provides additional information on countries' intended post-2030 trajectories. The resulting updated trajectory is shown by the black dashed line.

The close alignment between the dotted and dashed lines indicates that, in aggregate, the 2035 NDCs largely reaffirm countries' intended trajectories toward net-zero emissions in the middle of the century, rather than representing a departure from them.

The solid black line reflects the exclusion of the US 2030 and 2035 NDCs following its withdrawal from the Paris Agreement, effective 27 January 2026 (but maintains the US net zero target). This shifts the global emissions pathway away from the simple linear interpolation between 2030 targets and long-term net-zero goals.

Temperature remains ‘just below 2°C’ with LT-LEDS

Warming estimates under NDCs combined with LT-LEDS consistently estimate that global temperatures will likely be ‘just below 2 °C’, even with the US withdrawal (Figure 2). Assumptions about post-2035 emissions declines play a decisive role in temperature projections. When long-term targets are taken into account, emissions continue declining beyond 2035 rather than plateauing. This reduces cumulative emissions over the century.

When analysis disregards long-term targets, warming projections based on NDCs alone become highly uncertain. Indicative estimates span a wide range (approximately 1.7 to 3.2 °C by 2100), depending primarily on how emissions are extrapolated beyond 2035. This widening uncertainty reflects the fact that NDCs are time-bound policy announcements. Without additional information about post-2035 ambition, models must make assumptions about whether emissions continue to decline, stabilise, or rebound. Small differences in these assumptions translate into large differences in cumulative emissions and long-term warming.

Figure 2 shows global temperature implied by NDCs and LT-LEDS. It depicts the full range of high and low ambition, that is the full grey plume from Figure 1, the best estimate of which (the 50th percentile) is 1.7 to 2.3°C by 2100, if we assume that the rate of US emissions reductions are slower to 2035, but that it reaches net-zero by 2050. Projected warming is 1.7 to 2.0°C, if countries all meet the more ambitious ends of their target ranges. If instead, US emissions trends after 2035 continue to reflect current policies and do not trend towards net-zero by mid-century, the best estimate projected 2100 temperature across the full range is 1.8 to 2.5°C.

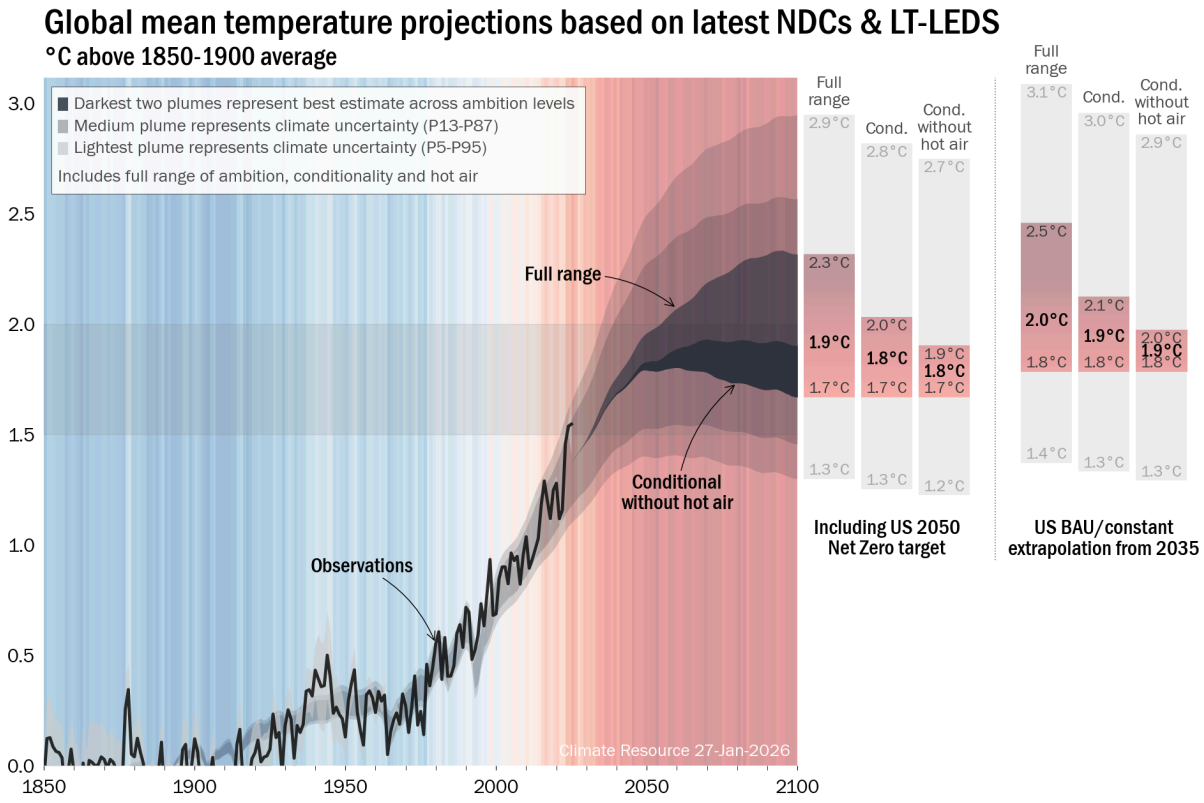


Figure 2: Global 2100 temperature implied by NDCs + LT-LEDS in two cases. The two cases use projections based on US current policies to 2035, and then (1) assume US emissions trend to net-zero from 2035 to mid-century (three bars on the left) and (2) assume the US does not follow a net-zero pathway, instead using a BAU and constant extrapolation range from 2035 to 2060, followed by an equal-quantile walk from 2060 to 2100.

The opportunity to limit warming to 1.5 °C (without overshoot) depends on what the world achieves by 2030. Based on 2030 NDCs, that opportunity has now likely passed, unless we reduce emissions significantly faster than required to meet those 2030 targets. While 2035 targets improve the medium-term outlook, they cannot fully compensate for insufficient reductions in this decade. As a result, even optimistic interpretations of NDCs and LT-LEDS converge around warming outcomes close to 2 °C rather than 1.5 °C. However, it is still possible to return to 1.5 °C in 2100 after overshooting it this century. The challenge now is twofold: to close the remaining target gap so that any overshoot of 1.5 °C is short and shallow, and to close the implementation gap by delivering the policies and actions required to realise those targets.

The gap between current 'just below 2 °C' projections and pathways consistent with '1.5 °C with a short and shallow overshoot' defines the global mitigation challenge, requiring both enhanced and earlier targets and the policies needed to implement them.

3. How big actors move the needle

Rapid emissions reductions from all countries will determine whether limiting warming to 1.5°C with a short and shallow overshoot remains feasible, but five jurisdictions are key. Together they account for a majority of global greenhouse gas emissions today and are projected to retain a dominant share through mid-century. These are China, the US, India, the European Union, and Russia. Assumptions about these jurisdictions' near- and medium-term emissions trajectories are important factors in global temperature projections. In 2030, the top five emitters are projected to account for almost 60% of global emissions, with China alone responsible for around a third, followed by India and the US (each likely around a 10%), the EU, and Russia (each around 4%).[5]

Among these jurisdictions, the US and India play distinct but critical roles in shaping global projections. For the US, uncertainty arises from the withdrawal from the Paris Agreement and the resulting ambiguity about the medium-term emissions trajectory. For India, uncertainty arises because it is yet to submit a 2035 NDC, leaving a range of plausible medium-term emissions pathways consistent with its existing commitments and long-term net-zero target.

This section explores how assumptions for these two countries affect global emissions and temperature outcomes. It does not seek to predict political developments or policy choices. Rather, it examines how different, internally consistent modelling assumptions translate into different global trajectories, highlighting where the sensitivity in aggregate results lies.

Future warming projections are of course also affected by how stated NDCs are implemented. China has submitted a 2035 NDC that provides an explicit, economy-wide emissions signal, including a shift from carbon-intensity targets to an absolute emissions target and a large expansion of wind and solar capacity. Uncertainty in the quantification remains particularly around the definition of peak emissions, the scope of the 2060 target, and the implications of rising per-capita emissions. This uncertainty is captured within our low and high assumptions applied in our analysis rather than stemming from the absence of a stated NDC.

[5] Climate Resource analysis.

United States: post-withdrawal emissions trajectories

Although the withdrawal from the Paris Agreement removes the legal standing of the US 2035 NDC, it does not eliminate the influence of existing federal legislation, sub-national action, or market-driven emissions reductions. Recent analyses from the Princeton REPEAT Project, the Rhodium Group, and Climate Action Tracker (CAT) suggest that US emissions are likely to continue declining through the 2030s under existing legislation, albeit at a slower pace than implied by the withdrawn NDC (Figure 3).[6] Additional analyses of plausible US emissions trajectories are likely forthcoming, for example from the University of Maryland; however, for the purposes of this assessment, we consider a bounded range spanning:

- **a lower-ambition case**, in which emissions fall by approximately **26% below 2005 levels** by 2035, reflecting conservative assumptions about policy durability and deployment rates.
- **a higher-ambition case**, in which emissions fall by approximately **35% below 2005 levels** by 2035, reflecting continued momentum under existing federal and state-level policies

CAT has also quantified a scenario in which recent trends observed in 2022–2023 continue, yielding emissions reductions of up to 46 % below 2005 levels by 2035. This outcome implicitly assumes sustained momentum and policy durability.[7]

We also explore emissions pathways beyond 2035 as described above. The range modelled spans US emissions beyond 2035 continuing to reflect current policies, or alternatively, trending towards net-zero by mid century. When these alternative US pathways are incorporated into global emissions projections, the resulting impact on end-of-century warming is shifted by around 0.1 to 0.2°C relative to a case in which the US NDCs and LT-LEDS were fully implemented.

The UNEP Emissions Gap Report 2025 adopts a dual approach to reflect both the US' submitted 2035 NDC and its announced withdrawal from the Paris Agreement. In that report's main analysis, the Biden-era 2035 NDC is included in the 'unconditional NDC' scenario but UNEP notes that this inclusion is purely technical because the NDC remains formally active until the withdrawal takes effect in January 2026.[8]

To account for the withdrawal, the report presents alternative scenarios excluding the US NDC, showing an increase of roughly 2 $GtCO_2e$ in the 2030 and 2035 emissions gaps, the loss of about 0.1°C of temperature benefit from the latest round of global NDCs, and the exclusion of the US net-zero target from its 'optimistic' scenario. UNEP EGR 2025 also revises its US current-policies projections upward by about 1 $GtCO_2e$ for 2030 to reflect recent domestic policy reversals, and includes a disclaimer (requested by the US State Department) stating that the US does not support the Emissions Gap Report and has formally notified its withdrawal from the Paris Agreement.[9]

---

[6] Rhodium Group. (2025). *Taking Stock 2025: US Energy and Emissions Outlook*. Rhodium Group; REPEAT Project. (2025). *Impacts of the One Big Beautiful Bill on the US Energy Transition – Summary Report*. Princeton University Zero Lab, REPEAT Project; Climate Action Tracker. (2025). *USA: Policies & Action*. Climate Analytics & NewClimate Institute.

[7] Climate Action Tracker (2025). *USA, Policies & Action* (updated 22 September 2025) https://climateactiontracker.org/countries/usa/policies-action/. After accounting for changes due to the *Big Beautiful Bill*, CAT assesses US emissions as reaching between 4.5-5.7 GtCO2e in 2035 (excluding LULUCF emissions). To compare emissions including LULUCF, we assume that US LULUCF emissions remain at current levels, rather than reduce further as was pledged under the Biden administration.

[8] UNEP (2025)

[9] UNEP (2025)

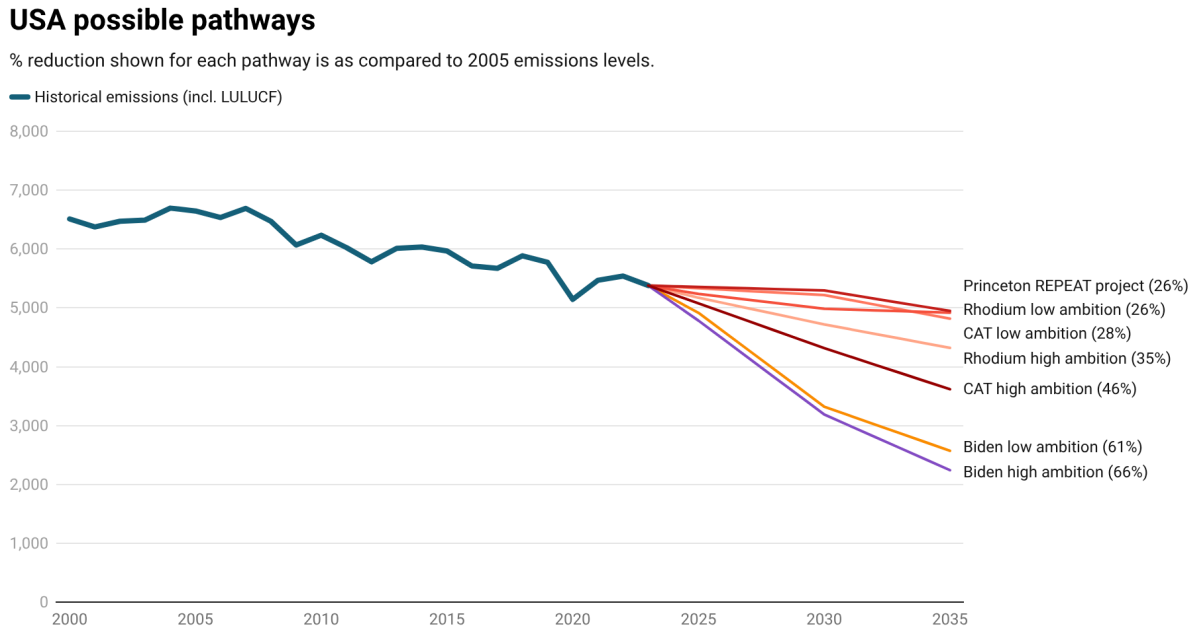


Figure 3: Possible US emissions pathways post-27 Jan 2026

India: a large unresolved medium-term uncertainty

India has not yet submitted a 2035 NDC, leaving a gap in medium-term global emissions projections. India's medium- to long-term emissions trajectory remains highly uncertain, including the timing and level of peak emissions. India has articulated a long-term net-zero CO_2 target for 2070, but it has not specified when emissions are expected to peak. As a result, any representation of India's post-2030 pathway necessarily relies on simplifying assumptions. To account for this uncertainty, we define two sensitivity cases for India's 2035 emissions:

- Lower-bound case: 4.5 Gt CO_2e by 2035, reflecting a moderate trajectory toward the long-term 2070 target.
- Upper-bound case: 5.5 Gt CO_2e by 2035, reflecting the less ambitious end of the 2030 target range embedded in India's 2030 NDC and a more conservative reduction path.

In Figure 4, this 4.5 to 5.5 Gt CO_2e range aligns with a continued growth from historical emissions towards the lower end of India's 2030 emissions intensity target range and beyond, and, from the upper end of the 2030 target range. These sensitivity cases allow us to explore plausible medium-term emissions outcomes for India while remaining consistent with India's previous NDC trajectories, publicly available projections and intensity-based targets. However, they do not cover the full range of plausible futures.

The impact of India adopting a higher or lower 2035 target on projected warming is presented in an extended table in Appendix 1, for a range from 4 to 6 GtCO_2-e. Our 2100 temperature assessments will be updated once India submits its 2035 NDC.

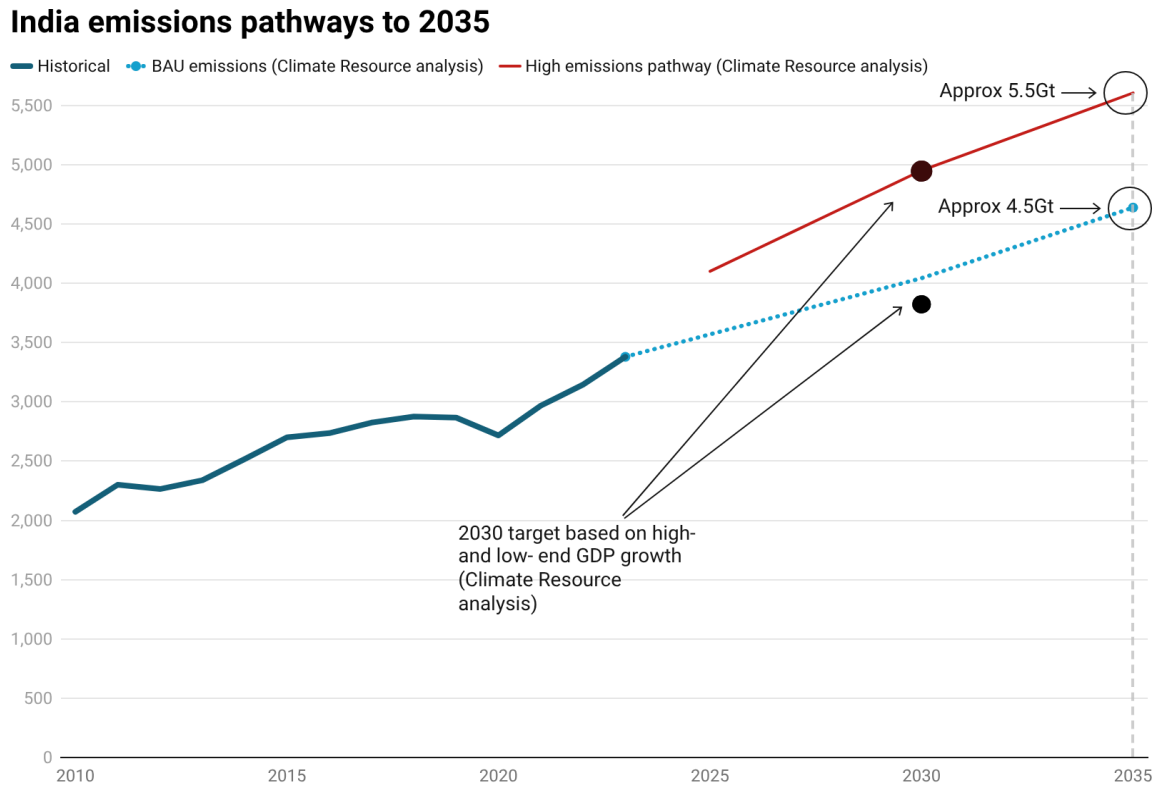


Figure 4: Possible Indian emissions pathways based on extrapolations from India's 2030 target extending from the high and low ends of GDP growth. GCAM's BAU emissions projection under current policies is also depicted for reference.

4. Comparison across major assessments

Key methodological divergences or uncertainties

Differences in projected warming outcomes across major assessments primarily reflect different scenarios, assumptions, reporting conventions, and methodological choices about how national policies and targets are interpreted. Assumptions about national policy implementation and long-term ambition lead to distinct warming outcomes. Three types of scenarios are often explored:

- **'Current policies'** global warming projections generally reflect existing policy measures without additional implementation of measures to achieve announced targets.
- **'NDCs only'** projections take 2030 and 2035 NDCs at face value and extrapolate beyond their stated time horizons, resulting in a wide range of warming outcomes due to uncertainty about post-2035 trajectories.
- **'NDCs combined with LT-LEDS'** projections generally assume all national targets are met on time and in full, with the range in warming outcomes reflecting factors such as conditions in targets, target ranges and ambiguity in the expression of some targets.

Major global assessments of warming in 2100 continue to produce broadly consistent results for comparable scenarios once differences in policy assumptions and modeling choices are explicitly accounted for (Table 1). The primary driver of variation across assessments is not the underlying physical science, but how scenarios treat current policies, 2030 and 2035 NDCs, and LT-LEDS or post-NDC emissions trajectories (Table 1).

These 'action versus target' lenses are a dominant source of divergence across temperature assessments, but there are other important ones. The methodological choices include:

- **Extrapolation approach:** whether emissions trends implied by 2035 targets are extended, flattened, or reversed. This is relevant even when long-term targets are included as around 20% of global emissions are not yet covered by an LT-LEDS.
- **Conditional targets:** how assessments treat NDC elements that are conditional on international support.
- **Hot air:** if targets are weaker than projected emissions under current policies, the difference is referred to as hot air - when hot air is excluded, levels consistent with current policy projections are used instead of targets.
- **Implementation risk:** whether targets are assumed to be fully met or partially realised.
- **Model choice:** differences in climate emulators or models.
- **2100 v peak warming:** whether temperatures are reported at end-of-century or at peak warming, and whether temporary overshoot is allowed, which can shift headline values.

Three consistent bands of 2100 warming across the literature

Across the recent assessments, the best estimates (and 50th percentile ranges) of 2100 warming projections above 1850-1900 levels are generally within three core bands (Table 1 and Figure 5):

- **Around 2.5 – 2.9°C (1.9 – 3.6°C)** under current policies.
- **Around 2.3 – 2.6°C (1.7 – 3.2°C)** when 2030 and 2035 NDCs are fully implemented but long-term trajectories are uncertain**.**
- **Around 1.8 – 2.2°C (1.5 – 2.5°C)** when NDCs and LT-LEDS are assumed to be met on time and in full, taking into account the impact of US emissions continuing to reflect current policies beyond 2035, or alternatively trending towards net-zero by mid century.

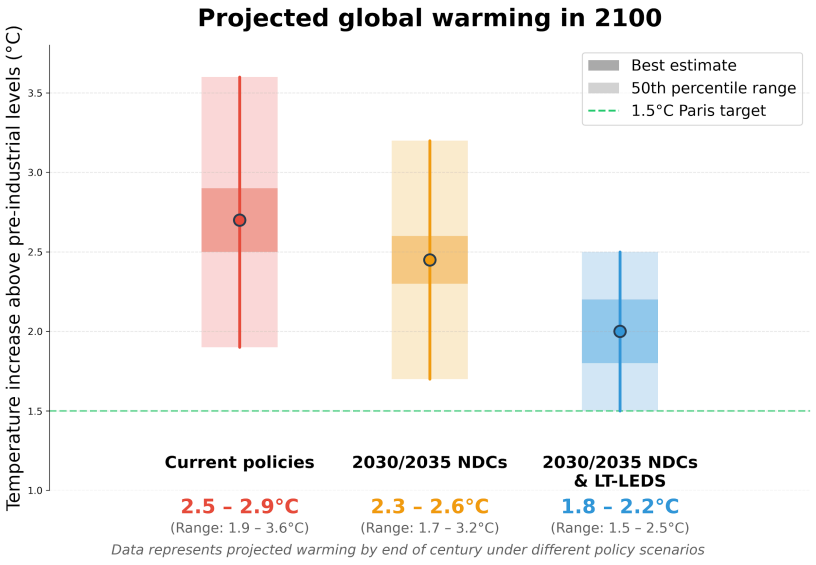
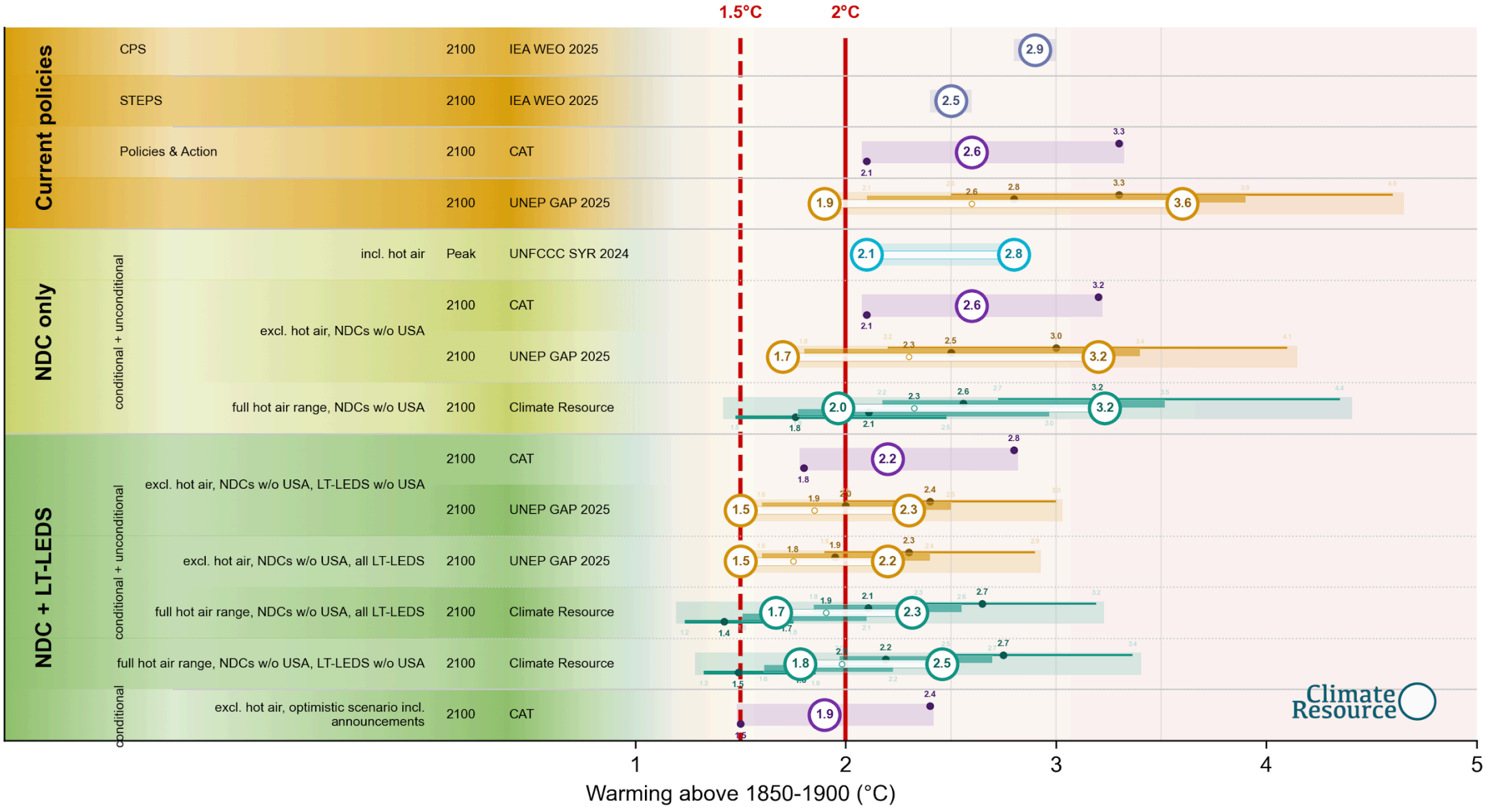


Figure 5: Three bands of 2100 warming projections in major assessments - best estimates and 50th percentile ranges from UNEP EGR 2005, CAT (2005)[10], and Climate Resource (this report). Note: The IEA WEO 2025 does not include an Announced Policies Scenario (APS) in contrast to previous reports. The APS is a future in which technology deployment reflects all national energy and climate targets (NDCs and LT-LEDS) being achieved in full and on time. The IEA has stated that it may provide an APS analysis when more 2035 targets have been submitted.

A comparison of the results from major recent assessments that inform the figure above is provided in Figure 6, and an extended more detailed breakdown is provided in Appendix 1.

[10] Climate Action Tracker (2025). *The CAT Thermometer: Global temperature outcomes for emissions pathways* (updated 13 November 2025)



IEA WEO 2025	Warming (10th/50th/90th percentile) - MIN/MID/MAX
CAT	Warming (10th/50th/90th percentile) - MIN/MID/MAX
UNEP GAP 2025	Warming (50th percentile) - MIN/MID/MAX; Warming (66th percentile) - MIN/MID/MAX; Warming (90th percentile) - MIN/MID/MAX
UNFCCC SYR 2024	Warming (10th/33rd/50th/66th/90th percentile) - MIN/MID/MAX
Climate Resource	Warming (10th/33rd/50th/66th/90th percentile) - MIN/MID/MAX

Figure 6: Recent 2100 warming projections - Note that, the UNEP EGR 2025 headline figure reports estimates of peak warming and a scenario with US NDC and LT-LEDS still in effect, whereas for consistency we have used the UNEP EGR 2025 assessments for 2100 warming and without US NDCs (included in the Appendices of the report).

Table 1 - Recent projections: long term average global mean temperature rise (2100 unless otherwise stated)

Source	Scenario	Warming (°C)	Likelihood	Approach: consideration of NDCs / LT-LEDS
UNFCCC NDC Synthesis Report (2024)	Full NDCs (median)	2.1 - 2.8 (peak)	50%	The assessment is based on Parties' official NDC submissions to the UNFCCC as at 9 September 2024 being met in full. It takes NDCs at face value, including 'hot air' and assesses the full range in ambition and conditionality in NDCs. LT-LEDS are not included. These are outside the formal mandate of the UNFCCC NDC Synthesis Report.
IEA WEO 2025	Current Policies (CPS)	2.9	50%	The CPS reflects an interpretation of energy policies already in legislation or regulation. It assumes no extension or strengthening of policies beyond their expiry, and adopts a cautious view of technology deployment.
	Stated Policies (STEPS)	2.5	50%	The STEPS adopts a broader interpretation of the policy landscape, incorporating formally announced policies and official strategy documents, even if not yet in law. NDCs and long term targets are not assumed to be met unless current policy trajectories are sufficient to deliver them.
UNEP Emissions Gap Report 2025	Current policies	2.8 (2.1 - 3.9) 2.6 (1.9 - 3.6)	66% 50%	The assessment is based on policies currently in place.
	NDCs	2.5 (1.8 - 3.4) 2.3 (1.7 - 3.2)	66% 50%	The assessment is based on NDCs submitted and announced up to 30 September 2025, excluding US NDCs. It assumes NDCs are met in full and the warming range reflects the full range of ambition and conditionality in NDCs, excluding hot air, and uncertainty in climate response, emissions accounting, and policy delivery.
	NDCs + LT-LEDS	2.0 (1.6 - 2.4) 1.8 (1.5 - 2.2)	66% 50%	The assessment is based on NDCs as at 30 September 2025 (excluding US NDCs) and all net-zero pledges, assessed as described above. The UNEP EGR 2025 explores a scenario without the US LT-LEDS estimating the 50% range is 1.5 - 2.3°C and the 66% range is 1.6 - 2.5°C.
Climate Action Tracker (2025) November Update	Current policies	2.6 (2.1 - 3.3)	50% (17 - 83%)	A policy-based assessment, using a bottom-up methodology.
	NDCs	2.6 (2.1 - 3.2)	50% (17 - 83%)	The assessment is based on NDCs submitted to the UNFCCC being met in full. It excludes hot-air, and the US NDC.
	NDCs + LT-LEDS	2.2 (1.8 - 2.8)	50% (17 - 83%)	The assessment is based on NDCs and LT-LEDS submitted being met in full. It excludes hot-air, and the US NDC and LT-LEDS. It excludes announcements and proposals not submitted to the UNFCCC - these are assessed in a CAT 'Optimistic Scenario that has a best estimate of 1.9 °C (1.5 - 2.4 °C).
Climate Resource (2026)	NDCs	2.3 (2.0 - 3.2)	50%	The assessment is based on NDCs submitted up to 23 January 2026, including the US withdrawal. It assumes targets are met in full and the warming range reflects the full range of ambition, conditionality and hot air in NDCs
	NDCs + LT-LEDS	1.9 (1.7 - 2.3)	50%	The assessment is based on NDCs and LT-LEDS submitted up to 23 January 2026 and including the US withdrawal. It assumes targets are met in full and the warming range reflects the full range of ambition, conditionality and hot air in NDCs. This range includes the US achieving net-zero by mid-century, consistent with its previous long-term target. If instead emissions post-2035 continue to reflect US current policies, the range is 1.8 to 2.5°C.

5. Synthesis — making sense of many numbers

The results presented in this briefing reinforce that warming estimates should not be interpreted as competing predictions, but as possible outcomes under different lenses. A best estimate (50th percentile) projection of around 2.8 °C under current policies does not contradict a best estimate projection of around 1.9 °C under full implementation of NDCs and long-term targets. Instead, the gap between them defines the scale of the current implementation challenge ahead, with the gap to 1.5 °C defining the target challenge ahead.

Taken together, the 2035 NDCs represent a meaningful signal of intent. In aggregate, they reaffirm countries' stated commitment to long-term net-zero goals, with the clear exception of the US. Even in the current geopolitical context, the 2035 targets submitted over the last year in aggregate place global emissions on a trajectory that broadly aligns with a linear decline from 2030, to 2035 and beyond towards net-zero targets. This results in best estimates of global warming outcomes around 1.8 to 2.2 °C, taking into account the US withdrawal.

This represents a step change from outcomes implied by current policies alone, which remain clustered around 2.5 to 2.9 °C. The difference between these pathways reflects future policy tightening, accelerated deployment of clean energy, and capital reallocation across the global economy. However, this improvement does not close the gap to '1.5 °C without overshoot'. The opportunity to limit warming to 1.5 °C throughout the century, without overshoot, has likely passed, unless emissions fall faster than is needed to meet 2030 targets. However, returning warming to 1.5°C by 2100 after overshoot remains technically feasible, provided existing targets are met in full, and ambition and implementation accelerate materially.

The impact of the US withdrawal from the Paris Agreement remains hard to assess. Excluding the US 2035 NDC is projected to shift global emissions upward in the medium term. The impact on warming depends largely on whether US emissions continue to reflect current policies, or after some delay, trend to net-zero by mid century. If US emissions continue to reflect current policies, it typically increases projected end-of-century warming by around 0.1 to 0.2 °C.

For policy, planning and investment, these findings have three key implications:

1. **Scenarios delivering 1.8 to 2.2 °C are now the base case**. This reflects government targets, which will increasingly be embedded in regulatory frameworks, mitigation and adaptation planning, and the choices made by all actors.
2. **Targets shape future policy and markets move in advance of policy:** The gap between current policies and stated targets implies rapid and often non-linear policy change. As the world moves to deliver these near term commitments it will drive:
    - Faster deployment of clean energy and electrification.
    - Sharper declines in emissions-intensive activities.
    - Heightened transition risks for assets incompatible with post-2035 trajectories.
3. **Implementation risk cuts both ways:** While failure to implement targets would result in higher warming, successful implementation may imply faster-than-expected change. Investment strategies that rely on slow or partial delivery of climate targets face growing downside risk.

The analysis highlights both progress and urgency.

The 2035 NDCs matter because they operationalise long-term net-zero commitments and anchor expectations about post-2030 policy direction. Implementation is now the focus. Achieving existing targets requires scaled-up climate finance, stronger domestic policy frameworks, and delivery of

conditional NDC elements, particularly in developing economies. International cooperation remains critical, especially to:

- Unlock sectoral transitions in hard-to-abate industries.
- Address shared infrastructure and supply-chain bottlenecks.
- Support countries with conditional targets and limited fiscal space.

6. Conclusion

This briefing shows that major global assessments of warming are broadly consistent when differences in policy assumptions and modelling choices are made explicit. Progress in the climate outlook has been made, particularly through strengthened 2035 targets that reaffirm commitment to long-term net-zero goals. At the same time, the persistence of projected warming close to 2°C even when all existing targets are met underscores the consequences of delayed action, both the importance of implementation and continued ramping up of ambition.

The central message is not that the world is 'on track', nor that it has 'failed'. Rather, it is that policy choices made in the next few years will determine which of the already-defined pathways becomes reality. Understanding the assumptions behind warming estimates is therefore essential for credible policy design, investment planning, and risk management.

Appendix

For a comprehensive compilation of current 2100 and peak warming projections, see the graphs on the following pages.

Figure A1: Warming projections for 2100 under 'pre-Paris' reference scenarios (red), current policy estimates (orange), current NDCs with different conditionality and sensitivity settings (bright green) and NDCs in combination with long-term and net-zero targets (dark green). The representations of future warming uncertainties across the literature vary, with e.g. the UNEP GAP report citing headline numbers for the 66% percentile warming range, others stating median warming projections and likely ranges. The depiction shows different percentiles and their ranges (often due to different underlying scenario sensitivities) across various sources.

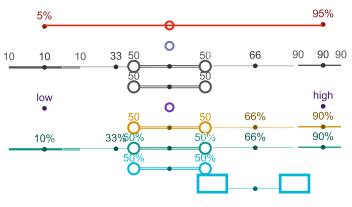
Figure A2: Same as Figure A1, but focussing on peak warming throughout the 21st century.

Before Paris Agreement		SSP5-8.5	2100	IPCC AR6 WG1
		SSP3-7.0	2100	IPCC AR6 WG1
Current policies		CPS	2100	IEA WEO 2025
		STEPS	2100	IEA WEO 2025
		RCo baseline	2100	Rhodium
		Slow evolution & cont. momentum	2100	McKinsey
		Policies & Action	2100	CAT
			2100	UNEP GAP 2025
NDC only	unconditional	incl. hot air, NDCs incl. USA	2100	Climate Resource
		incl. hot air, NDCs w/o USA	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 4 Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 4.5Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 5Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 5.5Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 6Gt	2100	Climate Resource
		excl. hot air, NDCs incl. USA	2100	UNEP GAP 2025
			2100	Climate Resource
		excl. hot air, NDCs w/o USA	2100	UNEP GAP 2025
			2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 4Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 4.5Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 5Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 5.5Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 6Gt	2100	Climate Resource
		incl. hot air	Peak	UNFCCC SYR 2024
		incl. hot air, NDCs incl. USA	2100	Climate Resource
		incl. hot air, NDCs w/o USA	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 4Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 4.5Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 5Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 5.5Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 6Gt	2100	Climate Resource
	conditional + unconditional	excl. hot air	Peak	UNFCCC Belem 2025
			2100	CAT
		excl. hot air, NDCs w/o USA	2100	UNEP GAP 2025
			2100	Climate Resource
		excl. hot air, NDCs incl. USA	2100	UNEP GAP 2025
			2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 4Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 4.5Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 5Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 5.5Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 6Gt	2100	Climate Resource
		full hot air range, NDCs w/o USA	2100	Climate Resource
	conditional	incl. hot air, NDCs incl. USA	2100	Climate Resource
		incl. hot air, NDCs w/o USA	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 4 Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 4.5Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 5Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 5.5Gt	2100	Climate Resource
		incl. hot air, NDCs w/o USA, India 6Gt	2100	Climate Resource
		excl. hot air, NDCs incl. USA	2100	UNEP GAP 2025
			2100	Climate Resource
		excl. hot air, NDCs w/o USA	2100	UNEP GAP 2025
			2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 4Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 4.5Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 5Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 5.5Gt	2100	Climate Resource
		excl. hot air, NDCs w/o USA, India 6Gt	2100	Climate Resource
NDC + LT-LEDS	unconditional	incl. hot air, NDCs incl. USA, all LT-LEDS	2100	Climate Resource
		excl. hot air, NDCs incl. USA, all LT-LEDS	2100	UNEP GAP 2025
			2100	Climate Resource
		excl. hot air, NDCs w/o USA, all LT-LEDS	2100	UNEP GAP 2025
		excl. hot air, NDCs w/o USA, LT-LEDS w/o USA	2100	UNEP GAP 2025
	conditional + unconditional	incl. hot air, NDCs incl. USA, all LT-LEDS	2100	Climate Resource
		excl. hot air, NDCs w/o USA, LT-LEDS w/o USA	2100	CAT
			2100	UNEP GAP 2025
		excl. hot air, NDCs w/o USA, all LT-LEDS	2100	UNEP GAP 2025
		excl. hot air, NDCs incl. USA, all LT-LEDS	2100	Climate Resource
		full hot air range, NDCs w/o USA, all LT-LEDS	2100	Climate Resource
		full hot air range, NDCs w/o USA, LT-LEDS w/o USA	2100	Climate Resource
		incl. hot air, NDCs incl. USA, all LT-LEDS	2100	Climate Resource
		excl. hot air, optimistic scenario incl. announcements	2100	CAT
	conditional	excl. hot air, NDCs incl. USA, all LT-LEDS	2100	UNEP GAP 2025
			2100	Climate Resource
		excl. hot air, NDCs w/o USA, all LT-LEDS	2100	UNEP GAP 2025
		excl. hot air, NDCs w/o USA, LT-LEDS w/o USA	2100	UNEP GAP 2025

1.5°C 2°C

1 2 3 4 5

Warming above 1850-1900 (°C)



IPCC AR6 WG1	Warming (10th/50th/90th percentile) - MIN/MID/MAX
IEA WEO 2025	Warming (10th/50th/90th percentile) - MIN/MID/MAX
Rhodium	Warming (10th/33rd/50th/66th/90th percentile) - MIN/MID/MAX
McKinsey	Warming (10th/33rd/50th/66th/90th percentile) - MIN/MID/MAX
CAT	Warming (10th/50th/90th percentile) - MIN/MID/MAX
UNEP GAP 2025	Warming (50th percentile) - MIN/MID/MAX; Warming (66th percentile) - MIN/MID/MAX; Warming (90th percentile) - MIN/MID/MAX
Climate Resource	Warming (10th/33rd/50th/66th/90th percentile) - MIN/MID/MAX
UNFCCC SYR 2024	Warming (10th/33rd/50th/66th/90th percentile) - MIN/MID/MAX
UNFCCC Belem 2025	Warming (10th/33rd/50th/66th/90th percentile) - MIN/MID/MAX

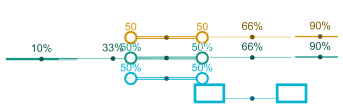
	Current policies		Peak	UNEP GAP 2025
		incl. hot air, NDCs incl. USA	Peak	Climate Resource
		incl. hot air, NDCs w/o USA	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 4Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 4.5Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 5Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 5.5Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 6Gt	Peak	Climate Resource
	unconditional	excl. hot air, NDCs incl. USA	Peak	UNEP GAP 2025
			Peak	Climate Resource
		excl. hot air, NDCs w/o USA	Peak	UNEP GAP 2025
			Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 4Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 4.5Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 5Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 5.5Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 6Gt	Peak	Climate Resource
		incl. hot air	Peak	UNFCCC SYR 2024
		incl. hot air, NDCs incl. USA	Peak	Climate Resource
		incl. hot air, NDCs w/o USA	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 4 Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 4.5Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 5Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 5.5Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 6Gt	Peak	Climate Resource
NDC only	conditional + unconditional	excl. hot air	Peak	UNFCCC Belem 2025
		excl. hot air, NDCs w/o USA	Peak	UNEP GAP 2025
			Peak	Climate Resource
		excl. hot air, NDCs incl. USA	Peak	UNEP GAP 2025
			Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 4Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 4.5Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 5Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 5.5Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 6Gt	Peak	Climate Resource
		full hot air range, NDCs w/o USA	Peak	Climate Resource
	conditional	incl. hot air, NDCs incl. USA	Peak	Climate Resource
		incl. hot air, NDCs w/o USA	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 4 Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 4.5Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 5Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 5.5Gt	Peak	Climate Resource
		incl. hot air, NDCs w/o USA, India 6Gt	Peak	Climate Resource
		excl. hot air, NDCs incl. USA	Peak	UNEP GAP 2025
			Peak	Climate Resource
		excl. hot air, NDCs w/o USA	Peak	UNEP GAP 2025
			Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 4Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 4.5Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 5Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 5.5Gt	Peak	Climate Resource
		excl. hot air, NDCs w/o USA, India 6Gt	Peak	Climate Resource
		incl. hot air, NDCs incl. USA, all LT-LEDS	Peak	Climate Resource
NDC + LT-LEDS	unconditional	excl. hot air, NDCs incl. USA, all LT-LEDS	Peak	UNEP GAP 2025
			Peak	Climate Resource
		excl. hot air, NDCs w/o USA, all LT-LEDS	Peak	UNEP GAP 2025
		excl. hot air, NDCs w/o USA, LT-LEDS w/o USA	Peak	UNEP GAP 2025
	conditional + unconditional	incl. hot air, NDCs incl. USA, all LT-LEDS	Peak	Climate Resource
		excl. hot air, NDCs incl. USA, all LT-LEDS	Peak	UNEP GAP 2025
			Peak	Climate Resource
		full hot air range, NDCs w/o USA, all LT-LEDS	Peak	Climate Resource
		full hot air range, NDCs w/o USA, LT-LEDS w/o USA	Peak	Climate Resource
	conditional	incl. hot air, NDCs incl. USA, all LT-LEDS	Peak	Climate Resource
		excl. hot air, NDCs incl. USA, all LT-LEDS	Peak	UNEP GAP 2025
			Peak	Climate Resource
		excl. hot air, NDCs w/o USA, all LT-LEDS	Peak	UNEP GAP 2025
		excl. hot air, NDCs w/o USA, LT-LEDS w/o USA	Peak	UNEP GAP 2025

1.5°C 2°C

1 2 3 4 5

Warming above 1850-1900 (°C)

Climate Resource



UNEP GAP 2025 Warming (50th percentile) - MIN/MID/MAX; Warming (66th percentile) - MIN/MID/MAX; Warming (90th percentile) - MIN/MID/MAX

Climate Resource Warming (10th/33rd/50th/66th/90th percentile) - MIN/MID/MAX

UNFCCC SYR 2024 Warming (10th/33rd/50th/66th/90th percentile) - MIN/MID/MAX

UNFCCC Belem 2025 Warming (10th/33rd/50th/66th/90th percentile) - MIN/MID/MAX