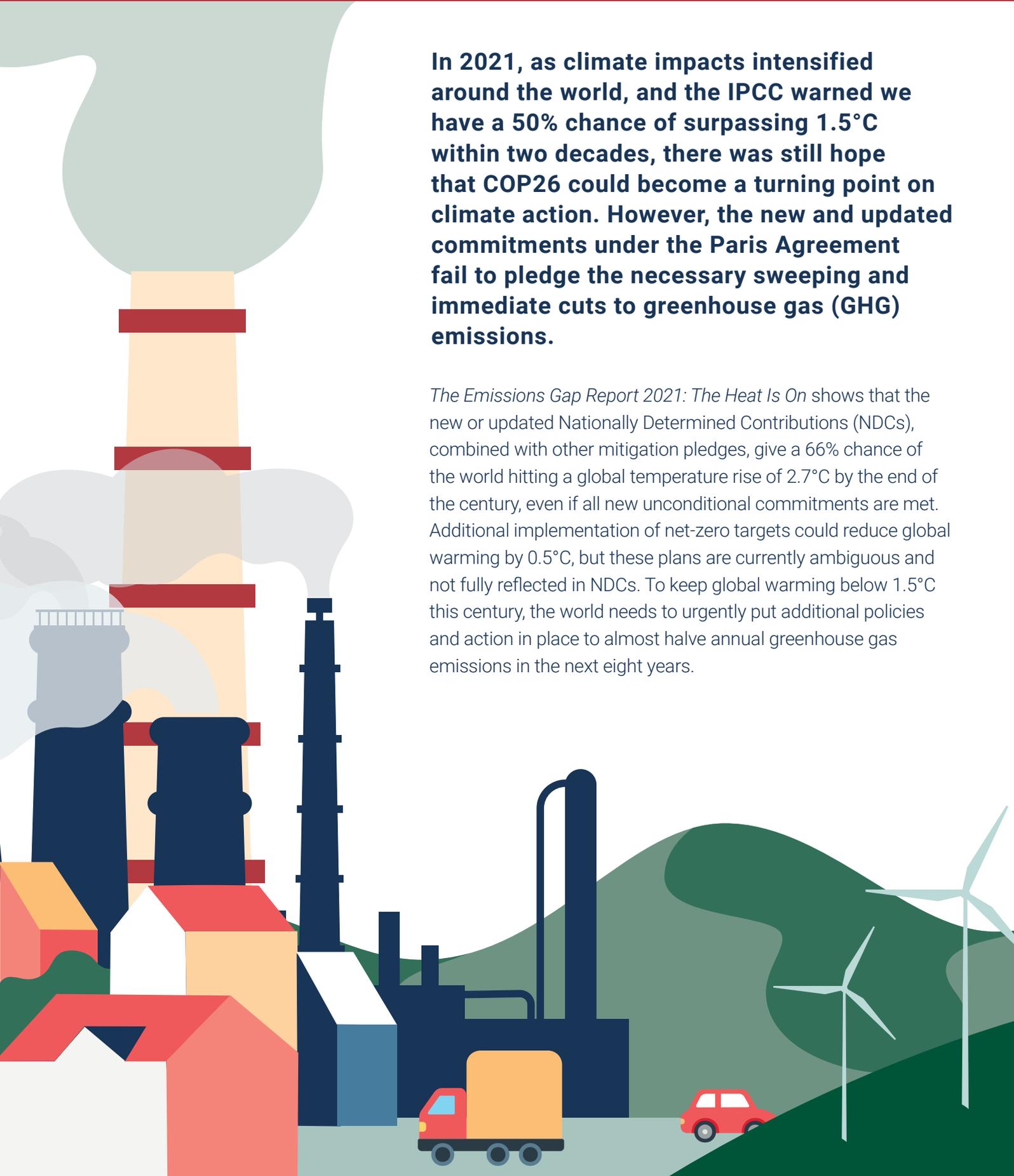


The Heat Is On

Emissions Gap Report 2021

In 2021, as climate impacts intensified around the world, and the IPCC warned we have a 50% chance of surpassing 1.5°C within two decades, there was still hope that COP26 could become a turning point on climate action. However, the new and updated commitments under the Paris Agreement fail to pledge the necessary sweeping and immediate cuts to greenhouse gas (GHG) emissions.

The Emissions Gap Report 2021: The Heat Is On shows that the new or updated Nationally Determined Contributions (NDCs), combined with other mitigation pledges, give a 66% chance of the world hitting a global temperature rise of 2.7°C by the end of the century, even if all new unconditional commitments are met. Additional implementation of net-zero targets could reduce global warming by 0.5°C, but these plans are currently ambiguous and not fully reflected in NDCs. To keep global warming below 1.5°C this century, the world needs to urgently put additional policies and action in place to almost halve annual greenhouse gas emissions in the next eight years.



Updates to NDCs under the Paris Agreement follow the trajectory of insufficient promises, not yet delivered.

- New and updated NDCs, together with announced mitigation pledges for 2030, only slightly narrow the gap between where emissions should be in 2030 to meet the Paris Agreement goals and where pledges will bring them.
- These new commitments take 7.5% off predicted 2030 greenhouse gas emissions compared to the previous commitments. Reductions of 30% are needed to stay on the least-cost pathway for 2°C and 55% for 1.5°C.
- As of 30 September 2021, 120 countries, representing about 51% of greenhouse gas emissions, had communicated new or updated NDCs. In addition, three countries have announced some form of new climate action for 2030.
- Together, formally submitted and announced NDC updates are estimated to give a 66% chance of hitting global warming of about 2.7°C by the end of the century.
- To stand a chance of limiting global warming to 1.5°C, we have eight years to take an additional 28 gigatonnes of CO₂ equivalent (GtCO₂e) off annual emissions, over and above what is promised in the updated NDCs and other commitments – equivalent to almost halving current greenhouse gas emissions.
- For the 2°C target, the additional need is lower: a drop in annual emissions of 13 GtCO₂e by 2030.

The bad news comes against a background of post-pandemic emissions bounce-back and rising atmospheric concentrations of CO₂.

- The COVID-19 pandemic led to a drop in global CO₂ emissions of 5.4% in 2020. However, CO₂ and non-CO₂ emissions in 2021 are expected to rise again to a level only slightly lower than the record high in 2019.
- Atmospheric concentrations of all major greenhouse gases continued to rise in 2020. CO₂ concentrations are higher than at any time in the last two million years.

The opportunity for using COVID-19 fiscal rescue and recovery spending to stimulate the economy while fostering a low-carbon transformation has been missed in most countries so far.

- A small number of high-income economies account for the majority of green spending, with developing economies and emerging markets in danger of being left behind.
- Only 17-19% of total recovery investments to May 2021 are likely to reduce greenhouse gas emissions (USD 438 billion out of a total USD 2.28 trillion in recovery spending according to the Global Recovery Observatory).
- Of this spending, almost 90% is accounted for by six G20 members and one permanent guest.
- COVID-19 spending has been far lower in low-income economies (USD 60 per person) than advanced economies (USD 11,800 per person).

Zeroing in on net-zero could make a big difference, but current plans are vague and not included in NDCs.

- A total of 49 countries plus the EU have pledged a net-zero target. This covers over half of global domestic greenhouse gas emissions, over half of GDP and a third of the global population. Eleven targets are enshrined in law, covering 12% of global emissions.
- If implemented effectively, net-zero targets could reduce global warming by about 0.5°C relative to projections that only take into account unconditional NDCs and other commitments, thus coming closer to the upper range of the temperature goal of the Paris Agreement. However, many of national climate plans delay action until after 2030.
- Twelve G20 members have pledged a net-zero target, but they are still ambiguous. Out of nine G20 member plans assessed in the report, five are on a linear path to net zero.

Reduction of methane emissions from the fossil fuel, waste and agriculture sectors can contribute to closing the emissions gap and reduce warming in the short term.

- Methane emissions are the second largest contributor to global warming. The gas has a global warming potential over 80 times that of carbon dioxide over a 20-year horizon.
- Methane has a shorter lifetime in the atmosphere than carbon dioxide – only twelve years, compared to up to hundreds for CO₂ – so cuts to methane will limit temperature increase faster than cuts to carbon dioxide.
- Available no- or low-cost technical mitigation measures alone could reduce anthropogenic methane emissions by around 20% by 2030.
- Additional measures, such as switching from natural gas to renewables, dietary changes and food waste reduction could add 15% to the mitigation potential.

Carbon markets can deliver real emissions abatement and drive ambition, but only when rules are clearly defined, designed to ensure that transactions reflect actual reductions in emissions, and are supported by arrangements to track progress and provide transparency.

- Markets can provide an opportunity for countries, companies and other actors to achieve their emission reduction goals at lower costs and thereby create room to enhance their ambition in both the near- and long term.
- Global modelling studies estimate that if all NDCs were transformed into tradable emissions abatement, and all countries had economy wide targets, around 4-5 GtCO₂e could be traded per year in 2030.
- In addition to potentially lowering the cost of additional ambition everywhere, markets could lead to a shift in capital investment toward selling regions, and in this way affect local air quality, employment, sustainability metrics, and shift costs.