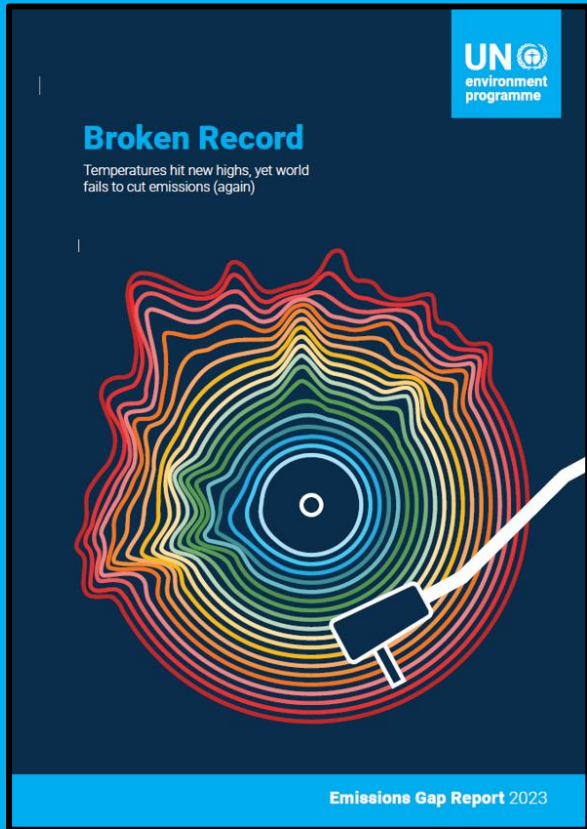


WHAT? Side Event on the Gap Reports in the margins of the 10th ASC of the CPR
WHEN? On Thursday 23 November, from 13.15 hr to 14.45 hr
WHERE? Conference Room 1, UN Compound, Gigiri, Nairobi, and Online Connection

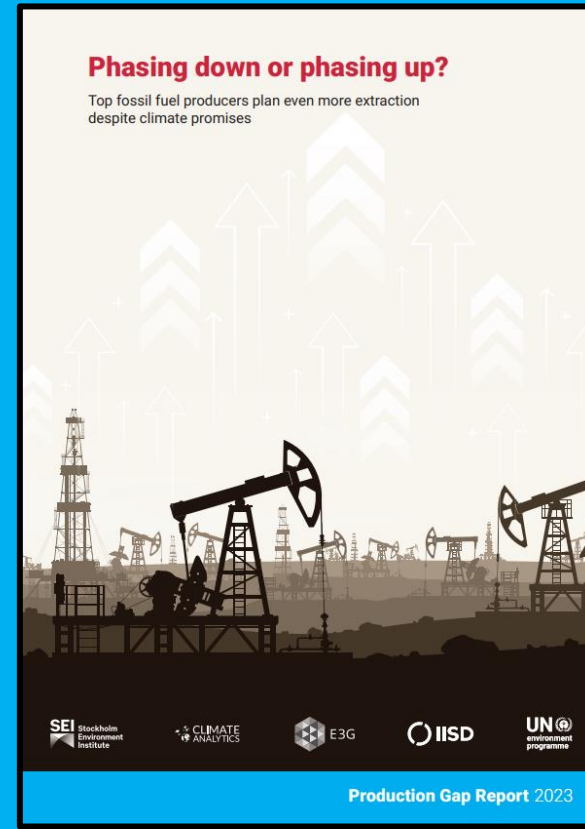
In partnership with



13:15-13:45 Emissions Gap Report



13:45-14:15 Adaptation Gap Report



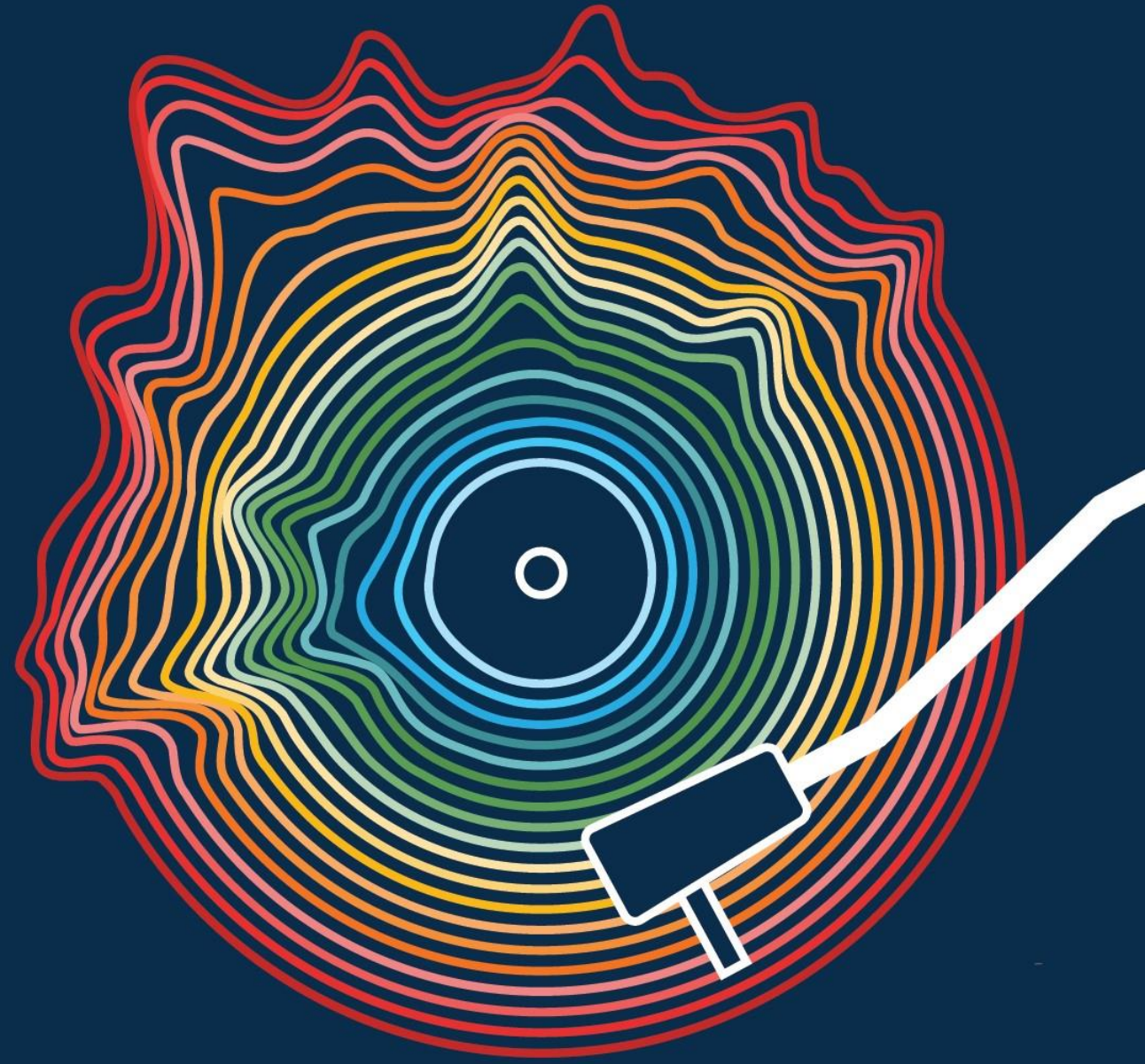
14:15-14:45 Production Gap Report



Emissions Gap Report 2023

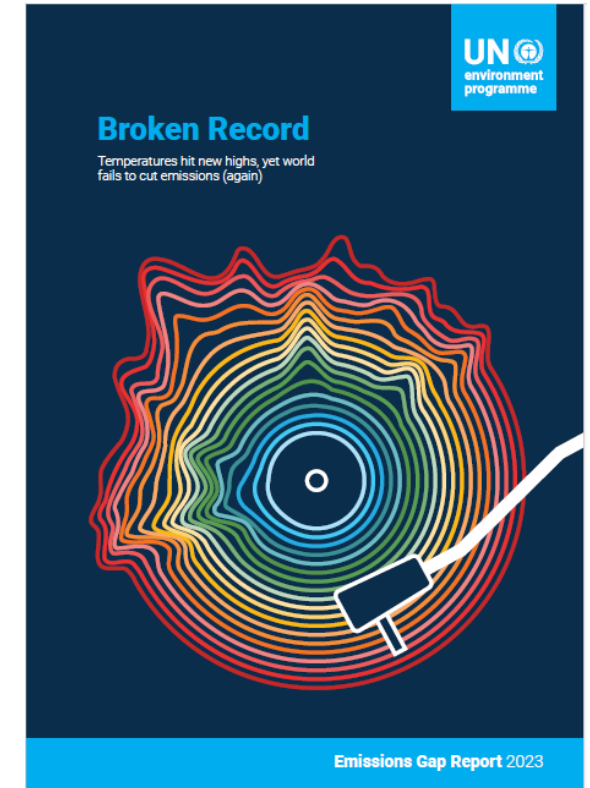
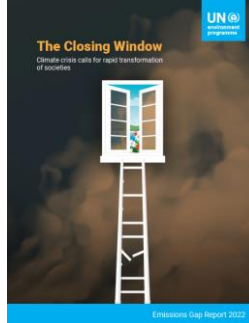
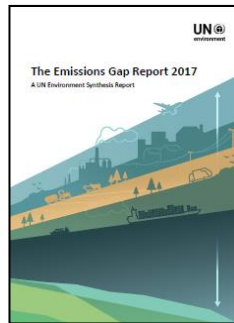
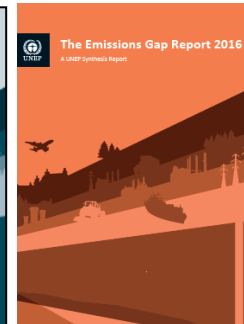
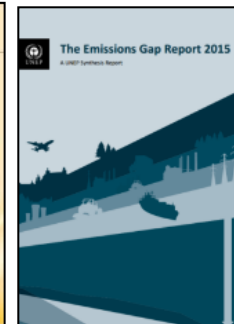
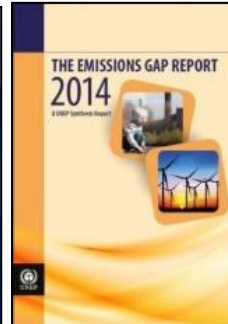
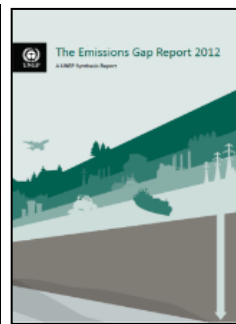
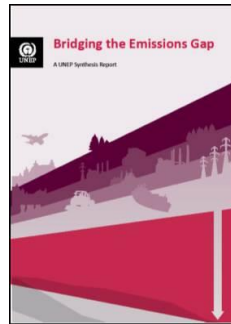
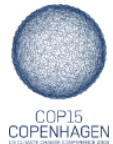
Broken Record

Temperatures hit new highs, yet world fails to cut emissions (again)



Emissions Gap Reports

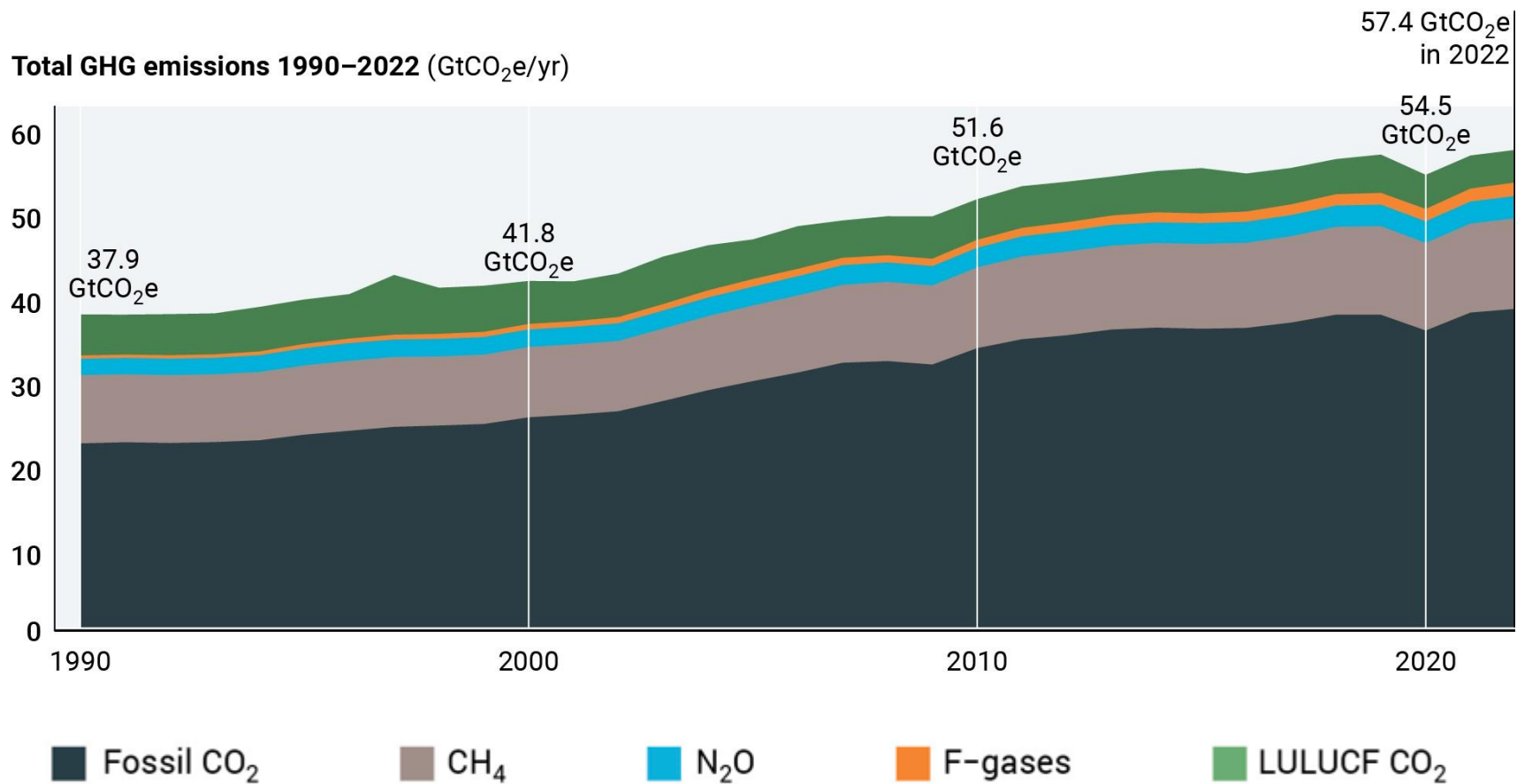
Annual science-based assessment reports since 2010



Key questions of the Emissions Gap Report 2023

- What are the key trends in global emissions?
- What progress has been made in ambition and action since COP 27 and since the Paris Agreement was adopted?
- What are the implications for the emissions gap in 2030 and for the next round of climate pledges with targets for 2035?
- What are the global warming implications?
- What does this imply for energy transitions in high-income countries and in low- and middle-income countries?
- What is the role and scope for carbon dioxide removal in achieving the Paris Agreement's temperature goal?

Total global greenhouse gas emissions set new record in 2022



- Global GHG emissions increased by 1.2% from 2021 to 2022
- All sectors apart from transport have fully rebounded from the COVID-19 induced drop in emissions and now exceed 2019 levels
- Emissions of methane, nitrous oxide and fluorinated gases increase rapidly

Negligible progress on nationally determined contributions since COP27

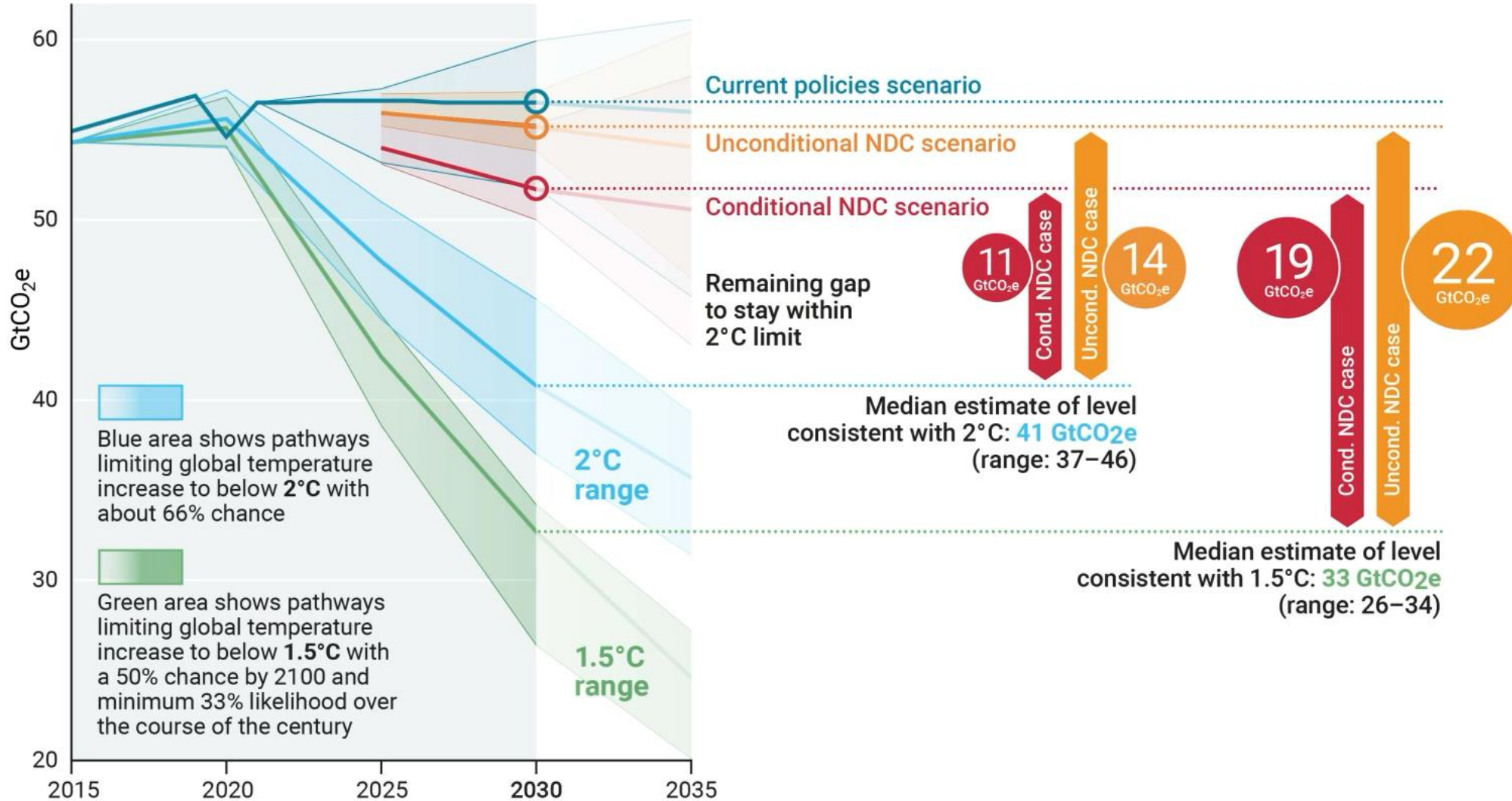
- Despite the call for countries to revisit and strengthen their 2030 targets, only 9 countries had submitted new or updated NDCs by 25 September 2023
- If fully implemented, they are expected to reduce global emissions by about 0.1 GtCO₂e annually by 2030

...but some progress since the Paris Agreement

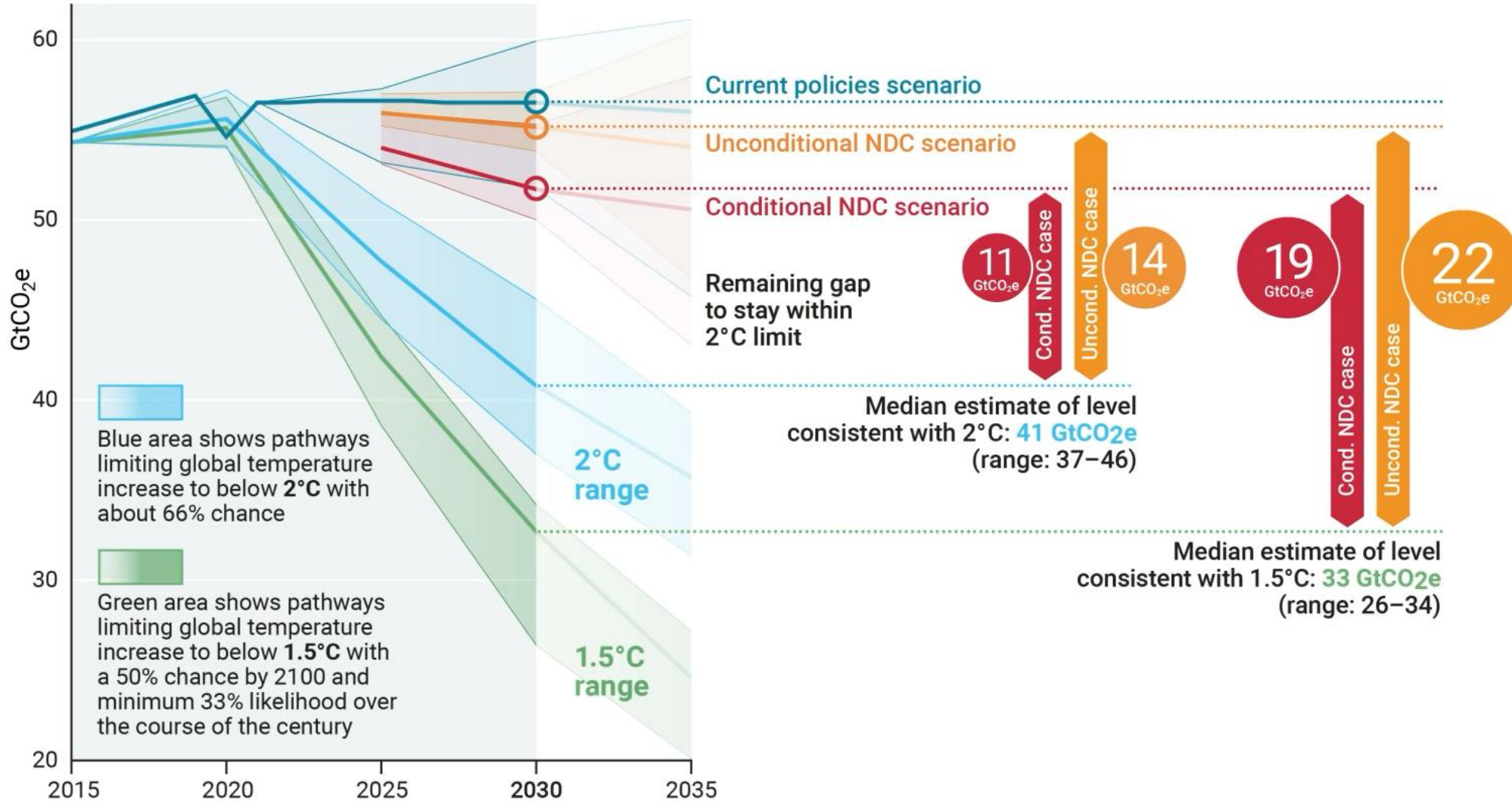
- Collectively and if fully implemented, all new and updated unconditional NDCs result in an annual reduction of global GHG emissions of about 5 GtCO₂e by 2030 relative to the initial NDCs
- More NDCs include GHG emissions targets, greater coverage of sectors and gases, more include unconditional elements



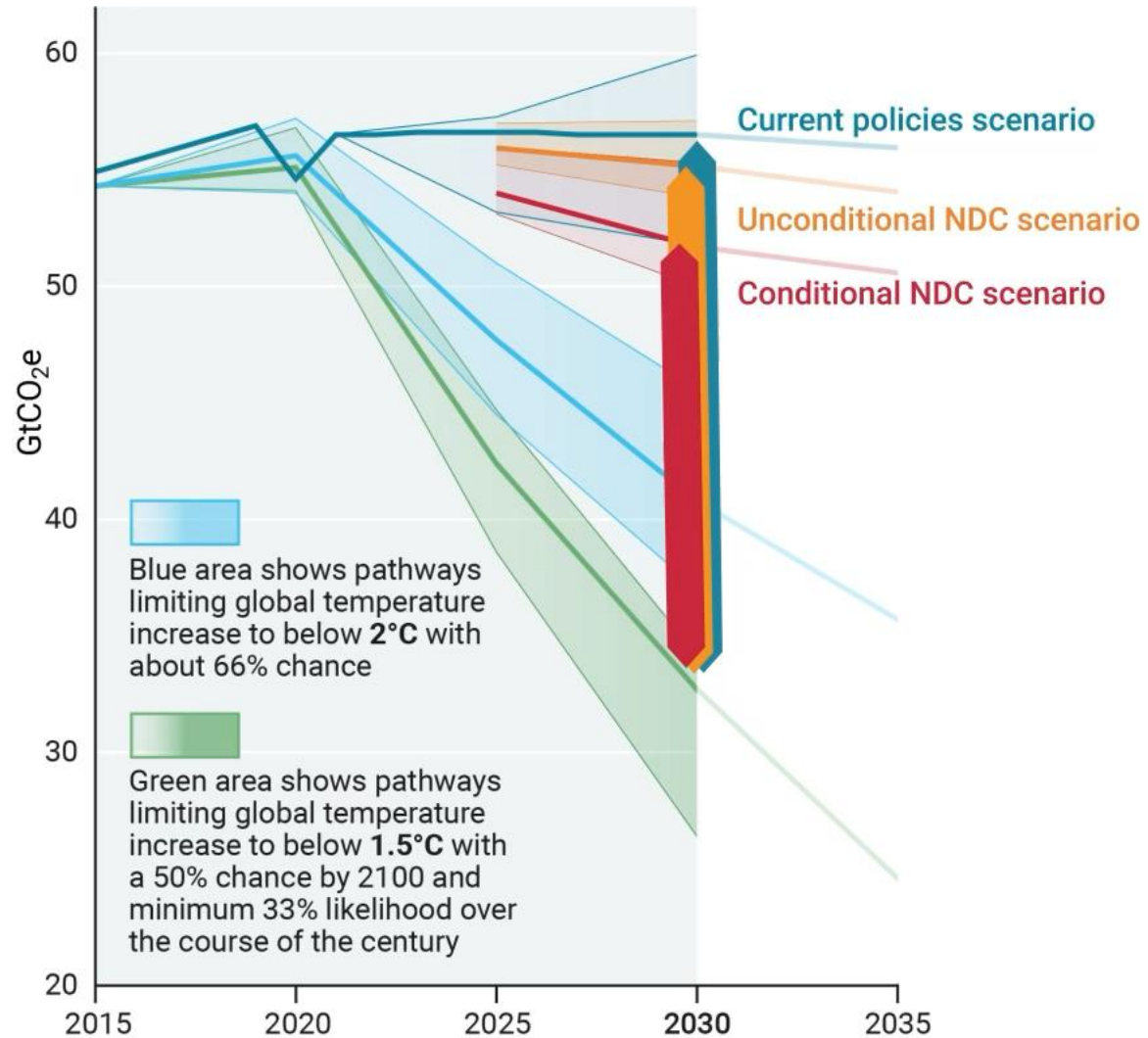
The emissions gap in 2030 remains high



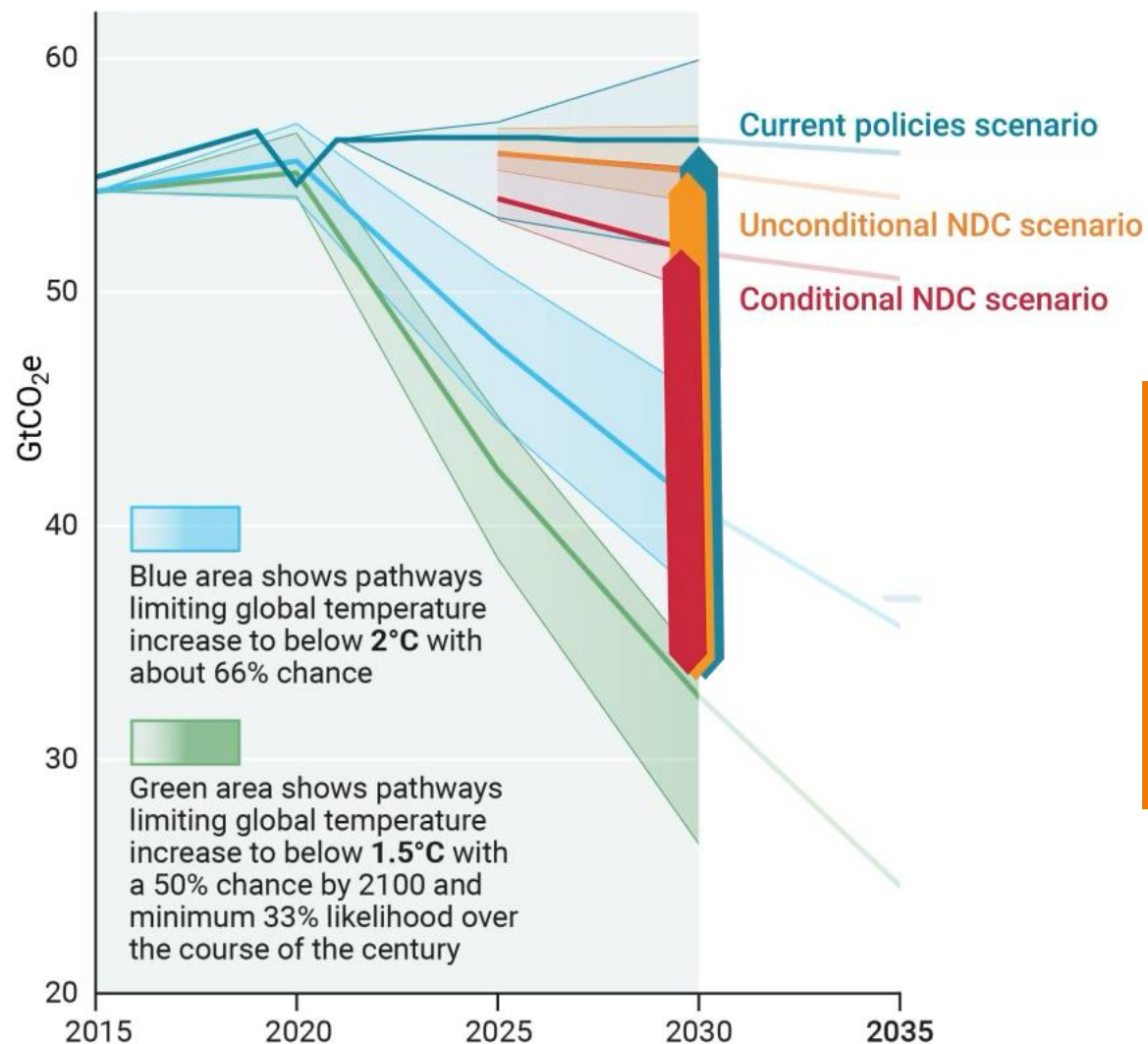
The emissions gap in 2030 remains high



The emissions gap in 2030 remains high



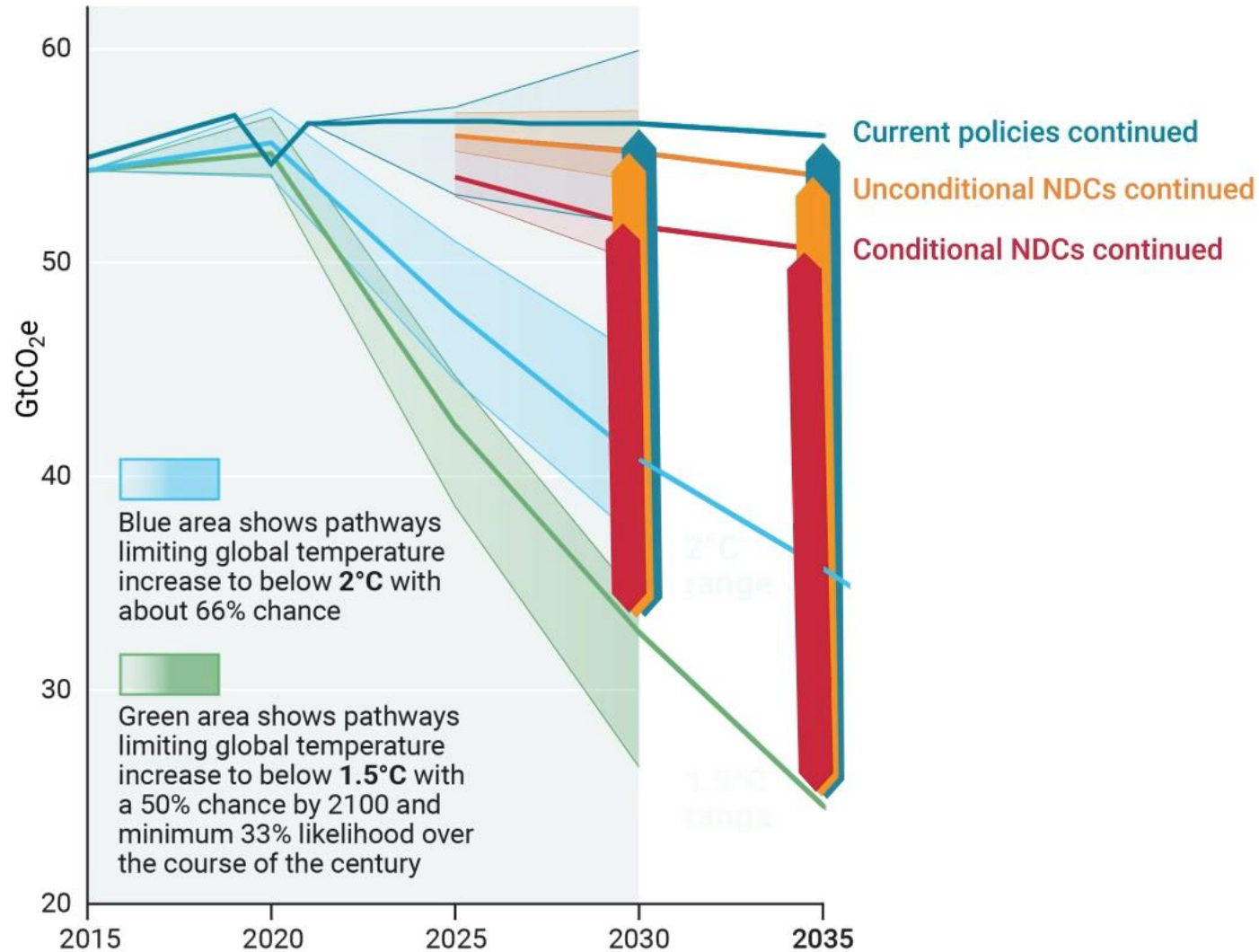
The emissions gap in 2035 will deepen without strengthened action and ambition



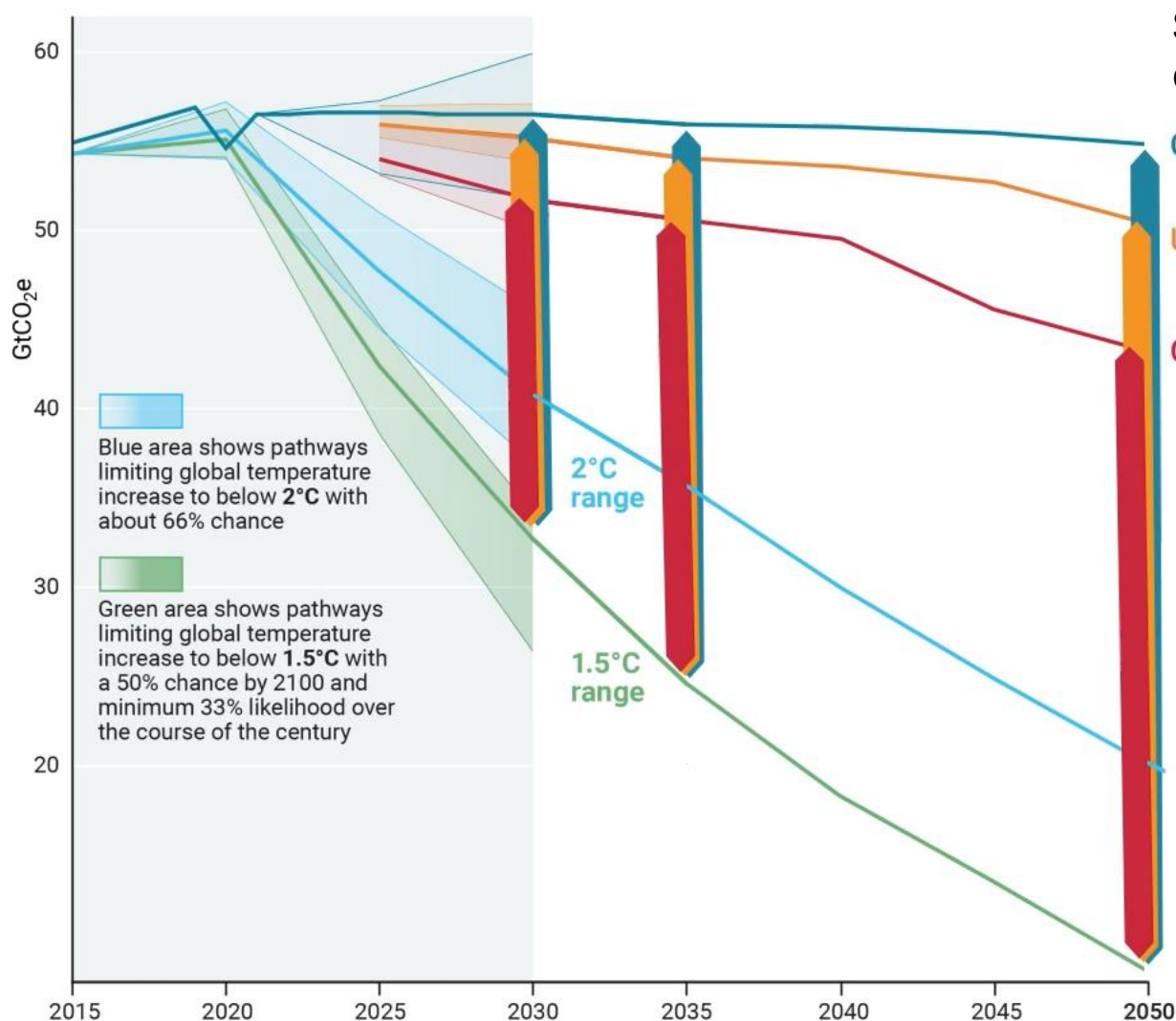
Global ambition in the next round of NDCs:

Collectively, 2035 targets must cut 18 GtCO₂e off current unconditional pledges for a 2°C goal, and 29 GtCO₂e for the 1.5°C goal

The emissions gap – becoming unbridgeable over time



Global warming projections exceed the Paris Agreement goal by far



Scenarios limit global warming over the course of this century to (with a 66% chance):

Current policies continued **3.0°C (range: 1.9–3.8)**

Unconditional NDCs continued **2.9°C (range: 2.0–3.7)**

Conditional NDCs continued **2.5°C (range: 1.9–3.6)**

2.0°C (range: 1.8–2.5)

Relentlessly strengthening implementation in this decade is critical

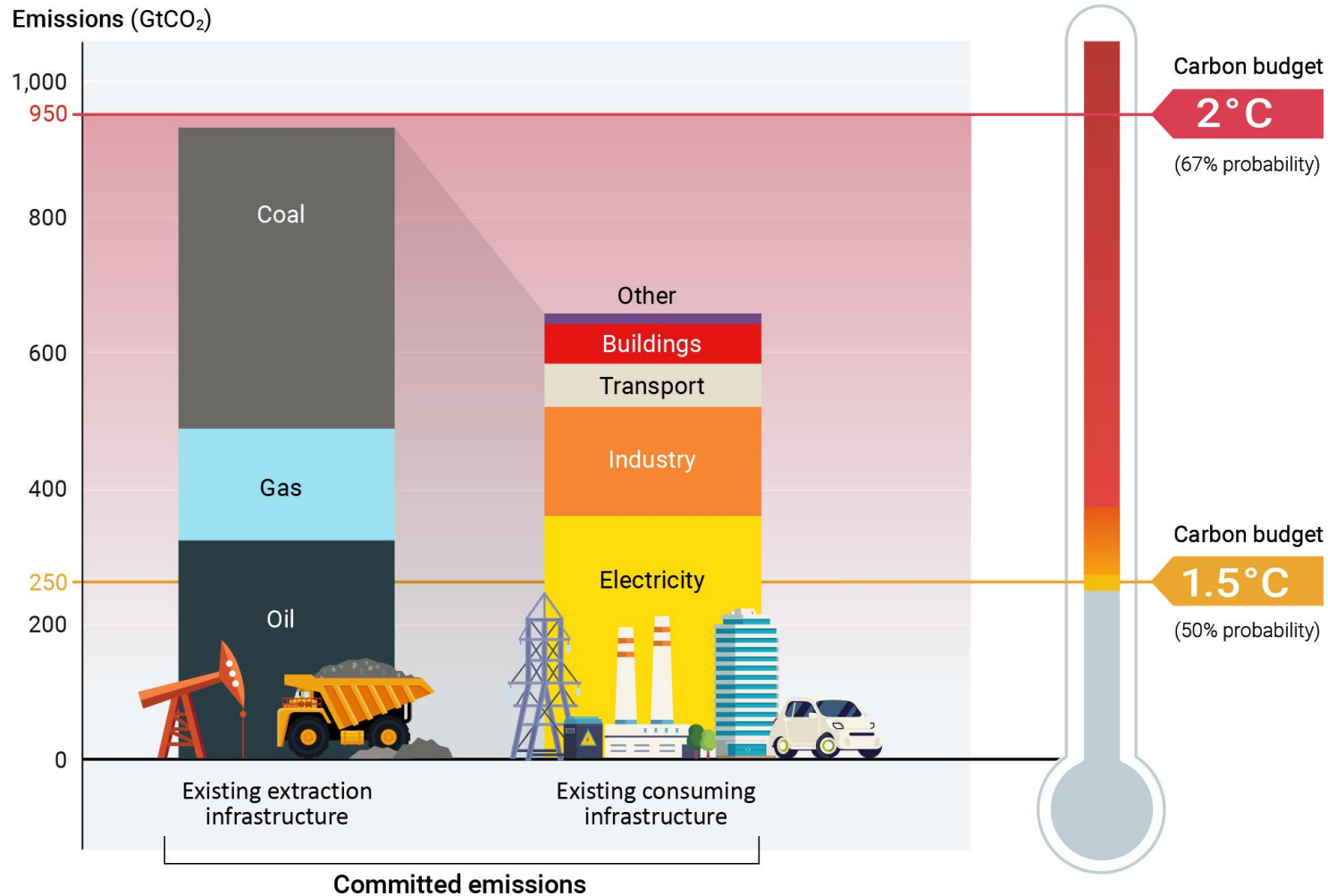


Stronger implementation action needed to:

- Narrow the emissions gap in 2030
- Facilitate significantly more ambitious targets for 2035 in the next round of NDCs
- Help pave the way for enhancing the credibility and feasibility of the net-zero pledges that by now cover around 80 per cent of global emissions

Global GHG emissions in 2030 at levels implied by current NDCs will make it impossible to limit warming to 1.5°C with no or limited overshoot and strongly increase the challenge of limiting warming to 2°C.

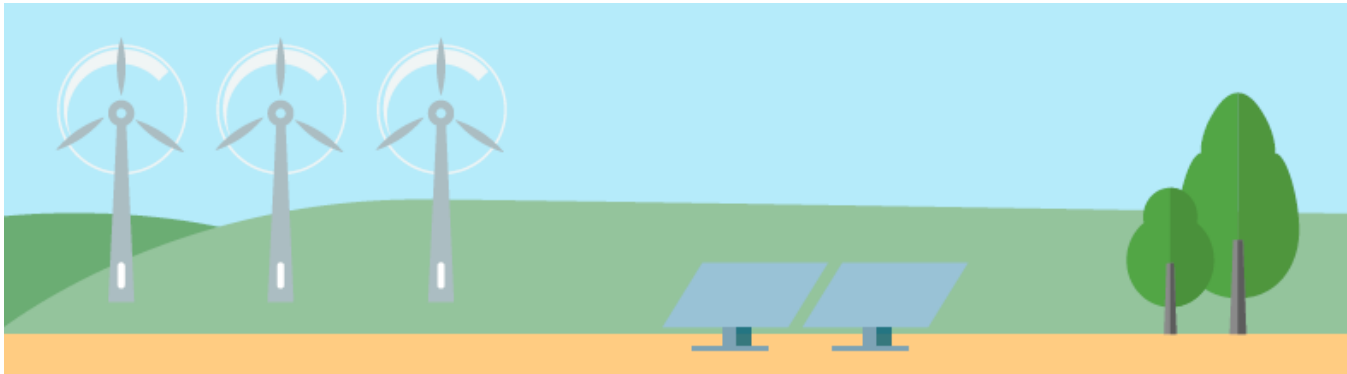
All countries must urgently accelerate economy-wide, low-carbon transformations



- Global transformations of energy systems is essential
- The coal, oil and gas extracted over the lifetime of producing and under-construction mines and fields would emit more than 3.5 times the carbon budget for 1.5°C, and almost the size of the budget for 2°C

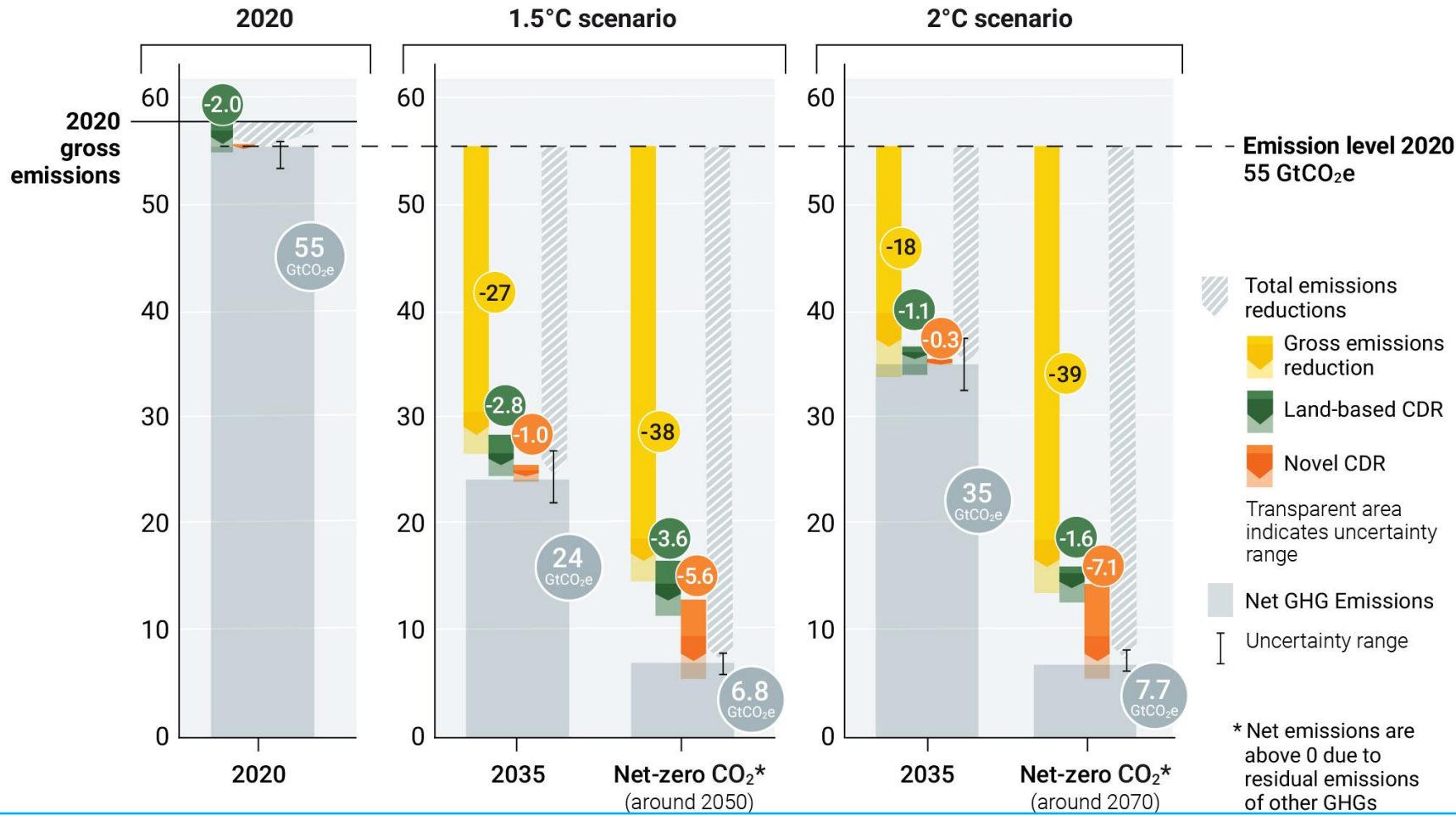
Low- and middle-income countries face substantial economic and institutional challenges, but can also exploit opportunities

- Energy transitions shaped by development contexts
- Access to affordable finance is a prerequisite for increasing mitigation ambition
- Capacity and institutions must be strengthened, and political economy challenges overcome
- The preparation of the next round of NDCs offers an opportunity to develop nationally driven road maps with investment-ready implementation plans – COP28 offers an opportunity to call for the support needed



Delay in action increases future reliance on carbon dioxide removal

Emissions reductions starting from 2020 levels (GtCO₂e/yr)



- Achievement of future gigaton levels of CDR is uncertain and associated with several risks
- Technologies will first need to go through a formative phase, which will require strong policy and financial support.
- Robust measurement, reporting and verification systems required to enhance credibility
- Next decade critical for novel CDR methods

Thank you

on behalf of the authors, the steering committee members and the production team of the report

Anne Olhoff, CONCITO – Denmark's green think tank
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Underfinanced. Underprepared.

Inadequate investment and planning
on climate adaptation leaves
world exposed



Adaptation Gap Reports – science-based assessments since 2014



2014



2016



2017



2018



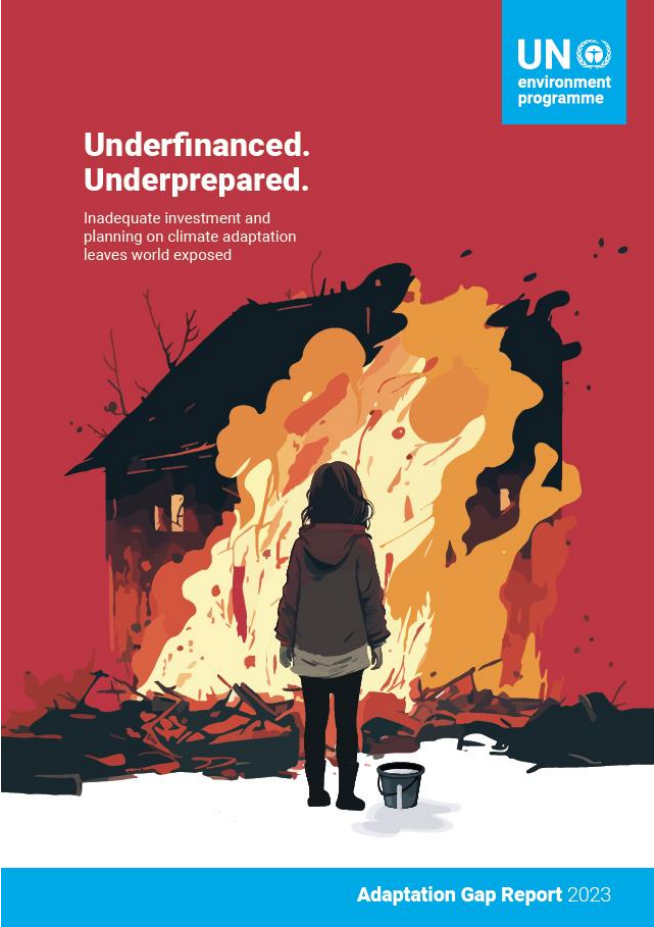
2020



2021



2022



Adaptation Gap Report 2023

Climate adaptation progress slowing down as climate impacts intensify

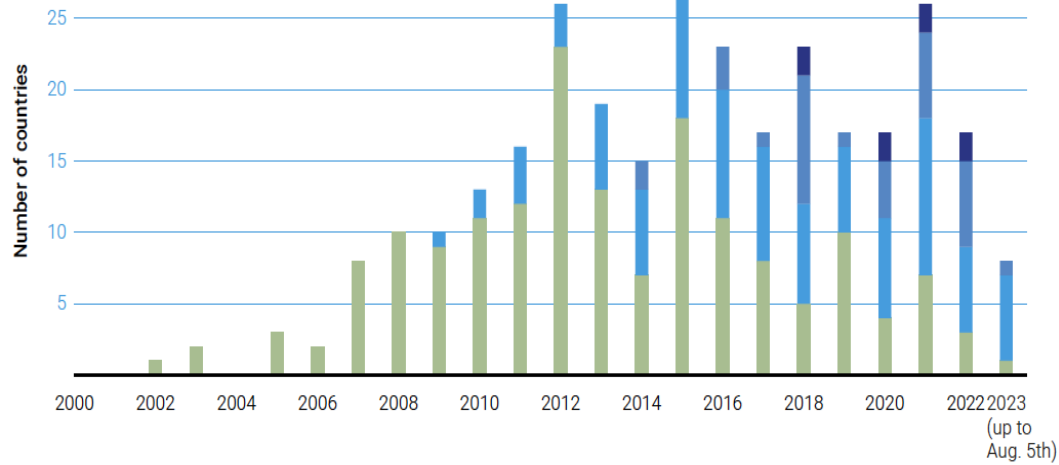
- Slow on financing
- Slow on planning
- Slow on implementation

2023 saw record temperatures, devastating storms, floods, droughts, and heatwaves.

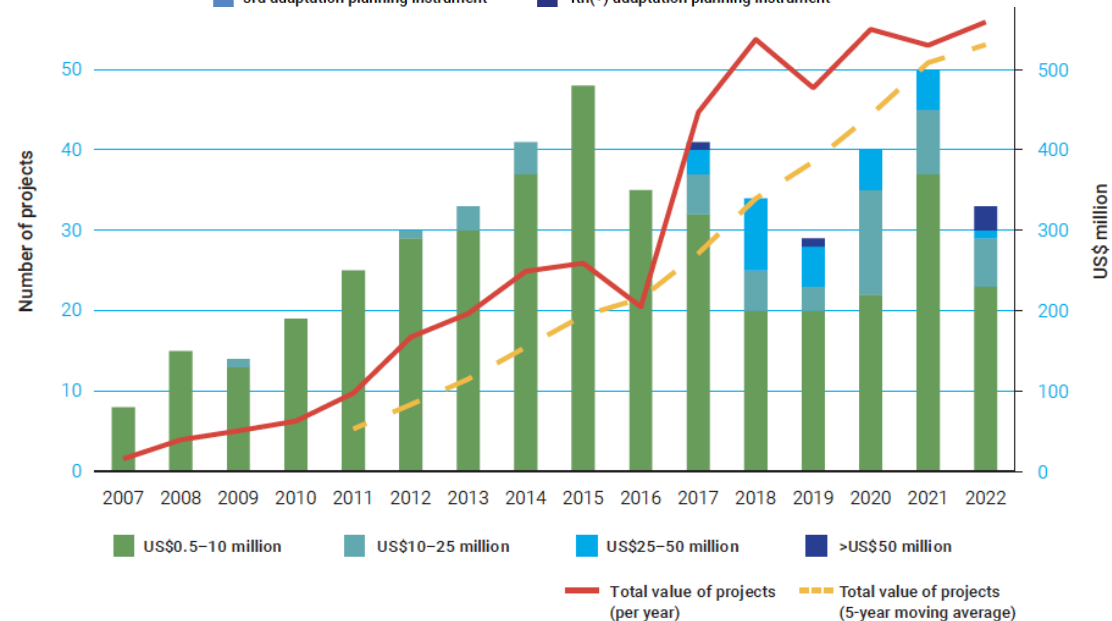
To protect vulnerable populations, adaptation must increase alongside rapid cuts to greenhouse gas emissions.



Adaptation planning and implementation are plateauing

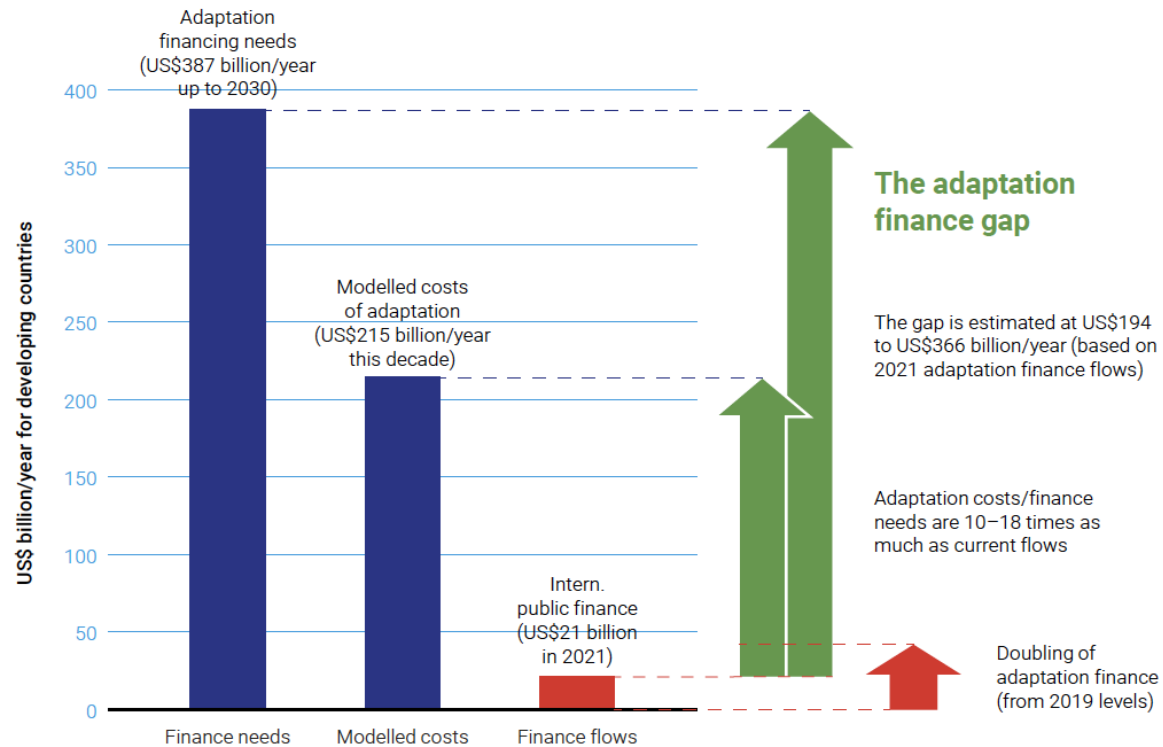


■ 1st adaptation planning instrument
 ■ 2nd adaptation planning instrument
■ 3rd adaptation planning instrument
 ■ 4th(+) adaptation planning instrument



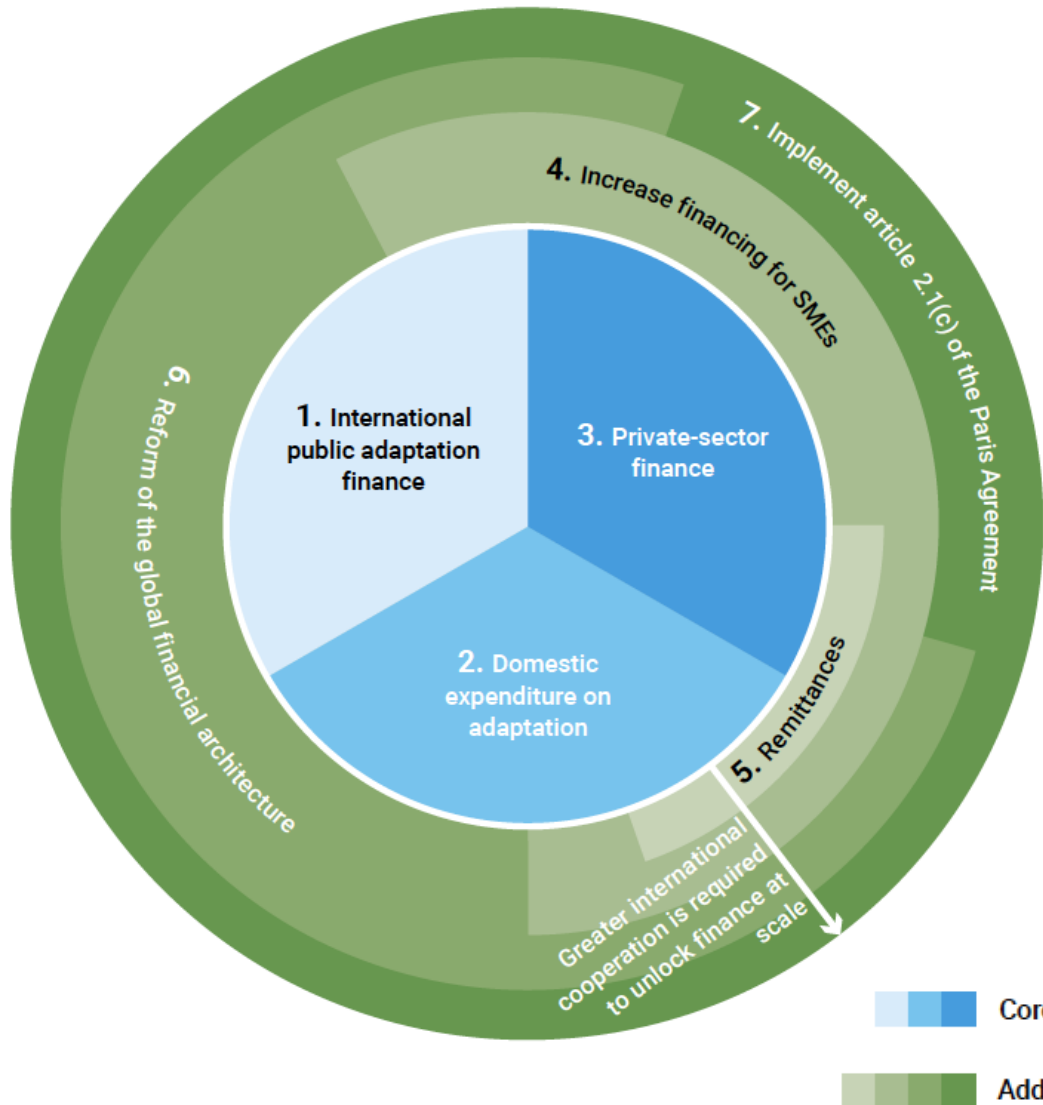
- 85% of countries have at least one national adaptation planning instrument.
- Over 50% of countries have two or more national-level instruments.
- Project sizes are bigger but their number has stagnated for the past decade.
- Gender and social inclusion poorly addressed in adaptation actions

Adaptation finance needs of developing countries are 10-18 times current international public finance flows



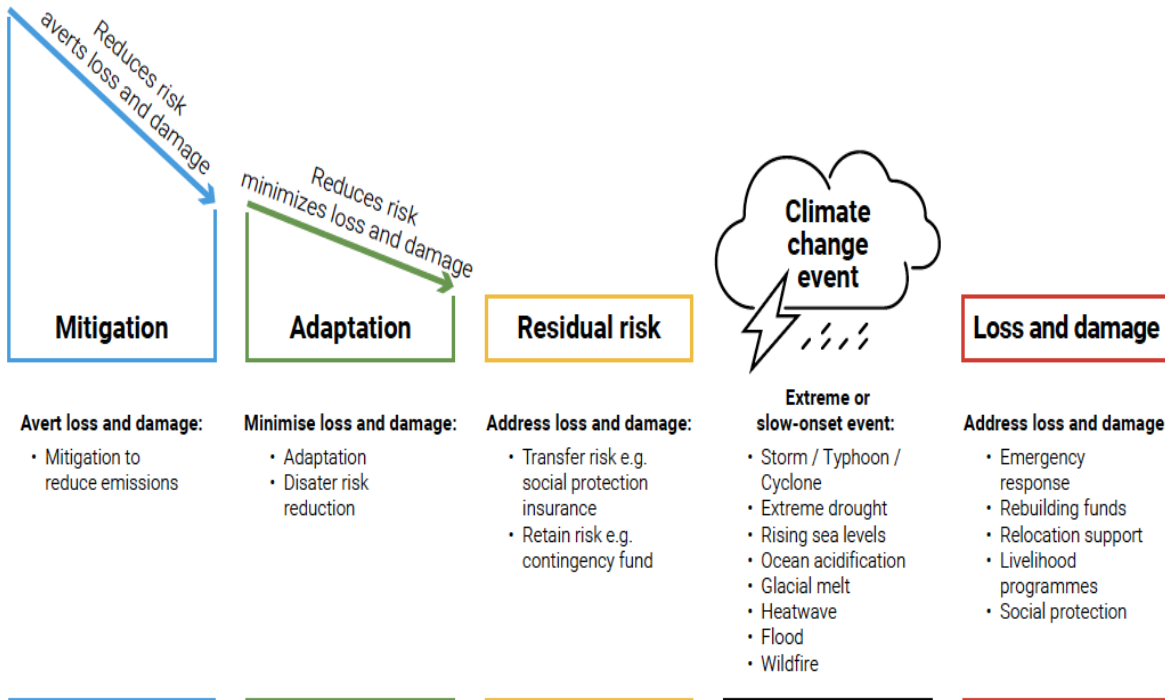
- Estimated central estimate of Adaptation Costs (Finance Needs) **US\$215-387 billion** per year this decade
 - Modelled adaptation costs in developing countries: **US\$215 billion** per year this decade.
 - Adaptation finance needs from analysis of NDCs/NAPs for developing countries: **US\$387 billion** per year until 2030.
- International public adaptation finance flows to developing countries **declined by 15%** to **US\$21 billion** (since AGR 2022)
- Adaptation finance gap: **US\$194-366 billion** per year.
- Doubling of 2019 adaptation finance flows to **US\$40 billion** can narrow gap by **5-10%**.

Innovative ways to deliver finance critical



- Seven ways to increase adaptation finance:
 1. Domestic expenditure
 2. International finance
 3. Private sector finance
 4. Increasing & tailoring finance to SMEs
 5. Remittances
 6. Reform global financial architecture
 7. Implementation of Article 2.1(c) of the Paris Agreement

Investing in climate action NOW will limit costs in the future



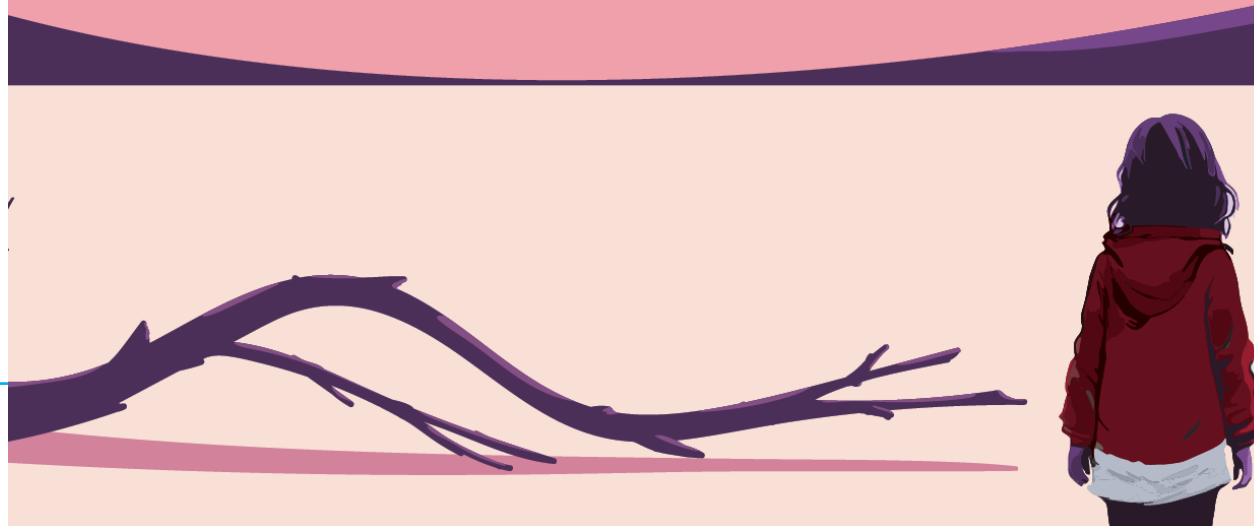
- Over **US\$500 billion** in losses and damages in 55 most climate-vulnerable countries.
- Multiple ways to address economic & non-economic loss and damage.
- More robust numbers needed
- Mobilize resources for loss and damage fund & progress on funding arrangements agreed at COP 27
- Other innovative financing mechanisms vital
- Insulating low-income countries and disadvantaged groups from climate impacts imp. Outcome of COP28

Source: Adapted from: Richards, J.A. (2022).

COP 28 must commit to insulating poor and vulnerable from climate impacts

Adaptation is slowing on all fronts

when it should be accelerating to catch up with rising climate impacts, resulting in massive implications for losses and damages, particularly for the most vulnerable people around the planet.



Thank you

on behalf of the authors,
steering committee members
and the production team of the report

Henry Neufeldt, Chief Scientific Editor,
UNEP Copenhagen Climate Centre
UNEP Early Warning and Assessment Division
World Adaptation Science Programme (WASP)



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leaves world exposed

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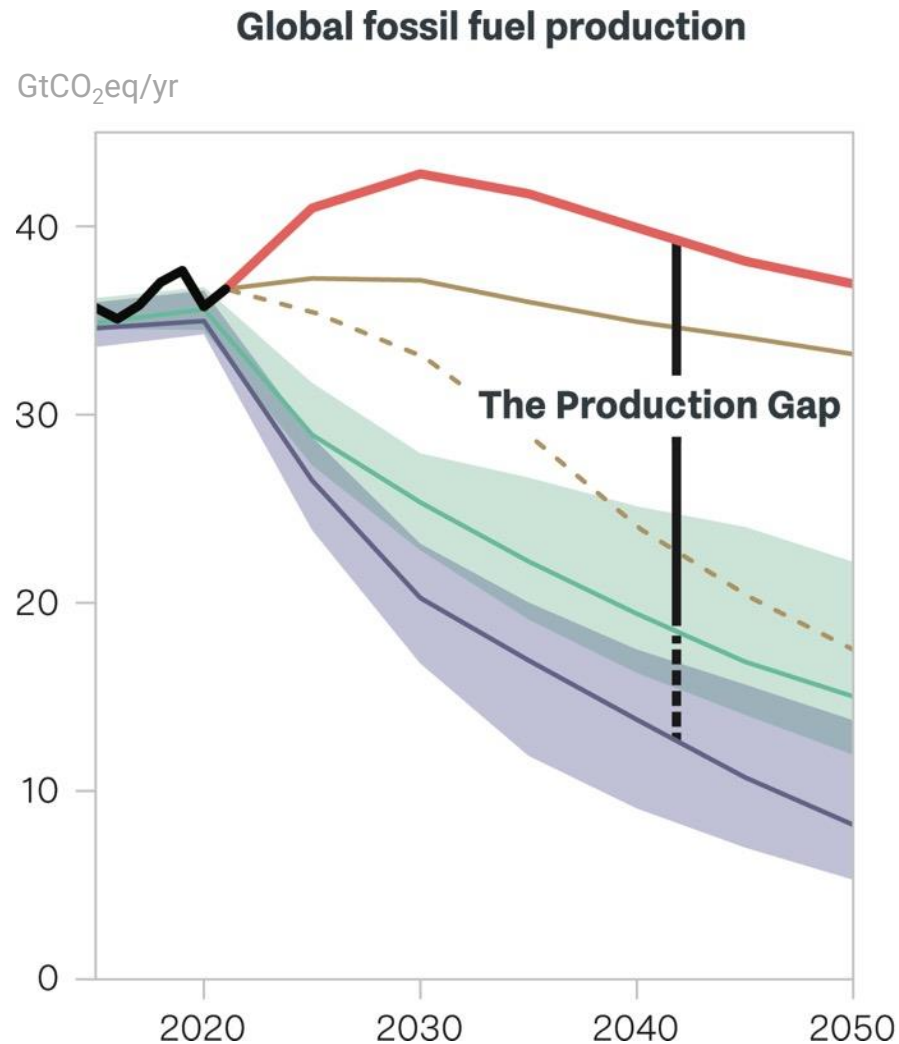




2023 Production Gap Report

Annual Subcommittee Meeting Side Event
23 November 2023

Quantifying the global fossil fuel production gap



Estimated from government plans & projections (GPP)

Implied by governments' stated climate policies

Implied by governments' announced climate pledges

Consistent with limiting long-term warming to 2°C

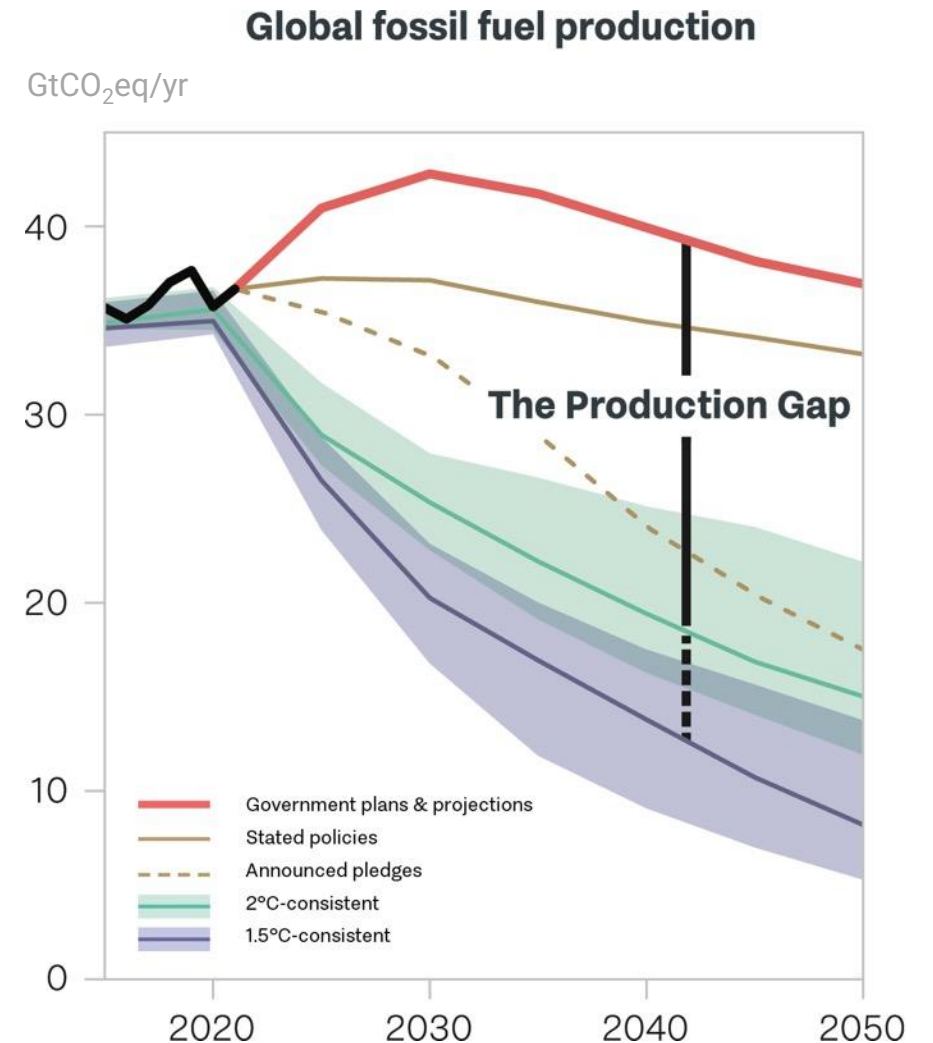
Consistent with limiting long-term warming to 1.5°C

**Fossil fuel production can be quantified in units of energy, physical amounts, or committed GHG emissions from extraction and combustion activities.*

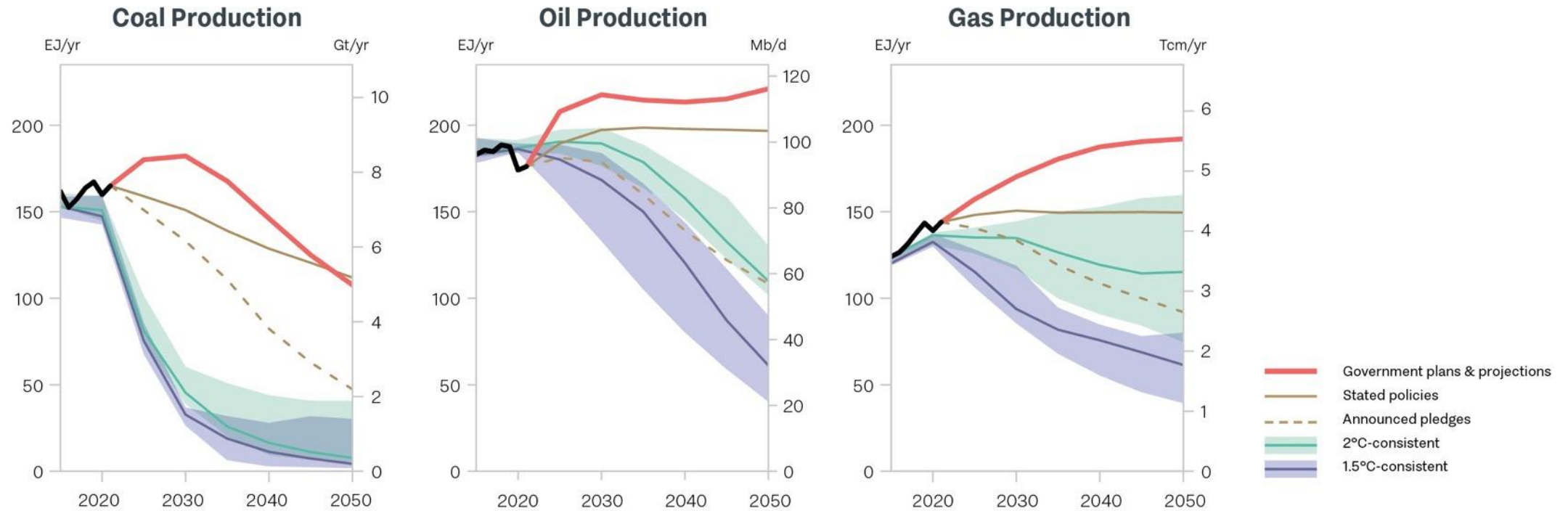
The production gap: 2023 analysis

In aggregate, governments plan to produce, in 2030, around 110% more fossil fuels than would be consistent with limiting warming to 1.5°C, and 69% more than would be consistent with limiting warming to 2°C.

- These global production gaps grow wider out to 2050.
- Since it was first quantified in 2019, the global production gap has remained largely unchanged.
- Despite encouraging signs of an emerging clean energy transition, the persistence of the global production gap puts a well-managed and equitable energy transition at risk and conflicts with governments' climate commitments.



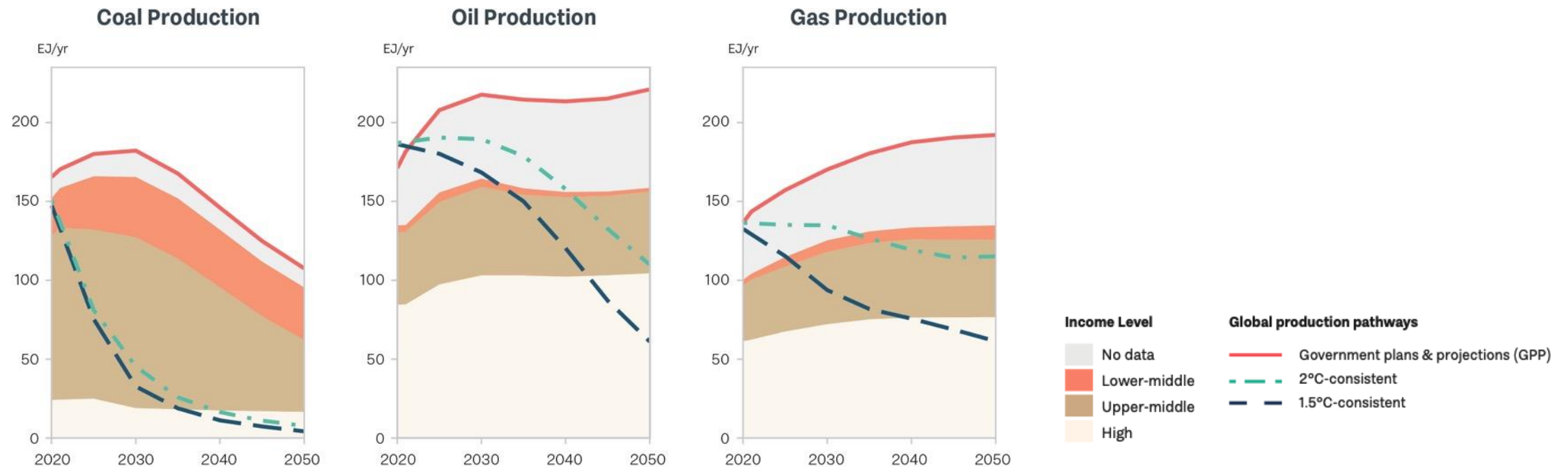
The production gap by fuel: 2023 analysis



Taken together, government plans and projections would lead to an increase in global coal production until 2030, and in global oil and gas production until at least 2050.

By 2030, global production levels under the GPP pathways would lead to 460% more coal, 29% more oil, and 82% more gas than respective levels under the 1.5°C-consistent pathways.

Equity implications of government plans/projections



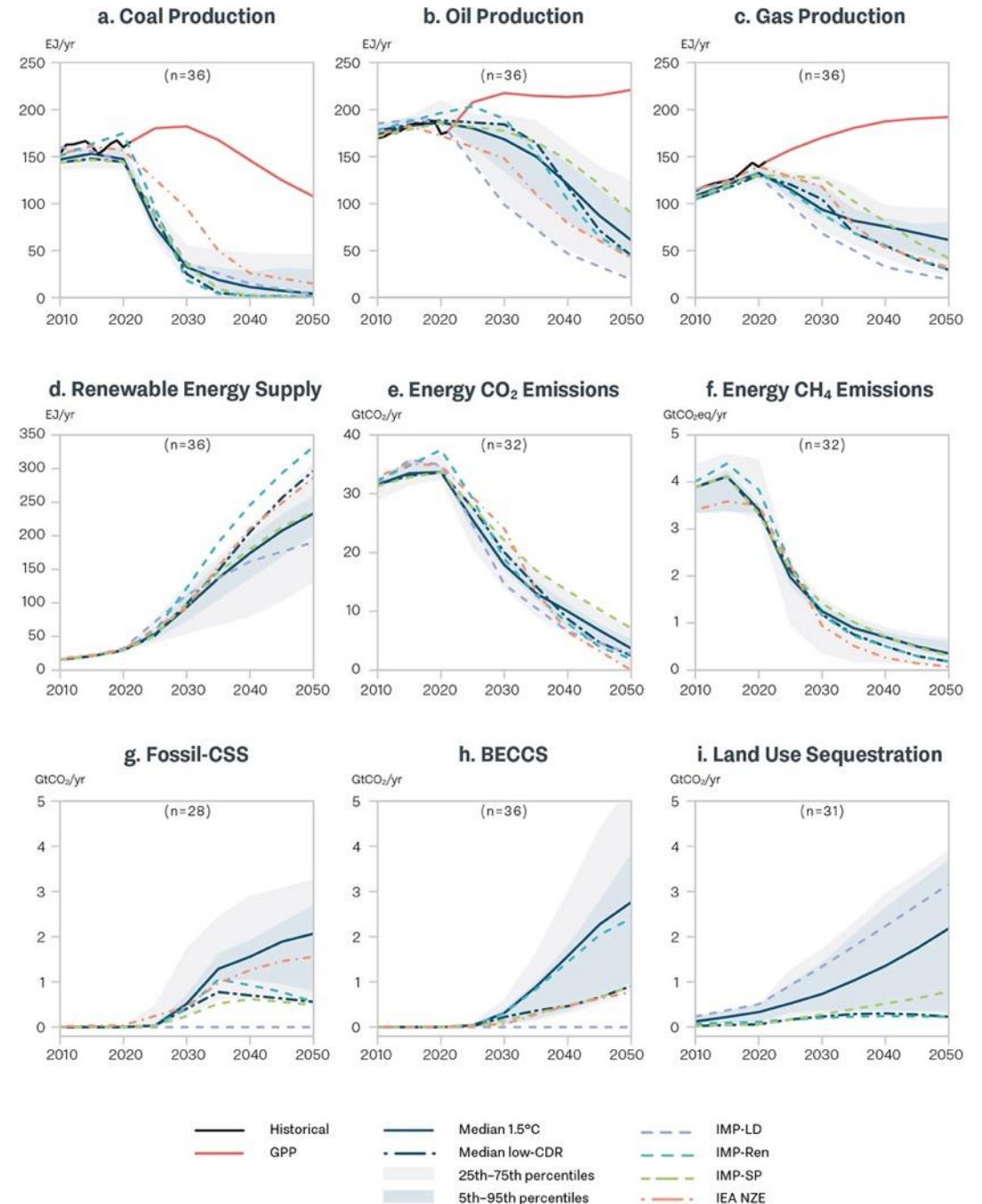
For each fossil fuel, the combined levels of production being planned by 10 high-income countries alone would already exceed global 1.5°C-consistent pathways by 2040.

An equitable transition away from fossil fuel production must recognize countries' differentiated responsibilities and capabilities. Governments with greater transition capacity should aim for more ambitious reductions and help finance the transition processes in countries with limited capacities.

Exploring 1.5°C-consistent global production pathways

Three key insights from Sections 2.3–2.4:

1. To keep 1.5°C goal in reach, global production and consumption of all three fossil fuels needs to decline substantially between now and 2050, alongside other key climate mitigation strategies, and regardless of future fossil-CCS and CDR deployment.
2. Modelled reductions in coal, oil, and gas depend on and influence one another – important to set reduction targets for all three.
3. Modelled reductions particularly sensitive to fossil-CCS and CDR assumptions, especially for gas. Taking a precautionary approach suggests, at a minimum, aiming for a near total phase-out of coal by 2040 and a combined reduction in oil and gas by around three-quarters by 2050 from 2020 levels.

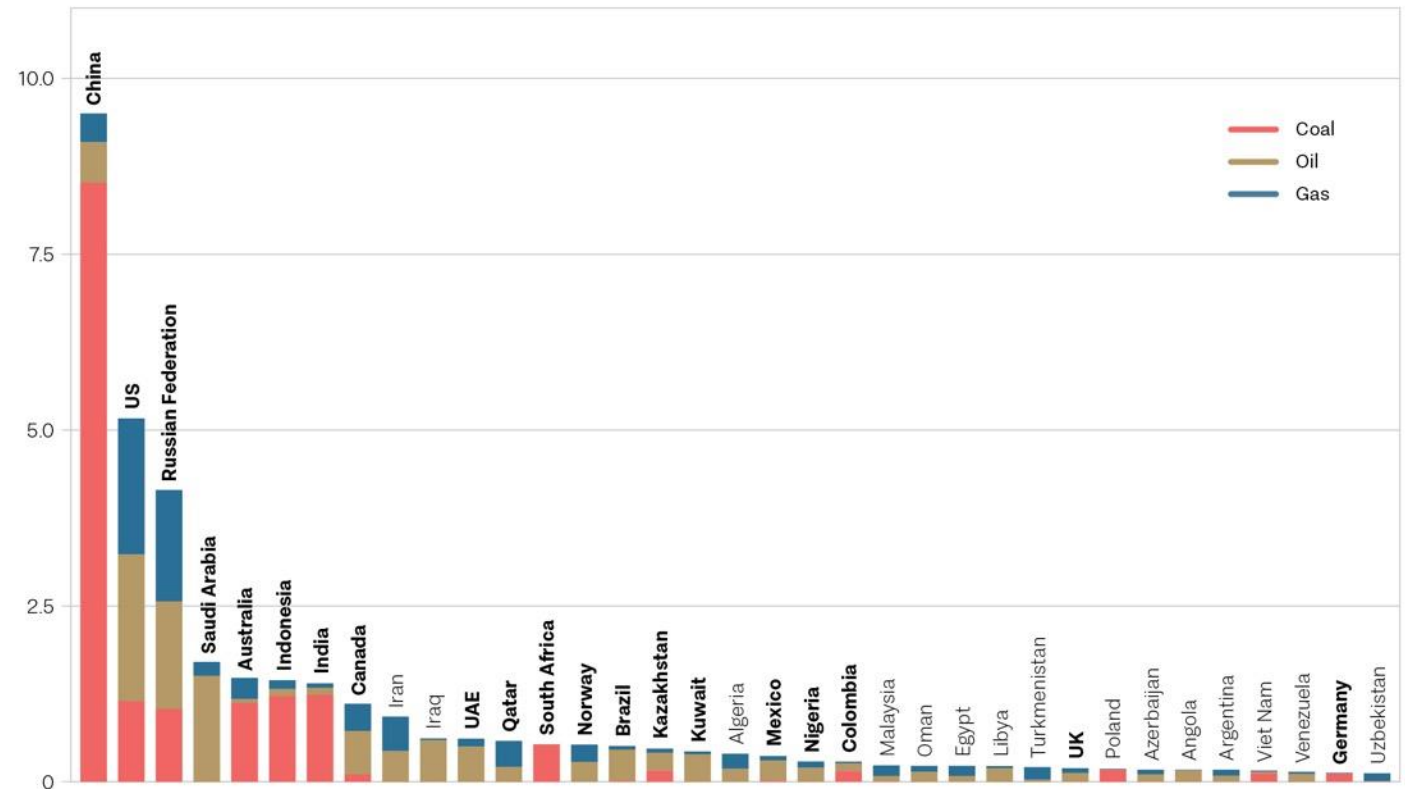


Expanded country profiles for 20 key producers

2021 extraction-based GHG emissions (GtCO₂eq)

Summarizing:

- Climate ambitions
- Government views on production
- Production plans and projections
- Support for domestic and international production
- Policies and discourses towards a managed and equitable transition
- Key production statistics and dependence metrics



Status of national policies

- Many countries have pledged to achieve net-zero emissions and launched initiatives to reduce emissions from fossil fuel production activities. None have committed to reduce coal, oil, and gas production in line with limiting warming to 1.5°C.
- Many are promoting gas as an essential “bridge” or transition” fuel but with no apparent plans to transition away from it later.
- There are some encouraging signs of change. Four countries have begun to develop scenarios for domestic fossil fuel production consistent with national or international climate goals.
- Support for a just energy transition is growing, although such discourses and policies are still mostly limited to coal-fired power generation.

| Country | Status of national net-zero commitment; net-zero target year | Signatory of Global Methane Pledge | Signatory of Glasgow Statement | Planned change in national fossil fuel production for 2030 relative to 2021 (EJ) | | |
|--------------------|--|------------------------------------|--------------------------------|--|-----------------------|-----------------------|
| | | | | Coal | Oil | Gas |
| Australia | In law 2050 | ✓ | | ▲ 0.2 | ■ 0 ^b | ▲ 0.7 |
| Brazil | NDC objective 2050 | ✓ | | No data | ▲ 5.2 | ▲ 1.0 ^d |
| Canada | In law 2050 | ✓ | ✓ | No data | ▲ 3.0 | ▲ 0.6 |
| China | NDC objective 2060 | | | ▼ 5.3 | ■ 0 | ▲ 2.6 |
| Colombia | In law 2050 | ✓ | | ▲ 1.7 | ▼ 0.1 | ■ 0 |
| Germany | In law 2045 | ✓ | ✓ | ▼ 0.5 | ■ 0 | ▼ 0.1 |
| India | NDC objective 2070 | | | ▲ 10.7 | No data | No data |
| Indonesia | In strategy document 2060 | ✓ | | ▲ 2.5 | ▼ 0.2 | ▲ 1.1 |
| Kazakhstan | In strategy document 2060 | | | ▼ 0.2 | ▲ 0.4 | ▲ 0.1 ^d |
| Kuwait | Political pledge 2050 (oil & gas sector) 2060 (rest of economy) | ✓ | | No production | ▲ 2.1 | ▲ 0.1 |
| Mexico | No commitment | ✓ | | No data | ▲ 1.4 | ▲ 0.6 |
| Nigeria | In law 2060 | ✓ | | No data | ▲ 1.3 | ▲ 2.6 ^d |
| Norway | No commitment ^a | ✓ | | No data | ▼ 0.5 | ▼ 0.3 |
| Qatar | No commitment | | | No production | No data | ▲ 3.9 ^c |
| Russian Federation | In strategy document 2060 | | | ▲ 3.2 | ▲ 2.9 | ▲ 3.3 |
| Saudi Arabia | Political pledge 2060 | ✓ | | No production | ▲ 5.5 | ▲ 1.3 |
| South Africa | In strategy document 2050 | | | No data | No data | No data |
| UAE | NDC objective 2050 | ✓ | | No production | ▲ 1.8 ^c | ▲ 0.4 ^b |
| UK | In law 2050 | ✓ | ✓ | No data | ▼ 0.7 | ▼ 0.6 |
| US | In policy document 2050 | ✓ | ✓ | ▼ 5.1 | ▲ 5.2 | ▲ 2.5 |

Thank you

on behalf of the authors,
steering committee members
and the production team of the report

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