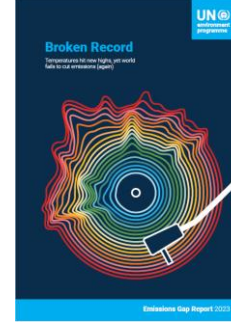
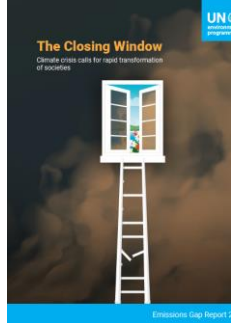
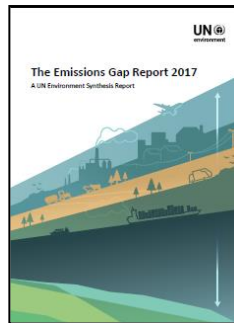
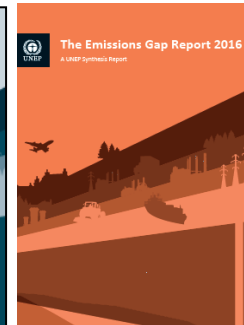
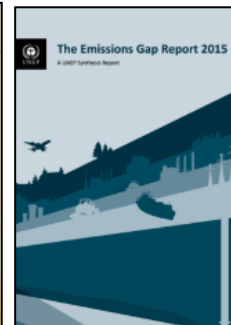
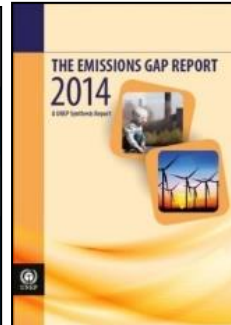
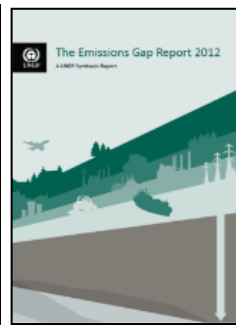
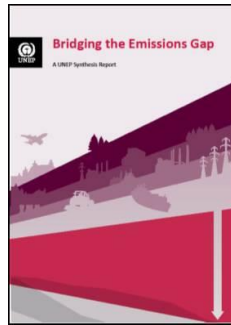
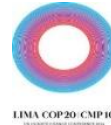


# **No more hot air ... please!**

With a massive gap between rhetoric and reality,  
countries draft new climate commitments

# Emissions Gap Reports

Annual science-based assessment reports since 2010



**COP29**  
Baku  
Azerbaijan



# Emissions Gap Report 2024 – All eyes on the next NDCs



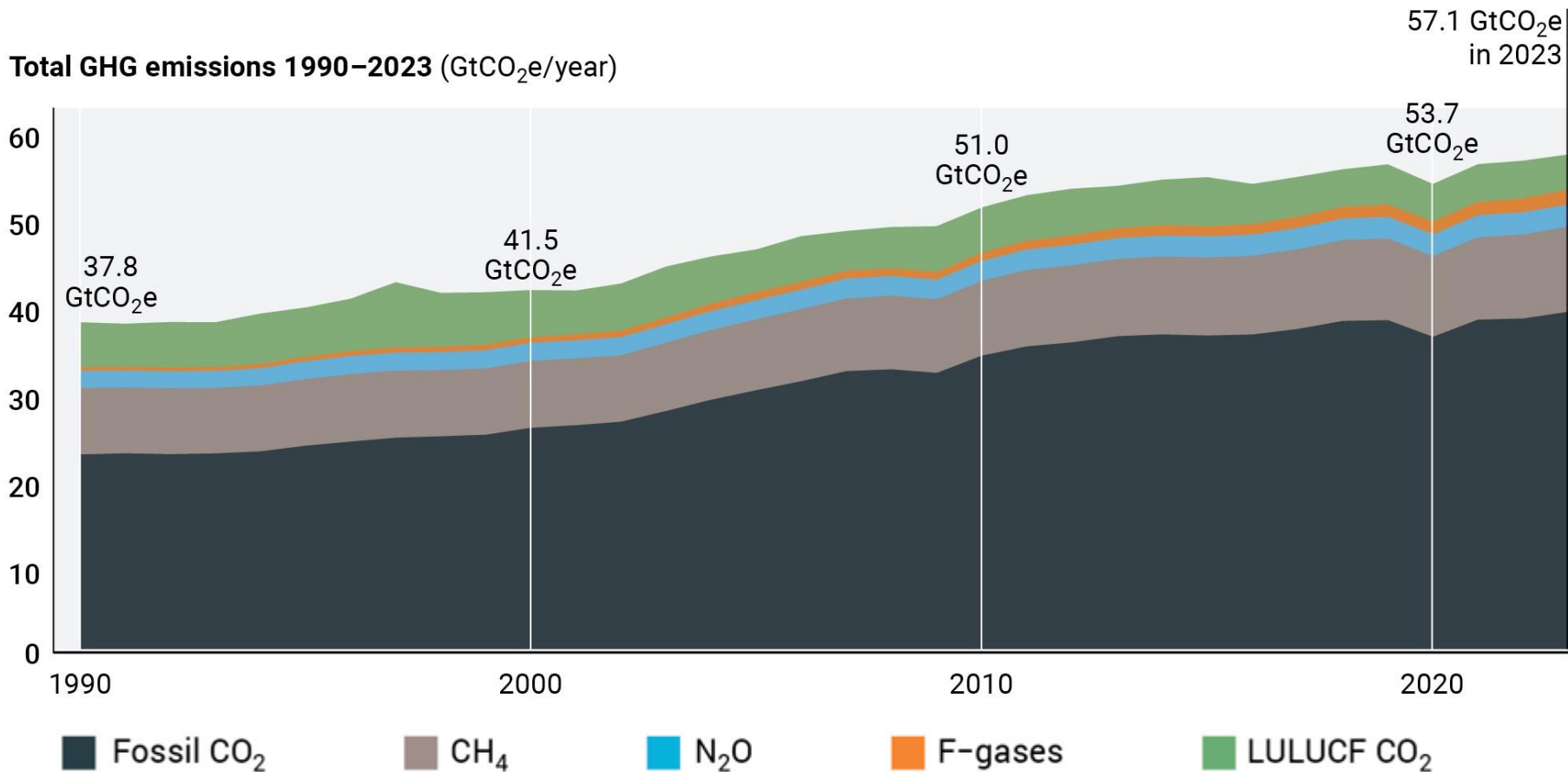
## Updating the annual assessment of:

- Trends in global GHG emissions
- Global and G20 progress towards 2030 targets and net-zero emission pledges
- The emissions gap in 2030 and 2035
- Global warming implications

## Special focus on what we need from the next nationally determined contributions (NDCs), due in 2025:

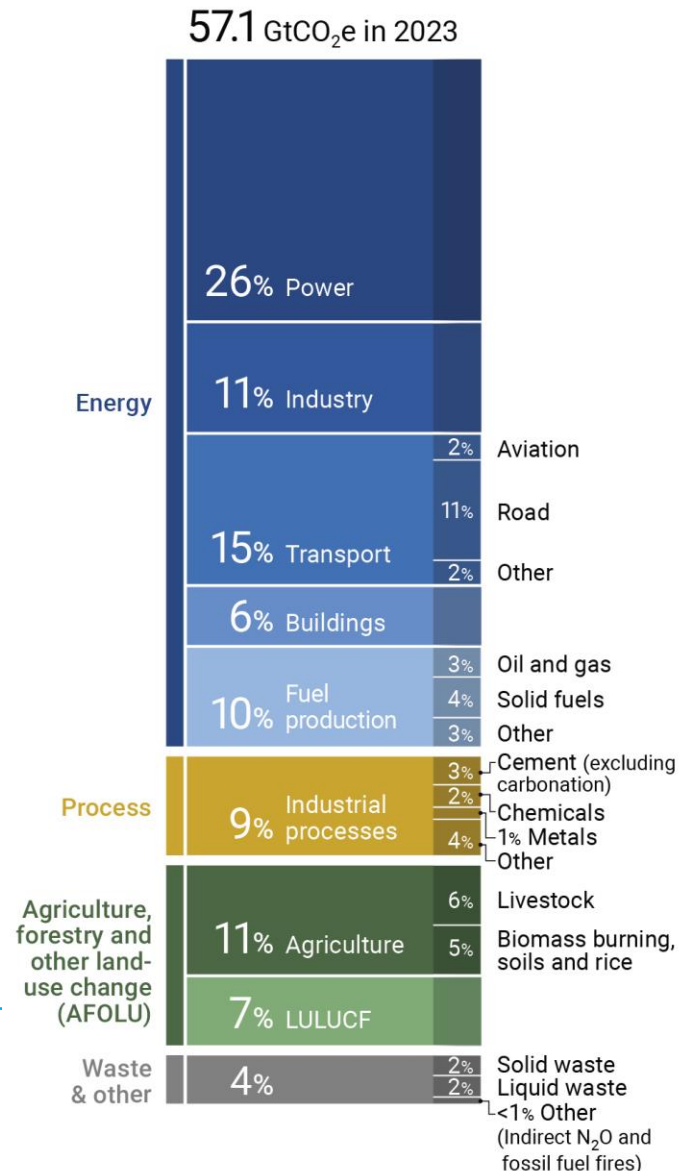
- How can global milestones and targets be translated into national action and ambition in the next NDCs?
- What are the opportunities across sectors?
- What does this imply for mitigation finance and investment?

# Global greenhouse gas emissions set new record of 57.1 GtCO<sub>2</sub>e in 2023



- Global GHG emissions increased by 1.3% from 2022 to 2023
- Growth rate above the average rate of the decade preceding the COVID-19 pandemic (2010–2019) of 0.8% per year

# Greenhouse gas emissions grew across all sectors apart from LULUCF





















- Highest increase in emissions from international aviation at 19.5%
- Other sectors with 2022-23 growth above 2.5 % include fuel production (oil and gas, solid fuels), road transportation and energy-related industry emissions
- Sector shifts towards renewable sources and electrification not yet fast enough to significantly displace fossil fuels
- Fossil CO<sub>2</sub> emissions account for approximately 68% of current GHG emissions

# Progress in ambition and action on 2030 NDCs has plateaued

NDC characteristics	COP 21 (2015)	COP 26 (2021)	COP 27 (2022)	COP 28 (2023)	EGR 2024
<b>Number of NDCs:</b>	<b>Number of NDCs (% of global emissions incl. LULUCF)</b>				
That reduce 2030 emissions relative to initial NDCs	N/A	65 (63%)	79 (79%)	82 (80%)	83 (80%)
That contain a GHG reduction target	122 (85%)	143 (89%)	147 (91%)	148 (91%)	148 (91%)
That contain a GHG reduction target relative to a base year	35 (33%)	43 (34%)	44 (34%)	46 (35%)	46 (35%)
That contain a GHG target covering all sectors (energy; industry; waste; LULUCF)	46 (44%)	80 (53%)	85 (55%)	88 (55%)	89 (55%)
That contain a GHG target covering all GHGs listed in the Kyoto Protocol (CO <sub>2</sub> , methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride and nitrogen trifluoride)	20 (29%)	22 (30%)	23 (31%)	23 (31%)	23 (31%)

# Countries still off track to deliver on the globally insufficient 2030 NDCs

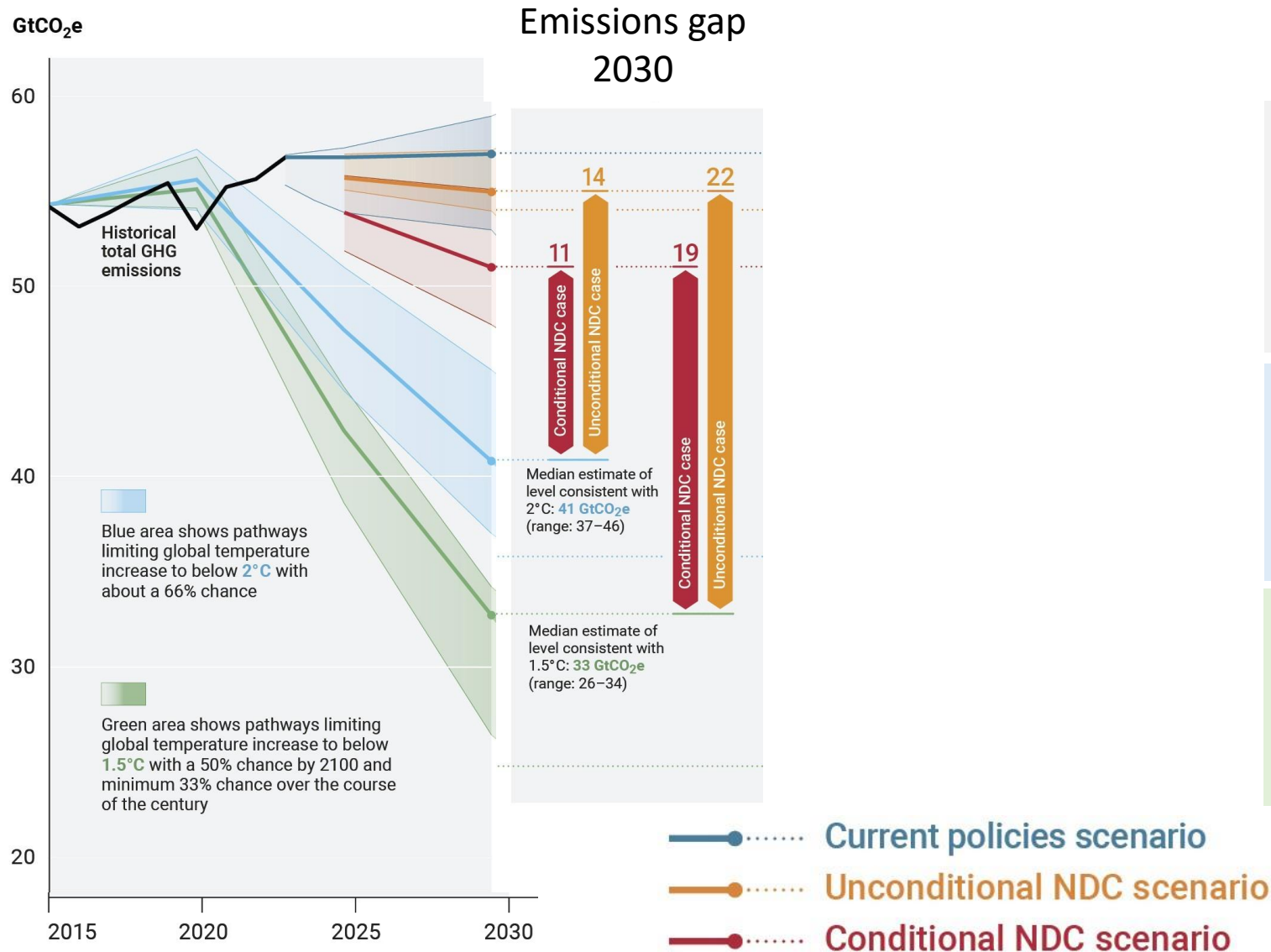
LIKELY to meet the target with existing policies*		LESS LIKELY to meet the target with existing policies	
 China	●●●●●○	 Argentina	○○○
 European Union	●●○ <sup>1)</sup>	 Australia	○○○ <sup>1)</sup>
 India	●●●●●	 Brazil	○○○
 <b>Türkiye</b>	●●●●	 Canada	○○○○ <sup>1)</sup>
 <b>Russian Federation</b>	●●●○ <sup>1)</sup>	 Indonesia	○○○
 <b>Mexico</b>	●●	 Japan	○○○
		 Republic of Korea	●○○
		 Saudi Arabia	○○
		 South Africa	●○○
		 United Kingdom	○○ <sup>1)</sup>
		 United States of America	○○○○○○○○ <sup>1)</sup>

Number of studies indicating: ● Target will be achieved    ■ Conditional NDC    **Bold font:** overachieved by more than 15%  
○ Target will be missed

Implementation gap: how far countries are from achieving their 2030 NDCs based on existing policies:

- **Collective G20 implementation gap** for 2030: 1 GtCO<sub>2</sub>e annually for unconditional NDCs
- **Global implementation gap** for 2030: 2 GtCO<sub>2</sub>e annually for the unconditional NDCs and 5 GtCO<sub>2</sub>e for the conditional NDCs
- About same size as last year

# The emissions gap remains large and unchanged from last year



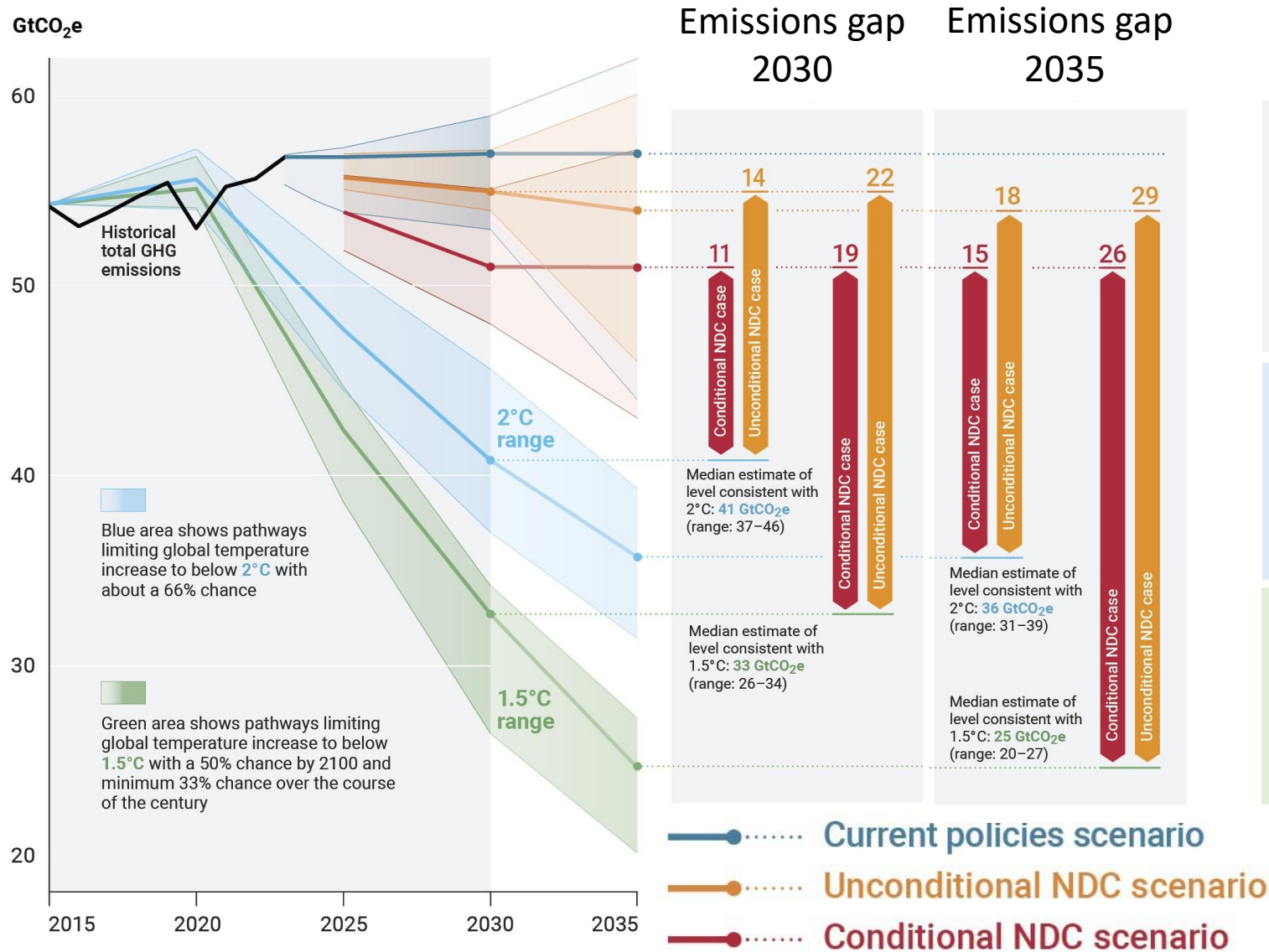
**Unconditional** and **conditional** NDCs reduce 2030 emissions by 4% and 10% respectively, relative to 2019 levels

Reductions required to align with 2°C pathways:  
**2030: 28%**

Reductions required to align with 1.5°C pathways:  
**2030: 42%**



# The emissions gap remains large and unchanged from last year



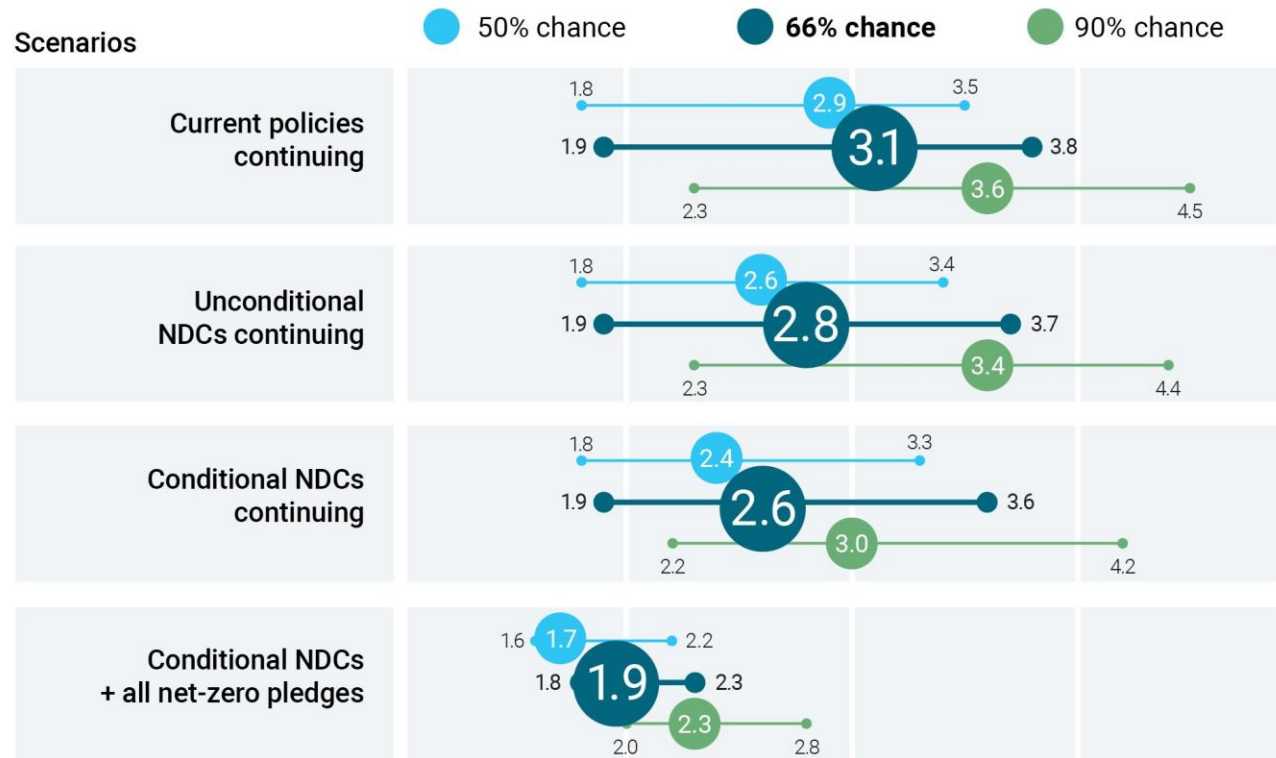
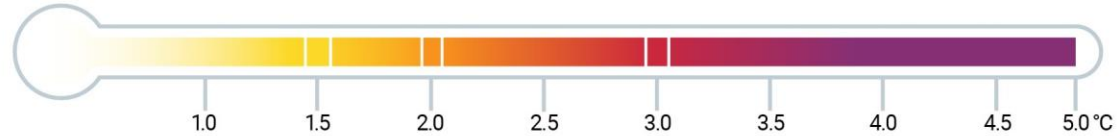
**Unconditional** and **conditional** NDCs reduce 2030 emissions by 4% and 10% respectively, relative to 2019 levels

Reductions required to align with 2°C pathways:  
**2030: 28%**  
**2035: 37%**

Reductions required to align with 1.5°C pathways:  
**2030: 42%**  
**2035: 57%**

# Immediate action matters for temperature projections

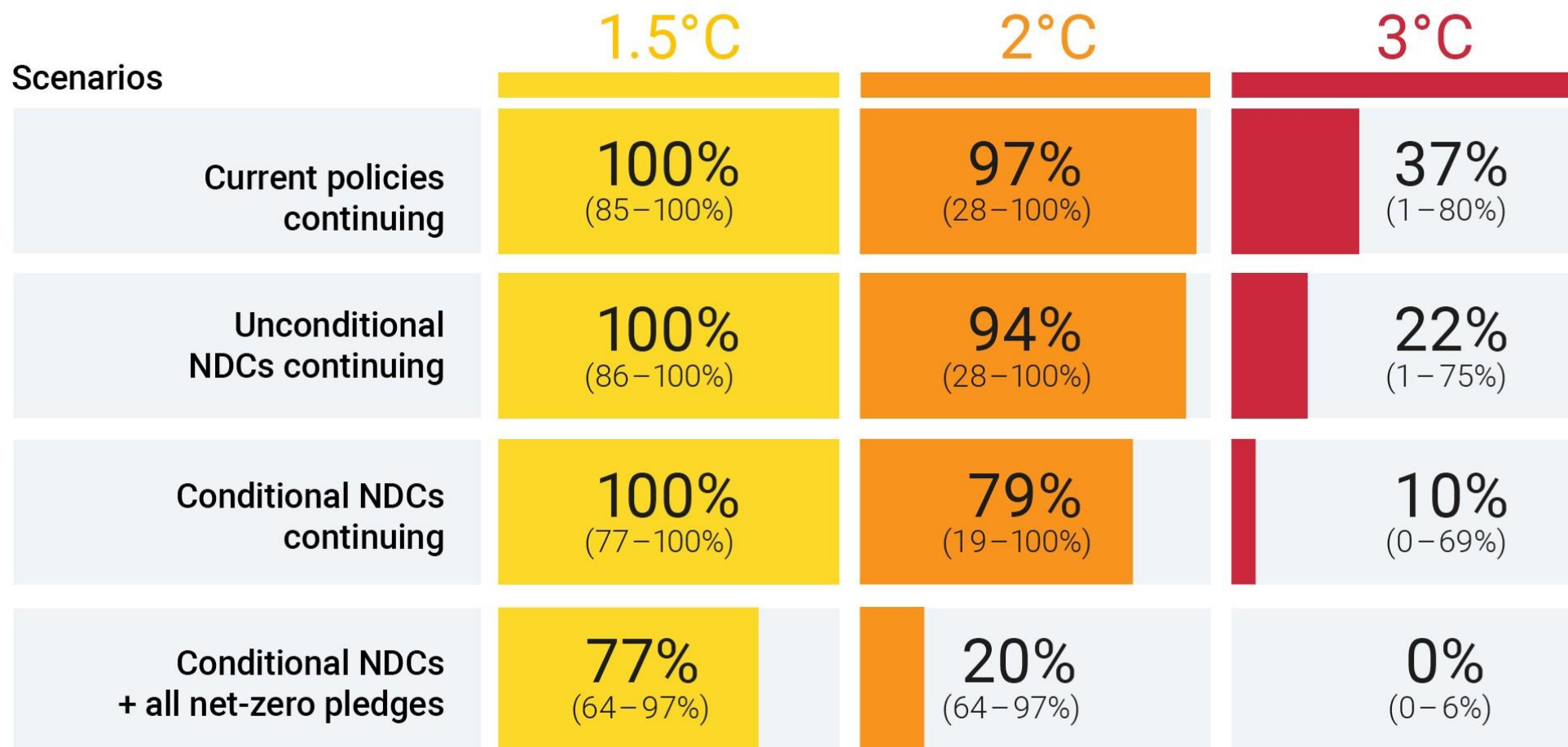
Peak warming over the twenty-first century (°C) relative to pre-industrial levels



- Temperature projections based on the conditional NDC scenario are 0.5°C lower than those based on existing policies
- Only under the most optimistic scenario do temperature projections get closer to the Paris Agreement goal

# Immediate action critical to keep Paris Agreement temperature goal alive

Likelihood of warming exceeding a specific temperature limit (%)



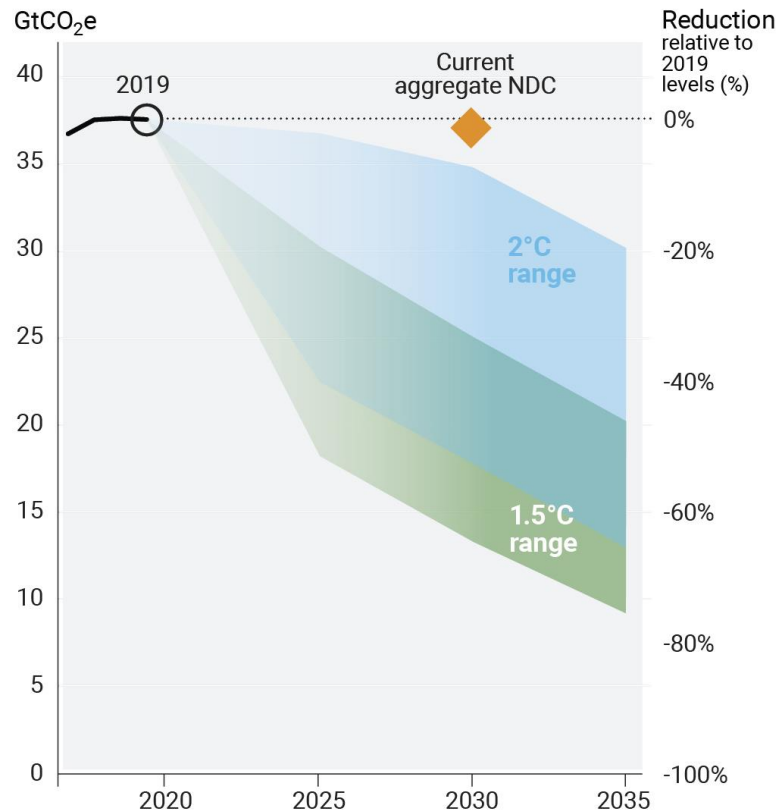


# Translating global milestones into national ambition and action in the next NDCs

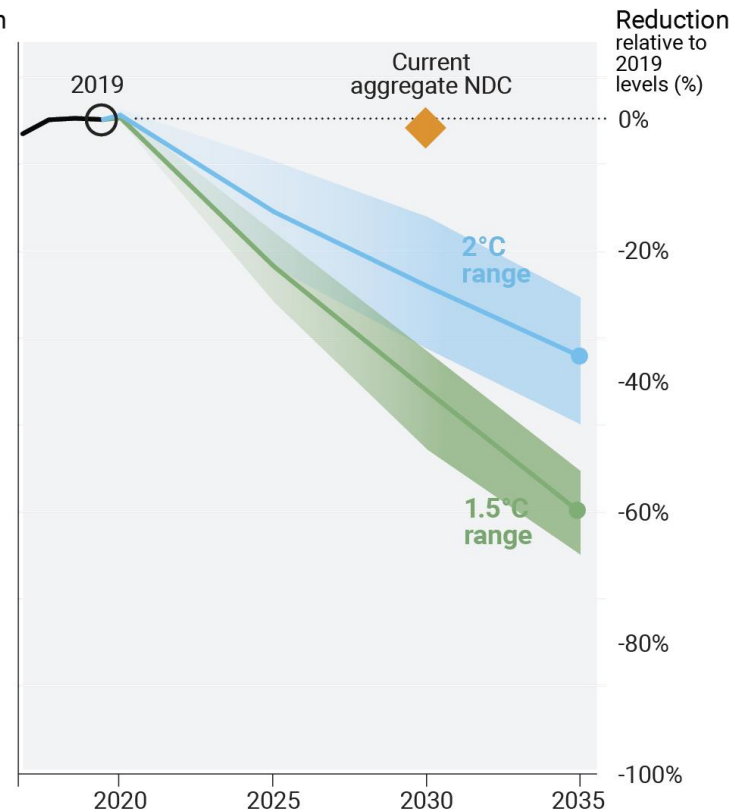
# The G20 must move further and faster

Illustrative fair-share and cost-effective mitigation ranges consistent with below 2°C and 1.5°C for the G20 collectively\*

**G20: Fair-share ranges**



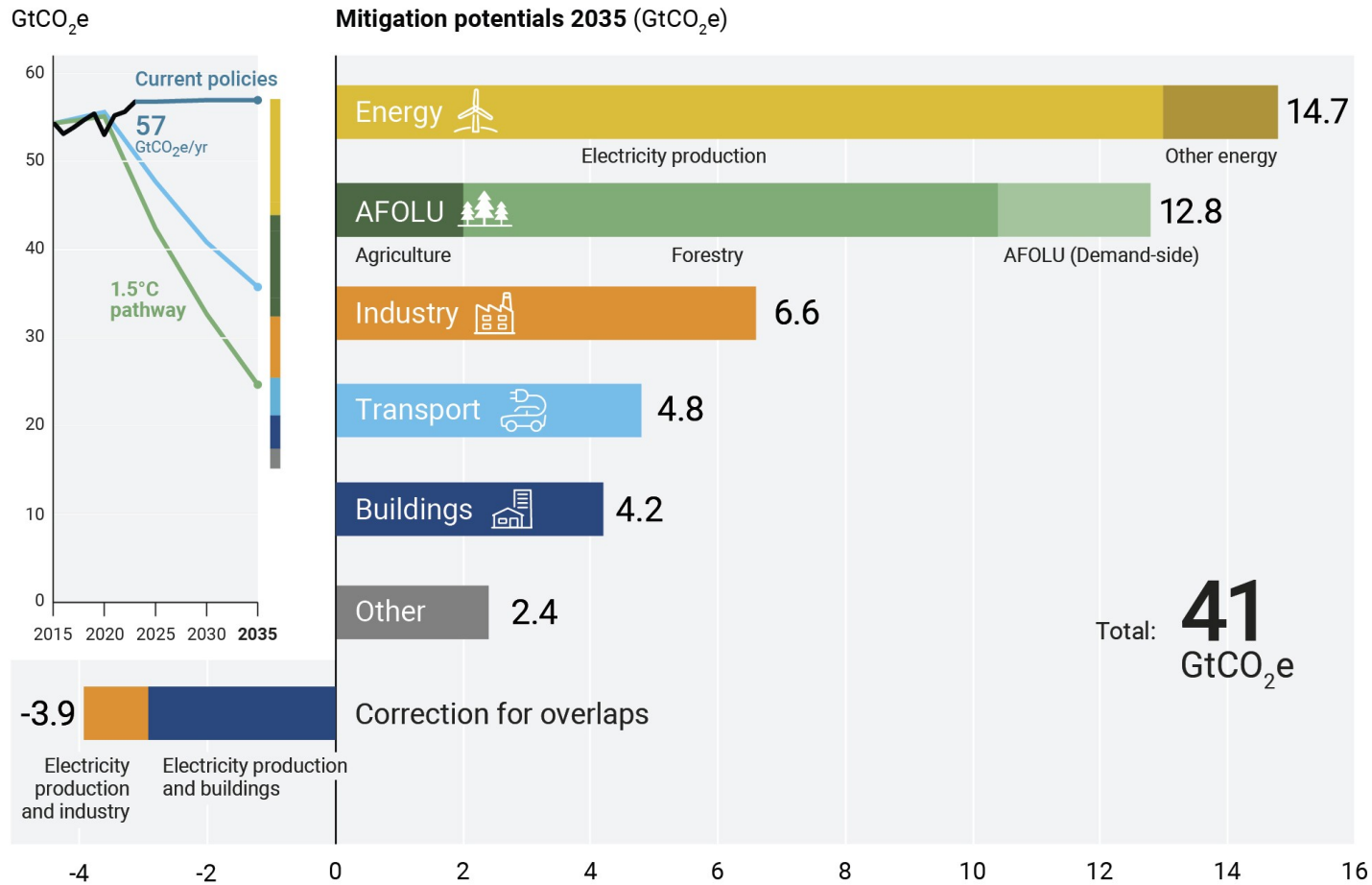
**G20: Cost-effective ranges**



- G20 NDC target for 2030 neither aligned with cost-effective nor with fair-share 2°C and 1.5°C ranges
- Some G20 members will need to cut their emissions faster than others
- Stronger international cooperation and support, including climate finance essential

\*Excluding the African Union, and excluding LULUCF

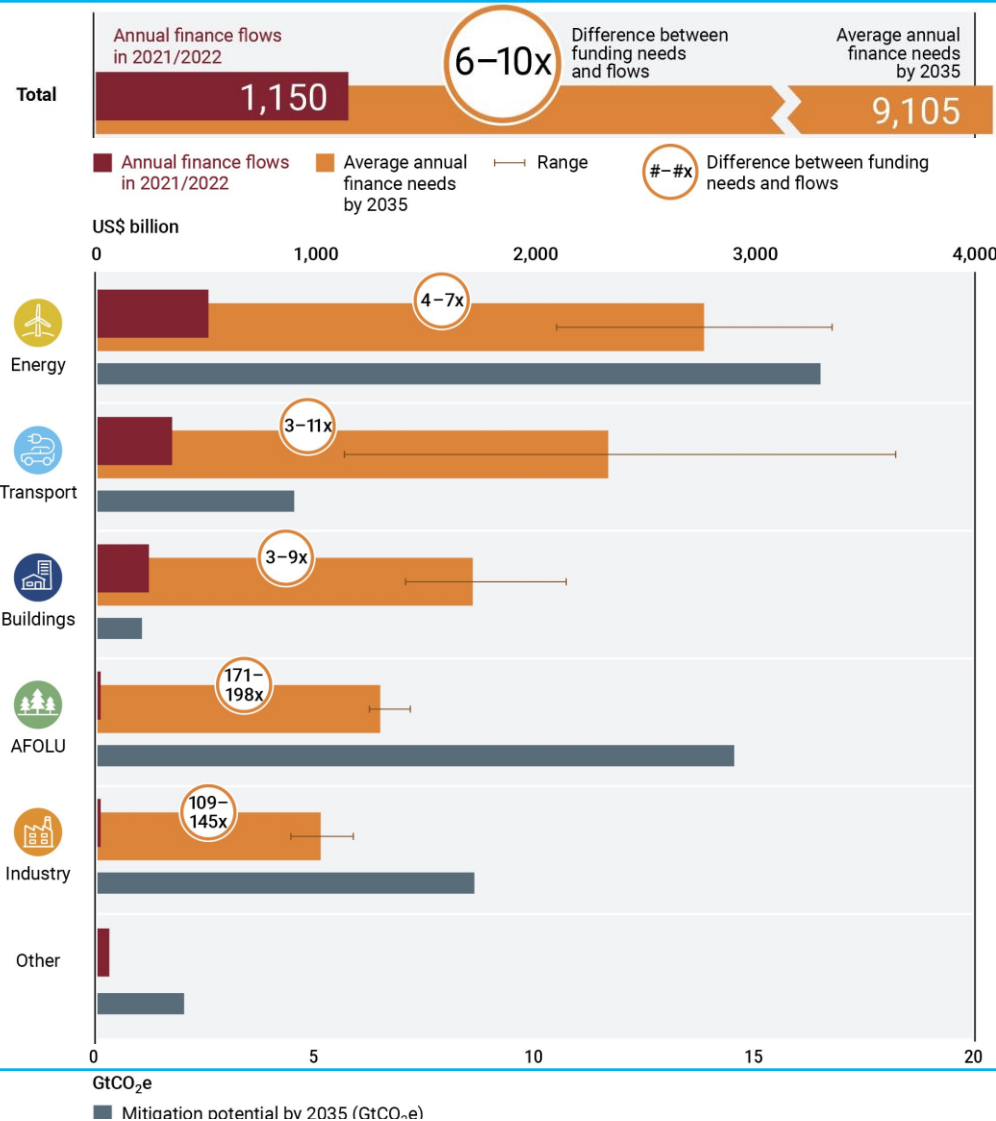
# The sectoral mitigation potential is sufficient to bridge the emissions gap



- Total mitigation potential about twice what is required for 2°C-alignment and about 30% above 1.5°C-alignment requirements for 2030 and 2035
- Options in wind, solar PV and forestry alone account for about half the potential
- Demand-side and efficiency measures, and electrification and fuel switching in buildings, transport and industry sectors important
- Realizing the potentials requires overcoming persisting challenges and massively boosting policies, support and finance

**Note:** techno-economic mitigation potential at costs <US\$200/tCO<sub>2</sub>e  
Half of the total potential available at costs <US\$20/tCO<sub>2</sub>e

# At least a sixfold increase in investment required for 1.5°C alignment



- Only US\$0.9 trillion to US\$2.1 trillion annually would be incremental, manageable within the US\$110 trillion global economy
- Large differences between funding needs and flows across sectors and geographies
- A shift in investment patterns, directing international funding towards emerging market and developing economies (EMDEs) outside of China is essential.
- Next NDCs: EMDEs can detail the means of implementation needed, including international support and finance to achieve ambitious NDC targets for 2035

# Checklist for the next NDCs due in 2025



**Meet the highest standards:** include all gases listed in the Kyoto Protocol, cover all sectors, set specific, quantitative targets in relation to a base year, describe mechanisms for review and accountability.



**Accelerate mitigation action now and set significantly more ambitious mitigation targets for 2035,** consider sectoral benchmarks and all mitigation options and potentials relevant in national contexts.



**Be transparent and clear** about how the NDC reflects both a fair share and the highest possible ambition, and how it is aligned with 1.5°C and a net-zero transition.



**Explain how the NDC contributes to the outcome of the first global stocktake,** including tripling renewable energy deployment and doubling annual energy efficiency rates by 2030 and to transitioning away from fossil fuels.



**Be explicit about conditional and unconditional elements, and provide details on the means of implementation needed,** including institutional and policy change, as well as international support and finance required to achieve ambitious NDC targets for 2035.





# A quantum leap in ambition is needed, but ambition means nothing without action

Unless global emissions in 2030 are brought below levels implied by existing policies and current NDCs, it will become impossible to get on a pathway that limits global warming to 1.5°C with no or limited overshoot, and strongly increase the challenge of limiting warming to below 2°C



# Thank you

on behalf of the 58 authors, the  
13 steering committee members  
and the production team of the report

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