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The Gap Between Climate Ambitions and Energy Realities

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60th Anniversary

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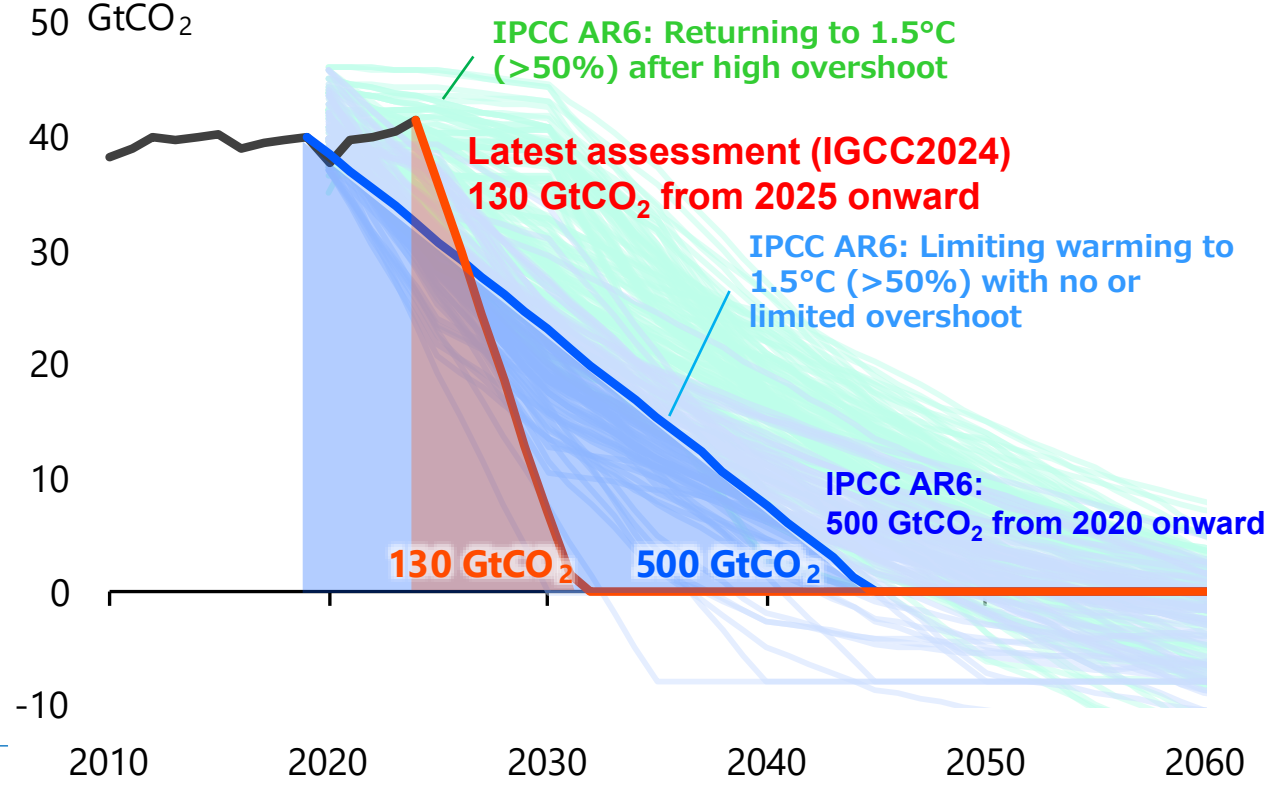
1.5℃ target practically unattainable

Remaining carbon budgets toward 1.5℃ with a 50% probability

- ✓ **The IPCC AR6: 500 $GtCO_2$** from 2020 onward
- ✓ **The latest assessment: 130 $GtCO_2$** from 2025 onward (IGCC2024)
  - Less than four years' worth of current emissions, requiring net-zero by 2032.

CO_2 emissions pathway consistent with the 1.5°C target



500 $GtCO_2$

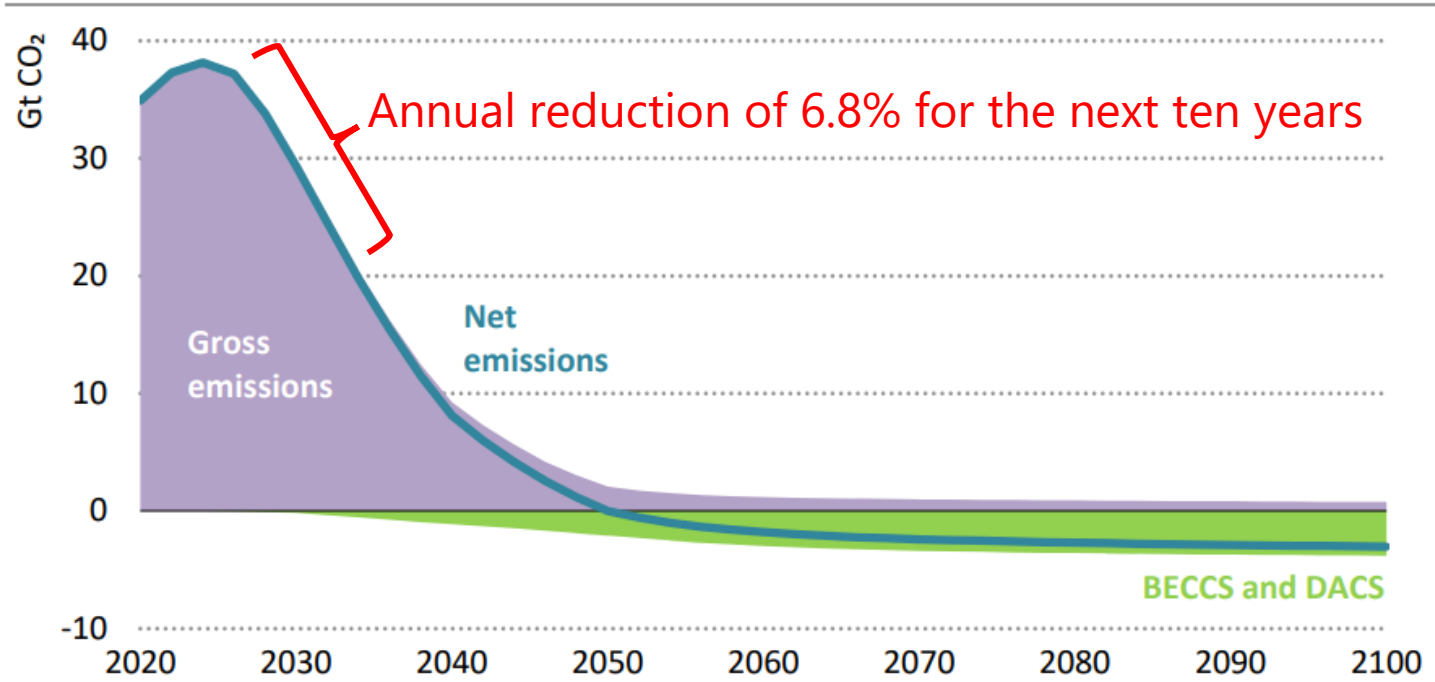
- Minus 200 $GtCO_2$ in emissions from 2020 to 2024
- Minus just over 100 $GtCO_2$ due to the reduction of aerosols with cooling effect
- Minus about 40 $GtCO_2$ due to high temperatures over the past few years

Gives us **130 $GtCO_2$**

1.5℃ target : What if high overshoot is allowed?

- ✓ IEA's NZE Scenario (WEO2025) :
  - Above 1.6℃ for almost 30 years with peak of around 1.65 ℃
  - Above 1.5℃ for around 55 years
  - Falls back below 1.5℃ in 2100
- ✓ CO_2 emissions need to be reduced by more than half **by 2035 with CAAGR -6.8%**. Emissions reduced by **-5.2% in 2020 under COVID 19**. Still inconceivable.

Figure 7.8 ▷ Global gross and net energy-related CO_2 emissions in the NZE Scenario, 2020-2100

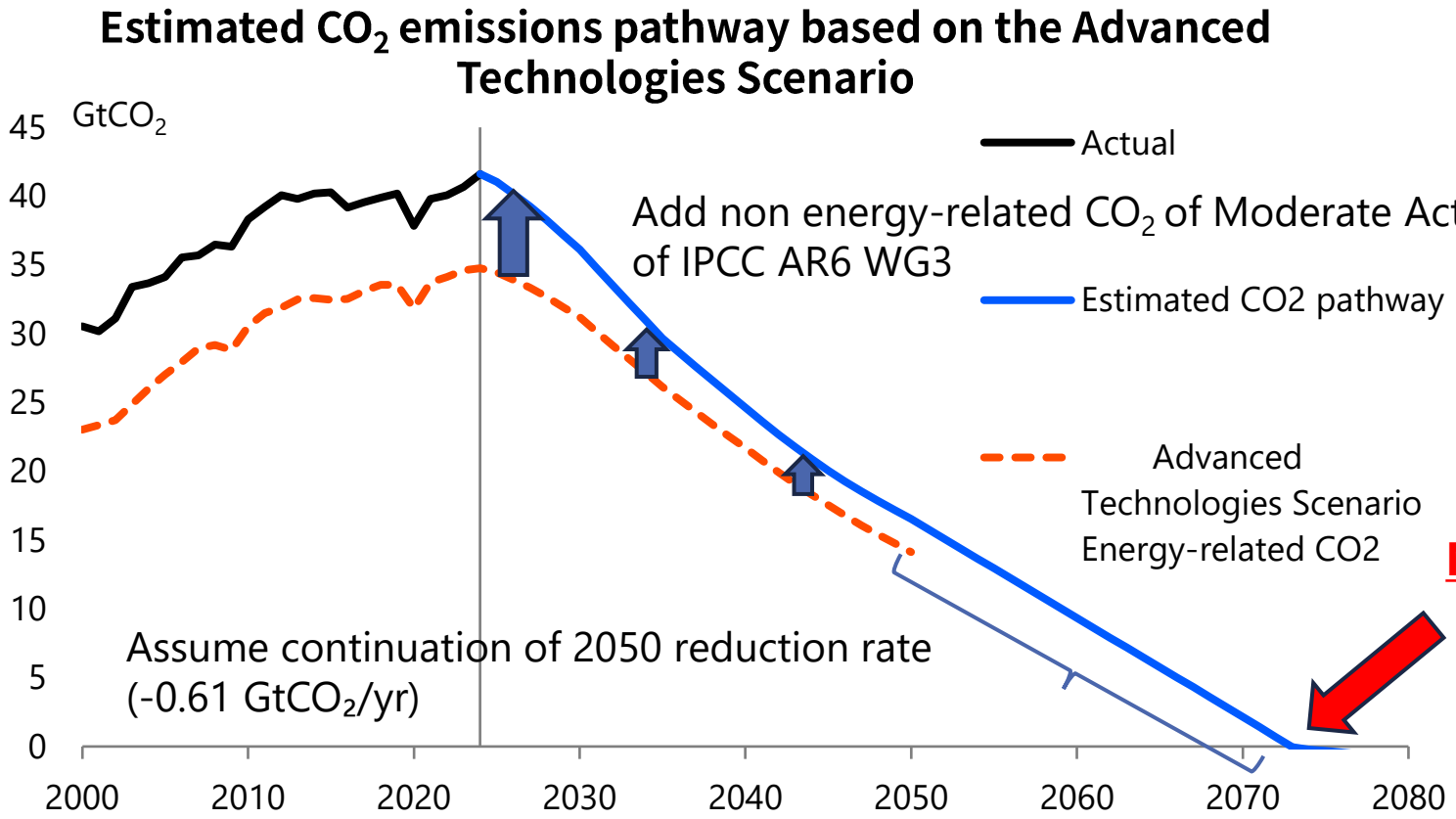


(Source) IEA、WEO2025

Comparison of the Advanced Technologies Scenario (ATS) and the 2 ℃ target (CO_2 emissions pathway)

✓ Two IEEJ Outlook scenarios:

- **ATS: Maximum feasible efforts for energy security and climate goal (what temperature rise?)**
- REF: Continuation of historical trends



Net-zero in 2073

In IPCC AR6, the CO2 emissions pathways for 2℃ with a 67% probability achieves net-zero around 2070 to 2080.

Comparison of the Advanced Technologies Scenario and the 2℃ target (carbon budget)

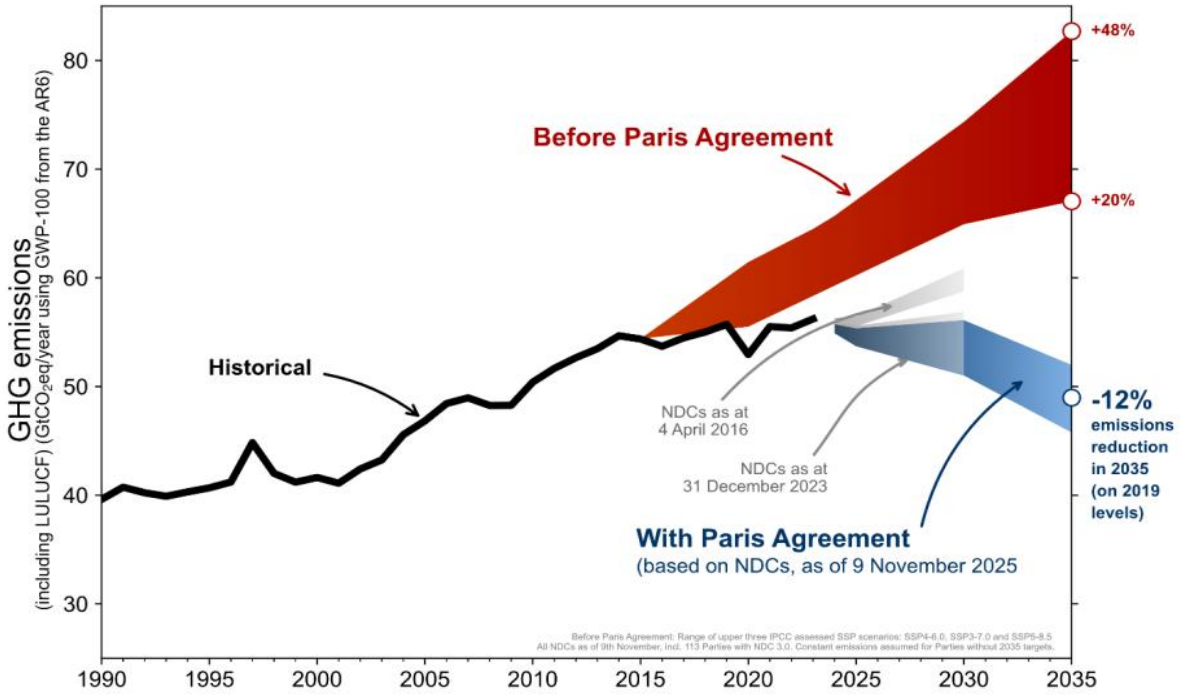
- ✓ Carbon budget under ATS is **lower than other estimates to limit global temperature rise to 2 ℃ with 50% probability.**
- ✓ However, it **slightly exceeds IGCC 2024 estimate for 2 ℃ target with 67% probability**. It remains crucial to pursue reduction potentials exceeding ATS.

Scenarios		Cumulative CO_2 from 2025 onwards ($GtCO_2$)
Estimated pathway (cumulative to net-zero)		**906**
2℃ with 50% probability	IPCC AR6 SYR (Starting point adjusted)	1,150
	GCB2024	1,110
	IGCC2024	1,050
2℃ with 67% probability	IPCC AR6 SYR (Starting point adjusted)	950
	GCB2024	NA
	IGCC2024	870

- ✓ Note:
  - Since the IPCC AR6 SYR budget starts in 2020, the value is listed after deducting 200 $GtCO_2$ emissions for 5 years from 2020 to 2024.
  - GCB (Global Carbon Budget) and IGCC (Indicators of Global Climate Change) are international research projects, updated annually.

Gap between ambition and commitments

- ✓ Emissions pathway based upon **new NDCs of 113 countries** who submitted before COP30
  - Great progress compared with “Before PA”
  - But **far away from 1.5℃ pathway: 60% reduction by 2035 compared with 2019**
  - Not consistent even with 2℃ pathway



- ✓ **Some G7 countries seem to have adjusted their commitments from G7 agreement in 2024**, “Our goal remains unchanged ……. by 60% by 2035, relative to the 2019 level.”
- ✓ Even the EU is adjusting its policies.

	2030 NDC2.0	2035 NDC3.0	2035 (relative to 2019)
Canada	▲40%～▲45% Relative to 2005	▲45%～▲50% Relative to 2005	▲44%～▲49%
EU	▲55% relative to 1990	▲66.25%～▲72.5% relative to 1990	▲54%～▲62%
Japan	▲46% relative to 2013	▲60% relative to 2013	▲54%
UK	▲68% relative to 1990	▲81% relative to 1990	▲66%

What about companies? Japanese leadership?

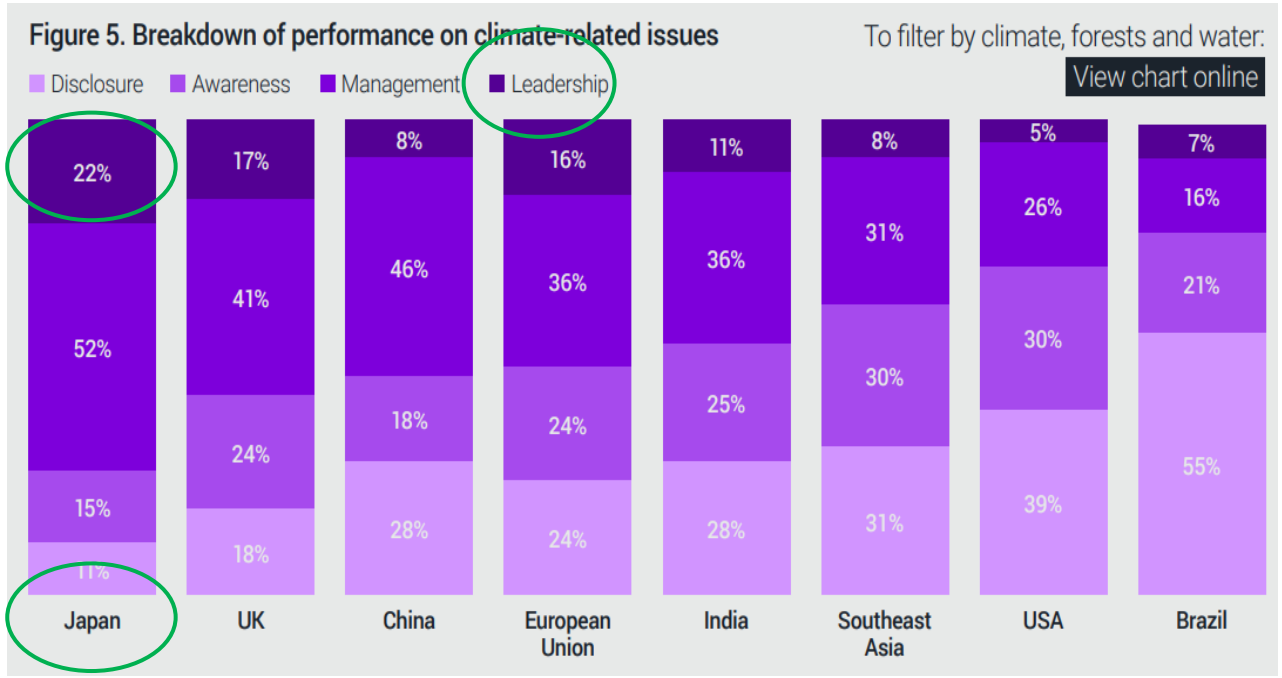
✓ **SBTi** (Science Based Targets)

- Among about 11,000 companies with validated SBTi targets, **Japanese companies lead the highest share at around 2,100 (20%).**
- **Among the 1595 companies which left SBTi since 2019, the number of Japanese companies is just 37 (2%)**. Most of these companies, including major American and European ones, could not meet the requirements of SBTi.

✓ **CDP** (Climate Disclosure Project)

- CDP discloses climate-related information of over 22,000 global companies.
- In its report (Jan. 2026), CDP **ranked Japan at top** in terms of percentage of the highest-level performance.

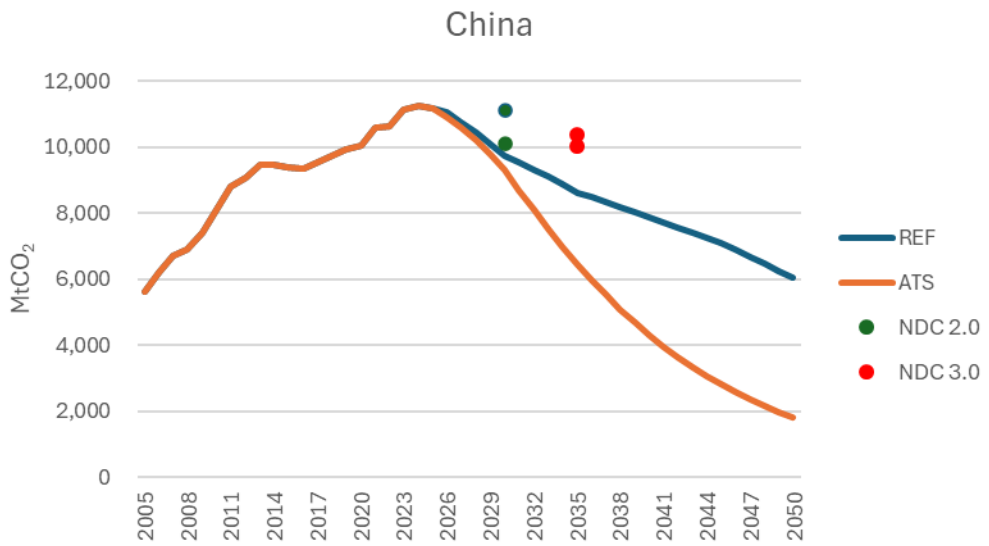
How should we see these?



Source: SBTi database, Corporate Health Check 2026, CDP

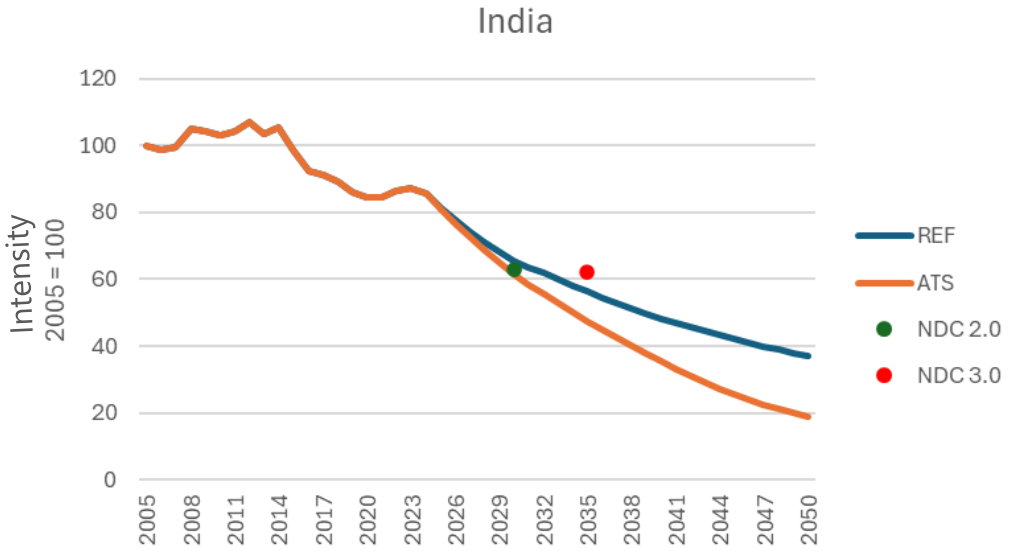
Emerging economies: China and India

- ✓ **China's new NDC**: 7-10% GHG emissions reduction from peak by 2035 is **well above REF scenario.**



Note: The same emissions reduction target by 2035 was assumed for energy-related CO_2.

- ✓ **India's new NDC**: 47% GHG emissions intensity per GDP reduction by 2035 from 2005 is also **above REF scenario**.

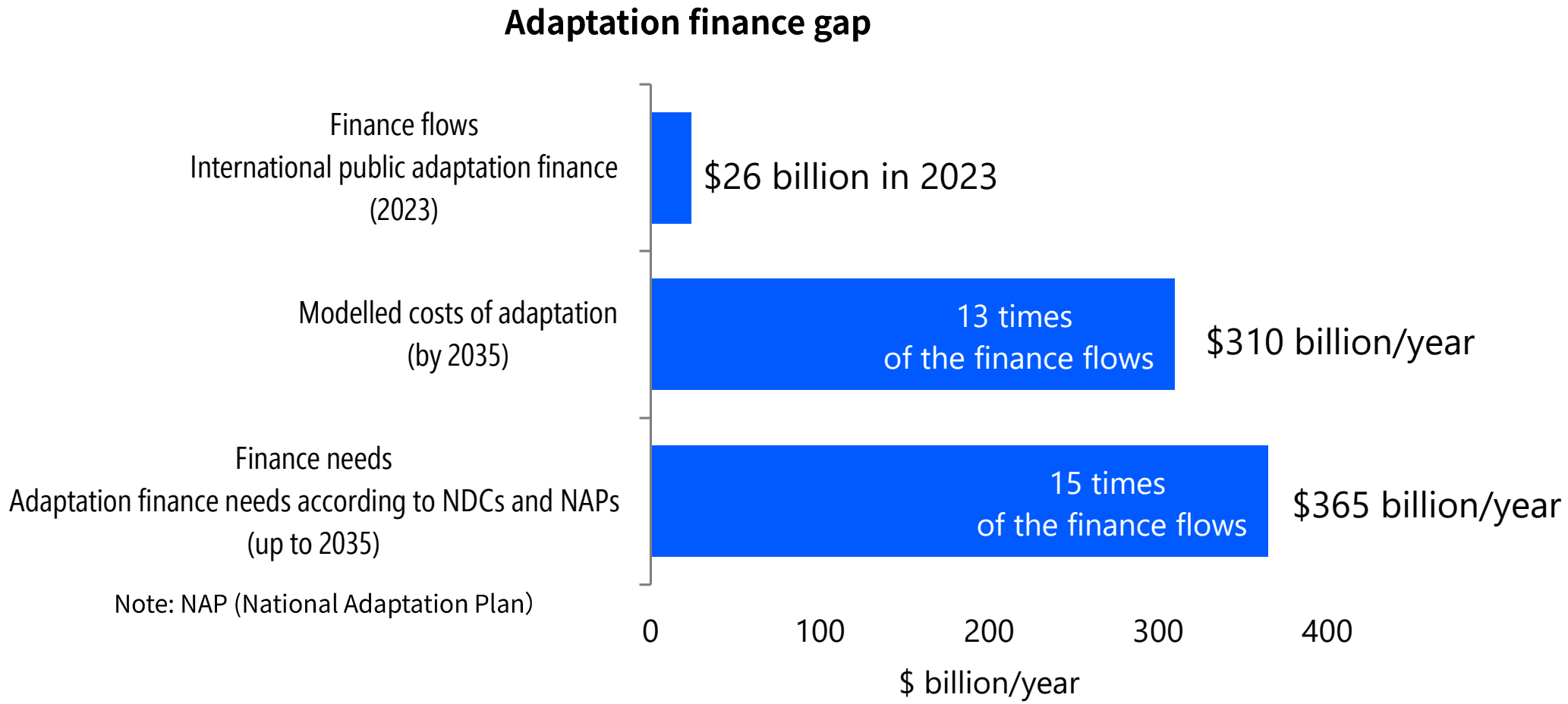


Note: Energy-related CO_2 intensity target was calculated from the past correlation between GHG and energy-related CO_2 emissions.

- ✓ China's 15th Five-Year Plan implies that its GHG emissions will not peak until 2030.
- ✓ India's energy-related emissions will grow by around 48% by 2035, compared with 2023.

To face the reality, adaptation is a key. But the adaptation finance gap is substantial.

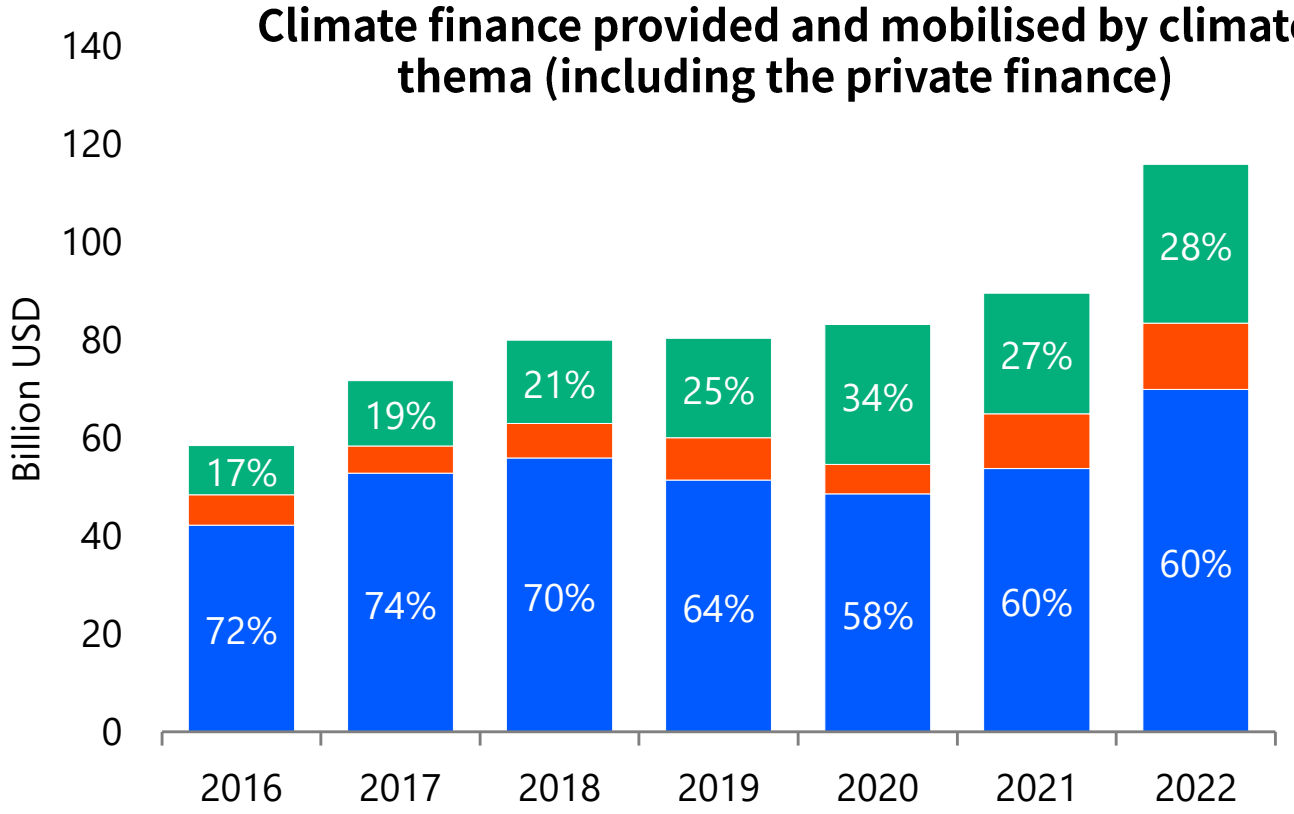
✓ Closing this gap is a priority.



Source: Created from UNEP (2025), Adaptation Gap Report 2025.

Balance between adaptation and mitigation finance

- ✓ Art. 9.4 of the Paris Agreement states, "The provision of scaled-up **financial resources** should aim to **achieve a balance between adaptation and mitigation**". But it is unbalanced.
- ✓ Given COP 29 & 30 agreements, it will remain unbalanced.



Climate finance: COP29 agreed "at least $300 billion per year **by 2035**", **tripling the previous target.**

Adaptation finance: COP30 agreed "at least **triple adaptation finance by 2035.**"

Source: Created from OECD (2024), Climate Finance Provided and Mobilised by Developed Countries in 2013–2022.

Summary

- ✓ The remaining carbon budget to achieve the 1.5°C target is rapidly depleting, and it is time to take the 2°C target as a realistic target.
- ✓ Narrative is important. This does not necessarily mean step-back but rather return to the original objective of the Paris Agreement.
- ✓ ATS is consistent with 2°C target. It is a forward-casting scenario and can serve as a milestone for future efforts grounded in reality.
- ✓ Commitments are not consistent even with 2°C target. Only with our maximum efforts, can 2°C be within reach.
- ✓ On adaptation, a large financial gap between what is needed and provided has to be filled. Balance between mitigation and adaptation finance should be revisited.