



## **Corrigendum to “Indicators of Global Climate Change 2024: annual update of key indicators of the state of the climate system and human influence” published in Earth Syst. Sci. Data, 17, 2641–2680, 2025**

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This corrigendum is necessary to make consistent estimates of the remaining carbon budget (RCB) across annual updates. Remaining carbon budget estimates in Table 8 of the 2024 Indicators of Global Climate Change (IGCC 2024) (Forster et al., 2025) started from observed global warming over the 2015–2024 period whereas IPCC (Rogelj et al., 2018; Canadell et al., 2021) and previous iterations of the Indicators of Global Climate Change (Forster et al., 2024) used the human-attributable global warming estimate over that period.

For consistent comparison across years and reports, we here provide the RCB estimates starting from the human-attributable global warming estimate over the 2015–2024 period reported in IGCC 2024. The calculation is documented at Lamboll (2026).

Note that values in Table 8 in Forster et al. (2025) are also expressed relative to the start of 2025.

The comparison values provided in the updated Table 8 do not change the conclusions of the original paper.

**Table 8.** Estimates of the remaining carbon budget for 1.5, 1.6, 1.7 and 2.0 °C, for five levels of likelihood, considering only uncertainty in TCRE. Estimates are expressed relative to the start of 2025. The probability includes only the uncertainty in how the Earth immediately responds to CO<sub>2</sub> emissions (TCRE), not long-term committed warming or uncertainty in the climate response to other non-CO<sub>2</sub> emissions. All values are rounded to the nearest 10 Gt CO<sub>2</sub>.

Temperature (°C)	Estimated remaining carbon budgets from the beginning of 2025 (Gt CO <sub>2</sub> )				
Avoidance probability:	17 %	33 %	50 %	67 %	83 %
1.5	380	240	160	110	60
1.6	680	460	350	260	190
1.7	970	690	530	420	320
2	1850	1350	1080	890	720

For context, the statement in Forster et al. (2025) that notes “that the 50 % RCB estimate of 130 Gt CO<sub>2</sub> would be exhausted in a little more than 3 years if global CO<sub>2</sub> emissions remain at 2024 levels” would translate based on the updated Table 8 values to “the 50 % RCB estimate of 160 Gt CO<sub>2</sub> would be exhausted in a little more than 4 years if global CO<sub>2</sub> emissions remain at 2024 levels”.

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