

# What does the IPCC say about the remaining CO<sub>2</sub> budgets?

The United Nations Intergovernmental Panel on Climate Change (IPCC) published the following table in its 2018 Special Report ([IPCC SR1.5 2018](#), Chapter 2, table 2.2., p. 108):

Additional Warming since 2006–2015 [°C] <sup>*(1)</sup>	Approximate Warming since 1850–1900 [°C] <sup>*(1)</sup>	Remaining Carbon Budget (Excluding Additional Earth System Feedbacks <sup>*(5)</sup> ) [GtCO <sub>2</sub> from 1.1.2018] <sup>*(2)</sup>			Key Uncertainties and Variations <sup>*(4)</sup>					
		Percentiles of TCRE <sup>*(3)</sup>			Earth System Feedbacks <sup>*(5)</sup>	Non-CO <sub>2</sub> scenario variation <sup>*(6)</sup>	Non-CO <sub>2</sub> forcing and response uncertainty	TCRE distribution uncertainty <sup>*(7)</sup>	Historical temperature uncertainty <sup>*(1)</sup>	Recent emissions uncertainty <sup>*(8)</sup>
		33rd	50th	67th	[GtCO <sub>2</sub> ]	[GtCO <sub>2</sub> ]	[GtCO <sub>2</sub> ]	[GtCO <sub>2</sub> ]	[GtCO <sub>2</sub> ]	[GtCO <sub>2</sub> ]
0.3		290	160	80	Budgets on the left are reduced by about –100 on centennial time scales	±250	–400 to +200	+100 to +200	±250	±20
0.4		530	350	230						
0.5		770	530	380						
0.53	~1.5°C	840	580	420						
0.6		1010	710	530						
0.63		1080	770	570						
0.7		1240	900	680						
0.78		1440	1040	800						
0.8		1480	1080	830						
0.9		1720	1260	980						
1		1960	1450	1130						
1.03	~2°C	2030	1500	1170						
1.1		2200	1630	1280						
1.13		2270	1690	1320						
1.2		2440	1820	1430						

In the 'Summary for Policymakers' the IPCC writes ([IPCC SR1.5 2018](#), SPM, p. 14, emphasis and [from 2018] not in the original):

*"C.1.3 Limiting global warming requires limiting the total cumulative global anthropogenic emissions of CO<sub>2</sub> since the preindustrial period, that is, staying within a total carbon budget (high confidence). (...) The associated remaining budget is being depleted by current emissions of 42 ± 3 GtCO<sub>2</sub> per year (high confidence). (...) Using global mean surface air temperature (...) gives an estimate of the remaining carbon budget [from 2018] of 580 GtCO<sub>2</sub> for a 50% probability of limiting warming to 1.5°C, and 420 GtCO<sub>2</sub> for a 66% probability (medium confidence). (...) Uncertainties in the size of these estimated remaining carbon budgets are substantial and depend on several factors. (...)."*

The following table is an extract from table 2.2.

Approximate Warming since 1850 – 1900 [°C]	Remaining Carbon Budget [GtCO <sub>2</sub> from 1.1.2018]	
	Probability	
	50%	67%
~ 1.50	580	420
~ 1.57	710	530
~ 1.60	770	570
~ 1.67	900	680
~ 1.75	1040	800