

# Just years to curb global warming

Without rapid carbon dioxide emission cuts, the world has only a 50% chance of limiting global temperature rises to 1.5°C above preindustrial levels before 2030, according to a new study

Global mean temperature increase (degrees Celsius\*)

2030-2046  
**+2.00°C**

2021-2029  
**+1.50°C**

2000-2020  
**+0.8°C**

2020: Second warmest year since 1880.  
Just 0.02°C below record of +1.00°C set in 2016

1880-1999  
**+0.41°C**

\*land and ocean combined above long-term average

†1 gigatonne (GT) is unit of mass equal to 1 billion tonnes

Carbon budget (estimate of CO<sub>2</sub> emissions to limit global warming, gigatonnes†)

1,200

**2046** Budget for 50% chance of limiting warming to 2°C will be used up if CO<sub>2</sub> emissions remain at current levels

250

680

**2029** Budget for 50% chance of limiting warming to 1.5°C will be exhausted if CO<sub>2</sub> emissions remain at 2022 levels of around 40GT per year

1,010

**+0.08°C**  
Global annual temperature increase per decade since 1880