

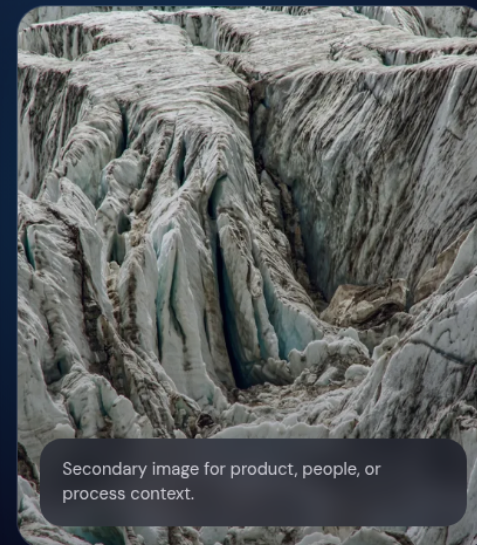
176 years of global temperature

NOAA's annual global temperature anomalies from 1850 to 2025, compared with the 20th-century average. The three warmest years in the record are 2024, 2023 and 2025.

NOAA GCAG

annual.csv

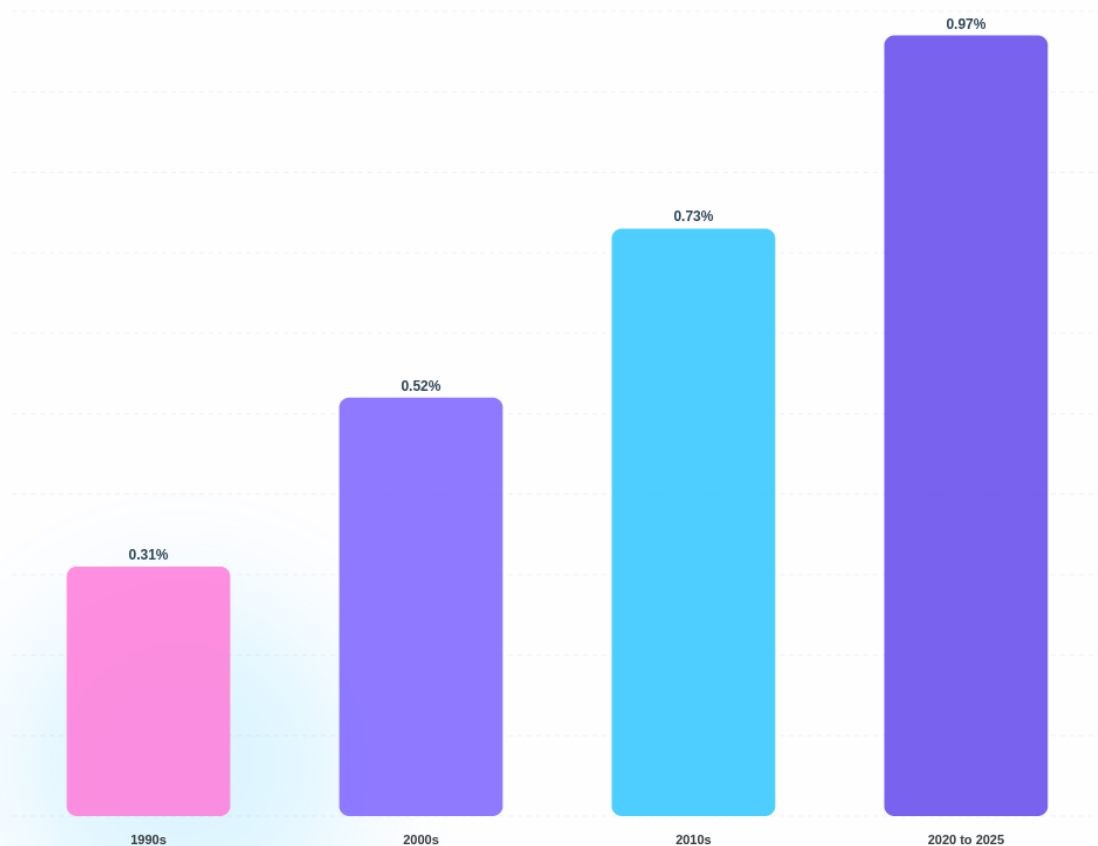
1850 to 2025



Each decade warmer than the last

Decade average anomaly

DEG C



Mean annual anomaly in degrees C, relative to the 1901 to 2000 average.

Core Analysis

About +0.2 a decade

Each step from the 1990s on is 0.2 to 0.25 degrees.

No cool years

Every year since 1977 is above the 20th-century average.

Partial decade

The 2020s bar uses six full years, 2020 to 2025.



THRESHOLDS

When the record crossed each line

First year the annual anomaly went above each level.



1850

Record starts

Anomaly of -0.43°C ; the 1850 to 1900 mean is -0.36°C .



1977

Last year at or below zero ends

From here on, every year is above the century average.



1998

First year above $+0.5$

A strong El Nino year.



2023

First year above $+1.0$

$+1.11^{\circ}\text{C}$, followed by $+1.17^{\circ}\text{C}$ in 2024.

Against the 1850 to 1900 mean, **2024 was about 1.53°C warmer** in this series.

DATA TO 2025

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The four warmest years on record

Sorted by annual anomaly. The 2026 row is year to date and left out.

RANK	YEAR	ANOMALY	VS 1850 TO 1900
1	2024	+1.17 C	+1.53 C
2	2023	+1.11 C	+1.47 C
3	2025	+1.05 C	+1.41 C
4	2016	+0.92 C	+1.28 C

The top three years are the last three full years in the file.



METHOD

How this deck was made from one CSV

The file is `annual.csv` from `github.com/datasets/global-temp`, with columns `Source`, `Year` and `Mean`. Only the GCAG rows (NOAA) were used; the GISTEMP rows use a different baseline.

Filter

Source equals GCAG, years 1850 to 2025.

Aggregate

Decade means with a `groupby` on year divided by 10.

Rebase

Subtract the 1850 to 1900 mean of -0.357 C for the pre-industrial view.

Every value on these slides can be recomputed from the public file in under a minute.

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