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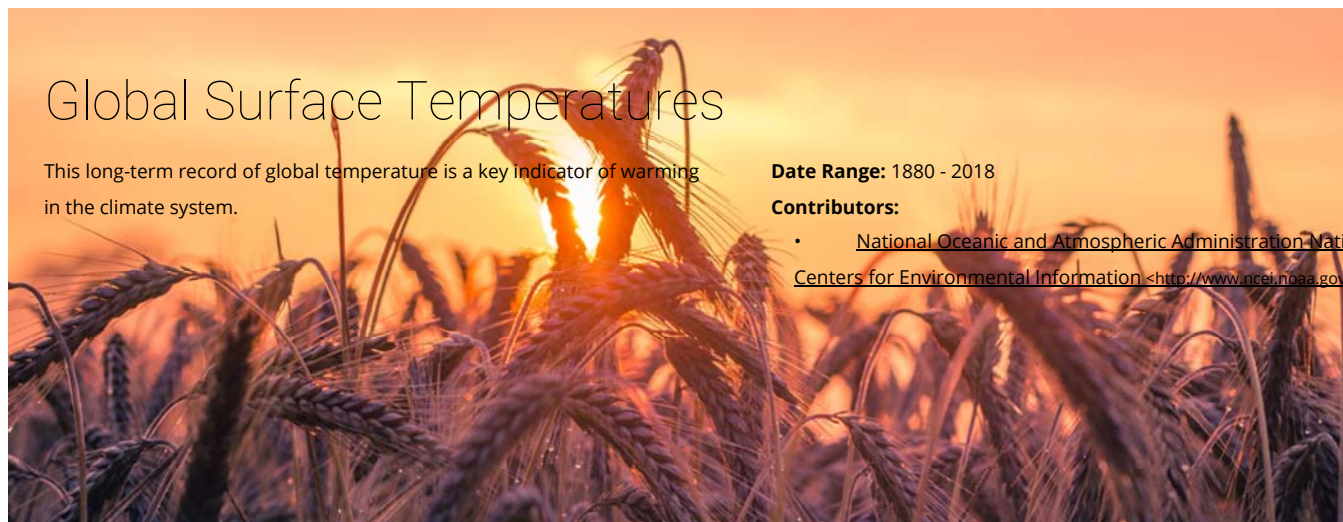
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# Global Surface Temperatures

This long-term record of global temperature is a key indicator of warming in the climate system.

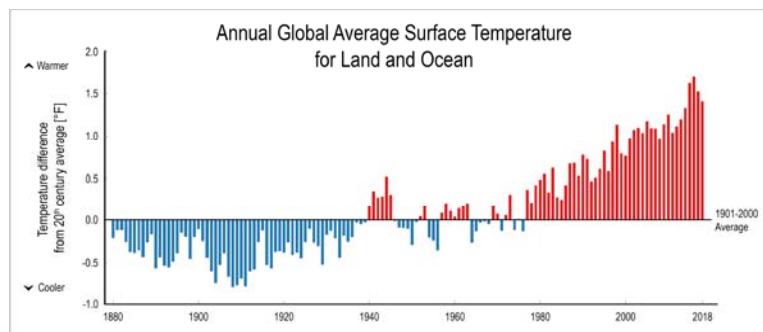
**Date Range:** 1880 - 2018

**Contributors:**

- [National Oceanic and Atmospheric Administration National Centers for Environmental Information](#) <http://www.ncel.noaa.gov/>

## Land and ocean surface temperatures are increasing

Since 1880's, the average global temperature has increased by more than 1.5°F. Since the 1980's, average temperatures have exceeded the last century's average every year.



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*The bars on the graph show the number of degrees by which the average global temperature for each year differs from the average global temperature during the last century (1901-2000).*

## About Global Surface Temperatures

Global average temperatures include air temperatures measured on land and sea surface temperatures measured from ships and buoys worldwide. The data shown in the graph were drawn from the National Oceanic and Atmospheric Administration (NOAA) Global Historical Climatology Network (GHCN) and International Comprehensive Ocean-Atmosphere Data Set (ICOADS).

### Related Resources

- [Climate.gov Climate Change: Global Temperature](https://nca2014.globalchange.gov/highlights/regions/southwest#graphic-20925) <https://nca2014.globalchange.gov/highlights/regions/southwest#graphic-20925>
- [Climate.gov Global Climate Dashboard](https://nca2014.globalchange.gov/highlights/regions/southwest#graphic-20925) <https://nca2014.globalchange.gov/highlights/regions/southwest#graphic-20925>
- [EPA Climate Change Indicators: U.S. and Global Temperature](https://www.epa.gov/climate-indicators/climate-change-indicators-us-and-global-temperature) <https://www.epa.gov/climate-indicators/climate-change-indicators-us-and-global-temperature>
- [NASA Global Temperature](https://climate.nasa.gov/vital-signs/global-temperature/) <https://climate.nasa.gov/vital-signs/global-temperature/>
- [NOAA Climate at a Glance](https://www.ncdc.noaa.gov/cag/global/time-series/globe/land_ocean/yt/12/1880-2016) <https://www.ncdc.noaa.gov/cag/global/time-series/globe/land\_ocean/yt/12/1880-2016>

#### WHY IT'S IMPORTANT

- Changes in global temperatures over the past century provide one important line of evidence for the effects of increasing greenhouse gas emissions. Such evidence can inform national and international policy discussions.

## Explore USGCRP Indicators



Annual Greenhouse Gas Index



Arctic Sea Ice Extent

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### Select USGCRP Products

- [USGCRP Indicators Fact Sheet](https://www.globalchange.gov/sites/globalchange/files/usgcrp%20indicators_march2018-final_newsletter%20version_23may18.pdf) <https://www.globalchange.gov/sites/globalchange/files/usgcrp%20indicators\_march2018-final\_newsletter%20version\_23may18.pdf>
- [Fourth National Climate Assessment](https://nca2018.globalchange.gov/) <https://nca2018.globalchange.gov/>
- [Climate Science Special Report](https://science2017.globalchange.gov/) <https://science2017.globalchange.gov/>

### Indicator Announcements and Opportunities

- [Upcoming Workshop on Social Indicators](https://www.sesync.org/project/propose-a-workshop/socio-environmental-systems-indicators-for-climate-change-adaptation) <https://www.sesync.org/project/propose-a-workshop/socio-environmental-systems-indicators-for-climate-change-adaptation>
- [Arctic Observing Network](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503222) <https://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=503222>
- [NOAA Funding Opportunities for Developing Indicators \(FY19 NOAA/CPO/MAPP\)](https://cpo.noaa.gov/portals/0/grants/2019/mapp_fy19_programinformationsheet_projectionsjune26.pdf) <https://cpo.noaa.gov/portals/0/grants/2019/mapp\_fy19\_programinformationsheet\_projectionsjune26.pdf>

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