Climate Change Science Overview

ON THIS PAGE

- Earth's climate is changing
- Natural causes alone cannot explain recent changes
- Human causes can explain these changes
- Climate will continue to change unless we reduce our emissions
- Climate change impacts our health, environment, and economy

Earth's climate is changing. Multiple lines of evidence show changes in our weather, oceans, ecosystems, and more.

Natural causes alone cannot explain all of these changes. Human activities are contributing to climate change, primarily by releasing billions of tons of carbon dioxide (CO_2) and other heat-trapping gases, known as greenhouse gases, into the atmosphere every year. [1]

Climate changes will continue into the future. The more greenhouse gases we emit, the larger future climate changes will be.

Human activities, like driving, manufacturing, electricity generation, and the clearing of forests contribute to greenhouse gas emissions and warm the planet.
Sources: EPA 2010, EPA 2011, USGCRP 2008 (243 pp, 17.19MB, About PDF)

Changes in the climate system affect our health, environment, and economy. We can prepare for some of the impacts of climate change to reduce their effects on our well-being.

Earth's climate is changing

The global average temperature has increased by more than 1.5°F since the late

Related Links:
- U.S. National Climate

These pages from the United States Environmental Protection Agency reflect many characteristics of effective sexy technical writing.

Observe here how the text is easy to read...clear and concise.

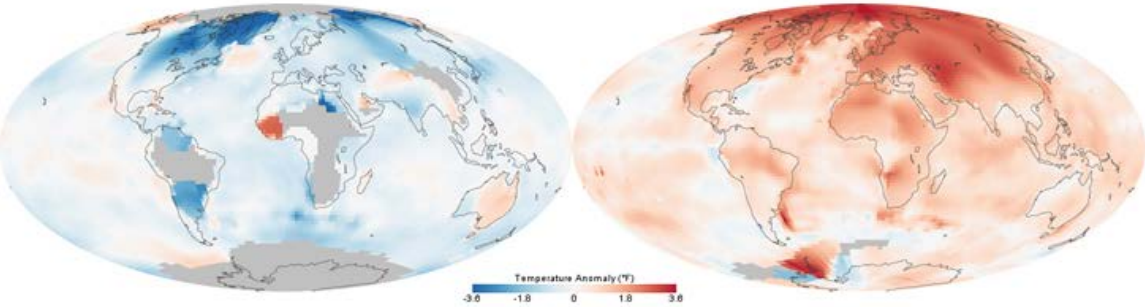
The use of images such as these provide information for the busy user of this document and clarify the content. Observe how the use of captions beneath the images further clarifies what they show for the reader's benefit.

1800s. [2] Some regions of the world have warmed by more than twice this amount. The buildup of greenhouse gases in our atmosphere and the warming of the planet are responsible for other changes, such as:

- Changing temperature and precipitation patterns [1] [2]
- Increases in ocean temperatures, sea level, and acidity
- Melting of glaciers and sea ice [1]
- Changes in the frequency, intensity, and duration of extreme weather events
- Shifts in ecosystem characteristics, like the length of the growing season, timing of flower blooms, and migration of birds
- Increasing threats to human health

Learn more about the indicators of climate change.

Assessment, 2014
- USGCRP *Global Climate Change Impacts in the United States*
- NRC America's Climate Choices Reports EXIT Disclaimer
- IPCC Fifth Assessment Report EXIT Disclaimer
- IPCC *Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation*, Summary for Policy Makers EXIT Disclaimer



View enlarged image

These maps show temperatures across the world in the 1880s (left) and the 1980s (right). Blue colors represent cooler temperatures compared with the average temperatures from 1951 to 1980, and red colors represent warmer temperatures compared to this average. The map on the left shows that it was colder in the 1880s in most places. The map on the right shows it was warmer in the 1980s in most places. Earth's average surface temperature has increased by more than 1.5°F since the 1880s. Two-thirds of the warming has occurred since 1975, at a rate of roughly 0.3°F–0.4°F per decade.
Source: NASA

Click on the image to open a pop-up that explains the differences between climate change and global warming.

The use of white space, text boxes in different colors, and a bulleted list all serve to make this document more readable! Reference documents in related links support the accuracy of the information.

Graphic elements such as these maps provide more information to the reader, making this document more comprehensive

Text below the graphics further explains them so that the content is complete.

Interactive elements like a pop up screen involve the reader and provide opportunities to have additional information.