



Climate Change 101

There is broad agreement in the scientific community that climate* change is real, happening now, and that it poses risk to life as we live it today. But how does it work and what is really happening in our region? The resources below are organized into three categories: climate change basics, expected impacts in Maine, and climate change around the globe.

This is a living collection of resources. If you know of materials or links you'd like to see on this page, please let us know by contacting us at

ABCD@belfastlibrary.org.

*Climate versus weather: Climate and weather both refer to atmospheric conditions, but there is a key difference. “Weather” refers to short term events or conditions. “Climate” refers to the longer term average of atmospheric conditions, practically speaking, the 30 year average of weather.

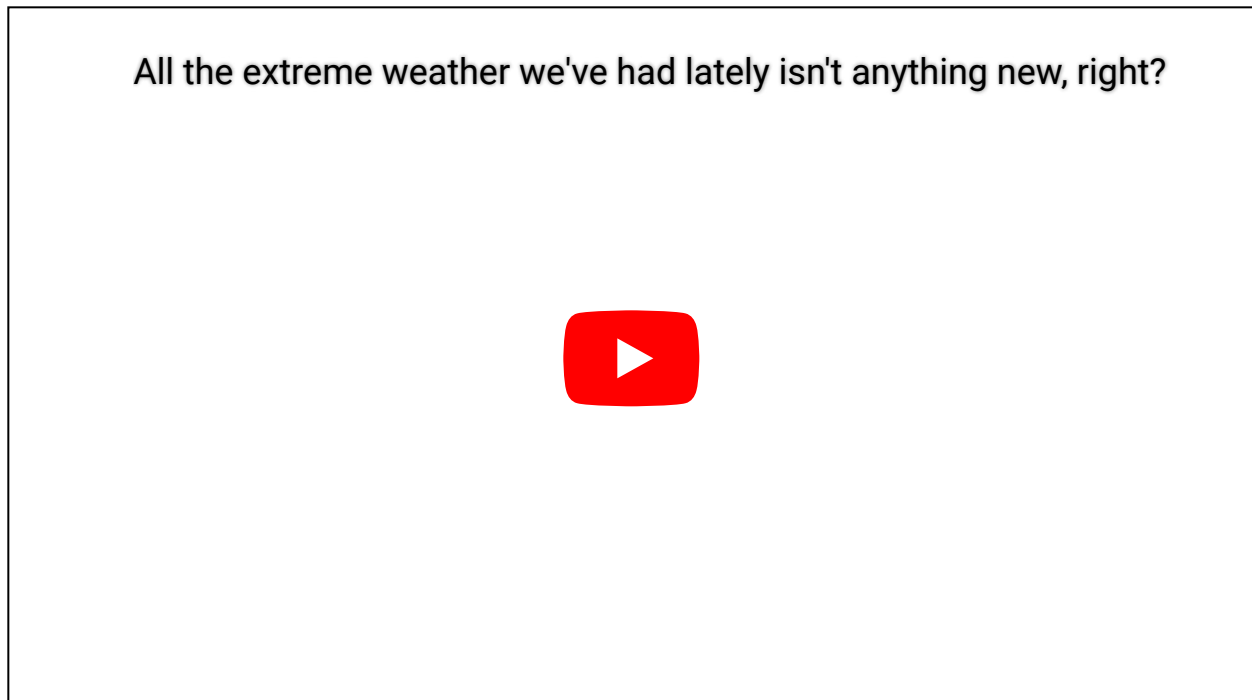
Climate Change Basics

Watch Dr. Katharine Hayhoe’s PBS Global Weirding series



[Just how long have we known about climate change anyways?](#)

Learn some surprising things about the history of climate change science.



All the extreme weather we've had lately isn't anything new, right?

Learn the key differences between climate change and weather, and learn more about why scientists are concerned.

I Live in the Eastern US - Does Climate Change Matter to Me? | Glob...



I Live in the Eastern US - Does Climate Change Matter to Me?

Climate change will not impact all regions of the globe in the same ways. Learn how climate change is expected to impact the East coast of the U.S.

International consensus



The Intergovernmental Panel on Climate Change (IPCC) - an international group of scientists - has been providing science-based assessments of climate change to policy makers regularly since 1988. In 2021 they released their sixth assessment report. Key findings include:

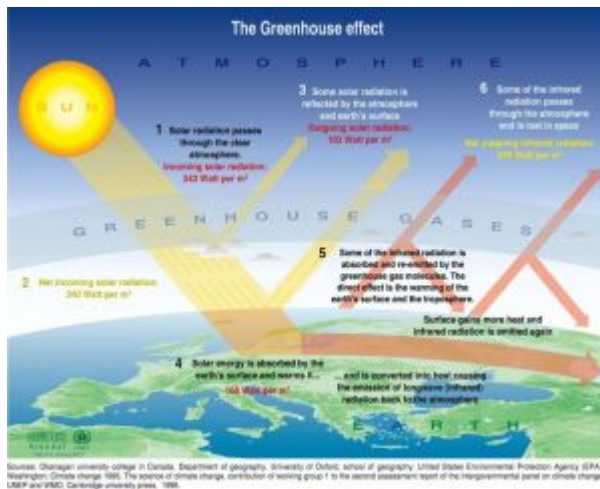
- Climate change is intensifying the water cycle. This brings more intense rainfall and associated flooding, as well as more intense drought in many regions.

- Coastal areas will see continued sea level rise throughout the 21st century, contributing to more frequent and severe coastal flooding in low-lying areas and coastal erosion.

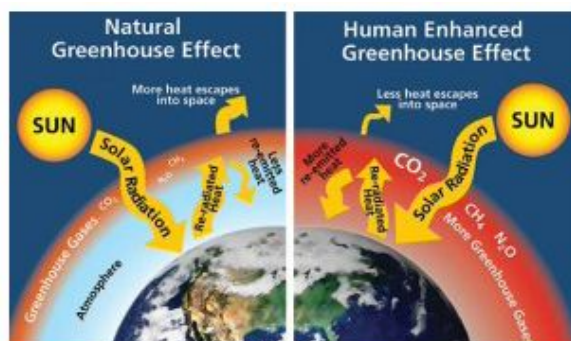
[Explore the IPCC's 6th Assessment Report website for details and supplementary materials.](#)

Illustrated overviews of climate change science

The following three overviews each present the basics of climate change, and represent the breadth of impacts and organizations responding. Each presents the same basic information, with the emphasis appropriate to its audience.



The [Climate Change 101: climate science basics](#) document presents a short and clear explanation of the mechanisms of climate change and its impacts, with links for more information. Created by the Public Health Institute's Center for Climate Change and Health, it emphasizes the ways that climate change impacts human health.



The [Land Trust Alliance](#) offers the basics with links for more information on the climate change impacts on various land types.

Greater concentrations of greenhouse gases mean more solar radiation is trapped within the Earth's atmosphere, making temperatures rise. Source: W. Elder, NPS.

The Causes of Climate Change

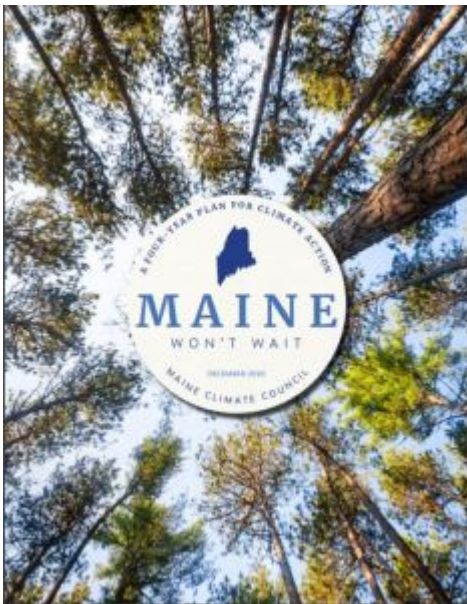


A simplified animation of the greenhouse effect. Credit: NASA/JPL-Caltech (Download in español.)

The [National Aeronautical and Space Agency](#) has been tracking climate change indicators from orbiting satellites for decades. NASA, an independent agency of the federal government, studies Earth's climate as a matter of national importance.

Climate Change in Maine and Our Region

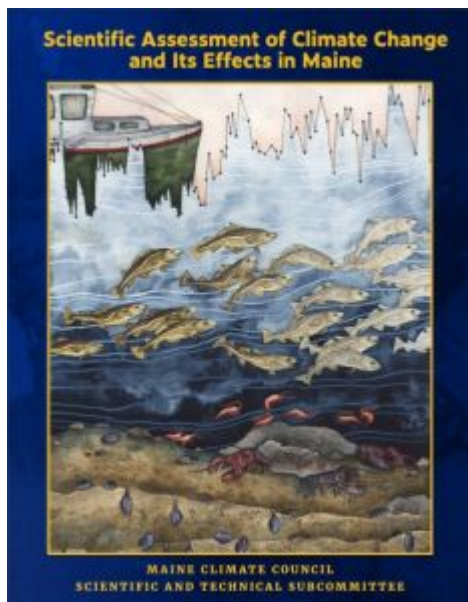
Maine Won't Wait: A four-year plan for climate action



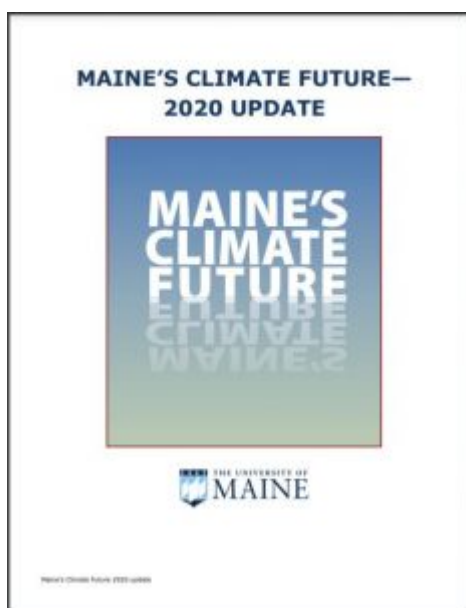
[Maine Won't Wait: A four-year plan for climate action](#) was written by a group of scientists, industry leaders, local and state officials, and citizens. The plan presents the urgency and opportunity of climate change in Maine to both protect the character of Maine and create economic activity, and lays out steps to take to dramatically reduce the state's greenhouse gas emissions.

Scientific Assessment of Climate Change and Its Effects in Maine

The [Scientific Assessment of Climate Change and Its Effects in Maine](#) report summarizes how climate change has already impacted our state and how it may continue to do so.



Maine's Climate Future 2020 update



[Maine's Climate Future - 2020 update](#) details the impacts of changing climate on habitats and industries in Maine, as well as the rate of change that is being observed.

Coastal Maine impacts

The Town of Vinalhaven and the Island Institute are working together to respond to the threat of sea-level change in the island. Learn more about their work in [this short video](#).

A group of Maine non-profits, colleges, and universities came together to form **Collaborating Toward Climate Solutions**, an effort focused on helping municipalities work together to formulate their response to climate



change. [Read about their work on Islesboro in this short piece in the Village Soup.](#)

Advanced Resources

Fourth National Climate Assessment

The Fourth National Climate Assessment by the U.S. Global Change Research Program present climate information in accessible, accurate, up-to-date terms, not to mention thorough. We suggest beginning with:

- The 25-page [Executive Summary of Vol I](#), which focuses on climate science;
- The 40-page [Overview of Vol II](#), which focuses on impacts, risks, and adaptation; and
- The [40 FAQs](#), which cover many of the big questions that you might be asking.

Climate Change: Evidence and Causes

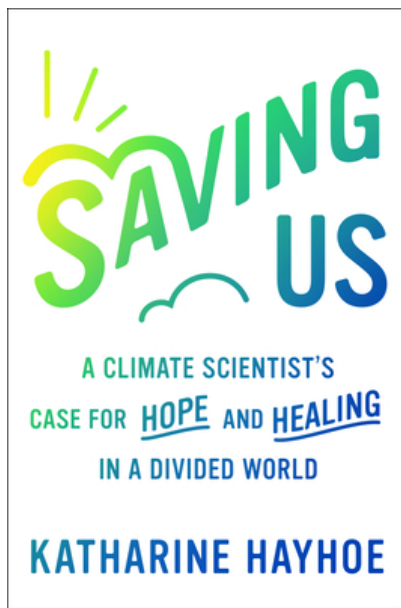
The [Climate Change: Evidence and Causes](#) report from the [National Academies](#) of the United States and [The Royal Society](#) of the United Kingdom offers a very approachable summary of our current understanding of climate science.

What We Know Initiative

The [What We Know initiative](#) from the American Association for the Advancement of Science (AAAS) has done a great job communicating climate science and responses; the initiative has evolved into two related efforts: [What We Know](#) and [How We Respond](#). There's even a [short video on this work](#).

Resources in the Belfast Free Library Collection

Saving Us: A Climate Scientist's Case for Hope and Healing in a Divided World By Katharine Hayhoe



Called "one of the nation's most effective communicators on climate change" by *The New York Times*, Katharine Hayhoe knows how to navigate all sides of the conversation on our changing planet. A Canadian climate scientist living in Texas, she negotiates distrust of data, indifference to imminent threats, and resistance to proposed solutions with ease. Over the past fifteen years Hayhoe has found that the most important thing we can do to address climate change is talk about it--and she wants to teach you how.

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[Click here for a list of new books on climate change in our collection.](#)

If you know other great resources of climate change understanding, please let us know! Send a message to ABCD@belfastlibrary.org.



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