



State of the Planet

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Web Resources on Global Climate Change

To accompany

Modern Global Climate Change

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Science **302**, 1719-1723 (2003)

[\[Abstract\]](#) [\[Full text\]](#)

(from the [State of the Planet](#) series)

- [Web Sites of Interest](#)
- [Previously in Science](#)

Web Sites of Interest on Global Climate Change

Selected U.N. and Intergovernmental Sites

[EPA Global Warming Site](#)

Rich collection of basic information from the U.S. [Environmental Protection Agency](#).

[Climate TimeLine Information Tool](#)

From the [NOAA Paleoclimatology Program](#), a useful, dynamic timeline, arranged in powers of ten, that explores weather and climate history on scales ranging from one day to 100,000 years.

[UNEP Climate Change Portal](#)

Central source for research and resources regarding climate change, from the [United Nations Environment Programme](#).

[United Nations Framework Convention on Climate Change](#)

Documents and resources relating to the Kyoto Protocol.

[Intergovernmental Panel on Climate Change](#)

IPCC site includes access to key publications and presentations on climate change.

[Global Climate Observing System](#)

Multi-agency U.N. effort established in 1992 to ensure that the observations and information needed to address climate-related issues are obtained and made available to all potential users..

[World Data Centre for Greenhouse Gases](#)

Established under the [Global Atmosphere Watch](#) program of the U.N. [World Meteorological Organization](#). Site provides useful [basic information](#) on greenhouse and related gases.

[Climate Action Network \(CAN\)](#)

A worldwide network of more than 340 nongovernmental organizations "working to promote government and individual action to limit human-induced climate change to ecologically sustainable levels."

Selected U.S. Government Sites

[A Paleo Perspective . . . On Global Warming](#)

Another educational presentation by the [NOAA Paleoclimatology Program](#).

[The El Niño Theme Page](#)

A resource page from the [Tropical Atmosphere Ocean Project](#) at NOAA's Pacific Marine Environmental Laboratory

Other Useful Resources on Climate Change

[Pew Center on Global Climate Change](#)

Superb, information-packed site from an independent research and policy center.

[Climatic Research Unit, University of East Anglia](#)

Climate information, resources, and research. The [Tiempo Climate Cyberlibrary](#) and the [Climate Monitor Online](#) are among the offerings.

[Hadley Centre for Climate Prediction and Research](#)

Information about climate research by a division of the UK Meteorology Office; includes a discussion of [climate modeling](#).

[AAAS Atlas of Population and Environment](#)

Free online version of comprehensive reference on geographic relationships between population and environment; includes section on [climate change](#).

[Climate Change Science: An Analysis of Some Key Questions](#)

Worthwhile 2001 report, from the National Research Council's Committee on the Science of Climate Change, offers a wealth of basic information on climate change variables.

[NASA's Global Change Master Directory](#)

A database of descriptions of Earth science data sets and services relevant to global change research. A collection of [earth science Internet links](#) and a [learning center](#) are also provided. Highly recommended.

[Globalchange.gov](#)

U.S. government gateway to global change data and information.

[U.S. Global Change Research Information Office](#)

Access to data and information on climate change research, adaptation/mitigation strategies and technologies, and global change related educational resources on behalf of the [U.S. Climate Change Science Program](#) and the [U.S. Global Change Research Program](#).

[Climate Change Impacts on the United States](#)

A report from the [U.S. Global Change Research Program](#).

[Energy Efficiency and Renewable Energy](#)

Rich, consumer-oriented portal to reams of basic information on efficiency and renewable-energy topics, from the U.S. Department of Energy.

[NASA Goddard Institute for Space Studies](#)

Includes information on GISS research, access to datasets, and a variety of resources including a [glossary](#) of frequently used climate terms.

[U.S. Climate Action Report](#)

May 2002 U.S. Department of State document outlining Bush Administration policy and activities under international climate change agreements.

[Abrupt Climate Change: Inevitable Surprises](#)

A 2002 NRC report explores the meaning of abrupt climate change, and global warming's role as a trigger for such change.

[Global Climate Change Student Guide](#)

Nicely laid out basic educational resource provided by the [ARIC Web site](#) of the Manchester Metropolitan University, UK, which also includes an [encyclopedia of the atmospheric environment](#) and other resources.

[The Warming of the Earth](#)

A "beginner's guide" presented by the [Woods Hole Research Center](#).

[Weather and Climate Basics](#)

Nicely compiled overview from the [National Center for Atmospheric Research](#) explains weather, climate, and the difference between the two.

[Global Change and Climate Change Links](#)

An extensive collection provided by [ITAS](#), Research Centre Karlsruhe, Germany.

[Global Climate Change: Selective List of Online Resources](#)

A well-organized collection provided by the [Pacific Institute](#).

[The North Atlantic Oscillation Thematic Web Site](#)

Web resource provided by David Stephenson, Climate Analysis Group, Department of Meteorology, University of Reading, UK.

[Carbon Dioxide Information Analysis Center \(CDIAC\)](#)

The primary global change data and information analysis center of the U.S. Department of Energy (DOE); Web site includes a collection of [global climate change links](#), a [glossary](#), and a selection of [educational links](#).

[Trends Online: A Compendium of Data on Global Change](#)

CDIAC document that provides synopses of frequently used time series of global change data.

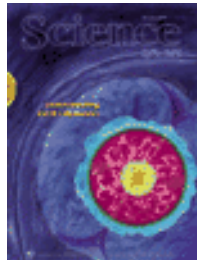
Selected Previous *Science* Articles on Global Climate Change

Science Special Issues

[Special Issue: Understanding Earth's Dynamics](#)

16 June 2000; v. 288, no. 5473

Includes news and review articles on several aspects of climate change study, as well as a [Web supplement](#).



[Special Issue: Paleoclimate](#)

21 April 2001; v. 292, no. 5517

News and reviews on earth's variable climatic past, and what it could mean for predictions of future climate change.

Other *Science* Articles

Interpretation of High Projections for Global-Mean Warming

T. M. L. Wigley and S. C. B. Raper
Science **293**, 451-454 (2001)

[\[Abstract\]](#) [\[Full text\]](#)

CO₂ and Climate Change

Thomas J. Crowley and Robert A. Berner
Science **292**, 870-872 (2001)

[\[Summary\]](#) [\[Full text\]](#)

Anthropogenic Warming of Earth's Climate System

Sydney Levitus *et al.*
Science **292**, 267-270 (2001)

[\[Abstract\]](#) [\[Full text\]](#)

Tropical Origins for Recent North Atlantic Climate Change

Martin P. Hoerling, James W. Hurrell, and Taiyi Xu
Science **292**, 90-92 (2001)

[\[Abstract\]](#) [\[Full text\]](#)

Nitrogen and Climate Change

Bruce A. Hungate *et al.*
Science **302**, 1512-1513 (2003)
[\[Summary\]](#) [\[Full text\]](#)

Detection of a Human Influence on North American Climate

David J. Karoly *et al.*
Science **302**, 1200-1203 (2003)
[\[Abstract\]](#) [\[Full text\]](#)

Climate in Medieval Time

Raymond S. Bradley, Malcolm K. Hughes, and Henry F. Diaz
Science **302**, 404-405 (2003)
[\[Summary\]](#) [\[Full text\]](#)

Simulation of Recent Southern Hemisphere Climate Change

Nathan P. Gillett and David W. J. Thompson
Science **302**, 273-275 (2003)
[\[Abstract\]](#) [\[Full text\]](#)

Influence of Satellite Data Uncertainties on the Detection of Externally Forced Climate Change

B. D. Santer *et al.*
Science **300**, 1280-1284 (2003)
[\[Abstract\]](#) [\[Full text\]](#)

Climate Forcing by Aerosols--a Hazy Picture

Theodore L. Anderson *et al.*
Science **300**, 1103-1104 (2003)
[\[Summary\]](#) [\[Full text\]](#)

Toward Integrated Reconstruction of Past Climates

Kevin E. Trenberth and Bette L. Otto-Bliesner
Science **300**, 589-590 (2003)
[\[Summary\]](#) [\[Full text\]](#)

Abrupt Climate Change

R. B. Alley *et al.*

External Control of 20th Century Temperature by Natural and Anthropogenic Forcings

Peter A. Stott *et al.*
Science **290**, 2133-2137 (2000)
[\[Abstract\]](#) [\[Full text\]](#)

The Global Carbon Cycle: A Test of Our Knowledge of Earth as a System

P. Falkowski *et al.*
Science **290**, 291-296 (2000)
[\[Abstract\]](#) [\[Full text\]](#)

Climate Extremes: Observations, Modeling, and Impacts

David R. Easterling *et al.*
Science **289**, 2068-2074 (2000)
[\[Abstract\]](#) [\[Full text\]](#)

Causes of Climate Change Over the Past 1000 Years

Thomas J. Crowley
Science **289**, 270-277 (2000)
[\[Abstract\]](#) [\[Full text\]](#)

Lessons for a New Millennium

Michael E. Mann
Science **289**, 253-254 (2000)
[\[Summary\]](#) [\[Full text\]](#)

Status and Improvements of Coupled General Circulation Models

Hartmut Grassl
Science **288**, 1991-1997 (2000)
[\[Abstract\]](#) [\[Full text\]](#)

1000 Years of Climate Change

Ray Bradley
Science **288**, 1353-1355 (2000)
[\[Summary\]](#) [\[Full text\]](#)

Warming of the World Ocean

Sydney Levitus, John I. Antonov, Timothy P. Boyer, and Cathy Stephens
Science **287**, 2225-2229 (2000)
[\[Abstract\]](#) [\[Full text\]](#)

Science **299**, 2005-2010 (2003)

[\[Abstract\]](#) [\[Full text\]](#)

Advanced Technology Paths to Global Climate Stability: Energy for a Greenhouse Planet

Martin I. Hoffert *et al.*

Science **298**, 981-987 (2002)

[\[Abstract\]](#) [\[Full text\]](#)

Climate Effects of Black Carbon Aerosols in China and India

Surabi Menon, James Hansen, Larissa Nazarenko, and Yunfeng Luo

Science **297**, 2250-2253 (2002)

[\[Abstract\]](#) [\[Full text\]](#)

Soot Takes Center Stage

William L. Chameides and Michael Bergin

Science **297**, 2214-2215 (2002)

[\[Summary\]](#) [\[Full text\]](#)

The Ocean's Role in Atlantic Climate Variability

Martin Visbeck

Science **297**, 2223-2224 (2002)

[\[Summary\]](#) [\[Full text\]](#)

Dynamics of Recent Climate Change in the Arctic

Richard E. Moritz, Cecilia M. Bitz, and Eric J. Steig

Science **297**, 1497-1502 (2002)

[\[Abstract\]](#) [\[Full text\]](#)

Ecological Effects of Climate Fluctuations

Nils C. Stenseth *et al.*

Science **297**, 1292-1296 (2002)

[\[Abstract\]](#) [\[Full text\]](#)

Interpretation of Recent Southern Hemisphere Climate Change

David W. J. Thompson and Susan Solomon

Science **296**, 895-899 (2002)

Mid-Holocene Climate Change

Eric J. Steig

Science **286**, 1485-1487 (1999)

[\[Summary\]](#) [\[Full text\]](#)

Northern Hemisphere Ice-Sheet Influences on Global Climate Change

Peter U. Clark, Richard B. Alley, and David Pollard

Science **286**, 1104-1111 (1999)

[\[Abstract\]](#) [\[Full text\]](#)

Costs of Multigreenhouse Gas Reduction Targets for the USA

Katharine Hayhoe *et al.*

Science **286**, 905-906 (1999)

[\[Summary\]](#) [\[Full text\]](#)

Fossil Fuels Without CO₂ Emissions

E. A. Parson and D. W. Keith

Science **282**, 1053-1054 (1998)

[\[Summary\]](#) [\[Full text\]](#)

Climate Change Record in Subsurface Temperatures: A Global Perspective

Henry N. Pollack, Shaopeng Huang, and Po-Yu Shen

Science **282**, 279-281 (1998)

[\[Abstract\]](#) [\[Full text\]](#)

The Kyoto Negotiations on Climate Change: A Science Perspective

Bert Bolin

Science **279**, 330-331 (1998)

[\[Summary\]](#) [\[Full text\]](#)

Thermohaline Circulation, the Achilles Heel of Our Climate System: Will Man-Made CO₂ Upset the Current Balance?

Wallace S. Broecker

Science **278**, 1582-1588 (1997)

[\[Abstract\]](#) [\[Full text\]](#)

Are We Seeing Global Warming?

[\[Abstract\]](#) [\[Full text\]](#)

The Sun's Role in Climate Variations

D. Rind

Science **296**, 673-677 (2002)

[\[Abstract\]](#) [\[Full text\]](#)

How Accurate Are Climate Simulations?

Thomas M. Smith, Thomas R. Karl, and
Richard W. Reynolds

Science **296**, 483-484 (2002)

[\[Summary\]](#) [\[Full text\]](#)

Quantifying Uncertainties in Climate System Properties with the Use of Recent Climate Observations

Chris E. Forest *et al.*

Science **295**, 113-117 (2002)

[\[Abstract\]](#) [\[Full text\]](#)

Aerosols, Climate, and the Hydrological Cycle

V. Ramanathan, P. J. Crutzen, J. T.
Kiehl, and D. Rosenfeld

Science **294**, 2119-2124 (2001)

[\[Abstract\]](#) [\[Full text\]](#)

K. Hasselmann

Science **276**, 914-915 (1997)

[\[Summary\]](#) [\[Full text\]](#)

Climatic Changes of the Last 18,000 Years: Observations and Model Simulations

COHMAP Members

Science **241**, 1043-1052 (1988)

[\[PDF\]](#) (10.1 MB)

Modeling the Ice-Age Climate

W. L. Gates

Science **236**, 1138-1144 (1976)

[\[PDF\]](#) (1.5 MB)

The Surface of the Ice-Age Earth

CLIMAP Project Member

Science **191**, 1131-1137 (1976)

[\[PDF\]](#) (2.1 MB)

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