

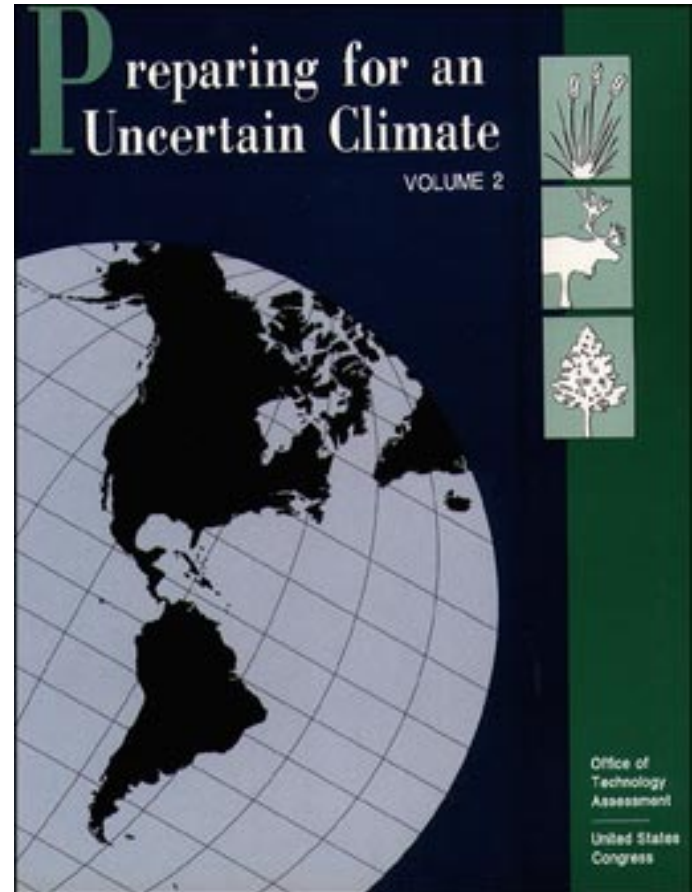
Preparing for an Uncertain Climate—Vol. II

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Foreword

Preparing for an Uncertain Climate is OTA's second report on climate change. In 1991, we published *Changing by Degrees: Steps to Reduce Greenhouse Gases*, which focused on ways to reduce the buildup of greenhouse gases in the atmosphere. Slowing the rate of growth in these emissions continues to be very important, but most analyses conclude that despite international efforts, the Earth is likely to warm several degrees over the next century.

Climate change poses many potential problems for human and natural systems, and the long-term effects of climate change on these systems are becoming increasingly important in public policy. For example, international agreements were recently signed on both climate change and biodiversity. Recognizing the potential problems, Congress asked OTA to examine how the Nation can best prepare for an uncertain future climate. This assessment tackles the difficult tasks of assessing how natural and human systems may be affected by climate change and of evaluating the tools at our disposal to ease adaptation to a warmer climate. Volume 1 addresses coastal areas, water resources, and agriculture; volume 2 includes wetlands, preserved lands, and forests.

OTA identifies more than 100 options in the full report that could help ease the transition to an uncertain climate. We categorized a subset of these options as "first steps." Options that fall into this group are near-term concerns because they will take a long time to complete, address "front-line" or urgent issues that need attention first in order to make better decisions later, can be approached through efforts already under way, are beneficial for reasons other than helping to prepare for climate change, or represent near-term "targets of opportunity."

The United States has put in place an ambitious Global Change Research Program to "observe, understand, and ultimately predict global and regional climate change." This effort, which has so far been based overwhelmingly in the physical sciences, is not geared to help make natural resource planning and management decisions, to identify ecosystem-level responses to climate change, or to readily provide policy guidance on mitigation or adaptation. While scientists continue to reduce uncertainty, policy makers will continue to reauthorize environmental legislation, manage natural resources, and develop energy policy. Having mechanisms for integrating research and evaluating reasonable policy routes while we are completing the science would be a valuable addition to the Federal effort. This assessment could help guide these needed improvements.

Preparing for an Uncertain Climate was requested by three congressional committees: the Senate Committees on Environment and Public Works and on Commerce, Science, and Transportation, and the House Committee on Science, Space, and Technology. OTA appreciates the support this effort received from hundreds of contributors. Workshop participants, reviewers, contractors, and informal advisors gave us invaluable support as we attempted to sift through the voluminous material on this subject. OTA, however, remains solely responsible for the contents of this report.



Roger C. Herdman, Director

Advisory Panel

Helen M. Ingram, Chairman
Director
Udall Studies in Public Policy
University of Arizona

Richard M. Adams
Professor of Resource Economics
Department of Agricultural and
Resource Economics
Oregon State University

Vera Alexander
Dean, School of Fisheries
and Ocean Sciences
University of Alaska

Michael J. Bean
Senior Attorney
Environmental Defense Fund

Margaret Adela Davidson
Executive Director
South Carolina Sea Grant
Consortium

J. Clarence Davies
Director
Center for Risk Management
Resources for the Future

Baruch Fischhoff
Professor of Engineering
and Public Policy
Carnegie Mellon University

Michael H. Glantz
Program Director
Environmental Impacts Group
National Center for Atmospheric
Research

George Hoberg
Assistant Professor
Political Science Department
University of British Columbia

Henry D. Jacoby
Director, Joint Program on the
Science and Policy
of Global Change
Sloan School of Management
Massachusetts Institute of
Technology

Waiter Jarck
Corporate Director
Forest Resources
Georgia-Pacific Corporation

David N. Kennedy
Director, California State
Department of Water Resources

Jon Kusler
Executive Director
Association of State Wetlands
Managers

Douglas MacLean
Associate Professor
Philosophy Department
University of Maryland

Jerry Mahlman
Director, Geophysical Fluid
Dynamics Laboratory/NOAA
Princeton University

Barbara Miller
Senior Civil Engineer
Tennessee Valley Authority

Steve Peck
Director, Environmental Sciences
Department
Electric Power Research Institute

Herman Shugart
Chairman
Department of Environmental
Sciences
University of Virginia

Phil Sisson
Director, Commodities and
Economic Analysis Division
Quaker Oats

Don Wilhite
Director
International Drought
Information Center
University of Nebraska

Gary Yohe
Professor
Department of Economics
Wesleyan University

NOTE: OTA appreciates and is grateful for the valuable assistance and thoughtful critiques provided by the advisory panel members. The panel does not, however, necessarily approve, disapprove, or endorse this report. OTA assumes full responsibility for the report and the accuracy of its contents.

Project Staff

Clyde Behney
Assistant Director, OTA
Health and Environmental
Sciences Division

John Andelin
Assistant Director,
to Aug. 31, 1993

Robert Niblock
Program Manager
Oceans and Environment

ADMINISTRATIVE STAFF

Kathleen Bell
Office Administrator

Kimberly Holmlund
Administrative Secretary

Sharon Knarvik
Secretary

CONTRIBUTORS

Bob Friedman

Beth Robinson

Mark Zinniker

EDITOR

Cynthia Allen
Editorial Services

ROSINA BIERBAUM
Project Director

Michael Bowes
Senior Analyst

William Westermeyer
Senior Analyst

Jacqueline Courteau
Analyst

CONTRACTORS

Timothy Beatley
University of Virginia
Stanley Changnon
Illinois State Water Survey

William Cline
Institute of International Economics

Charles Cooper
San Diego University

William Easterling
University of Nebraska-Lincoln

Jae Edmonds
Pacific Northwest Laboratory
Environmental Defense Fund

David Gillilan
University of Arizona

Patrick Halpin
University of Virginia

Robert Lilieholm
Utah State University

Janice Longstreth
Pacific Northwest Laboratory

Geraldine McCormick-Ray
University of Virginia

Mary McKenney
consultant

Walt Oechel
San Diego State University

Sherry Showell
Analyst

Nadine Cutler
Research Analyst

Elise Holland
Research Analyst

Julie Phillips
Indexer

Frank Potter
consultant

Carleton Ray
University of Virginia

Theodore Schad
Consultant

Daniel Sheer
Water Resources Management, Inc.

Joel Smith
RCG/Hagler, Bailley, Inc.

William Smith
Yale University

Nick Sundt
consultant

Richard Wahl
University of Colorado

Scott Warren
Connecticut College

Daniel Willard
Indiana University

Workshop Participants

WORKSHOP ON WETLANDS

Tom Bancroft

National Audubon Society

Ann Bartuska

U.S. Forest Service

Michael Bean

Environmental Defense Fund

Elizabeth Bokman

U.S. Department of the Interior

Dieter Busch

U.S. Fish and Wildlife Service

Douglas Canning

Washington Department of Ecology

James Chambers

National Oceanic and Atmospheric
Administration

Kevin Erwin

Kevin L. Erwin Consulting
Ecologist, Inc.

Lee Foote

U.S. Fish and Wildlife Service

Taber Hand

Association of State Wetlands
Managers

Suzette Kimball

University of Virginia

James Kundell

The University of Georgia

Jon Kusler

Association of State Wetlands
Managers

Bruce Moulton

Texas Water Commission

Walter Oechel

San Diego State University

Richard Park

Indiana University

Karen Poianl

Cornell University

Michael Sauer

North Dakota Department of Health

Charles Segelquist

U.S. Fish and Wildlife Service

John Simpson

Massachusetts Department of
Environmental Protection

James Titus

U.S. Environmental Protection Agency

John Toliver

U.S. Forest Service

Richard Tomczyk

Massachusetts Department of
Environmental Protection

Virginia Van Sickle-Burkett

U.S. Fish and Wildlife Service

Don Voros

U.S. Fish and Wildlife Service

Scott Warren

Connecticut College

Dennis Whigham

Smithsonian Environmental
Research Center

Daniel Willard

Indiana University

Tom Winter

U.S. Geological Survey

Irene Wisheu

University of Ottawa

Donald Witherill

Maine Department of Environmental
Protection

WORKSHOP ON FORESTS

Robert Bailey

University of Georgia

Richard Birdsey

Northeastern Forest Experiment Station

Bruce Bongarten

University of Georgia

J.E. de Steigeur

U.S. Forest Service

Phil Dougherty

Southeastern Forest Experiment Station

Lauren Fins

University of Idaho

Michael Fosberg

U.S. Forest Service

Kathleen Geyer

U.S. Forest Service

Robin Graham

Oak Ridge National Laboratory

Robert Haack

Michigan State University

Edward Hansen

U.S. Forest Service

Roy Hedden

Clemson University

Arnold Holden

U.S. Forest Service

David Le Blanc

Ball State University

F. Thomas Ledig

U.S. Forest Service

Robert Lilieholm

Utah State University

Rex McCullough
Weyerhaeuser Company

Stephen Nodvin
University of Tennessee

David Parsons
National Park Service

Phillip Riggan
U.S. Forest Service

Clark Row
consultant

Con Schallau
American Forest Council

Hank Shugart, *Chair*
University of Virginia

William Smith
Yale University

Alan Solomon
U.S. Environmental Protection Agency

Jack Winjum
U.S. Environmental Protection Agency

John Zerbe
Forest Products Laboratory

Robert Ziemer
U.S. Forest Service

WORKSHOP ON WESTERN LANDS

Cecil Armstrong
U.S. Forest Service

Will Blackburn
U.S. Department of Agriculture

Terence Boyle
Colorado State University

Michael Cassity
University of Wyoming

Stan Coloff
Bureau of Land Management

Charles Cooper
San Diego State University

Doug *FOX*
U.S. Forest Service

Helen Ingram, *Chair*
University of Arizona

Linda Joyce
U.S. Forest Service

John Kelmelis
U.S. Geological Survey

Gil Lusk
Glacier National Park

Mitch McClaran
University of Arizona

Gary McVicker
Bureau of Land Management

Ron Moody
U.S. Department of Agriculture

David Mouat
Desert Research Institute

Walter Oechel
San Diego State University

Pat Reece
Panhandle Research and Extension
Center

Patrick Reed
University of Georgia

Tim Seastedt
University of Colorado

Richard Stroup
Political Economy Research Center

Eleonora Trotter
University of New Mexico

Sara Vickerman
Defenders of Wildlife

Mary Wallace
University of Arizona

Don Wilhite
University of Nebraska

WORKSHOP ON CLIMATE TREATIES AND MODELS

Dan Bodansky
University of Washington

Tony Brenton
Harvard University

Herman Cesar
Tilburg University

Joel Darmstadter
Resources for the Future

Hadi Dowlatabadi
Carnegie Mellon University

Jae Edmonds
Pacific Northwest Laboratory

Howard Gruenspecht
U.S. Department of Energy

James Hammitt
Rand Corp.

William Hogan
Harvard University

Ted Parson
Harvard University

Steve Rayner
Pacific Northwest Laboratory

John Reilly
Massachusetts Institute
of Technology

Joel Scheraga
U.S. Environmental Protection Agency

Dennis Tirpak
U.S. Environmental Protection Agency

David Victor
Harvard University

John Myant
Stanford University

**WORKSHOP ON
AGRICULTURE**

Richard Adams

Oregon State University

Robert Chen

Consortium for the International Earth
Science Information Network

Ralph Chite

The Library of congress

John Clark

Battelle Institute

Roy Darwin

U.S. Department of Agriculture

William Easterling

University of Nebraska

Dean Ethridge

U.S. Department of Agriculture

Gary Evans

U.S. Department of Agriculture

Steven Hollinger

University of Illinois

Marvin Jensen

Colorado State University

C. Allan Jones

Texas A&M University

Jan Lewandrowski

U.S. Department of Agriculture

Robert Loomis

University of California

Robert Mendelssohn

Yale University

Calvin Quaiset

University of California

Wayne Rasmussen

U.S. Department of Agriculture

Steve Rawlins

U.S. Department of Agriculture

John Reilly

Massachusetts Institute of Technology

Norman Rosenberg, Chair

Battelle Institute

Cynthia Rosenzweig

Columbia University

Vernon Ruttan

University of Minnesota

Paul Unger

U.S. Department of Agriculture

John van Es

University of Illinois

**WORKSHOP ON ECOLOGY
AND REMOTE SENSING**

Jim Bunce

U.S. Department of Agriculture

Leonard David

Space Data Resources and Information

Ruth Defries

University of Maryland

Irv Forseth

University of Maryland

Robert Hudson

University of Maryland

David Inouye

University of Maryland

Tony Janetos

National Aeronautics and
Space Administration

Michael Kearney

University of Maryland

Penelope Kolnes

University of Maryland

Bill Lawrence

University of Maryland

Eileen McLellan

University of Maryland

Alan Miller

University of Maryland

Raymond Miller

University of Maryland

Rob Nicholls

University of Maryland

Karen Prestegard

University of Maryland

Steve Prince

University of Maryland

Alan Robock

University of Maryland

John Townshend

University of Maryland

Richard Weismiller

University of Maryland

Robert Worrest

Consortium for the International Earth
Science Information Network

**WORKSHOP ON EOS AND
USGCRP: ARE WE ASKING
AND ANSWERING THE
RIGHT QUESTIONS?**

Dan Albritton

National Oceanic Atmospheric
Administration

James Anderson

Harvard University

Francis Bretherton

University of Wisconsin

Ronald Brunner

University of Colorado

William Clark

Harvard University

Robert Corell

National Science Foundation

Jeff Dozier

University of California

John Eddy

Consortium for the International Earth
Science Information Network

Diane Evans

Jet Propulsion Laboratory

James Hansen

National Aeronautics and Space
Administration

Tony Janetos

National Aeronautics and Space
Administration

Jerry Mahlman

Princeton University

Ari Patrinos

U.S. Department of Energy

Robert Watson

National Aeronautics and Space
Administration

WORKSHOP ON WATER RESOURCES

Tony Bagwell

Texas Water Development Board

Stanley Changnon

Illinois State Water Survey

Hanna Cortner

University of Arizona

Stephen Estes-Smargiassi

Massachusetts Water Resources
Authority

Myron Fiering

Harvard University

Kenneth Frederick

Resources for the Future

Jerome Gilbert

Water Transfer Associates

Michael Glantz, Chair

National Center for Atmospheric
Research

Helen Ingram

University of Arizona

William Kellogg

National Center for Atmospheric
Research

Dennis Lettenmaier

University of Washington

Steve Macaulay

California Department of Water
Resources

Barbara Miller

Tennessee Valley Authority

Peter Rhoads

South Florida Water Management
District

John Schefter

U.S. Geological Survey

Neil Schild

U.S. Department of the Interior

Rusty Schuster

Bureau of Reclamation

Joel Smith

U.S. Environmental Protection Agency

Eugene Stakhiv

U.S. Army corps of Engineers

Dan Tarlock

Chicago-Kent College of Law

Richard Wahl

University of Colorado

Don Wilhite

University of Nebraska