

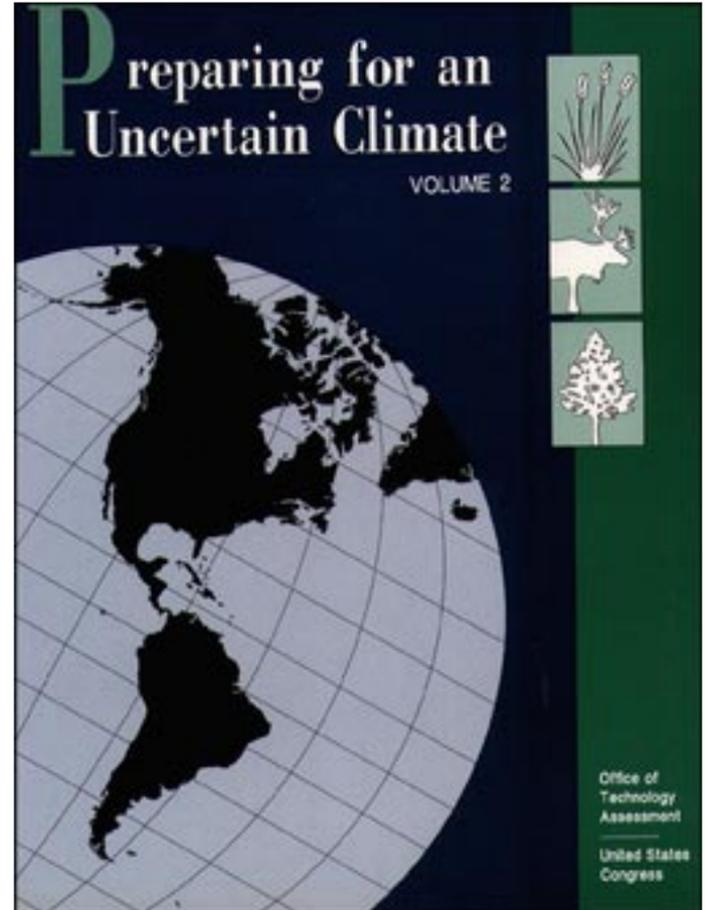
Preparing for an Uncertain Climate—Vol. II

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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.



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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.

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