

# CLIMATE CHANGE 2001: IMPACTS, ADAPTATION, AND VULNERABILITY

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*Climate Change 2001: Impacts, Adaptation, and Vulnerability* is the most comprehensive and up-to-date scientific assessment of the consequences of, and adaptation responses to, climate change. The report:

- Evaluates evidence that recent observed changes in climate have already affected a variety of physical and biological systems.
- Makes a detailed study of the vulnerabilities of human populations to future climate change, including associated sea-level rise and changes in the frequency and intensity of climate extremes such as floods, droughts, heat waves and windstorms, and taking into account potential impacts on water resources, agriculture and food security, human health, coastal and other types of settlements, and economic activities.
- Assesses the potential responses of natural environments and the wildlife that inhabit them to future climate change and identifies environments at particular risk.
- Considers how adaptation to climate change might lessen adverse impacts or enhance beneficial impacts.
- Provides an overview of the vulnerabilities and adaptation possibilities by major region of the world (Africa, Asia, Australia/New Zealand, Europe, Latin America, North America, Polar Regions, and Small Island States).
- Contrasts the different vulnerabilities of the developed and developing parts of the world and explores the implications for sustainable development and equity concerns.

This latest assessment of the IPCC will again form the standard scientific reference for all those concerned with the environmental and social consequences of climate change, including students and researchers in ecology, biology, hydrology, environmental science, economics, social science, natural resource management, public health, food security, and natural hazards, and policymakers and managers in governmental, industry, and other organizations responsible for resources likely to be affected by climate change.

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Earth's city lights—shown for a projection spanning Europe, Asia, and Africa—is one indicator of the scale of human influence on the world. The brightest areas of the Earth are the most urbanized, but not necessarily the most populated. Image by Robert Simmon and Craig Mayhew, Science Systems and Applications, Inc.; data courtesy of the United States Air Force Defense Meteorological Satellite Program (DMSP) and the National Oceanic and Atmospheric Administration's National Geophysical Data Center, based on research performed by Dr. Marc Imhoff of the National Aeronautics and Space Administration's Goddard Space Flight Center.

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