

March 1995

# Climate Change

## The Clinton Administration Program

**The Clinton Administration is strongly committed to addressing the challenge of climate change, with cost-effective policies that are good both for the environment and the economy. We support policies that provide insurance to reduce the risks posed by climate change. Our approach has three pillars. First, our policies are based on sound science. We strongly believe that policies should be based on mainstream science, not on the views of either skeptics or alarmists. Second, our policies are based on partnerships with the private sector-industry and nongovernmental organizations. This issue must be addressed in close cooperation with all stakeholders. Finally, we believe that climate change requires international solutions. Climate change is a global problem and must be addressed by the global community.**

### Sound Science

The United States has based its climate change policies on the conclusions of the Intergovernmental Panel on Climate Change, which has provided an authoritative international consensus on the science of climate change.

The U.S. Global Change Research Program (USGCRP) provides a major contribution to the research base on which the IPCC assessments rely. The USGCRP was formally established by Congress in 1990 to coordinate the resources and research activities of a dozen federal agencies, especially national research activities and U.S. participation in international research activities supporting programs such as the World Climate Research Programme, the International Geosphere-Biosphere Programme, and the Human Dimensions Programme. The USGCRP, funded at \$1.8 billion in FY 1995, coordinates a broad agenda of research, supporting the Mission to Planet Earth, ozone depletion studies, and work on the human dimensions of global change. Questions that drive the USGCRP's climate change research include:

- What is the climate's response to increasing concentrations of aerosols and greenhouse gases?
- What are the impacts of climate change on society and the environment?
- How can society mitigate future climate change or adapt to its consequences?

Based on these questions, research focuses on observing and documenting Earth system behavior; understanding the processes that influence changes in the

Earth system; developing and applying models to predict climate change; evaluating the effects of climate change on agriculture, forests, water resources, coastal regions, ecosystems, and other natural resources; and improving the capabilities to mitigate adverse consequences and capitalize on any beneficial opportunities that climate change may present.

### Recent Accomplishments of the USGCRP

- Climate models successfully simulated the transient cooling of the lower atmosphere in response to the sulfates emitted by the eruption of Mt. Pinatubo.
- The improved ability to forecast El Nino and resulting shifts in tropical and subtropical precipitation is helping farmers in North and South America to plan better and thereby boost yields and reduce economic disruptions.
- Model simulations of changes in climate over the last 100 years match observed patterns more closely when both greenhouse gases and the regional concentrations of sulfate aerosols are taken into account.
- Combined satellite and surface measurements recently identified an unexpected absorption of 25-40 watts per square meter of radiation by the atmosphere. This new information will lead to a reanalysis of the Earth's radiation balance and the role of clouds in climate change.
- Observations show that since 1970, precipitation over the U.S. has increased by about 5 percent compared with the previous 70 years, primarily in the autumn. In addition, the frequency of extreme rainfall events (more than 2" per day) has increased throughout much of the country.
- Arctic ecosystems exposed to elevated levels of carbon dioxide only increased productivity for a few years, suggesting that the CO<sub>2</sub> fertilization effect may be short-lived.

Because the importance of climate change depends largely on the physical and economic impacts on human society, USGCRP has started to shift its funding toward increased evaluation of the socio-economic implications of climate change.

### Partnerships with the Private Sector and State Governments

To meet the challenge of climate change, we must involve business, non-governmental organizations, and government at all levels.

*"We must take the lead in addressing the challenge of global warming, which could make our planet and its climate less hospitable and more hostile to human life."*

*President Clinton, Earth Day 1993*

Nowhere is this commitment reflected more strongly than in the President's Climate Change Action Plan (CCAP). Released in October 1993, the CCAP implements President Clinton's commitment to reduce U.S. greenhouse gas emissions to 1990 levels by the year 2000.

The CCAP demonstrates that government and the private sector can work together to better the economy and the environment. It is expected to produce energy savings of over \$60 billion by the year 2000 and create clean jobs for the future. Great strides have been made in the last year by the Department of Energy, the Environmental Protection Agency, the Department of Agriculture, and the Department of Transportation. Some of the highlights include:

- By joining Climate Challenge, 248 electric utilities, representing 53 percent of U.S. electric generating capacity, have committed to undertake voluntary measures to reduce their greenhouse gas emissions by 44 million metric tons by the year 2000.
- 500 new participants have joined Green Lights since October 1993, for a total of more than 1,650. These participants have reduced lighting electricity consumption by an average of 47 percent, saving approximately \$90 million.
- Climate Wise, being carried out jointly by EPA and DOE, is designed to stimulate emission reductions across all sectors of the economy. Several industrial companies, representing 3 percent of U.S. industrial energy use, have become partners in Climate Wise and pledged to reduce annual emissions by 20

million tons of carbon equivalent by the year 2000.

- Motor Challenge, which helps companies install high-efficiency motor systems, has recruited over 200 partners, established a national technical assistance hotline, and is soliciting sites for 25 showcase technology demonstrations. These showcases will rapidly transfer high-efficiency motor systems throughout industry.
- Corporate response to WasteWise, which encourages voluntary source reduction and recycling of business waste, has attracted over 300 businesses; and more than 750 waste reduction programs are underway.
- Twenty-nine grants have been awarded through the National Industrial Competitiveness for Energy, Environment and Economy (NICE<sup>3</sup>) program. These grants will improve industrial process efficiency, reduce waste, and cut greenhouse gas emissions in several key industries.
- Natural Gas Star, designed to reduce methane losses from gas transmission and distribution lines, has expanded to include over 35 corporate partners representing over 55 percent of transmission company pipeline miles, 25 percent of distribution company pipeline miles, and 35 percent of all service connections.
- The State and Local Outreach Program awarded grants to 18 states. The state grants are to complete greenhouse gas inventories or to develop comprehensive mitigation strategies essential for laying the foundation for actual reduction efforts. In total, 24 states have participated in the program. The effort now has seven cities in the "Green Fleets" initiative and 25 cities are targeted for the "Cities for Climate Protection" program. To illustrate the potential for localities, one medium-sized city has

estimated that it can reduce emissions by the greenhouse gas equivalent of 4.8 million metric tons of carbon.

- Seven joint implementation projects are underway which encourage renewable energy, fuel switching, energy efficiency and improved forest management in developing and transition economy countries.

### International Solutions

The United States is also demonstrating leadership under the Framework Convention on Climate Change and in other international fora. The cornerstones of the Administration's policy include:

- Promoting actions to strengthen the international response under the Framework Convention and working with other nations to determine appropriate goals for the next century.
- Encouraging a strong international process to review national plans. The United States is also helping to build the capacity for appropriate actions in nearly 60 developing countries and transition economies through the U.S. Country Studies program.
- Demonstrating the benefits of joint projects through the U.S. Initiative on Joint Implementation, the first such program in the world.
- Promoting the development and diffusion of beneficial technologies.
- Supporting reform of international institutions, including working with the multilateral development banks, to better assist their clients to fulfill their obligations under the Convention.
- Strengthening the newly restructured Global Environment Facility (GEF) to effectively serve as the operating entity of the Convention's financial mechanism. The United States is committed to ensuring the success of the GEF in responding to the threat of climate change.