

INTRODUCTION

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The New England region, including the six New England states and upstate New York, represents a part of the United States that is somewhat unique in terms of climate change impacts. Weather affecting the rest of the United States soon affects the New England region. Figure 1 shows that the region is in the unenviable position of being downwind from the rest of the country. Weather and climate are clearly global processes, and climate change impacts affecting the rest of the U.S. will also have likely impacts in New England. The heavy impact of the ice storms of January, 1998, is an example of the impact that continental weather patterns can have on New England. In a similar fashion, coal-fired power generation in the Midwestern states reduces air quality and visibility in New England, as well as contributes to the acid rain problems impacting the region. Changes in both the physical and chemical climate may well have profound impacts on the New England region.

These issues and the potential impacts were discussed in detail at the New England Regional Climate Change Impacts Workshop. The findings of this workshop are described below in this report and are summarized in the Summary of Findings section.

THE WORKSHOP

The New England Regional Climate Change Impacts Workshop was one in a series of regional climate change workshops held by the White House Office of Science and Technology Policy (OSTP), in cooperation with the U.S. Global Change Research Program (USGCRP) and various funding agencies. This event was hosted by the Institute for the Study of Earth, Oceans, and Space (EOS) at the University of New Hampshire (UNH). It was convened at the New England Center on the University's Durham campus, from

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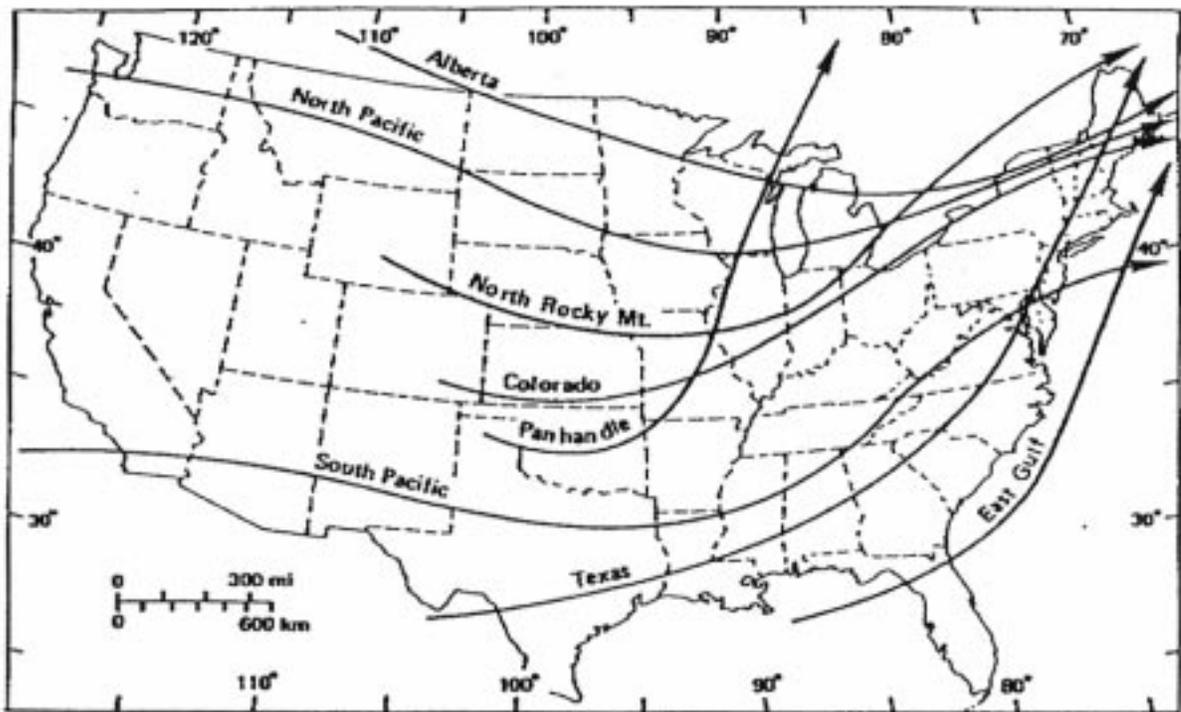


Figure 1. Major storm and airmass patterns for the United States show that the Northeast's weather is intricately linked to weather phenomena in the rest of the nation and Canada. Additionally, this airmass pattern results in the Northeast receiving high concentrations of chemical pollution from outside the New England region.



Jerry Melillo, Co-Director of the Ecosystems Center, Marine Biological Laboratory, outlines the workshop goals and presents the four questions to be addressed by workshop participants.

September 3-5, 1997. The UNH workshop was funded by the National Science Foundation (NSF).

An extensive effort was made to identify and connect with targeted stakeholder groups (sectors) through personal contacts, individualized letters of invitation, and a specifically-designed White Paper. This White Paper (Appendix I) was written in non-technical terms, with examples of current and potential future climate change impacts to New England. Additionally, a website was developed to provide on-line reports and information regarding the workshop, this site will also host the final report at: <http://www.necci.sr.unh.edu>.

A total of 122 participants, representing a broad range of stakeholders from all the New England states plus upstate New York, attended the first two days of plenary and breakout sessions. The third day was reserved for writing the draft Workshop Summary Report. This report will provide input to the U.S. Climate Change Forum held in Washington, D.C., November 12-13, 1997.

The morning plenary session of the first day was focused on soliciting stakeholder/ sectoral perspectives and concerns (see Agenda, Appendix II). Following opening remarks from the president of the University of New Hampshire and the director of the host institute, presentations from stakeholder perspectives included natural resources, human health, insurance, energy and utilities, government and resource management, and recreation and tourism. Mr. Daniel Goldin, NASA Administrator, presented a luncheon keynote address

regarding NASA's commitment to climate studies and outreach. An afternoon plenary session introduced participants to present and past climates, followed by afternoon breakout sessions which were given the task of identifying current stress factors impacting each sector noted below. A reception and poster session was held at the end of the first day.

The second day focused on the science of climate change. The topics included evidence of the current impact of climate warming in Alaska, sea-level rise issues and impacts, agricultural impacts, weather variability / predictability, air quality, and the challenge of developing an integrated assessment. The same sectoral breakout groups met in the afternoon, addressing the likely additional impacts of climate change in each sector, knowledge gaps and response strategies. The closing plenary session provided an opportunity for the breakout session chairs to present their group's findings to the workshop and respond to questions concerning common issues.

The third day of the workshop was devoted to writing an initial draft version of the workshop report. Representatives from each of the seven sectoral breakout groups— Business/Insurance and Industry, Energy and Utilities, Government and Resource Management, Human Health, Information Transfer and Public Awareness, Natural Resources, and Recreation and Tourism—worked together to contribute to this report. A review pro-

cess was implemented by emailing second drafts to breakout session members for their comments.

Of the 122 participants attending the two-day workshop, approximately one-half (57) represented non-academic, non-agency sectors from business and industry, non-governmental organizations, state and local governments and education (Appendix III). Over 100 non-agency participants from business and industry, non-governmental organizations, state and local governments and education as well as research communities returned for day two of the workshop, and 75 were present for the final wrap-up session at 6:00 p.m.

It is important to note that while nearly all of the workshop participants represented a range of stakeholders, their views, as expressed in this report represent a limited cross-section of stakeholder opinions and perspectives. A continuing effort must be made to solicit a broader range of input regarding climate change impacts to the New England/ upstate New York region.

Media coverage for the workshop was a component of planned outreach to provide information about regional climate change issues. A communications plan was developed for internal and external media coverage. Pre-conference news stories were made available through press releases. When possible, public information officers from the speaker's institutions were contacted and informed about the workshop. Press releases were sent to local, regional, and national venues. Environmental, agricultural, and science reporters were identified and faxed releases. Members of the press were invited to attend plenary and breakout sessions. A media coordinator was available following the workshop to assist reporters with fact-checking and gaining access to researchers and data necessary for their stories.

Media coverage was extensive, and included local (New Hampshire TV, Channel 9, New Hampshire Public Radio and print media), regional (Boston Globe, New York Times) and national (several Associated Press stories) venues. The coverage of the workshop began with a media breakfast held the first morning of the workshop; every effort was made to assist reporters in gaining access to workshop participants, national speakers, research scientists, and sectoral representatives in attendance. A complete media press package was available at the start of the workshop, and the media coordinator facilitated interviews, television coverage, and reporter requests for more information and background on the workshop participants. Representatives of the media expressed gratitude

and satisfaction regarding the efforts made to facilitate their coverage of the workshop.

WORKSHOP GOALS

The New England Regional Climate Change Impacts Workshop had the following goals:

- To initiate and open a dialogue between the broadest-possible range of stakeholders regarding regional climate change issues, impacts, and vulnerabilities. This dialogue must be two-way, and solicited from the key stakeholder groups within the New England/ upstate New York region.
- To identify specific regional climate change issues and uncertainties, using the direct input of the stakeholders attending the workshop.
- To identify key regional vulnerabilities, knowledge gaps and research needs, as well as possible coping skills and mitigation strategies appropriate to the New England region.
- To inform participants that climate change is likely to be one of many stress factors to impact our region in the future. Many of these stress factors will be interrelated, and collectively may have a significant impact.
- To facilitate connections and networking among the stakeholder groups attending the workshop.



Following the first day of the workshop, Thomas Baerwald, of the National Science Foundation, and Wanda Haxton, from the Environmental Protection Agency, have a moment to discuss workshop progress during the evening reception and poster session.

- To generate a Workshop Summary Report reflecting the climate change issues, vulnerabilities, coping skills, and mitigation strategies identified by the workshop participants as important to the New England/upstate New York region.

These goals were met through a combination of plenary presentations from stakeholders and research scientists, three sector-based breakout sessions, and an open dialogue among all participants. A final agenda is attached as Appendix II.

THE FOUR QUESTIONS

In order to meet the above goals, the four questions raised by Jerry Melillo, Co-director and Senior Scientist, Marine Biological Laboratory at Woods Hole, during national organizing workshop held at the Aspen Global Change Institute

were addressed by all participants during the course of this workshop:

1. What are the current concerns and stresses identified by regional stakeholders in each sector?
2. How will climate variability and climate change modify the current concerns and stresses?
3. What information and data are needed in order to fully understand and address these climate-related issues?
4. What types of strategies and approaches are available for coping with or mitigating climate change stresses?