OVERVIEW

Tourism in the United States generates hundreds of billions of dollars every year from domestic and international travelers and employs more workers than any other industry. Weather and climate conditions at a particular locale are a major decision factor for tourists. Many local and regional tourist destinations have, over many years, cultivated a reputation for certain activities or expectations that are mainly based upon the local climate. Florida is known for its sunshine and warm beaches, while Vermont is known primarily for its autumn foliage and winter skiing. Thus, this sector is highly sensitive to changes in weather and to the impacts of a changing climate. If climate conditions change over time, it will likely impact existing tourist industries. Having access to relevant climate information is essential to understanding how weather patterns and climate trends influence the tourism industry and to effectively plan for the future.

KEY STAKEHOLDERS

NOAA’s National Climatic Data Center (NCDC) works with various groups, both as an information provider and as an applied research partner, to examine the effects of weather and climate on tourism. This helps decision makers within the tourism sector determine practical and profitable responses to climate changes and variations. There are many different governmental and non-governmental organizations, public and private groups and businesses, and individuals that can benefit from using pertinent climate and weather-related information. Some major groups include:

- Commercial passenger transportation carriers
- Federal, state, regional, and local governmental planning, commerce, and marketing agencies
- Accommodations operators and managers, such as hotels, motels, and vacation rentals
- The food service industry, such as restaurants and restaurant supply companies
- Travel planners and agencies
- Cultural event planners
- The sporting event industry, such as football, baseball, and the Olympics
- Weather-dependent tour operations and recreation industries, such as ski resorts and diving companies

SECTOR NEEDS

Climate information is often available only as raw observations or in the form of tables, graphs, or written summaries, which may be difficult for users who are not well-versed in climate science to fully interpret. To bridge this gap, NCDC is partnering with the tourism sector to translate climate data into accessible, useful, and accurate products; and to leverage NCDC’s climate expertise to better understand what the information means and how it can be used most effectively.
Climate information can be used in a variety of ways. Some examples include:

- Using temperature data and information on increased frequency, duration and intensity of heat waves to determine how much outdoor recreation at summer tourist destinations may be reduced.
- Using precipitation information to understand how changes in river and lake levels may affect fishing and boating industries.
- Using drought information to plan for watering the greens and fairways at golf courses.
- Using snow cover extent and temperature trends to determine the optimal locations to build new ski lifts, which have about a 25-year lifespan.

**NCDC DATA and PRODUCTS**

There are many different types of useful climate information available. Some examples include:

- The *Global Historical Climate Network*, which contains historical temperature and precipitation data for thousands of land stations around the world.
- Local climatic averages, such as temperature, precipitation, winds, and sunshine.
- Satellite-based *Coral Bleaching Products*, which include regions of extreme warm water that can be harmful to reefs (called hotspots), and degree heating weeks, which indicate the thermal stress that coral reefs experience.
- The *U.S. and North American Drought Monitor*, which are synthesis products of multiple indices and impacts that represent a consensus of federal and academic scientists.
- Satellite-based snow cover extent products.
- The *Integrated Surface Data* database, which contains climate information for about 10,000 weather stations, with some dating back as far as 1901.

Collaboration between climate scientists and the tourism community is essential in helping to build the necessary bridges that will transform climate data into information that is relevant and credible. Ongoing communication is important to ensure that the information NCDC provides is appropriate and applicable to tourism sector needs. As climate changes in the years ahead and the effects become more noticeable, new information needs will emerge. NCDC will work closely with this sector, attending trade meetings and sponsoring future workshops and conferences, in order to better understand, address, and anticipate these needs.

Additional details about available NOAA products and the economic benefits of these products are provided at:

http://www.economics.noaa.gov

For further information on obtaining NCDC climate services and products related to tourism please contact:

Customer Services Branch
NOAA’s National Climatic Data Center
151 Patton Avenue
Asheville, NC 28801-5001 U.S.A.
828-271-4800 • TDD 828-271-4010
Fax 828-271-4876
E-mail: ncdc.orders@noaa.gov
http://www.ncdc.noaa.gov

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**NOAA Satellite and Information Service**

**National Environmental Satellite, Data, and Information Service (NESDIS)**

**National Climatic Data Center (NCDC)**

U.S. Department of Commerce

June 2010