

Climate, Weather & Tourism in North Carolina: Concluding Thoughts

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Some Shared Themes

- **Changing trends in both climate & tourism**
 - Both have significant economic implications for NC
 - Changing values, culture, society, environment and economy
 - Changes in demographics, activities & behavioral choices (e.g., changes in booking patterns)
 - Changes in natural resources and infrastructure that support tourism
 - Understanding & responding effectively to change is central to *sustainability* of resources, businesses & communities



Some Shared Themes

- **Climate Matters**

- Recall Daniel Scott's figure
- Weather to climate and back again
 - Historical context, current conditions and future projections
 - Variability and change
- Extreme events *and* changing patterns/trends
 - Temperature, precipitation (amount and timing), streamflow, water resources (drought), tropical storms, coastal inundation/erosion (sea level rise plus storms), weather conditions for key events
 - Changes in species and ecosystems (marine & terrestrial), health and other indirect effects



Some Shared Themes

- **Need regional & *local* information:**
 - Changing patterns, trends & consequences
 - Data, research, assessment, information, education and action
 - Seasonal forecasts & longer-term projections as well as near-term weather data/information
 - Understanding climate in a multi-stress context
 - Place-based, participatory approaches essential
 - Critical roles for government, universities, businesses, communities and public sector



Some Key Challenges

- Understanding and addressing interactions among changes in economy, climate, resources and behavior
 - Taking a systems approach
- Understanding and addressing consequences of changing climate and changing policy (adaptation **and** mitigation)
- Stimulating and informing action
 - Science, dialogue, policy, education –KIDS!!!
 - Media engagement (challenge & opportunity)
 - Engaging policy officials



Some Key Challenges

- Vulnerability of natural resources and infrastructure supporting tourism
 - Coastal areas particularly sensitive
 - Competing demands for resources
 - Transportation infrastructure and water resources
- Need for new institutions to support adaptation
 - Understanding change & enhancing resilience
 - Taking advantage of “low-hanging fruit”



Early Opportunities

- Growing interest in weather/climate and tourism in industry, government and scientific community
 - Strong cadre of partners already engaged
 - LET'S KEEP THE DIALOGUE GOING!!!!!!
- Resource conservation, energy efficiency and sustainability programs
- Linking climate adaptation with hazards risk reduction – science, communications, policy
- Industry looking at ways to diversify and manage risks to the climate-sensitive components of tourism
- Adaptive management to build resilience



Early Opportunities

- Enhancing awareness and improving communication
 - Among industry, government, science, tourists, public
 - Promoting tourism assets
 - Clarifying climate connections
 - Re-thinking messages and medium (incl. web-based technologies and GIS tools)
 - Alternative itineraries & other ways of diversifying
 - Engaging/informing the next generation
 - Tourism sector as community leaders



Early Opportunities

- Number of exciting examples of community/sector response (Bald Head, Grandfather Mtn., Great Wolf, ...)
- Emerging data integration and visualization tools and data access technologies
- Improving seasonal forecasts and longer-term projections at the regional scale
- Conducting regional tourism vulnerability assessments



Early Opportunities

- NOAA efforts to develop, convey and apply information in useful and usable ways
 - Existing partners & programs (SERCC, state climatologist, Sea Grant extension, NCDC, CSC, NWS...)
 - NCDC sector engagement & targeted products
 - NOAA climate service portal development
 - Data analysis and decision support tools
- Emerging university science-policy-education programs at ECU and the university partners who sponsored/participated this workshop
 - Some exciting, ongoing projects
 - Several ideas for multi-disciplinary research projects
 - Faculty expertise and student enthusiasm



Some Potential Data Applications and Issues (Neal Lott)

- Correlate climate data with cash flow to better prepare for ups and downs (capital planning)
- Risk assessment (extremes) and weather insurance derivatives contracts
- Climate change scenarios (what periods are important, e.g., 10-30 years)?
- Feasibility studies for business expansion—e.g., best locations, marginal areas
- Travel planning – U.S. and global
- Use of data to develop information for marketing
- Better use of NWS/CPC products for seasonal outlooks
- Energy-efficient building design and related energy issues (e.g., wind, solar)