

Climate extension: What Sea Grant can do for YOU!

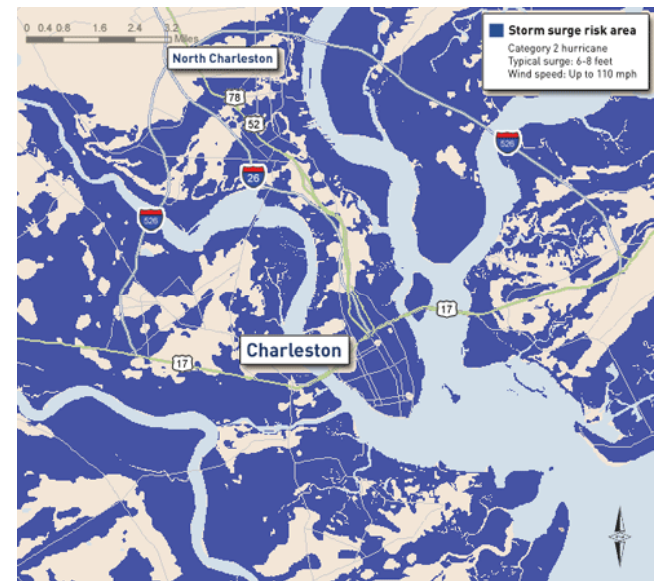
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Outline

- Why do we need climate extension?
- What does a climate extension specialist do, exactly?
- What's next for climate extension in the Carolinas?



<http://www.edf.org/content/Images/charleston2.gif>



Sometimes, scientists think differently...

“The scientist does not study nature because it is useful; he studies it because he delights in it, and he delights in it because it is beautiful. If nature were not beautiful, it would not be worth knowing, and if nature were not worth knowing, life would not be worth living.”

- Jules Henri Poincaré (1854-1912)
French mathematician

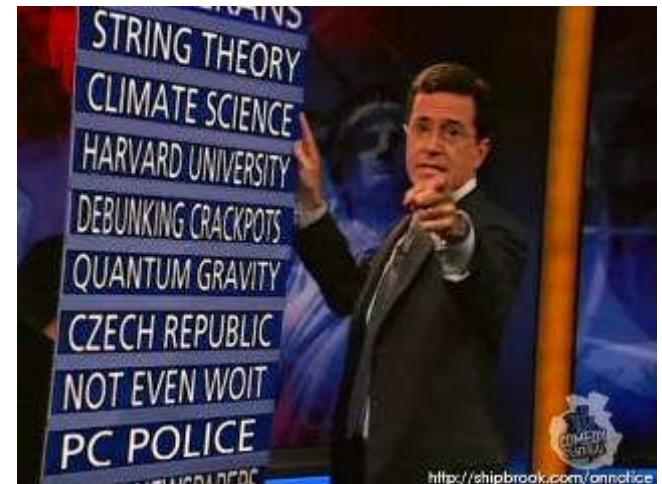




...than the rest of us.

“Now don’t get me wrong
- I’ve been a staunch
believer in climate
change ever since Al
Gore’s *An Inconvenient
Truth* grossed \$49 million
dollars worldwide. The
market has spoken.
Global warming is real.”

-Stephen Colbert
May 14, 2008





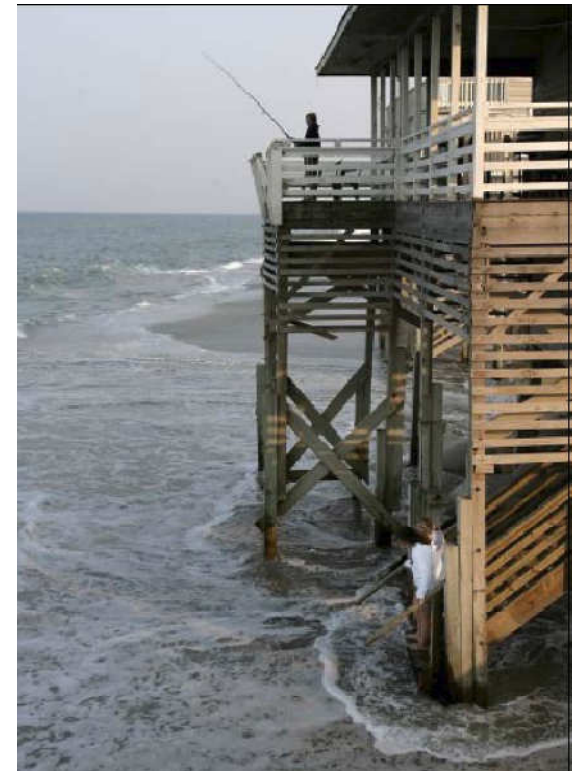
Traditional methods of climate communication

- Assume information provision enough for decision-making
- Use scientific language
- Emphasize mitigating climate change
- Think of risk differently than decision-makers do



Roles of a climate extension specialist

- Catalyze collaboration between scientists and stakeholders
- Interpret different “languages”
- Align differing priorities
- De-politicize scientific issues



(Seward 2007)



The Regional Coastal Climate Change Initiative

- *Carolinas Coastal Climate Outreach Initiative (CCCOI)* proposal submitted to NOAA 2006
 - South Carolina Sea Grant Consortium
 - North Carolina Sea Grant
 - Carolinas Integrated Sciences & Assessment (CISA – Univ. of SC)

- Established Regional Climate Extension Specialist position

- Serves both North, South Carolina coasts



(NC Division of Tourism, Film and Sports Development n.d.)



Developing climate extension capacities

- Inform and educate coastal users about impacts from climatic variability and changes
 - User needs assessment
 - FAQ sheets
 - Climate extension blog

- Provide tailored, decision-relevant climate information
 - Communication between researchers, decision-makers
 - Sea Grant Extension collaborations



Beyond information provision

- Local needs assessment for new programs
 - Workshops?
 - Online resources?
 - Other suggestions?

Coastal Climate Extension
Helping the Carolina coasts stop taking climate for (Sea Grant)

Monday, October 20, 2008

Why do we need climate extension, anyway?

Scientists don't speak the same language as stakeholders. For years, climate scientists have known that a lot of their work on climate variability and change goes unused by the stakeholders they believe could benefit from it. On the flip side, stakeholders are concerned about climate-related issues, but with all of the science cloaked in unfamiliar jargon and scientific principles, they don't know how to use it to address climate variability and change. In other words, climate information that could be used

Why do we need climate extension, ... Posted by Jessica Whitehead in Climate extension at 09:19

Categories: Climate extension, Sea level rise

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Frequently Asked Questions
Using Climate Information to Improve Coastal Planning

1. What is the difference between weather and climate? What makes coastal climatology so special?
2. How does climate affect water resources?
3. Can climate affect the environmental quality along the coasts?
4. How can we use information about the climate to reduce damages from coastal storms?
5. Does climate affect our utilities and infrastructure?
6. What is the link between climate and fisheries?
7. What effects can climate have on recreation and tourism?
8. Where can I get data and information about coastal climate?
9. What is the Sea Grant doing to improve my ability to use climate information?

1. What is the difference between weather and climate? What makes coastal climatology so special?

Weather is the short term (daily-to-weekly) atmospheric conditions we experience. Climate is the long-term average weather conditions over different time periods (seasonal-to-millennial) that are characteristic of a region like the coastline of the Carolinas. Climatology is the study of climate, and it includes historical climate characteristics, ranges of natural variations in climate, and long-term climate change. Along the coastline, climate also includes the ways the ocean interacts with both the land and the air. This means that climate studies along the coast consider atmospheric and marine data, like marine winds, salinity, currents, wave characteristics, and tides.

2. How does climate affect water resources?

Increasing population along the coastline means an increasing need for sustainable supplies of fresh water. Droughts can decrease water availability, and floods can contaminate surface water supplies and rivers. Both erosion and temperature can increase the distribution of algal blooms. Additionally, observations since the 1920's and 1930's indicate that the sea level in Wilmington, NC rose at an average rate of about 0.73 feet per century; in Charleston, SC, the rate was closer to one foot per century (NOAA 2005). Globally, climate scientists expect sea levels to rise at least 0.6 and 2 feet in the next 100 years (IPCC 2007). As the sea level rises, salt water can inundate estuaries and infiltrate fresh water supplies. You can use National Oceanic and Atmospheric Administration (NOAA) seasonal forecasts and drought.

Photos (from top): National Oceanic and Atmospheric Administration (NOAA) National Hurricane Center; @sashpato.com/Alan Taylor; NOAA Coastal Prediction Center; @sashpato.com/Scott Smith; NOAA Coastal Services Center



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