Introduction

Evidence suggests that climate change will have significant effects including rapid sea level rise on coastal communities around the globe. Yet, in the United States, there are varying levels of concern regarding sea level rise. Public risk perception of sea level rise may affect public support of policies to mitigate climate change. This study is a qualitative examination of public concern regarding sea level rise in Charleston, South Carolina, which is one of the most vulnerable metropolitan areas on the East Coast to sea level rise. News articles and opinion pieces analyzed for themes that exemplify concern or lack of concern with the risks of sea level rise. Implications from this research suggest that when discussing the risks of climate change, focusing on salient issues of unique natural and historical assets in coastal communities will allow citizens to perceive greater risk due to sea level rise.

Methods

Study site

My study area is Charleston County in South Carolina, which includes the towns of Awendaw, Hollywood, James Island, Johns Island, Kiawah Island, Lindencroft, Mount Pleasant, Meggett, Mount Pleasant, Ravenel, Rockville, Seabrook Island, Sullivan’s Island, and West Ashley. Charleston is one of the most vulnerable metropolitan areas on the East Coast to sea level rise.

I developed a database with the full text of the found items, date published, and type of article between 2007 and 2015. The goal was to ascertain the level of concern of the metropolitan areas on the East Coast to sea level rise. Public risk perception of sea level rise on coastal communities around the globe. Yet, in the United States, there are varying levels of concern regarding sea level rise. Public risk perception of sea level rise may affect public support of policies to mitigate climate change. This study is a qualitative examination of public concern regarding sea level rise in Charleston, South Carolina, which is one of the most vulnerable metropolitan areas on the East Coast to sea level rise. News articles and opinion pieces analyzed for themes that exemplify concern or lack of concern with the risks of sea level rise. Implications from this research suggest that when discussing the risks of climate change, focusing on salient issues of unique natural and historical assets in coastal communities will allow citizens to perceive greater risk due to sea level rise.

Coding Results

Ten distinct themes were identified through coding. They are listed in order of most to least often mentioned in articles.

Local flooding

This was the most common code that served as an indicator of salience. “An era of global warming is expected to bring more frequent, intense storms and the kind of devastation recently seen with Superstorm Sandy.”

Economy

Concerns about the economy come from both ends of the spectrum, with people concerned about the effect sea level rise may have on tourism in Charleston to people concerned about loss of jobs and tax increases due to action against climate change. “If temperature and sea levels continue to rise, as climate change models predict, some of the first casualties in the state’s economy will be in the outdoor tourism sector.”

Beaches

“The sign on the post tells it all: No pets allowed. The sign was hung to protect shornbird and sea turtle nests on a remote beach in the Wildlife Refuge. The pool is now in the ocean.”

Call for action

“The ocean is rising. We live on the coast. What are we going to do about it?”

Trust in science

“There seems to be ‘My mind is made up. Don’t confuse me with facts.’” There are also a number of people urging fellow Charlestonians not to ignore the reality of sea level rise.

Human safety

Many of the concerns about human safety are connected to local flooding and storms. “Crazy weather extremes may overwhelm some locations, making some areas undesirable... making preparations will save lives.”

Natural beauty/Uniqueness

“Life on the coast is unique in many ways. From our breathtaking sunsets over the Atlantic, to the seasonal flux of tourists, we live our life in tune with the rhythm of the ocean, tides rising and falling with a reassuring predictability.”

Polar ice caps

Referencing the melting of polar ice caps can in some instances be a sign that the writer conceptualizes the problem of sea level rise as very far away, physically or temporally. “I am sure [columnist] was trying to alarm us with his statement ‘Antarctic land ice is decreasing by an astounding 100 billion tons per year.’”

Alarmism

“We as a nation are being asked to drink the Kool-Aid of global warming and rising sea levels based upon extremely limited empirical evidence. It is time for the climate change community to stop the global warming fear-mongering. The sky is not falling.” Those who are not concerned about sea level rise often call those who are “climate doomspirationists,” and remark on lack of scientific evidence.

Historical landmarks

One article paints a picture of what Charleston could be like in 2107, when the historic town is completely submerged in water due to climate change. She urges the reader to picture a tour of a post-climate-change Charleston—instead of a horse-drawn carriage, you’re cruising down what used to be Broad Street. Other articles mention the Custom House, the over 200 year old St. Michael’s church, and Cape Hattaras Lighthouse, among other landmarks which locals feel strongly be preserved for future generations.

Community Comprehensive Plans

I reviewed the Community Comprehensive Plan of Charleston to analyze the preparedness of the county. This is a document the Charleston County Council develops to determine the future development of the county. The document features absolutely no mention of sea level rise or any plans to handle the effects of climate change.

This is surprising considering that over 70% of the articles I collected demonstrated high levels of concern about the effects of sea level rise, and many featured a call for action and policy change.

Conclusion

Results support the hypothesis that those who exhibit a high level of concern regarding sea level rise are more likely to focus on salient issues. Those who demonstrate concern about sea level rise (and climate change in general) tend to conceptualize its effects as nearby and its risks imminent, or already occurring. A person with a lack of concern regarding sea level rise or general climate change is more likely to mention far away issues like polar ice caps and not mention local problems. This supports the literature surrounding environmental risk perception, which suggests that focusing on salient, understandable risks rather than the abstract and seemingly far away issue of climate change is more likely to bring about higher levels of concern (Carthon 2013). The results also support claims that those who thought about local adaptation were more likely to report high willingness to mitigate climate change (Evans 2014).

The use of online news sources may not have been the most effective way to test my hypothesis, as its being online may have skewed the data (perhaps toward younger, or more educated people). However limited the implications, these results do answer important questions about how to best discuss problems like sea level rise. A focus on the tangible, clear and non-politicized is most effective. This information can help better demonstrate the risks of climate change and perhaps bring about policy to limit these risks. Analysis of Community Comprehensive Plans demonstrate that this policy is badly needed.

References


Figure 1. Charleston County’s borders are shown here in red.