

ABSTRACT

KOFFMAN, KATHERINE ALICE. Climate of Doubt in North Carolina: Sea Level Rise, Economic Interests, and the Media. (Under the direction of Dr. Sasha Newell, Dr. Nora Haenn and Dr. Louie Rivers III.)

In 2012, North Carolina passed House Bill 819, which put in place a four-year moratorium on the calculation of future sea level rise, as well as related policy implementation. The bill was a response to a 2010 report published by the state's Coastal Resource Commission's Science Panel (CRC), which stated that the coast of North Carolina is highly likely to experience a one meter sea level rise by 2100. The bill led to media frenzy, especially in Raleigh, North Carolina, the center of the political debate. The NC legislatures action highlights the doubt that persists surrounding climate and sea level change nationally. A central aspect of this debate is how does the media frame climate change and sea level rise? This leads to the question of how did the Raleigh media frame climate change, sea level rise and the arguments of various actors involved in the bill's debate? I answered this question by examining climate change and sea level rise coverage in the city's newspaper, The Raleigh News and Observer, and publications of the conservative think tank, the John Locke Foundation, also based in Raleigh. My analysis found that due to their different audiences and political stances, the two sources addressed the bill and environmental conditions in very different ways, but perpetuated the state's environmentality of doubt surrounding climate change and sea level rise.

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Climate of Doubt in North Carolina: Sea Level Rise, Economic Interests, and the Media

by
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BIOGRAPHY

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Upon completion of her master's degree, Katie will either pursue a doctorate degree, or join the workforce. Either way, she knows that her training in Anthropology will help point her in the right direction.

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LIST OF ABBREVIATIONS

CRC – Coastal Resources Commission

HB819 – House Bill 819

JLF – John Locke Foundation

NCGA – North Carolina General Assembly

NOAA – National Oceanic and Atmospheric Administration

RNO – Raleigh News and Observer

USGS – United States Geological Survey

CHAPTER I. INTRODUCTION

My research examines how state actors and their elite counterparts in the private sector employed discursive framing tactics to encourage public doubt about climate change in North Carolina. It scrutinizes the language used to manipulate the public's perception of sea level rise and climate change by the economic actor, the NC-20, as well as the state government of North Carolina. The story began when official U.S. science institutions, such as the United States Geological Survey (USGS), used tide gauge data from the National Oceanic and Atmospheric Administration (NOAA) to determine that North Carolina's coast is a sea level rise "hotspot" (Caffrey and Beavers 2013). Sea-level rise occurs more rapidly between Massachusetts and North Carolina than anywhere else in the world (Caffrey and Beavers 2013).

In March 2010, the Coastal Resources Commission (CRC) released the *Sea-Level Rise Assessment Report*. The panel reviewed previous research by NOAA and the USGS, and collected their own data. The CRC came to the conclusion that:

"Given the range of possible rise scenarios and their associated levels of plausibility, the Science Panel recommends that a rise of 1 meter (39 inches) be adopted as the amount of anticipated rise by 2100, for policy development and planning purposes"

- *North Carolina Sea-Level Rise Assessment Report*

The assessment unsettled coastal developers and real estate agents, even though NOAA's research affirmed North Carolina as one of the most vulnerable locations in the United States for sea-level rise (Glass and Pilkey 2013; Lee 2012; Tursi 2012).

In reaction to such assessment, the discursive framing around questions of climate change and sea level rise in the media manipulated public understanding and encouraged

doubt about its likelihood. Consequently, the North Carolina General Assembly (NCGA) passed House Bill 819 (HB819), which placed a four-year moratorium on the official study of sea-level rise.

A. The NC-20

The NC-20 most vocally expressed their disdain with the report. The NC-20 is a coastal interest group comprised of real estate agents and business leaders, concerned with the potential economic impact of coastal development restrictions, led the charge to challenge the report (Glass and Pilkey 2013). The NC-20's mission statement is:

“[t]o support, defend, and further the common environmental and sustainable economic development interests within the 20 coastal counties through coordinated communication, information sharing, data collection and monitoring, scientific research, and proactive interaction with legislation and executive decisions makers at all levels of government” (NC-20).

The NC-20 was a capitalist relation that based social relations on commodity exchanges in the production of goods (Felluga 2011). The capitalist relations in North Carolina's coastal economy were primarily the real estate, construction, and tourism industries, which coalesced in the form of the NC-20. These industries bring in billions of dollars into the state's economy. Tourism brought in \$25 billion and sustained approximately 9.2% of jobs in the state directly or indirectly (The Economic Impact of Tourism in North Carolina). While this includes all parts of the state, the coast brings in a significant amount of money, especially during the summer months. Real estate and land development are very important as well. In 2012, the median price of a house on the Outer Banks was \$330,000, while the average price was \$420,245 (OBX Realty Group). The most expensive house sold during 2012 was \$3.75 million, while the lowest priced house was \$55,000 (OBX Realty Group). Oceanfront houses

tend to sell for a lot more than non-oceanfront homes. Undeveloped land is affordable, but valuable on the coast, which makes it attractive to developers. According to OuterBanks.com, lots range from \$20,000-\$200,000, but can be more expensive if they are oceanfront. According to Outer Beaches Realty, on Hatteras Island, oceanfront lots range from approximately \$245,000 to \$750,000 (2012). As shown, the tourism, development and real estate industries are highly profitable in North Carolina, and it is understandable that groups such as the NC-20 may be concerned about their economic prosperity.

Twenty representatives made up the NC-20's Board of Directors; ten of which were county managers, and the other 10 represented business interests (NC-20; Sorg 2012). In addition to concerns about land development and structure elevation, the coastal stakeholders did not want to pay higher insurance rates. If the state acknowledged the one-meter sea level rise prediction, the insurance companies could raise prices for coastal property owners. The cost of living on the coast could increase significantly if all aspects of economic interests were not kept in check, including the insurance rates. Coastal stakeholders had a lot to lose if they did not protect their economic interests, and therefore manipulated the language in the discussion of climate change to shape people's mindsets.

The science adviser of the NC-20 in 2012, who led the charge against the CRC, was John Droz, Jr., a physicist and real estate broker (Leslie 2012; Sorg 2012). He conducted an independent critique of the CRC's original report for the NC-20, and disagreed with the conclusion of a one-meter change (Theel 2014). Droz has no peer-reviewed articles in credible journals, but he felt he qualified to review the CRC's report, which utilized peer-reviewed science articles to support their prediction (Leslie 2012). Droz interacted with

various conservative-based institutes, such as the American Tradition Institute, where he was a Fellow and Director of the Environmental Law Center, Americans for Prosperity, and the JLF, where he gave lectures opposing alternative energy and wind power (Sorg 2012).

Based on Droz's independent review of the CRC's report, the NC-20 wrote an addendum of the report in 2011. The NC-20 claimed to find five essential flaws:

“... the *Critique* concluded that the CRC Panel's *Report*:

1. Was not a scientific assessment of the NC SLR issue,
2. Did not do a *balanced* literature search regarding SLR
3. Did not synthesize the “best available science” on SLR
4. Made several unsupported assumption in coming to their conclusions, and
5. Ignored their main researcher's latest data (at the time of the report).”

-*Commentary on: NC CRC 2010 SLR Report Addendum* (NC-20 2012)

The NC-20 argued that the CRC sought to limit economic activity on the Outer Banks, which would result insurmountable economic damage for the state. The group perpetuated the idea that the prediction is a “myth promoted by manmade global warming advocates rather than a serious prediction based on science” (Sturgis 2012). The cries of inaccuracy and economic damage by the NC-20 created a counternarrative to the data presented by the CRC. The success of this counternarrative at the state level was extremely rare; while many doubt the reality of climate change and sea level rise, they are unable to receive attention at the state level for their ideas. This counternarrative disseminated doubt about sea level rise, and gained ground among members of the NCGA who staunchly opposed climate change, due to economic fears.

B. NCGA support

The NC-20 found support for their challenge among members of the NCGA who represented coastal counties. The writers of HB819 were Representative Pat McElraft and

Senator Bill Cook. McElraft is a real estate broker from Emerald Isle, North Carolina, and Representative Bill Cook is a retired economic developer from Beaufort County, North Carolina (Bill Cook for NC Senate; Glass and Pilkey 2013; North Carolina General Assembly; Project Vote Smart). McElraft worked as a sales representative and real estate broker before entering politics (Sturgis 2012). Top contributors to her campaign included the North Carolina Association of Realtors and the North Carolina Home Builders Association (Follow the Money; Sturgis 2012). Cook worked for Potomac Electric Power Company in Washington, D.C., until he retired to North Carolina (Bill Cook for NC Senate). In addition to the North Carolina Republican Party, Cook's biggest financial supporters included Troy Petty, a relator from Avon, North Carolina and the North Carolina Association of Realtors (Follow the Money). Real estate groups contributed to many members of the NCGA campaigns.

The NCGA and the NC-20 circulated public discourse that questioned the reality of sea-level rise. House Bill 819 (HB819), which placed a moratorium on the study of sea-level rise until 2016, passed without public protest since the NCGA convinced the public of the uncertainty of sea-level rise. The NCGA Republicans and some Democrats did not support the CRC's estimates of a 39-inch rise, and pushed for the use of historical records to predict future sea level rise. The argument was that the extrapolation of data from the past 100 years would give an accurate picture of the next century. Between 1900 and 2000, the coast experienced an eight-inch rise in sea level; therefore, using data extrapolation, the state would only experience an eight-inches rise over the next 100 years.

Despite the contrast in predictions, it is interesting to note that GIS renderings of vulnerable coastal land shows that no matter which scenario happens, the coast is in trouble. Much of the coastal regions are low-lying areas, which are vulnerable to eight inches and one meter of sea level rise. The following two maps show the land that could succumb to sea level rise if there is an eight-inch rise, or a thirty-nine inch rise:

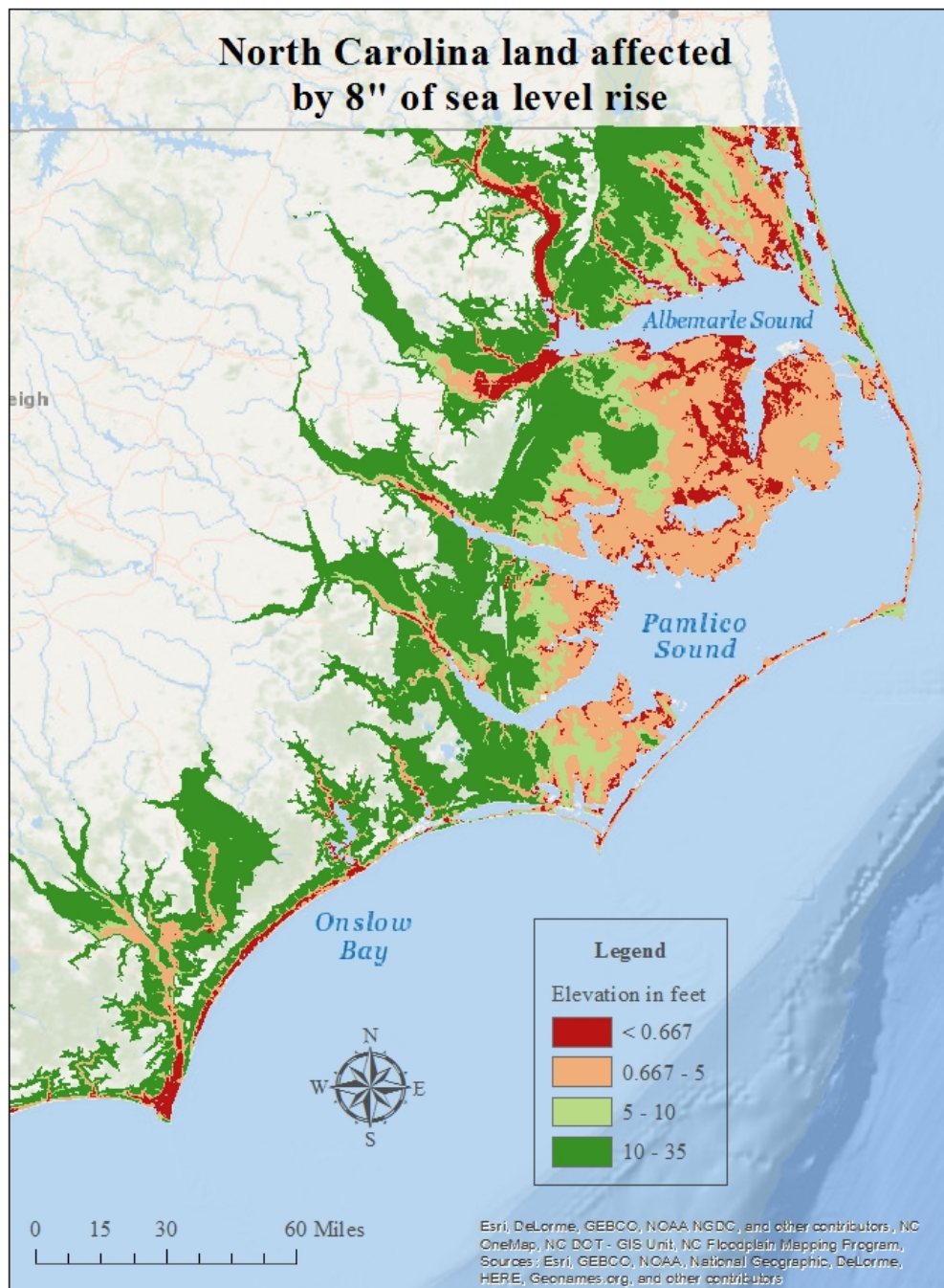


Figure 1 The map shows (in the red) what areas are 8" or less above sea level, and could be underwater with 8" of sea level rise. Map author: Katherine Koffman.

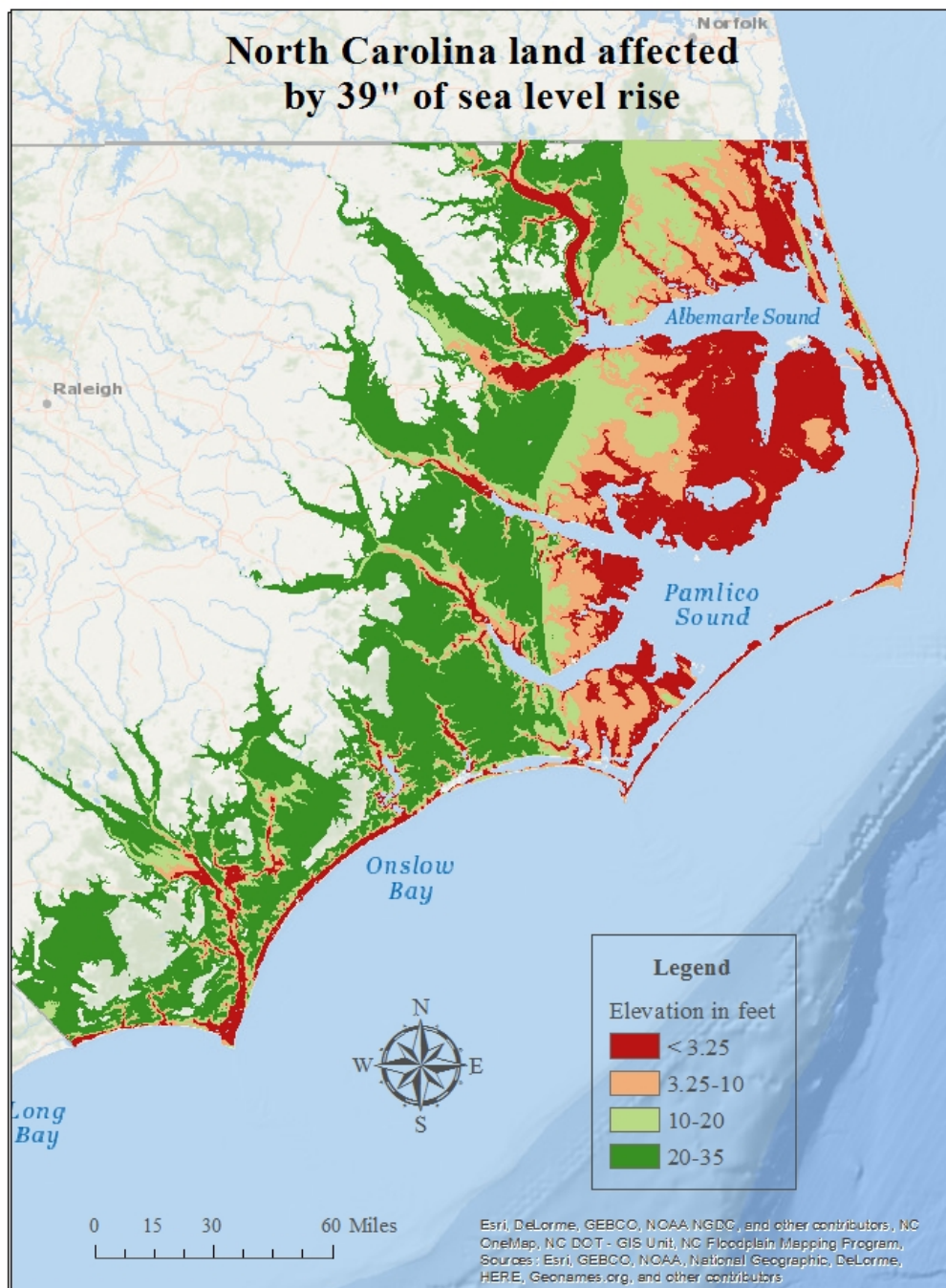


Figure 2 The map shows (in the red) what areas are 39" or less above sea level, and could be underwater with 39" of sea level rise. Map author: Katherine Koffman

C. House Bill 819

First introduced as “Requirements for Calculating Sea-level rise” in April 2011, HB819 gained traction among members of the NCGA (Project Vote Smart; North Carolina General Assembly). The 2012 Senate version of the bill mandated the study of historical records, but various national media outlets and comedians, such as Stephen Colbert, mocked the state legislators, joking that the NCGA willed away science with a law. Due to the harsh backlash, the House toned down the Senate’s version of HB819 so that it set strict requirements for future study.

On April 28, 2011, the House of Representatives overwhelmingly passed the first version of the bill, with 83 yes votes, and 29 no votes (North Carolina General Assembly; Project Vote Smart). However, in June of 2012, the Senate redrafted the bill to include some controversial and dramatic changes. The more stringent regulations proposed by the Senate included the use of historical data to determine future rates of sea level change, and the use “statistically significant” peer reviewed literature (Project Vote Smart). Predictions of accelerated sea-level rise were unacceptable unless consistent with historical trends (Project Vote Smart). Unsurprisingly, this meant that the CRC could not report on accelerated sea level rise. As a final stipulation, the Senate declared that the CRC was the only source authorized to define rates of sea-level rise for policy and regulation purposes (Project Vote Smart). The revised Senate bill passed 35-12 (North Carolina General Assembly; Project Vote Smart).

The Senate’s bill received heavy opposition from the House, in part due to the backlash from the national public and media (Glass and Pilkey 2013). In a non-concurrence

vote by the House, the Senate's version was unanimously rejected (North Carolina General Assembly; Project Vote Smart). McElraft redrafted HB819 and entitled it "Prohibits Calculating Sea Level Change Until 2016" (Project Vote Smart). Her version contained less controversial language and avoided the requirement of the use of historical records. McElraft set new requirements for the CRC's calculation of sea-level rise. First, the new report must include a summary of peer-reviewed science literature that addresses data on global, regional and North Carolina-specific sea-level change (Project Vote Smart). The CRC must compare future projected sea level changes to historical trends, although their prediction does not have to draw conclusion from historical data (Project Vote Smart). Additionally, the CRC must include an "assumptions and limitations" section of the models used (Project Vote Smart). The final requirement is that the CRC must study the economic and environmental costs and benefits to the coastal region that could result from the CRC's proposed sea-level regulations (Project Vote Smart).

The new bill prohibits the CRC from officially publishing their new report until July 1, 2016, but the CRC must submit a new draft by March 31, 2015. The updated report will go to the NCGA and the public to be scrutinized (Project Vote Smart). The CRC must take the public's and NCGA's comments into consideration before publishing their official report (Project Vote Smart; Glass and Pilkey 2013). Despite the state imposed moratorium on the prediction of future sea levels, the bill authorized local governments to implement their own sea-level studies (Jarvis 2012). On July 2, 2012, the Senate passed HB819 by a vote of 40-1, and on July 3, the House passed the bill by a vote of 68-46 (North Carolina General Assembly; Project Vote Smart).

The bill proceeded to Governor Bev Perdue after its passage. Although opposed to HB819, Perdue decided against vetoing it (North Carolina General Assembly; Project Vote Smart). She did not want to waste taxpayer dollars on an NCGA summer session, which would likely result in an override of her veto (Jarvis 2012). Additionally, Perdue liked the idea of locally conducted sea-level rise studies (Jarvis 2012). On August 3, 2012, HB819 became law without Perdue's signature (Jarvis 2012; North Carolina General Assembly; Project Vote Smart). Despite the changes to the bill, the state still received backlash in the national media. Although the national media scorned the bill, the NCGA and the NC-20 used the local media as a platform to convince the public of the need for HB819.

D. Purpose of research

My research explores connections among the local media and political and economic actors. I utilize the associations of the *Raleigh News and Observer* (RNO), the John Locke Foundation (JLF), and elite actors, such as the NCGA and the NC-20, to describe the circulation of environmental discourse and capitalist underpinnings of HB819. Publications like the RNO and JLF, allowed for elite actors to manipulate the messages circulated by the media in a process called framing. Framing is the assemblage of perceived realities that promote particular interpretations (Entman 2007; Jönsson 2011). Elites and the media can collaborate to circulate political communication and ideas, which can include environmental rhetoric. Environmental rhetoric, which I address as *environmentality*, is the official “eco-knowledge” of the state that is spread to the public realm (Luke 1995). In the case of the sea level debates, the media was an essential component to spread frames about HB819. The vote for the bill occurred among the members of the NCGA, but interestingly enough, the state

took the discussion of the bill to the public. The media was as a medium for the NCGA and NC-20 to circulate the environmentality that sea-level rise is uncertain. I address this concept in greater depth in the next chapter.

To identify the actions and ideas of the various actors involved, I analyzed two local media sources, the RNO and the JLF, which aided in the circulation of the state's environmentality. I created a standard method of evaluation that each article underwent, which established the key actors, the valence of the article, key words used, etc. To collect articles, I searched the archives of the RNO and the JLF from January 1, 2012, or the year of the bill's debate, to December 31, 2013, to see if there was any backlash in the aftermath in the bill's passage. I also evaluated user-generated comments from this timeframe to gain an understanding of the public's reactions to the state's rhetoric. However, I used articles and blogs with national audiences for this evaluation because the RNO and the JLF did not have user activity in their comment sections. An assessment of the local media's discussions of the issues allowed me to understand the instillation of public doubt about the existence of sea-level rise. The origins of the debate allowed for a clearer understanding of the bill.

E. The RNO and JLF

It was important to evaluate Raleigh media sources for various reasons. As the state capital, Raleigh is a highly influential city with many elite actors, such as state legislators and the governor. In addition, Raleigh is part of the Research Triangle, which includes Durham, Chapel Hill and Research Triangle Park. This is an intellectual part of the state, where high caliber scientific research happens at universities such as North Carolina State University, University of North Carolina-Chapel Hill, and Duke University. With the state's disavowal

of sea level research until 2016, there is a disparity in interests between the research institutions and the limitations set by the state.

The RNO is the second largest newspaper in North Carolina, with a daily print readership of approximately 325,000 (The Raleigh News and Observer). Founded in 1880, the RNO is a “moderate-to-liberal” newspaper (North Carolina History Project). In addition, many other state newspapers, such as the *Greensboro News and Record* and the *Charlotte Observer*, use it as a feeder newspaper, printing articles originally written for the RNO.

The JLF, a conservative think-tank based in Raleigh, NC, holds a substantial presence in the local media. Although there are several media outlets to select from in Raleigh, the JLF is important because of its intricately woven connections to politics through Art Pope. Pope is a conservative businessman who contributes thousands of dollars of his own money to political causes. Additionally, he channels millions of dollars through various corporations he owns to different interest groups, such as the Civitas Action Group, Real Jobs NC and Americans for Prosperity (Kromm 2011). In the 2010 election, Pope donated to 22 Republican campaigns, and 18 of the candidates he financed won (Kromm 2011). This election resulted in the Republican takeover of the NCGA. In 2013, Governor Pat McCrory appointed Pope as the state budget director, reflecting the importance of the connection between the capital actors and the state’s actions.

Pope inherited his father’s multimillion-dollar family business, Variety Wholesalers, which operates under various names in the southern U.S. (Kromm 2011). He supports various institutions in North Carolina, such as the John William Pope Foundation (JWPF). Named after Pope’s father, the JWPF is an organization that “works to improve the well-

being of the citizens of North Carolina and the nation through the advancement of individual freedom and personal responsibility” (John William Pope Foundation). In addition, the organization’s mission is to support:

“A network of organizations in North Carolina that advocate for free markets, limited government, individual responsibility, and government transparency. Beginning over two decades ago, the Pope Foundation invested in academic institutions to train the leaders of tomorrow; think tanks to translate ideas into an understandable form for policymakers and the public; grassroots organizations to help implement those ideas; and government watchdogs to ensure that taxpayer dollars are spent wisely” (John William Pope Foundation).

The foundation is worth an estimated \$148 million and it donates to different causes, such as scholarships, the arts, nonprofits and right-wing groups (Kromm 2011). Tax records show that the JWPF gave \$8 million to the Civitas Action Group between 2005 and 2010 (Kromm 2011). Its involvement in media is not new; it supported media outlets, such as the *Capitol Monitor*, which closed after the editor refused to make the news partisan (Kromm 2011).

In 1990, Pope created the JLF, and between 1990 and 2011, it received approximately \$20 million worth of funding from the JWPF (Kromm and Sorg 2011). The JLF runs the *Carolina Journal*, which hosts print media, radio, online media and TV programming based on conservative ideology (Kromm and Sorg 2011). In line with this conservative ideology, the JLF portrayed strong opinions against the existence of sea level rise and climate change. The JLF centered their arguments on the belief that the CRC’s report contained significant scientific flaws, which made the information inaccurate and untrustworthy. The foundation supported HB819, and employed the arguments of sea level and climate change skeptics to validate their articles.

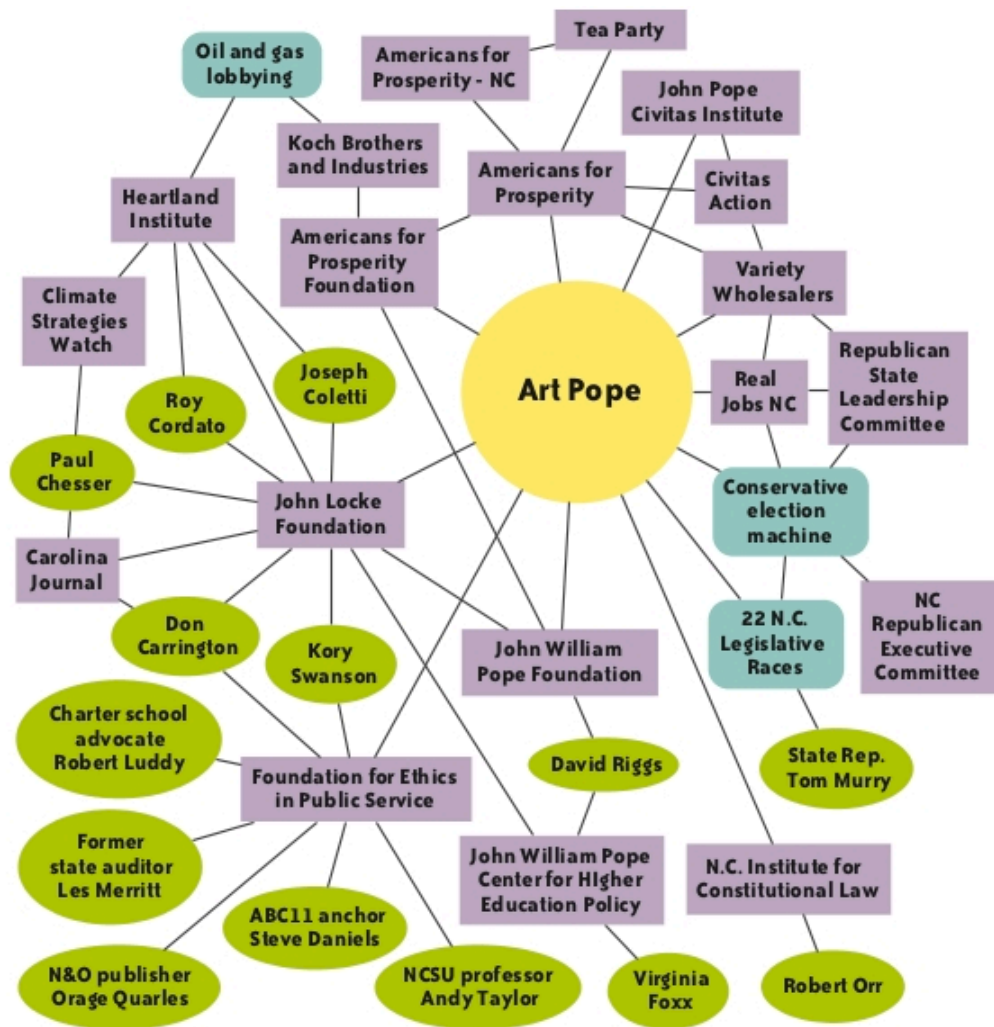


Figure 3 Art Pope's connections to various organizations, media outlets, politicians, etc., demonstrated in this graphic, published by Indy Week on March 9, 2011.

The local media's coverage of the political controversy of sea-level rise created a public platform for the discourse of doubt to flourish. While the RNO is a moderate newspaper, various types of articles allowed for the NCGA's eco-knowledge to develop into a topic of debate. The principles of journalism, such as writing balanced stories, allowed the media to portray uncertainty about climate change and sea-level rise. The NCGA and NC-20

depended on the journalism ethic of balanced reporting from the RNO to convey both sides of the debate, and through the publication of editorials and letters to the editor from supporters. The JLF consistently published articles and newsletters in support of the NCGA's position. It did not adhere to journalistic principles because it is a privately supported political think tank. Its publications, such as the *Carolina Journal* and weekly newsletters, regularly challenged the science of climate change and sea-level rise. The JLF quoted scientists, academics and government officials who did not agree with mainstream sea level predictions. I show through published media and reader responses how the creation and circulation of environmentality in the Raleigh media enticed the public to doubt science and the future realities facing the state.

In this research, I addressed five research questions that are essential in understanding this research:

1. Why did an official sea level rise discourse form?
2. What is the role of capitalist profit motives in relation to the passage of the bill?
3. How did the minority opinion form state policy?
4. What role did the media play in the dissemination of the state's environmentality of doubt? Who did the media rely on to explain the situation and circulate the state's environmentality?
5. How did the state's environmentality affect the public's understanding of sea level rise?

First, why did an official discourse on sea level rise form? In this text, I refer to this as the environmentality of doubt, or the discourse which the state circulated that expressed uncertainty about sea level rise. I explored the motivations behind the formation of the discourse and the sequential passage of the bill. Second, what is the role of capitalist profit motives in relation to the passage of the bill? The involvement of various capitalist actors, such as the NC-20 affected the outcome of the discourse and the bill. I explain the potential

benefits received by these actors. Third, how did the minority opinion form state policy? It is very rare that a non-governmental group without a strong following can successfully persuade the state to implement policy that benefits their personal interests. However, the NC-20 successfully did just this. Fourth, what role did the media play in the dissemination of the state's discourse? Who did the media rely on to explain the situation and circulate the state's discourse? As I demonstrate throughout the text, there were various actors, besides journalists, who contributed to the circulation of information during this time. This further demonstrates the presence and circulation of discourse in the RNO and the JLF. Finally, I question how the state's discourse affected the public's understanding of sea level rise? In the rampant circulation of discourse for and against HB819, it is important to evaluate the affect on the public's understanding of the science. In the evaluation of user-generated comments, I explore the presence of language and the further circulation of discourse perpetrated by the actors involved in the debate. These questions allowed me to explore the various aspects of this debate, and work towards an understanding of the theories and motivations behind this debate.

CHAPTER II. LITERATURE REVIEW

In this research, I bring together the concepts of environmentality and imagined communities to demonstrate how print media shapes the relationship among a state, its publics, and the environment. I use imagined communities and public synonymously to describe the collective people of the state. An imagined community is a group of people that voluntarily unite around common ideas and beliefs, despite never interacting with one another (Anderson 1991; Spitulnik 1996; Warner 2002). For example, in this research, people identify themselves as North Carolinians, despite possibly having nothing in common besides living in the same state.

I focused on the framing of the doubt of climate change and sea-level rise, as well as the framing of state policy that arose from this. I applied the idea of environmentality to the topic of sea-level rise in North Carolina and I showed this study of environmentality must be grounded in a solid understanding of neoliberal capitalism and publics. Print media, a form of capitalism that publics consume, is an ideal source of information in this research because the selected sources are artifacts of imagined communities. Publics prevail in all social spaces, and according to Warner (2002), they self-organize around some type of text, such as discourse or an image. The media serves as one of the social spaces for publics to interact and have conversations with the state. Due to the dialectical relation, or “how contradictory meaning are negotiated between relationship parties,” (Baxter 2009: 418) states and publics try to control each other through “communicative tensions between opposing systems of meaning,” (Baxter 2009: 418). I applied this definition of dialectical relationships to the

conversations of the state and the public in the media to show the tensions that formed between their interpretations of the state's environmentality. This process of dialectical relationships gave me insight into the formation of a state's environmentality and the response of the public because I saw the tensions between the state and the public, which was a response to neoliberal economics.

A. Environmentality literature

How are we to understand the discourse on environmental science and climate change that a government produces? One fruitful approach focuses on environmentality, which describes the official knowledge and power relations of a state, in regards to the environment (Luke, 1995). Environmentality is a way of thinking about the state's management of environmental resources that emphasizes influence over the public, rather than a direct impact on the physical environment. Researchers working within an environmentality framework traditionally examine the gradual and indirect impacts of state actions as the environmental resources affect the economic and social behaviors of publics.

Environmentality is a play on Foucault's theory of governmentality, understood as the general, everyday technique of the governance of individuals "under the authority of a guide responsible for what they do and for what happens to them" (Rose, et al 2006: 83). Governmentality includes "the broad sense of techniques and procedures for directing human behavior" (Foucault 1997: 81). This manipulation of behavior occurs in a calculated manner from a distance, so people are unaware of the guided change of desires, habits, aspirations and beliefs (Li 2007). According to Foucault, governmentality gives the pretense that the government is interested in securing "the welfare of the population, the improvement of its

condition, the increase of its wealth, longevity, health, et cetera” (Li 2007: 275). However, this is a manifestation of power because the government produces knowledge and discourse for the public to absorb. The discourse of security and well-being is a mask for the state’s desire to control social behavior (Foucault 1997: 68). Foucault hints that governmentality is used to manipulate publics to comply with and rationalize the state’s discourse and power (Foucault 1997: 68, 73-79).

Social scientists, such as Luke and Agrawal, modified Foucault’s original theory of governmentality to fit their environmental research; environmentality concentrates specifically on environmental governance, knowledge, and practice (Luke 1995). Luke explained environmentality as a discourse, presented as “eco-knowledge” that gives states “geo-power” over nature and modern societies (1995). The environment is a “nexus for knowledge formation and as a cluster of power tactics,” which results in the acquisition of “eco-knowledge” (Luke 1995: 66). The most noticeable effects of environmentality occur in the economic realms of society (Luke 1995). Agrawal adds to Luke’s definition of environmentality by examining gradual changes in “environmental politics, institutions and subjectivities” (Agrawal 2005: 324). Environmentality is a framework that describes how the power of the state and the ethics of individuals create new environmental subjects (Agrawal 2005; Foucault 1997).

In my research, I use the concepts of publics and capitalism to explain how an environmentality of doubt functions. An environmentality of doubt is when the state’s official knowledge is an expression of apprehension about a situation instead of a set idea of the environmental issue. The NCGA and the NC-20 circulated doubt about accelerated sea

level rise to protect their economic interests. These relationships expressed elements of the state's control over the environment through means such as eco-knowledge, geo-power, and regulatory practices; therefore, they formed an environmentality. The environment and development are "inextricably linked" (Luke 1995: 74) because of the bio-power that states and publics can exert over the environment. My interpretation of Luke is that publics, capitalism and the environment exist as spaces of discipline, where the state circulates an official eco-knowledge and geo-power over society and the environment to further their economic benefits.

As I applied the ideas of environmentality to sea level rise in North Carolina, I found that the ideas of Luke, Agrawal and others are necessary but insufficient. To fully understand this situation, we need to understand the relationship between a state and its publics through the media, under the particular circumstances of neoliberal capitalism that prevail. In the next section, I develop this further to show why these ideas connect. My understanding of this is based on a critical analysis of my data. For example, in my research, the state created an official eco-knowledge that sea-level rise is uncertain, which successfully disseminated through the media, and among the public. The state circulated their environmentality in the media to justify the passage of HB819, which placed no restrictions on coastal development and real estate.

B. The formation of neoliberal environmentality

The environmentality of doubt protected the neoliberal economy in North Carolina. The state produced a discourse that protected powerful private interests in the coastal economy, such as the real estate market and coastal development. Neoliberalism supports

privatization, free trade, individualism and deregulation of the markets (Castree 2010; Klooster 2006; Thorsen and Lie 2009). Harvey described neoliberalism as “a theory of political economic practices proposing that human well-being can best be advanced by the maximization of entrepreneurial freedoms within an institutional framework characterized by private property rights, individual liberty, unencumbered markets, and free trade” (2005:22).

Pure forms of neoliberalism do not exist, and there is a break between neoliberal theory and practice (Castree 2010). While states encourage privatization, they still hold an interest in capitalizing on natural resources, which goes against the neoliberal idea of the state not holding a role in economic activities. In addition, government officials reap economic benefits through personal connections to private enterprises. States encourage the private extraction, or utilization, of natural resources, ignoring negative effects on the environment and the public (Perdue and Pavela 2012). Perdue and Pavela explained environmental destruction in West Virginia as a result of the economic and political ties to the coal industry (2012). Despite the negative effects of coal mining and mountaintop destruction, the economic benefits to politicians and the state were too great to discontinue (Perdue and Pavela 2012). Elite actors, such as politicians, received economic benefits, but did not face the ramifications of environmental demolition due to the socioeconomic and geographic benefits of the upper class.

Consequently, neoliberalism encourages asymmetric political, social and economic development, benefiting the elite actors, but not the public (Castree 2010). Asymmetry appears in socioeconomic gaps, the unbalanced distribution of wealth, environmental destruction, and gains in political power. Political economy and ecology coexist in

neoliberalism, like in all economic regimes, and there is a constant source of tension between the two (Castree 2010). The state seeks to reap the benefits of natural resource extraction, but at the same time, this degrades the environment. This is where environmentality becomes an effective tool of the state; state actors develop and implement discourse that benefits their personal neoliberal interests.

Neoliberalism favors development over protectionism because it advocates for privatization rather than state-initiated economic activity (Castree 2010). Rather than state environmental protection for the fair redistribution of social and economic benefits, private industries commoditize and capitalize on a state's neoliberal economic approach. Despite the immediate economic benefits, there are limits to growth and resource use (Castree 2010). When states create conservation efforts, neoliberalism contradicts the intended goals of resource preservation. Privatization, commodification and marketization of resources and the development structures that protect the right to continually exploit resources run contrary to conservation efforts (Fletcher 2010). In cases such as the North Carolina coastline, real estate served as the driving force behind the rapid development of land. This land is finite on the coast, making it highly valuable and desirable to develop. Despite the negative environmental implications, this does not always limit the actions of a state. Therefore, states develop an environmentality that permits the continuation of the status quo (Dove and Kammen 2001). In a neoliberal setting, political actors foster an environmentality that encourages publics to interpret the environment as a source of economic and societal prosperity, despite the outward argument of the state in favor of environmental conservation (Luke 1995).

The NCGA's passage of HB819 is a prime example of an environmentality used to preserve economic prosperity. The state expressed doubt about the reality of sea level rise to demonstrate they believed it was in the best interest of the public to continue with current economic practices. However, resource management and conservation can emerge as another form of environmentality, and can exist as mechanisms to continue economic activity (Luke 1995). This environmentality could advocate for the responsible continued use of available natural resources, such as land. However, industries, such as real estate, promote doubt to continue their current practices.

C. Social order and imagination

As demonstrated in this section, states rely on imagined communities to gain legitimacy. States circulate ideas to the public to maintain power and social order. The state seems to act in the best interest of the public, but maintains and manipulates societal rules to work in their best interest. In North Carolina, the government introduced an official sea-level environmentality that protected the best interests of the economic actors, while outwardly maintaining that they did not want to limit the rights of the public. The debate and proposed drafts of the bill negated that sea-level rise is a dangerous reality for coastal states, such as North Carolina. Therefore, I look at the actual dynamics of circulation and the messages in the media to understand the way the economic actors manipulated the public.

This research also tells of shifting publics within North Carolina. Curiously, a minority opinion in state politics came to carry a great weight in the media and in politics. While this opinion originated in an economic interest group, it gained support from members in the NCGA, and allowed for the formation of a sea level rise counternarrative. With the

help of the state, the counterpublic gained traction in the media, which allowed them to relay the environmentality to the public.

Publics are part of the imagination because “the members of even the smallest nation will never know most of their fellow members, meet them or even hear of them, yet in the minds of each lives the image of their communion” (Anderson 1991: 6). In order to form this sense of unity, imagined communities must share common experiences, which can come through the consumption of media. Media is at the heart of imagined communities because it aids in the creation of a national conscious and a united public through exchange, communication, the fixity of language, reproduction, and the ability to spread the language of power (Anderson 1991). Media overcomes the friction of time and space that are inherent in trying to organize large groups of people to spread information.

Through print media, the state attempts to control publics, or retain their support, by circulating discourse about relevant issues. Distribution of news, political appointments, marriages, etc., allows media consumers to belong to a tight-knit community that shares knowledge (Anderson 1991). The state freely contributes to the media, and as a result, can access a convenient medium to hold dialogues with the public, or to circulate discourse. States need publics to consume messages to effectively distribute ideas and discourse. When states address a public, they assume their messages reach more than just the intended public when the media distributes materials through society (Warner 2002). Circulation creates public accessibility, which is vital to produce a common meaning or understanding. Spitulnik states, “the social circulation of media discourse provides a clear and forceful demonstration of how media audiences play an *active* role in the interpretation and appropriation of media

texts and messages” (1996: 165). The circulation of ideas in the media allows publics to remain cohesive; the state depends on the interpretations of the public to continue support for the state (Anderson 1991; Habermas 1989; Warner 2002). However, there is no guarantee that publics consume media as desired by the state, as shown in my analysis of user-generated comments.

Those with ideologies that do not conform to the norms of accepted social discourse create counterpublics (Warner 2002). They formulate counterdiscourses and

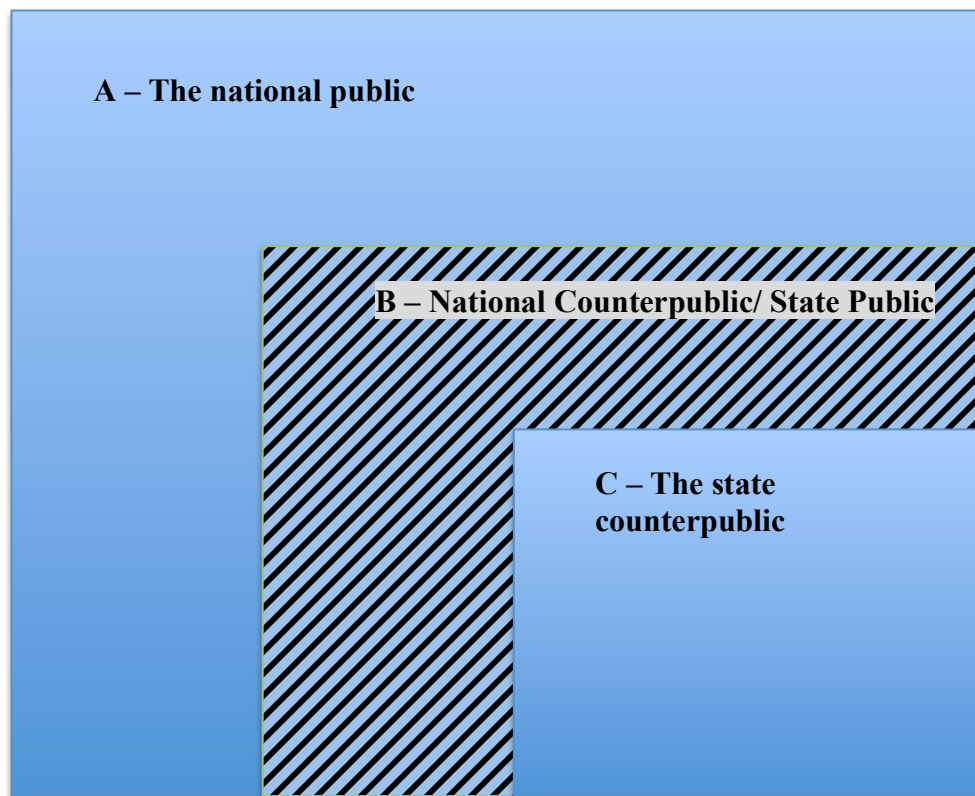


Figure 4- The layers of publics and counterpublics in North Carolina and the United States.

counternarratives, which circulate as oppositional interpretations to accepted discourse (Warner 2002; Oreskes and Conway 2010). Consequently, the creation of a counternarrative results in societal and cultural conflict (Warner 2002). Counterpublics may aspire to transform into publics; but they maintain a subordinate status because they cause friction, which challenges the counterpublic's ability to achieve agency (Warner 2002). Despite a counterpublic's subordinate status, they fight against the status quo to gain attention and societal traction. The counterpublic gains power when cast as a social movement by the public (Warner 2002).

To bring the ideas of publics and counterpublics down to earth, I applied them to the national discourse on climate change. On a national level, many media sources seemingly agree that climate change and sea-level rise are realities. Scientists and environmental-oriented groups such as the USGS, NOAA and the IPCC published and circulated among the American public that climate change and sea-level rise are a serious risk. However, in 2012, the NCGA and the NC-20 openly questioned these findings, and circulated an environmentality of uncertainty about the science behind the research, qualifying them as the counterpublic in the eyes of the American public. However, a group that may be a counterpublic at a national scale can be a public from the perspective of a smaller-scale political unit, such as a state.

The NC-20 and the NCGA appealed to North Carolinians by describing the limitations the state faced economically without coastal development. As a result, they pushed a counternarrative against the mainstream science reports. With the circulation of a new environmentality, a counterpublic emerged that gathered around these ideas. However,

once the bill gained significant support, went to vote, and passed the NCGA, the counterpublic, who supported the restrictions on science, transformed into the public. Interestingly enough, supporters of the scientists of the CRC, such as the academics at North Carolina institutions, became part of the counterpublic in North Carolina, even though they belonged to the American public. Consequently, throughout the text, I refer to the state actors and elites, such as the NC-20, as the public, while those who support the findings of the CRC, the IPCC and the USGS, among others, as the counterpublic. As demonstrated by Figure 1, the national public and the North Carolina counterpublic are the same, as demonstrated by the solid blue. The national counterpublic/ state public became the mainstream voice in North Carolina, and trumped the arguments of the state counterpublic, as demonstrated by the differences in size of the boxes in the chart.

The NC-20 and NCGA fought the potential of economic development regulations and therefore gained traction for their ideas. The NCGA and the NC-20 formed a counternarrative to the mainstream scientific narrative regarding the danger related to sea-level rise in the state. Through the circulation of its environmentality, the state appealed to members of the public who feared the loss of property and economic activity by rash government action. The counterpublic gained agency within the social imaginary of the public for “preventing” economically destructive actions. As the environmentality circulated through the media by “rational actors,” such as the NCGA, the state established the discourse as the “real truth” to the public. “Rational actors,” such as the NCGA, hold the power to frame their ideas as official knowledge and circulate discourse.

The North Carolina counterpublic functioned as the rational actor because the elites manipulated the process of knowledge formation for the public by challenging mainstream discourse. Even though counterpublics challenge public discourse, they operate in a similar fashion; therefore, they too function within the social imaginary. As Warner described, social tension erupted in North Carolina, when the NCGA and NC-20 led counterpublic gained traction with their environmentality. The traction of this movement led to the anti-science counterpublic becoming the public. This transformation allowed for the NCGA and the NC-20 to construct environmental knowledge about environmental issues on the coast.

The reshaping of the counterpublic into the public allows a state to shape the social imaginary of the public by limiting their understanding of different facets of the state, such as the environment. The distribution of power can support the environmentality of doubt set forth by the state. The state distributes power in a controlled manner to obfuscate information from the public in order to create and enact policy without protest (Hull 2012; Fletcher 2010). The distribution of power over a wide range of offices in a bureaucracy allows states to hide information from the public. A bureaucracy can make it difficult to obtain information (Hull 2012), therefore creating confusion about the truth about environmental issues. This tendency has particular ecological consequences. In North Carolina, the state furthered capitalistic interests and practices, and did not protect the environment or the coastal residents of the state. The state can make it difficult to involve the public and expand legislation outside of capitalistic interests.

D. Media and elite framing

Framing is a successful media technique that allows for messages to be organized and manipulated by making information more salient in a text (Nisbet 2009; Entman 1993). The media simplifies events into interesting narrative forms to make information more appealing to publics, and influence what issues publics pay attention to (Boykoff 2007; Nisbet 2009). The discussion of HB819 allowed for the media to convey simplified, and sometimes sensationalized, information to the public about climate change and sea level rise. Framing involves constructed realities that create different outcomes based on how ideas are “organized, presented and debated, and increasingly used to understand a range of environmental problems and issues” (Matthes 2012; Spence and Pidgeon 2010: 657). Frames incorporate language to “act as the driver for large shifts in policy and public opinion” (Gruszczynski and Michaels 2012: 362).

While the media primarily frames issues, it is crucial to recognize that the process is integrative and interconnected (Matthes 2012). The media does not act alone; frames often originate in the rhetoric of elite actors who attempt to influence the production and circulation of information (Entman 1993; Matthes 2012). Elite framing works towards the success of personal political agendas because of the potential for influence through political communication (Matthes 2012). The study of elite rhetoric within mass media demonstrates the framing of policy; elites produce information and frames, the media selects and publishes the frames, and in turn, publics consume presented material (Gruszczynski and Michaels 2012; Matthes 2012; Scheufele 1999).

Framing impacts how the public interprets the state's environmentality. The media and elites carefully construct and circulate environmentality narratives, which the public consumes. Elite actors, such as members of the NC-20 and the NCGA published articles in the RNO and JLF to spread doubt about the possibility for accelerated sea level. The RNO did not always publish articles with explicit opinions, like the JLF. However, many articles contained "balanced" perspectives that pushed the state's environmentality of doubt.

Successful frames use language to assert the viewpoints of the elite actors, such as the state.

A crucial aspect to successful media and elite framing is the language of the message. Language is a powerful, deliberate and controlled framing tool (Boykoff 2007; Boykoff and Boykoff 2007). Publics are frequently unaware of their exposure to framing, making content, language and messages powerful tools (Askew, et al 2002). Language creates metaphorical frames that easily circulate, and consciously or unconsciously become part of the public's speech (Spitulnik 1996).

Nisbet (2009) demonstrates the power of language as a framing tool. A good example of language in the media was the coverage of the Three Mile Island accident. In 1979, near Middletown, Pennsylvania, equipment malfunction and design flaw caused the Three Mile Island Unit 2 to experience a partial meltdown (US NRC). It is the most severe nuclear accident in US history (US NRC). The accident led to arguments and discussions about the use of nuclear power. Many accounts framed Three Mile Island in a negative light, using phrases such as "public accountability," "Pandora's Box," and "runaway technology," which resulted in a poor connotation of nuclear power (Nisbet 2009: 12-13).

Although this language appeared in discussions about a nuclear accident, it later infiltrated climate change discourse, as shown in the media's framing of Al Gore's *An Inconvenient Truth* (Nisbet 2009: 7). The media paid attention to climate change and political controversy surrounding the message of the documentary, reusing popular phrases, such as "Pandora's Box" (Nisbet 2009: 7). In addition, an image of polar bears on melting ice appeared on the cover of *Time Magazine* in 2006 (Nisbet 2009). Many media outlets appealed to publics through discussion of the environment and the destruction of habitats (Nisbet 2009). These framing approaches contained common tactics, such as appealing to the emotions of the public through the use of images and language (Nisbet 2009). Framing takes objective ideas, and applies values to them, which in turn manipulates the understanding of the information. As a result, climate science is framed and reduced into terms of doubt, fear-mongering, and other tactics that shape the way that people understand these issues.

Discursive frames infiltrate the language patterns of the public, as demonstrated by Spitulnik in Zambia, regarding the spread of English phrases through radio programs (1996). Spitulnik described that discourse "is recycled from the realm of radio into contexts of face-to face communication" (1996: 167). Spitulnik argued that "the detachability and the repeatability of a given radio expression can be fueled by the medium itself, as it lends prominence to the phrase, for example, through frequent occurrence or through association with colorful personalities, heightened drama, or humorous moments" (1996: 167). Similarly, sea level discursive frames detached from the original media context and became part of the public's speech patterns. The colorful personalities of politicians and outspoken critics of sea level rise, heightened drama within the NCGA, and pushed the circulation of the state's

environmentality of doubt in the media. For example, phrasing, such as global warming, global cooling, and skepticism about sea-level rise, made it into the vocabulary of the public.

Powerful language easily creates uncertainty and controversy about issues such as climate change. Additionally, it can affirm doubt for those who already denied the existence of climate change and sea level rise. The media disperses information to the public, and holds partial responsibility for constructing climate change as a controversy (Antilla 2005). As demonstrated by the RNO and the JLF, some media sources frame climate change as a “criticism of scientific evidence, substantial benefits of climate change, and actions to ameliorate would be too great a threat to the nation’s economy and sovereignty” (Antilla 2005: 344). Conflicting definitions and descriptions in the media create confusion and uncertainty in the public, undermining scientific data (Matthes 2012; Chong and Druckman 2007). Those invested in economic development of resource intensive industries, such as the oil or coal companies, create counter-movements that deny climate change (Van den Hove, et al 2002). In support of this, certain media outlets deemphasize scientific findings, draw notice to ambiguous language to create uncertainty, and oversimplify the issues (Antilla 2005). The powerful capitalist actors and the media frame science as a complex and layered issue that laypeople cannot fully understand (Jonsson 2011). Constructing doubt is not difficult because “societies must now acknowledge environmental problems that are practically invisible” (Trumbo 1996: 269). It is easier to convince the public of the uncertainty of change when change is not tangible. Framing science as a complex, controversial and uncertain issue allows for the media to distance the public from science (Jonsson 2011).

Strong language creates a field of force, which polarizes and antagonizes frames within and outside of the media (Moore 1999). As a result, this exacerbates arguments about the meaning of certain symbols or words, such as the coverage of the Three Mile Island accident (Moore 1999; Nisbet 2009). However, successful frames use powerful language and attract attention from the media (Chong and Druckman 2007). Without the public's awareness, media and elites use frames to set agendas, and publish what they deem worthy of the public's attention (Entman 1993). A crucial aspect of climate change framing is language, which affects the way that discourse is constructed, distributed and interpreted..

E. Balanced media and the creation of doubt

The state successfully manipulates the messages circulated in the media because of its knowledge about how the media functions. The media focuses on the objectivity of reporting, attempting to write fair and balanced stories (Boykoff and Boykoff 2004). Theoretically, the media acts as a social facilitator, or a neutral third party, to objectively report and mediate conflicts between the public, and in this research, the state (Boyer 2012; Mazzarella 2004). However, this brings the paradox of bias in balance because balanced media gives greater weight to a less-supported side of an issue (Boykoff and Boykoff 2004; Antilla 2005). As a result, the media presents the public with an inaccurate perspective on the issues. Journalists give equal weight to climate change skeptics and believers, fabricating the idea that climate change is scientifically controversial. The journalistic principle of objectivity functions as a binary process, which is constrictive. It limits the viewpoints presented by the media, when there could be other possibilities. According to Oreskes and Conway (2010):

“the mass media became complicit, as a wide spectrum of the media- not just obviously right-wing newspapers like the *Washington Times*, but mainstream outlets too- felt obligated to treat these issues as scientific controversies. Journalists were constantly pressured to grant the professional deniers equal status- and equal time and newsprint space- and they did” (569).

In the media, the pressure to comply with the deniers resulted in the “reporting on climate in the United States became biased toward the skeptics and deniers because of it” (Oreskes and Conway 2010: 570). According to Boykoff, the media “effectively amplified uncertainty through coverage of climate contrarians’ counterclaims regarding anthropogenic change” (2007: 483). Words such as “controversial” or “uncertain,” project discord about climate change (Boykoff 2007; Jonsson 2011). A side with little scientific support receives media attention, and it appears more valid than it is in reality (Boykoff 2007; Boykoff and Boykoff 2004; Boykoff and Boykoff 2007). When the media creates balance, it allows the state and the media to withhold crucial information.

Uncertainty and doubt subsist as components of silencing frames because they omit data and limit the amount of information given to the public, which makes it difficult to uncover the truth (Hull 2012). In North Carolina, the state pushed their capitalist interests, and framed the CRC’s report as a threat to science, as well as the public’s economic prosperity and land rights. Effectively, the state argued through print media that allowing the CRC’s predictions to dictate environmental policy limited the public’s rights. As a result, an environmentality of doubt circulated in the media. Publics rely on the media and the state for information, and do not question the knowledge presented because of the state’s credibility (Hull 2012; Luke 1995). The state withheld information and ignored high-risk situations, as shown by the NCGA’s ignorance of looming sea-level rise. This threatened civil society’s

safety and their rights because the public gives its consent to the state to rule in its best interest. In order to study these processes of framing and the circulation of environmentality, I scrutinized the language of the media in the articles that I collected from the RNO and the JLF to answer my questions.

CHAPTER III. METHODOLOGY

My research and data collection occurred in two stages. First, I assessed elite and media framing in articles from the RNO and the JLF. The second part of my research evaluated user-generated content related to the issue, based on comments found on articles, blogs, forums, etc., on the Internet. The assessment of the RNO and JLF allowed for a holistic assessment of the state's environmentality, the framing process of the local media and its effects on the public.

A. Data collection, sampling and evaluation

In order to assess the frames used in the RNO and JLF, I searched each source's archives for relevant articles. The search parameters included articles between January 1, 2012 and December 31, 2013. I selected January 1, 2012 as the start date because the sea level rise discussion emerged in 2012. The data collection ended on December 31, 2013, because I wanted to see if discussion continued after the passage of the bill. The search terms I used to collect articles included "sea level," "climate change" and "House Bill 819." My search resulted in 103 articles. Twenty-four of the articles were from the JLF, while the remaining 79 originated in the RNO. As demonstrated by the graph below, 2012 had the most articles pertaining to my topics of interest, with 64 articles. Although I did not use articles from 2011 because there little discussion about sea level rise, but a lot about climate change, it is clear that there was a distinct shift in the number of articles that related to my topics of interest in 2012. In 2013, the number of articles leveled off again, and discussed sea level rise less frequently.

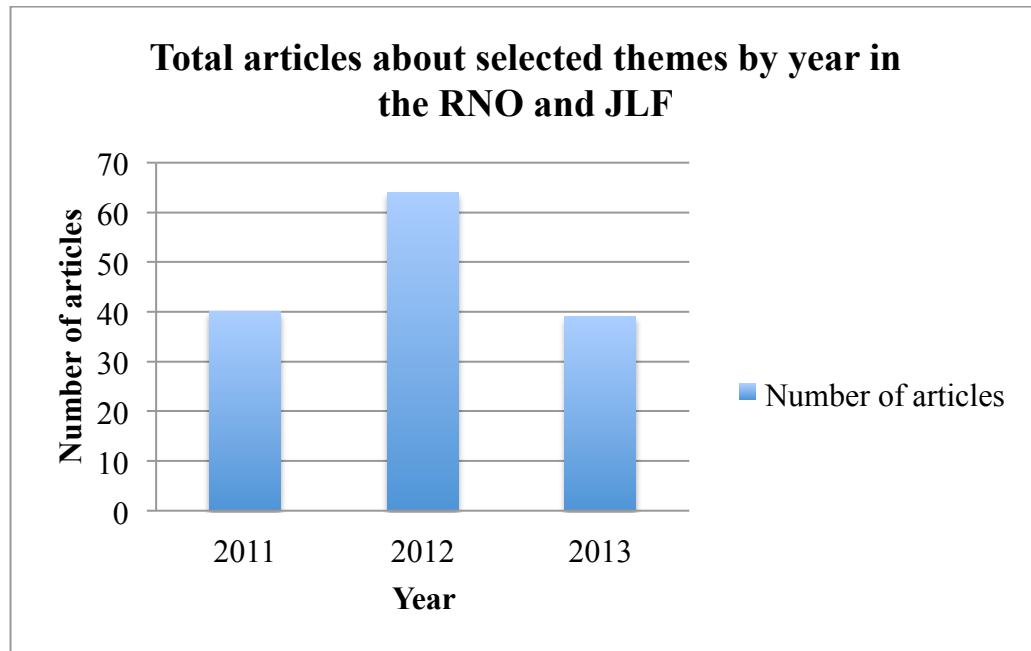


Figure 5 The distribution of articles from the RNO and the JLF pertaining to climate change, sea level rise and HB819 in North Carolina between 2011 to 2013.

I dissected the articles to establish their main topics and frames. I sorted the articles into different categories based on their source of publication, the content of the article and its main topic of discussion. While some articles addressed multiple topics, I assessed the argument and the main point of the article made by the author to evaluate the main subject. The themes most frequently mentioned in the articles became my frames of assessment.

To classify the actors behind these frames, I created the following categories for this evaluation: elites in positions of power, knowledge, and not applicable. Elites in positions of power were state actors, or anyone who had the power to control or influence state policy. Elites in positions of knowledge included those who identified with a university or scientific institution, who used their job to promote knowledge in the topic of discussion. As a

subcategory, I addressed those in positions of power and those in positions of knowledge who challenged science. This included actors who openly opposed accelerated sea level rise, and used science to contradict fellow scientists, as well as state actors. The final category was not applicable (N/A) for the few cases where there were no elite actors identified.

After an analysis of the data basics, I compared the valence of the articles. Valence is the “degree to which an emotional response is positive or negative” (Bolls et al 2001: 629). The valence allowed for an initial assessment of the presence of bias. The valence set the tone of the article. I questioned if the article approached climate change or sea-level rise as real, not real, or if the tone was neutral, mixed or unclear. With this, I further compared how the RNO and JLF approached the discussion of climate change and sea level rise during the time frame of evaluation.

Then, I constructed a code sheet to allow for a standard method of evaluation for each article (See Appendix A). The code sheet contained a series of questions that determined article basics, such as the source, dateline, article type and main subject. It also contained an evaluation of language use and discussion of the issues based on the frames. For a majority of the coding, I used a binary system. The possible answers included “yes” and “no,” but if the frame did not apply to the article, I selected “not applicable” so as to not skew the data. Finally, my coding sheet contained a section that evaluated the frequency of controversial and popular language, as well as the discussion of topics. This section allowed me to look for patterns across articles and media sources in relation to the search terms.

The evaluation of the frames present in the articles allowed me to subsequently gather data. I entered the collected data into SPSS, which allowed me to evaluate the frequency of

framing, language use and topic discussion. From here, I searched for patterns within the data, based on the news source and the publication date of the article. The search for various frames and patterns allowed me to complete a comprehensive analysis that assessed media and elite framing in the RNO and the JLF.

In the second stage of data collection, I gathered comments from online articles to understand the impact of this debate on public opinion. I did not collect data from the RNO and the JLF because the comment sections of the newspapers were either unavailable or empty. Instead, I used a search engine to find articles that contained user-generated content; I focused mainly on articles from TV news websites, online news sources, blogs posted on popular sites, such as *Scientific American*, and blogs written by university scientists. All of the blogs dealt with HB819's debate and were in the same time range as the articles from the RNO and the JLF. However, I did not evaluate the content of the blog or articles. I focused on the user's comments and their response to the content. In total, the search generated 14 articles that provided a total of 337 comments. This captured a broad array of opinions, which helped to somewhat gauge the national public's perception of the sea level debate.

Analysis of user-generated content is important because it can provide an idea about how the public absorbs a state's environmentality. User-generated content supports the idea of a public because "users from remotely located spaces can come together and get involved in political debates about issues of common interest, while at the same time serve as channels for social interaction and community building" (Miloni, et al 2012). In addition, the user-generated content provides insight into the public's varying opinions and the degree to which people agree or disagree with the information presented in the article (Miloni, et al 2012).

In order to analyze the comments, I searched for various patterns in the data. I compiled the comments into a word document where I searched for the frequency of language use. I sought out the key words addressed in the original coding sheet to assess their frequency in the public commentary. Next, I separated the comments, based on whether they were pro or anti-HB819. I then evaluated the comments for rhetoric, to determine how media frames affected the discussion among the public.

My methodology was useful for my research because it allowed me to assess a variety of variables in the framing of HB819, climate change and sea level rise in the media. I collected a wide range of data to evaluate the role that the media played in to circulation of the state's environmentality. Additionally, I amassed ample information about the influence of environmentality on the public's understanding of sea level rise. My analysis of the resulting data allowed me to sufficiently answer my research questions and gain a better understanding of the process of the formation of environmentality.

CHAPTER IV: DATA ANALYSIS

In this chapter, I demonstrate the role of the media in the state's implementation of an environmentality of doubt. This included the media's utilization of elite actors as sources of knowledge, the use of elite actors for a sense of "balance" within the articles, framing science, the creation of frames of uncertainty and doubt, as well as the presence of political slants and economic interests.

I argue in this chapter that state efforts to sow an environmentality of doubt served only a narrow public, despite discourse to suggest that it was in the best interests of all citizens of North Carolina. In essence, my research shows that the notion of an independent media is fictitious because the state sets the terms of the debate and takes advantage of good journalism practices (balanced reporting) to force misinformation into the news stream. The question is whether state actors work independently, or in collusion with the media, to manipulate how people understand the environment to protect economic interests. Select articles argued that there is no need to plan for accelerated sea-level rise because no one can accurately predict the future. However, the scientific consensus is that sea-level rise is immanent (NASA), but politicians tend to disagree. Due to this ignorance of science, I believe that the public needs to be aware of the manipulation by the state or the media.

In this section, I expected the RNO to acknowledge sea-level rise as an issue more frequently than the JLF. The RNO is a public source that does not take a specific political viewpoint and intends to inform the masses. Despite my expectations, I found that the RNO is not as dissimilar from the JLF. The JLF is a source of news for like-minded conservatives,

where I expected arguments against climate change and for economic protection of coastal interests. However, I found similar arguments in the RNO, which reflected that the newspaper was not completely moderate in its approach to discussing sea level rise. This is in part due to its principle of reporting balanced news, which resulted in biased or skewed reporting. In order to balance their articles and viewpoints, the RNO used actors from both ends of the political and scientific spectrum. In contrast, the JLF is not a public source, but rather a conservative think tank aimed at like-minded individuals. The JLF did not need balance or objectivity. I expected the elite actors to include conservatives, climate change and sea level skeptics, as well as supporters of HB819.

Perceptions of climate change and sea-level rise

The evaluation of the media's discussion of climate change and sea-level rise allowed me to see the trends in the discussion of the issues in question by the state. The analysis of frames permitted me to understand the general arguments the publications made- if they based arguments in science, how they perceived the issues, and political influences within the articles. First, I established if the media perceived environmental issues as a risk, or the valence of the article. I then determined if the sources identified these concerns as state or global risks. Along with this, I explored whether the publication acknowledged climate change or sea-level rise as anthropogenic, or not anthropogenic. I then evaluated if the sources quoted or referenced elites within the article to justify arguments. I compared whether the articles addressed the issues as scientific or political. Finally, I looked for blatant opinions in the articles, such as if the author challenged the science of the CRC.

In regards to media valence, the RNO showed the greatest variation: 59% of articles addressed the issues as real, 33% did not offer a clear opinion of the topic, and I could not ascertain any slant in their opinion. However, eight percent of articles denied the reality of the issues. In the JLF, no articles acknowledged that sea level rise or climate change existed, 13% were neutral, and 88% said the issues did not exist.

Table 1- Perception of climate change and sea level rise in the RNO (N=79)

	Yes	No	Not applicable
Is climate change perceived as a risk?	33	4	42
Is sea-level rise perceived as a risk?	30	7	42
Is climate change a threat to the state?	31	3	45
Is climate change a global threat?	15	2	62
Is sea-level rise a threat to the state?	30	6	43
Is sea-level rise a global threat?	12	4	63
Is climate change anthropogenic?	17	2	60
Is sea-level rise anthropogenic?	7	3	69
Is climate change a political controversy?	11	6	62
Is climate change a scientific controversy?	3	13	63
Is sea-level rise a political controversy?	35	4	40
Is sea-level rise a scientific controversy?	7	24	48
Does the article challenge science?	7	72	X
Does the article quote climate change skeptics?	3	76	X
Does the article quote sea-level rise skeptics?	19	60	X

Table 2- Perception of climate change and sea level rise in the JLF (N=24)

	Yes	No	Not applicable
Is climate change perceived as a risk?	0	19	5
Is sea-level rise perceived as a risk?	0	13	11
Is climate change a threat to the state?	0	18	6
Is climate change a global threat?	0	19	5
Is sea-level rise a threat to the state?	0	12	12
Is sea-level rise a global threat?	0	11	13
Is climate change anthropogenic?	2	8	14
Is sea-level rise anthropogenic?	0	2	22
Is climate change a political controversy?	7	1	16
Is climate change a scientific controversy?	19	0	5
Is sea-level rise a political controversy?	7	1	16
Is sea-level rise a scientific controversy?	12	0	12
Does the article challenge science?	23	1	X
Does the article quote climate change skeptics?	15	9	X
Does the article quote sea-level rise skeptics?	11	13	X

These charts allowed for a side-by-side comparison of the data from both publications, and permitted me to explain why certain patterns existed. The perceptions of climate change and sea level rise of many RNO articles starkly contrasted those from the JLF, and reflected their fundamental differences. As previously described, several underlying factors influenced the data, such as the promotion of the state's environmentalism and the economic motivations of elite actors.

First, I compared the perception of risk presented by each publication. In the RNO, "not applicable" was often the largest category, but I put this in so that my analysis would not seem skewed in favor of the "no" category. With this in mind, the RNO articles that addressed the frames in question mainly viewed climate change and sea-level rise as risks. However, the publication contained articles that negated sea-level rise or climate change as a risk, and were usually written by NC-20 members. These articles represented a small percentage of the total RNO sample. In the JLF, articles addressed climate change and sea-level rise as non-existent or non-problematic. Additionally, the RNO published articles that acknowledged climate change and sea-level rise as anthropogenic. The JLF addressed human activity in two articles, but denied anthropogenic change in ten articles.

Next, I explored whether the publications described the debate as scientific or political. Once again, I encountered contrasting viewpoints between the RNO and the JLF. The RNO frequently described environmental issues as political debates, while the JLF saw them as scientific debates. Similarly, I evaluated if the articles challenged science by quoting individuals who denied the existence of climate change or sea-level rise. All but one JLF article challenged the science behind climate modeling. Finally, a greater proportion of JLF

articles quoted climate change or sea level rise skeptics. However, the RNO did quote sea-level rise skeptics in order to balance their articles. This promoted the state's environmentalism of doubt among readers because the RNO equally supported both sides.

"As for sea-level rise, let's look at the facts rather than crystal ball computer models. A new study in *Nature Geoscience*, based on historical photos of glaciers and their "behaviors" under previous rising temperatures, reported that Greenland ice melt could slow down rather than accelerate, leading to less dramatic sea-level rise.

And in the Winter 2010/2011 edition of *21st Century Science and Technology*, Nils Axel-Morner, former president of the Commission on Sea Level Changes and Coastal Evolution at the International Union for Quaternary Research, wrote, "global sea level is not in an alarming rising mode." Peer-reviewed research that supports such findings [is] plentiful if you look — for example, see PopularTechnology.net for links to 19 peer-reviewed papers on sea-level rise that do not support the extreme three-foot plus rate."

"Balance Needed on Coverage of Sea-level rise"

News article by Paul Chesser

June 15, 2012

JLF

The author, Paul Chesser, utilized metaphorical language frames to detract from the CRC's report and support his own argument. Chesser stated that the computer models were "crystal ball" predictions, and circulated a discourse about the fictive nature of the CRC's report. This perpetuated that the predictions were based on false notions rather than facts. People consumed these models, which reflected in their comments presented in the next chapter.

Chesser's article discusses a repeat informant of the JLF, Dr. Morner. The article justified Morner as an information source due to his credentials, and he argued that sea level rise was not an issue. Additionally, Chesser stated that there is research that supported his stances, but gives a link to a website that is a blog, filled with skeptical science. This blog

circulated the sea level and climate change claims of the JLF and NC-20.

Despite the small proportion of articles that outright denied the existence of sea-level rise, these aided the state's environmentality. The articles managed to circulate an environmentality of doubt to the public, and questioned the integrity of mainstream scientific actors. Despite the general scientific consensus about the existence of climate change and sea-level rise, these sources circulated public doubt about the issues.

Patterns of elite actors

The articles frequently quoted elites, whether it was to support a viewpoint or to present multiple viewpoints within in the article. In the RNO, 65% of the articles quoted elites, while the JLF quoted elites in 83% of the time. I found that many articles utilized elite framing to spread environmentality, no matter if it promoted doubt or supported the existence of sea-level rise. The first pattern in the use of elite actors was to justify stances or validate information provided in the articles. Each publication used a variety of elite actors as information sources, but I focused on identifying the main elite actor. I figured out whom they quoted most frequently; if the author openly agreed with a certain actor's position; or whom the article was written about.

The RNO had a diverse array of main actors, while the JLF focused on a smaller pool of elite informants. The most frequently mentioned elite actors by the RNO were the NCGA and scientists, which was logical, considering that much of the public debate centered on the NCGA's challenge of science. The JLF quoted scientists to justify their viewpoints and confirm their narrative.

I kept this information in mind as I evaluated the data because it helped me understand the underlying motivations of the media and the state. I determined which actors the publications justified as elite, which turned out to be elites in positions of knowledge, such as academics and scientists, and elites in positions of power, such as state officials, and economic actors, such as the NC-20. There were four articles from both publications that did not discuss or quote elite actors. In the RNO, 42 articles identified elite actors in positions of power. Twenty-six of the articles identified elite actors in positions of knowledge. The JLF had two elite actors in positions of power and ten actors who held positions of knowledge.

I then looked at if the publications discredited elites, the percentage of articles that quoted elites, and the articles that used elites to support their arguments or positions within the articles. Elite discrediting involved the author of the article, op-ed, opinion or letter to the editor, contradicting the opinions of other elite actors.

I then focused on the principle actors within the news articles, which included the NC-20, politicians, academics and scientists. These were significant actors because they drove the state's public debate. The NC-20 was the counterpublic that lobbied the NCGA for the passage of HB819 because they felt threatened by the CRC's report. As a result, the NCGA created a counternarrative to the CRC's report in order to protect the coastal economy, which is worth billions of dollars. Politicians and the NC-20 actively circulated an environmentality of doubt through the media. In most of the RNO samples, academics and scientists worked against the politicians and the NC-20 to circulate that sea-level rise is a reality for North Carolina. In a way, this was the environmentality of the scientists and

academics since they too promoted their interpretation of science. Like the NCGA, scientists and academics tried to convince the public of the accuracy of their sea level prediction.

The NC-20 and capitalist actors

The NC-20, surprisingly, was not frequently mentioned in the media, despite their role in lobbying for the bill. The RNO mentioned the NC-20 more than the JLF; the NC-20 appeared in eleven RNO articles and six JLF articles. In these articles, the NC-20 encoded their counternarrative so that people interpreted the message that sea level rise did not exist, and that the CRC's science was inaccurate. The NC-20 was originally the counterpublic to the mainstream scientific ideas because they offset the CRC's report with their environmentality of doubt. Of the six JLF articles that mentioned the NC-20, five negated the reality of sea-level rise. In the RNO, members of the NC-20's board, such as Tom Thompson and Bud Stilley, wrote letters to the editor and opinion pieces to justify their counternarrative against the CRC's "restrictive" sea level report.

The recent committee approval of House Bill 819 in the state Senate was, as expected, widely criticized by sea-level rise "believers." Members of NC 20, who are labeled "deniers," are routinely accused of not understanding science and for requesting legislative intervention based purely on economics. Let's take a look at those accusations.

First, note that fears of global warming and accelerated sea-level rise are reminiscent of previous climate change concerns, only in reverse. Newsweek magazine, in the April 28, 1975, edition, in an article entitled "The Cooling World," warned of "drastic decline in food production" and opined that "resulting famines would be catastrophic" due to global cooling. Foremost among the scientists predicting this doomsday scenario were those from NOAA, the very agency now part of the current doomsday scenario of global warming, massive ice melt and a "hockey stick" sea-level rise. If the climate change community was totally wrong 37 years ago, shouldn't we be a little bit leery of their prediction today of a massive sea-level rise 88 years hence?

Second, despite warnings of an accelerating sea-level rise, Dr. Robert Dean, professor emeritus at the University of Florida, Gainesville, and his co-author, Dr. James Houston, director emeritus of the Engineer Research and Development Center, U.S. Army Corps of Engineers, concluded in a recent paper (which Dean summarized in a recent presentation to NC 20): “The results of all of our analyses are consistent – there is no indication of an overall world-wide sea level acceleration in the 20th Century data. Rather, it appears that a weak deceleration was present.”

“How sea level rules would hinder NC’s coast”
Opinion article by Tom Thompson, Chairman of NC-20
June 20, 2012
RNO

“The state’s recent reconsideration of the predictions regarding sea level rise are both reasonable and responsible. Dr. Orrin Pilkey’s criticism (“The state’s sea level retreat,” Feb. 23 Point of View article) was based solely on his personal beliefs and opinions, perhaps with an eye on the availability of future grant money. Seriously, when was the last time you heard about a grant to fund a study “disproving” global warming?

Based on the opening remark of Dr. Margery Overton (chairwoman of the state Science Panel at the Coastal Resources Commission symposium), which was, “There is no accepted scientific method for the prediction of long term sea level rise,” science isn’t the issue. There is no science, but there are opinions from scientists about their ability to accurately predict the future via computer modeling. The same type of “modeling” that brought you the financial crisis of 2008.”

“Sea level prediction: opinion, not science”
Letter to the editor by Bud Stilley, director of NC-20
February 28, 2012
RNO

As represented by Thompson and Stilley, the NC-20 doubted the existence of climate change, and challenged the predictions for the state. They used frames that were popular phrases within the public realm, such as believers, deniers, global warming, accelerating sea-level rise, opinions and weak deceleration. Thompson argued that the NC-20 was not economically motivated, but a rational actor that rejected the bad science of politically

motivated actors. Thompson framed the CRC's report as incorrect and irrational, while Stilley focused on discrediting the computer models, and stated the CRC's report was opinion, and not science. Thompson and Stilley encouraged that the CRC was a counterpublic because they promoted poor scientific practices and rejected the truth.

Thompson's argument also utilized outside resources and past examples to express doubt. He stated that in the 1970s, scientists warned of a coming ice age that never occurred. In 2012, similarly, scientists argued about global warming, which included similar language used in discussions about the non-existent ice age, such as a "drastic decline in food production." Thompson cited the research of Dr. Robert Dean of the University of Florida, and Dr. James Houston of the US Army Corp of Engineers, who asserted that sea levels are lowering. Thompson used their elite positions in academia and the US Army Corp of Engineers to justify his argument.

Media sources, such as the RNO, served as a space for capitalist actors to address a broader audience. Normally, I would expect these letters to the editor or articles to appear in the JLF, not the RNO. This allowed the elite actors to subtly express their economic motives, and invalidate the CRC's report. In an attempt to balance all perspectives of the issue, the RNO published articles written by various elite actors on both sides of the issue. NC-20 actors avoided crucial elements of why sea-level rise is an issue and perpetuated their environmentality of doubt to the public. However, the NC-20 faced staunch opposition from academics and scientists, who supported the existence of sea level rise and climate change.

Academic actors

Despite the push by the NC-20 to discredit the CRC, academic actors mostly defended the panel's stance. Their position as brokers of knowledge gave them credibility. The RNO quoted academics in 26 out of 76 articles. Of these 26 articles, 24 indicated sea level as a real issue, while two argued against sea-level rise as an issue. The JLF quoted academics in five of the 24 articles; of these five articles, four academics supported the existence of sea-level rise, while one denied its reality.

In the following editorial, Dr. Orrin Pilkey used his position as a professor emeritus to explain why the NC-20's opinions were incorrect and dangerous.

Enter NC-20, an organization lobbying for North Carolina's 20 coastal counties. Unfortunately, it plays down sea-level rise and the risk that it carries for the future of coastal development. In so doing, the efforts of this group have been anti-science. Now it has caused the Emergency Management division to report only on the risk afforded by a 40 cm. sea-level rise and to not publicly report on the 1 meter rise.

NC-20 representatives have claimed repeatedly that the Intergovernmental Panel on Climate Change concluded that the sea level would rise between 7 and 22 inches by 2100. Indeed the panel did give those numbers - but it also stated that "this range of values does not include the contribution of meltwater from Greenland and Antarctica - believed to be the most important sources of meltwater for sea-level rise between now and 2100."

In a presentation to the General Assembly, NC-20 touted a list of 30 experts who are said not to believe the North Carolina science panel's numbers. These "experts" include one who wrote a pamphlet entitled "Sea-level rise is the Greatest Lie Ever Told."

"The state's sea level retreat"
Editorial by Dr. Orrin Pilkey
February 23, 2012
RNO

Throughout this piece, Dr. Pilkey used strong language to counter the position of the NC-20. Pilkey explained that the NC-20 was a counterpublic with anti-science policies and

expressed disdain toward the group. His frustration over the missing data in the NC-20's argument was apparent. Pilkey stated that the IPCC's predictions originally did not include the data on the melting ice in Greenland and Antarctica, but this information was crucial to understand future sea level rise. Pilkey used his position of knowledge to assert that the NC-20 researchers were not qualified to assess sea level rise.

While Pilkey was an outspoken supporter of the CRC's report, other academic actors, such as Andy Keeler, explored both sides of the argument. While he supported the idea of careful planning, Keeler also understood the fear of losing an important sector of the economy.

Neither public policy nor private decisions will be helped by denying reality. The issue in North Carolina is public policy, not science, and competing interests should battle directly in that arena. The groups behind this attack on science have good reason to advocate for balanced policies, but their attempts to override the scientific process through legislation will not help anyone as coastal communities figure out how to adapt to a changing and highly uncertain climate.

North Carolina should not need Stephen Colbert to remind us of that truth.

"Making sense of sea level"
Op-Ed by Andy Keeler
June 14, 2012
RNO

In this op-ed, Andy Keeler, a professor of economics at East Carolina University, positioned himself as an expert on public policy and coastal sustainability because he was the program head of the UNC Coastal Studies Institute in Manteo. Keeler argued against the actors who framed the debate as scientific because he saw HB819 as a fight for the protection of financial interests and political power. However, Keeler was in favor of protecting the public and planning responsibly for the future. Even though Keeler described the climate as

“highly uncertain,” he was not a promoter of doubt. He wanted balanced options for sea level planning and did not believe the problem was avoidable. Keeler took a more “balanced” approach in his evaluation because he understood both sides of the argument. However, at the end of his article, Keeler framed “ignoring science” as unhelpful and dangerous.

In contrast to Pilkey and Keeler, academic actors did not always oppose the bill. The JLF quoted academic actors who disagreed with the CRC’s report. The promotion of the state’s environmentality by academic and scientific actors allowed for the JLF to use “credible” sources of support. This occasionally happened in the RNO, but mainly in the JLF, as demonstrated below:

Droz said some scientists believe the sea is not rising at all. He points to a recent newspaper profile of Dr. Nils-Axel Morner, former head of the Paleogeophysics and Geodynamics Department at Stockholm University and former head of the INQUA International Commission on Sea Level Change.

“Despite fluctuations down as well as up, the sea is not rising,” Morner said. “It hasn’t risen in 50 years. If there is any rise this century it will not be more than 10 centimeters (4 inches), with an uncertainty of plus or minus 10 centimeters.”

Droz asked Morner what he thought of the science panel’s prediction.

“Sorry, simply physically impossible,” Morner wrote. “It is, for sure, not rising by one meter by year 2100. Our best estimate for 2100 is 5 centimeters with a 15 centimeter margin of error, and that is nothing to worry about.”

“Criticisms convince state to back off projections of dramatic sea-level rise”

News report by Sara Burrows

February 20, 2012

JLF

In this section, Dr. Morner, formerly of the Paleogeophysics and Geodynamics Department at Stockholm University, denied the reality of the CRC’s predictions. Morner added credibility to the JLF’s articles because he appeared to be a reliable source, due to his

credentials. Morner considers himself a sea-level specialist, but is a polarizing figure. He claimed that the Pacific Islands did not need to worry about sea-level rise because the sea levels would drop (Monbiot 2011). However, this is contradictory to the 2014 IPCC report, which states the danger of sea-level rise for small islands around the world, especially in the Pacific (Nurse and McLean 2014). According to *The Guardian*, in addition to his outspoken position on sea level rise, “among his claims to fame are that he possesses paranormal abilities to find water and metal using a dowsing rod, and that he has discovered ‘the Hong Kong of the [ancient] Greeks’ in Sweden” (Monbiot 2011). The JLF seemed to add credibility when Morner supported their articles. Morner provided information to the JLF that protected their coastal capitalist interests that allowed JLF to circulate doubt because a “well-regarded” scientist did not agree with the sea-level rise predictions.

Scientific actors

The other group of elite actors frequently in the media was the scientists. These actors are different from academic actors because they worked for scientific organizations, rather than academic institutions. Viewed as knowledgeable sources of information, scientists could determine the validity of the CRC’s report. However, the scientists turned against one another at times, and publically criticized various research methods, such as computer modeling and extrapolation. The RNO quoted scientists in 28 of the 76 articles. Scientists argued that sea-level rise existed in 25 of the 28 total articles, while three articles quoted scientists who did not support sea-level rise. The JLF quoted or mentioned scientists in 12 of the 24 articles. One article mentioned a scientist in support of sea-level rise, while 10 articles quoted scientists who argued against sea-level rise. The final JLF article expressed mixed

opinions, which contributed to the viewpoint that sea-level rise is uncertain, and that the future predictions were a scientific issue, not political.

The JLF and the RNO also turned to scientists who framed sea-level rise as a non-issue. In the example below, the JLF positioned Dr. Patrick Michaels as a leading climate scientist, and the director of the Center for the Study of Science at the Cato Institute. Dr. Michaels wrote an op-ed for the RNO, where he additionally signed the article as a former climatologist for the state of Virginia.

If predictions of more than three feet of rising sea levels by 2100 have you ready to flee from your beach house, a leading climate scientist might be ready to take your place on the North Carolina coast. He explains why in a new John Locke Foundation Spotlight report.

"I'm willing to offer you bottom dollar for your house because everyone thinks it is doomed and because they're wrong," said Dr. Patrick Michaels, director of the Center for the Study of Science at the Cato Institute. "While Carolina beachfront property owners continue to wait during blow-hard season for the Big One that will wash their homes away, the earth continues on a warming trend that is lower than it was forecast to be, and sea level is slowly rising."

Michaels makes an offer -- in jest -- to buy your beach house "before it washes into the Atlantic," but he bases his humor on serious science. "Unless there is a sharp change that is simply not being revealed in recent data, the expectation of 38 inches of sea-level rise in the next 87 years is not very likely at all," Michaels added. "If, indeed, it becomes so, a change will be obvious over several decades, or the life expectancy of a beach house."

“Climate expert debunks gloom-and-doom predictions for NC sea levels”
News article by Mitch Kokai
September 26, 2012
JLF

Dr. Michaels framed the existence of sea-level rise as untrue, and he mocked those who heeded the CRC's predictions by offering to buy houses at a low price. He further pushed the metaphorical language frames that circulated sea-level rise doubt and promoted the agendas of political actors. Dr. Michael's science holds a clear slant politically and

scientifically. He referred to the hurricane season as “blow-hard season,” which reflected his complete disdain for the idea that hurricanes may become more serious with climate change. Dr. Michaels circulated the state’s environmentality of doubt by mocking members of the public who saw sea-level rise as an issue. He also used vague explanations that contradicted widely accepted climate science, and attempted to persuade the public that accelerated sea-level rise was laughable. In patronizing those who believed in sea-level rise, Dr. Michaels manipulated the emotions and thought processes of the public.

Political actors

Politicians held a more prevalent role in the media than the NC-20, and more effectively circulated the environmentality of doubt. The RNO quoted politicians in 27 articles, while the JLF did in five articles. Two political actors addressed sea-level rise as real in the RNO, while two actors in the JLF acknowledged it as real. However, three political actors in the JLF articles and 10 politicians in the RNO denied the existence of sea-level rise. Other politicians quoted in the RNO expressed uncertainty about sea-level rise. The expression of doubt through the media permitted politicians to create a platform of debate.

While many articles did not explicitly state the author’s opinion of HB819, I assessed points of discussion that aligned with one side of the issue more than another to determine if there was a political slant. This included factors such as language use, which elite actors they quoted, and if there was an opinion explicitly stated or hinted at for one side of an argument. I found that 49% of the articles in the RNO and 83% of the JLF sample held some type of political slant. In the following news article, political slant existed toward those who passed the Senate version of HB819.

The Senate voted 35-12 to squelch those findings as unreliable and harmful to economic development.

“It’s becoming tough on any kind of economic development if we don’t start using common sense in some of this rule-making,” said Sen. Harry Brown, a Republican who represents coastal Jones and Onslow counties.

The bill’s main backer, Republican Sen. David Rouzer of Johnston and Wayne counties, said the more severe prediction of sea-level rise would sink property values, hurt tax revenues and inflate insurance rates. He said that predicting climate eight decades out is folly.

“Senate approves law that challenges sea-level science”

News article by John Murawski

June 12, 2012

RNO

The article, which reported on the outcome of the Senate’s vote, did not attempt to give a balanced view on the outcome. Instead, it focused on the Republican effort to protect economic interests. The author had a slanted view in the article that could additionally qualify as partisan bias.

In addition to political slant, I looked for partisan bias in the articles. Characteristics I searched for included overt explanations of which political party was favorable, which party was correct in their argument, and anything that reflected support for one political party over the other. Four RNO articles and three JLF articles demonstrated overt partisan bias. Partisan bias was rare and I did not expect to encounter it much in the articles.

As previously discussed, politicians received monetary support from donors, such as real estate groups, which allowed for the intertwining of neoliberal interests with science and policy. Consequently, this caused proponents of the bill to mask their economic interests in the coast through the questioning of science. The writers of the bill, McElraft and Cook,

represented coastal counties and supported the environmentality perpetuated by the NC-20 and the NCGA. In a news article from the RNO, Tom Thompson shifted the attention from economics to flawed science.

“Nobody can predict the future with any degree of certainty,” Tom Thompson of Washington, NC, the NC-20 board chairman said in an interview. Rouzer and NC-20 sought to discredit the panel’s reliance on computer projections.

Thompson warned against wasting millions of dollars by building roads, houses and other structures high enough to avoid an unlikely rise in the sea level. Citing sea-level measures from the 20th century. Thompson’s group predicts a rise of only eight inches during the 21st century.

“We’re concerned there’s no science behind this thing,” Thompson, who serves as Beaufort County’s economic development director, said in an interview. “To say 39 inches in 88 years is just so far outside the historical realm, it’s just impossible.”

“Senate committee likes the slow-rise approach for sea-level forecasts”

News article by Bruce Siceloff

June 7, 2012

RNO

Thompson, who served as the NC-20 chair and as Beaufort County’s economic development director, which made him an influential political actor. He had economic interests in the coast, and he also held a prominent role in the NC-20. However, Thompson associated inaccurate computer models with wasted taxpayer dollars to further his doubt about sea-level rise. Political actors, such as Thompson, used their positions of power to influence the public, and frame why they supported the bill with language of doubt and ambiguity.

Discussion of HB819

An important aspect of evaluation was the media’s discussion of HB819. This gave me a better idea of the presence of the state’s environmentality. This analysis is important

because people are unaware of the media's manipulation of ideas, or the role that the state plays in feeding the public information. The public needs to understand that this debate is not actually about the accuracy of science; it holds roots in the political and economic values of various elite actors in the state. The value of economic goals in the state was higher than ecological management and value. HB819 protected the economic interests and high-risk investments made in the coastal region.

To analyze the discussion of the bill, I established key factors about the debate. First, I evaluated the frequency of discussion of HB819, climate change and sea-level rise. Then, I sorted how the articles discussed each issue to look for a proliferation of bias, or if the articles aided the perception of uncertainty spawned by the state. In the selected time frame, the RNO discussed HB819 in 32 articles, while the JLF addressed it in four. It surprised me how few JLF articles discussed the bill. Many of the JLF's articles focused on the inaccuracy of the CRC's report, and did not discuss the actual bill. The RNO mainly discussed HB819 as a political conflict, where the JLF argued that the bill was against bad science.

Following this, I evaluated the selected articles to see if the author included their opinion of HB819. Four JLF articles and four RNO articles classified the bill as positive policy. Thirteen RNO articles addressed the bill as negative, while five gave mixed opinions and ten articles either had a neutral or unclear stance on the bill. The JLF did not address the bill beyond the four articles that identified it as a positive measure. As demonstrated, the JLF contributed to the state's environmentality through direct support of the bill. Although outright support of the bill in the RNO was less prominent, several articles gave mixed or

unclear opinions on the issue, furthering the NCGA's narrative of environmental uncertainty. However, mixed or unclear opinions inhibit the goals of the state to gain support for the bill.

The media successfully gave the public a variety of information on the effects and realities of climate change and sea-level rise in North Carolina. As demonstrated below, the RNO did not hold a particular stance on the issue and addressed all sides.

The calculation, prepared for the N.C. Coastal Resources Commission, was intended to help the state plan for rising water that could threaten 2,000 square miles. Critics say it could thwart economic development on just as large a scale.

A coastal economic development group called NC-20 attacked the report, insisting the scientific research it cited is flawed. The science panel last month confirmed its findings, recommending that they be reassessed every five years.

But NC-20, named for the 20 coastal counties, appears to be winning its campaign to undermine them.

The Coastal Resources Commission agreed to delete references to planning benchmarks – such as the 1-meter prediction – and new development standards for areas likely to be inundated.

The N.C. Division of Emergency Management, which is using a \$5 million federal grant to analyze the impact of rising water, lowered its worst-case scenario prediction from 1 meter (about 39 inches) to 15 inches by 2100.

Several local governments on the coast have passed resolutions against sea-level rise policies.

When the General Assembly convened this month, Republican legislators went further.

They circulated a bill that authorizes only the coastal commission to calculate how fast the sea is rising. It said the calculations must be based only on historic trends – leaving out the accelerated rise that climate scientists widely expect this century if warming increases and glaciers melt.

“Coastal NC counties fighting sea-level rise predictions”
News article by Bruce Henderson
May 28, 2012
RNO

This segment described the various components of the debate to the public. For example, the article discussed the contrasting viewpoints of the CRC and the NC-20, the NC-20's goals, the effect of the NC-20 upon the NCGA, as well as the formation and circulation of doubt. Henderson addressed the neoliberal underpinnings of the debate and the successful efforts of the NC-20 to undermine the CRC's report because of their economic interests. Although Henderson pointed out flaws in the debate, missing information detracted from the overall argument. For example, Henderson did not mention that the predictions from the CRC were one meter because of the potential impact from melting glaciers in Greenland and Antarctica. The article also addressed the circulation of the bill, which reflected the conscious formation of an environmentality of doubt by the state and the NC-20, which undermined scientific knowledge.

LANGUAGE USE AND PHRASING

A key component of understanding the presence of environmentality was phrasing and language use. Language is a powerful tool that can persuade readers to change the way they interpret frames. Much like Spitulnik's article that described the Zambian public repeating the language heard on the radio, the Raleigh media helped circulate discourse that the public consumed and repeated. These articles presented strong linguistic models that influenced the public, and were subsequently reproduced. I evaluated the discussion of climate change, sea-level rise, political phrasing, as well as the existence of opinion phrasing in the JLF and the RNO. My assessment of language allowed me to show the roots of the debate and its influence on the public understanding of the issues.

Climate change phrasing

According to the first chapter of the 2013 IPCC climate report, several indicators of climate change exist, including “surface temperature, atmospheric water vapour, precipitation, severe events, glaciers, ocean and land ice, and sea level” (Cubasch, et al 2013). It is a complex problem with a variety of factors that affect the outcome, which the public may not fully understand. The state and the media used the complexity of the issue to their advantage during the sea-level rise debates because they carefully crafted language to manipulate how people understood the issues. In 2012, the RNO and the JLF circulated doubt about the issues, which led to several outcomes in the public perception of sea-level rise. In my data collection for this section, I looked for the discussion of climate change in the media and analyzed how the sources addressed these issues in the public domain. This included the topics of weather severity and intensification, hurricanes, temperature changes and popular phrases, such as global warming and cooling.

Weather functioned as a popular conversation topic in association with climate change. Weather intensification, weather patterns and severity of storms were prevalent in the RNO, while the JLF did not commonly address these issues. Hurricanes Sandy and Irene occurred during the span of the evaluation, but there were not many articles that questioned the relationship between climate change and low-category, but impactful hurricanes. However, this could be a limitation imposed by my search boundaries. I looked for articles related to sea-level rise and climate change, specifically in North Carolina. Hurricane Sandy hit North Carolina, but did not create the same amount of damage as it did in New Jersey and New York. However, there was an informative article in the RNO about the impact of Irene

on North Carolina and the East Coast. The article framed Irene as a huge financial blow that brought concern for the future because it was only a Category One in North Carolina.

“Irene became the costliest Category 1 U.S. hurricane on record since at least 1980, with estimated total damage of \$15.8 billion. The storm resulted in \$4.3 billion in personal, commercial and auto insurance claims, according to Verisk Analytics, a publicly traded company that assesses risk.”

“After the rain: Irene’s lessons to the East Coast”

News article by Michael Hill

August 28, 2012

RNO

The title of this article is powerful because it projects the “lessons to the East Coast” from Hurricane Irene. Hill discussed the hurricane as a force of nature, and demonstrated that hurricanes are more powerful than humans. Hill wanted the public to be aware of the reality of more powerful storms in the future. The use of phrases such as “costliest Category 1 U.S. hurricane” and “estimated total damage of \$15.8 billion,” illustrated the immense damage of the storm. Money speaks to people, and quantifying the damage was a way to capture the public’s attention. Normally, the public would not expect a Category One hurricane to cause billions of dollars in damage.

The next data set pertained to climate, rather than weather. Eleven RNO articles addressed temperature rise in North Carolina, and eleven articles addressed the controversial terms global warming and global cooling. Global warming and global cooling are notorious because they do not accurately encompass environmental issues. As previously described, there are many factors that scientists evaluate to understand the magnitude of climate change. The use of global warming or cooling, instead of climate change, distorts the depiction of the problem. The RNO used the terms a relatively small number of times throughout the

timeframe, but the JLF frequently employed these phrases, and stated that the term climate change was inaccurate.

“There is no public policy debate in which the language has been manipulated more than in the case of global warming. In fact, the language has been changed to such an extent that the words being used, when viewed objectively, have little to do with either the science or the public policy concerns.

Three expressions are so ingrained in the conversation that even skeptics (mis)use them. These terms are part of a propaganda drive meant to confuse the public on both the science and policy of global warming. The three terms are climate change, carbon, and emissions.”

“Using the Right Word in Warming Debate”

Editorial by Dr. Roy Cordato

August 22, 2013

JLF

In this article, the emphasis placed on language use is addressed. Cordato explained, in a confusing manner, why the use of climate change, carbon and emissions were incorrect. He argued that “objectively,” the words used by “propagandists,” such as President Obama, were incorrect. The use of the phrase “propaganda” gave the connotation that the president attempted to feed the public false information. This article was not objective, and reflected the manipulation and bias projected on the public. For example, Cordato stated that global warming was “accurate and specific,” while climate change was “inaccurate and general” because the climate always changes. Cordato explained that carbon is an inaccurate term as well, because the actual concern stems in if too much *carbon dioxide* accumulates in the atmosphere. This statement paralleled Trumbo’s work that it is difficult to convince a public of an issue that is not tangible to the senses (1996). Effectively, this article further pushed the environmentality of doubt, as it framed carbon dioxide as a supporter of life, not a harmful component of the environment. Not only did Cordato question the assertions of climate

change and the correct words to use, he also doubted people's intelligence. To conclude the article, he called upon people to correct others who did not use accurate language language:

"Honest policy analysts should just say no to this propagandist assault on language. Whenever "climate change" is used instead of "global warming," or "carbon" is used in place of "carbon dioxide," the person using those terms should be called out and made to explain himself."

"Using the Right Word in Warming Debate"

Editorial by Dr. Roy Cordato

August 22, 2013

JLF

Cordato asserted that his argument was rational, as well as honest and correct. The manipulation of language by the JLF created uncertainty and pushed for a forceful defense of the proposed terminology. The publication managed to reject evidence of climate change, and projected the state's environmentality of uncertainty.

Addressing sea level

Additionally, I analyzed the presence of terms and phrases related to sea-level rise in the media. Like the climate change phrasing, the sea level terminology allowed me to evaluate the underlying motivations of the articles. After reading through the articles, I determined that the keywords associated with sea level discussions included historical data, prediction, sea-level rise, sea-level decrease, insurance policies, evidence of sea-level rise and no evidence of sea-level rise.

The RNO addressed that the first draft of HB819 demanded future predictions use historical data. The JLF advocated for the use of historical data as an accurate prediction tool. While sea-level rise discussion occurred in both sources, their arguments varied greatly. Only articles from the RNO reported on the evidence that proved accelerated sea-level rise. Some

articles from the JLF and RNO discussed decreasing sea level, while others laid out evidence that climate change did not exist.

The JLF's main argument was that sea-level rise was not problematic for the state. What I found confusing was the JLF's argument that future sea levels could not be predicted, but then they stated that historical records were best for predicting future trends.

"We've done the experiment and we know the result. When mankind began driving up atmospheric CO₂ levels (with dramatically beneficial effects on agriculture) the post-LIA acceleration in rate of sea-level rise ceased. The last ~3/4 century of increasing CO₂ levels and emissions have caused no increase at all in the rate of sea-level rise. It is irrational and unscientific to expect that repeating that experiment over the next 3/4 century will have a significantly different result. The best prediction for sea level in the future is simply a linear projection of sea level in the past. For the southern NC coast, that's a measly 7 inches of sea-level rise by 2100 (and a little over twice that for the northern NC coast, due to land subsidence there)."

"A set of facts on NC sea-level rise that are hard to dispute"

Editorial by Dr. Ray Cordato

June 11, 2012

JLF

While the JLF fed its audience its environmentality of doubt, it manipulated the use of language and the understanding of sea level science. Cordato avoided climate scientists' warnings of melting ice caps and changing temperatures, and stated that sea level predictions were "irrational and unscientific." Cordato promoted doubt as he called into question the legitimacy of climate science. Cordato used an argument that is no longer relevant because the population was smaller and carbon emissions were significantly lower. Similar to the article "Using the Right Words in the Warming Debate," Cordato asserted that carbon dioxide was not problematic, and with his logic, sea-level rise would be "a measly 7 inches"

by 2100. The language enticed readers with a strong message that other media sources and scientists could not overlook the “facts” they provided.

Briefly, one article mentioned insurance policies in the state. This highlighted the underlying economic motivations of elite actors, even though this aspect did not garner too much media attention. The NC-20 wrote about the non-existence of change, or a lack of evidence for increased sea levels. In the JLF article, “A set of facts on NC sea-level rise that are hard to dispute,” Cordato says:

“I think that the rule makers should conform NC’s rules regarding land development, setbacks, structure elevation, insurance, etc., to actual scientific evidence, rather than to the political winds of the day. Don’t you?”

Once again, the JLF suggested that the policy needed to match the science, which is ironic, since their policy actually went against the science. This list of necessary policy changes aligned with the economic interests of the NC-20 and the NCGA. The articles that supported future sea level modeling with historical data, due to the inaccuracy and unreliability of current climate models, took issue with the potential economic loss. Instead, they ignored the predictions of world-renowned climate scientists to protect their own economic vitality.

The staging of political controversy

In this segment, I identified the language that framed the debate as a political controversy. In each article, I marked references to any of the following terms: partisan divide, Democrat, Republican, HB819, opposition, support, conservative, liberal and

independent. I selected these terms due to their frequency of use in the media, as well as their relevance to the issue.

The RNO used political phrasing more often than the JLF. This result was not surprising due to the previous conclusion that the JLF discussed the issues as scientifically controversial, rather than political. Interestingly, there was little discussion of HB819 in the JLF. The JLF, a staunch proponent of the bill, promoted the state's environmentalism, as reflected by its financial and political supporters, and their articles focused on disproving the CRC rather than lobbying for the bill.

In addition, the articles reflected that the politicians held highly contrasting opinions; Democrats were more likely to vote against the bill and supported the sea level predictions of the CRC and the IPCC. Republicans voted in favor of the bill and questioned the CRC's report. After the passage of the bill in July 2012, an RNO news article demonstrated the strong partisan divide in the government.

Rep. Pat McElraft, a Republican real estate agent from Emerald Isle who pushed the bill, said the commission would now "use some real science" to evaluate the coast, saying some scientists have debunked global warming.

"You can believe whatever you want about global warming, but when you go to make planning policies here for our residents and protecting their property values and insurance rates ... it's a very serious thing to us on the coast," she said.

Democratic lawmakers such as Raleigh's Deborah Ross countered the argument, saying "ignorance is not bliss, it's dangerous."

"By putting our heads in the sand, literally, for four years," she said. "We are not helping property owners. We are hurting them because we are not giving them information they may need to protect their property."

Republican John Blust of Greensboro appeared indignant about being lectured on climate change, saying “I don’t know what the planet is going to be like in 100 years.”

“If you all don’t agree with our point of view, somehow you’re bad, somehow you’re ignorant ... there is a constant almost intimidation factor going on,” he said.

“New law bans policies on sea-level change for 4 years
News article by John Frank
July 3, 2012
RNO

This article attempted to balance the outcome because it quoted representatives who voted for and against HB819. In doing so, the article demonstrated the bias in balance. The Republicans continued to promote the environmentality of doubt, as they enjoyed the shift from the counterpublic, to the official public with the passage of the bill. McElraft continued to circulate the environmentality as she commented on the need for the use of “real science.” John Blust suggested that future sea levels are a matter of opinion, and continued to pedal doubt. In an attempt to balance these politicians, the author quoted Deborah Ross, a Democrat, who articulated her disdain with the bill. Ross said that the passage of the bill was dangerous, and utilized the widely circulated frame of “putting our heads in the sand.” This implied that she believed that the bill limited the public’s knowledge of the environment. Ross did not view the bill as a way to protect property rights and insurance rates, but rather as a way to potentially harm the residents of North Carolina. However, the new public and their environmentality of doubt attracted a majority of the attention in the article, and further circulated the new “official truth” of the state.

Presence of opinion in the articles

The final step of this section of the data analysis evaluated the presence of opinions on the issues. I searched for key phrases such as skeptical, agreement, contradiction, against, voted for, voted against, controversial and scientifically controversial. This allowed me to identify the bias presented within articles that one might not expect to see in publications like the RNO due to their principles of objectivity and balance.

“Writing on Forbes.com, the Heartland Institute's James Taylor counters the claims of scientific geniuses like Al Gore and Michael Bloomberg that Hurricane Sandy, in conjunction with a serious nor'easter, was essentially a man-caused disaster -- that is that it was the result of human- induced global warming. But as he points out, if you turn to actual scientists you get a different story. And as Taylor notes, it's not an alarmist vs. skeptic thing. Both sides agree, "nature happens." Taylor makes his point by quoting NOAA's Martin Hoerling, not a "denier," to use a favorite word of environmentalist demagogues...”

“Global warming responsible for Sandy Disaster- NOT!”

Foundation newsletter by Dr. Roy Cordato

November 7, 2012

JLF

“The projection of 38 inches referred to by [Dr. Patrick] Michaels is from a controversial report released by the North Carolina Coastal Resource Commission in 2010 and is the estimate being used by many to argue for drastic new land-use regulations along North Carolina's coast. Michaels argues that the commission's projections of global warming are inconsistent with reality and that their projections of sea-level rise therefore overestimate what should actually be projected. He also argues that the tidal gage that the NCCRC relied upon, which is located at Duck along the northern Outer Banks, is an extreme outlier and is completely inconsistent with measurements taken in Wilmington and Southport.”

“Well-known climatologist disputes sea-level rise claims”

Foundation newsletter by Dr. Roy Cordato

September 28, 2012

JLF

These samples from the JLF demonstrate how the authors catered to their conservative audience, who shared their views on sea-level rise. The JLF circulated various

language phrases for their audience to reproduce. Phrases such as actual scientists, alarmists, skeptics, deniers and controversial, are subjective terms. In the first article, Cordato relied on information from James Taylor of the Heartland Institute. The Heartland Institute is a national level conservative think tank, and much of their research and beliefs align with the JLF. Cordato mocked Al Gore and Michael Bloomberg, and called them “scientific geniuses,” which emphasized that their views should not be interpreted as fact. Taylor countered Gore and Bloomberg’s statements that Hurricane Sandy and subsequent nor’easters were influenced by human activity. Cordato suggested that this was unreliable information because “if you turn to actual scientists you get a different story.”

The second article clip also expressed a conservative bias. For example, Cordato claimed that the CRC’s report was controversial. The report was not controversial until the NC-20 felt economically threatened. Cordato loaded the article with opinionated phrases, such as the prediction’s inconsistency with reality and the report was an overestimate when compared to the past. He also claimed that scientists based their measurements in Duck, an extreme outlier compared to Wilmington and Southport. Cordato attempted to persuade readers that the CRC was inconsistent and inaccurate in their research. In the case of the JLF, this language allowed them to further circulate the state’s environmentality.

The capitalist interests of the state and the JLF led to the creation of a counternarrative that manipulated how people perceived sea-level rise, as shown in this chapter. In the next chapter, I show how the media and the state successfully impacted the public’s understandings of sea-level rise and the CRC’s report. However, not all members of

the national public accepted the state's environmentalism, and refused to interpret the issue in the manner the state desired.

CHAPTER V: PUBLIC RESPONSE TO ENVIRONMENTALITY

In the first part of the analysis, I determined how the media conveyed the environmentality of doubt about climate change and sea-level rise in North Carolina. This chapter explores how the national public reacted to or absorbed the circulation of the environmentality. It was essential to analyze this because publics need to know how their personal views and political stances undergo manipulation. I wanted to determine if environmentality was an effective tool of the North Carolina public (the supporters of HB819 and the circulators of the environmentality of doubt). There were two ways to determine the effect of environmentality. First, I addressed the results of the 2012 election in North Carolina, where the members of the NCGA ran for reelection. Second, I evaluated the national public's response to various media that involved the North Carolina sea-level rise debates. Originally, I hoped to evaluate the comments of the readers of the JLF and the RNO, but their online articles did not have any comments. Therefore, I relied on comments from blogs that had a national audience. I wanted to understand how the national public responded to the North Carolina public, or the sea-level rise skeptics and deniers. Additionally, I sought the reaction of the national public to the North Carolina counterpublic, or the scientists, academics and writers who believed the science of the CRC's report.

The 2012 Election: Triumph for the Republicans

HB819 became law in August 2012, and elections for the NCGA and governor occurred in November. The Republicans successfully maintained and increased their majority in the NCGA. In the House, Republicans gained nine seats, for a total of 77

representatives (NCGA). One Republican lost their bid for reelection in the House, but they lost due to a liberal shift in their district (NCGA). In the Senate, Republicans gained one seat, which increased their majority to 33 of the 50 seats (NCGA). The public elected Republican Pat McCrory as governor. The elections indicated public support for their respective NCGA representative's actions. The bill was potentially dangerous for the NCGA Republicans since it passed four months before election, but the Republicans were confident that their environmentalism garnered support.

Despite their success, it is questionable whether the election was an accurate representation of the public's opinion of HB819. In their respective district, people may like their representative, but it does not mean they supported the NCGA as a whole. The public is sometimes uninformed about state politics, and vote along party lines instead of for the candidate that can do the best work. As shown in this public opinion poll from October 2012, those surveyed indicated that they did not view the NCGA favorably, but were in favor of Pat McCrory for governor.

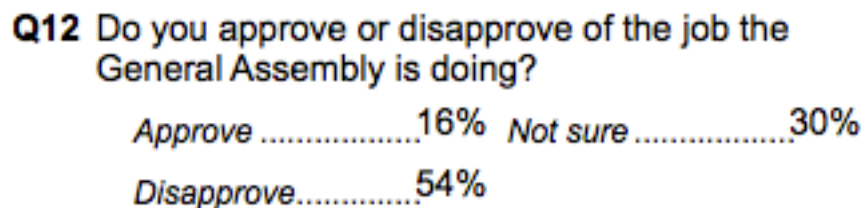


Figure 5 - Source- Public Policy Polling, October 1, 2012

The candidates for Governor are Democrat Walter Dalton, Republican Pat McCrory, and Libertarian Barbara Howe. If the election was today, who would you vote for?

<i>Walter Dalton</i>	37%
<i>Pat McCrory</i>	47%
<i>Barbara Howe</i>	5%
<i>Undecided</i>	10%

Figure 6 - Source- Public Policy Polling, October 1, 2012

User-generated content in response to HB819

HB819 did not pass because of a popular vote, so it is difficult to gauge exact public reaction. After presenting the data from the RNO and the JLF, I wanted to know the national public's reactions to the bill through the comment sections of various news sources, blogs and online articles. It is difficult to determine who commented on the blogs, other than when they contribute their real name. For example, John Droz, Jr. contributed comments to various blogs, and was a known representative of the JLF. The comment sections of blogs and news articles during the timeframe of interest were extensive. I collected data from national online media sources, which helped me to piece together if the environmentality of doubt circulated outside the narrow sphere of the Raleigh media.

The comment sections reflected how polarizing the bill was, as well as how the public interpreted the bill. Comment sections are spaces where the public can freely express their opinions in a relatively anonymous setting. Some comments reproduced the rhetoric of elite

actors and supported the state's environmentality of doubt. HB819 supporters argued that the CRC used flawed science to predict future sea levels. However, opponents of the bill contended that HB819 blatantly rejected science for economic purposes. Frequently, commenters attacked one another, the state government and North Carolinians. Common trends included the repetition of the state's environmentality, the coastal economics aspect, political alliances, the questioning of people's intelligence, and religion. Interestingly, John Droz, Jr., the science adviser for the NC-20 and Bill Price, a former board member of the NC-20, were active presences in the comment sections, and continuously defended their viewpoints and the actions of the state. Their input allowed for the national public to learn who they were and their justifications for HB819. This section gives several examples of what I found within the comment sections of various sources.

Repeating rhetoric and environmentality

Droz, Price and other sea level skeptics readily expressed their scientific doubts within comment sections, and circulated the state's environmentality. Droz and Price questioned the CRC's predictions, addressed current rates of sea-level rise, offered personal observations, and repeated concerns of the state legislators. Droz and Price advocated for the use of real science in future predictions, rather than "alarmist" science. They proposed to solve this by using the literature that argued that sea-level rise does not exist.

Additionally, users offered scientific explanations of the data collected by sea level gauges to argue that the sea level will increase by inches, rather than feet. Like the state, they avoided acknowledging factors that affect sea-level rise, such as the melting ice of Greenland or Antarctica. For example, one commenter stated:

“NOAA has records for sea-level rise for many coastal places in the U.S. In NC they have 5 locations with data. The longest running NC records are at Wilmington and Beaufort, around 70 and 60 years long respectively, and show a stable, steady average rate of rise throughout those periods. These 2 records average at just over 2.3 mm/yr or about 9-10 inches in 100 years. Duck has the highest rate for records lasting just over 30 years, at 4.6 mm/yr or about 18" in 100 years. So 39" in the next 100 years is certainly far, far out of the bounds of past measured trends on the NC coast. The only locations in the U.S. close to 39" in 100 years is on coastal Louisiana.”

Written by: Mark B.
“Shoot the Messenger: Carolina’s Costly Mistake on Sea-level rise”
Yale Environment 360

The commenter utilized existing data from the NOAA, but did not accurately explain fluctuations in sea level. Instead, he picked the data that suited his respective argument. The commenter supported his segment with inaccurate numbers and did not cite his information. The commenter circulated the state’s environmentality of doubt when he expressed distrust about Duck’s measurements. He stated that the predictions were not on par with historical records, so they were not accurate. The commenter recycled the environmentality of the state to assert his opinion, but he did not accurately depict sea-level rise in North Carolina.

The state’s environmentality was apparent in the defense of HB819 by various users. Commenters argued that the NCGA promoted “good scientific practices” because they did not allow for one-sided scientific data to create environmental policy. I found commenters who used the economic argument against climate scientists when they stated that the alarmist position was a ploy to obtain grant funding for their research. A reader from Yale Environment 360 submitted this comment:

“As a marine biologist with a degree in marine technology, I cannot understand how any other scientist can find fault in the NC Legislature promoting good scientific practice.... other than for the purpose of obtaining additional funding for their

program through shameful scare tactics.

I additionally take offense at your use of the phrase "...oft-repeated arguments pulled from the climate skeptic blogosphere.." What exactly is a climate skeptic Rob? Are you implying there are individuals that are skeptical that 'climate' exists? No, you understand such a scenario does not exist. You are intentionally misleading your readers while denigrating those that disagree with your wild assertions based entirely on computer models."

Written by: Hugh K.
"Shoot the Messenger: Carolina's Costly Mistake on Sea-level rise"
Yale Environment 360

The supporters of the bill argued that computer models used by the CRC and climate scientists were inaccurate, which further contributed to the state's environmentality of doubt. In the above example, the user echoed politicians and lamented the irresponsibility of wild predictions. He used elite framing to position his argument as correct based on his degree in marine technology and work as a marine biologist. Additionally, he disliked the term "climate skeptics," because it seemed that the blog's author insinuated that HB819 supporters did not believe in the climate. There were several commenters on the Yale360 blog that said the author misled the public and promoted bad science.

"I do not consider historic trends either alarming or unreasonable. While I would prefer not to see any bill of this type passed through any legislature, attempting to replace this "bad science" based on historical evidence with other "bad science," based on model predictions does not provide any improvement. Best models and verifiable evidence do not match. Therefore, on which would you prefer we base future growth? At present, I would opt for verifiable evidence, with the understanding that historical trends may change in the future."

Written by: Daniel
"Shoot the Messenger: Carolina's Costly Mistake on Sea-level rise"
Yale Environment 360

“What North Carolina is doing is saying that the basis of design for the state is to be historical data.

This Article is objecting that imaginative fiction cannot be used. Over the past 20 years, “Climate Change” proponents have predicted drastic drops in sea level. That didn’t happen. They have also predicted drastic warming and consequent rise in sea levels. That hasn’t happened yet either.

The latest information is that sea levels have risen over the last one hundred years at less than 8 inches, if at all. (The uncertainty is greater than that.)

If we get any solid data, then that can be used. But, theory only isn’t a good basis for engineering design, especially when it’s mostly supported by political wishing.”

Written by: YetAnotherBob
“NC Considers Making Sea-level rise Illegal”
Scientific American

“Is there any limit to fabulous and fanciful speculations about what sea level MIGHT become? None whatever. An asteroid collision on Antarctica, for instance, would probably release all the ice at once producing a huge wave straight out of “Day After Tomorrow.”

But it’s speculative and governments ought not to work on speculation when you have perfectly good historical data from which to make policy decisions.”

Written by: mggordon
“NC Considers Making Sea-level rise Illegal”
Scientific American

As shown in these comments, the state’s environmentality possibly influenced members of the national public through more informal means of communication and circulated the same language that appeared in the Raleigh media. This showed that the state’s environmentality extended beyond the narrow media sphere in Raleigh that I analyzed. These models reflected how the language of uncertainty shaped the public’s mindset. Several users

believed that historical data was useful; therefore, future sea level would not be abnormal.

The first commenter felt that the state's actions were warranted, but not preferable, because they did not want the state to need to counteract "bad science." The commenter added that historical trends are not "alarming or unreasonable" like the CRC's "bad science." They emphasized the computer models as unverifiable and reliable, much like the NC-20.

The second commenter associated the CRC's predictions with "imaginative fiction." They pointed out drastic predictions that never occurred, such as sea level drop because of global cooling, and now extreme sea-level rise. Instead, the commenter called the predictions "political wishing." The commenter expressed doubt in five sentences filled with language of uncertainty.

Similarly, the third commenter drew on the fictive scale of sea-level rise by climate scientists, and questioned the fantasy filled scientific prediction. The user applied metaphorical language frames to reproduce the environmentality of doubt. The commenter likened the CRC's predictions to the apocalyptic movie, "Day After Tomorrow." They essentially called the predictions imaginative and impossible to prove. With these comments, the user circulated the environmentality of doubt, and that the predictions were politically and scientifically controversial. The circulation of the state's environmentality continued with input from public supporters who argued that the CRC's science was flawed.

Economic response

The economic motivations of the bill were frequently discussed in the debate. The economic discussion extended to the public comment sections. The state's new counterpublic, or those against the bill, argued that Republicans willingly ignored science to

preserve capitalist interests in the coast. The public, or those in favor of HB819, accused scientists of exaggerating sea-level rise and climate change to receive grant money. Another accusation of HB819 supporters was that scientists did not accurately study sea level to preserve time and money. These arguments from the public reflected the environmentality of doubt that the state and the NC-20 circulated.

NC Lawmakers base laws on Facts, not Fiction.

Scientists have declined to answer questions on CRC Science Report since Feb,2011.

Scientist said, in effect, that it was better to be fast and cheap than accurate.

Lawmakers disagree. They want to be accurate.

Bill Price

Written by: Bill Price

"Update: Revised North Carolina Sea-level rise Bill Goes to Governor"

American Association for the Advancement of Science

You mean Occidental AI [Gore]? I was trying to and then ran into a video of him selling how wonderful NAFTA would be and you could change a few words and it's an exact copy of his 'the world is ending' speech. And I don't believe either version. He actually said that anybody that didn't love NAFTA were trying to live 150 years in the past. Now he's selling carbon credits with Barry. He'll jump on any bandwagon that'll turn a buck.

Written by: Peter J. (Mojave_green)

"North Carolina Sea-level rise Accelerating, Researchers Report"

Huffington Post

As previously mentioned, Bill Price actively commented on various blog sites during the sea level debate. Price accused various actors in the debate of evading questions about their research. He emphasized that lawmakers wanted accurate science, while the scientists did not care. Price, like Droz, pushed the state's environmentality, in order to protect the

coastal economy. Price and the NC-20 feared that the CRC's report would restrict development in the coastal region, and impact the industries in the region.

The second comment, from the *Huffington Post*, accused Al Gore of jumping on any trend that would make him a lot of money. "Occidental Al" was a backhanded way of calling Gore a hypocrite. Occidental refers to Occidental Petroleum, an oil company that Gore's father served as a chairman (Frantz 2000). The Gore family still holds stock in Occidental, which was controversial during the 2000 election and Gore's career shift to environmentalism (Frantz 2000). However, the HB819 proponents encountered several economic arguments from the opponents of the bill as well.

Commenters against the bill pointed to the economic connections of the NC-20 and NCGA as the motivating factors behind HB819. Arguments of this nature contained anger against politicians and developers for caring more about money than the public. There was a general sentiment of distrust towards politicians and financial actors. Additionally, they critiqued the state for allowing the real estate industry to dictate environmental policy.

"It's more politics than science hate. Housing developers get all their money as soon as the houses sell. If they are underwater even a year later, they totally don't care because they got rich."

Written by: wesvvv

"New Law in North Carolina Bans Latest Scientific Predictions of Sea-Level Rise"

ABC News

Anyone who builds on a barrier island needs to have his head examined. Spending millions of dollars to restore the beaches through renourishment and/or protective structures is a complete waste of money. Allowing real estate interests to dictate scientific studies and/or legislation relating to such studies is the height of ignorance!

Written by: Ninong

"Update: Revised North Carolina Sea-level rise Bill Goes to Governor"

American Association for the Advancement of Science

“This smells like the usual ploy of real estate speculators buying legislators to maximize their returns. Funny part is that coastal land posed for “resort development” probably isn’t owned by Tarheels at all — might even be owned by the Chinese, or maybe the Koch brothers. Problem isn’t with the people of NC, but with the unconstrained access of big money to buying votes.”

Written by: aglindh
“NC Considers Making Sea-level rise Illegal”
Scientific American

The first commenter suggested that the housing developers wanted to develop land without regards for environmental concerns. Developers did not want to lose the opportunity to build and make money, according to the commentator. The second commenter, from the American Association for the Advancement of Science, expressed that beach renourishment projects were a waste of money because they were efforts by the state to keep developers happy and to justify coastal development. The commenter said it was ignorant and irresponsible to let economics drive policy and scientific interpretations. The final commenter, from *Scientific American*, speculated that economic interests, such as the real estate companies, bought the votes of the NCGA so they would pass HB819. This inquisition framed the North Carolina public as anti-science, as well as economically motivated. Despite these accusations, commenters from the public and the counterpublic did not employ substantial evidence to prove their claims. However, the commenters held heated exchanges about economics across various articles, blogs and websites.

Political parties divided

In the user-generated comments, the national public was heavily divided along party lines, which was different from the RNO, a polyvocal source, and the JLF, which is one-sided. This led to various viewpoints and arguments among members of the national public.

The commenters used their beliefs to insult other people who did not agree with their position. Rather than arguing with facts, commenters bashed others because of their inaccuracy, backwards politics and thinking.

From 1870 to 2000 sea level hasn't risen by the thickness of two dimes (approx 2 mm) according to observational ground data. I don't see the gloom and doom scenarios the liberals are enjoying.

Written by: mji61
"North Carolina Bill Would Require Coastal Communities To Ignore Global Warming Science"
Think Progress

"Liberals don't care about facts if it gets in the way of their argument about climate change."

Written by: mezz1120
"North Carolina Sea-level rise Accelerating, Researchers Report"
Huffington Post

In these comments, the users viewed climate change and sea level rise as a liberal controversy. Both commenters argued that liberals did not care about facts, but enjoyed the "gloom and doom." The users believed that environmental issues were part of the liberal agenda, rather than reality. What surprised me was that the author of the comment from "Think Progress" said that liberals enjoyed the desolate predictions of sea-level rise. This fed into the perception that liberals and scientists over exaggerated the severity of sea-level rise. Supporters of the bill may have felt that scientists made predictions about sea-level rise without experiencing the coast. Some commenters felt they knew the land and the ocean better because their families owned the land for generations. They argued that there were no tangible changes apparent to them or their families. While these opinions were not generalizable to all supporters of the bill, this showed the performatives of rational-critical

discourse at play. The user believed that their position was rational and realistic, while the lofty sea level predictions were non-rational beliefs used to disrupt the status quo.

Commenters supported of the environmentality of doubt, and perpetuated the idea through the dissemination of rhetoric in their comments.

All I can say is very good and more power to the Republican Trash of America. The sooner they begin to completely disregard climate science, the sooner we will be rid of at least one portion of the garbage problem faced by America ... we will be rid of [illiterate] white trash. ... lol, "A projection map showing land along the coast underwater would place the permits of many planned development projects in jeopardy. Numerous new flood zone areas would have to be drawn, new waste treatment plants would have to be built, and roads would have to be elevated. The endeavor would cost the state hundreds of millions of dollars, Thompson said." Yes, it would cost them millions, instead, these fools running the legislator will allow development to continue and the idiots who voted them in will buy into that development. Who in their right mind would want to? Illiterate trash = Republican.

Written by: Katherine Alexander
"New Law in North Carolina Bans Latest Scientific Predictions of Sea-Level Rise"
ABC News

[M]y gosh, these Republicans... they're regressing and becoming more backward with each passing day..

[C]ome on Americans, you keep voting for these backward ignorant wackos.. maybe in a few decades they will finally have succeeded in turning the U.S. into a third-world country (even many third-world countries are more educated and civilized than American right-wingers when it comes to global warming..)

Written by: maya
"North Carolina Bill Would Require Coastal Communities to Ignore Global Warming Science"
Think Progress

The liberal commenters were extreme in their attacks on conservatives. The first commenter identified the Republicans as the American trash problem that needed solving. The trash metaphor continued throughout the comment as they highlighted what the state

needed to take into consideration. They mentioned the flood zones of the state that the politicians ignored in order to protect their economic interests. The second commentator used choice words to describe the Republicans, and called them “backward ignorant wackos.” They also said that the Republicans’ policies could turn “the U.S. into a third-world country.” However, they carried on the metaphor, suggesting that third world countries were less ignorant than the U.S. about climate change. These commenters expressed their distrust for the Republicans by sounding their disdain about the “backward” policies of the state.

North Carolina: The “Ostrich State”

Commenters questioned the intelligence and ignorance of North Carolinians. The state received the name “The Ostrich State” in one thread because the commenters stated that North Carolinians stuck their heads in the sand and ignored science. In a viral segment of *The Colbert Report*, Stephen Colbert jested the state legislature for their ignorance of science:

“Now, fortunately, folks, North Carolina Republicans have drawn a line in the soon-to-be-underwater sand. They have written a new bill that would immediately address the crisis predicted by these climate models by outlawing the climate models.”

Segment: “The Word: Sink or Swim”
June 6, 2012
The Colbert Report

Colbert joked that it was a “brilliant solution” by the North Carolina Republicans. “If your science gives you a result that you don’t like, pass a law saying that the result is illegal. Problem solved.” Many commenters had a similar sarcastic tone, and laughed at the idea of outlawing science. Some comments utilized stereotypes of southern states, such as North Carolinians were poorly educated. However, others justified their comments of intelligence

because the residents of the state were unintelligent for electing such ignorant representatives. Others ignored that the politicians, and not the citizens of North Carolina, passed the bill.

Apparently we have managed to out-stupid Mississippi. I would have thought such a feat beyond the reach of Einsteinian physics, and I suppose that as a result the universe will collapse into a singularity any minute.

Written by: lexalexander
“NC Considers Making Sea-level rise Illegal”
Scientific American

But if NC floods all those morons that survive will come to my state and I sure don’t want them to be allowed to vote in my state. I move we pass a law that all people displaced due to their own stupidity should not be allowed to vote in their new state.

Written by: Kagehi
“NC Considers Making Sea-level rise Illegal”
Scientific American

The above comments expressed frustration about the situation. In *Scientific American*, the first commenter used exaggerated metaphors to express the ridiculousness of the situation. Their language expressed that HB819 was backwards and nonsensical, and declared that the passage of the bill could result in the universe collapsing “into singularity any minute.” In the second comment from *Scientific American*, the author referred to all North Carolinians as “morons” that they did not want to move to their state. While it is unclear whether the author chided the North Carolina public for electing the officials who passed HB819 or believed that they voted for the bill to pass, they were not fond of North Carolinians.

Religious debate

Due to North Carolina's position in the "Bible Belt," religion was a point of discussion among media consumers. Commenters used religion to mock the intelligence and beliefs of the state. A few times, it was comical, such as when a user quoted of a Bible verse to show that people should not build houses on the sand.

"New International Version (NIV)

Matthew 7:24-27

The Wise and Foolish Builders

24 "Therefore everyone who hears these words of mine and puts them into practice is like a wise man who built his house on the rock. 25 The rain came down, the streams rose, and the winds blew and beat against that house; yet it did not fall, because it had its foundation on the rock. 26 But everyone who hears these words of mine and does not put them into practice is like a foolish man who built his house on sand. 27 The rain came down, the streams rose, and the winds blew and beat against that house, and it fell with a great crash."

Written by: BoulderLova

"New Law in North Carolina Bans Latest Scientific Predictions of Sea-Level Rise"

ABC News

However, commenters utilized religion to express poor taste. For example, in the following comment, the user brought up radical religious groups, and lumped them together in a negative way, which had nothing to do with the sea level debate.

The GOP is dominated by people who subscribe to a Neolithic belief system, which teaches that a white, old, male Deity with a beard created the World 5.000 years ago, forming man out of clay. Subsequently, they attribute everything that happens - from rape to pregnancy, to climate change- to the will of that deity, which they call God. This fatalistic view is not exclusive to radical Christianity, it is shared by the right-wingers in almost all religions, from Mormonism to Islam. They have their own polls, and their own fact checkers, which support their [parallel] universe. How likely is it that these people will start considering [scientifically] proven facts any time soon? Unlikely! If God didn't want sea levels to [rise], he [could] stop it. He's already shown that he can do that, when he split the Red Sea in front of Moses

3,500 years ago, right? The only choice we have is to vote them out, before they do more damage than what they already have done.

Written by: Waltfl
“North Carolina Sea-level rise Accelerating, Researchers Report”
Huffington Post

There were several glaring problems with this comment. It was clear that the user did not like the Republican Party, but the argument held little relevance to the situation. The individual argued that Republicans’ ideas based in religious beliefs were dangerous, yet he threw in elements of his own belief system. The commenter also compared the party to radical religious groups, and was angry over their lack of science to draw conclusions.

Some commenters utilized religion against the intelligence of North Carolinians. However, religious commenters held extreme ideas as well. In the comment below, the user went on a tangent about a user, who will face judgment from God.

I am appalled at the comment of this unknown and unverified commenter, who said he wants to live long enough to see the NC 20 counties under water. Shame on him. He seems irrational, not to want further EXPERT STUDY on the matter of SLR. My family has lived in Downeast Carteret County, for over 300 years and I don't think any of these God fearing people would make such a statement about another population group. I am not a developer or [real estate] agent, but I do live on 7.5 acres of waterfront property, that has been in the family, for over 300 years. My ggg-grand parents are buried within 300 ft. of my front door steps and about 30 ft. from my son's grave, in the family cemetery, that has never seen SLR, even when pre-colonial [Indians] lived on this land. I take it that Mr. SEAL LEVEL is not a person of faith, but he still must face [judgment], when he knocks on those gates, not made with hands, eternal in the heavens. Such a person should hang his head with shame and ask forgiveness of the Great Architect of the universe, the land and the seas.

Written by: Thom Styron
“The big money behind the assault against sea-level rise science in North Carolina”

The user expressed disdain toward the individual, and shamed the user with religious justifications. The user implicated that sea-level rise was unpredictable because it was up to their god to decide if it happened. The commenter also used family history to justify his position that sea-level rise is not happening. He was protective of his family's land and asserted it would not be lost to sea-level rise.

On the defense: North Carolinians react

Commenters did not let the residents of North Carolina off easy. As previously mentioned, the commenters questioned the intelligence of North Carolinians and their political decisions. However, this did not sit well with users from the state who revealed their opinions on the bill. Commenters, such as the one in the previous section from Carteret County, adamantly denied sea-level rise based on their observations and their families' waterfront property size. Other commenters did not find it amusing that others assumed that all state residents supported the bill or voted for the politicians in office.

Is this utterly idiotic and infuriating? Yes, of course. But HEY. ALL YOU PEOPLE SAYING THE ENTIRE STATE SHOULD SINK. Yeah, you. And you other people saying anyone evacuating from North Carolina shouldn't be allowed to vote anymore. How is it not clear to you that there are rational, intelligent people in North Carolina who voted for rational, intelligent candidates—who lost? How are you not aware that the decisions handed down from lawmakers do not speak for the views of the entire state or country?

Written by: Bewildebeest
 "NC Considers Making Sea-level rise Illegal"
 Scientific American

"As a North Carolina resident, I would just like to say "Thank You" to all the people out there who assume that just because they believe that we live in a

Democratic nation, that any of the actual residents of North Carolina had anything at all do to with this tragic miscarriage of law and science...

"I bring this up because I consider myself to be an educated man. A reasonable man. And more than that, one who is vehemently opposed to the kind of ridiculous laws that this exposé puts forth. I did not even know about the issue until the law had already been passed. Nor did my vote on the gay marriage issue stop the inevitable laws on that front from being passed into our state constitution..."

Written by: jeoshua
"NC Considers Making Sea-level rise Illegal"
Scientific American

In *Scientific American*, the commenters were wary of the assumptions that they voted for the representatives that passed the bill. Each discussed the frustration of the situation because the lawmakers did not take into consideration the views of their constituents. The commenters did not want these actions to be representative of the state's intelligence. They described themselves as reasonable people who did not support the bill, and found HB819 "utterly idiotic and infuriating," as well as "a tragic miscarriage of law and science."

A sample of opinions

With these examples of user-generated comments, I exemplified how the state's environmentality potentially impacted the language and understanding of the controversy public debate and circulation of ideas. In the online forums, people recycled the same key terms and arguments used by the state and the NC-20. This suggested that the media frames peoples' minds, but it cannot be proven that this mentality is a direct result of the media that I analyzed. While evaluating comment sections is not as effective as public polls or direct comments on the RNO's and JLF's websites, it still gives a good representation of both sides of the debate in the public realm. As demonstrated in the collection of comments, the state's

environmentality language appeared in the comments of national level blogs and articles, which showed this was possibly effective.

CHAPTER VI CONCLUSION

The utilization of North Carolina as a case study allows me to contribute to anthropology scholarship by demonstrating that the state and the media contribute to the public's understanding of the environment. I establish the links between the local media, the elite actors, capitalist relations and the public to decipher the effectiveness of the state's sea level environmentality. I found that the media served as a platform for conversation between the state and the public that allowed for the spread of the environmentality, as well as discussion and debate. The NC-20 successfully posited doubt about environmental predictions by scientists, and convinced the state to pass legislation to support their ideas. This caused the scientists and actors who supported this position to go on the defense and justify their studies. The state's position of doubt catalyzed the debate in a way that an oppositional scientific stance could never do. This unique stance allowed the minority opinion to transition into the state's official stance on sea level rise.

The case of North Carolina is a reminder to look at the motivating factor behind shifts in political opinions. The state actors and the capitalist interests had a powerful stronghold over the environmental policy in the state, and the environmentality of the state. Capitalist motivations played a strong role in the circulation of the state's discourse. Therefore, with the push in favor of economic interests, there was a rapid shift in the political interpretation of sea level rise. Elite and media actors held powerful roles in the circulation of the debate and language of doubt. The elite actors knew of their influence over the public and formed a

conversation to shape the way the public perceived the environment. This in turn protected their capitalist interests in the coastal region.

The media actors were not bystanders in the circulation of the elites' messages. Journalists selected which elites to quote in their articles, wrote balanced articles, which attributed to bias, and occasionally let their own opinions infiltrate the media. The connections between the Raleigh media and the elite actors allowed for the spread of the environmentality of doubt. The RNO strove for a more balanced perspective in their reporting of the debate, but as previously demonstrated, balance is bias. Due to their mixed perspective of the debate, the RNO left room for doubt about the reality of sea-level rise. The JLF readily reflected the environmentality of doubt of the state and the efforts of the Republicans through means such as quoting sea level rise skeptics and "disproving" mainstream science reports from the IPCC and the CRC. My analysis of the data shows that the media did circulate the environmentality of doubt of the state through means such as elite framing and language use.

One of the questions posed at the beginning of this text asked how the state's discourse affected the public's understanding of sea level rise. Evaluation of public speech patterns in the comment sections of selected sites reflected the circulation of the state's environmentality of doubt. Language of doubt, fear, and economic threat clouded the comment sections, which further illustrated Spitulnik's research about the repackaging and circulation of language used in the media by publics. While many commenters affirmed their belief in the reality of the science behind sea-level rise, many further circulated the denial of science and the importance of economic protection. This is an important aspect of this

research because it shows that the state's circulation of their environmentality was effective, especially with the circulation of key words from the political debate in the public's speech patterns.

The next update from the CRC is due on March 31, 2015, but the NCGA will not debate the report until 2016. The next bill will be up for debate the same year that the NCGA seats are up for reelection, as well as the governorship. It raises questions of how the predictions in 2012 and 2016 will be similar: Will the public consume and further circulate the environmentality of the state? Will the 2016 election turn out similarly to that of 2012? Will the media be a key circulator of the environmentality of doubt for the state again? There are many questions that future research could address.

My suggestions for future research include an evaluation of the media during the publication of the newest report and the debate process in 2016. A comparison between the events of 2012 versus 2016 could provide valuable information. Additionally, it would be beneficial to include more media outlets that covered this event. This could include national and international media sources. This may reflect the extent of the effectiveness of the environmentality of doubt, and whether it extended past the state boundaries. The study could compare how the state and the media frame sea-level rise, science and economics in each case. The incorporation of interviews with actors involved on both sides of the debate would give valuable insight to their relationship with climate change. Continued evaluation of this topic is important because the public may not be aware of the continual manipulation they undergo because of the media and the state framing environmental issues, such as sea level rise.

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APPENDIX

APPENDIX A- CODING SHEET FOR DATA ANALYSIS

Variable name (in SPSS)	Description	Codes	Notes
Source	Which newspaper source the article originated from.	<ol style="list-style-type: none"> 1. Raleigh News and Observer 2. The John Locke Foundation 	
Year	Year article published	<ol style="list-style-type: none"> 1. 2012 2. 2013 	
ArticleType	Type of article	<ol style="list-style-type: none"> 1. Basic news article 2. Press-release style announcement (with no obvious reporting) 3. Opinion-editorial (op-ed) 4. Editorial 5. Opinion 6. Column, letter, or article by member of North Carolina government 7. Letter to the editor 8. Interest piece 9. Foundation newsletter 	
Valence	Perspective of the article	<ol style="list-style-type: none"> 1. Appears to agree with the existence of climate change/sea-level rise 2. Neutral, mixed, or unclear 	

		<p>opinion on the subject matter</p> <p>3. Appears to negate the existence of climate change/ sea-level rise</p>	
MainSubject	<p>Main subject or key words of the story- as defined by the headline and first few sentences.</p>	<p>1. Climate change</p> <p>2. Sea level change</p> <p>3. North Carolina legislature</p> <p>4. North Carolina governor</p> <p>5. House Bill 819</p> <p>6. Political parties</p> <p>7. Political controversy</p> <p>8. North Carolina gubernatorial race of 2012</p> <p>9. Coastal Resources Commission</p> <p>10. Scientific research</p> <p>11. Energy</p>	

EliteActors	Elite actors mentioned, quoted or discussed in the article.	<ol style="list-style-type: none"> 1. NC General Assembly member or specific division (House or Senate) 2. Governor Bev Perdue 3. Governor Pat McCrory 4. NC-20 5. Governmental department (ex: NCDENR) 6. Coastal Resources Commission 7. Scientist(s) 8. Academic(s) 9. Scientific or environmental organization 10. Other 11. None 	
WhyElite	What qualifies them as elite actors?	<ol style="list-style-type: none"> 1. Position of power 2. Position of knowledge 3. Challenger of science 4. N/A 	

DiscreditElites	Does the author discredit any elites?	<ol style="list-style-type: none"> 1. Yes 2. No 	
EliteQuoted	Does the author quote an elite in their article?	<ol style="list-style-type: none"> 1. Yes 2. No 	
EliteSupport	Does the author use an elite's stance to support their article?	<ol style="list-style-type: none"> 1. Yes 2. No 	

PoliticiansQuoted	Are specific politicians quoted or mentioned?	1. Yes 2. No	
PositionOnSL	What is the politician's position on sea level?	1. SL Rise real 2. SL Rise not real 3. Neutral 4. Mixed 5. Unsure 6. n/a	
AcademicsQuoted	Are there specific academics quoted or mentioned?	1. Yes 2. No	
PositionOnSLAcad	What is their position on sea level?	1. SL Change Real 2. SL change Not real 3. Neutral 4. Mixed 5. Unsure 6. n/a	
ScientistsQuoted	Are there specific scientist quoted or mentioned?	1. Yes 2. No	
PositionSLSci	What is their position on sea level?	1. SL rise real 2. SL rise not real 3. Neutral 4. Mixed 5. Unsure 6. n/a	
NC20Quoted	Are specific NC-20 members quoted or mentioned?	1. Yes 2. No	
PositionSLNC20	What is their position on sea level?	1. SL Change Real 2. SL change Not real 3. Neutral 4. Mixed 5. Unsure	

		6. n/a	
Politics of elite framing			
PoliticalSlant	Is there a political slant to this article?	1. Yes 2. No	
ScienceRefuted	Do they refute scientific evidence or scientific consensus?	1. Yes 2. No	
SLPoliticalControversy	Does the author discuss sea level a political controversy?	1. Yes 2. No	
HB819Addressed	Do they address the sea level bill (House Bill 819)?	1. Yes 2. No	
OpinionHB819	What is their opinion of HB819?	1. Positive 2. Negative 3. Neutral 4. Mixed 5. Unclear 6. N/A	

Frames of evaluation for articles: if the article does address issues of climate and/or sea level change, use these questions to evaluate if there is potential bias.

Frame	Yes	No	N/A
Does the article acknowledge climate change as a risk?	Yes	No	N/A
Does the article acknowledge sea level change as a risk?	Yes	No	N/A
Does the evaluation of climate change give	Yes	No	N/A

equal weight to each side of the issue?			
Does the evaluation of sea level change give equal weight to each side of the issue?	Yes	No	N/A
Is climate change addressed as a local threat?	Yes	No	N/A
Is climate change addressed as a state threat?	Yes	No	N/A
Is climate change addressed as a global threat?	Yes	No	N/A
Is sea level change a danger to the state of North Carolina?	Yes	No	N/A
Is sea level change addressed as a global threat?	Yes	No	N/A
Is climate change framed as controversial in the scientific community?	Yes	No	N/A
Is climate change framed as controversial in the political realm?	Yes	No	N/A
Is sea level change framed as controversial in the scientific community?	Yes	No	N/A
Is sea level change framed as controversial in the political realm?	Yes	No	N/A
Does the article support one side of the partisan divide explicitly?	Yes	No	N/A
Does the article quote	Yes	No	N/A

well-known skeptics/opponents of the existence of climate change?			
Does the article quote well-known skeptics/opponents of the existence of sea level change?	Yes	No	N/A
Is climate change viewed as anthropogenic?	Yes	No	N/A
Is their data fact-based?	Yes	No	N/A
Is their data conjectural?	Yes	No	N/A
Does the article refute or challenge scientific data?	Yes	No	N/A
Does the article address House Bill 819 as a constraint or negative?	Yes	No	N/A
Does the article address House Bill 819 as beneficial or positive?	Yes	No	N/A

Frames of evaluation			
WeatherIntensification	Do they address weather intensification?	1. Yes 2. No	

AddressHurricanes	Do they discuss hurricane intensification?	<ol style="list-style-type: none"> 1. Yes , Sandy 2. Yes, Irene 3. Yes, not specified 4. None 	
SLAnthropogenic	Is sea level induced by anthropogenic causes?	<ol style="list-style-type: none"> 1. Yes 2. No 3. Neutral 4. Not addressed 	
EliteFraming	Does elite framing occur in this article?	<ol style="list-style-type: none"> 1. Yes 2. No 	
RepKeyWords	Is there a repetition of key words?	<ol style="list-style-type: none"> 1. Yes 2. No 	
MissingInfo	Is there missing information (lack of cited information in a news article, argument that is opinion based)?	<ol style="list-style-type: none"> 1. Yes 2. No 1. Unclear/ unsure 	
FutureImplications	Does the author discuss future implications of climate or sea level change?	<ol style="list-style-type: none"> 1. Yes 2. No 	
FutureOutlook	What is the outlook on this discussion of the future?	<ol style="list-style-type: none"> 1. Positive 2. Negative 3. Neutral 4. Unsure 5. N/A 	
Use of key phrases			
PoliticalKeyWords	Key political words used in the articles.	<ol style="list-style-type: none"> 1. Partisan divide 2. Democrat 3. Republican 4. Election of 2012 5. House Bill 819 6. Opposition of 7. Support for 8. Conservative 	

		9. Liberal 10. Independent N/A	
ClimateKeyWords	Key climate change words used in the articles.	1. Temperature rise 2. Weather patterns 3. More severe weather 4. No change in weather 5. Global warming 6. Global cooling or no change 7. Evidence 8. No evidence of climate change/ lacking evidence 11. N/A	
SeaLevelKeyWords	Key sea level words used in the articles.	1. Historical data 2. Predictions 3. Insurance policies 4. Sea-level rise 5. Sea level decrease 6. Evidence of sea level change 7. No evidence of sea level change/ lack of evidence 8. N/A	

OpinionKeyWords	Key opinion words used in the articles.	<ol style="list-style-type: none"> 1. Skeptical 2. Agreement 3. Contradiction 4. Against 5. Voted for 6. Voted against 7. Controversial 8. Scientifically controversial 9. N/A 	
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