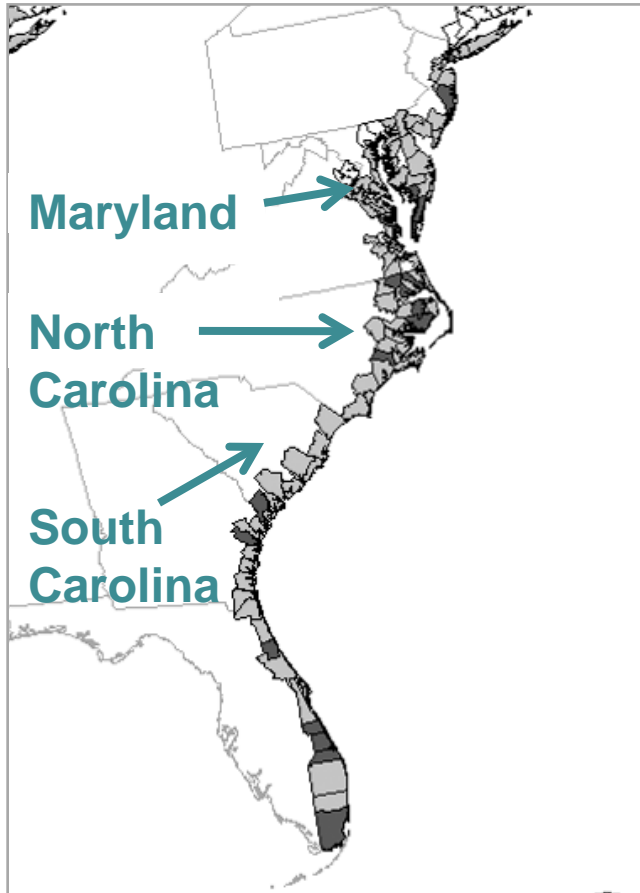


# The socio-cultural construction of willingness to adapt in coastal communities in the US with reference to coastal communities in Europe

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# Outline

- **Introduction: The risk and vulnerability at the US Atlantic coast**
- **Research Questions**
- **Analysis of socio-cultural constructions in coastal adaptation**
  - Contestation of knowledge in media discourse
  - Decision makers' perceptions
- **The German Baltic Sea coast: a different construction of coastal risks (?)**
- **Concluding remarks**



## Coastal Risk and Vulnerability

- Observed relative sea level rise of up to 4 mm/yr
- Hurricanes: main source of coastal physical vulnerability
- Social vulnerability

Place Vulnerability of Atlantic coastal counties based on physical and social indicators

Source: Boruff, B. J., Emrich, C., & Cutter, S. L. (2005)

# Coastal management strategies and CCA

## Maryland

- Coastal adaptation to climate change
- Coastal retreat
- No-hardening rule
- Sea level rise

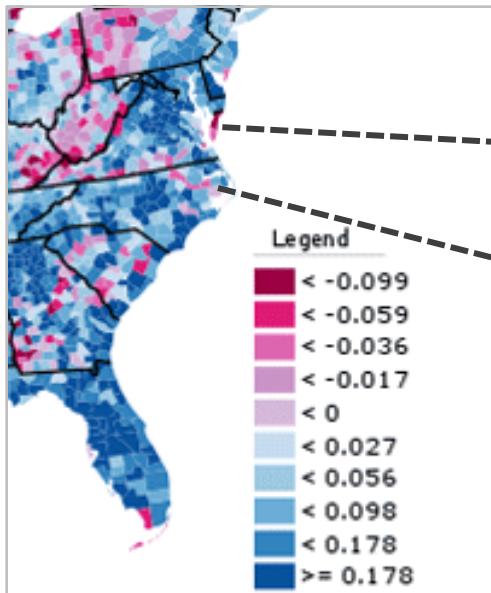
## North Carolina

- Coastal adaptation to climate change
- Coastal retreat
- No-hardening rule
- Sea level rise

## South Carolina

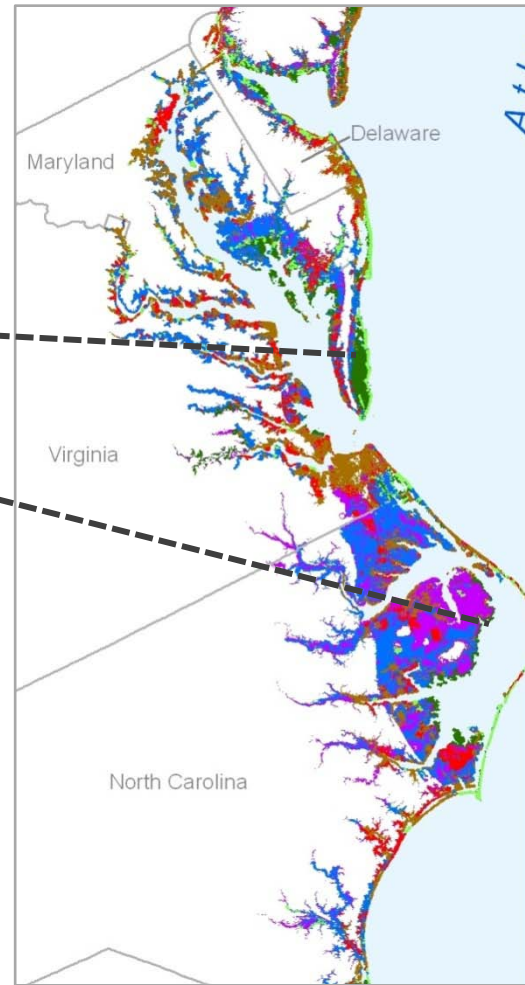
- Coastal adaptation to climate change
- Coastal retreat
- No-hardening rule
- Sea level rise

# Coastal riskscapes



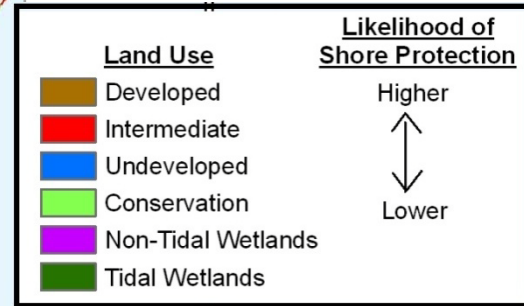
**Percent Change in Population, 2000-2010.**

Source: <http://www.urbanophile.com/2011/03/31/census-2010-offers-portrait-of-america-in-transition/>



## Patterns of coastal protection at the Southeast Atlantic Coast

Source: Titus, J., & Hudgens, D. (2009).



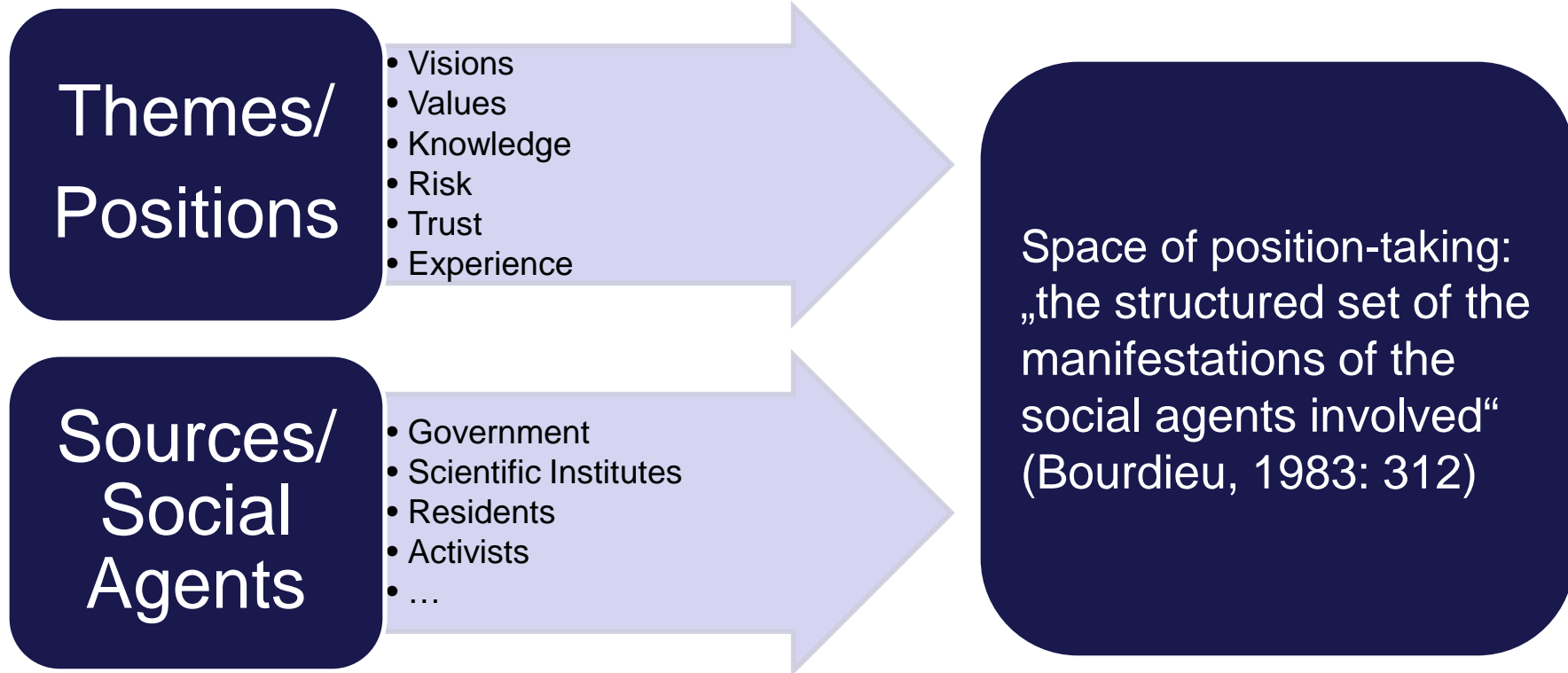
# The socio-cultural construction in adaptation to climate change

- ***„Public opinion can fundamentally compel or constrain political, economic, and social action to address particular risks.... whoever controls the definition of ‘dangerous‘ climate change controls the rational solution to the problem.” (Leiserowitz, 2005)***
- ***“Raising awareness and discussing an issue does not directly result in behavior change or policy action” (Moser & Dilling, 2007)***
- **Collective perceptions of climate risk: outcome of a power struggle among different communities, shaped by cultural values and societal constellations**

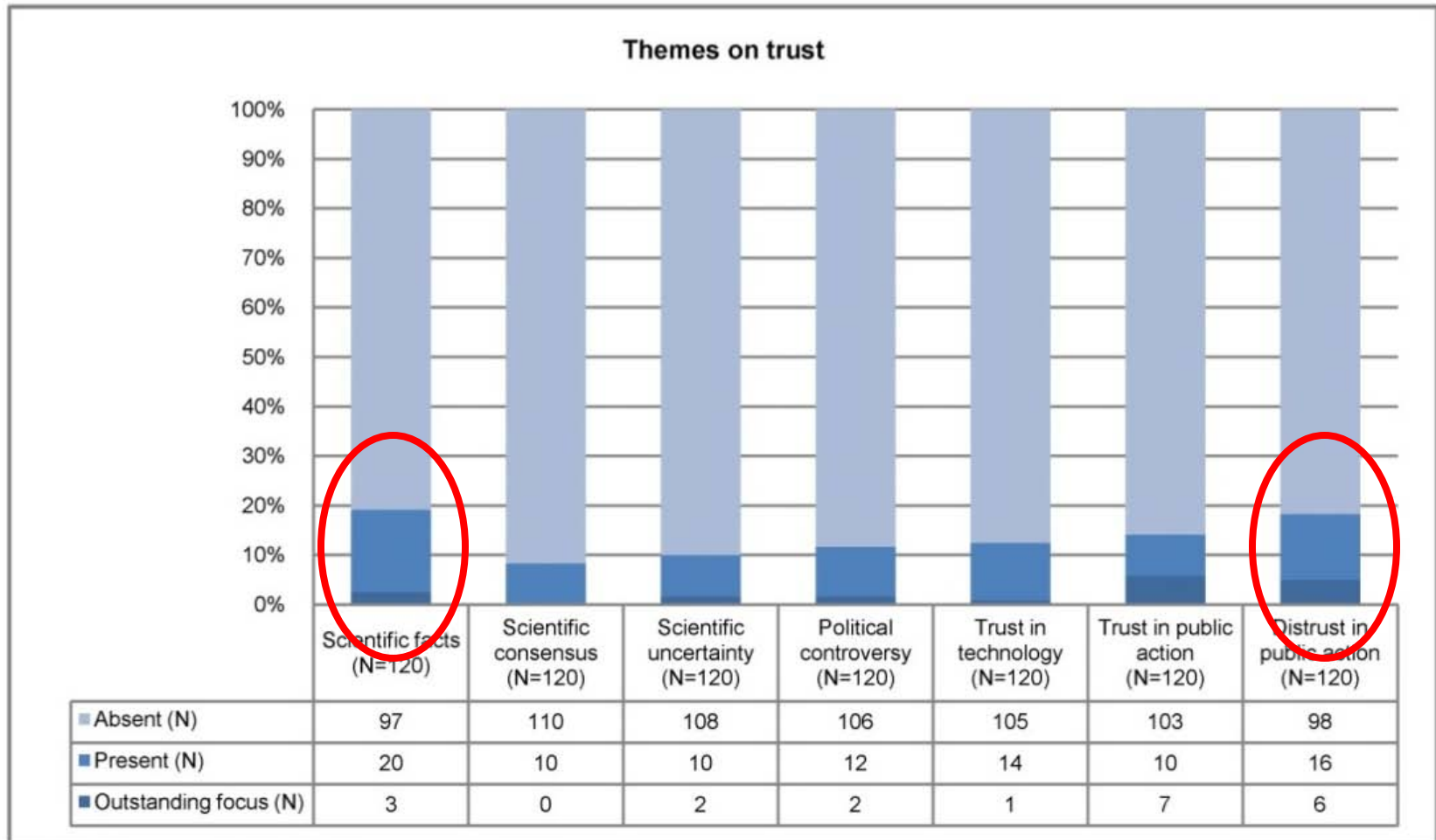
# Research Questions

- **In what ways are differences in environmental beliefs, risk perceptions and knowledge reflected in behavioural intentions and decision-making for coastal adaptation to climate change?**
  - **In what ways is the perceived need to take adaptive action constructed in society? (Media)**
  - **In what ways are collectively constructed perceptions of climate risk reflected in the willingness to take adaptive action? (Decisionmakers' perceptions)**

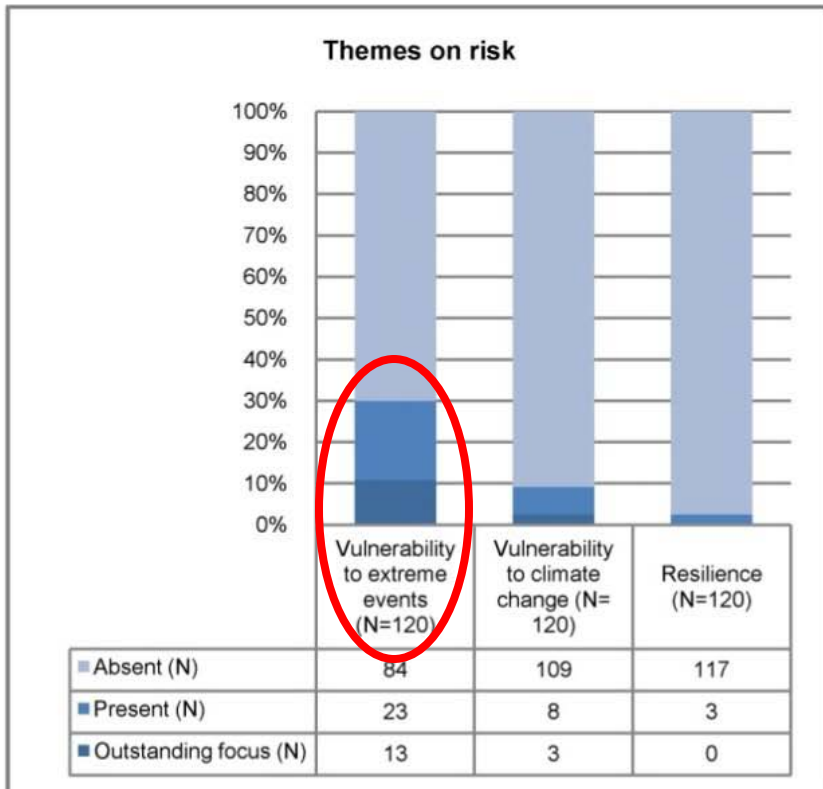
## Position-taking in media discourse



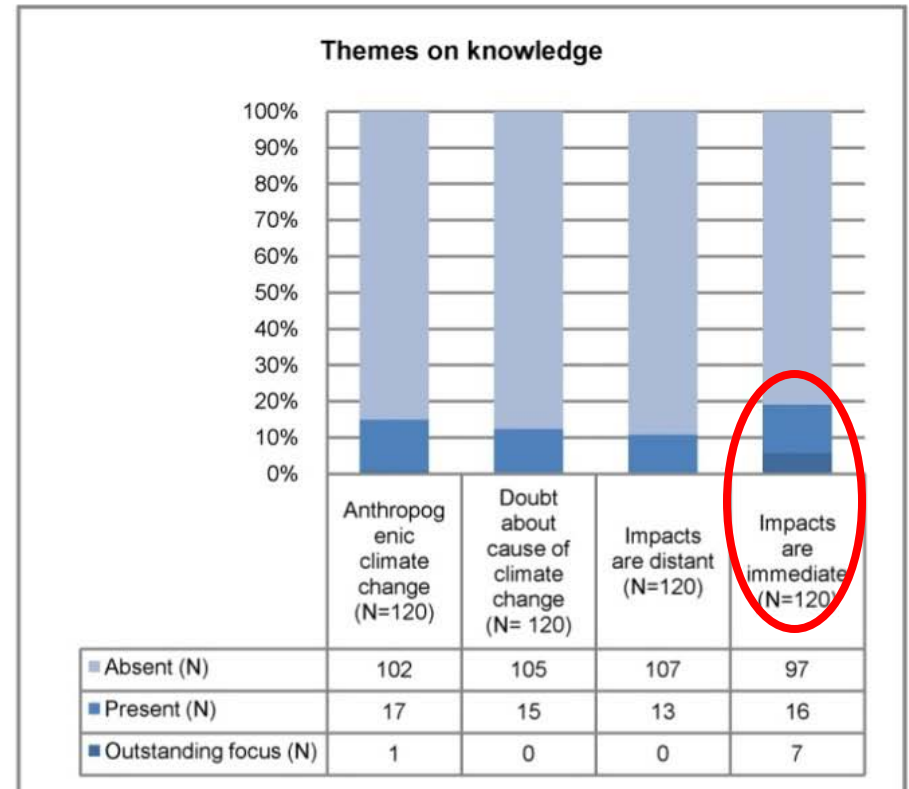




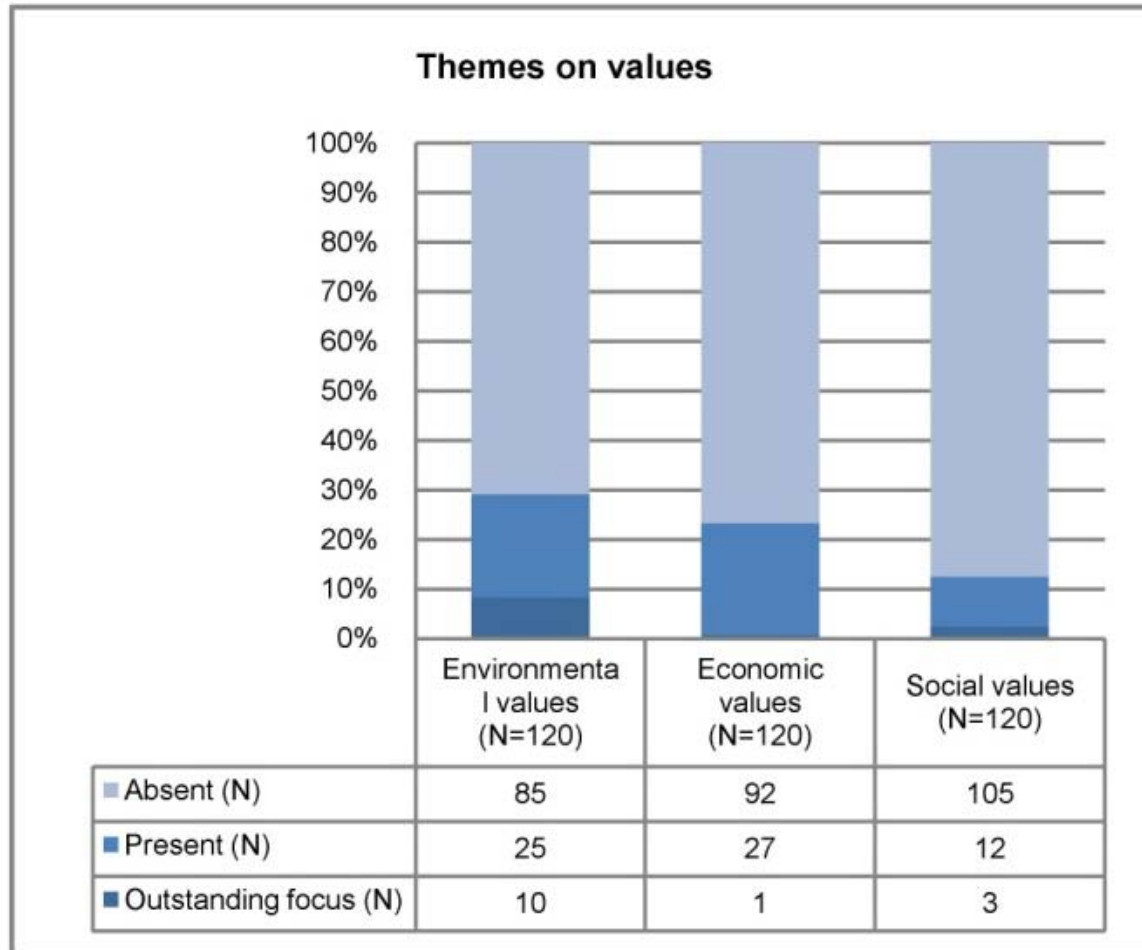
c) Absolute and relative frequencies of themes on trust



a) Absolute and relative frequencies of themes on risk



b) Absolute and relative frequencies of themes on knowledge



a) Absolute and relative frequencies of themes on values

- **Contestation over ownership of risk**
- **Politicised discussion of knowledge on climate change and its impacts**
- **Contestation over trust in science and political action**
- **Contestation over environmental versus economic values**

# Contestations in coastal governance

**Decision-makers' perception  
of local attitudes**

**Literature review on coastal  
risk governance**

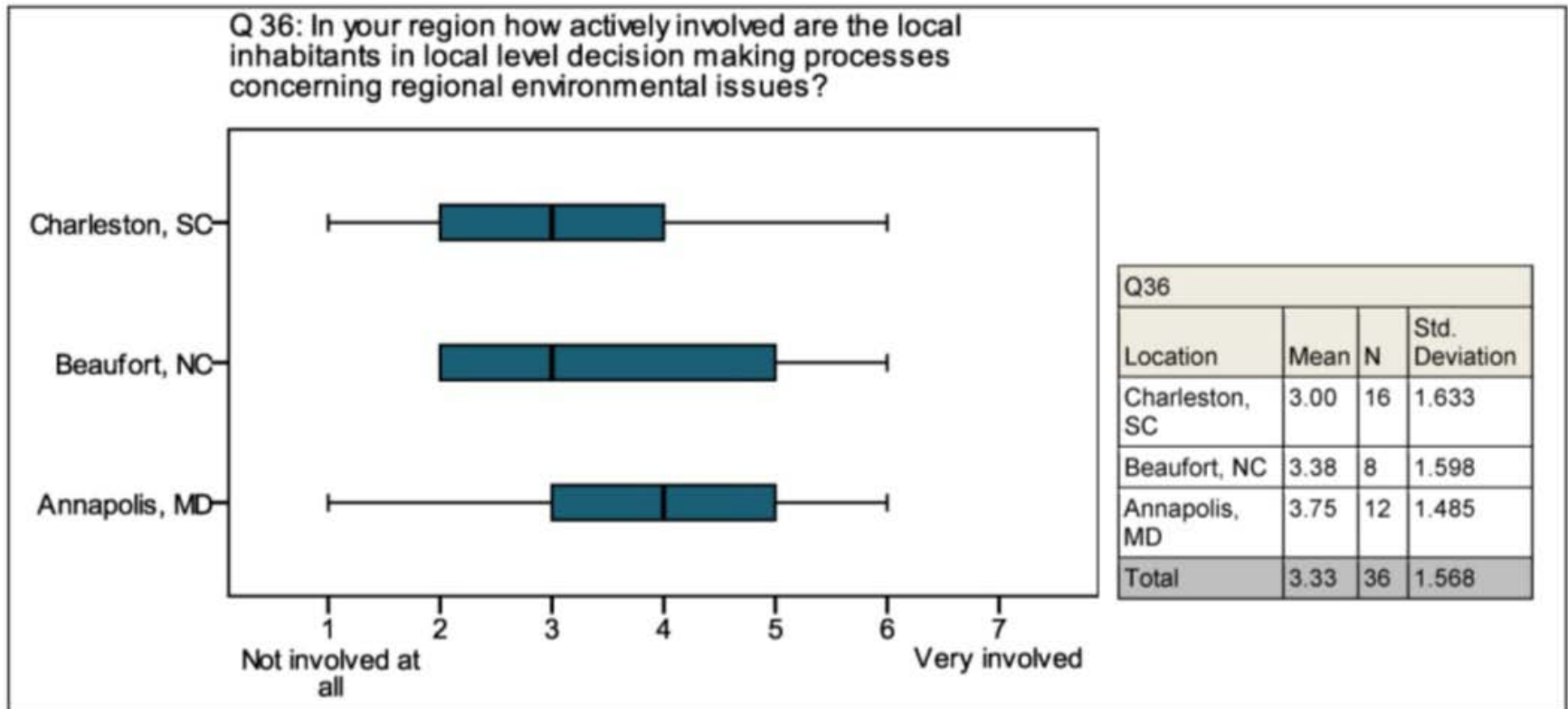
# Contestation over risk ownership

- Risk perceptions differ in spatial and temporal scale
- Increasing costs for coastal protection tolerated by local decision-makers and residents
- Influence of the real estate market: notion of stability and protection
- Residents are willing to cope with impacts but construct them as foreseeable and controllable

## Contestation over knowledge

- **NC: contestation over models to be used in estimation of future sea level rise**
- **SC: absence of strategies for adaptation to sea level rise in the state's coastal management programs**
- **“Alarmists” in Maryland, BUT: mentioning ‘climate change’ equally hinders implementation of adaptation activities.**

# Contestation over trust





# Contestation over values

- **Socio-economic patterns in response to coastal hazards related to values**
  
- **In South Carolina:**
  - **the protection of profitable coastal resources in the Beachfront Management Plan**
  
  - **conservationist approach in the Coastal and Estuary Land Conservation Program that excludes development and ignores sea level rise**

# Results

- **Contestation over values, knowledge, trust, and risk ownership: in media and in governance**
- **“culture of uncertainty avoidance” (Hofstede & Hofstede, 2005)**
- **currently dominating values and practices hinder the implementation of strategies in adaptation to climate change**
- **While supportive attitudes are also present, they often do not enter the decision-making process under its current design**



## Reference to a case at the German Baltic Sea coast

# CCA in Timmendorfer Strand (Schleswig-Holstein) and Ummanz (Mecklenburg-Pomerania)

- Last extreme event: storm surge of 1872
- CCA is part of the state's coastal management strategy in Schleswig Holstein
- CCA measure implemented in Timmendorfer Strand in participatory approach
- Measures in Ummanz in discussion

- **Importance of social factors in contestation over values**
- **Contestation over discursive power dominated by organizations, business representatives and environmental organisations**
- **Great confidence in scientific knowledge, the public sector, and in technological possibilities**
- **Hardly any evidence is given to support arguments**
- **no scepticism / controversies**

# Local decision-making for CCA in two coastal communities

- **Local decision-making in Timmendorfer Strand dominated by economic values (in the tourism sector)**
- **Participatory approach facilitated integration of CCA and economic interest (in tourism)**
- **Strong contestation over economic vs ecologic values in Ummanz**
- **Cooperative approaches to coastal planning in Ummanz have failed**

## Concluding remarks

- **The themes values, trust, and risk ownership are equally contested in the German case**
- **The construction of knowledge is less contested and less politicised than in the US case**
- **Participative approaches can facilitate the collective construction of willingness to adapt but can also be hindered by strong contestations**
- **Understanding spaces of contestation to identify room for manoeuvre in implementation of CCA**

# RADOST

## Regional Adaption Strategies for the German Baltic Sea Coast

[www.klimzug-radost.de](http://www.klimzug-radost.de)

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