European Climate Change Adaptation Conference Hamburg 18-20 March 2013



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

Fanny Frick, Humboldt-Universität zu Berlin; Dr. Grit Martinez, Ecologic Institut









Bundesministeriur für Bildung und Forschung



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 \mathbf{O}
 - Decision makers' perceptions Ο
- The German Baltic Sea coast: a different construction of coastal risks (?)
- **Concluding remarks**



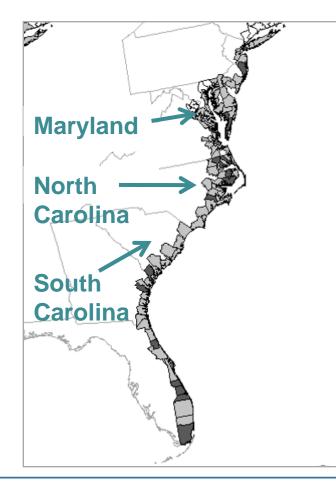




GEEÖRDERT VON für Bildung

Bundesministerium





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



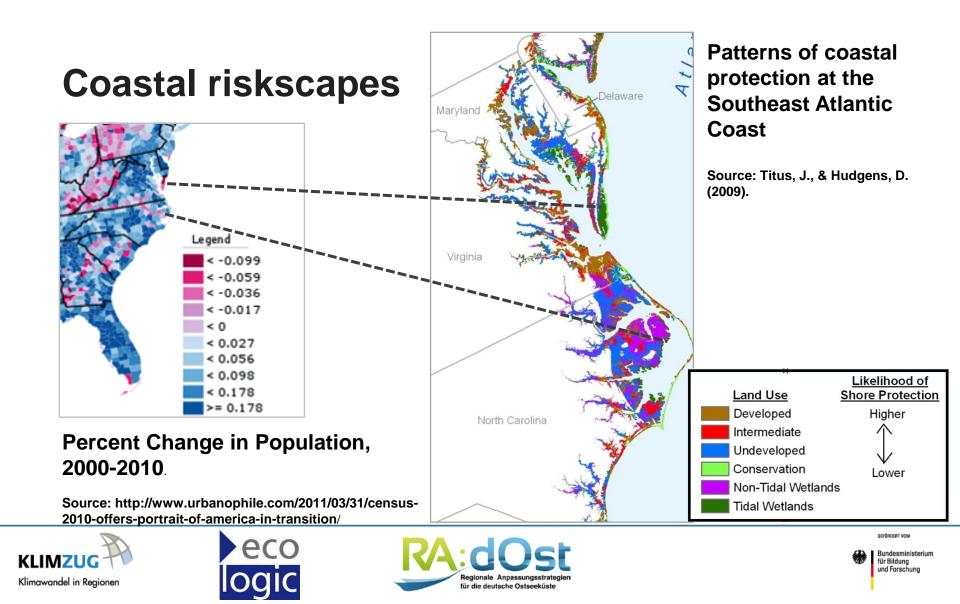




GEFÖRDERT VOM









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 \mathbf{O} constructed in society? (Media)
 - In what ways are collectively constructed perceptions of climate Ο risk reflected in the willingness to take adaptive action? (Decisionmakers' perceptions)





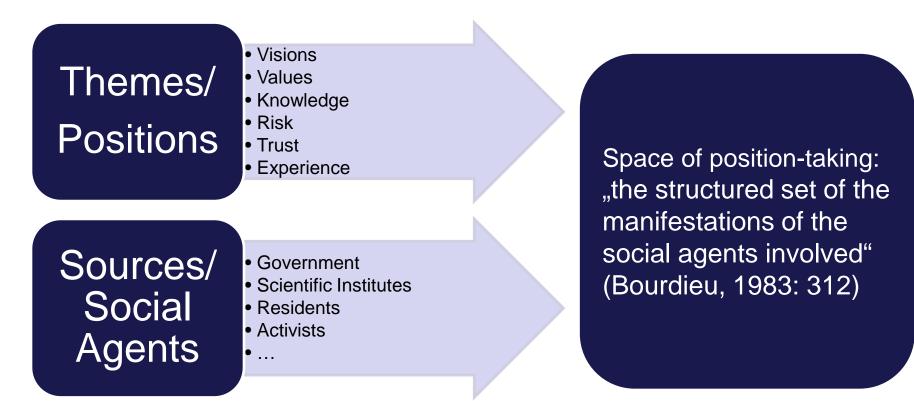


GEEÖRDERT VON ür Bildung

Bundesministeriun



Position-taking in media discourse





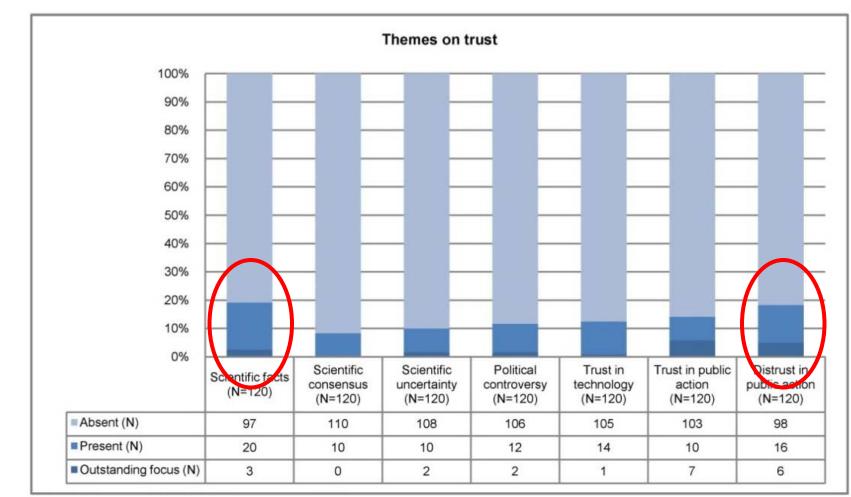




GEEÖRDERT VON ür Bildung

Bundesministeriun





c) Absolute and relative frequencies of themes on trust

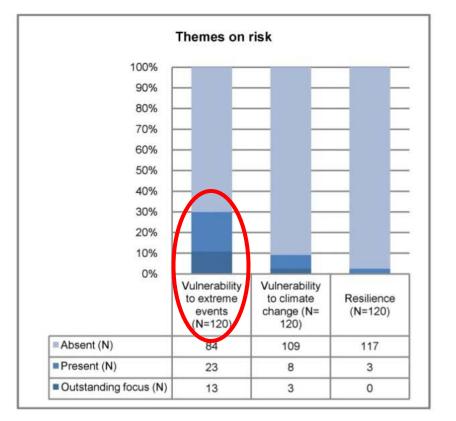




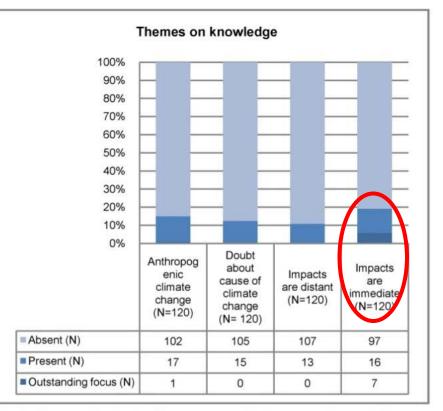


GEFÖRDERT VOM





a) Absolute and relative frequencies of themes on risk



b) Absolute and relative frequencies of themes on knowledge



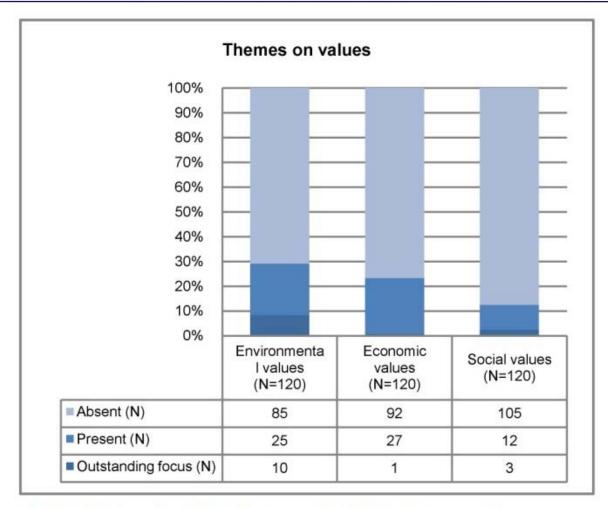




GEFÖRDERT VOM für Bildung

Bundesministerium





a) Absolute and relative frequencies of themes on values







GEFÖRDERT VOM für Bildung

Bundesministerium



Bundesministerium für Bildung und Forschung



Klimawandel in Regionen









Decision-makers' perception of local attitudes

Literature review on coastal risk governance







GEFÖRDERT VON

für Bildung und Forschung

Bundesministerium



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







GEEÖRDERT VON ür Bildung

Bundesministeriun



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.





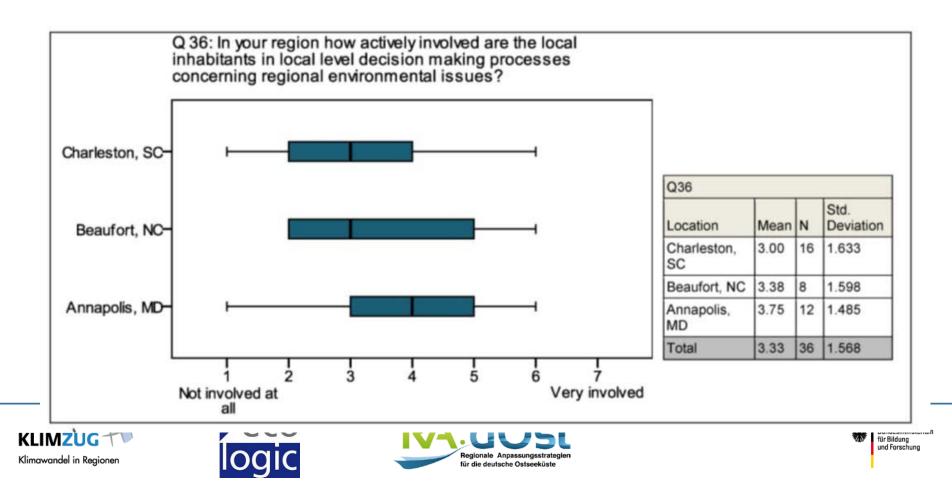


GEEÖRDERT VON ür Bildung

Bundesministeriun



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









The socio-cultural construction of willingness to adapt





Reference to a case at the German Baltic Sea coast







GEFÖRDERT VOM





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







GEEÖRDERT VON ür Bildung

Bundesministeriun



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







GEEÖRDERT VON ür Bildung

Bundesministerium



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







GEFÖRDERT VOM Bundesministeriun für Bildung

The socio-cultural construction of willingness to adapt



RADOST Regional Adaption Strategies for the German Baltic Sea Coast

www.klimzug-radost.de

fanny.frick@geo.hu-berlin.de grit.martinez@ecologic.eu







GEFÖRDERT VON

Bundesministerium für Bildung und Forschung