The influence of perceived risk, uncertainty, and trust on coastal climate change adaptation planning

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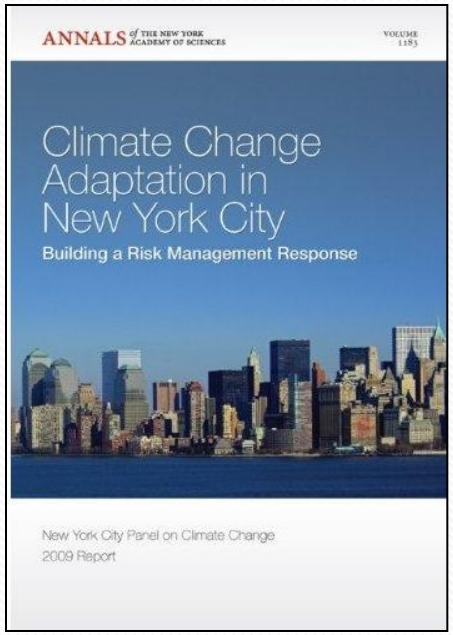
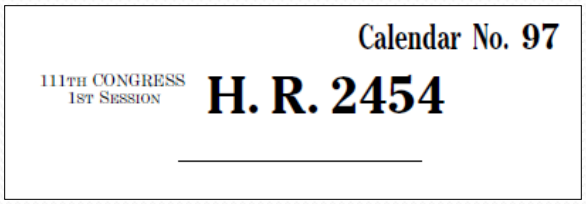
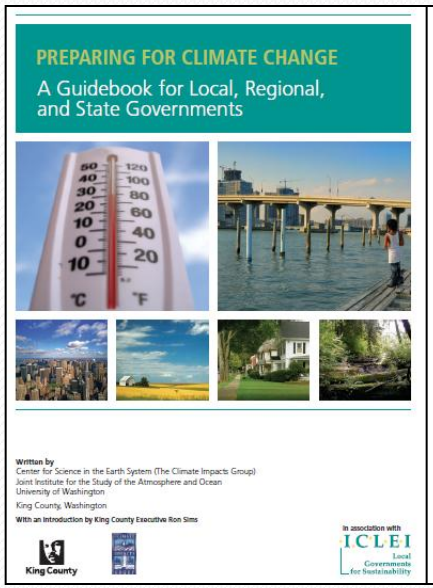
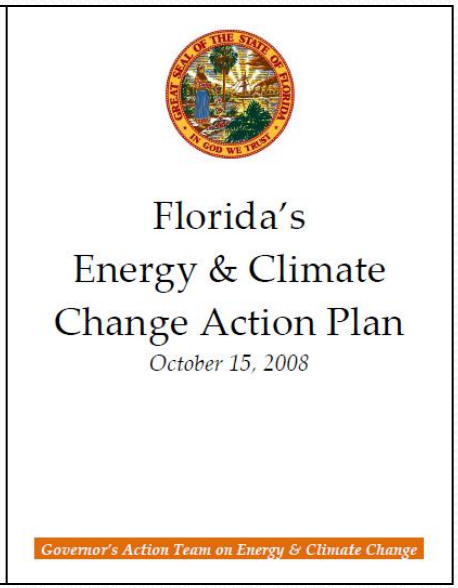
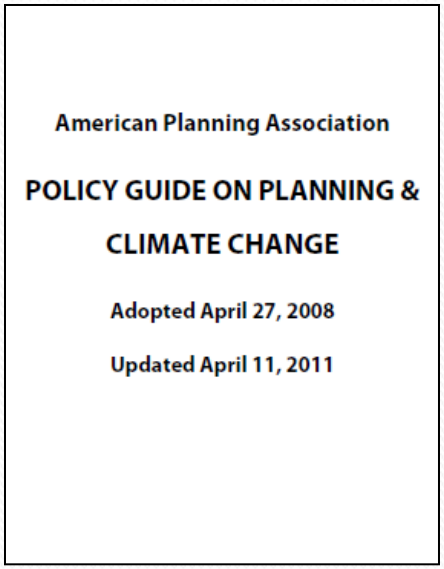
Adaptation Planning in the U.S.











Theories

- Risk perception (O'Connor 2005)
- Perceived uncertainty
- Trust (Kasperson 1992)

Research Question

How does perception of risk, perceived uncertainty, and trust influence support for adaptation planning that considers addressing climate change impacts?

http://ourchangingclimate.wordpress.com/

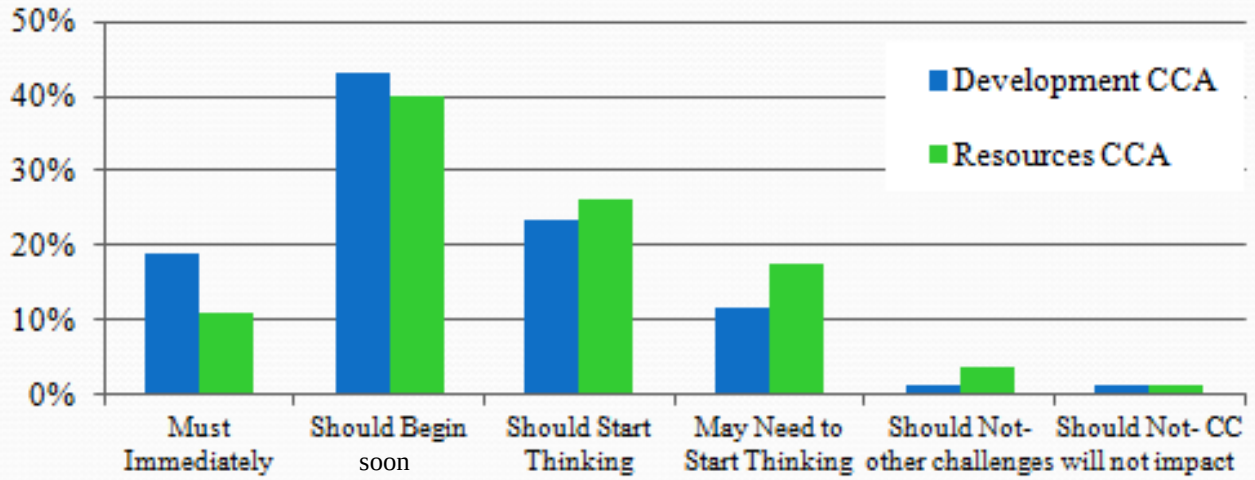
Methods

- Research participants
  - City, county (borough), and state-level planners; NGOs
  - Alaska, Florida, Maryland
- Semi-Structured Interviews (n = 27)
- Web-based questionnaire (n =460)
  - Dillman's Tailored Design Method
    - 30% surveys analyzed (n=137)

Support for Adaptation Planning

Q6 & 7: Which statement best represents your level of support for the

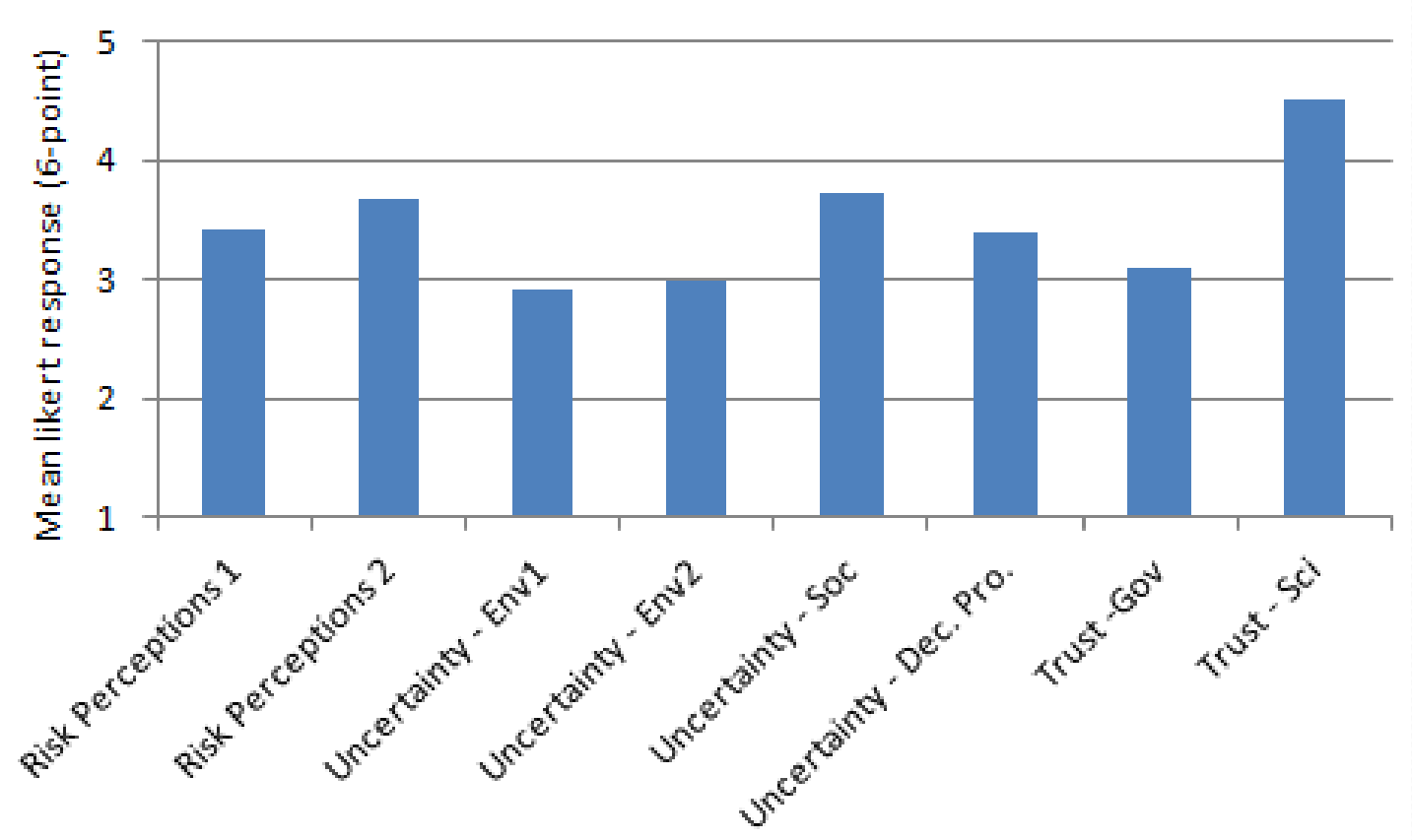
1) development of local-level adaptation strategies…
2) allocation of financial and human resources to implement local-level adaptation strategies…



Scales

- Risk Perception
  - 1st order climate impacts (6 questions)
  - 2nd order climate impacts (8 questions)
- Uncertainty
  - Environmental 1st order (6 questions)
  - Environmental 2nd order (8 questions)
  - Social (8 questions)
  - Decision Processes (4 questions)
- Trust
  - Climate Scientists (6 questions)
  - State Government (7 questions)

Scales


Mean likert response (6-point)
5
4
3
2
1
Risk Perceptions 1
Risk Perceptions 2
Uncertainty - Env1
Uncertainty - Env2
Uncertainty - Soc
Uncertainty - Dec. Pro.
Trust -Gov
Trust - Sci

Preliminary Results

- Ordinal regression
  - Multicollinearity: Spearman's rho

	Support for Development of CCA		**Allocation of Resources for CCA**	
Covariates	Sig.	Odds Ratio	Sig.	Odds Ratio
Risk Perception	**.000**	**0.405**	**.000**	**0.403**
Uncertainty Env1	.679	1.089	.473	1.161
Uncertainty Env2	.214	1.329	.847	1.045
Social Uncertainty	.257	0.769	.440	0.836
Uncertainty Dec. Process	.197	1.215	**.082**	**1.302**
Trust Scientists	**.006**	**0.522**	**.011**	**0.548**
Trust Gov.	.932	1.020	.166	1.393

Nagelkerke (Pseudo R^2): Development CCA .420; Resources CCA .392

Discussion

- Support for adaptation planning
  - “Feeling at risk matters”
  - Does trust foster support?
  - Does adaptation planning need certainty?
- Continuing research
  - Dimensions of trust
  - Compare across study areas and levels of management

Support for this Research

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