Stakeholder evaluation to inform large-scale resilience planning

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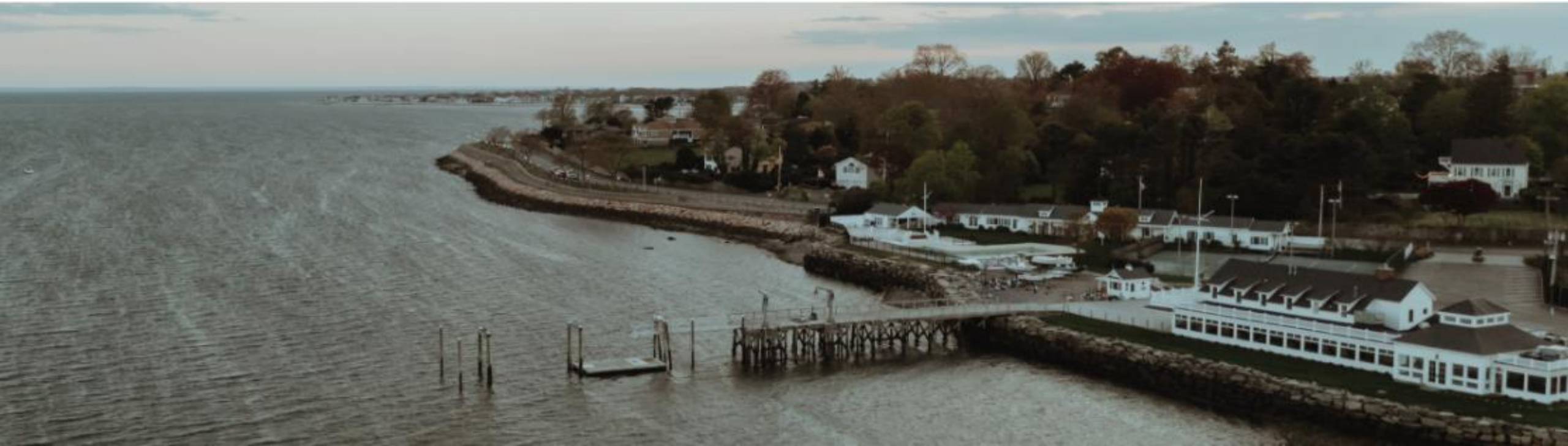


Background

A regional-scale stakeholder assessment to meet the needs of Resilient Connecticut.

- The project uses technical capacity, local and regional planning, and stakeholder engagement to cultivate disaster recovery and long-term community resilience.
- A protocol was developed for collecting organizational-scale assessment information from broad and diverse stakeholders.
- A utilization-based framework (Patton, 2009) was enacted in the development of the assessment approach
- These findings can be used to inform Resilient Connecticut stakeholder engagement efforts

Stakeholder Systems

Though our robust inventory was specifically designed for use with the Resilient Connecticut project, we believe that others can use and adapt this tool to assess and develop broad and diverse stakeholder systems related to coastal climate change and resilience.

Develop MACRO List

Government
Consultants
Underserved
Utilities + Transport
Business
Health
NGOs
Academia

Develop MESO List

Federal, State, + Regional Organizations
Energy Companies
Youth Organizations
Waste Management
Universities
Land Trusts
Social Services

Community Checking Process

Summit Attendees, Council of Governments, State Agency Committee, Project Team

Develop MICRO List

Constructed of specific organizations, businesses, consultants, universities, companies, etc.

Create Contact List

Point individual identified for each possible participant, contact information gathered.

Timeline

Stakeholder List Finalized	October 12, 2020
Survey Released	October 14, 2020
Survey Closed	November 1, 2020
Data Cleaned	January 20, 2021
Initial Key Findings	January 22, 2021
Quantitative Analysis	March 5, 2021
Qualitative Analysis	April 27, 2021
Final Report	May 10, 2021

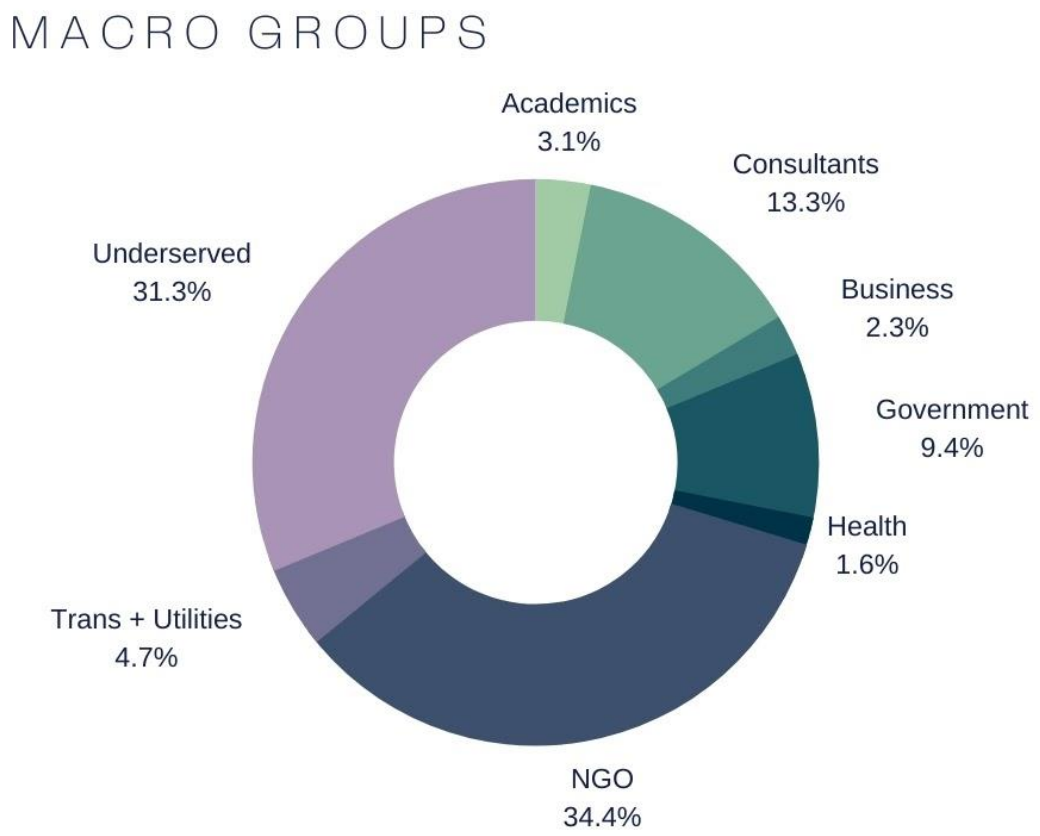
Research Focal Questions

- How do stakeholders of different categories want to be involved in resilience planning?
- Do they differ by their organization's current phase of climate change adaptation?
- What are the correlations or relatedness between the stage of climate planning, resilience topic priorities, organization understanding matrix responses, and the types of resources respondents need?

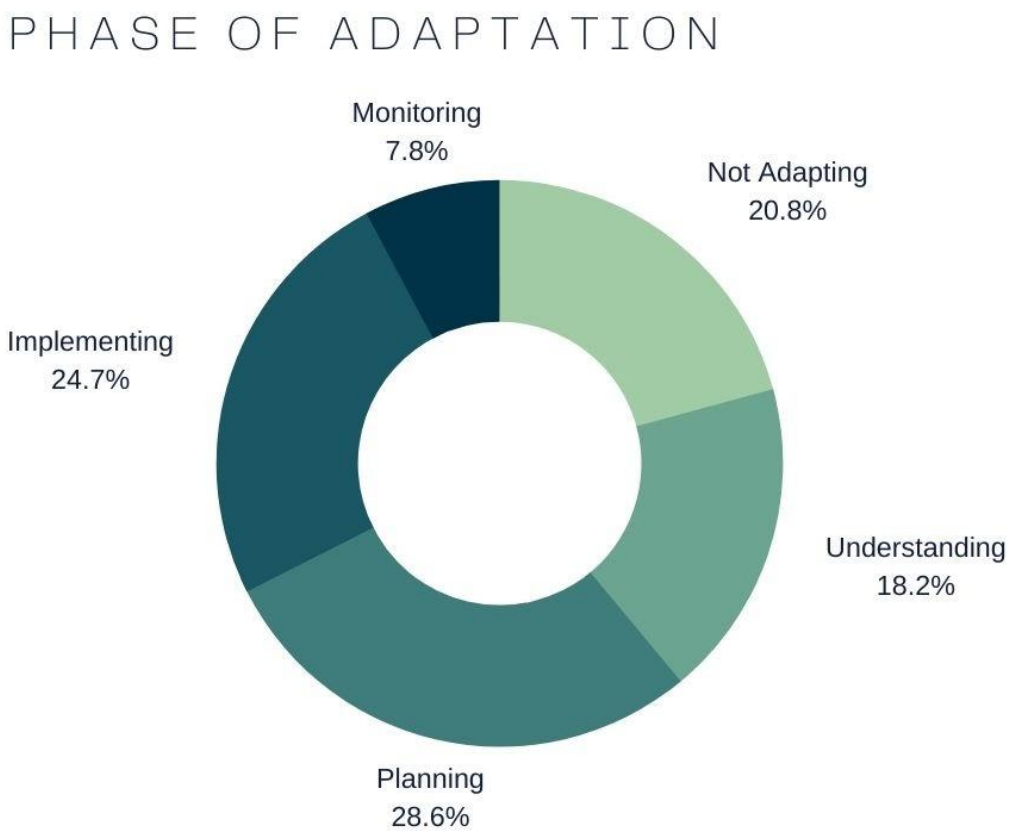
Methods

- Collaboratively developed survey.
- Generated sampling pool.
- Piloted survey for clarity, context, and structure.
- Distributed survey using Qualtrics. (128 surveys were collected – a response rate of 29%.)
- Quantitative data analysis using SPSS.
  - Descriptive stats, Chi-Square tests, and Correlational tests
- Qualitative data analysis using Qualtrics.
  - Open coding process

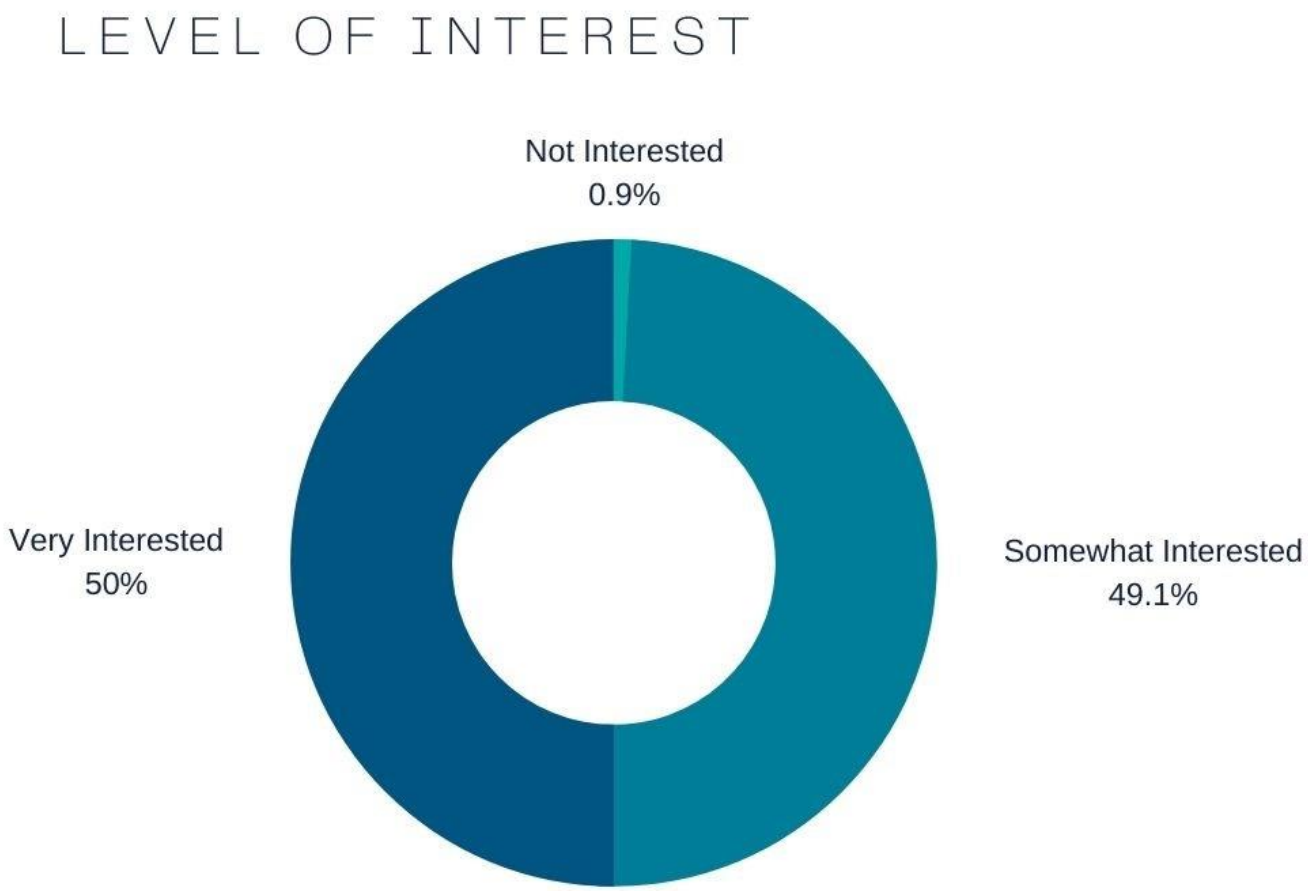
Some Descriptive Results (N=128)



Some Descriptive Results (n=77)



Level of Interest (n=77)



Please rate the level of priority your organization gives to "climate resilience":

Answer	%	Count
Not a priority	4.65%	4
Low priority	6.98%	6
Medium priority	24.42%	21
High priority	61.63%	53
Unsure/Don't know	2.33%	2
Total	100%	86

Please select up to three climate vulnerability topics your organization prioritizes the most.

Answer	%	Count
Socially and economically vulnerable populations	18.58%	21
Infrastructure damage	9.73%	11
Public health and safety	8.85%	10
Coastal erosion	8.85%	10
Economic impacts	7.96%	9
Public outreach and engagement	7.08%	8
Damage to wetlands	5.31%	6
Protecting private property	4.42%	5
Drought/dry weather	3.54%	4
Loss of cultural heritage	3.54%	4
Power outages	3.54%	4
Flooding of roadways	2.65%	3
Protecting public property	2.65%	3
Strong winds	1.77%	2
Loss of beaches or coastal parks	1.77%	2
Public access to coastal resources	0.88%	1
Air quality issues	0.88%	1
Fires	0.00%	0
Salt water intrusion into drinking water	0.00%	0
Total	100%	113

Association between phase of adaptation and organizational understanding of resilience topics

Organizational Understanding	Correlation p =	Pearson r =
Likelihood of extreme flood events	p < .001 *	r = .489
Likelihood of frequent and repetitive flood events	p < .001 *	r = .484
Who the most socially and economically vulnerable populations are	No correlation.	r = .008
Understands number of residents affected by sea level rise	p = .022 *	r = .274
Organization understands public perceptions relating to building regional resilience	p = .006 *	r = .328
Costs and benefits to doing regional resilience planning	p = .001 *	r = .378
What others in our region are doing to build regional resilience	p < .001 *	r = .471
What the most innovative approaches are to regional resilience planning	p < .001 *	r = .536

Association between phase of adaptation and climate vulnerability information needs topics

Vulnerability Assessment Needs	Correlation p =	Pearson r =
Local climate predictions, seasonal to annual	p < .001 *	r = .493
Local climate predictions, decadal to century	p < .001 *	r = .458
Temperature and humidity changes	p = .008 *	r = .373
Sea level rise projections in CT	p < .001*	r = .448
Shoreline change in CT	No correlation.	r = .261
Coastal flooding or saltwater intrusion	p = .014 *	r = .348
CT riverine flooding	p = .004 *	r = .392
Predictions of ecosystem impacts	p = .006	r = .377
Ocean acidification in LIS	p < .001 *	r = .551
Invasive species	p < .001*	r = .452
Social vulnerability of CT residents	No correlation.	r = .054
Economic vulnerability of CT residents	No correlation.	r = -.014
Information about communicating climate risks specific to CT	No correlation.	r = .267
Information about communicating climate change generally	No correlation.	r = .264

Association between phase of adaptation and resilience and adaptation information needs topics

Resilience and Adaptation Options	**Correlation p =**	**Pearson r =**
How to incorporate climate change into operations	p = .002*	r = .413
How to incorporate climate change into your organizations plans	p = .001*	r = .487
How to effectively communicate about climate resilience	p = .001 *	r = .549
Model ordinances and zoning regulations	p < .001 *	r = .550
New local or state financing methods for projects	p = .01*	r = .348
Knowledge of grant opportunities	p = .001*	r = .412
Technical capacity for grant applications	p < .001*	r = .507
Staff capacity for grant applications	p = .009 *	r = .344
Enabling state legislation	p = .046 *	r = .276
GIS mapping support	p < .001 *	r = .504
Networking with other organizations around climate resilience topics	p < .001 *	r = .458
Knowledge of adaptation options for different vulnerabilities	p < .001*	r = .487
Training on climate adaptation planning	p < .001 *	r = .577

Some Qualitative findings

- Many organizations don’t know what to do or are already doing a lot to become more climate resilient. A full list is provided in the final report -- 32 unique items.
- Respondents are unsure of how to improve climate resilience resources, though a few noted the need for more coordination and alignment of resources – an interest in fewer resources that are streamlined is indicated.
- Not surprisingly, the biggest barrier respondents noted is around funding, and similarly, lack of staff.
- Some believe that they would be motivated if additional funding were provided. Though several participants noted that they are already motivated, they just need resources.

Conclusion: Organizational interests

- Most respondents prefer to interact with Resilient Connecticut via the Resilience roundup as well as attend virtual or in person summit events.

- Different subgroups vary by their interest in different aspects of the RC outreach and engagement by their organizational affiliation and phase of adaptation.

Conclusion: Levels of adaptation

- Twenty percent of respondents indicated that they are *not currently involved* at all in planning to adapt to the affects of climate change in our region.

- 60% of participants say that climate resilience is a high priority, though only 33% are implementing and/or monitoring.

Conclusion: Priorities

- The most important planning priority topic indicated by respondents was “socially and economically vulnerable populations.”

- Priorities vary based on the phase of adaptation and the type of organization.

Conclusion: Information needs

- Understanding needs exist around “shoreline change in CT”, “Social vulnerability of CT residents”, “economic vulnerability of CT residents”, “Information about communication climate risks specific to CT”, and “Information about communicating climate risks, generally”

- Information needs are being satisfied related to all of the topics presented in the resilience and adaptation options section.

Thank You

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