Climate Adaptation Glocality:
Policy Progress among Connecticut Towns

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Some Initial Images









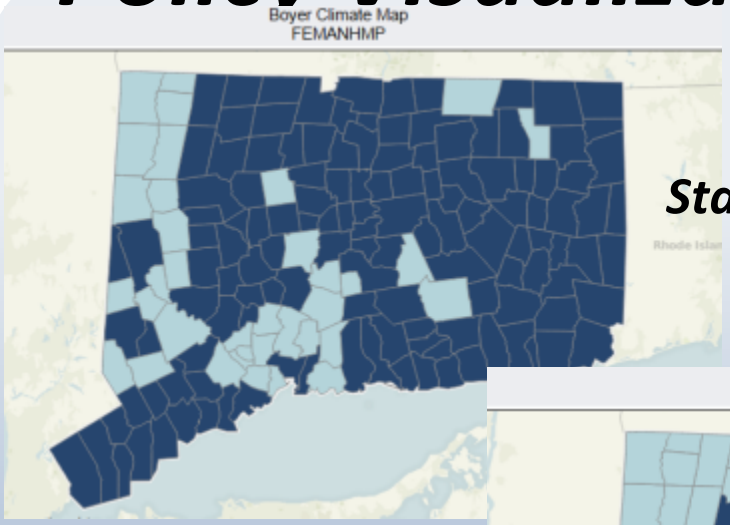
Another Climate Change Image



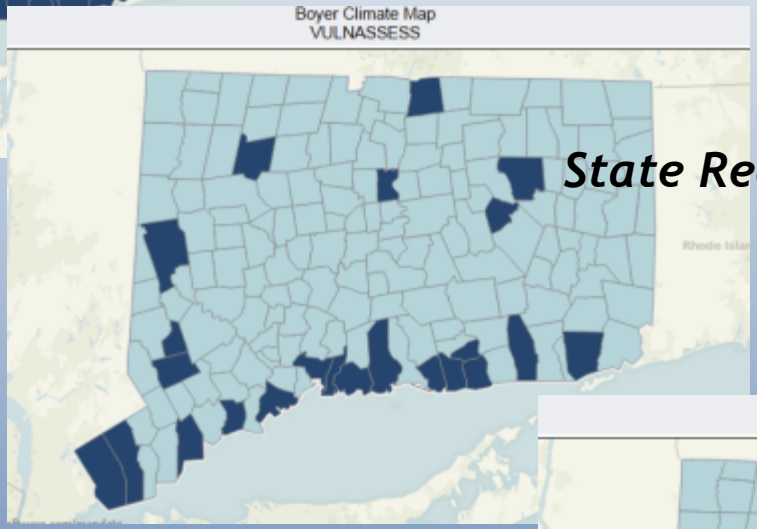
Data Collection

- Data gathered from 154 of 169 CT towns on sustainability programs, using planning documents & follow-up interviews with town officials.
- Also conducting more extensive interviews with policy-makers across the state to understand nuances of climate adaptation policy.
- Began data collection about two years ago.
- UConn IRB Protocol #H10-108.

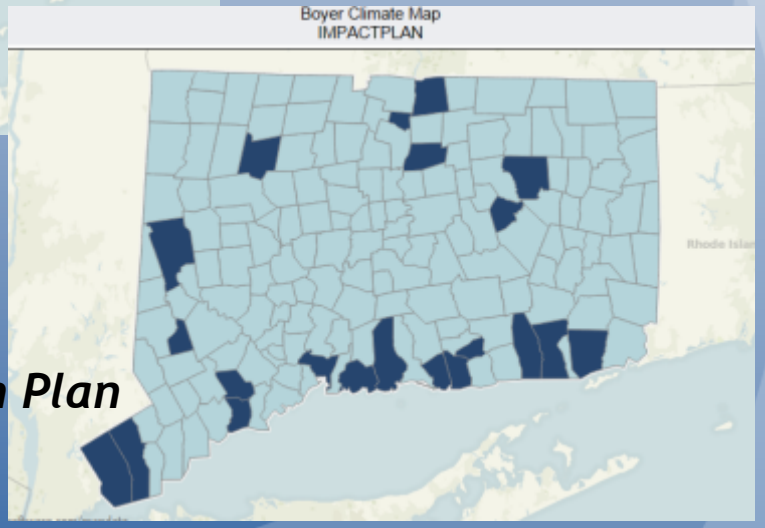
Policy Visualization



State-mandated Natural Hazard Mitigation Plan (FEMA-approved)



State Recommended Vulnerability Assessment



State Recommended Climate Action Plan

Table 1: Climate Change Plans by Town Type

	Plan type		
Town type	**Climate change action plan**	**Climate change vulnerability assessment**	**Natural Hazard Mitigation Plan**
Coastal[1]	46% (N=24)	58% (N=24)	92% (N=24)
Riverine[2]	13% (N=39)	10% (N=39)	63% (N=43)
Inland[3]	5% (N=91)	5% (N=91)	81% (N=102)
All types	14%[4] (N=154)	15%[5] (N=154)	79%[6] (N=169)

Table 2: Capital & Zoning Adaptation Policies by Town Type

	Types of Adaptation Policies			
Town type	**Median no. of capital policies**	**Most common capital policies**	**Median no. of zoning policies**	**Most common zoning policies**
Coastal[9] (N=24)	**5**	▪ Drainage infrastructure ▪ Open space ▪ Stormwater management	**9**	▪ Restrict coastal development ▪ Water quality ▪ Wetlands
Riverine[10] (N=42)	**2**	▪ Drainage infrastructure ▪ Open space ▪ Bridges	**7**	▪ Open space ▪ Floodplains ▪ Erosion
Inland[11] (N=99 for capital, N=98 for zoning)	**3**	▪ Drainage infrastructure ▪ Open space ▪ Bridges or roads	**7**	▪ Water quality ▪ Open space ▪ Wetlands

Table 7: Barriers to Action by Town Type

	Town type			
Type of Barrier	Coastal (n=24[16])	Riverine (n=44[17])	Inland (n=89)	All types (n=151[18])
Lack of funding	66%	75%	71%	71%
Insufficient state/federal coord.	42%	50%	43%	44%
Lack of public information	33%	45%	33%	35%
Other issues take priority	13%	39%	38%	34%
Climate change skepticism	8%	18%	34%	26%
Insufficient private/public coord.	13%	18%	12%	14%
Insufficient staff	13%	16%	21%	19%
Other barriers	8%	2%	2%	3%

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Table 6: Anecdotal Comments From Town Calls

Town type	Interview comments
Coastal	▪ Constituent Buy-In - Particularly in poor communities tying our actions to efforts that are understandable to people is very important; meaning that in order to get buy-in there needs to be a recognition that it affects someone personally in the short term. In the short term this is most understandable from the flooding, natural disaster side and tying our efforts into mitigation strategies. ▪ It's an election year, and climate change has become a political issue. ▪ Towns are already developed, and it's not like we can make up regulations that require people to elevate their homes or move further back from the coast, because they're already there. ▪ The greatest barrier to addressing climate change lies in convincing policy makers of the problem. ▪ There's a historic tradition of building/living on the coast, and we have to educate people as to where they should live. This isn't Holland, and we can't engineer our way out of the sea level rise- people can't just build walls around their coastal houses, because the walls will cave in.

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Anecdotal Comments From Town Calls

Riverine	▪ Money is the big issue in addressing climate change. We have the time but we do not have the financial resources. ▪ The John Birch Society and its anti-UN Agenda 21, anti-ICLEI rhetoric has come to town and if it gains traction, it could make our upcoming Plan of Conservation and Development adoption in 2015 problematic if we include too much discussion on sustainability issues, as it has around the country. ▪ Budgeting constraints. Other projects take precedence over climate change. ▪ Because of the size of the community and limited resources members do not know their exact role in addressing climate change ▪ We haven't encountered any barriers because none of this has gone anywhere yet. ▪ There are still influential individuals who hold that the concept of anthropogenic climate change is based on manipulated data and has no basis in fact. To date there seems to be insufficient political will on the part of town leadership to pursue the task of developing a comprehensive policy at the municipal level.

Anecdotal Comments From Town Calls

Inland	▪ Guidelines on climate change from the DEEP and State would help, as would grants to help us prepare a climate change report. ▪ "Specific information on the identifiable impact that climate change will have on the town… would be helpful" ▪ "I do not think [our town] will be affected by climate change because it is not close to the shores." ▪ It's not that we don't take climate change seriously, it's that small towns are faced with sinking budgets, and have a number of statutory mandates they have to satisfy. Small towns are less likely to have the money to pay for a climate change study, especially when there is an ongoing debate over climate change. For instance, the Public Works Director does not believe in climate change. ▪ Our Natural Hazard Mitigation Plan address flooding issues and vulnerabilities to natural disasters. ▪ "The effects of that hurricane [Sandy] were visible in [our town], even though we aren't prone to flooding as they are on the coast. …Large swaths of pine stands in the centennial forest were devastated by the hurricane, and whether or not the intensity of those hurricanes was caused or can be shown to be caused by climate change, it is certainly very visible and a cause for complaint…" ▪ "We're seeing some acknowledgement of the impacts of climate change in regional plans of climate change. For example, [one regional Council of Governments] included a chapter on climate change in their regional plan. We never would have seen that 10 years ago." ▪ No one steps forward to say, "This stuff is important and here is what I want my town to do about it now!" ▪ Educating our local land use board members, and the public would help.

Explaining CT Climate Adaptation Policy

- **Threats and vulnerability (Need → Response) -** coastal communities are, not surprisingly, more engaged with climate adaptation. Severe storms of recent years have sensitized officials and citizens to the threat posed by climate change in the near, medium and longer-terms.

- **Impact of Federalism** – the relationship of towns to the state and the state to the federal government play a significant role in driving policy action. The FEMA directives on NHMP planning and its trickle down effect to the towns throughout the state are demonstrated by the high level of compliance statewide regarding NHMPs. Funding also tends to flow downward especially for bigger projects and recovery

- **Policy entrepreneurs -** we cannot underestimate the impact that individual policy officials have in moving the Connecticut climate policy process forward.

- **Local political culture –** the degree of climate skepticism indicates that climate-doubters still play a role even in the more liberal Northeast.

- **Climate policy vacuum –** the relative lack of coherent, proactive federal climate policy devolves action to the states and municipalities. Thus, they do what they must to protect their citizens, their property and the ecosystems under their charge, even if in a highly constrained fiscal environment.