A Methodology for Meta-Analysis of Local Climate Change Adaptation Policies

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This project analyzes the status of local climate change adaptation policies and policy research to allow decision support and financial assistance to better target policy gaps.

Research Questions

1. To what extent have local governments in the U.S. developed adaptation policies?
2. What are the scope and features, and commonalities and differences, of these adaptation policies?
3. What gaps remain in urban adaptation policies in the U.S., and what is needed to fill these gaps?

Meta-Analyzing Adaptation Policies

What should we be looking for cities to be doing in regards to adaptation? While our answer to this question is evolving, local climate change policies should: (1) address climate hazards, (2) reduce vulnerability, (3) build institutional capacity, (4) engage in multi-level and multi-sectoral coordination, and (5) address tradeoffs and co-benefits (IPCC 2014). This analysis evaluates local adaptation policies along these 5 criteria and the (6) features of cities with adaptation policies and (7) primary motivations of cities that have adaptation policies.

References
IPCC. 2014. Climate Change 2014: Impacts, Adaptation, and Vulnerability. http://ipcc-wg2.gov/AR5/report/

Methodology

Step 1: Identify Data Sources (44 total)
a) Extensive internet search, including literature search
b) Consultation with colleagues, NGOs, and practitioners

Step 2: Characterize Data Sources

Surveys/Reviews (14)   **Case Studies (21)**   **Specific Programs (e.g., ICLEI) (10)**

Step 3: Evaluate Survey Findings

1. Policies address climate hazards?
2. Policies reduce vulnerability?
3. Policies build institutional capacity?
4. Policies engage in coordination?
5. Policies address tradeoffs and co-benefits?
6. Features of cities with adaptation policies
7. Motivations for adaptation policies

Strength of Evidence
Agreement Among Studies

Step 4: Evaluate Case Study Findings

1. Policies address climate hazards?
2. Policies reduce vulnerability?
3. Policies build institutional capacity?
4. Policies engage in coordination?
5. Policies address tradeoffs and co-benefits?
6. Features of cities with adaptation policies
7. Motivations for adaptation policies

Strength of Evidence
Agreement Among Studies

Step 5: Evaluate Specific Programs

1. Encourage cities to climate address hazards?
2. Encourage cities to reduce vulnerability?
3. Encourage cities to build institutional capacity?
4. Encourage cities to engage in coordination?
5. Encourage cities to address tradeoffs and co-benefits?
6. Features of cities participating in programs
7. Motivations for participating in programs

Strength of Evidence
Agreement Among Studies

Step 6: Extract Insights and Recommendations
Hypothetical example of insights: Findings from both survey and case study research demonstrate that local climate change adaptation policies lack attention to vulnerability reduction, and many existing programs are not filling this gap. Cities that do address vulnerability have done so because of prior experience with natural disasters, which may provide useful lessons for other cities and programs confronting similar threats.