Local and State Government-Led Climate Action Initiatives in the United States: Progress, Barriers, and Efficacy

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Role of Local and State

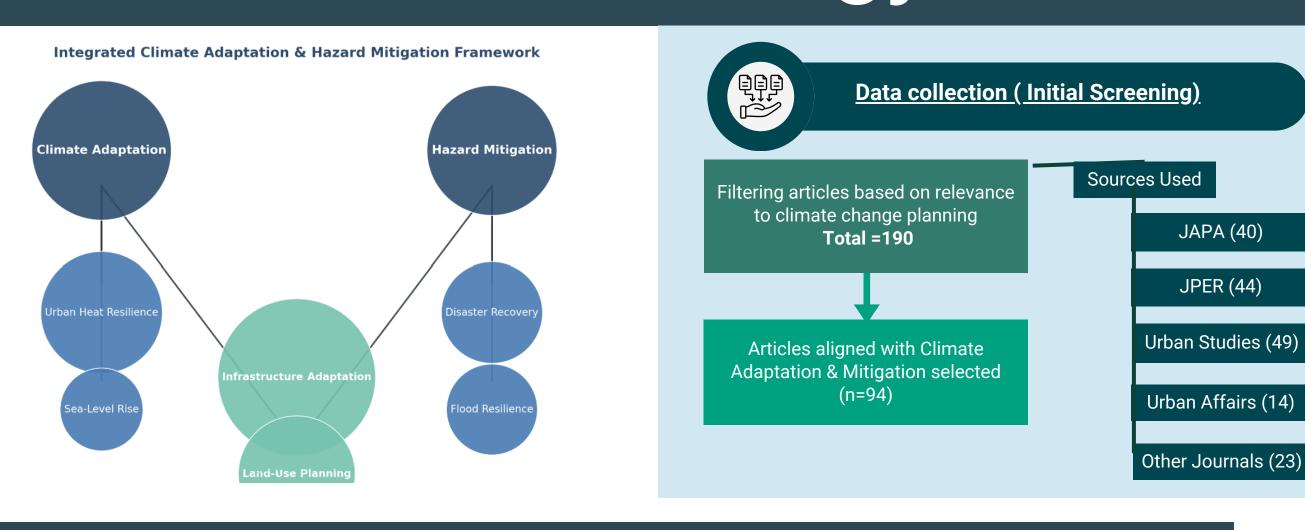
Governments in Climate

Introduction

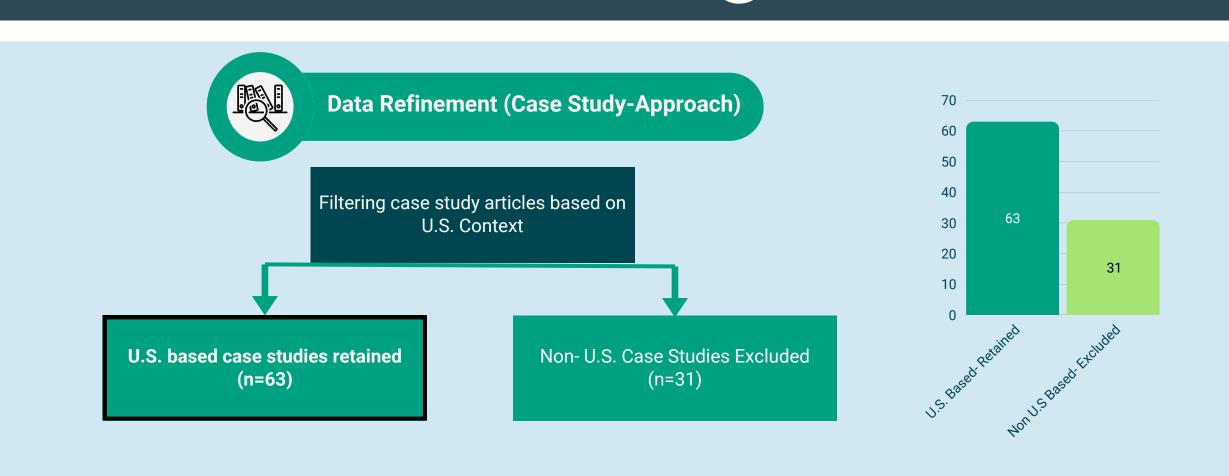
Local and state governments play a crucial role in driving climate action in the U.S., balancing both long-term adaptation and immediate hazard mitigation. State mandates, such as California Senate Bill 379 and Florida's Peril of Flood Act, push local governments to integrate climate resilience into planning. However, fragmented governance, political resistance, and funding constraints remain significant challenges. This study synthesizes a decade of research (2014–2024) to assess the effectiveness, scope, and barriers of local and state-led climate initiatives, highlighting emerging strategies like green infrastructure, climate-induced migration planning, and equity-driven frameworks.

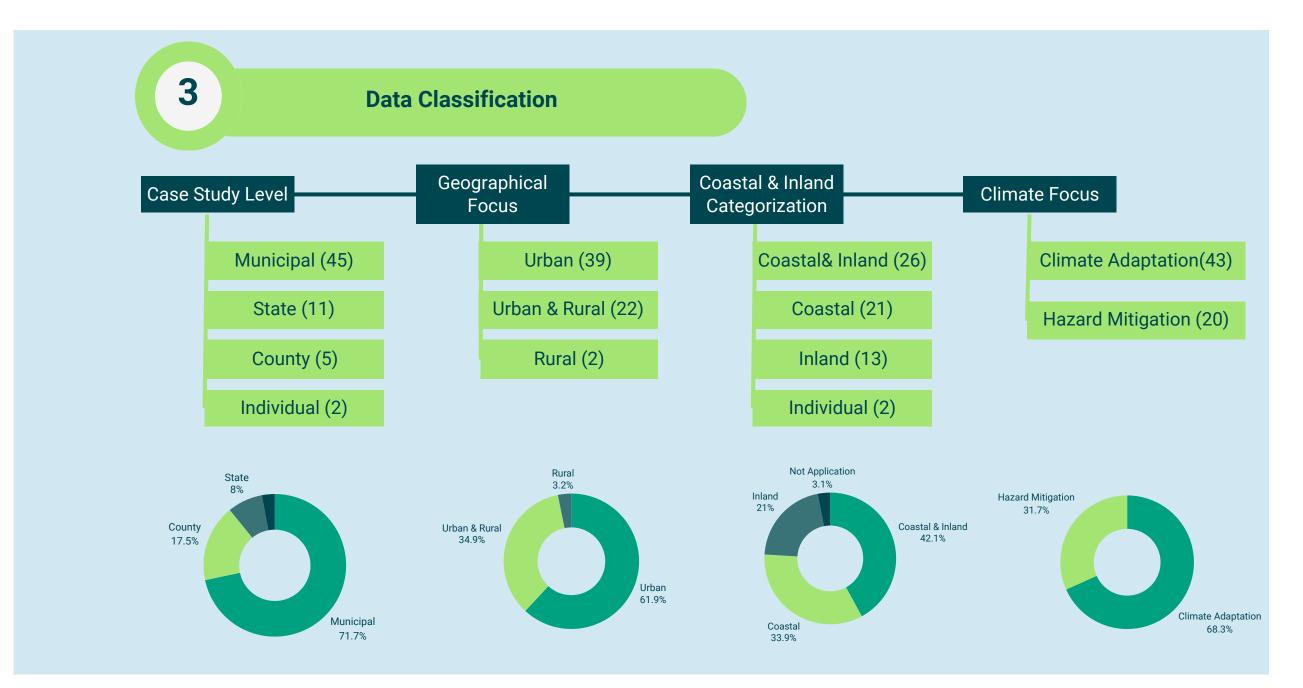


Methodology

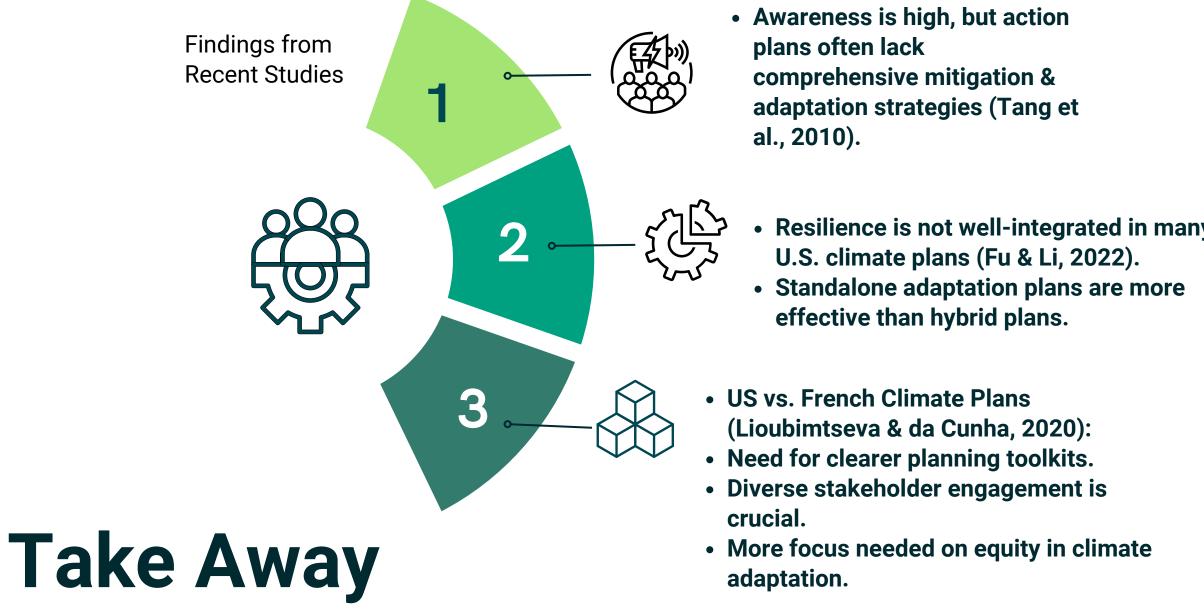


Findings





Evaluating Local Climate Adaptation Plans



Literature Review

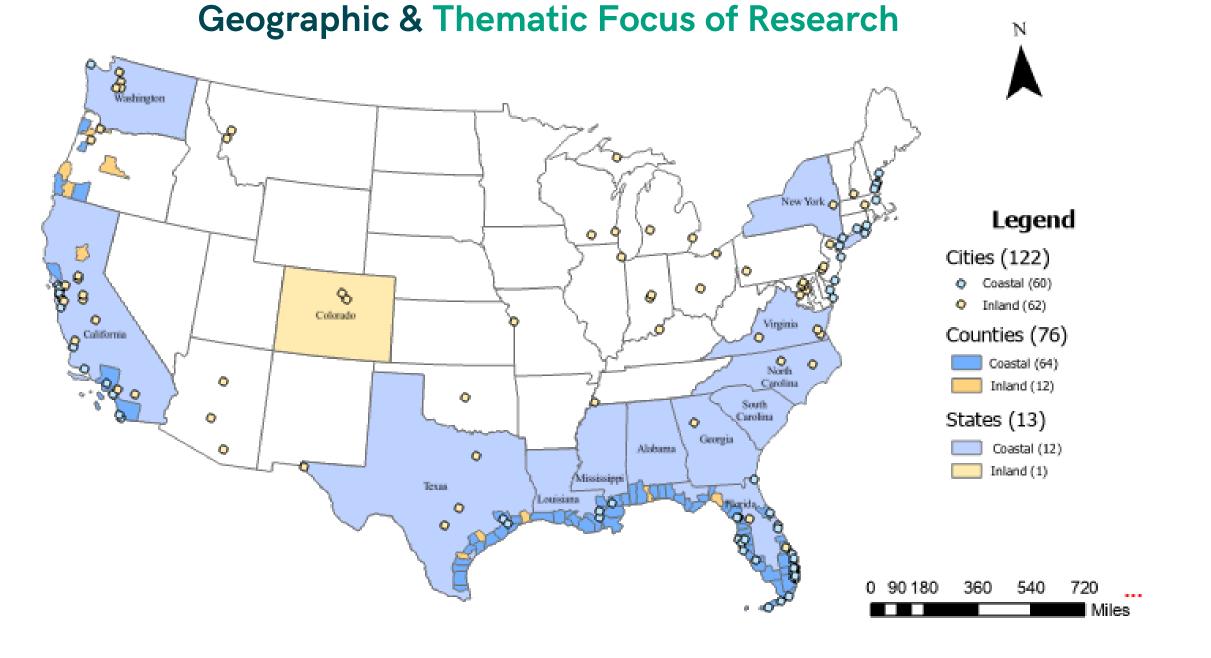
disaster response

Policies address long-term

climate risks and immediate

Action Studies highlight both Local & state governments play a crucial role in climate progress & challenges in local adaptation & hazard mitigation climate action Sea-Level Resilience This Study's Focus (2014-2024 Scoping Review): Adaptation • Analyzes local & state-led climate adaptation & hazard mitigation in the U.S.

Study Contribution & Research Scope Evaluation Criteria Geographic patterns Barriers to Flood of climate policies. Disaster implementation.



Implications for Policy & Planning



Informed Decision-Making Provides actionable insights for policymakers, urban

planners, and researchers





Strengthening Local Efforts Helps strengthen subnational

climate initiatives.



Building Resilience Contributes to building resilient communities

- Geographic Focus Research mainly centers on urban coastal cities, while rural hazard mitigation remains underexplored.
- Community Engagement & Local Knowledge Effective adaptation relies on community participation, while hazard mitigation increasingly considers equity and informal networks.
- Overlapping but Distinct Approaches Climate adaptation emphasizes long-term resilience, while hazard mitigation focuses on risk reduction and preparedness.
- Social Equity Considerations Studies highlight historical injustices and emphasize equitable disaster recovery and resilience efforts.
- Infrastructure & Green Solutions Green infrastructure and nature-based solutions are key strategies in both adaptation and mitigation.
- Economic & Governance Challenges Policy integration, funding mechanisms, and regulatory strategies shape climate adaptation and hazard mitigation efforts.
- Emerging Topics Urban heat management, climate migration, and integrated adaptation-mitigation strategies are gaining attention.
- Regional & Context-Specific Findings Coastal cities dominate research, but rural hazard mitigation and cross-jurisdictional planning are emerging areas of study

While Climate Adaptation and Hazard Mitigation are often discussed separately, they overlap in key areas such as infrastructure, equity, governance, and planning strategies. The insights suggest that integrated planning approaches that address both immediate hazard risks and long-term climate resilience are crucial for effective urban and regional planning. Recommendations for stakeholders: The insights suggest that integrated planning approaches that address both immediate hazard risks and long-term climate resilience are crucial for effective urban and regional planning.

This study is supported by the National Science Foundation (#2427242, PI: Qian He) and the New Jersey Office of Planning Advocacy (PI: Kevin Keenan, Co-PI: Qian He). For further information, please contact Dr. Qian He (he@rowan.edu), Assistant Professor, Department of Geography, Planning, and Sustainability, Rowan University