



Motivating Local Climate Adaptation and Strengthening Resilience: Making Local Data Trusted, Useful, and Used

The Resilient America Program of the National Academies of Sciences, Engineering, and Medicine convened the Committee on Applied Research Topics for Hazard Mitigation and Resilience to assist the Federal Emergency Management Agency (FEMA) in reducing the immense human and financial toll of disasters caused by natural hazards and other large-scale emergencies. FEMA asked the committee to identify applied research topics, information, and expertise that can inform action and collaborative priorities within the natural hazard mitigation and resilience fields. The committee, in consultation with the Resilient America Program, selected two large-scale themes within which to identify applied research topics: *Social Capital and Social Connectedness for Resilience*, and *Motivating Local Climate Adaptation and Strengthening Resilience*. It then planned workshops for these two themes to gather information for identifying priority applied research topics.

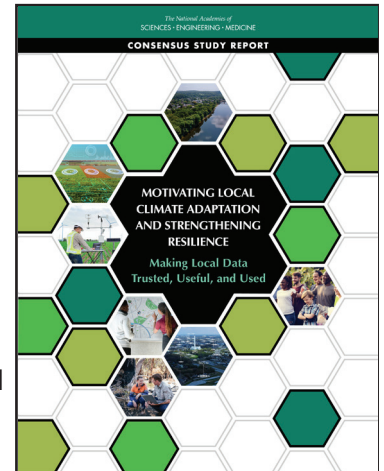
On the theme of *Motivating Local Climate Adaptation and Strengthening Resilience*, the committee identified three topics, each with underlying priorities, as particularly important for natural hazard mitigation and resilience:

1. Co-production of stakeholder-friendly data and useful information for local communities

- Develop data baselines that are both useful and used by local communities to evaluate climate-related threats.
- Compile roadmaps and scenarios for local communities to identify, access, and evaluate appropriate data for understanding and addressing climate threats.
- Develop guidance for evaluating climate data and information and improving accessibility and usability of climate data tools.
- Mutually engage local stakeholders in producing, analyzing, and communicating information on climate-related hazards and impacts.
- Co-identify information needs and methods for assessing actual and expected climate impacts on people, communities, economies, and natural systems.

2. Development of integrated local approaches to strengthening climate adaptation and resilience

- Identify components and participants for a holistic and integrated approach to strengthening local climate adaptation and resilience.



- Institutionalize climate resilience considerations and actions in local community decision-making and investments.
- Leverage and apply experiences from decision and communications sciences to motivate local climate adaptation decisions and action.
- Co-address community inequities in all climate adaptation actions.
- Use transparent, inclusive local decision processes to evaluate alternatives, benefits, and costs for locally relevant actions.

3. Building trust in data, information, processes, and partners for climate action

- Identify actions by public institutions (local to national level) that strengthen trust in policies and actions to address climate impacts.
- Identify characteristics and actions that strengthen trust in data and tools for climate understanding and analysis.
- Identify characteristics and actions that strengthen trust in local decisions and action on climate adaptation.
- Build trust in local climate decisions by co-developing intentional, inclusive decision-making processes.

The report provides examples of successful activities of each of these. It also identifies specific questions for attention by the applied research community, both within each of these topics and where they intersect. In addition to these three applied research topics, the committee identified three principles that cut across all three topics:

EQUITY. Opportunities for understanding and addressing existing inequities and disparate impacts from climate change are available when compiling and analyzing climate data, setting community priorities, and making decisions and investments to adapt to climate change. Equity is an inherently transdisciplinary issue that encompasses many different indicators of health and well-being and many different population groups, including under-served, under-resourced, and historically or systemically marginalized communities. Research on inequity covers not just the origins of disadvantage but also the conditions that make possible positive health- and life-affirming programs and practices.

COMMUNITY CO-DEVELOPMENT AND OWNERSHIP. Addressing and adapting to climate change may require significant changes in a community's development patterns, infrastructure, and investments. Participation and co-development of alternatives and solutions by community members can help build critical ownership in the resulting decisions and actions. In particular, peer-level and peer-to-peer engagement can help build community ownership as community members engage with each other to join climate-related discussions and decisions.

COMMUNITY-LEVEL FEASIBILITY. The feasibility of motivating local action to address climate impacts and build resilience depends on several factors, including applicability, affordability, practicality, portability, scalability, and justifiability. Perhaps most importantly, communities need resources to move forward on climate action, whether in the form of data, dollars, knowledge, or understanding.

For More Information... This Consensus Study Report Highlights was prepared by the Resilient America Program based on the Consensus Study Report: *Motivating Local Climate Adaptation and Strengthening Resilience: Making Local Data Trusted, Useful, and Used*. (2021). The study was sponsored by the Federal Emergency Management Agency. Any opinions, findings, conclusions, or recommendations expressed in this publication do not necessarily reflect the views of any organization or agency that provided support for the project.

Copies of the Consensus Study Report are available from the National Academies Press, (800) 624-6242; <https://www.nap.edu>.

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