



EQUITABLE CLIMATE RESILIENCE RESEARCH AND DATA NEEDS

A sharing of research and data needs around equitable climate resilience in the Gulf of Mexico captured by the Community Resilience Center at The Water Institute

INTRODUCTION

Supporting climate resilience is an established focus of many local, state, and national programs; however, recently there has also been intentional investment in pursuing equitable climate resilience. These investments have spanned a range of sectors and led to greater understanding of interconnected drivers related to vulnerability and the piloting of novel strategies striving for more equitable climate resilience. These advancements have been promising, but there are still large gaps in literacy, action, and research related to equity and climate resilience.

To advance research related to equitable climate resilience, it is essential to pursue areas of study based on input and direction from organizations and individuals working on resilience within marginalized and underserved communities and regions.

In 2023 as part of the founding of the Community Resilience Center at The Water Institute (the Center), the Center undertook a wide array of formal and informal processes to understand the research, literacy, and action needs around equitable climate resilience in the Gulf of Mexico. This included analyses of existing documents, reports, and literature; one-on-one and group listening sessions; and engagement with professional communities of practice and societies, service non-profits, and others working on the ground. The Center synthesized these efforts into needs statements that were reviewed and prioritized by a diversity of stakeholders and partners at a hybrid

Equitable Climate Resilience refers to pursuit of climate resilience that explicitly considers socioeconomic inequities and the resulting differences in power, knowledge, and resources.

in-person-remote workshop in November 2023. See more information on the workshop here: [GCECR Kick-off Workshop Report](#). Engagement included local, state, and federal government staff, tribal partners, non-profit staff, boundary spanning organizations, private sector partners, and others from all five Gulf states.

While the basis of the Center's engagement was to inform its own programming, so many community-informed research and data needs were identified it is beyond the Center's ability to address all of them. The Center encourages researchers and funders to join in pursuing the equitable climate resilience research and data needs identified herein. The Center also emphasizes that any research questions pursued from this document should be done in partnership with communities and practitioners in order to define and refine the scope of problems while advancing actionable knowledge that works at scales that matter.

DOCUMENT LAYOUT

The Center categorized the research and data needs for ease of reading; however, some research and data needs may be applicable to multiple categories. Needs were not repeated—each is only listed once. Some sections are further subcategorized into topical sections.

The Center listed each need as a bullet that is the continuance of the sentence “There is a need for more information on...” The Center used the term information to encompass a range of research and data analyses that could be required to meet the indicated need.

An asterisk (*) is an indication that the Center has identified this as a priority for the next three years; however, it does not mean that the Center does not welcome others to also join in on advancing the research and data of that particular need.

Because research and data needs are not static, this document will be updated biannually, and the Center invites contributions to future updates. To learn how to get involved please contact the Center at CRC@thewaterinstitute.org.

A community-led event produced by the Resilient East Biloxi program, a program supported in part by the Center. Participants painted rain barrels and cleaned up trash in John Henry Beck Park.



FUNDAMENTALS FOR EQUITABLE CLIMATE RESILIENCE

Fundamentals for equitable climate resilience are the essential skills, data, and capacity required to pursue climate resilience that explicitly considers socioeconomic inequities and the resulting differences in power, knowledge, and resources.

Within the area of fundamentals for equitable climate resilience, there is a need for more information on:

Planning and Policy

- policies for ensuring accountability in equitable engagement and inclusive decision making at the local, state, and federal government levels.
- the scope and extent of existing place-based environmental justice issues to support resilience planning and action.
- the impacts of climate change on marginalized and underserved communities in different decision-making contexts.
- how to better incorporate community input and future risk data into long-range land use planning.

Other Fundamental Research and Data Needs

- how to improve recruitment and retention of leadership in local and state government with experience and expertise in equitable decision making and project implementation.
- risk communication strategies that effectively convey the urgency of climate change without generating divisiveness.
- strategies and methods for integrating traditional forms of knowledge with formal scientific practice.
- greater resolution and diversity of socioeconomic and demographic data to describe climate resilience.*



Collaborative planning for resilience that considers issues found in the Center's guiding frameworks.

INSURANCE AFFORDABILITY AND AVAILABILITY

Within the area of insurance affordability and availability, there is a need for more information on:

Current State of Insurance

- reinsurers' perspectives of the current state of insurance.
- consumer decision making around insurance.
- how insurers calculate risk at the individual and community scale.
- potential policy and process pathways for integrating community or neighborhood-scale risk reduction measures into premiums.*
- the drivers in the risk ratings developed by FEMA's Risk Rating 2.0.

Innovative Insurance Products

- the implementation of innovative insurance products (e.g., parametric, all-hazard insurance, microinsurance) in different contexts and applications including case studies, best practices, and learning pilots.
- how to successfully communicate insurance product innovations to individuals and communities.*

Other Insurance Research and Data Needs

- the distributional equity related to the costs and other burdens of more resilient building standards.
- the ramifications and feasibility of including flood and hazard insurance in cost calculations for affordable housing.

MIGRATION

Within the area of community-led climate migration, there is a need for more information on:

Migration Processes and Policies

- strategies and approaches for successful community-led migration including best practices and success stories of climate migration.*
- legal and policy frameworks that overcome current policy barriers to community-led migration.*
- the legal implications of a community or tribe leaving their land.
- how to maintain cultural, social, and support networks after communities have migrated.
- support needed by migrating communities and receiving communities.

Other Migration Research and Data Needs

- the relationship between climate gentrification and migration.
- tipping points that result in migration.
- more comprehensive migration data (e.g., include renters, people who do not use credit, etc.).
- the differences in migration patterns between rural areas and more populated areas.



The Water Institute's staff engages community members at French Quarter Fest in activities demonstrating the importance of healthy shorelines in reducing risk.

FLOOD RISK

Within the area of flood risk, there is a need for more information on:

- residents' mental models of flood risk and exacerbating factors in their communities.
- how long-term development impacts frontline communities and mechanisms for accountability when negative impacts occur.
- planning and policy models that address historical context and inequities in flood risk management.*
- mechanisms to integrate future flood risk information in land use policies and planning.*
- the role of different legal concerns at local and state government levels in enabling or preventing development in flood risky areas (e.g., fear of takings claims preventing land use restrictions).

WATER INFRASTRUCTURE

Within the area of equitable climate resilience and water infrastructure, there is a need for more information on:

- the impacts of the Stafford Act on community recovery including how it sustains or exacerbates existing inequities.
- development and implementation of equitable investment models including best practices, example case studies, and conducting learning pilots.
- how to incorporate community benefits in benefit valuation calculations.
- the feasibility and trade-offs of adaptation alternatives (e.g., conservation, infrastructure, buyouts).

BUILT INFRASTRUCTURE

Within the area of built infrastructure, there is a need for more information on:

- developing and implementing inclusive decision- and policy-making processes around infrastructure investment and improvement programs that reduce disparate impacts to climate change.
- policies, processes, planning, and governance that would lead to increased accessibility and function of transportation systems.
- policies that contribute to lack of multimodal transportation access and potential mechanisms to overcome these barriers.
- novel approaches to resilient, accessible, and affordable housing.

HEALTH

Within the area of health, there is a need for more information on:

- how climate change will exacerbate inequities in healthcare.
- the quantified costs of climate change on healthcare systems.
- the impacts of air quality and extreme heat on public health and possible policy responses.

Participants at the Center 2023 Workshop wanted to elevate the fact that Minority Serving Institutions are already leaders in this space and would be valuable partners.

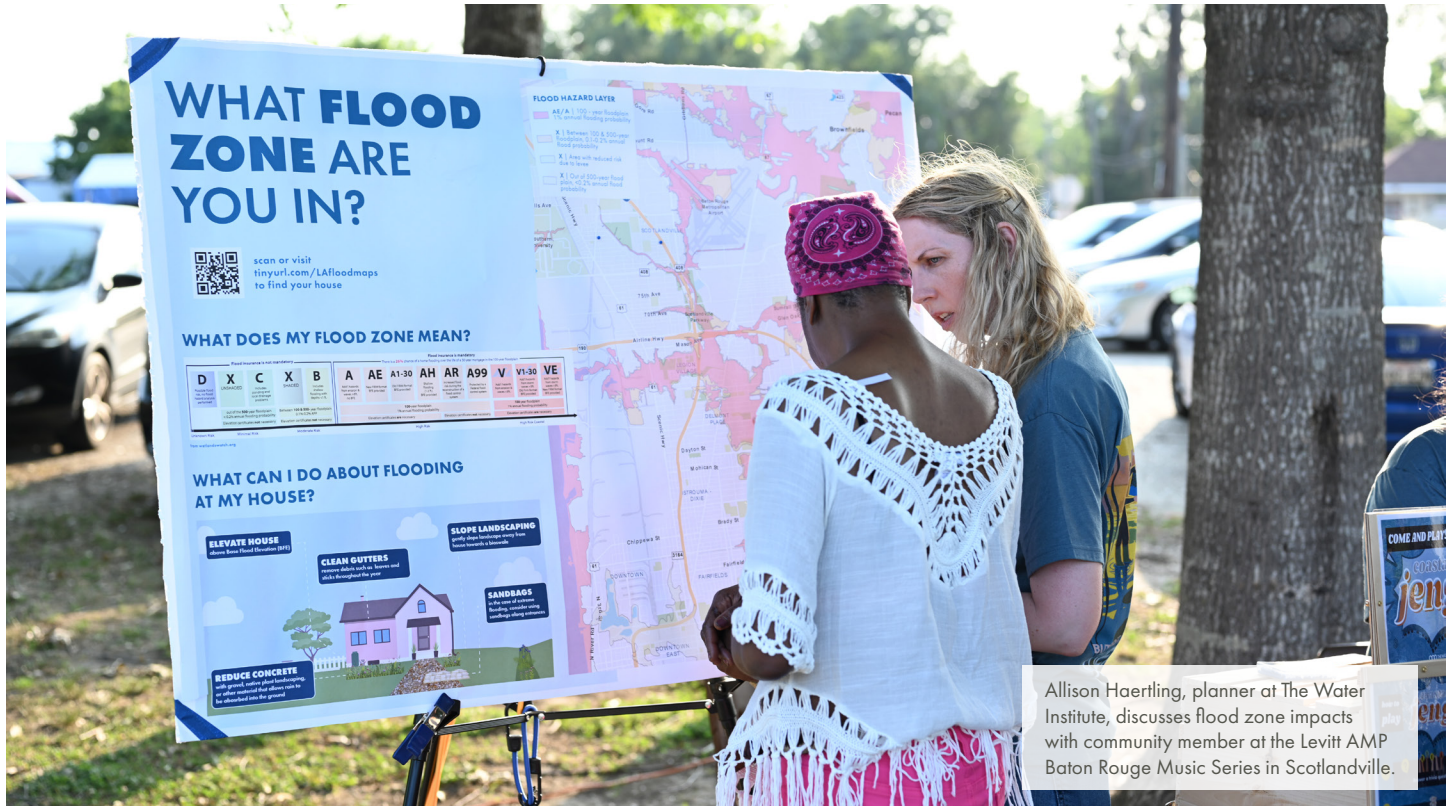
ENERGY

Within the area of energy, there is a need for more information on:

- how to foster energy resilience in underserved and marginalized communities.
- inequities in energy policies and renewable energy program access.

CLOSING NOTE

The Center recognizes this is not a comprehensive list and is representative of information collected to inform the Center’s programming. For additional information on how this list was developed or to learn how to get involved, please contact the Center at CRC@thewaterinstitute.org.



Allison Haertling, planner at The Water Institute, discusses flood zone impacts with community member at the Levitt AMP Baton Rouge Music Series in Scotlandville.