

# A Decision Framework for Equitable Use of Federal Funds for Buyouts

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**Mitigation Matters Report:**

Motlagh & Hamideh (2025). Natural Hazards Center, CU Boulder.

**Full Study:**

Motlagh & Hamideh (2025). *Sustainability*, 17(3). DOI: 10.3390/su17030966





## Research Question

How can local practitioners evaluate equity consequences of federal buyout projects?



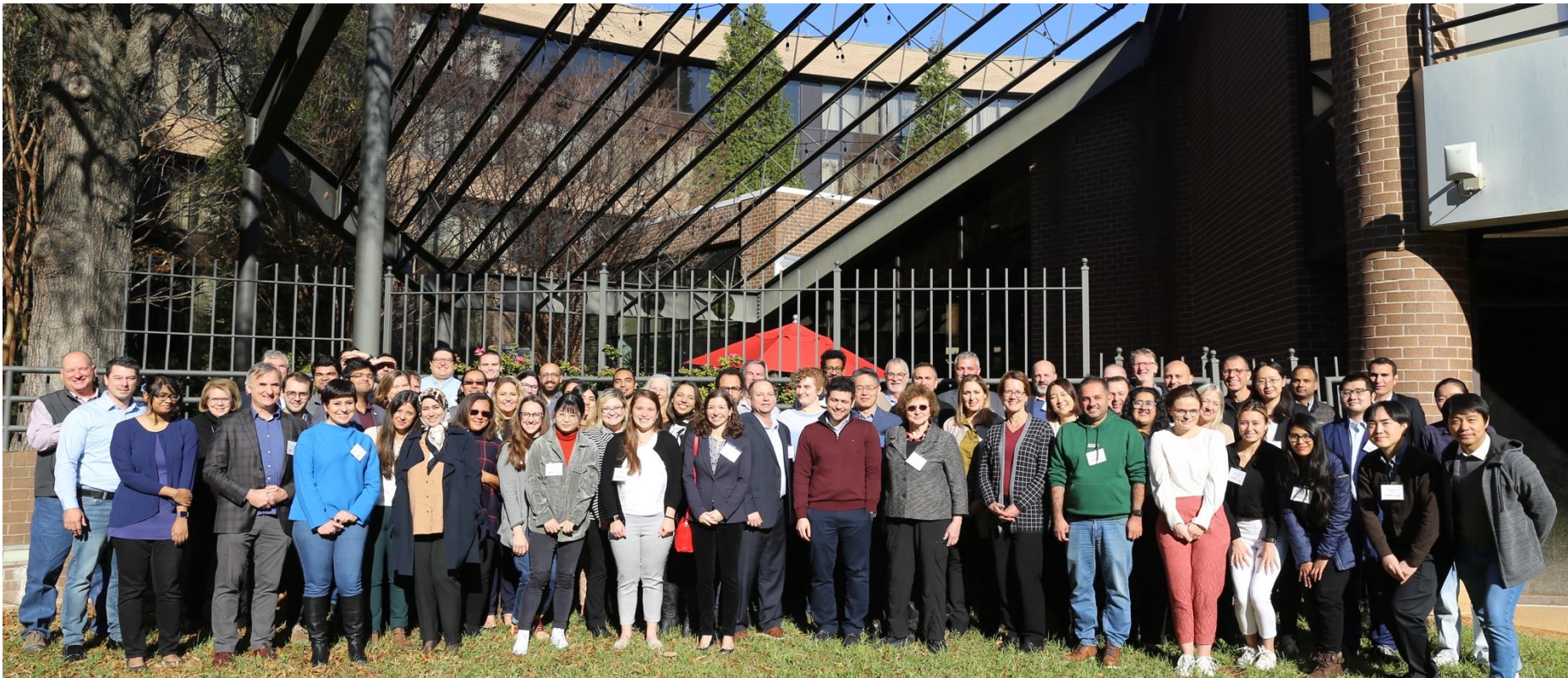
## Applying the Decision Framework

- Using the City of Galveston, TX (high exposure, past buyouts)
- And a decision-support tool called Interdependent Networked Community Resilience Modeling Environment (IN-CORE)

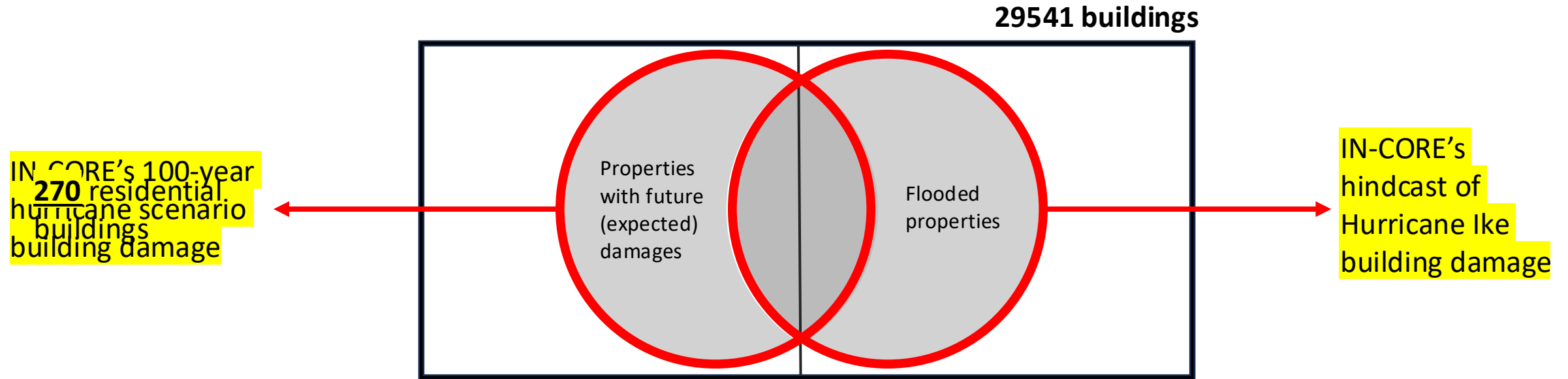


# IN-CORE

- Funded by the National Institute of Standards and Technology (NIST) supporting community resilience planning
- Models impact of natural hazard on community (social, economy, physical)
- Developed by 100 researchers from 14 universities
- Written in Python and is open source



# Using IN-CORE and the City of Galveston as an example ...



FEMA's HMA funding limits

Implications of buyout participation based on housing tenure and household characteristics

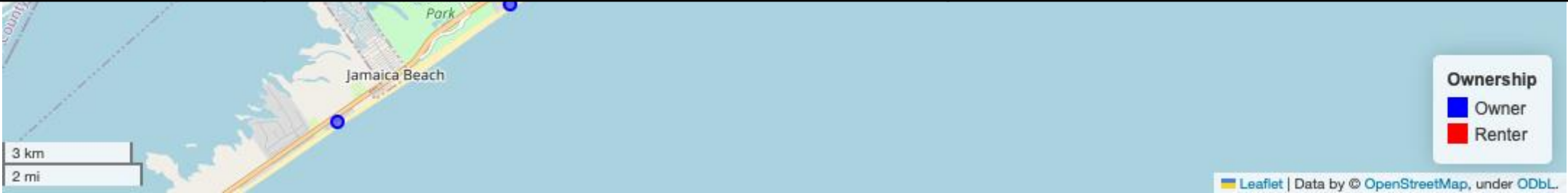




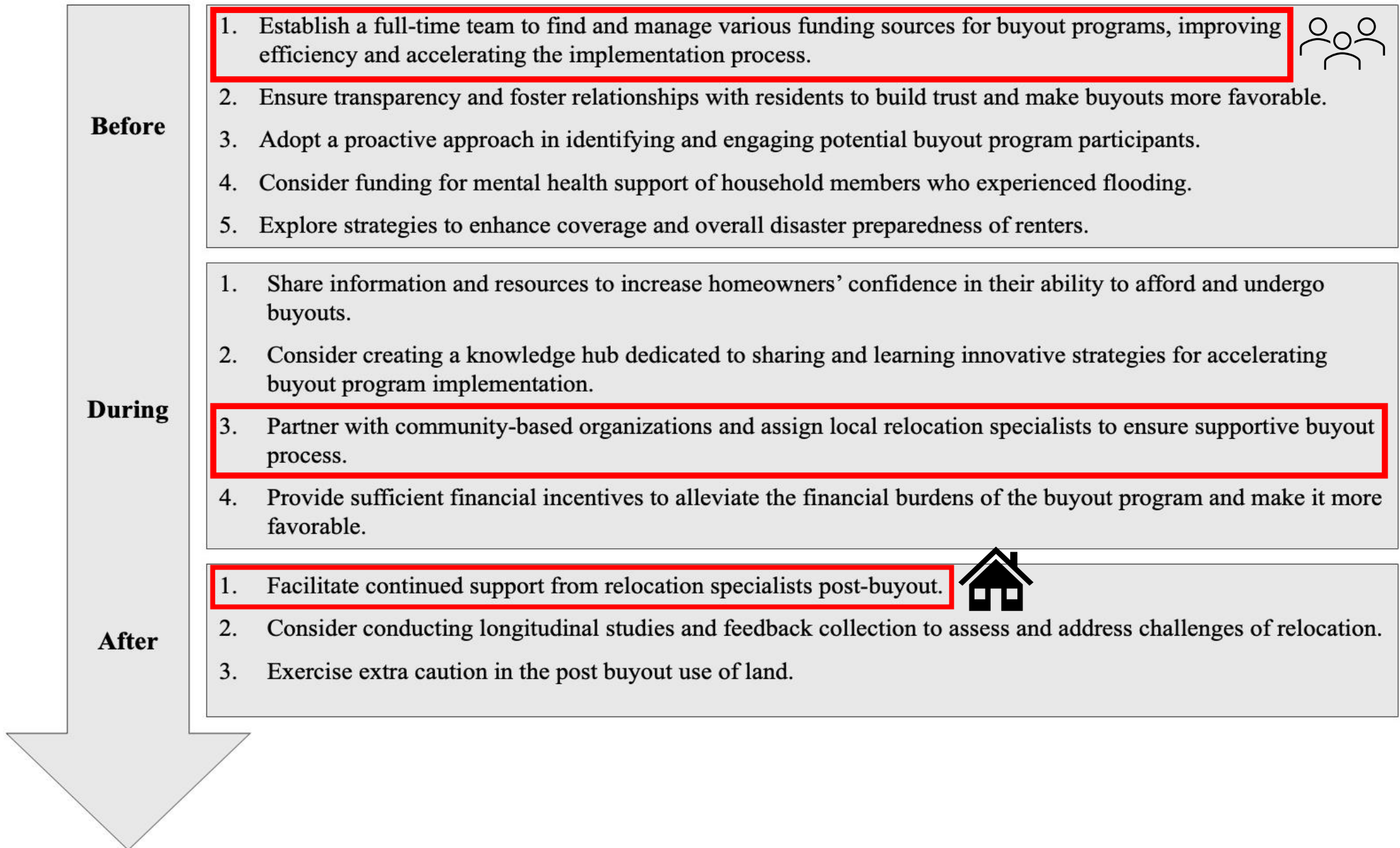
Result: Candidate housing units by tenure status



	Owners	Renters
Potential challenges	<div><div>(1) Homeowners are less likely to participate if they have a mortgage</div><div>(2) Lower chance of accepting an offer if cost sharing is required</div></div>	<div><div>(1) Renters-occupied homes are less likely to undergo buyouts</div><div>(2) Foreign national renters are ineligible for federal relocation benefits and post-buyout assistance, and require alternative funding sources.</div></div>
Potential consequences	<div><div>(1) Limited affordable housing options after relocation</div><div>(2) Losing social network if relocated outside their community</div></div>	<div><div>(1) Financial burden</div><div>(2) Higher chance of relocating to areas with equal or greater flood exposure and higher social vulnerability</div></div>



## Sequenced Recommendations for Buyout Program Improvements



# Thank you!

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