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Developing a Property Resilience Framework for Flood Risk
Management

Natural disasters are predicted to become more hazardous with climate change. While research discourse has been to incorporate the social vulnerability index to assess community risks, property losses continue to rise during flooding events. This highlights the need to develop a property resilience framework to mitigate physical damage as well as addresses residents' concerns, values, and priorities in the face of flooding hazards. Weather events include heat waves, droughts, winter storms, tornadoes, hurricanes, and floods. The study will focus on the flooding risks in three study areas because the state is prone to flooding, thereby examining the at-risk populations.

With the increasing climate challenges, there would be a need to assess the property climate related risks to identify potential hazards that could affect property, assessing how vulnerable the properties are to the hazard threats, and assessing the protective actions developed to improve hazard adjustment plans. The research discourse has been to reduce the influence of extreme weather risks.

The random forest model will be employed as indicators toward developing property resilience framework in mitigating flooding risks to support emergency preparedness. The expected findings will provide new insight with the integration of property protective measures in assessing flooding risks. The outcomes are expected to guide the emergency managers and policymakers in the decision-making process.

Presentation Theme: Disaster-risks reduction.

Collaborators, Advisor(s) and Department(s) that assisted with this research: Bennett-Gayle DeeDee.