

# Assessing Societal Values in Community Adaptation to Natural Hazard Risks: Highlights from an International Case Study

Hannah Torres<sup>a</sup>, Dr. Frank Muller-Karger<sup>b</sup>, Dr. Jack Kartez<sup>c</sup>, Dr. Mark Pelling<sup>d</sup>, Dr. Jose Marengo<sup>e</sup>, Catherine J. Reynolds<sup>b</sup>

a. University of South Florida School of Geosciences, b. University of South Florida College of Marine Science, c. EPA New England Environmental Finance Center, d. King's College London, e. Centro Nacional de Monitoramento e Alertas de Desastres Naturais

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## METROPOLE

International, Interdisciplinary Research  
Initiative on Coastal Vulnerability 2014-2017

Social and governance factors impact planning decisions and actions of communities. The research study “METROPOLE” was embedded in municipal planning processes in three countries to investigate how experiences, values, and perceptions shape decision maker and stakeholder adaptation planning for future sea level and storm surge. Findings are currently being used to collaboratively develop practitioner resources to enhance climate adaptation.

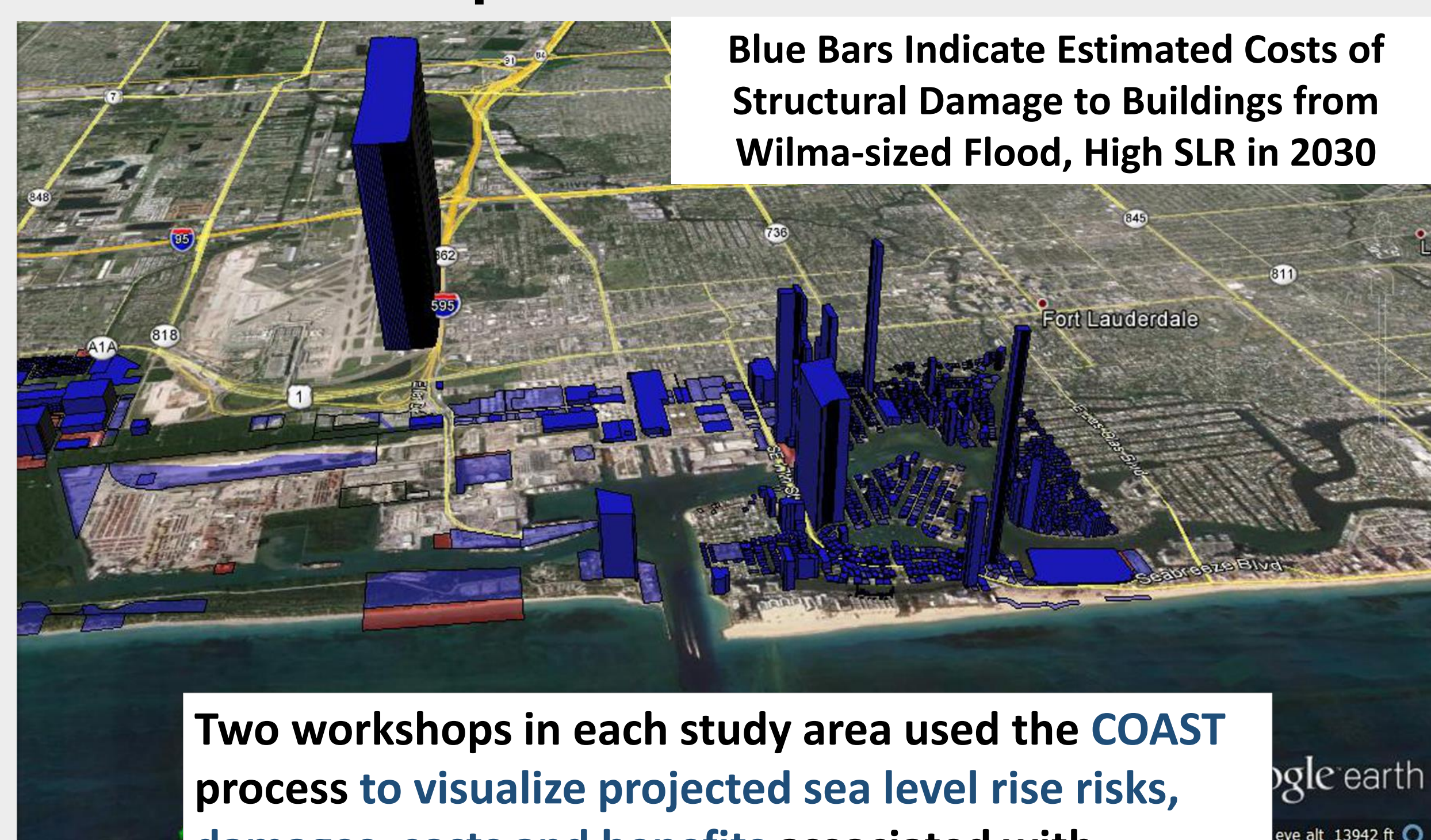


METROPOLE Study Locations  
Santos, BR  
Selsey, UK  
Broward County, FL, USA

COAST workshop in Selsey, UK



## COastal Adaptation to Sea Level Rise Tool



Two workshops in each study area used the COAST process to visualize projected sea level rise risks, damages, costs and benefits associated with community-chosen adaptation actions

## Pre/Post Workshop Surveys



Questions addressed how social, cultural, and governance factors influence adaptation priorities and acceptability of public finance mechanisms

## Adaptive Capacity Index

- 70 interviews with decision-makers addressed institutional adaptive capacity.
- ADAPTIVE CAPACITY:** The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences (IPCC, 2014)

## Focus Groups with Homeowners (Broward Only)

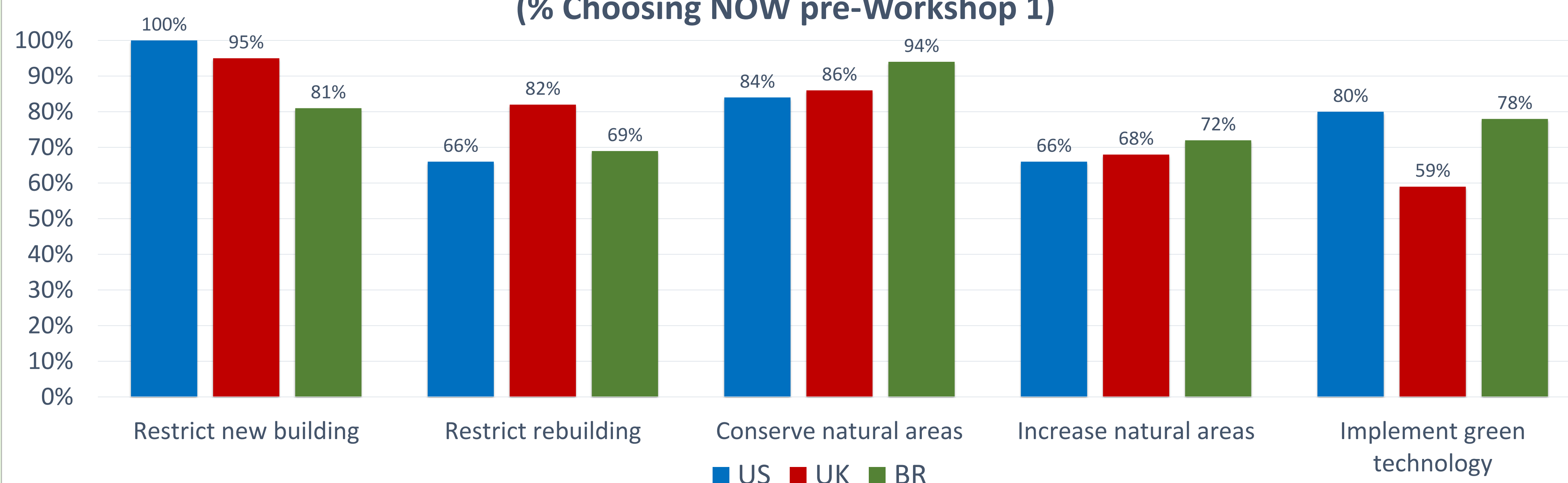
- Homeowners (22) discussed experiences with a hurricane and perceptions of local adaptation strategies to explore social factors influencing risk perceptions and adaptive capacity of individuals.

## Survey Data: Understanding Adaptation Priorities

Similar patterns in the three study areas:

- Majority indicate local governments should act now to 10-years for all adaptation options
- Same top 5 options chosen, but in different order: conservation, growth management, green infrastructure (see chart below)
- Structural (gray) solutions and voluntary buyouts were prioritized later, 10+ years into future

Country Comparison of Top 5 Priorities  
(% Choosing NOW pre-Workshop 1)



## Adaptive Capacity

- Size/scale of an organization impacts adaptive capacity (Paterson et al. 2017)
- Adaptive capacity of homeowners is influenced by risk perceptions, insurance practices, social networks.

## Implications for Planning

Factors that Influence Priorities:

- Social factors such as jobs & leadership roles
- Limited ability to imagine future beyond 15 years (Tonn, 2006)
- Perceived co-benefits of high priority “green” options: aesthetics, low-impact, perceived low cost

Recommendations:

- Explore conservation approaches, green resiliency and growth management options
- Develop and communicate processes & short-term steps for long-term “gray” solutions

Municipal-Led Outcomes:

- Research catalyzed local planning efforts

Next Steps:

- The American Planning Association Florida Chapter is developing continuing education programs for Fall 2017: webinars, workshops and resource materials