

NCST Technical Investigation of Hurricane Maria (Puerto Rico)

Emergency Communications and Evacuation

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Objective: To investigate the role of emergency communications in public response for those under imminent threat from Hurricane Maria. This project will also investigate the use of communications in disaster response (during and immediately after the hurricane event).

Motivation



Project falls under two duties of the NCST, to:

- evaluate technical aspects of evacuation and emergency response procedures, and recommend research or other appropriate actions needed to improve evacuation and emergency response procedures.

In the NIST memo to recommend the Hurricane Maria Investigation, the purpose is further tailored to needs in Puerto Rico to:

- characterize the performance of emergency communications systems and the public's response to such communications.

Background:

Evacuation and emergency response challenges found during NIST's Preliminary Reconnaissance Mission

- Category 5 Hurricane Maria preceded by Irma two weeks prior
- Heterogeneous terrain across the island posed multiple risks requiring different protective actions (flooding and storm surge, winds, landslides)
- Societal preference for sheltering-in-place
- Extended lack of communication among emergency officials, building officials, and the public after the storm
- Many people required rescues; in particular from multiple flooded towns across the island



Project Goals

Goal 1: Characterize the use of emergency communication (technology and information) before, during, and after the hurricane.

Goal 2: Identify the factors that influenced the public's decision to take protection (evacuate) prior to the hurricane, and to understand the role of emergency communications in that decision.

