

ALY6110

Module 1 Assignment – Case Study

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Title and Source:

- **Title:** "Agencies Mobilize to Improve Emergency Response in Puerto Rico through Better Data"
- **Source:** Federal Data Strategy, Resources.Data.gov
- **URL:** <https://resources.data.gov/resources/fdspp-pr-emergency-response/>

Overview:

- The article discusses the challenges faced by federal agencies, particularly FEMA, during the response to Hurricanes Irma and Maria in Puerto Rico in 2017. A significant obstacle was the lack of standardized and accurate address data, which impeded effective disaster response and aid distribution. In the aftermath, agencies collaborated to enhance the utility of Puerto Rico's address data and share best practices for using available information, aiming to improve future emergency responses.

Key Points:

- **Challenges in Address Data:**
 - Many addresses in Puerto Rico were un-geocoded, lacking associated latitude and longitude coordinates.
 - The absence of a standardized addressing system made it difficult to locate households, especially in areas inaccessible due to storm damage.
 - Multiple instances of the same street names within municipalities added to the confusion.
- **Impact on Emergency Response:**
 - The inability to accurately map addresses hindered damage assessments and the determination of assistance eligibility.
 - Inspectors often required local guides to locate homes, and compromised road networks further complicated access. [GovCIO Media & Research+3ICEYE+3Time+3](#)
- **Post-Disaster Collaboration:**
 - Federal agencies recognized the need to improve address data and geospatial practices.

- Efforts were made to enhance the utility of existing data and share best practices among agencies.

Benefits of Using Big Data:

- **Improved Disaster Response:**
 - Accurate geospatial data enables quicker and more efficient deployment of resources.
 - Enhanced data allows for better planning and coordination among agencies. [ICEYE+1WIRED+1](#)
- **Informed Decision-Making:**
 - Big data provides insights that can guide policy and operational decisions during emergencies.
 - Data-driven approaches can identify vulnerable populations and areas requiring immediate attention.

Challenges of Using Big Data:

- **Data Quality and Standardization:**
 - Inconsistent or inaccurate data can impede response efforts.
 - Lack of standardization across datasets makes integration and analysis difficult.
- **Infrastructure Limitations:**
 - In regions with limited technological infrastructure, collecting and utilizing big data can be challenging.
 - Natural disasters can damage communication networks, hindering data collection and dissemination.

Conclusion:

- The experience in Puerto Rico during Hurricanes Irma and Maria highlighted the critical role of accurate and standardized data in effective disaster response. While big data offers significant benefits in planning and executing emergency operations, challenges such as data quality, standardization, and infrastructure limitations must be addressed. Collaborative efforts among federal agencies to improve data practices are essential for enhancing resilience and preparedness for future disasters.