

The Future Rests on a Foundation of Integrated Fundamental Data

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- Forum for dialogue.
- Raising awareness.
- Supporting decision making
- High-level coordination on geospatial integration.
- Representatives from **National Statistical and Geospatial Information Agencies.**



10th anniversary
UN·EG-ISGI
UNITED NATIONS • EXPERT GROUP
ON THE INTEGRATION OF STATISTICAL
AND GEOSPATIAL INFORMATION

The Data We Need:

The Global Fundamental Geospatial Data Themes



Global Geodetic
Reference Frame



Addresses



Buildings and
Settlements



Elevation and
Depth



Functional Areas



Geographical
Names



Geology and
Soils



Land Cover
and Use



Land Parcels



Orthoimagery



Physical
Infrastructure



Population
Distribution



Transport
Networks



Water



Addressing Recognized Needs

- Integration of information from statistical and geospatial domains.
- Establishes “where?”
- Creation of globally comparable datasets.

“There is an urgent need for a mechanism, such as a global statistical-spatial framework, to facilitate consistent production and integration approaches for geo-statistical information.”

The Global Forum on the Integration of Statistical and Geospatial Information, New York 2014

Statistical Data

247	22	83240	2281	2.3669	1.044
84	242	87719	1424	2.4922	1.042
73	78	10020	1	1.044	1.042
12	24	14977	1	1.0419	1.042
249	894	84280	24751	2.4269	1.042
218	704	81207	24751	2.4269	1.042
248	803	202046	41623	2.4273	1.042
95	247	27619	1	2.3619	1.042
215	205	14927	1	4.4922	1.042
13	24	22512	261	1.0304	1.042
94	67	94574	261	1.0304	1.042
176	474	84445	24877	2.4247	1.042
10	73	38039	1	1.2323	1.042
245	220	27612	1070	4.4312	1.042
174	623	60747	5162	2.7664	1.042
219	10	23461	1	2.9437	1.042
178	10	23427	2201	2.364	1.042
72	18	23425	1	1.0416	1.042

Geospatial Data



Global Statistical Geospatial Framework (GSGF)

Five High Level Principles

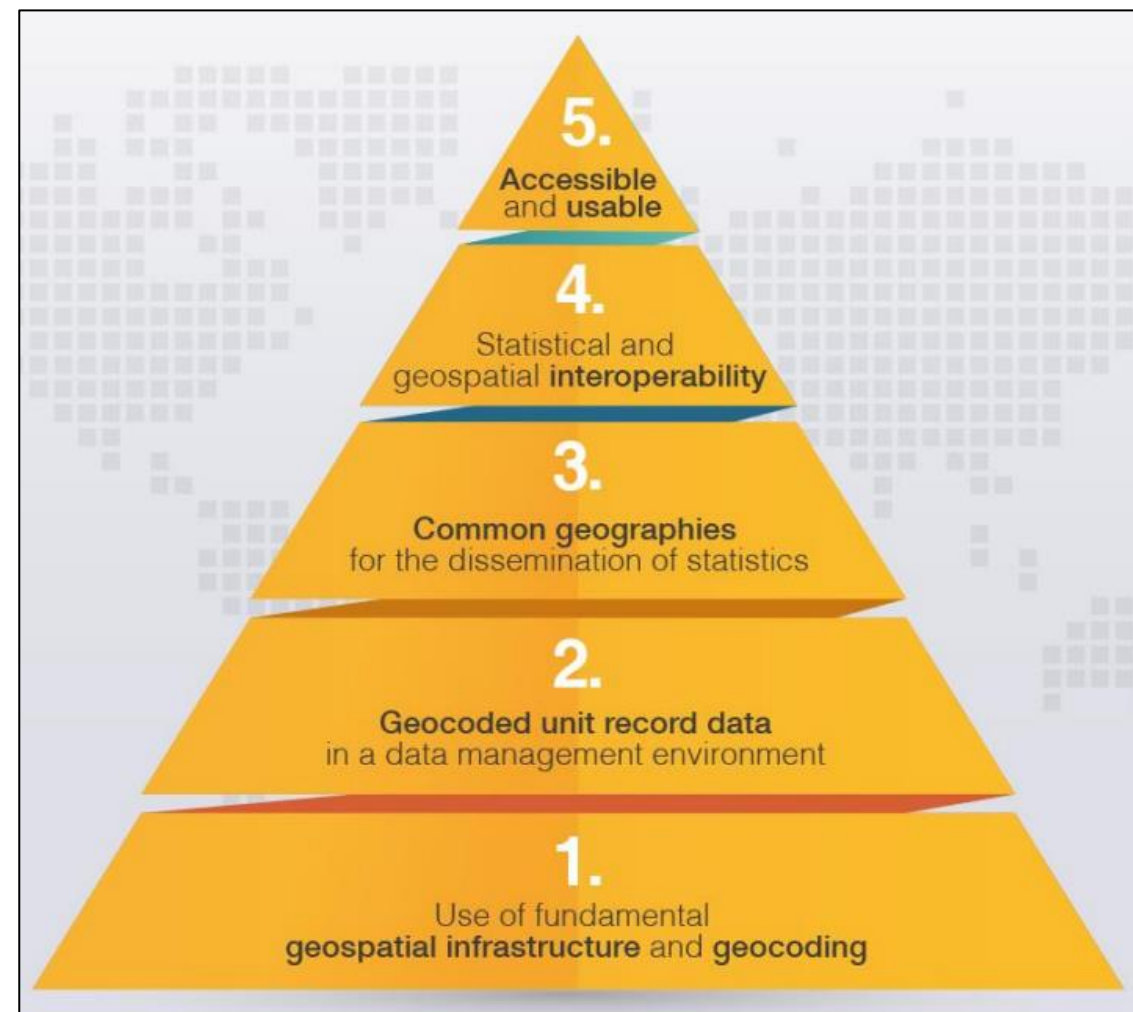
Principle 1: Use of fundamental geospatial infrastructure and geocoding.

Principle 2: Geocoded unit record data in a data management environment.

Principle 3: Common geographies for collection and dissemination of statistics.

Principle 4: Statistical and geospatial interoperability data, standards and processes.

Principle 5: Accessible and usable geospatially enabled statistics.



Disaster Impact Assessment

2022 pre-disaster Maui, HI



Imagery: © USDA NAIP 2022

2023 post-disaster Maui, HI



Imagery: © 2023, Maxar, USG Plus, Image Date 08/09/2023

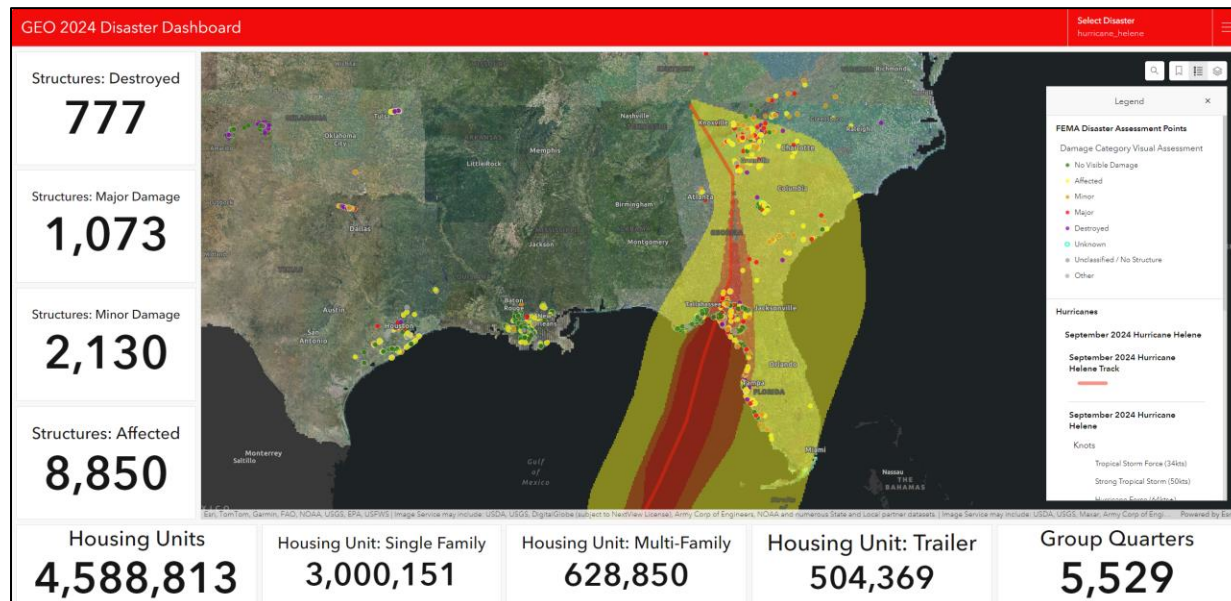
Real-time Analysis of Fundamental Geospatial Data for Disaster Response

Tornado data provided by NOAA through the [Damage Assessment Toolkit](#)

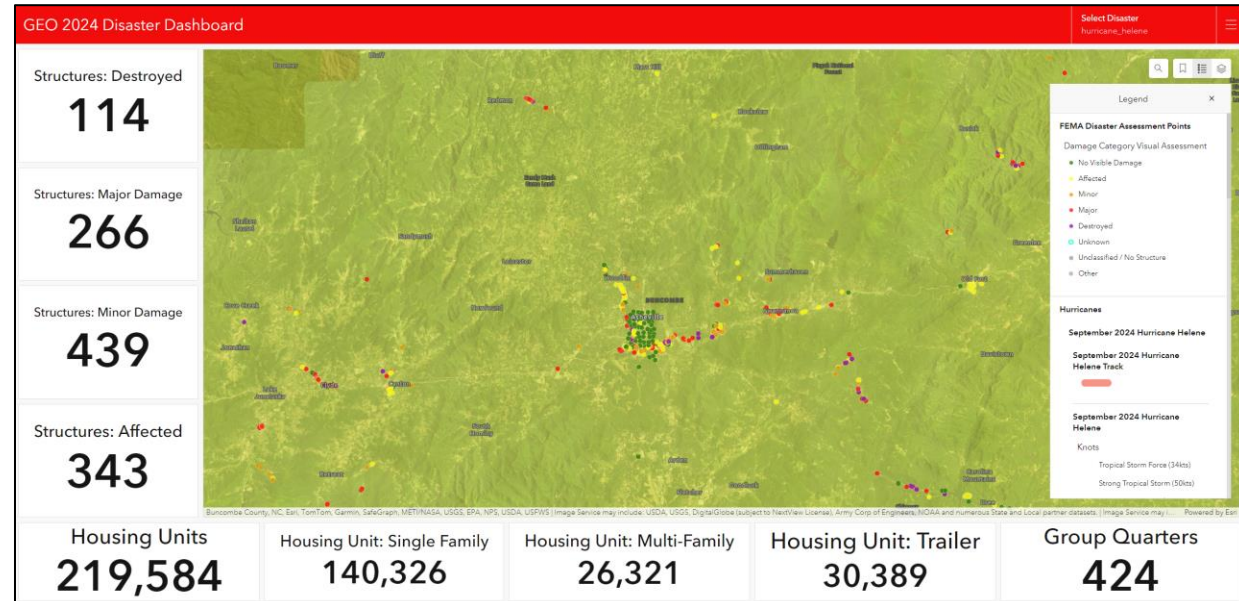


Integrated Geospatial and Statistical Data for Disaster Response

Hurricane Helene, September 2024



- Damage assessment points (FEMA)
- Hurricane and Tornado tracts/points (NOAA/NWS)
- Wildfire data (USFS)
- Seismic data (USGS)



- Housing Address Points (Census)
- Census Block Data (Census)
- Building Footprints (Census)
- Parcels (State, local, private industry partners)

Real-time Analysis of Integrated Data for Disaster Preparedness



GOES-16 GeoColor satellite image, National Oceanic and Atmospheric Administration.

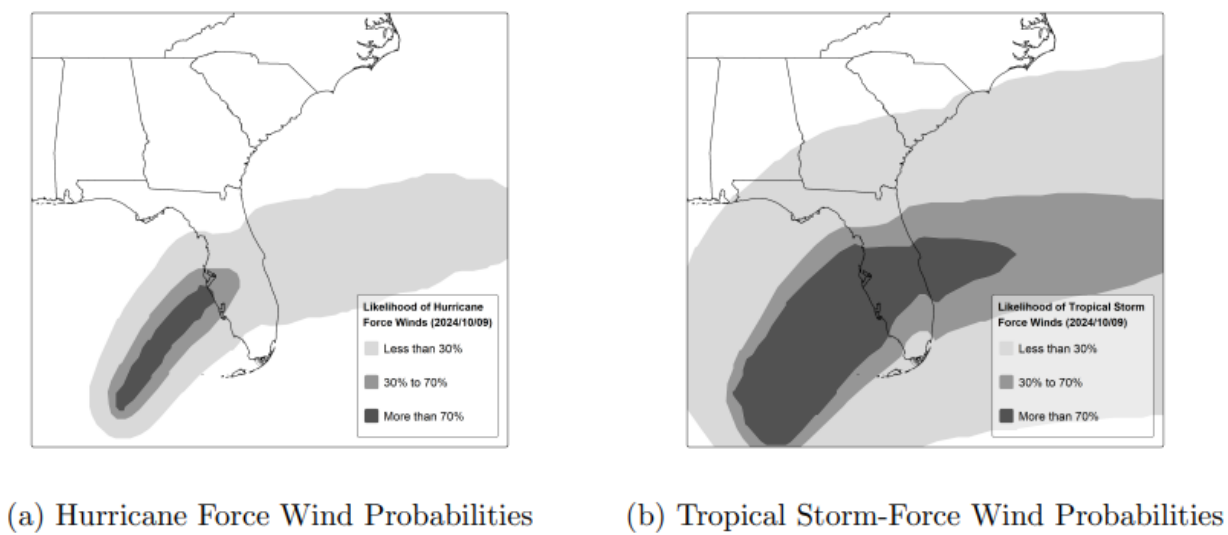
<https://www2.census.gov/topics/preparedness/events/hurricanes/milton/real-time-analysis-hurricane-milton.pdf>



National Hurricane Center Map, National Oceanic and Atmospheric Administration.

Real-time Analysis for Disaster Readiness and Response

Figure 1: The spatial distribution of tropical force wind speed and hurricane force wind speed probabilities.

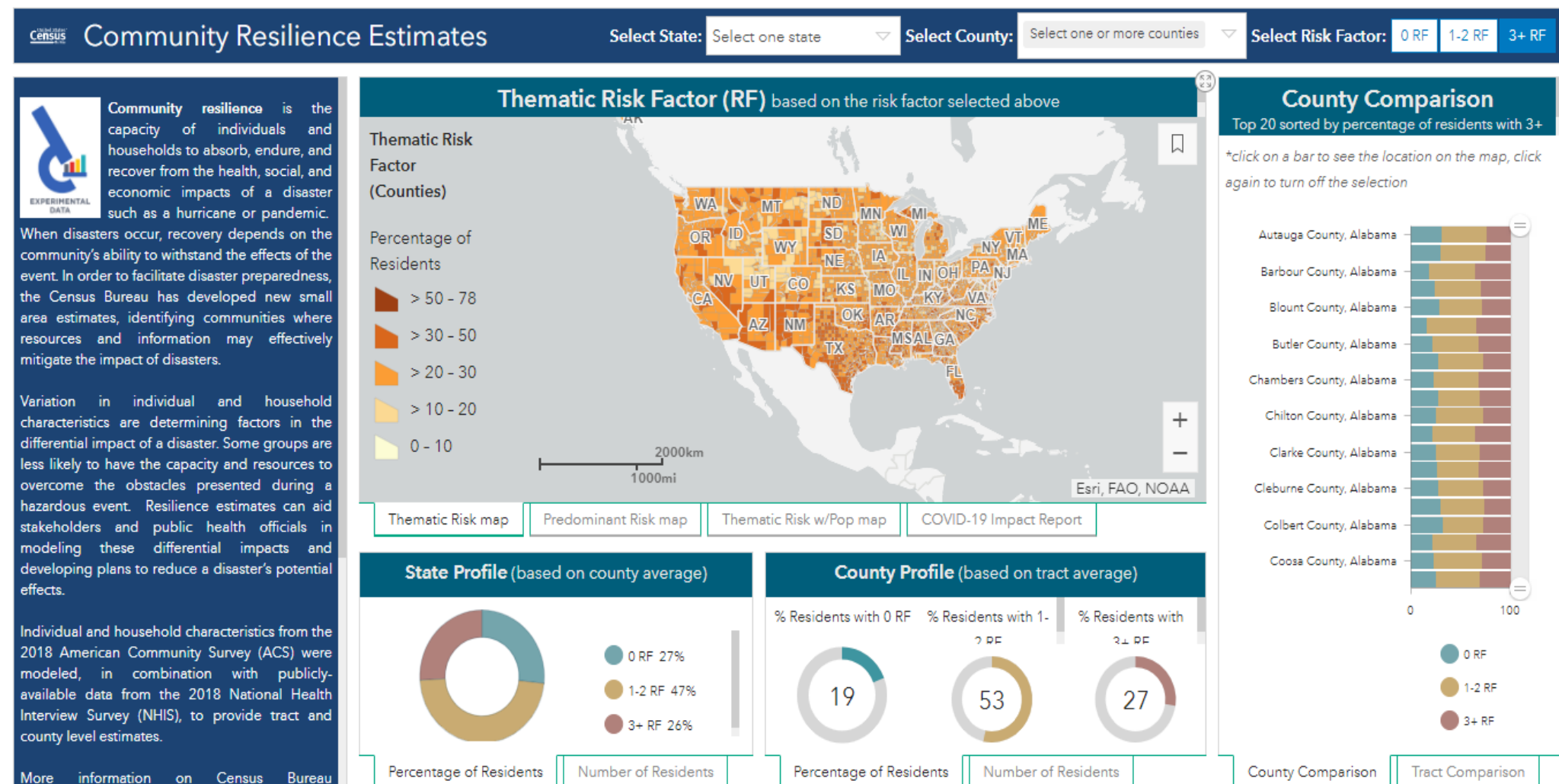


Notes: This Figure presents hurricane and tropical storm-force wind probabilities as provided by the NHC on October 9, 2024, at 11:00AM.

<https://www2.census.gov/topics/preparedness/events/hurricanes/milton/real-time-analysis-hurricane-milton.pdf>

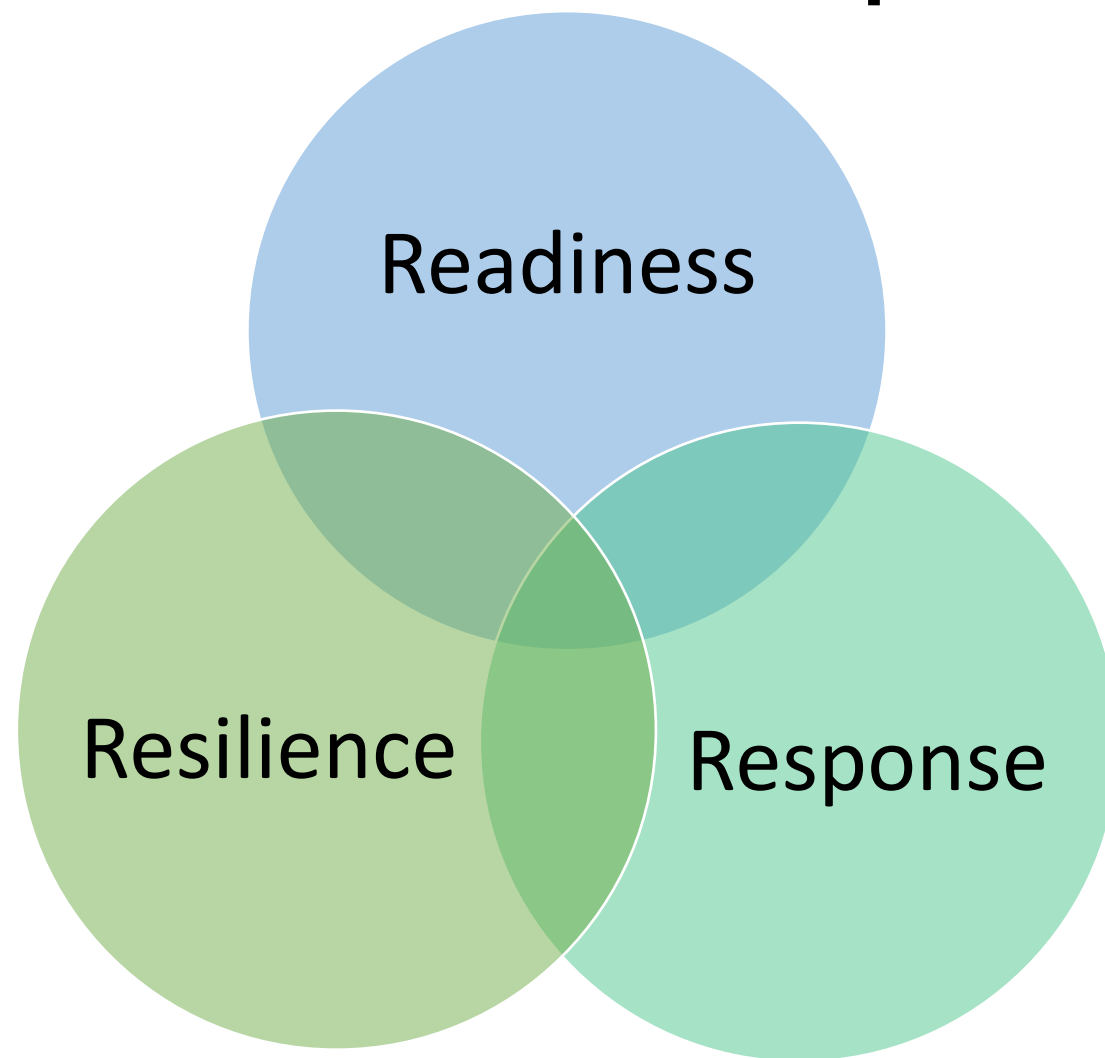
	Population	Percent
Panel A: hurricane-force winds		
Non-Hispanic White	4,961,974	53.14
Non-Hispanic Black	986,486	10.57
Hispanic	1,877,376	20.11
Non-Hispanic Asian	216,781	2.32
Non-Hispanic AIAN	25,379	0.27
Other	1,269,266	13.59
Over the Age of 65	2,016,941	21.60
Under the Age of 18	1,643,602	17.60
Lower Income	2,014,871	21.58
Total Population Exposed	9,337,262	

Data Integration for Community Resilience



<https://www2.census.gov/programs-surveys/demo/technical-documentation/community-resilience/>

Why Integrate Statistical and Geospatial Information?



The UN Expert Group on the Integration of Statistical and Geospatial Information

Thank you!



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