

NOAA Global Systems Laboratory

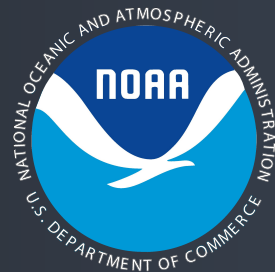
Assessing the Societal Benefits of Using Hazard Services to Communicate Storm Surge Hazards

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Global Systems Laboratory

AMS Annual Conference 2024



Lead research and directed development through the transition of environmental data, models, products, tools, and services to support commerce, protect life and property, and promote a scientifically literate public.

How do we support the people we are trying to serve?

1. How do we improve overall decision support?
2. Can we optimize value chains to remove barriers to service equity?
3. Can we create systems that get ahead of recovery efforts?
4. How do we measure the impact of our decision support tools?

Motivation



Hazard Services

Targeted Community Centric Alerts for Evolving Hazards

- Common Alerting Protocol (CAP) Messaging

Polygons for all Hazards

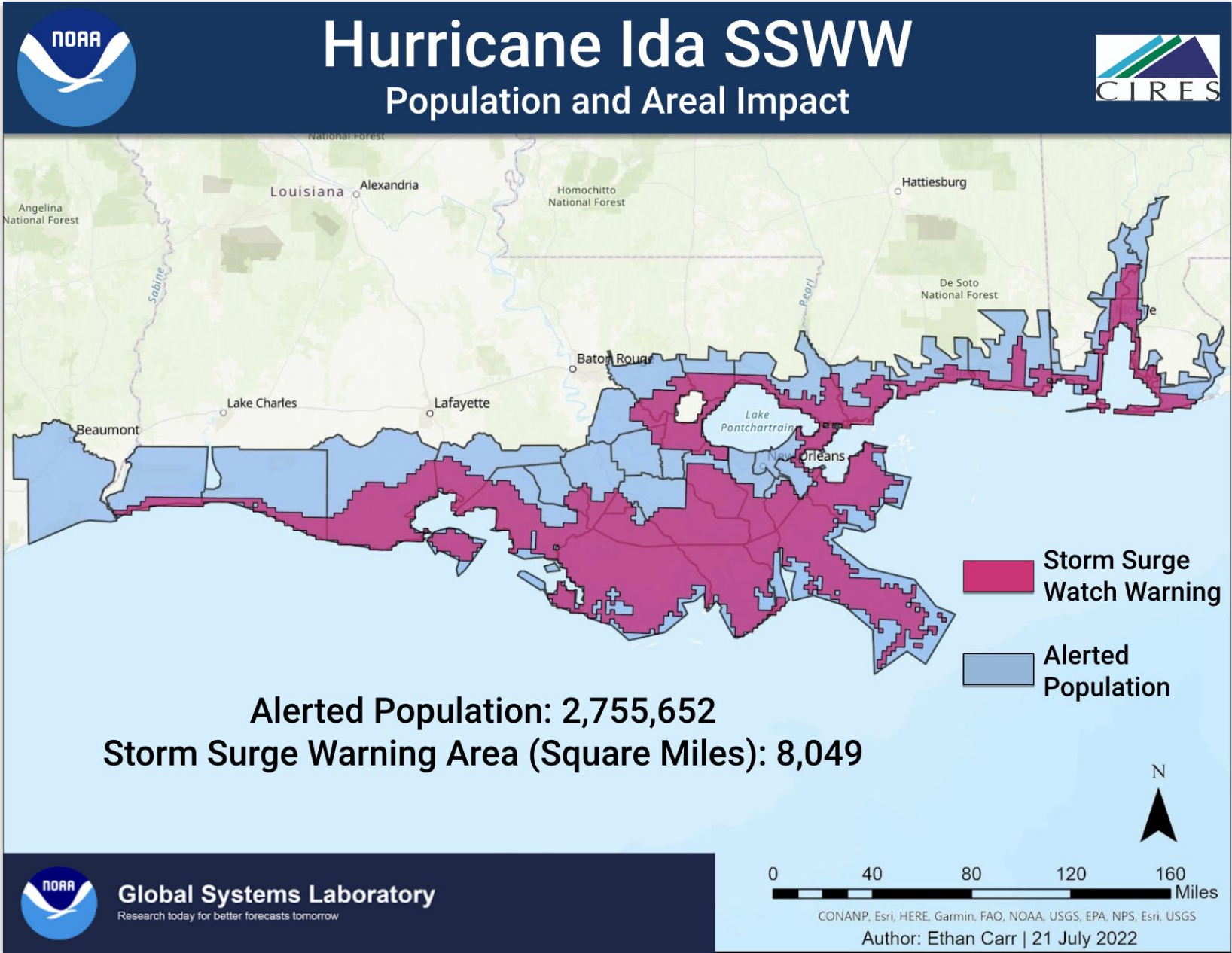
Removes Zone Based Alerts

- Minimizes Over-Warning

SVI in Hazards Services

Identify Areas for Specialized Messaging

- Unique for different Communities



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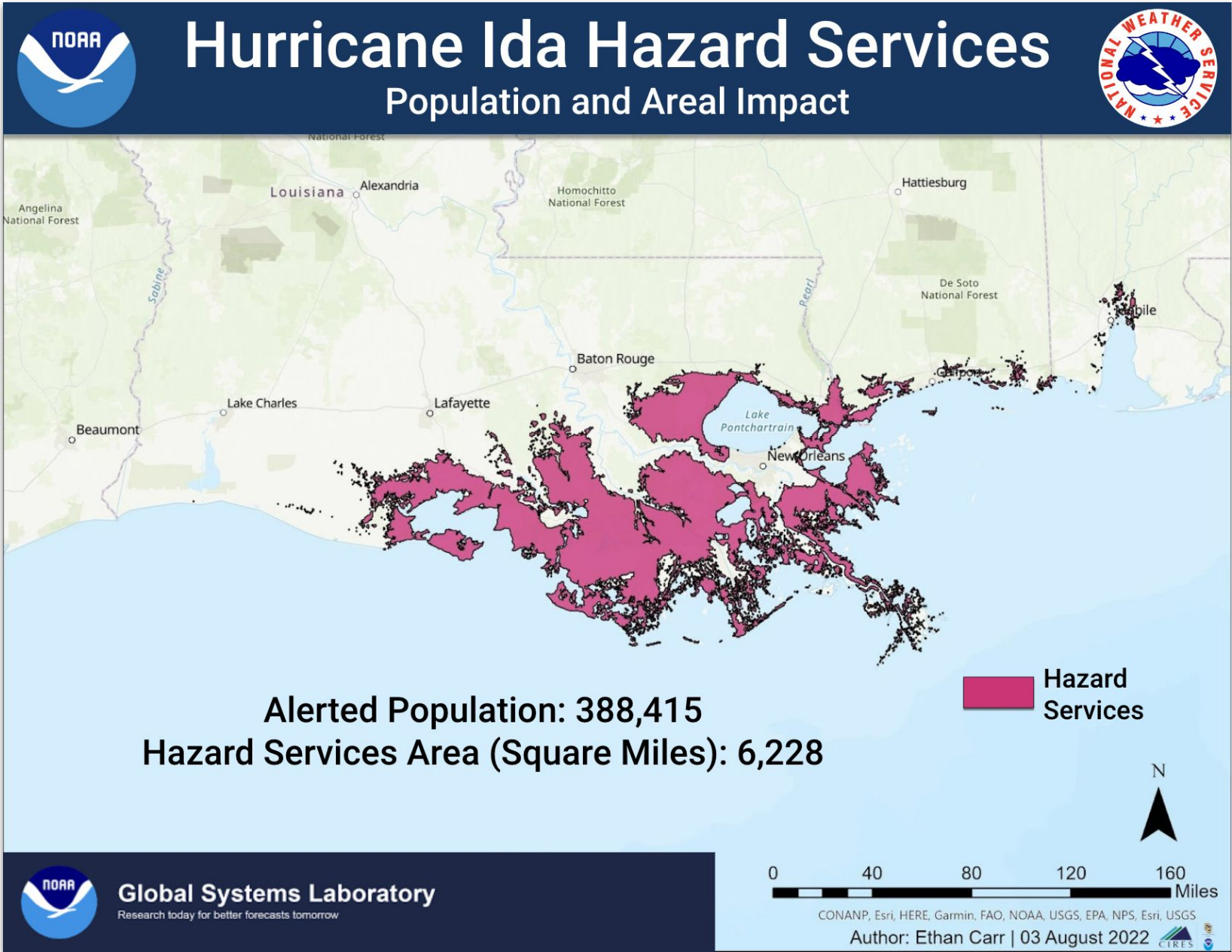
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Percentage of Households with No Vehicle Availability

New Orleans

Miami

New York City



Modifying Our Model

What We Know

- 1. Our new model works**
 - a. Minimizes Over-Warning
 - b. Maximizes Coverage
 - c. Improved Functionality
- 2. A perfect model is only as good its perceived utility for is audience**
- 3. Mitigation and preparation can only do so much**

What We Don't Know

- 1. The most effective communication practices for each hazard, locality, and population**
- 2. How does HS change operational forecasting and decision-making?**
- 3. Does improved forecasting influence public trust in forecasts?**

Interdisciplinary Approaches to Disaster Risk Reduction and Resilience



Weather Informatics and Decision Support Division (WIDS)



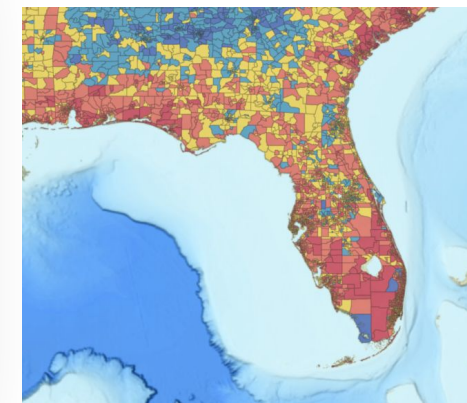
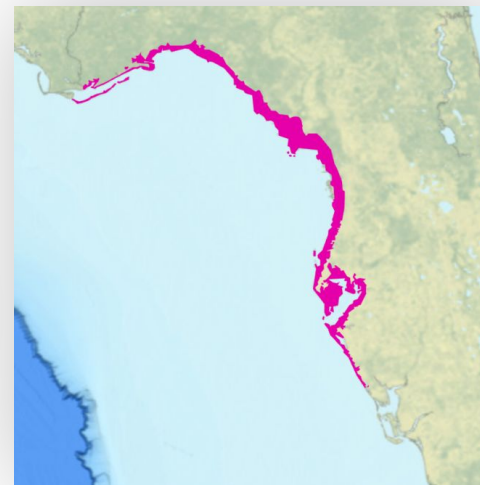
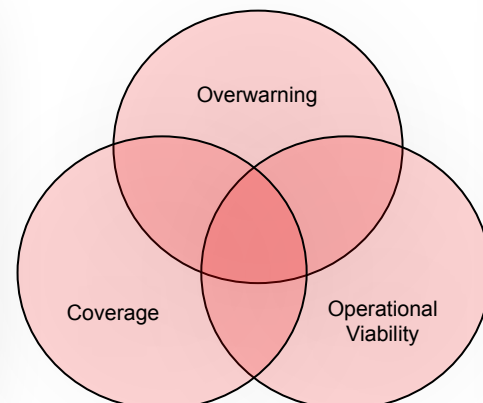
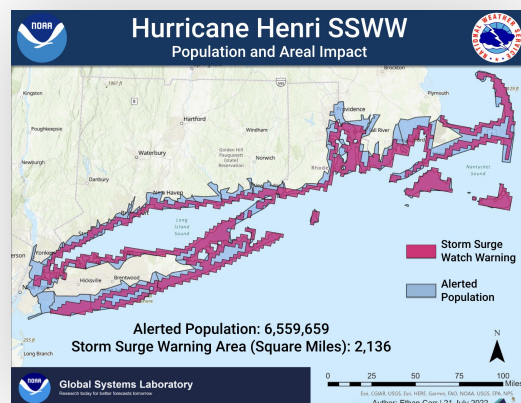
Proof of Concept

Research and
Development

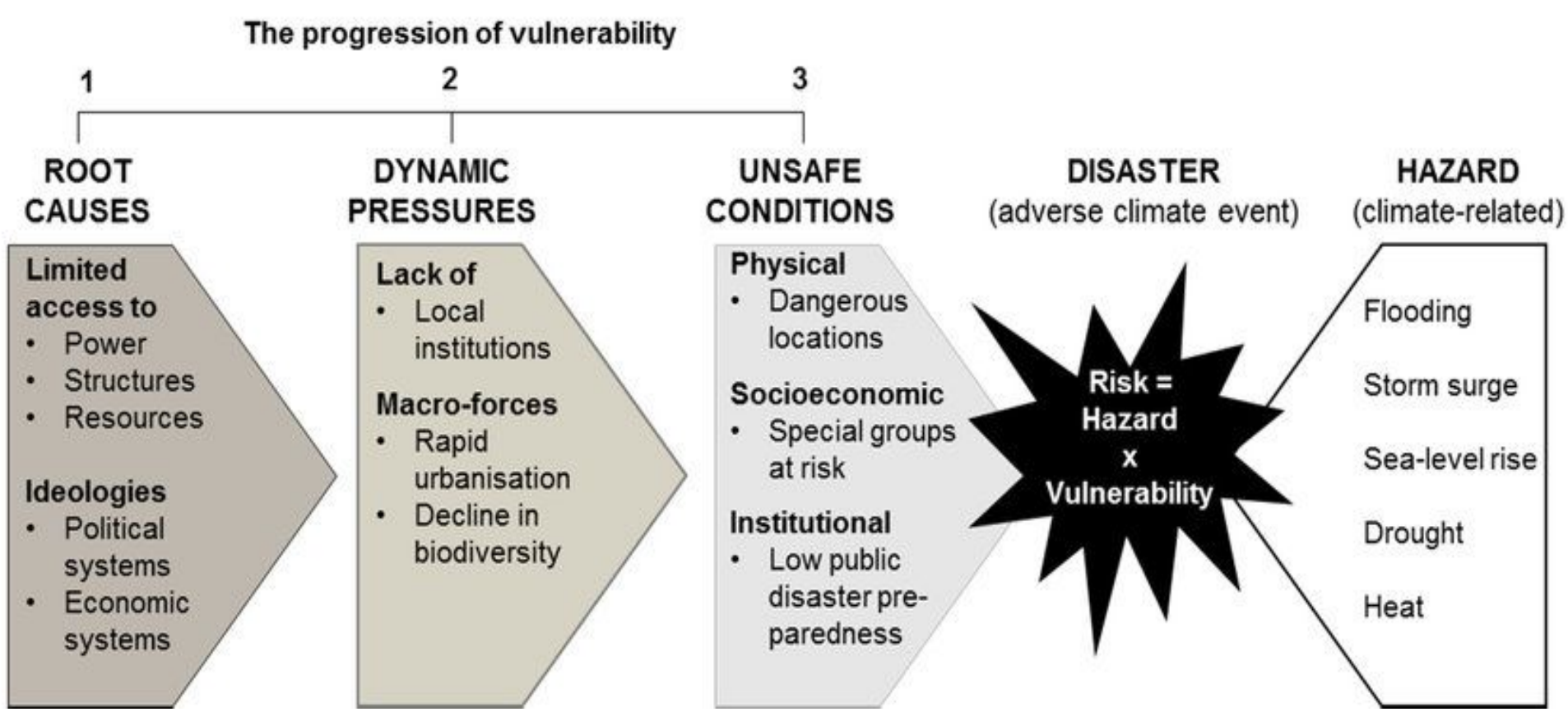
Testing and
Evaluation

SVI Implications

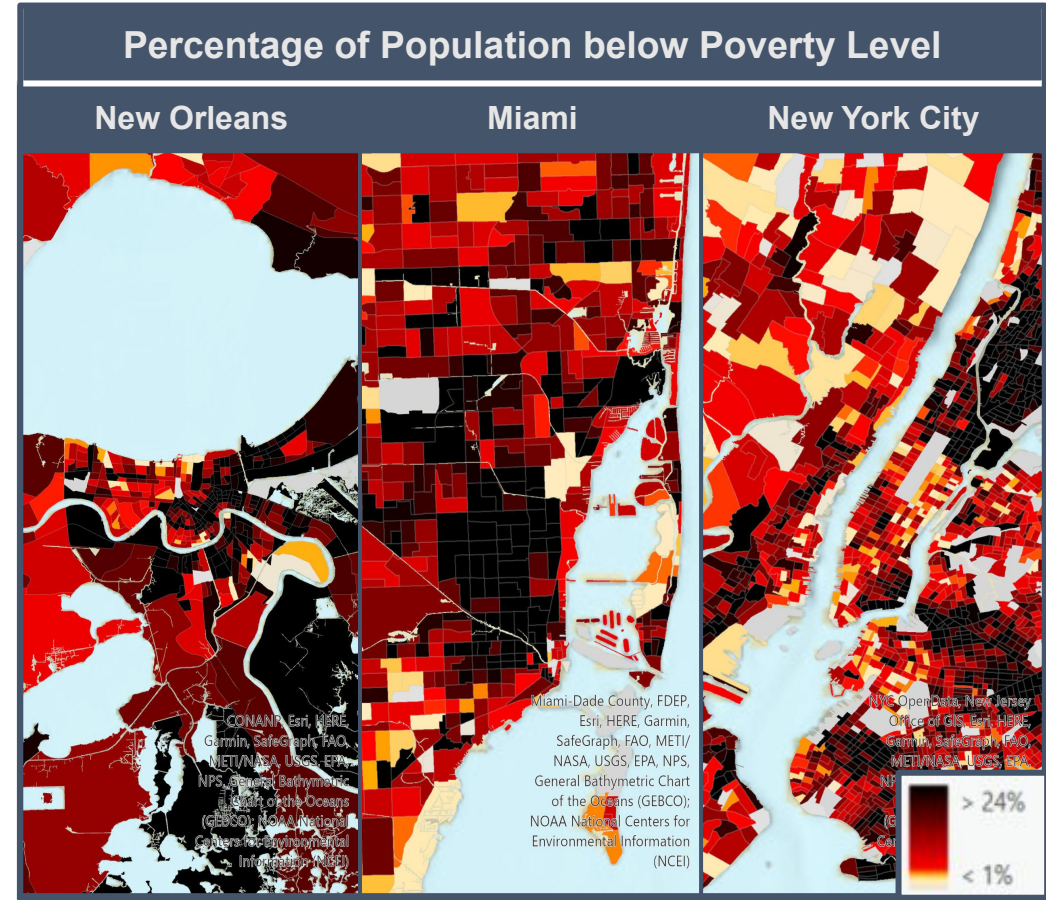
Resilience



Assessing Vulnerability



Wisner et al. (2004)



Importance of an Interdisciplinary Approach

- 1. Improving Communication Efficiency**
2. Identifying Areas of Vulnerability
 - a. Staging Resources
 - b. Evacuation Assistance
3. How does an understanding of SVI impact Decision Makers?
4. Do people respond better to a more precise Alert?
5. Quantifying Social and Economic Impacts

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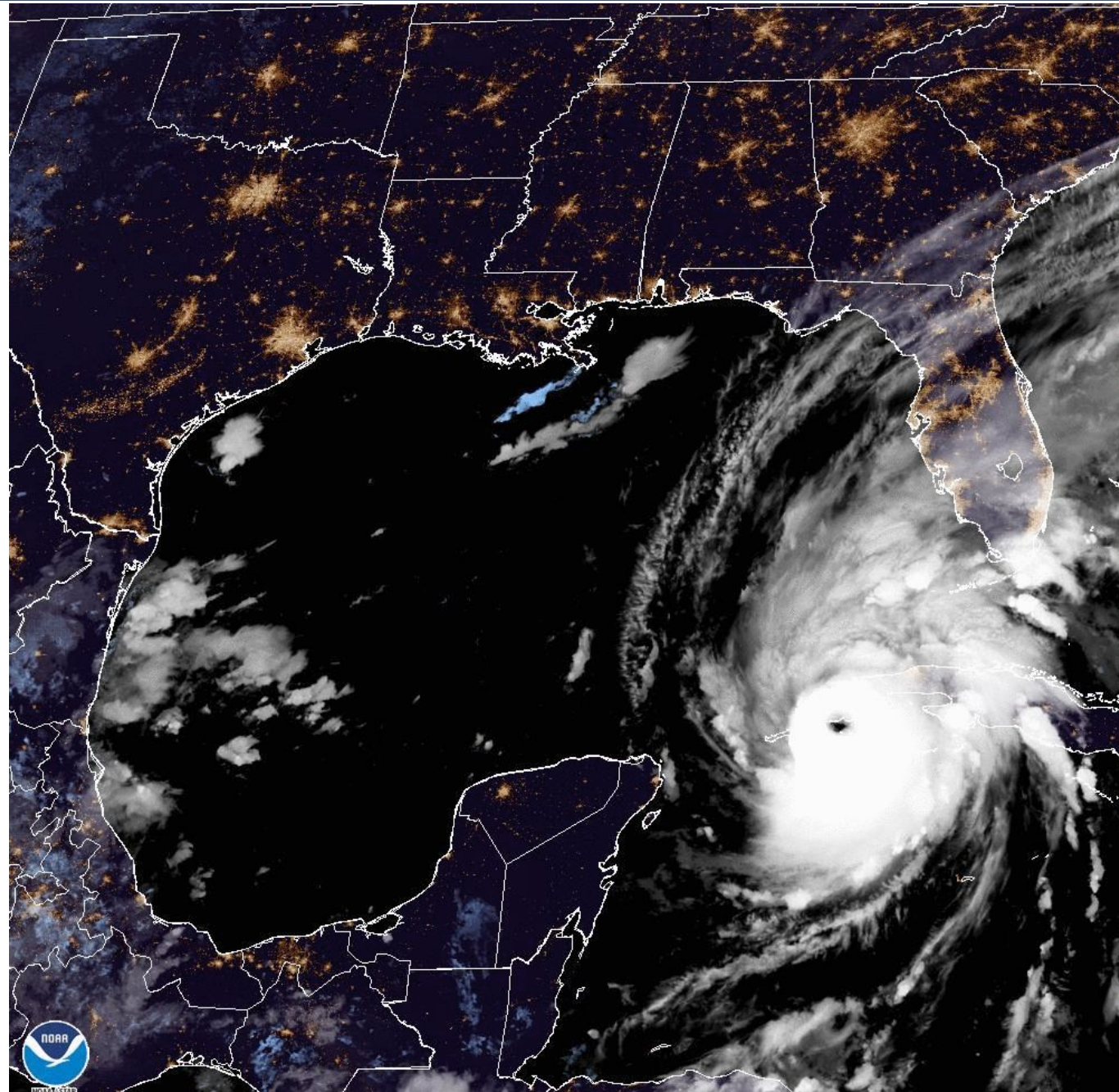
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Thank You/Questions



27 Sep 2022 08:01Z - NOAA/NESDIS/STAR - GOES-East - GEOCOLOR Composite GM



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