



Evaluating State Flood Resilience Policies in the Great Lakes

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A Changing Great Lakes Region



Change in Night Lights (2012–2016)

Lights out No change New lights

A Changing Great Lakes Region

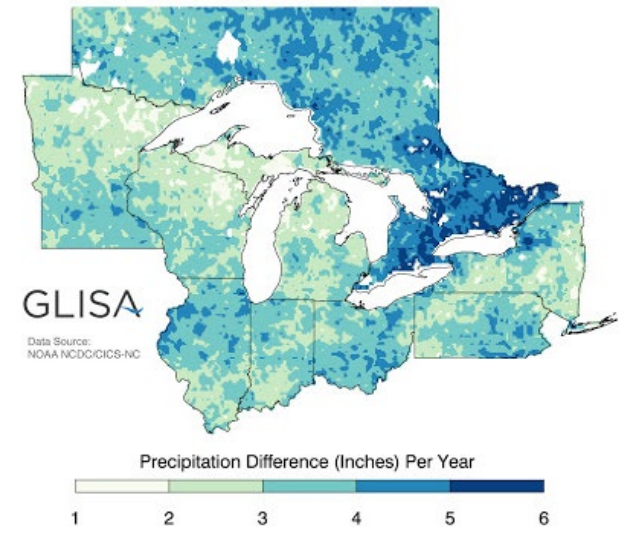
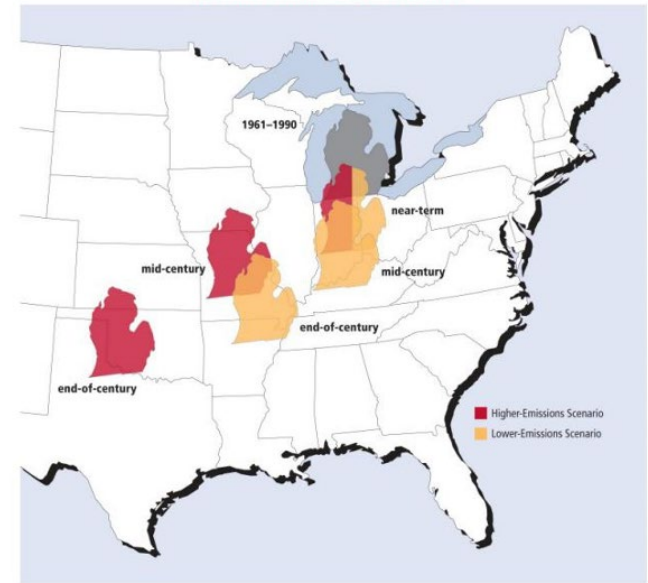
Growing vulnerability to disasters and climate risks

- Floods
- Storms
- Fires
- Heat waves
- Droughts

Chronic strains on service delivery and infrastructure

- Drinking water
- Energy provision
- Flood mitigation
- Transportation networks
- Heating/cooling needs

Michigan Migrating State Climate



An Unequal Great Lakes Region

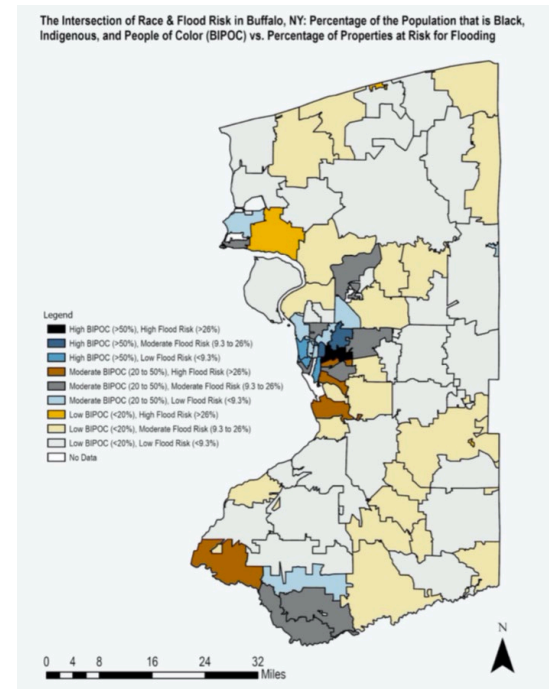
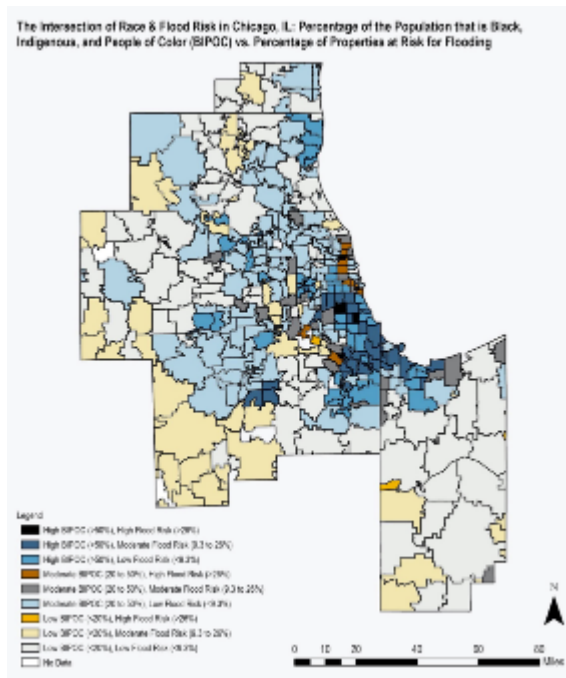
State	Racial Group with Lowest MHI	Household Income Gap: Statewide vs. Lowest Earning Group
Minnesota	Black	\$33,495
Wisconsin	Black	\$30,396
Illinois	Black	\$27,313
Indiana	Black	\$21,318
Ohio	Black	\$23,444
Michigan	Black	\$21,822
Pennsylvania	Other race	\$25,178
New York	American Indian or Alaska Native	\$26,977

- Great Migration (1910-1970) more than 6 million African Americans move to the region
- Today, 15 of the 25 most segregated U.S. cities are here
- High levels of income and wealth inequality; lower gov capacity

An Unequal Great Lakes Region

Persistent disparities in:

- Who is exposed to changing climate conditions and hazard events
- The capacities people have for accommodating and adapting



The Challenge

- Great Lakes cities face intertwined challenges of climate change and racial inequality
- Adapting cities to climate change requires a whole-of-city approach: deep transformations to urban infrastructures and economies (Hughes and Hoffmann 2020)
- Have the need and the vision...how do we get there?



Source: Detroit News, August 27, 2021

States can provide resources to make flood planning more likely, more equitable – and easier



A mapping project with help from NY DEC shows Newburgh, NY's waterfront in a flood scenario



Early literature discusses the role that states can and should play to enable local flood resilience

Examining the policies and programs states are currently providing for local governments

Objectives:

- **Determine and operationalize the types of resources** states provide for local flood risk policy and planning
- **Develop a scoring system** for assessing these resources
- **Apply the scoring system** to 8 states in the Great Lakes
- **Provide practitioners with highlights** from their state and others

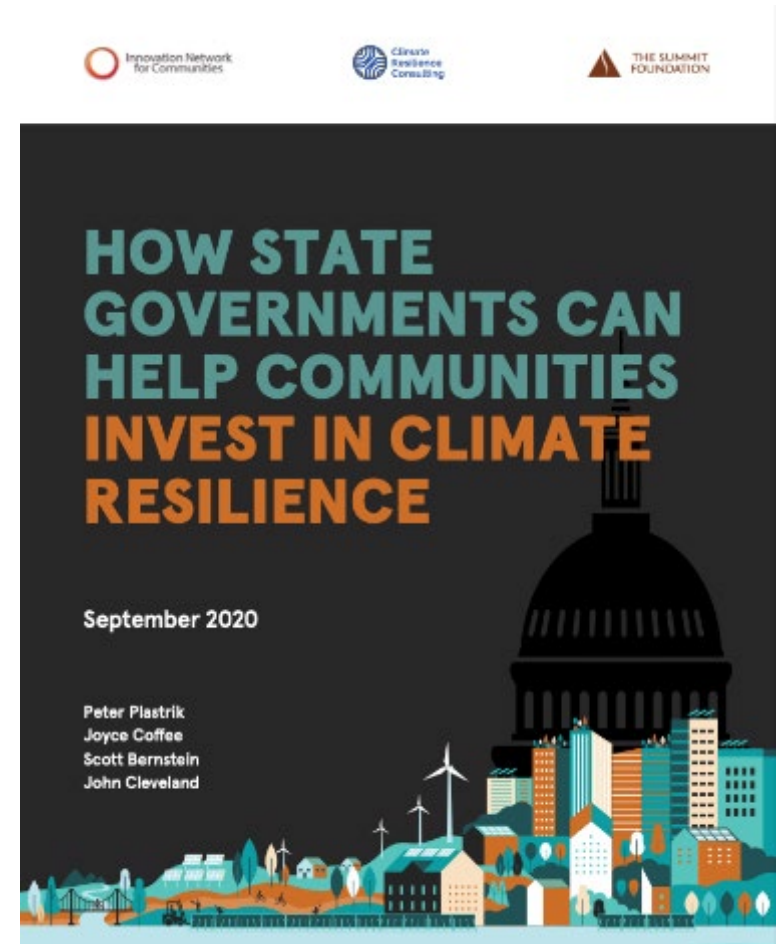


GLISA
A NOAA RISA TEAM

Scoring State Policies and Programs

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 - Information provision
 - Planning guidance
 - Regulations and standards
 - Funding and financing



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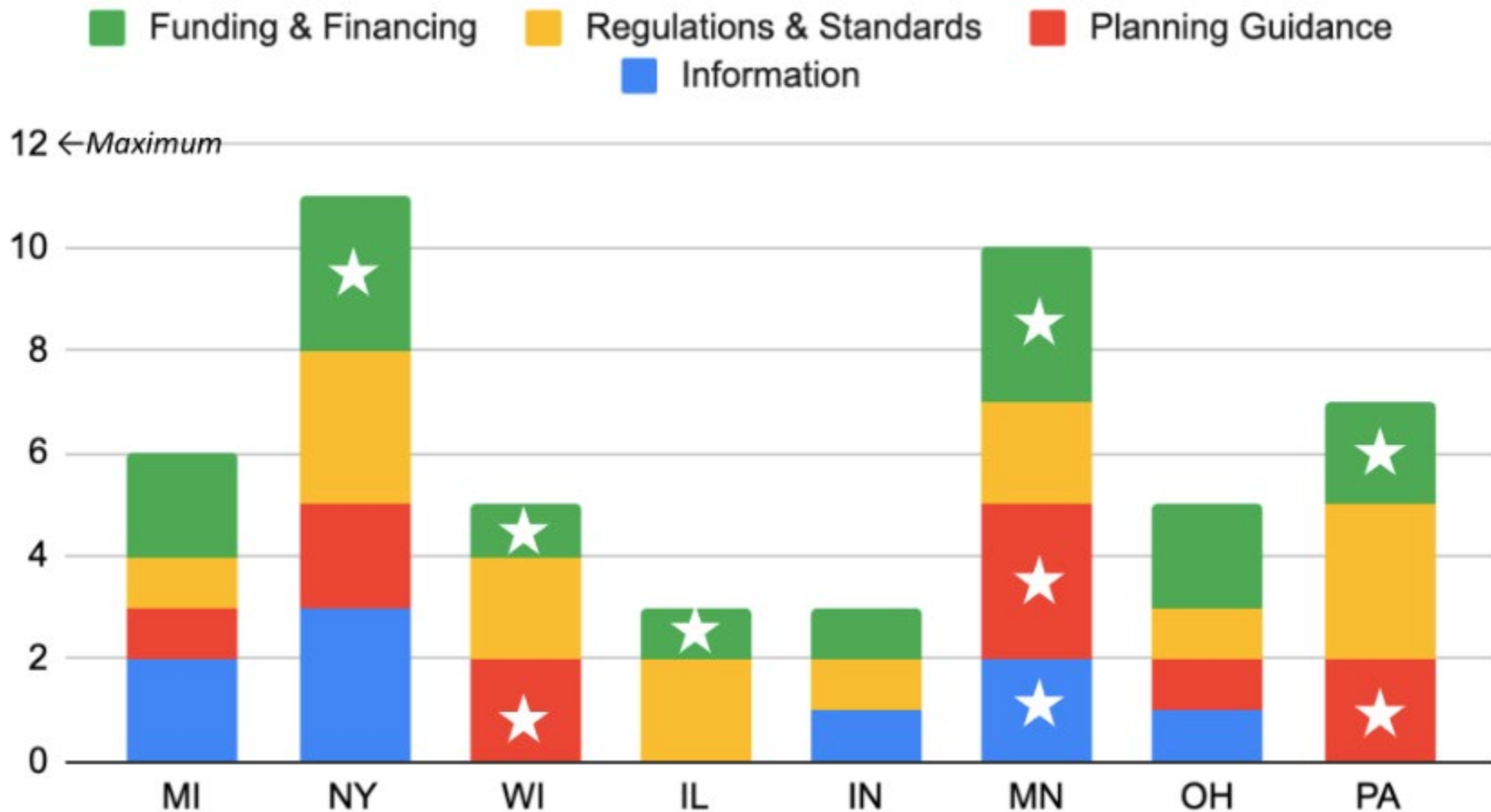
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4. Give states “stars” when they include attention to equity and justice

Scoring State Policies and Programs



Example: Minnesota's Planning Guidance

1. Climate Action Framework (2022)
2. State Water Plan (2020)
3. State Hazard Mitigation Plan (2019)
4. Climate Change Subcabinet (2019)

Example: New York's Regulations

Community Risk and Resilience Act (2014)

- Requires climate risks be part of planning, permitting and funding processes
- Communities have to meet CRRA requirements to access certain state funding/infra projects

State Smart Growth Public Infrastructure Policy Act (2010)

- Requires demonstrated consideration of future SLR/flood risk mitigation when an agency funds or otherwise supports a public infrastructure project

Example: Pennsylvania's Climate Impact Assessment

The 2021 impacts assessment includes, for the first time, an analysis of environmental justice and equity

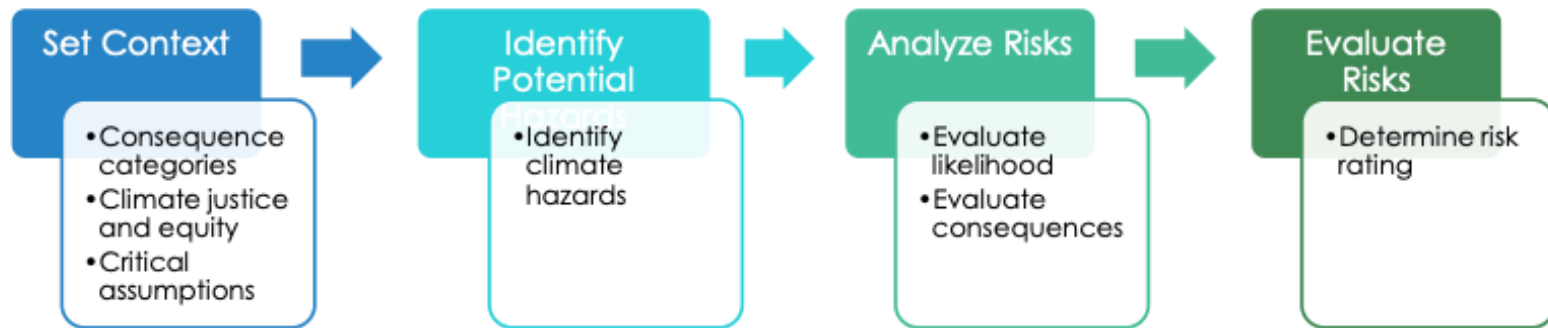


Figure 54. Risk assessment process

Recommendations for Policymakers

1. Center Equity
2. Use Information and Examples to Create Momentum Across Communities
3. Incentivize and Support Desired Actions



Next Steps

- Evaluate policy outcomes and impacts
 - Links to resilience as well as health, housing, economy
- Assess local awareness of state policies
- Examine transferability and scalability of best practices
- Others?





Thank You!

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