

“What if” Planning for Community Resilience

2022 Spring G/FLRPC Local Government Workshop

Agenda

- 01** Defining Climate Change
- 02** What is “What if” Planning?
- 03** Building the Scenario
- 04** Next Steps & Group Discussion



Defining Climate Change

Climate Change is a Global Issue



**Barton
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[The Paris Agreement](#)

[The Intergovernmental Panel on Climate Change Report \(2022\)](#)

[Fourth National Climate Assessment](#)



Climate Change is a Local Issue



**Barton
& Loguidice**

[NY ClimAID](#)

[NY Climate Change
Science
Clearinghouse](#)

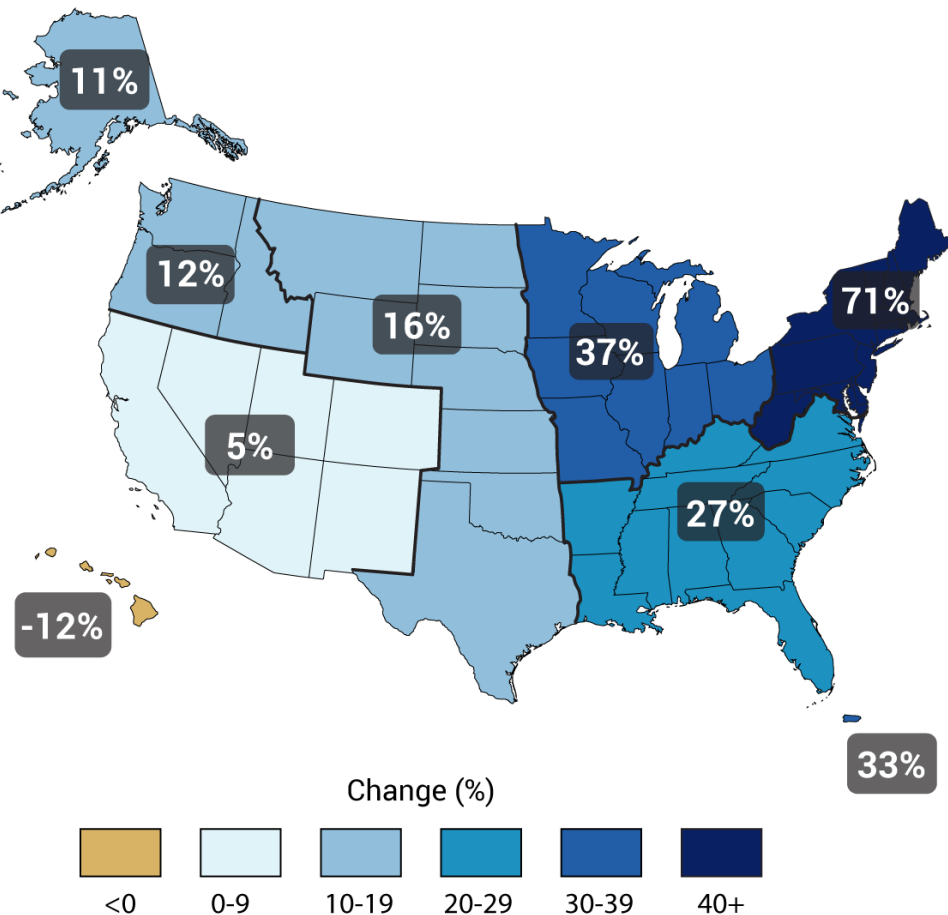


Impacts on Communities and Ecosystems



**Barton
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Observed Change in Very Heavy Precipitation



The map shows percent increases in the amount of precipitation falling in very heavy events (defined as the heaviest 1% of all daily events) from 1958 to 2012 for each region of the continental United States. **National Climate Assessment**

Many communities are self-insured. This means that losses to municipal structures and infrastructure are not really insured, but the losses are paid for through the municipal budget

Communities need to plan for climate impacts

Climate impacts will impact budgets

- Human Health
- Property and Infrastructure
- Water Supply and Pollution
- Agriculture
- Recreation and Tourism

Focal Scale

- Counties
- Regional Agencies



Slow-moving variables

(laws, regulations)

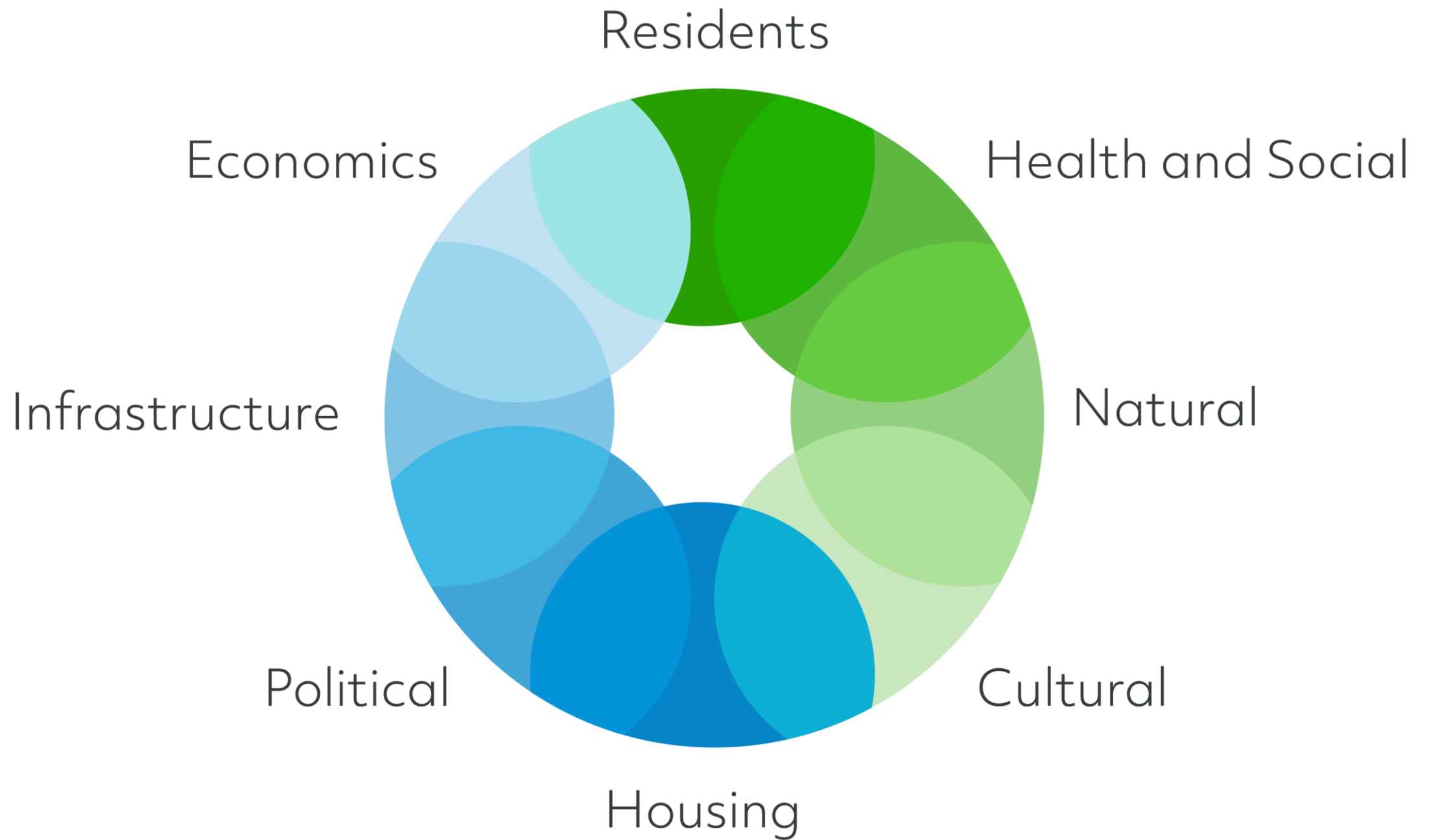
- United States
- Individual States



Fast-moving variables

(land use, management)

- Individual municipalities
- Landowners



What is “What if” Planning?

What is *What if*...Planning?

What if... planning is a process for considering what you/your community would do (inside of your control) *given a range* of hazards that are outside of your/your community's control.

AKA Scenario Planning



The *What if...* Planning Process

Identify Asset Systems

- Infrastructure & Buildings
- Social
- Financial
- Economic

Assess impacts of potential hazards on asset systems

Explore adaptive actions



Types of Scenarios

- **Narrative**
- **Exploratory**
- **Contingency planning**



Other Considerations

Resiliency planning is typically based on environmental scenarios; and rarely produces scenarios based on social, economic, legal, and regional considerations.

However, these are important considerations.





Building the Scenario

Consider a range of future **climate stressors** or **climate disturbances**

Sea level rise
Extreme precipitation
Coastal storms
Extreme temperature
Heat waves
Drought

Understand their affects on **assets**

Economic systems
Infrstructure
Health and social services
Natural and cultural resources
Housing
Vulnerable populations

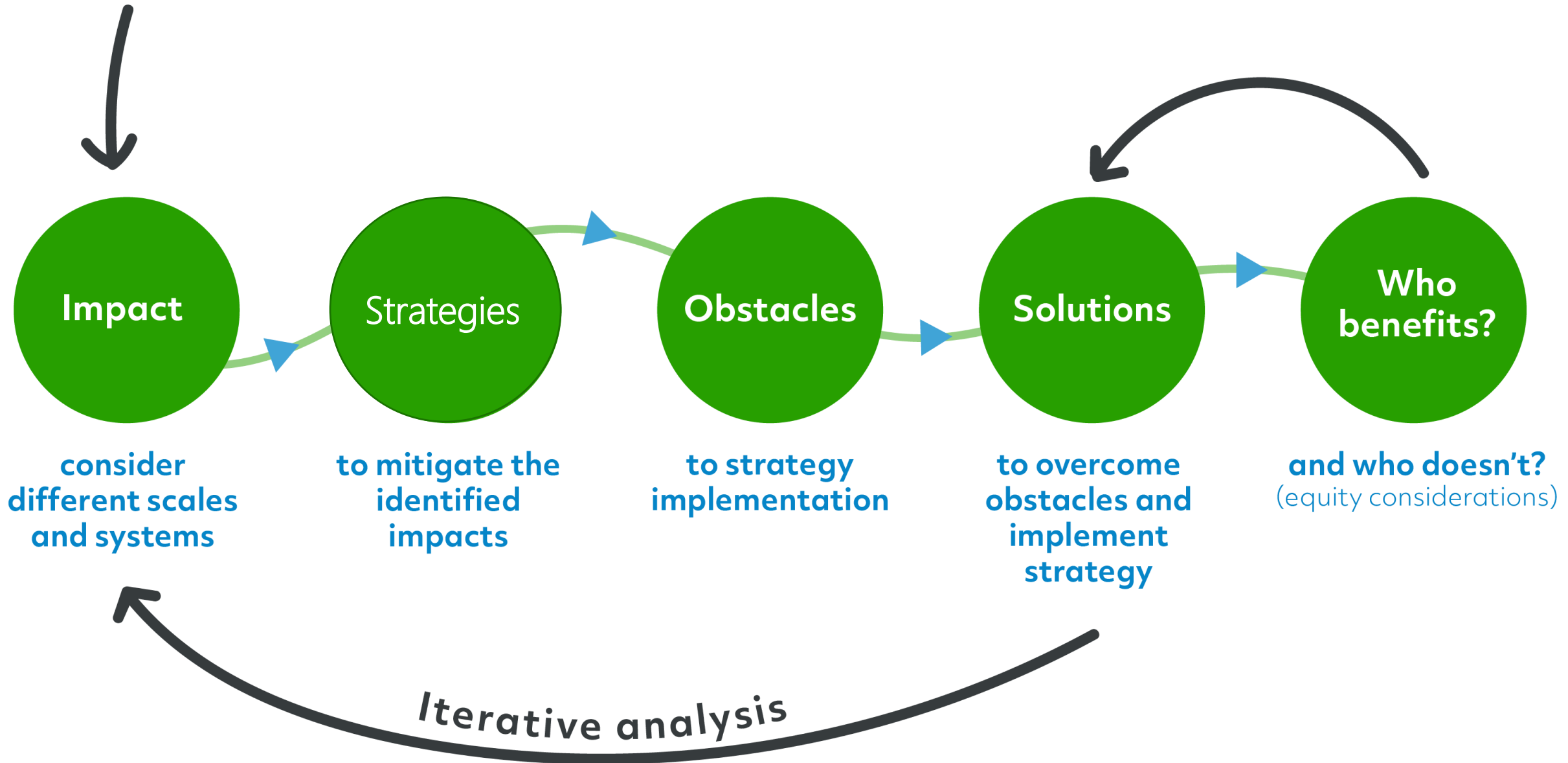
Identify mitigation and adaptation **projects**

Capital improvements
Community planning
Capacity building
Recovery and response
Policies
Laws and regulations



Some of the biggest challenges will be the **frequency**, **duration**, and **intensity** of these events, as well as the **overlap of multiple extreme events**.

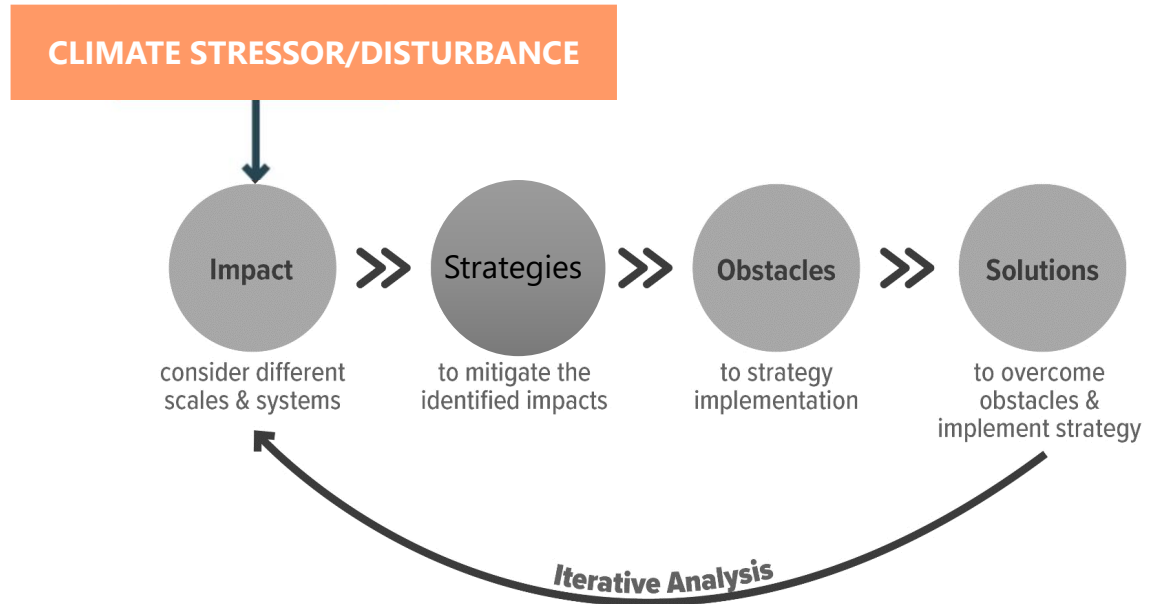
Climate Stressor or Climate Disturbance



SCENARIO DEVELOPMENT

Step 1. Identify a climate stressor/disturbance.

- Coastal storms
- Drought
- Flooding
- Extreme precipitation

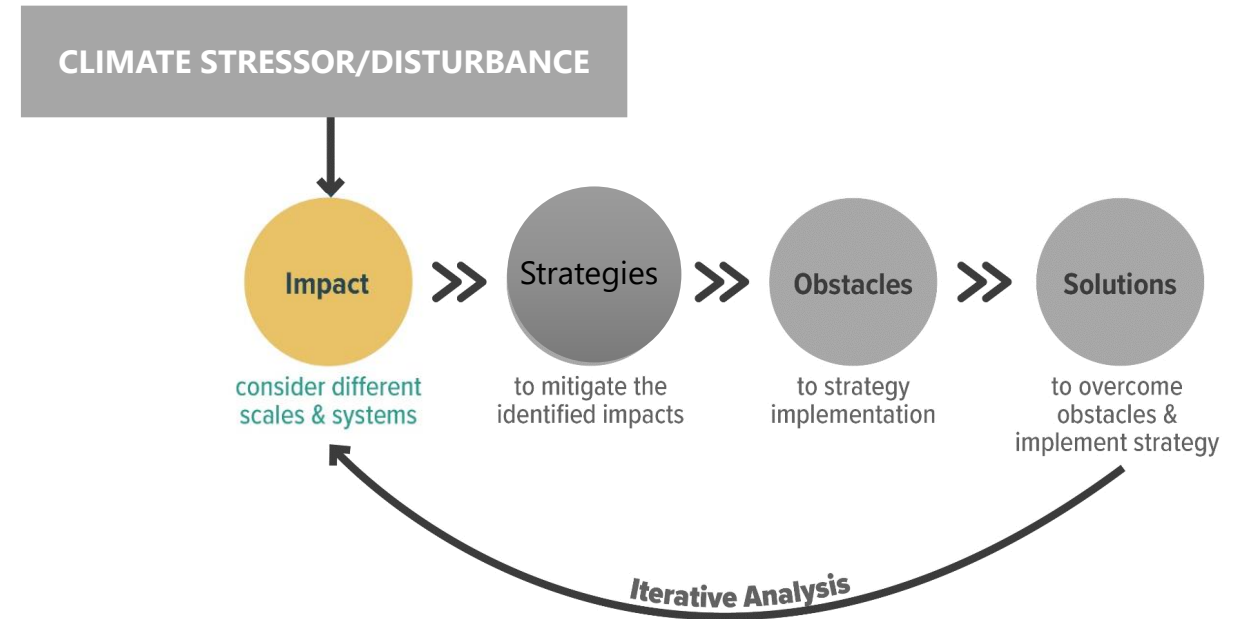


SCENARIO DEVELOPMENT

Step 2. Identify potential impacts.

FEMA CORE RECOVERY FUNCTIONS

1. Economic
2. Health & Social
3. Natural & Cultural
4. **Housing**
5. Infrastructure
6. Community Planning



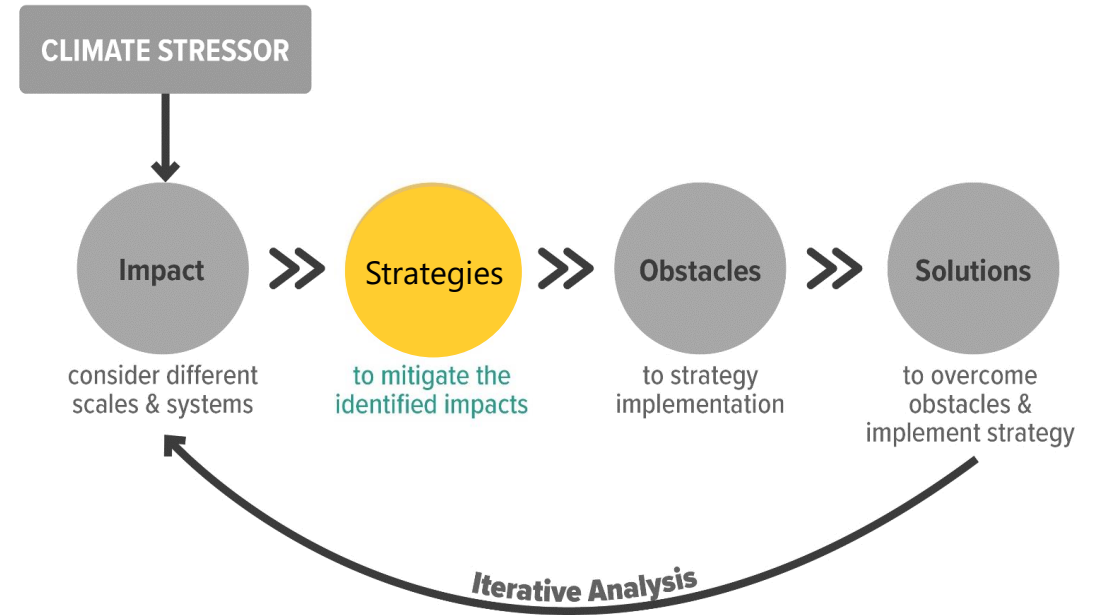
POTENTIAL IMPACTS

- Loss of or damage to property
- Loss of life
- Human Displacement

SCENARIO DEVELOPMENT

Step 3. What strategies could be implemented to mitigate this impact in the future?

- Elevate residential structures
- Relocate housing



SCENARIO DEVELOPMENT

Step 4. What are some of the obstacles you might face in implementing your resilience strategies?

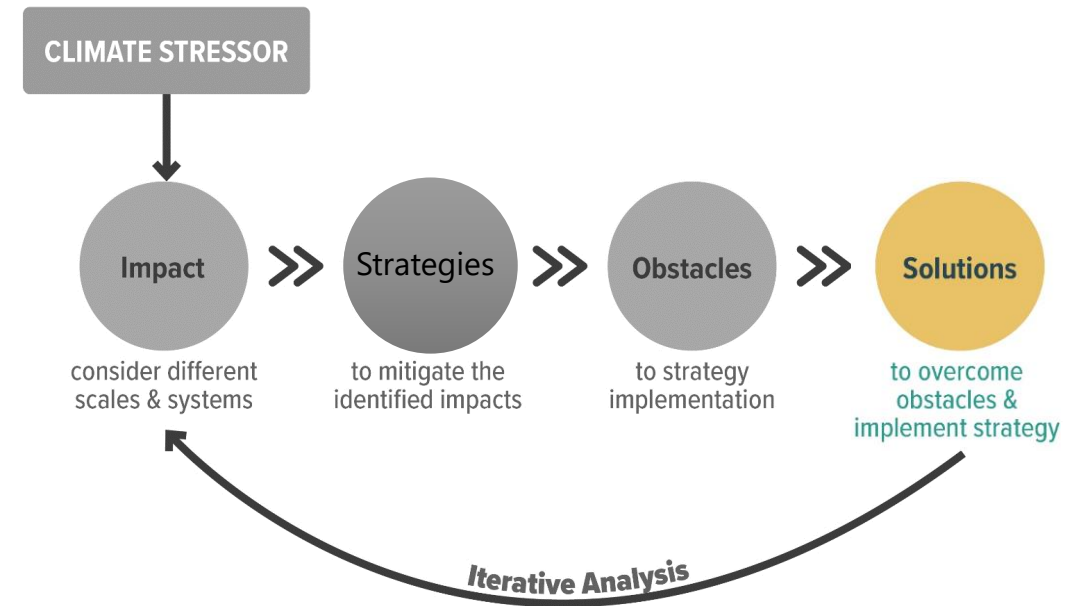
- Access to funding
- Community buy-in
- Political support



SCENARIO DEVELOPMENT

Step 5. How can these obstacles be overcome so that your strategy can be implemented?

- Intermunicipal collaboration
- Grants
- Legislation
- Public outreach campaigns
- Technical assistance
- New programs / policies



FILL UP ON THE FACTS **LOW-RISK DOES NOT MEAN NO-RISK.**

More than one in five claims to the National Flood Insurance Program in South Hampton Roads have been for properties outside of high-risk, mapped flood zones.

What can you do about the growing chances of flooding in Hampton Roads?

GET
**FLOOD
FLUENT.ORG**

<https://getfloodfluent.org/get-flood-fluent-media-resources/>

EXPLORING UNINTENDED CONSEQUENCES

Step 6. If your strategy is implemented, how might it impact other systems/core recovery functions?



If houses are elevated by 8-feet, what are the impacts to other core recovery functions?

HEALTH & SOCIAL

Access for emergency responders

HOUSING

Increased tax assessments & housing costs

Group Discussion

Barton & Loguidice

The Experience to **Listen**.
The Power to **Solve**.



Mary Austerman
Great Lakes Coastal Community Specialist
New York Sea Grant
mp357@cornell.edu
(315) 331-8415 x121

Jayne Breschard
Senior Managing Community Planner
Barton & Loguidice
jbreschard@bartonandloguidice.com
(585) 325-7190 x 2247

