

# **Risk Communication and Decision-Making for Local Governments**

**The National Academies' Second Sustainable R&D Forum  
Resilience and Adaptation Panel**

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# Coastal Communities: Vital to U.S. and International Economies

- 57 percent of the U.S. national gross domestic product is contributed by coastal watershed counties.
- Coastal counties contain 53 percent of the nation's population—but account for only 17 percent of U.S. land area (excludes Alaska).
- Coastal habitats help reduce impacts of floods, storms, and climate change on coastal communities by absorbing water, wave energy, and other stressors.



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added some info on wetlands and flooding in the notes  
NOAA\_OCRM, 7/16/2008

# NOAA Decision Support for Resilience

- **Partnerships**

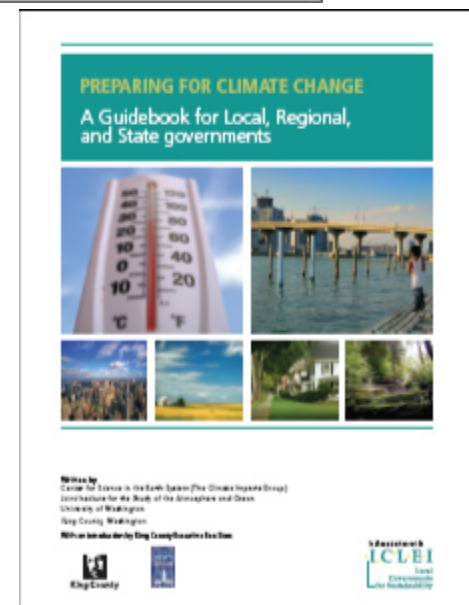
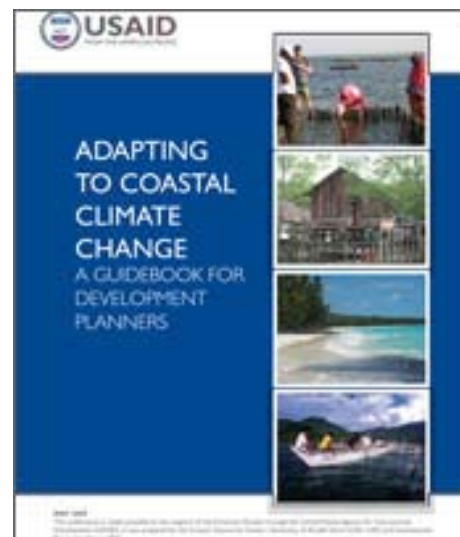
- Chambers of Commerce (Mobile Bay)
- The Nature Conservancy, Trust for Public Land, Land Trust Alliance
- Federal agencies
- Academia

- **Assessments and Planning Guidance**

- *Adapting to Coastal Climate Change: A Guidebook for Development Planners* (international)
- Local, regional, and state government guidebooks (domestic)

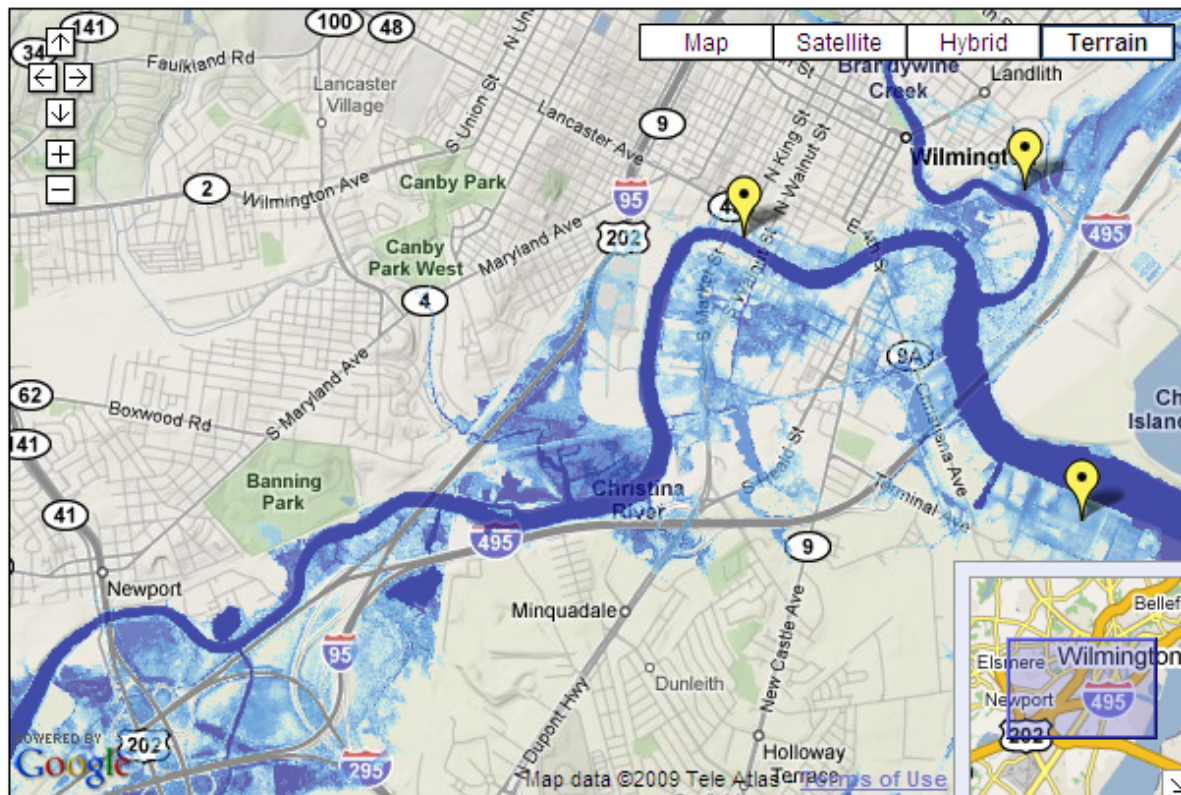
- **Social Science to Improve Products and Services**

- Understanding and improving how science is used in decision-making



# Sea Level Rise Impacts: Decision Support Tool

## SEA LEVEL RISE IMPACTS FOR WILMINGTON, DELAWARE



Sea Level  
Rise: 4 ft

This map shows potential flooding due to sea level rise. Use the slider bar to view the extent of inundation.

Water levels shown are relative to mean high water. Rising sea levels will increase the frequency of daily tidal floods.

The map illustrates the scale of potential flooding, not the exact location, and does not account for erosion, subsidence, or future construction.

Places of interest vulnerable to sea level rise.

Note: Flood layers may take a moment to load.

[Flood Frequency Predictions](#)

- Potential flooding in Wilmington, DE, due to sea level rise
- Water levels shown are relative to mean high water
- Rising sea levels will increase the frequency of daily tidal floods



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# Barriers to Success

- Risk should be driving decision-making regarding development and redevelopment, but it is not. Why?
  - Development revenues infused to local communities; Losses are spread nationally
  - Impediments associated with takings law: "*. . . nor shall private property be taken for public use, without just compensation.*"
  - Federal policies that subsidize development in risky areas
  - Need for improved communication of risk and urgency
- Lack of incentive or mandate for the range of state and local managers (i.e., emergency, floodplain, resource managers, land use, transportation planners) to work together toward an effective solution





# The Partnership Dimension: Internalizing Risk

- Creative partnerships to integrate climate information and planning tools
  - Public housing
  - Insurance industry
- Understanding cultural perceptions and what people value to promote risk-wise behavior
- Using tools and training to incentivize policy and behavior changes to encourage sustainability



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