South Florida's Approach to Water Governance:

Regional Adaptation to Flooding, Storm Surge, Sea Level Rise

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Florida's Economy

- Three fourths of Florida's population resides in coastal counties
  - 79% of state's total annual economy
  - built environment/infra-structure with replacement value of $2 trillion; $3 trillion by 2030

Photo: http://forwardflorida.com/florida-transportation/ripple-effect/

Economic Vulnerability to Flooding

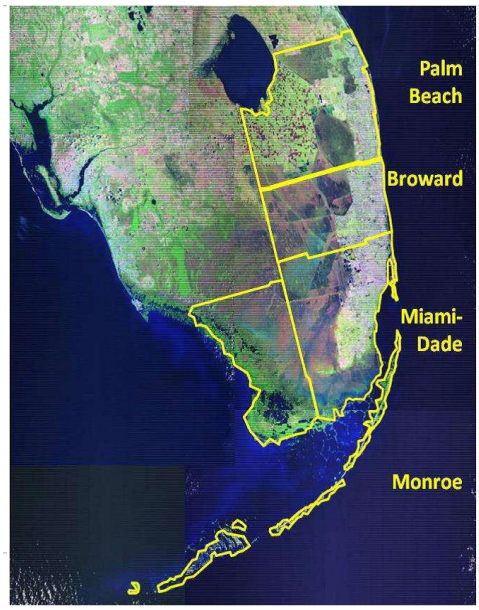
- A 2013 World Bank study identified 10 cities around the world that are most at risk to flooding:
  1) Guangzhou
  2) Miami
  3) New York
  4) New Orleans
  5) Mumbai
  6) Nagoya
  7) Tampa
  8) Boston
  9) Shenzen
  10) Osaka

http://www.worldbank.org/en/news/feature/2013/08/19/coastal-cities-at-highest-risk-floods

Pictures by Aline te Linde
September 2013

How is Florida responding?

- October 23, 2009: Southeast Florida Regional Climate Change Compact formed
  - Southeast Florida Regional Climate Change Compact ("Compact Counties") was established by the board of county commissioners in Palm Beach, Broward, Miami-Dade and Monroe counties
  - Staff Steering Committee formed (with ex-officio advice from entities such as the South Florida Water Management District and South Florida Regional Planning Council)



Sources:
miamidade.gov/oos/library/2011_climate_action_draft.pdf
http://glovis.usgs.gov/

How is Florida responding?

- 2010-2013: Federal/State legislative programs coordinated
  - In the US, the Compact Counties are recognized as one of the leading examples of regional-scale climate action; the first to pilot a "Project of Special Merit," called "Adaptation Action Areas"

What is an "Adaptation Action Area"?

"optional comprehensive plan designation for areas that experience coastal flooding and that are vulnerable to the related impacts of rising sea levels for the purpose of prioritizing funding for infrastructure needs and adaptation planning. Local governments that adopt an adaptation action area may consider policies within the coastal management element to improve resilience to coastal flooding"

- Criteria for the adaptation action area may include:
  - Areas below, at, or near mean higher high water
  - Areas which have a hydrological connection to coastal waters
  - Areas designated as evacuation zones for storm surge

Source: https://www.broward.org/Legislative/Documents/ChangingClimate.pdf

How is Florida responding?

- December 9, 2012: Counties approve Climate Action Plan
  - The Compact Counties have collaboratively developed a Climate Action Plan, which highlights 110 recommendations for transitioning to a more resilient Southeast Florida
- Spring 2014: Compact Counties formally adopt Southeast Florida Regional Climate Action Plan (RCAP)

How are Adaptation Action Areas funded?

- Federal:
  - National Oceanic and Atmospheric Administration (NOAA)
- State:
  - Florida Department of Environmental Protection (FDEP)
  - Florida Department of Economic Opportunity (DEO)
  - South Florida Regional Planning Council (SFRP)
  - Broward County
  - City of Fort Lauderdale
- Non-Profit:
  - Kresge Foundation; three-year, $975,000 grant to the Institute for Sustainable Communities to support the implementation of the Regional Climate Action Plan (RCAP)

Funding Adaptation: from P3s to “P5s”

- P3: Public Private Partnership
- → P5:
  - Public
  - Private
  - Non-Profit
  - Philanthropic
  - People
- P5 works in Southeast Florida because of the:
  - complexity of the problem
  - diversity of the region’s stakeholders
  - uniqueness of the Compact’s policy goals

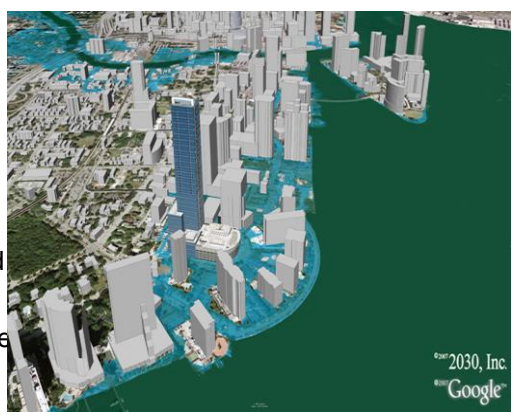
The Compact's Climate Resiliency Goals

- build coalitions with more municipalities; create guidance for statewide dissemination
  - incorporate the "Adaption Action Area" definition into more municipal and/or county Comprehensive Plans
- revise building codes and land development regulations in order to reduce future risk and economic losses associated with sea level rise and flooding

Source: www.broward.org/naturalresources/climatechange/documents/

The Compact's Climate Resiliency Goals

- develop new community flood maps reflective of a 100-year storm event under future sea level rise scenarios and use this information in the permitting/licensing of transportation projects, water management systems, and public infrastructure
- encourage private insurers and Citizens Insurance to invest in climate change science as a "present value of avoided future costs" strategy



Source: "Florida's Resilient Coasts"

Challenges: Funding Climate Resiliency

- Insurance industry
  - Can the present value of avoided future costs be a significant motivation for action?
- Coastal property owners vs inlanders
- Long-term funding
- Florida's unique economy

"If you want to go fast, go alone.

If you want to go far, go together."

- African Proverb

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