

FACING OUR ECO-FUTURE

*Innovations & Techniques
in Environmental Planning*

BISCAYNE BAY COASTAL WETLANDS

- *Restoring hydrology of wetlands connected to a U.S. marine national park*
 - *Mangroves, salt marsh*
- *Background [webpage](#)*
 - *Fact Sheet [pdf](#)*



BISCAYNE BAY COASTAL WETLANDS



THINK LIKE A WATER MANAGER: ROUGH WATERS AHEAD?

Factual / practical concerns?	Legal / regulatory concerns?

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Factual / practical concerns?	Legal / regulatory concerns?
Cost of acquisition	Private property taking
Water supply	404 permitting
Flood control systems	NPDES permitting
Sea level rise	

CALOOSA HATCHEE RIVER DISCHARGES

- *Increasing flows to downstream estuary*
- *Fact Sheet [link](#)*
- *Planning [document](#)*
 - *See pdf at pp. 84-85;
internal pp.61-62*



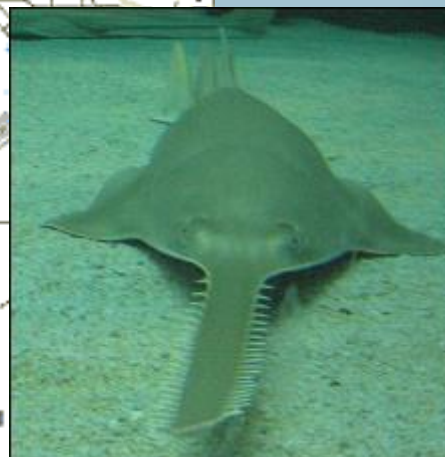
CALOOSAHAATCHEE WATERSHED



CALOOSAHATCHEE RIVER DISCHARGES



Franklin Lock (June 17, 2008)



Smalltooth sawfish & sand,
Florida manatee & seagrass

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Competing water supply needs of agriculture	Minimum flows & levels
Competing species needs	Endangered Species Act & critical habitat
Maintaining stable salinity levels despite droughts & hurricanes	Water quality violations
Sea level rise!	

DISPERSED WATER PROJECTS

- Storing waters on private lands in Northern Everglades
- Fact Sheet [link](#)
- Approved [contracts](#)
- Audubon [news story](#)



DISPERSED WATER PROJECTS



*Onsite pumping,
monitoring,
and storage
for future use*

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THINK LIKE A WATER MANAGER: ROUGH WATERS AHEAD?

Factual / practical concerns?	Legal / regulatory concerns?
Drought, hurricanes, System failures and evapotranspiration	Safety, liability?
Managing a wetland, or a reservoir	404 permits? Wildlife demands?
Water quality considerations	NPDES permits?
Climate change	

THE SOUTH FLORIDA CLIMATE CHANGE COMPACT

- *Palm Beach, Broward, Miami-Dade, Monroe Counties*
- *Fact Sheet [link](#)*
- *Approved [contracts](#)*
- *Audubon [news story](#)*



IMPACTS OF RISING SEAS: FLOOD CONTROL









CORAL REEFS

- *South Florida reef ecosystems bring over \$6 billion in annual income and 71,000 jobs!*
- *Coral growth is affected by temperature, water quality, and turbidity, as well as other factors.*
- *Climate change related events, such as sea level rise and increasing temperatures, are predicted to negatively our reefs.*

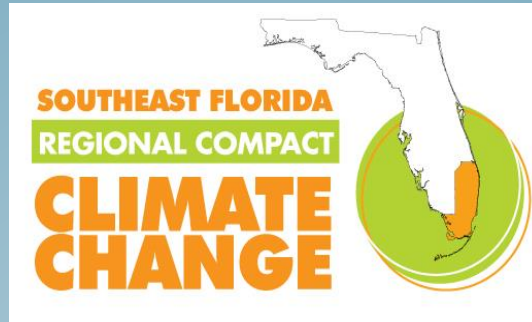


COMPACT PRINCIPLES

- *Adoption of GHG reduction targets*
- *Creation of climate change task force*
- *Development of sea level rise projection*
- *Assessment of vulnerable areas*
- *Climate and energy policy advocacy*
- *Similar efforts duplicated across region*

Partners Lending Expertise

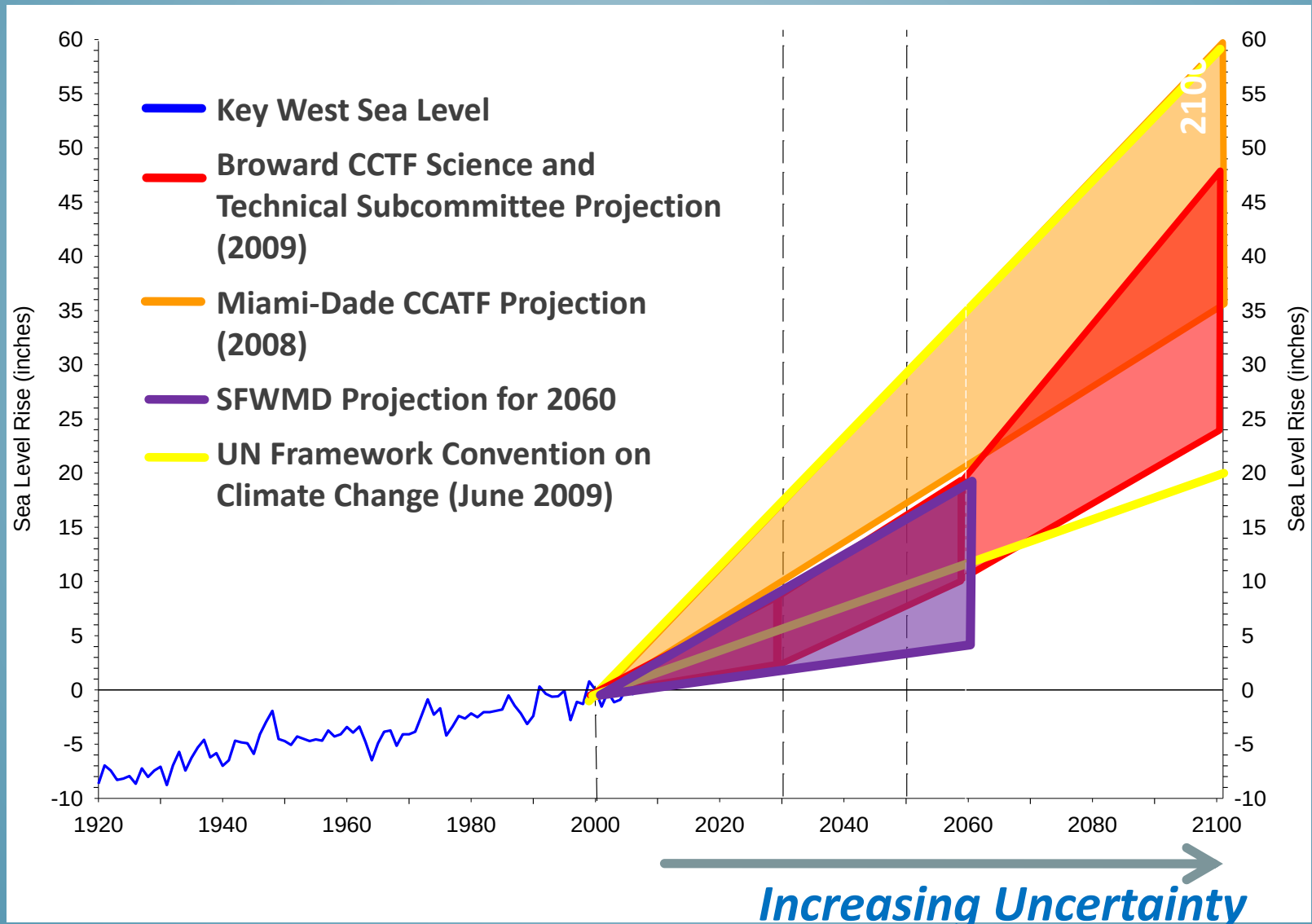




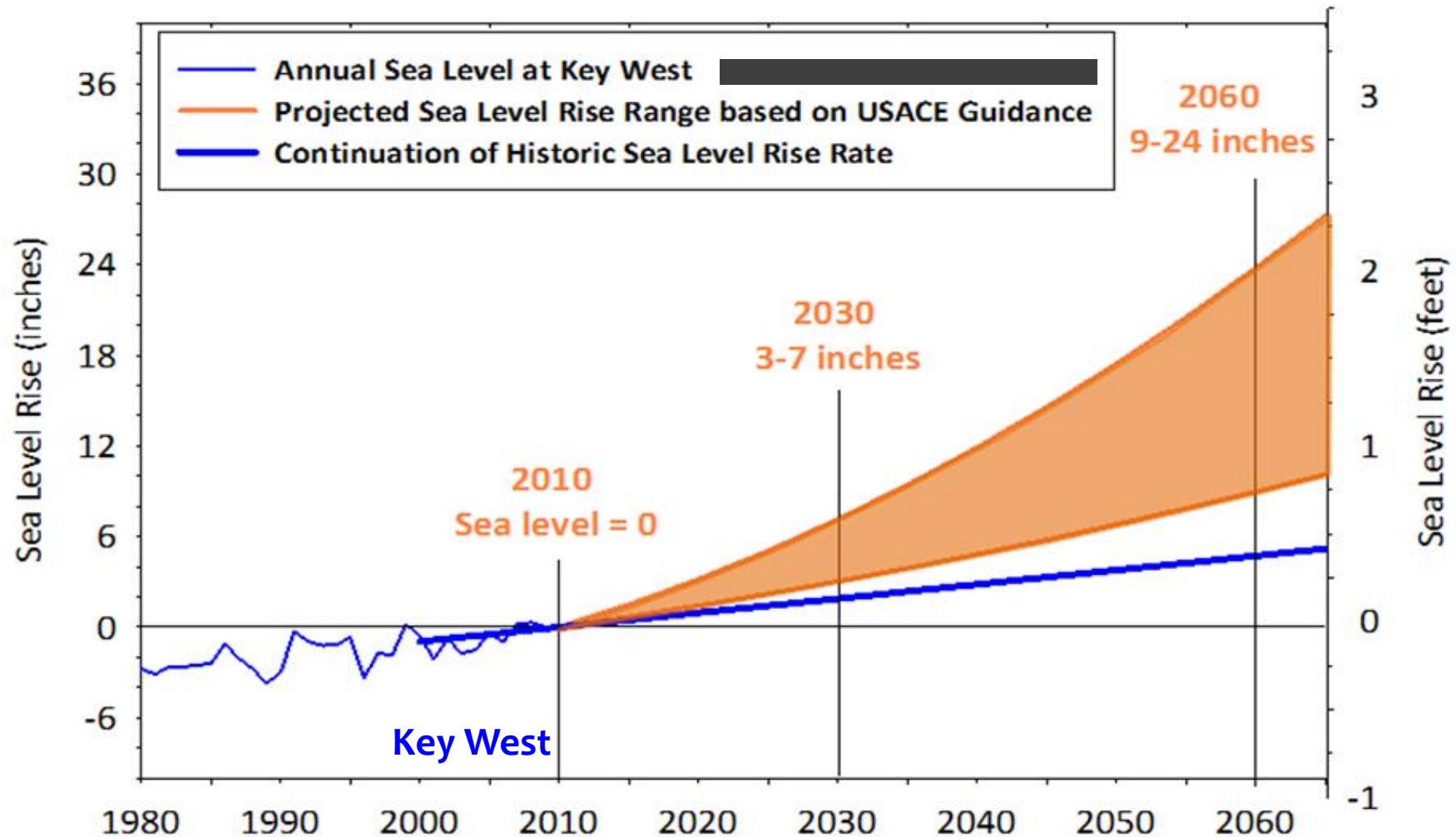
- Policy Collaboration: ratified January 2010
 - Develop Regional Tools
 - Unified SLR Projection
 - Inundation Maps
 - GHG Emissions Baseline
 - Coordinated Planning
 - Mitigation & adaptation strategies
 - Convene Annual Summits



COMMON REGION BUT DIFFERENT APPROACHES TO SEA LEVEL RISE PROJECTIONS



Unified Sea Level Rise Projection



Timeline of Sea Level Rise in SE FL

1 foot = 2040 – 2070 2 foot = 2060 – 2115 3 foot = 2075-2150

Adaptation Action Areas

- *Integration of SLR adaptation into local government comprehensive planning (HB 7207)*
 - **Section 163.3164(1) F.S.** Establishes “Adaptation Action Areas” within the coastal management element, to identify areas that experience coastal flooding due to extreme high tides and storm surge, and that are vulnerable to the related impacts of rising sea levels for the purpose of prioritizing funding for infrastructure needs and adaptation planning.

Adaptation Action Areas

- *Integration of SLR adaptation into local government comprehensive planning (HB 7207)*
 - **Section 163.3177(6)(g)(10), F.S.** Establishes criteria for the adaptation action area which may include, but need not be limited to, areas where land elevations are below, at, or near mean higher high water, which have a hydrologic connection to coastal waters.

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QUESTION:

*How is your country
innovating in areas of
water management or
environmental protection?*