



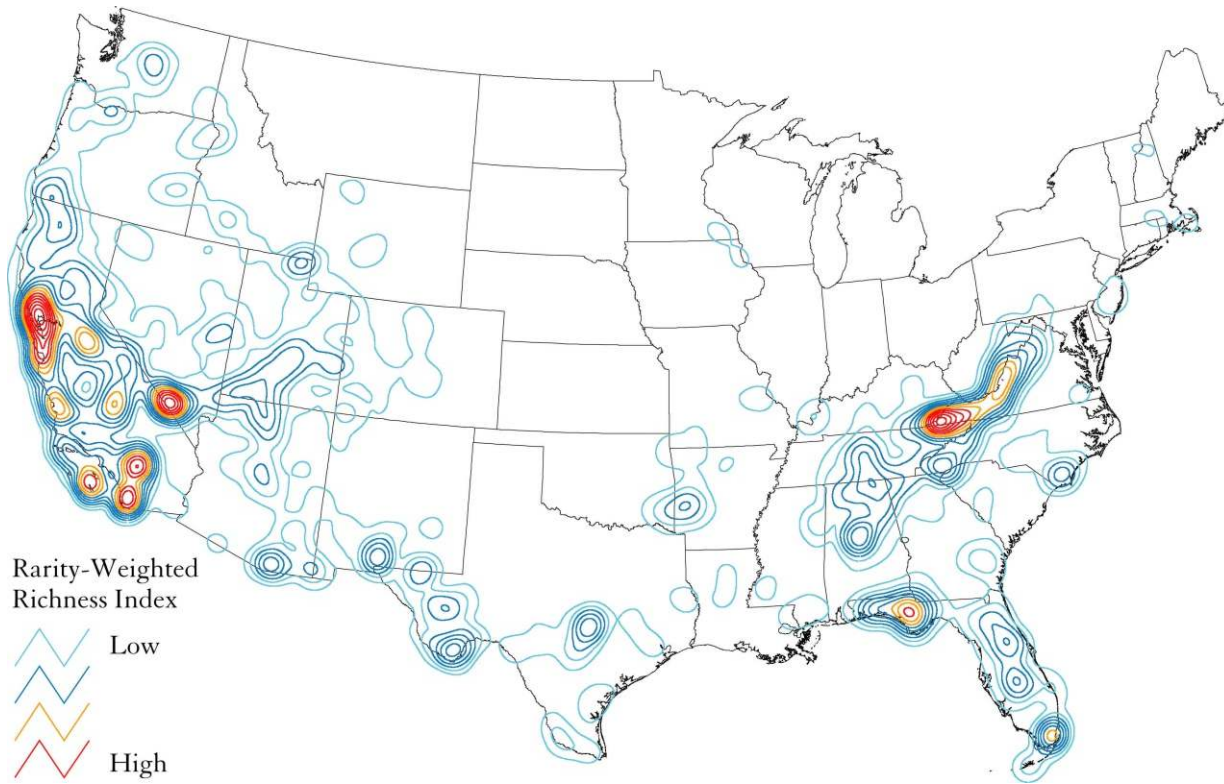
NATURE-BASED COASTAL DEFENSES

SEFL Regional Climate Change Compact's Shoreline Resilience Working Group

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S. Florida supports high numbers of rare species...



Source: *Precious Heritage*,
TNC & ABI, 2000

...and nature-dependent economic sectors.



Agriculture



Tourism

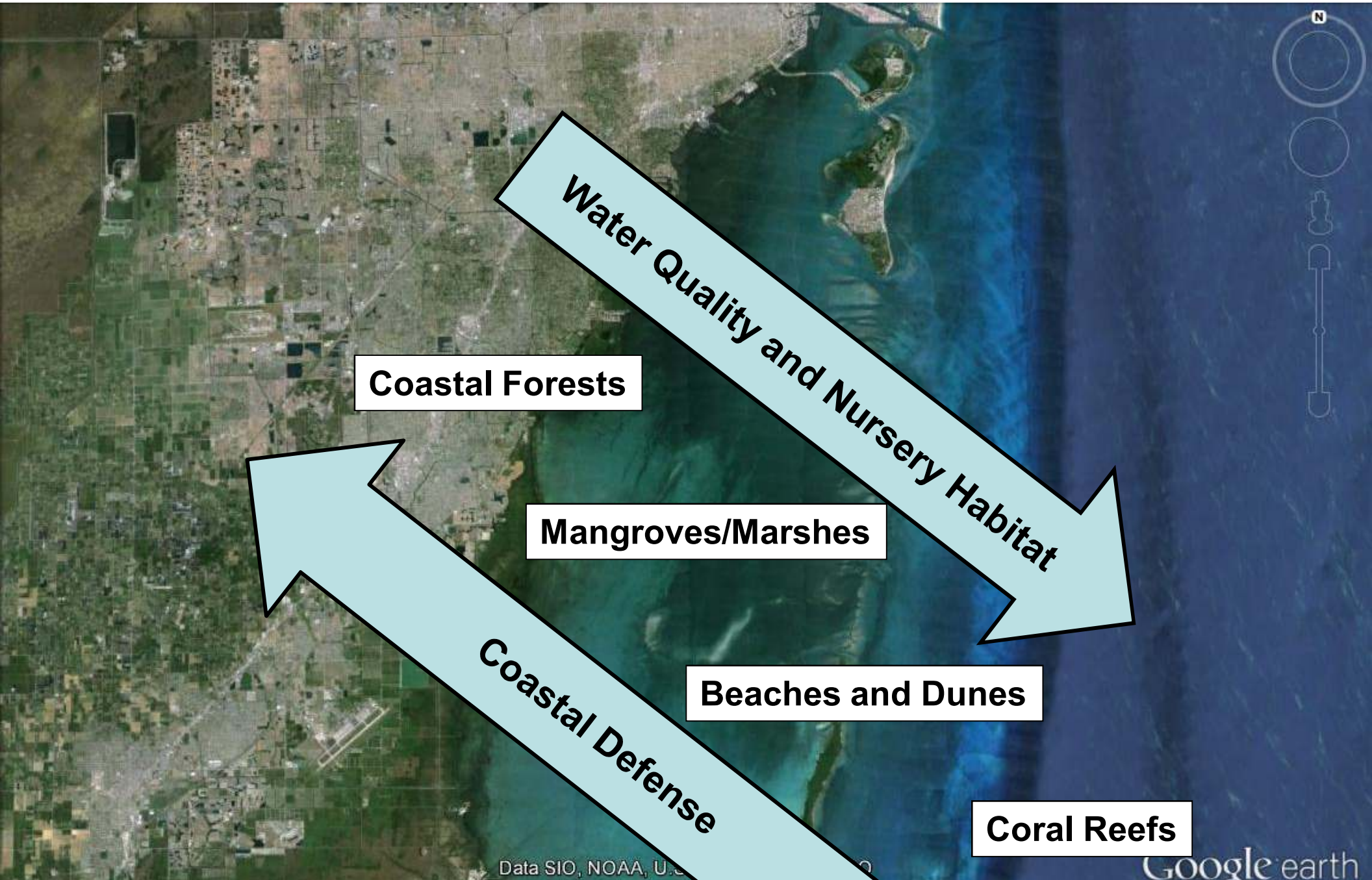


Fisheries



Real Estate

Natural coastal defenses minimize erosion and absorb floodwaters.



Regional Climate Change Action Plan

- Details 106 recommendations across 7 planning areas
- Natural Systems (NS) planning area has 14 recommendations
- “NS-7 Coordinate ‘living shorelines’ objectives... to foster use of natural infrastructure (e.g. coral reefs and mangroves) instead of or in addition to grey infrastructure (e.g. bulkheads).”



A Region Responds to a
Changing Climate

Southeast Florida Regional Climate
Change Compact Counties

Regional Climate Action Plan

October 2012



SEFL Regional Climate Change Compact's Shoreline Resilience Working Group

- **Scope:** All forms of natural, “living” and hybrid grey-green approaches to coastal defense that protect the SEFL mainland or the Florida Keys.
- **Timeline:** 2014-2016 or longer
- **Goal:** Improve coastal defense in the Compact region by increasing the efficacy, number and scale of nature-based erosion control and flood attenuation projects.

SEFL Regional Climate Change Compact's Shoreline Resilience Working Group

- **Objectives:**

- Serve as a clearing house for best practices and technical information
- Highlight completed projects as examples
- Catalogue opportunities for new projects
- Promote new projects with particular emphasis on a diverse set of high profile examples that advance the science and socialize the concept of nature-based coastal defenses

Nature-Based Coastal Defenses in Southeast Florida

Published by












The Nature Conservancy

Protecting nature. Preserving life.



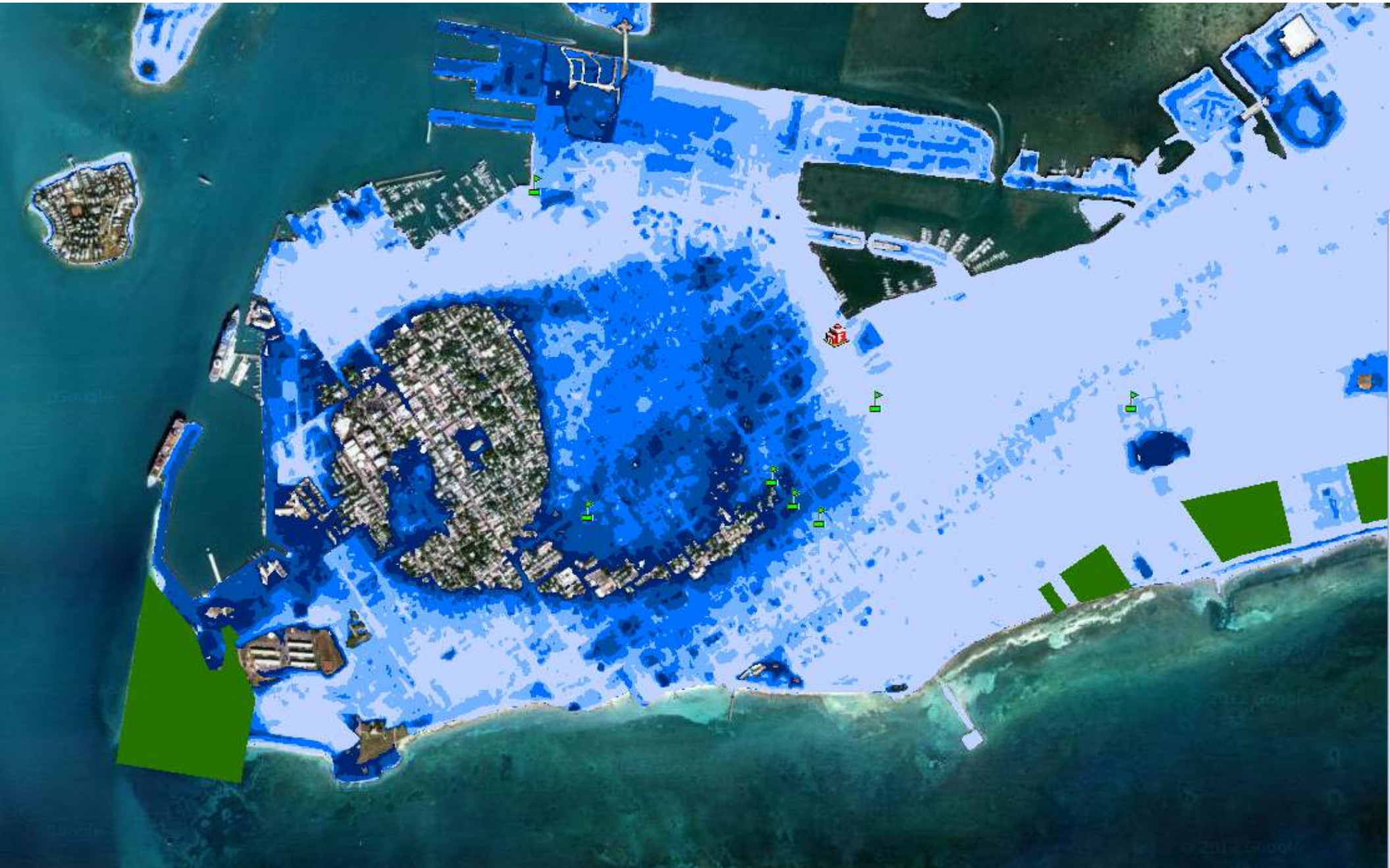
PROJECT DESCRIPTION

www.nature.org/southeastflorida-report

PROJECT		Total Acres
Coral Cove Dune Restoration Project		20 acres
Snook Islands Natural Area Habitat Enhancement Project	  	1 acre
John U. Lloyd Beach State Park Dune Restoration Project		2.5 acres
West Lake Park Mitigation and Restoration Project	 	54 acres
Miami Beach Dune Restoration and Enhancement Project		70 acres
Virginia Key North Point Ecosystem Restoration Project	 	17 acres
Florida Keys Coral Restoration Project		27 acres

www.maps.coastalresilience.org

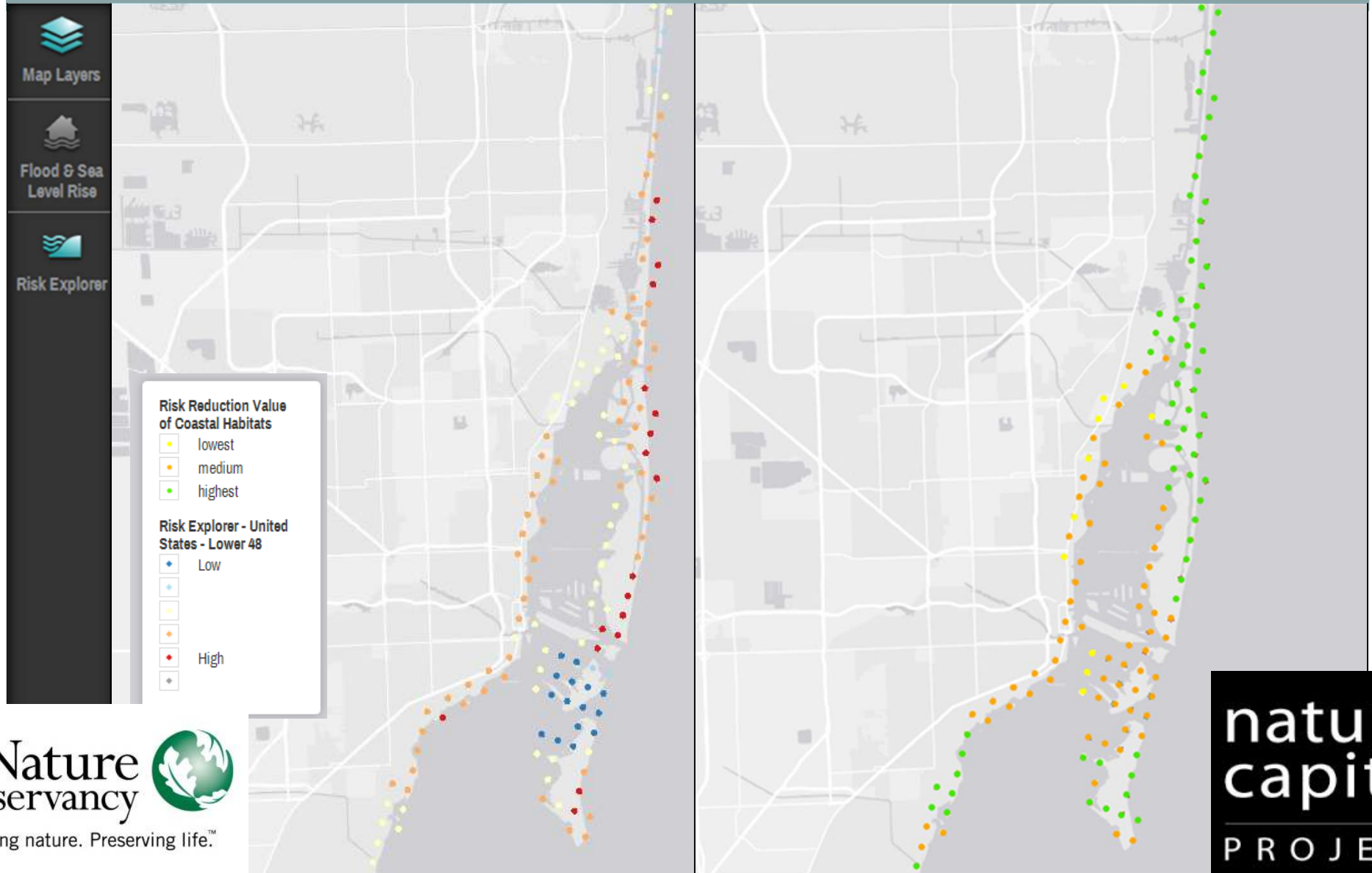
(Example: Key West with storm surge and 1', 2', 3', 4' of sea level rise mapped along with publicly-owned natural areas, schools and fire stations)



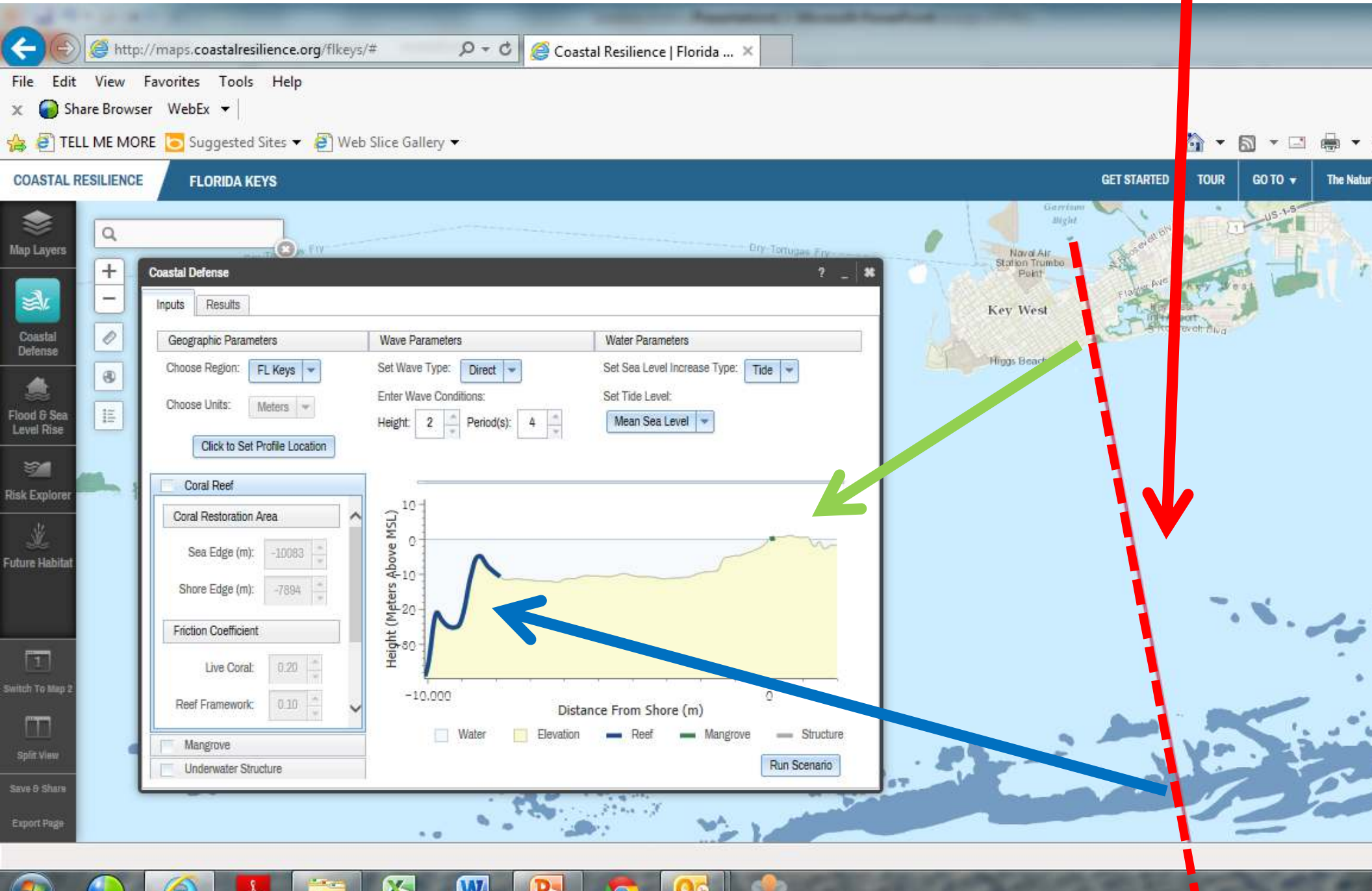
“Risk Explorer App”

www.maps.coastalresilience.org

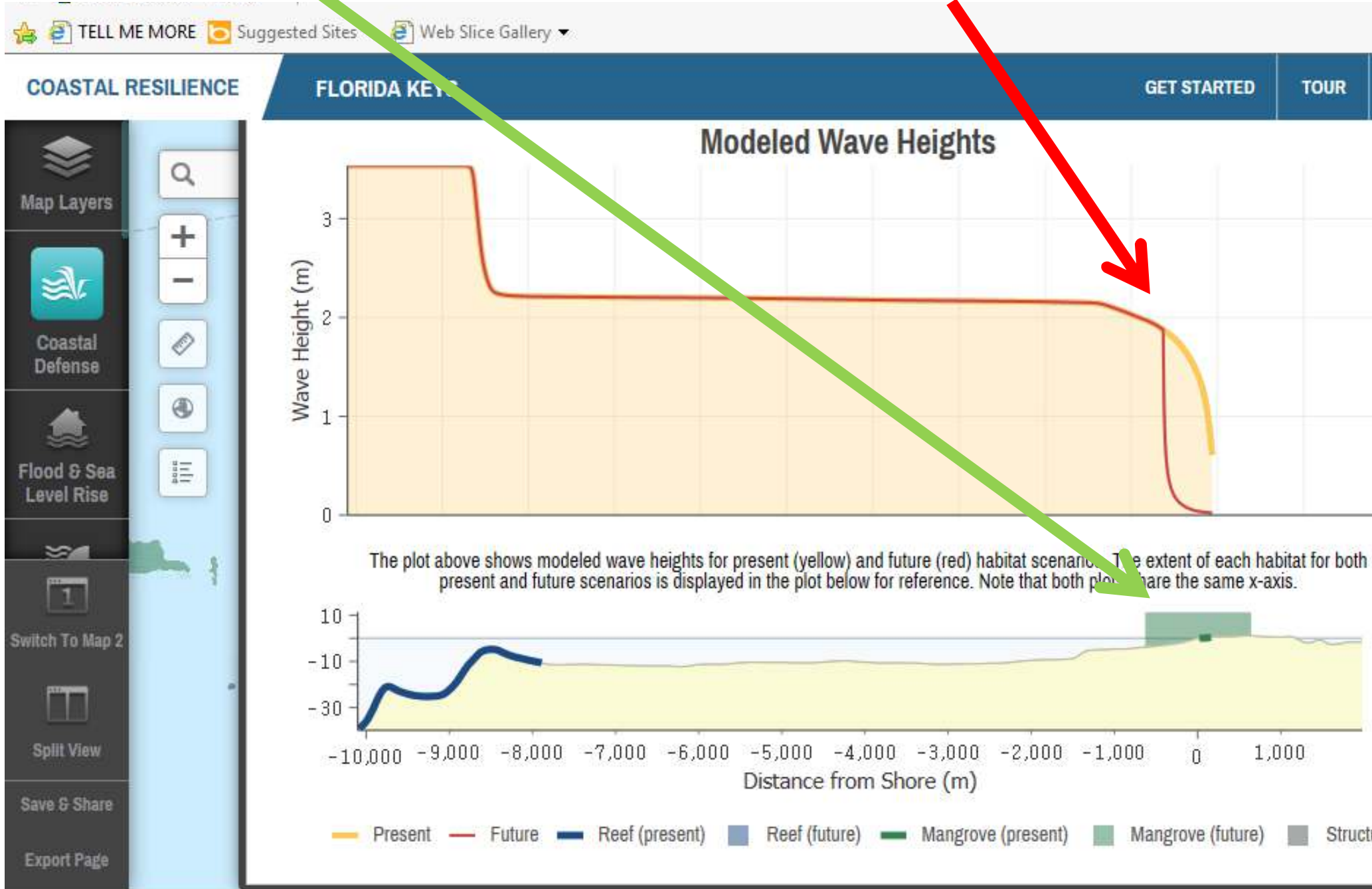
Coastal Risk Natural Risk Reduction



New “Coastal Defense App” digital transect across existing reef and mangrove

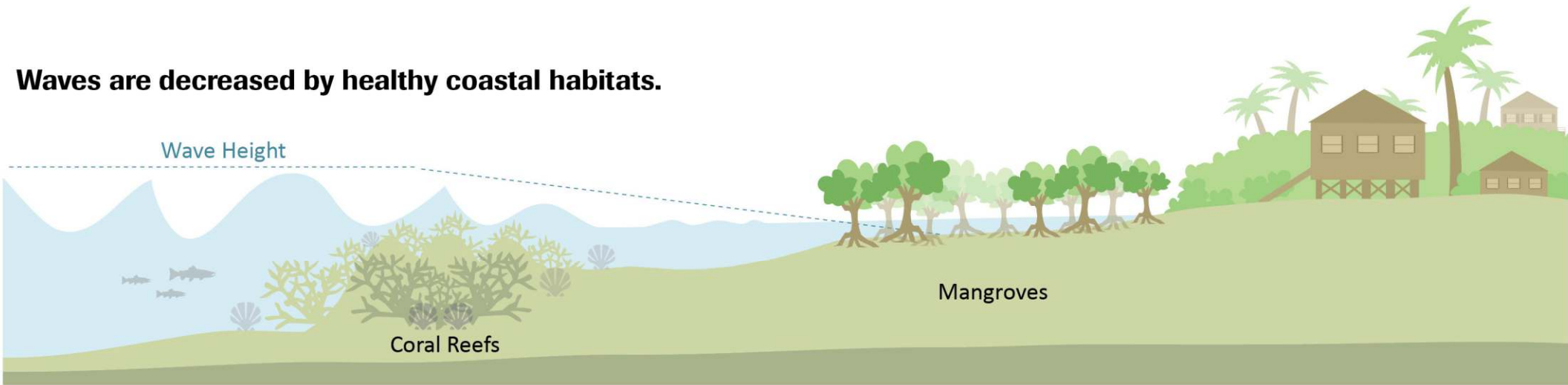


Mangrove expansion or creation leads to wave height reduction.

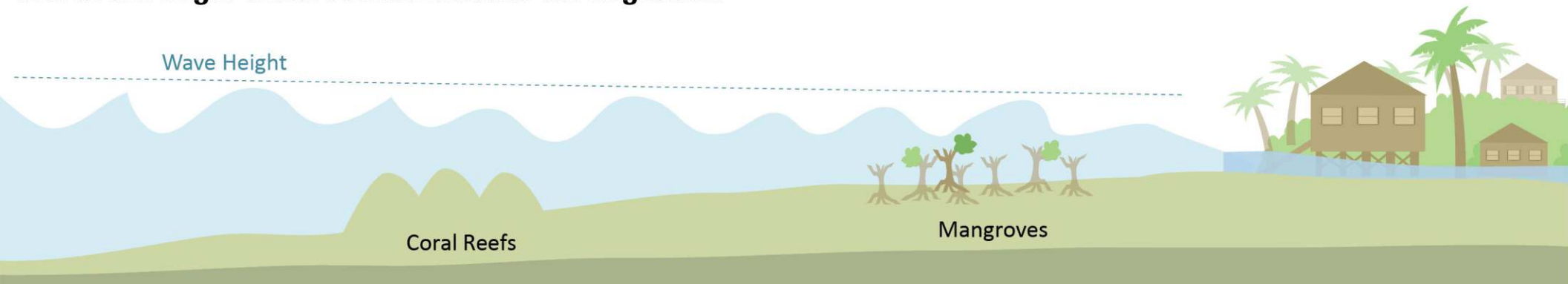


Natural coastal defenses provide cost-effective risk reduction, they are relatively adaptable to changing conditions and they provide numerous co-benefits that south Floridians already value.

Waves are decreased by healthy coastal habitats.



Waves are larger when coastal habitats are degraded.





THANK YOU

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SOUTHEAST FLORIDA
REGIONAL COMPACT

**CLIMATE
CHANGE**

