Importance of Ecological Oyster Reef Restoration

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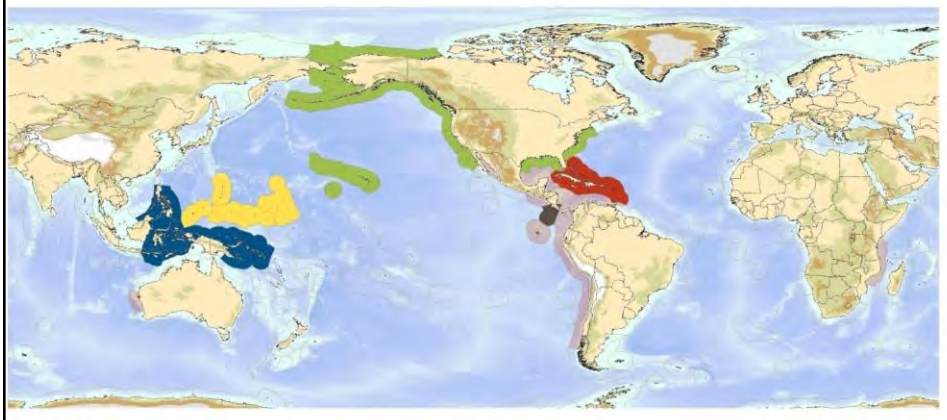
Our Mission

The mission of The Nature Conservancy is **to preserve** the plants, animals and natural communities that represent **the diversity of life on Earth** by protecting the lands and waters they need to survive.

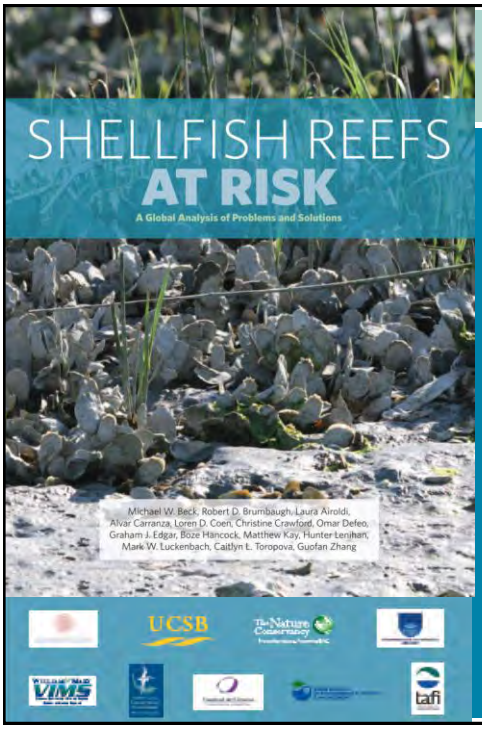
Current TNC Geographic Priorities for Marine Conservation



Current TNC Priority Marine Projects
- U.S. Coasts and Oceans
- Costa Rica
- Caribbean
- Pacific Islands
- Coral Triangle

Additional TNC Marine Programs
- Mexico Mosaics, Western Caribbean, Eastern Tropical Pacific, Humboldt Current, Mozambique, Western Australia

The Nature Conservancy
Protecting nature. Preserving life.
July 2009

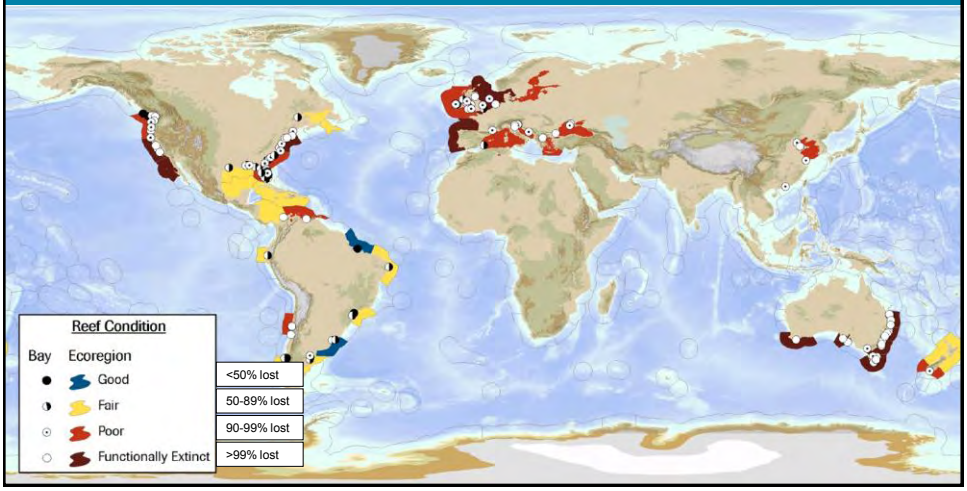


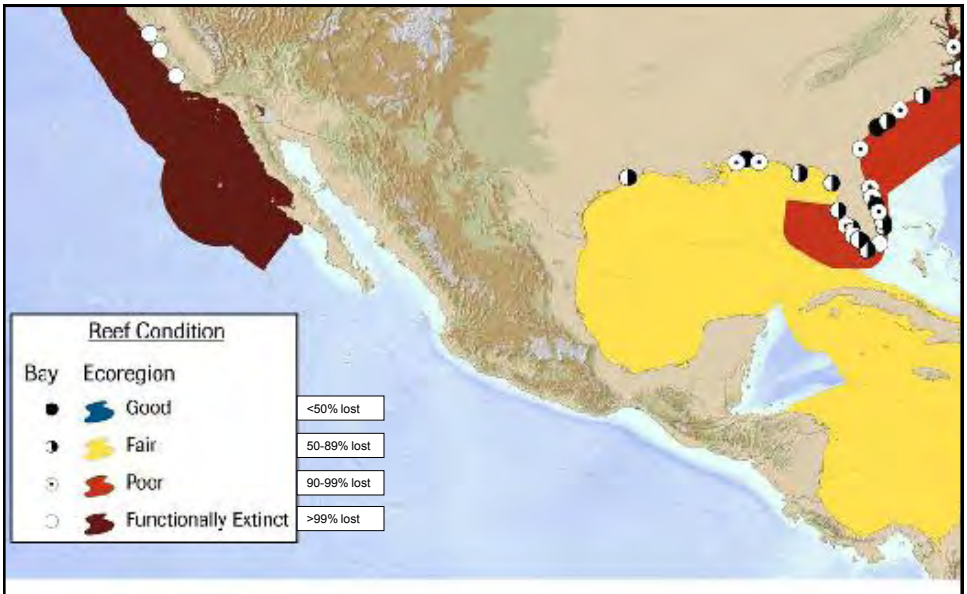
First Global Assessment

Ecosystem condition based on % of shellfish reefs remaining compared to baselines measured from 20-130 years ago

Shellfish Reefs at Risk
Global Analysis

Oyster Reefs are functionally extinct in 37% of estuaries





GOM is the only region in the US that is ranked FAIR for oyster reefs

Loss Statistics

Coral Reefs – 20% loss globally

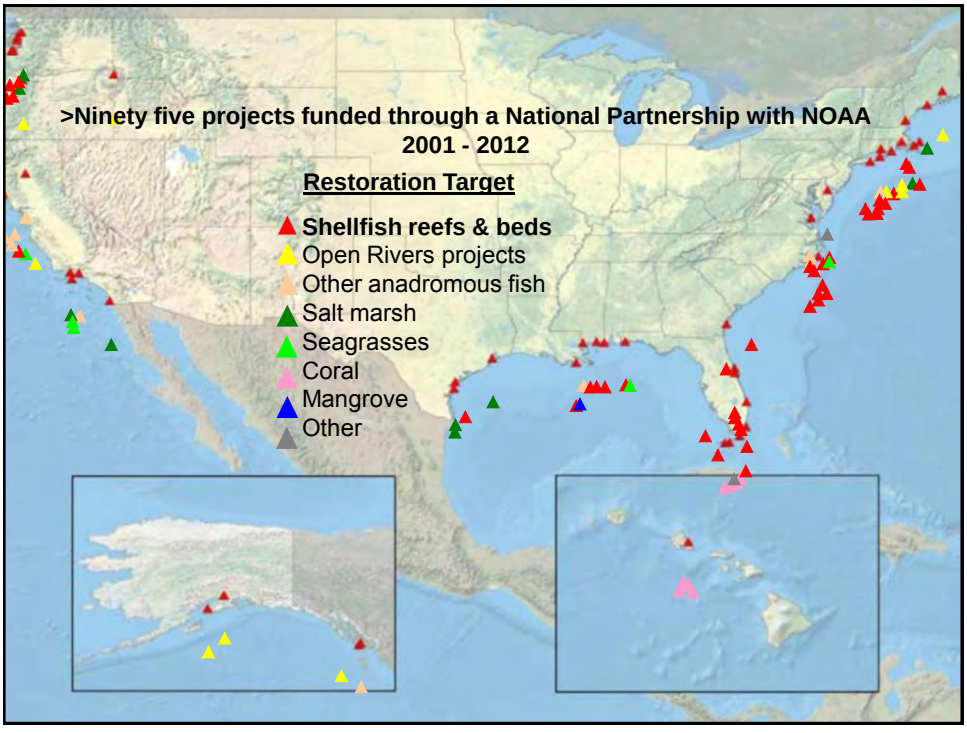
(Wilkinson 2002)

Marshes and Mangroves – 50% loss globally

(Burke et al. 2001; Valiela and Bowen 2001; Zedler and Kercher 2005)

Oyster Reefs – 85% loss globally

(Beck et al, 2011)



Nature Conservancy Analyses

- Marine/Estuarine Site Assessment for Florida, 2005
  (part of the Florida Comprehensive Wildlife Strategy)
- Assessing gaps in Florida's marine and estuarine conservation network, 2008
  (assess the current area-based protection status of FL marine and estuarine resources)
- Charlotte Harbor Feasibility Study, 2010
  (identify potential for marine and estuarine restoration in the Greater CH system)
- Florida Marine Habitat Blueprint
  (guide land protection priorities that benefit marine priorities)
- Gulf Decision Support Tool, 2011
- National-scale oyster reef restoration goals, *in progress*
  shellfish ecosystems are restored to levels that deliver ecologically meaningful services

Florida's Wildlife Legacy Initiative

Bivalve Reef
Statewide Habitat Threat Rank
VERY HIGH

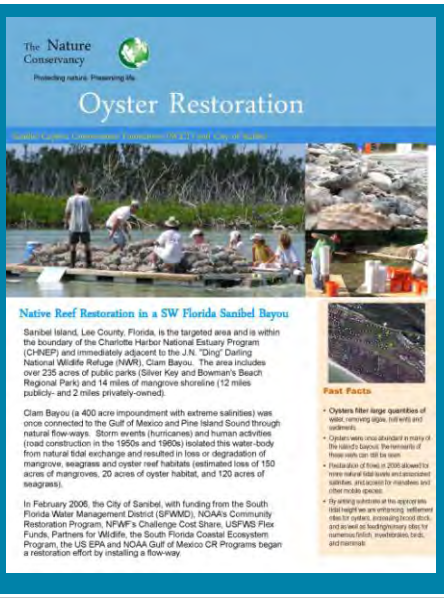
Current condition…
Poor and declining

Percent Oyster Reefs by Gap Status in Region 6

- <10% in Gap Status 1 & 2
  (1 & 2 = highest protection)

Assessing gaps in Florida's marine and estuarine conservation network
The Nature Conservancy, 2008

To improve the condition we need to…

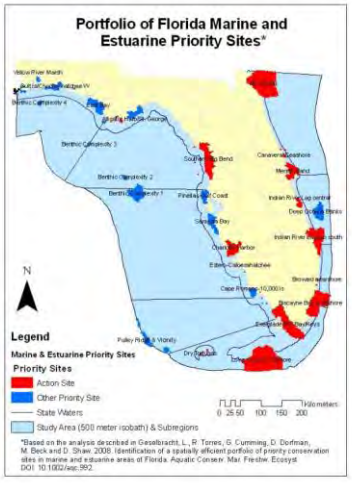


- Raise Awareness
- Enhance Conservation
- Enhance Restoration
- Improve Management

Marine Priority Areas

Why Charlotte Harbor?

- High biodiversity
- Charlotte Harbor is restorable
- History of Conservancy engagement in land conservation
- Aligns with our GOM Initiative
- Strong local interest and great potential for collaboration



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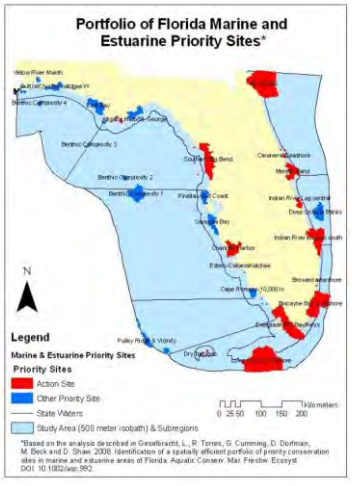


Our Approach

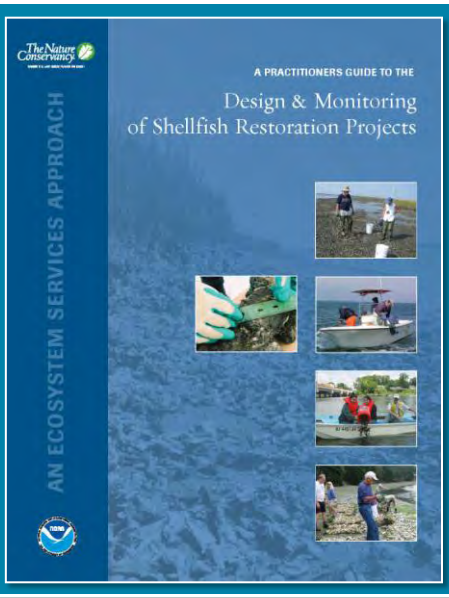
Whole-estuary science

- Determine how much restoration is needed to get to scale & where and what kinds of restoration will make the biggest difference

Strategic demonstration & test projects

- Pilot partnerships & collaboration – CHNEP, CH Aquatic Preserves, Bonefish-Tarpon Trust, Mote Marine Lab, recreational & commercial fishers
- Test "ingredients" for scaling up – restoration methods, sustainability, ecosystem services

Moving the Needle



Reference:
Brumbaugh, R.D., M. W. Beck, L. D. Coen, L. Craig and P. Hicks. 2006. A Practitioners' Guide to the Design and Monitoring of Shellfish Restoration Projects: An Ecosystem Services Approach. The Nature Conservancy, Arlington, VA.