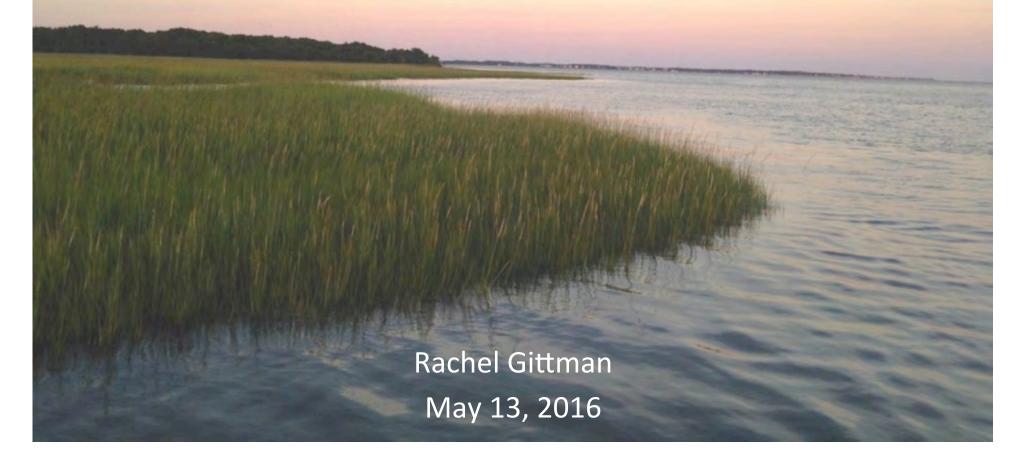


The living shoreline approach as an alternative to shoreline hardening:

Using science to inform coastal management policies





# Coastal ecosystem services



Habitat





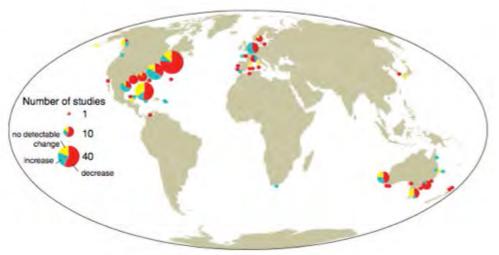


Tourism, Recreation, Aesthetics



## **Habitat Degradation & Loss**

#### Seagrass Losses >30%



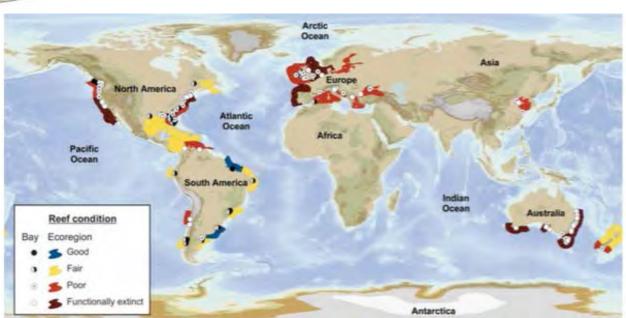
### > 40% decline of North American salt marshes

Gedan and Silliman 2009

Oyster Losses – 65-85%

Waycott et al. 2009

35% of mangrove area has been lost since 1980s



Valiela et al. 2001

Beck et al. 2011

## Coastal development

