NOAA FISHERIES

Science & Technology

Remote Sensing Tools and Applications for Coastal Habitats

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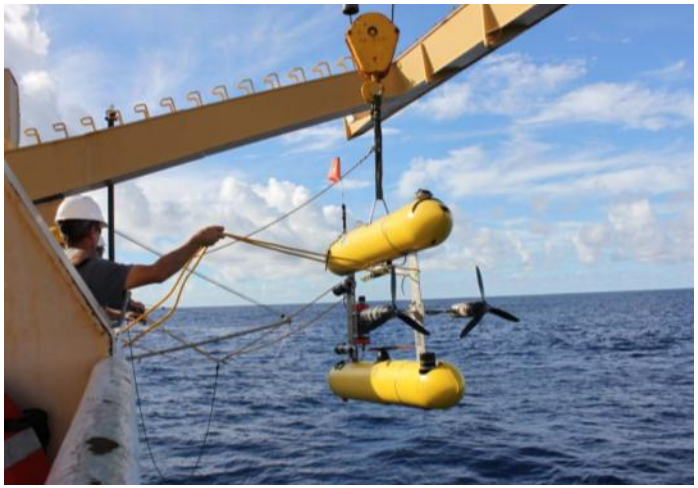
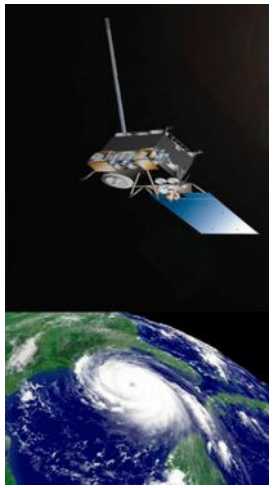
NOAA Fisheries Office of Science and Technology

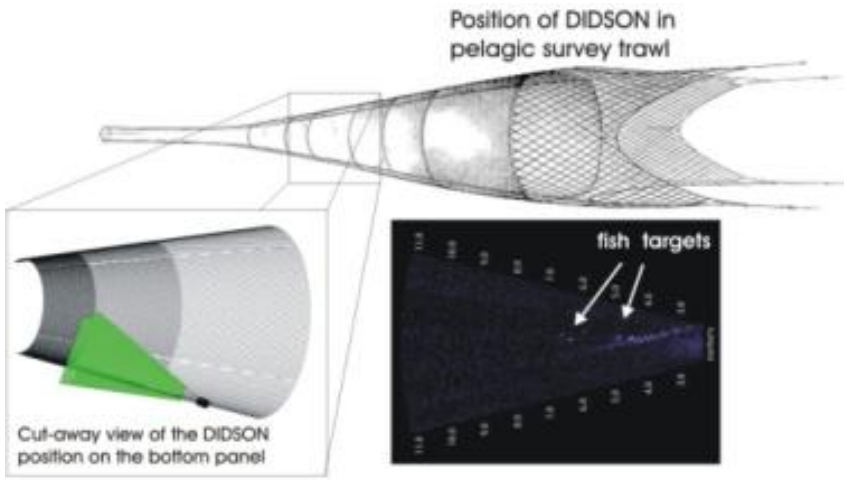
14 February 2014

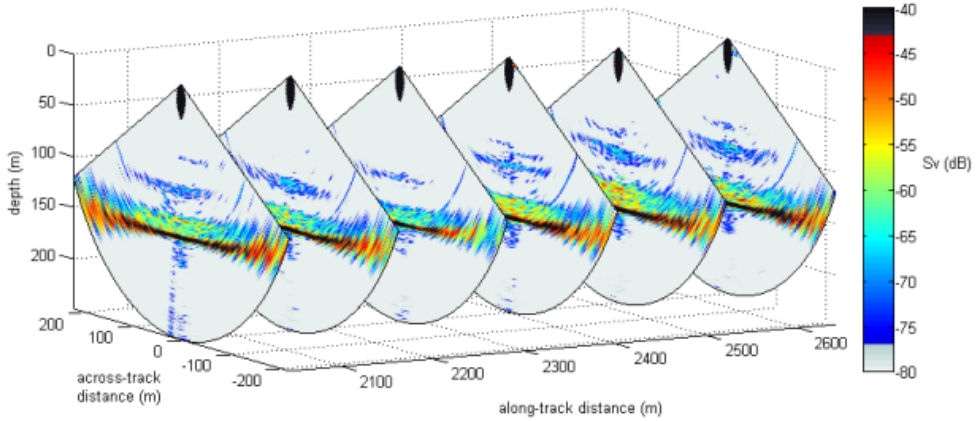
Platforms



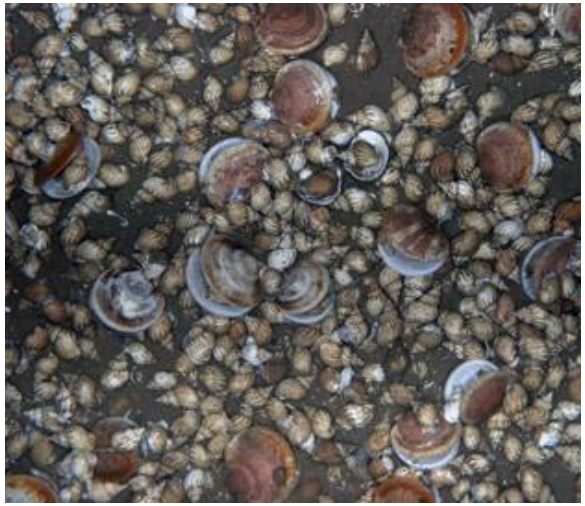


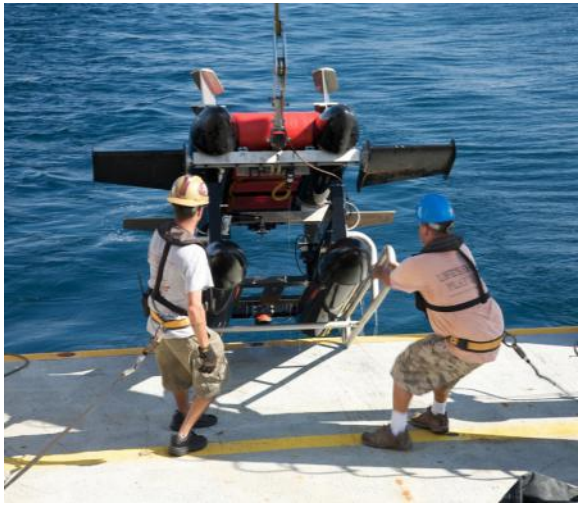
Acoustic Sensors





Optical Sensors





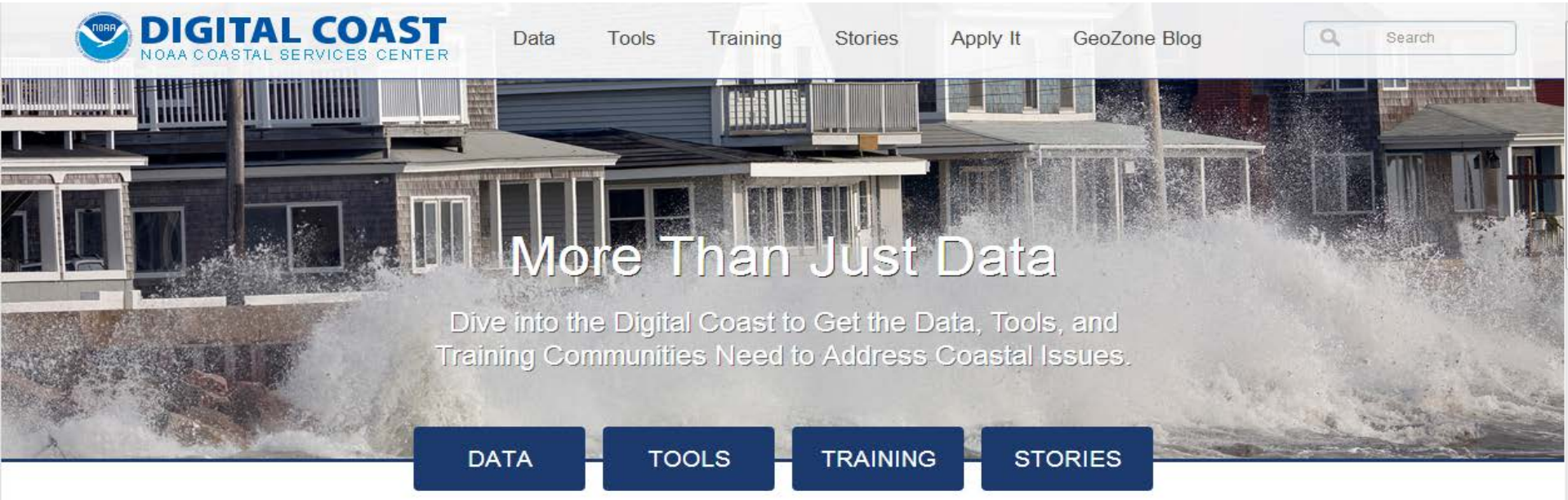
HabCam

ISIIS

Cam-Trawl

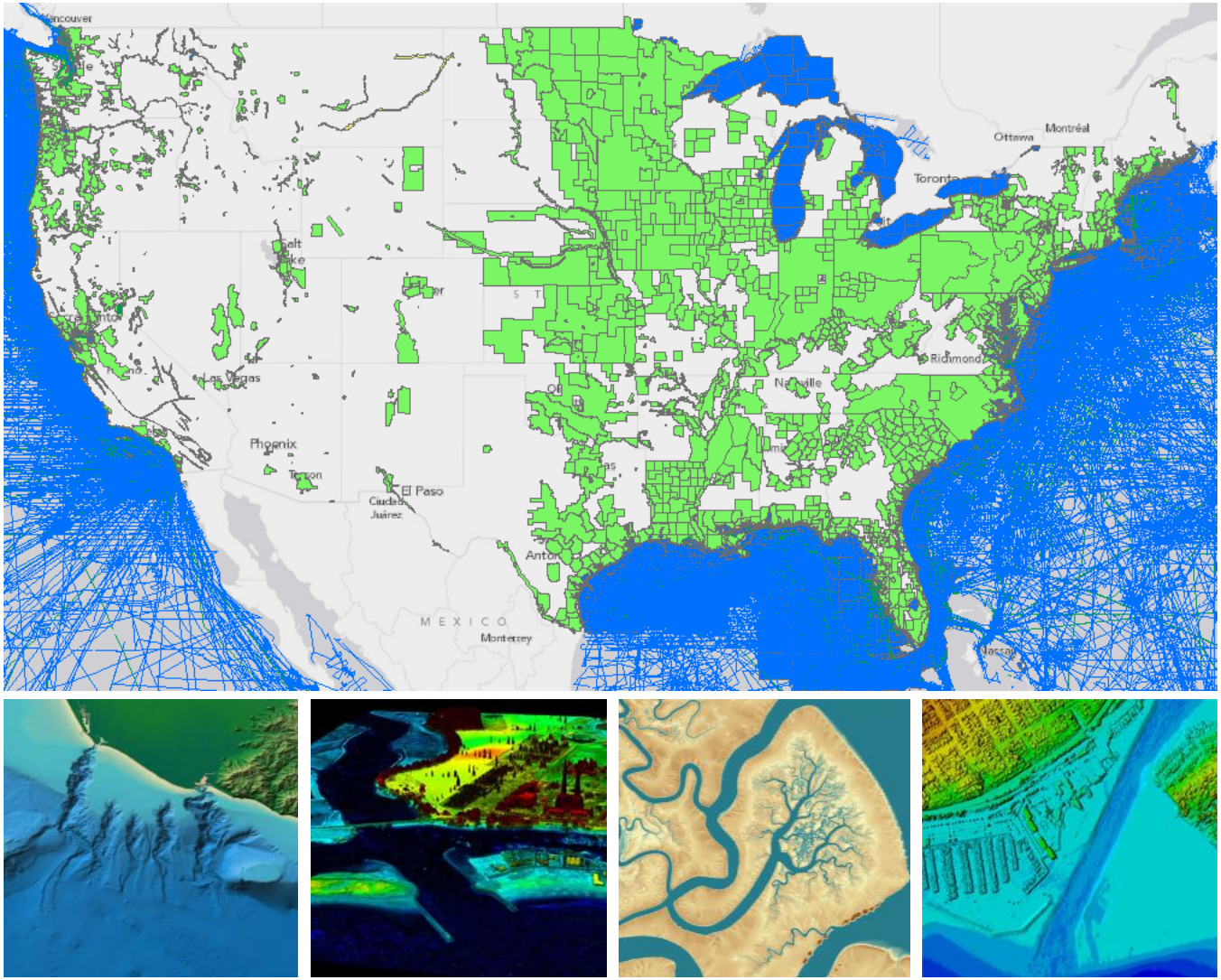
Digital Coast

- Access data
- Visualization tools
- Training
- Case studies

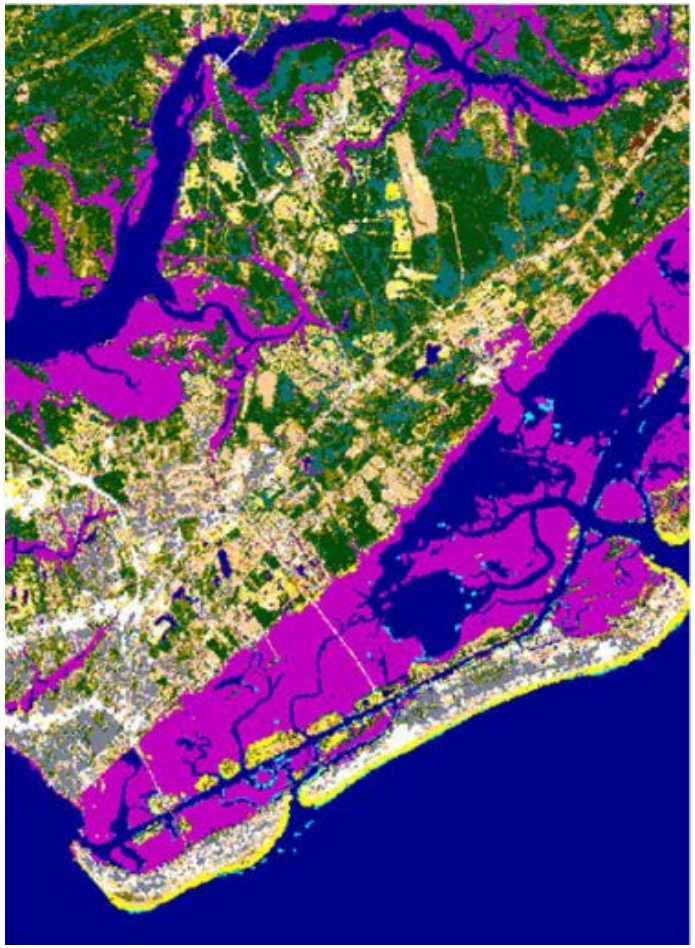


http://www.csc.noaa.gov/digitalcoast/

Digital Coast Data: Elevation



Digital Coast Data: Land Cover



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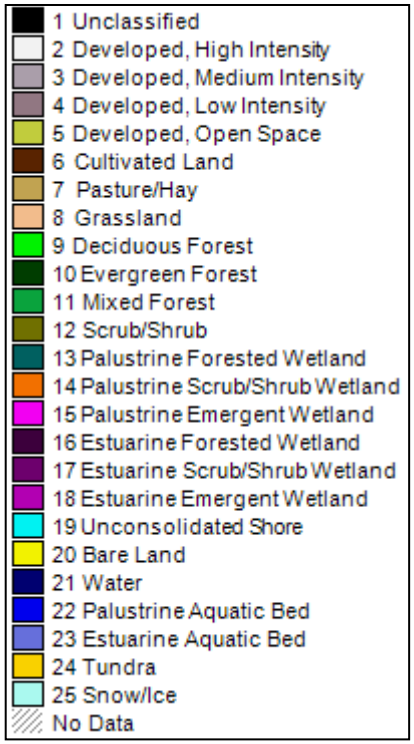


Digital Coast Tools

Airborne LIDAR Data Processing and Analysis Tools

Contributing Partners: Florida International University

Benthic Terrain Modeler

Contributing Partners: View all Partners

Overview

Features

Environmental Response Management Application (ERMA)

Contributing Partners: NOAA Office of Response and Restoration

Coastal Resilience Decision-Support Framework

Contributing Partners: The Nature Conservancy

Overview

Sea Level Rise and Coastal Flooding Impacts Viewer

Contributing Partners: NOAA Coastal Services Center

Overview | In Action | Support | Get It Now

Being able to visualize potential impacts from sea level rise is a powerful teaching and planning tool, and the Sea Level Rise Viewer brings this capability to coastal communities. A slider bar is used to show how various levels of sea level rise will impact coastal communities. Additional coastal counties will be added in the near future. Maps are not available for Alaska due to elevation data accuracy and vertical datum transformation gaps.

Features

- **Displays** potential future sea levels
- **Provides** simulations of sea level rise at local landmarks
- **Communicates** the spatial uncertainty of mapped sea levels
- **Models** potential marsh migration due to sea level rise
- **Overlays** social and economic data onto potential sea level rise
- **Examines** how tidal flooding will become more frequent with sea level rise

Acknowledgements

The NOAA Coastal Services Center would like to acknowledge those organizations that provided direct content used in this tool or feedback, ideas, and reviews over the course of the tool's development. Specifically the Center would like to acknowledge the following groups

Videos

Tool Overview

First Time Tips

Digital Coast Webinar Series

Mapping and Visualizing Sea level Rise and Coastal Flooding Impacts

View recorded webinar

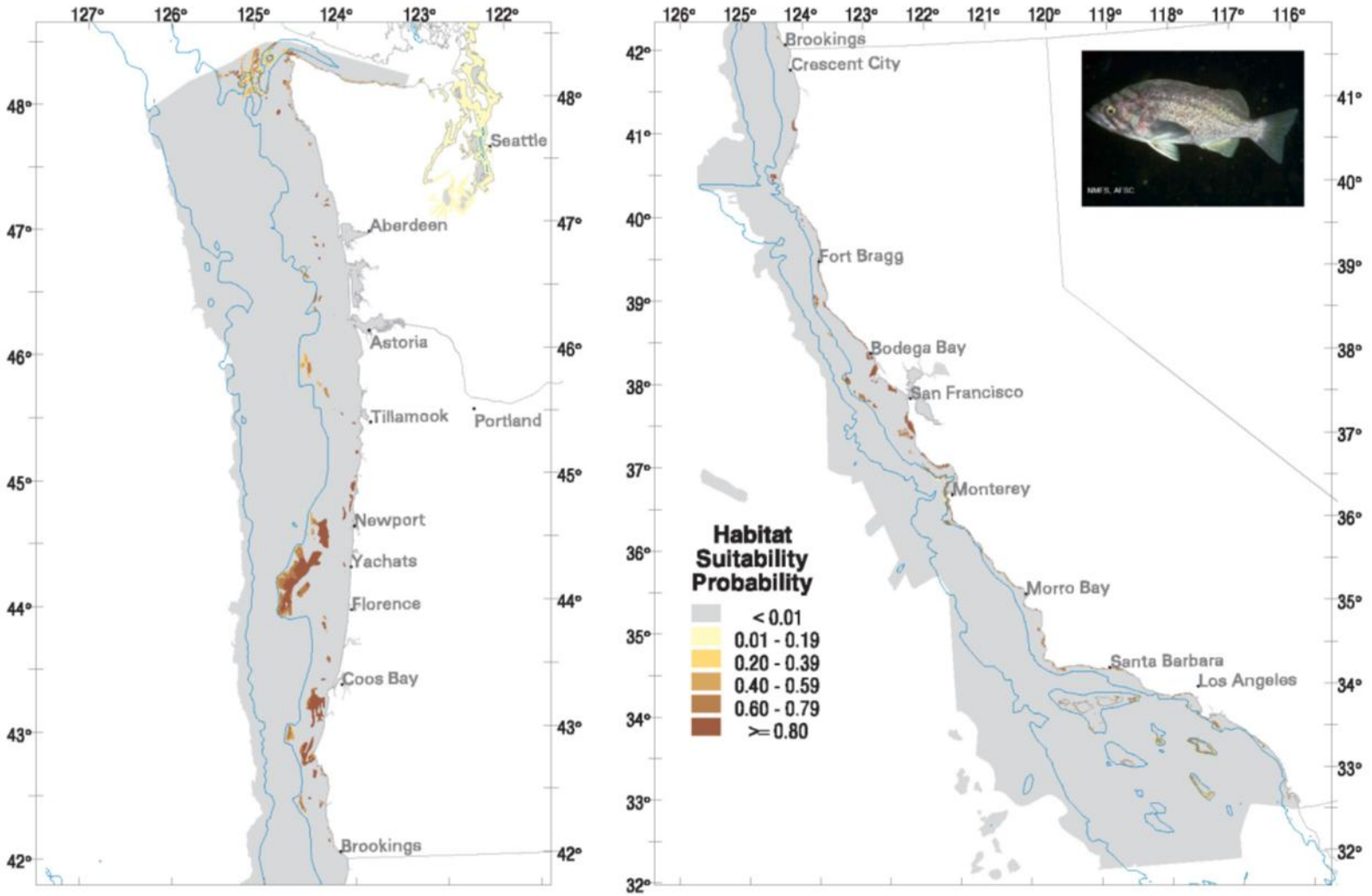
Related Training

- Climate Adaptation for Coastal Communities
- Coastal Inundation Mapping

Digital Coast Help

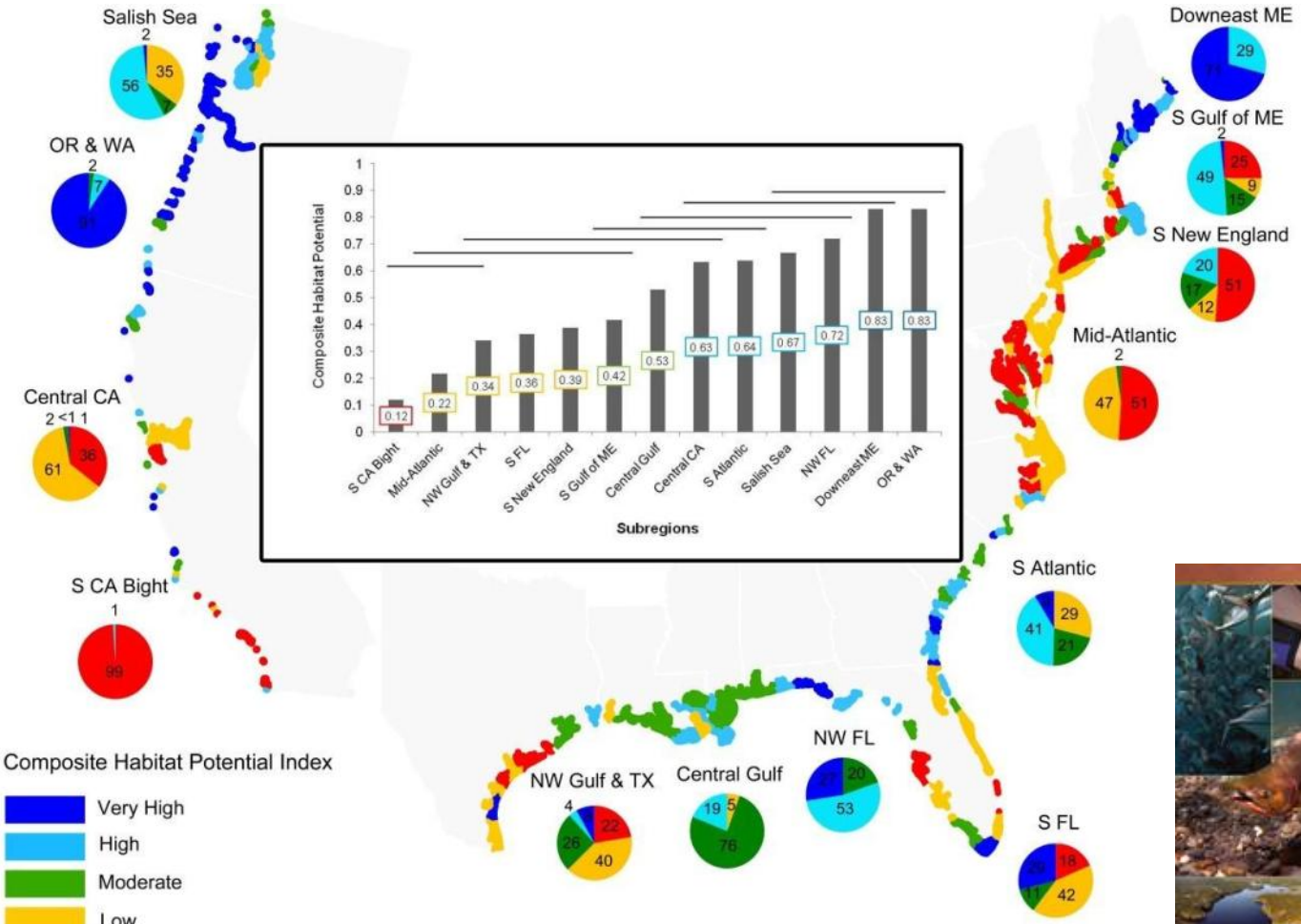
- Training: Online courses, live webinars, instructor-led classroom courses
- Stories from the Field: Case studies and projects using digital data
- Apply It: Use tools and data to answer your questions
- GeoZone Blog: What's new & interesting

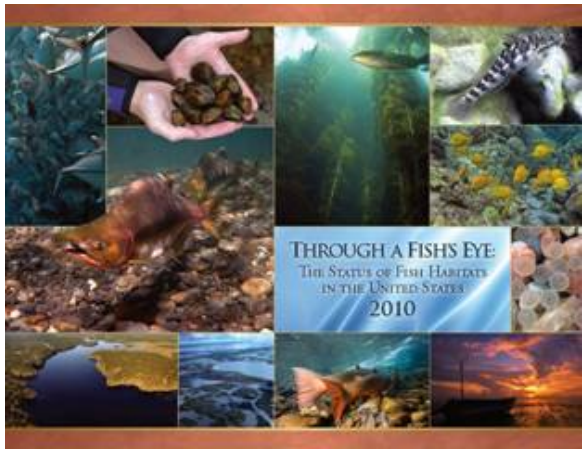
Applications: Habitat Suitability



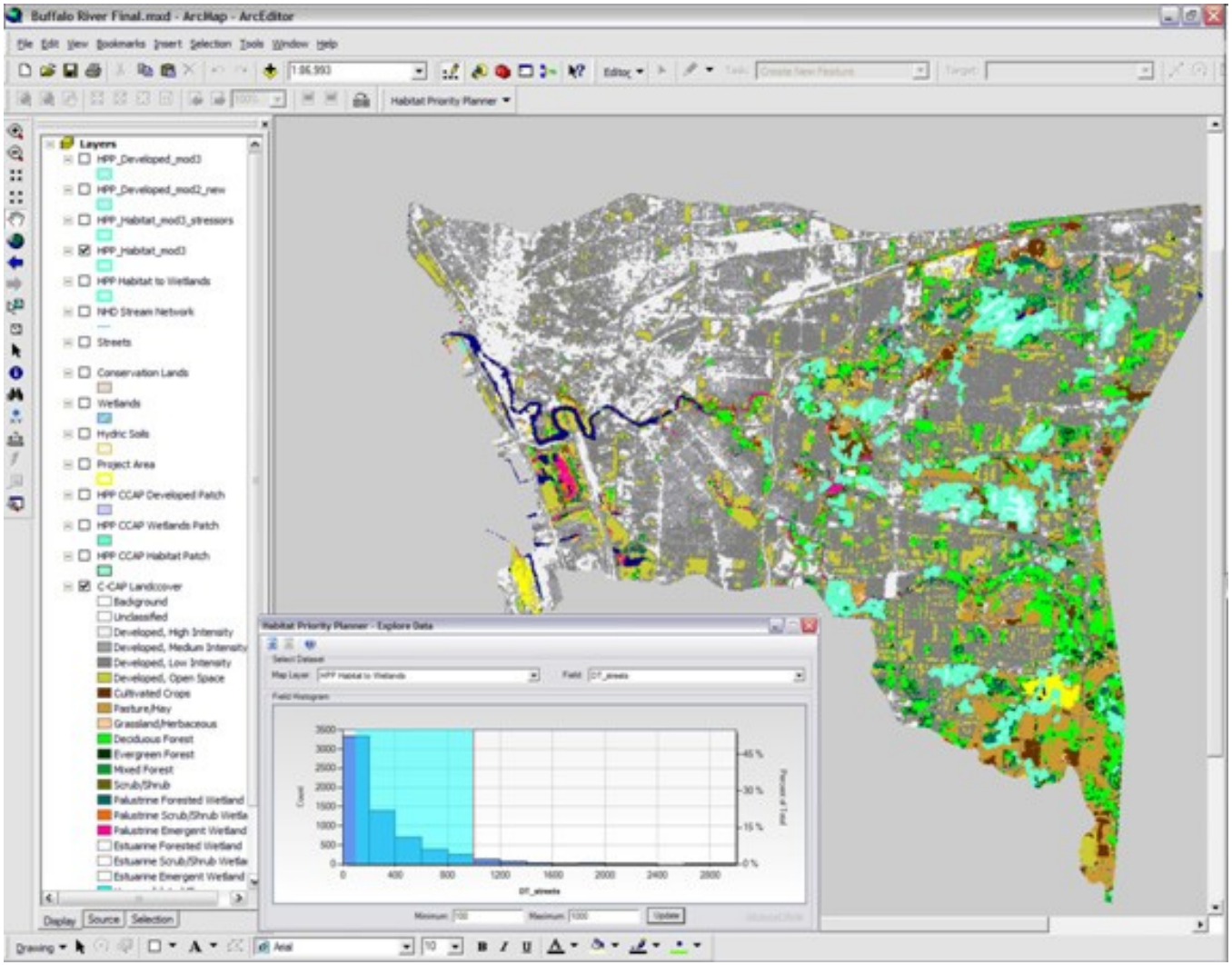
Applications: Habitat Vulnerability

Applications: Habitat Condition

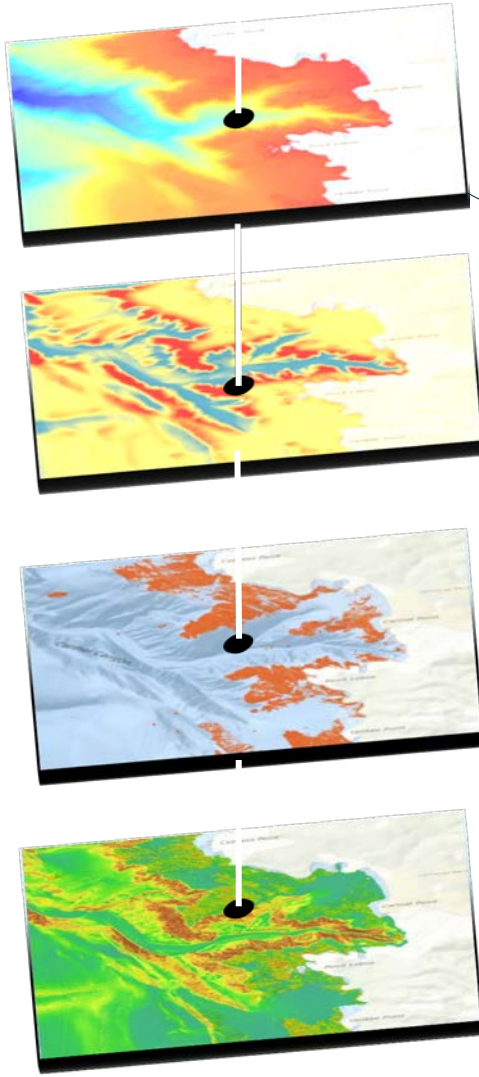




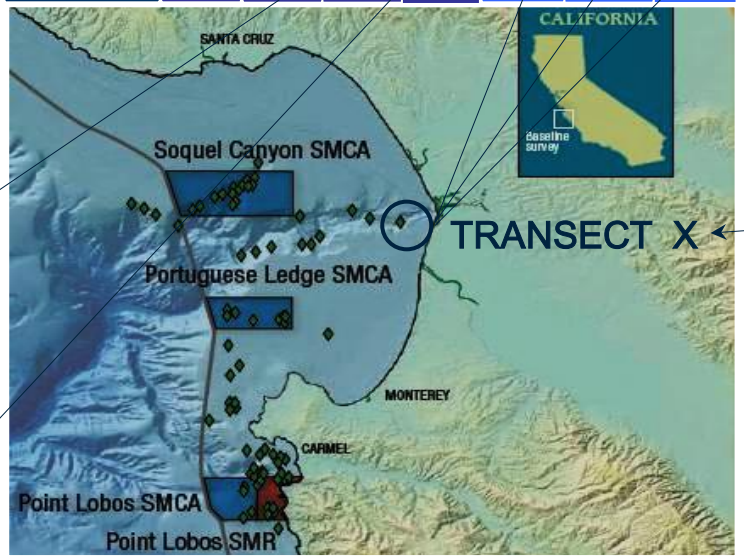
Applications: Restoration Planning



Applications: Visual Surveys



STATION
DEPTH
COMPLEXITY
RUGOSITY
SLOPE
DENSITY
BIOMASS
ABUNDANCE



Coastal Classification

http://www.csc.noaa.gov/digitalcoast/publications/cmecs

Using CMECS

Unconsolidated

Unclassified


Thank you