Web-Based Data, Training, and Tools for Coastal Management

Marie Auyong (presenter)
Ross Winans (Pacific Region Digital Coast Liaison)

Lynker Technologies on contract to NOAA Office for Coastal Management
Agenda

Digital Coast: coast.noaa.gov/digitalcoast

- Data
- Tools
- Training
- Stories
- Topics
Digital Coast: Data

- Elevations and depths (LiDAR, IfSAR, etc.)
- Coastal Land Cover
- Publicly available satellite and aerial imagery
- Historical Aerial Imagery
Data: Depths and Elevations

Note: NOAA is currently updating the depths and elevations for the Mariana Islands, with new topobathymetric LiDAR slated for release on Digital Coast by the end of 2020.

Data: Land Cover (C-CAP)

• High-resolution land cover map

• Available for select areas including Hawaii, Pacific territories, and the Caribbean

• Updated every five years
  note: Guam, CNMI and Hawaii are currently undergoing a 2020 update

• Mapping classes include forest, wetlands, and various natural and man-made features

Data: Coastal Land Cover (C-CAP)

2005 Land Cover

2005 to 2011 Change

2011 Land Cover
Data: Historical Aerial Imagery

Gathers images from numerous data sets and sources, scans them, and georeferences to existing base map data.

Data: Historical Aerial Imagery

Koko Bay, Oahu, Hawaii

1954

1965
Digital Coast: Tools

- Tsunami Information Service
- Land Cover Atlas
- Hurricane Tracker
- Sea Level Rise Viewer
- OpenNSPECT
Tools: Tsunami Information Service

Provides interactive tsunami evacuation maps and information for Hawaii and Guam
Tools: C-CAP Land Cover Atlas

Summarizes change trends and provides tables, maps, and reports to enhance communication and decision-making.
Tools: Hurricane Tracker

Analyzes historical tropical cyclone data
Tools: Sea Level Rise Viewer

Displays potential sea level rise, coastal flooding impact areas, and relative depth

Online data viewer, it simulate various sea level rise scenarios (from one to six feet above the average highest tides) and the corresponding areas that would be impacted by flooding.
Tools: OpenNSPECT

Measures potential runoff, nonpoint source pollution, and erosion.
Digital Coast: Training

Digital Coast Academy offers a wide range of learning resources.

**Scheduled Training**

- **Classroom, Instructor-Led**
  Bring these courses and our instructors to your location.

- **Online, Instructor-Led**
  Learn at your desk, or a coffee shop, with sessions taught in real time by our instructors.

**Additional Resources**

You may also be interested in additional training resources from our Digital Coast and Contributing Partners.

**On-Demand Products**

- **Self-Guided Resources**
  Develop and practice new skills on your own time with interactive guides and structured courses.

- **Case Studies**
  Learn from these peer-to-peer case studies how other coastal practitioners have tackled thorny issues.

- **Publications**
  Explore the digital library of topical publications and studies.

- **Quick References**
  Access helpful worksheets, checklists, and tip sheets.

- **Videos And Webinars**
  View short videos that make difficult topics easier to understand. View recorded webinars to learn from experts in the field.
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<tr>
<th>Focus Area</th>
<th>A Community Resource Guide for Planning Living Shorelines Projects</th>
<th>A Community Works Together to Restore the Floodplain and Reduce Damages</th>
<th>A Community-Based Social Marketing Approach to Promoting Safe Growth in Coastal Co...</th>
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<tr>
<td>Climate Adaptation</td>
<td>Provides communities with key information and resources for moving forward with living shoreline projects in New Jersey</td>
<td>See how community leaders are engaging stakeholders and residents to reduce riverine flooding by reclaiming the floodplain</td>
<td>Includes themes and key messages to help planners convey to communities the value of incorporating hazard mitigation in their comprehensive plans</td>
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<td>Coastal Conservatio...</td>
<td>A Framework for Developing Monitoring Plans for Coastal Wetland Restoration and Li...</td>
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<td>Coastal Economy</td>
<td>Guides users in selecting monitoring metrics, collecting data, and developing a monitoring plan for coastal wetland restoration and living shoreline projects</td>
<td>Provides participants with the knowledge and tools necessary to apply the ecosystem services framework to project planning (1-day course)</td>
<td>Allows a closer examination into the questions provided in the companion quick reference checklist for considering ecosystem services in project planning</td>
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<td>Community Resilience</td>
<td>Outlines a process for measuring socioeconomic benefits of salt marshes, living shorelines, and oyster reefs</td>
<td>Outlines a process for planning evaluations that can improve any project or program</td>
<td>Outlines six steps to help communities determine costs of flooding and green infrastructure approaches</td>
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Digital Coast: Stories

STORIES FROM THE FIELD

See how organizations are using Digital Coast resources to address coastal issues.

Displaying 121 Stories

- Adapting to Sea Level Rise in Miami-Dade County, Florida
- Advancing Restoration in the Great Lakes Region
- Analyzing Sedimentation Processes to Guide Conservation in Oregon
- Analyzing the Impacts of Hurricane Katrina on Forest Ecosystem Services
- Applying Green Infrastructure to Storm Runoff and Safeguard Puerto Rico’s...
Digital Coast: Topics

Groups Digital Coast resources under a single topic. These topics will summarize case studies, data, and tools needed to tackle a pressing coastal management issue.
Questions?

marie.auyong@noaa.gov
ross.winans@noaa.gov

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