

Coastal Coupling Community of Practice Webinar

April 11, 2024

1 - 2 pm ET

<https://www.weather.gov/watercommunity/>

coastal.coupling@noaa.gov

Agenda

1. Welcome to new members
2. Update on community activities
3. Upcoming engagement opportunities
4. Ashley Chappell and Cathleen Yung

NOAA Integrated Ocean and Coastal Mapping (IOCM)

Bathymetric Data: Coastal Coupling Community
of Practice Mapping Priorities Kick-off

Welcome

- New CC CoP members
- New Super Friends

Update on community activities

- Website: <https://www.weather.gov/watercommunity/>
- Email for CoP Coordinator: coastal.coupling@noaa.gov
- AGU, AMS, & Ocean Sciences
- CoP Roadmap Working Group

Upcoming engagement opportunities

- Seeking volunteers! Forming now!
 - Hack-a-thons and Other Challenges Working Group
 - Datasets and Standards Working Group
- coastal.coupling@noaa.gov



Conducting a Coastal Coupling Community of Practice Spatial Priorities Study

Ashley Chappell, Cathleen Yung
NOAA Integrated Ocean and Coastal Mapping (IOCM)

April 11, 2024

Outline

Introduction & Background:

- *What is IOCM and Why?*
- *What is a Spatial Prioritization Study?*
- *What are its goals?*
- *How will it work?*

Recently conducted studies and why:

- *Florida*
- *Great Lakes*
- *Informing regional mapping plans and resource allocation*

Grid Selection & Proposed Criteria for CC-CoP Study

- *Where will the CC-CoP assess community needs?*
- *What criteria will be used?*

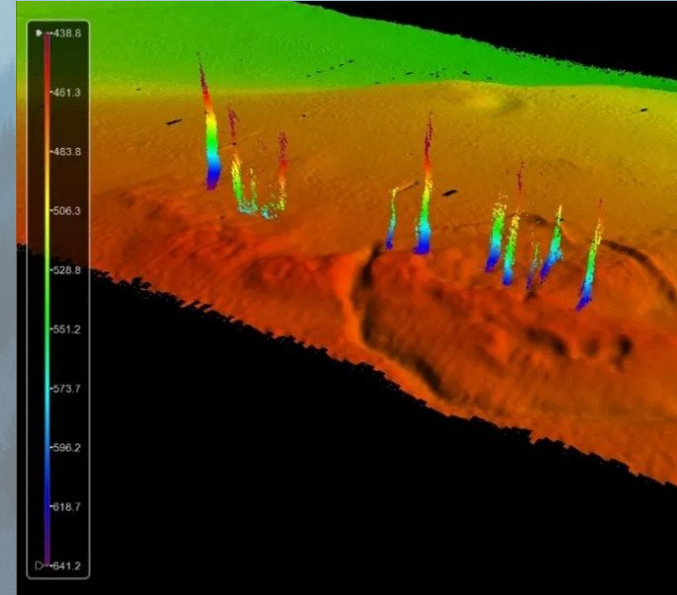


What is IOCM?

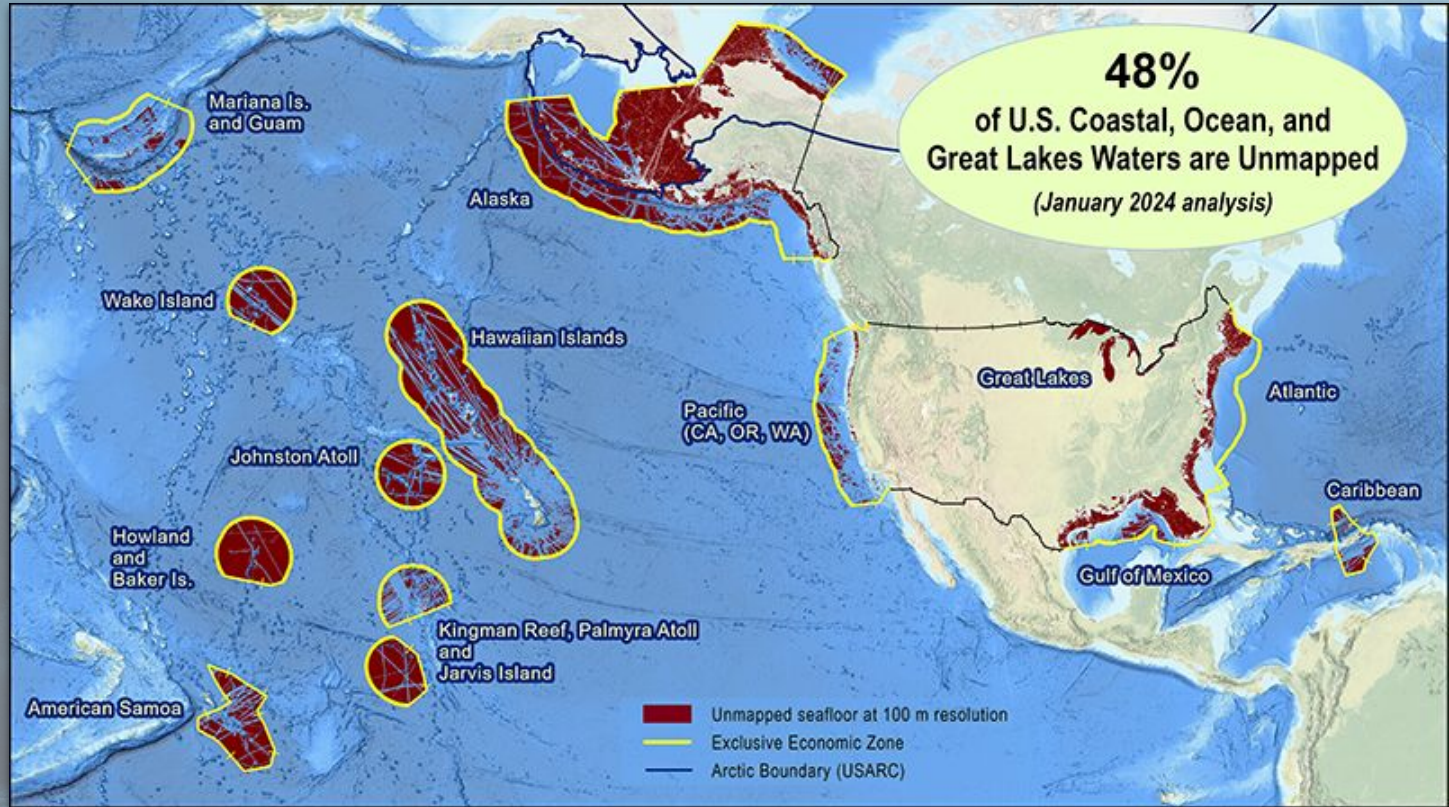
IOCM is *planning, acquiring, integrating, and managing* ocean and coastal geospatial data and derivative products for easy access and use by the greatest range of users.

Three primary activities:

- Data Acquisition
- End-to-End Data Management
- Maximum Use and Re-Use of Data



Mapping Progress in U.S. Waters



National Ocean Mapping, Exploration and Characterization Strategy (NOMECS)

Map the U.S. EEZ

Establish a Standard Ocean Mapping Protocol

Identify mapping priorities

Execute campaigns to map waters deeper than 40 m by 2030, and shallower waters by 2040

Make mapping data usable and available

Explore and characterize priority areas of the U.S. EEZ

Establish Exploration and Characterization (E&C) Standards and Protocols

Identify strategic E&C priorities

Explore and characterize priority areas

Make E&C data usable and available

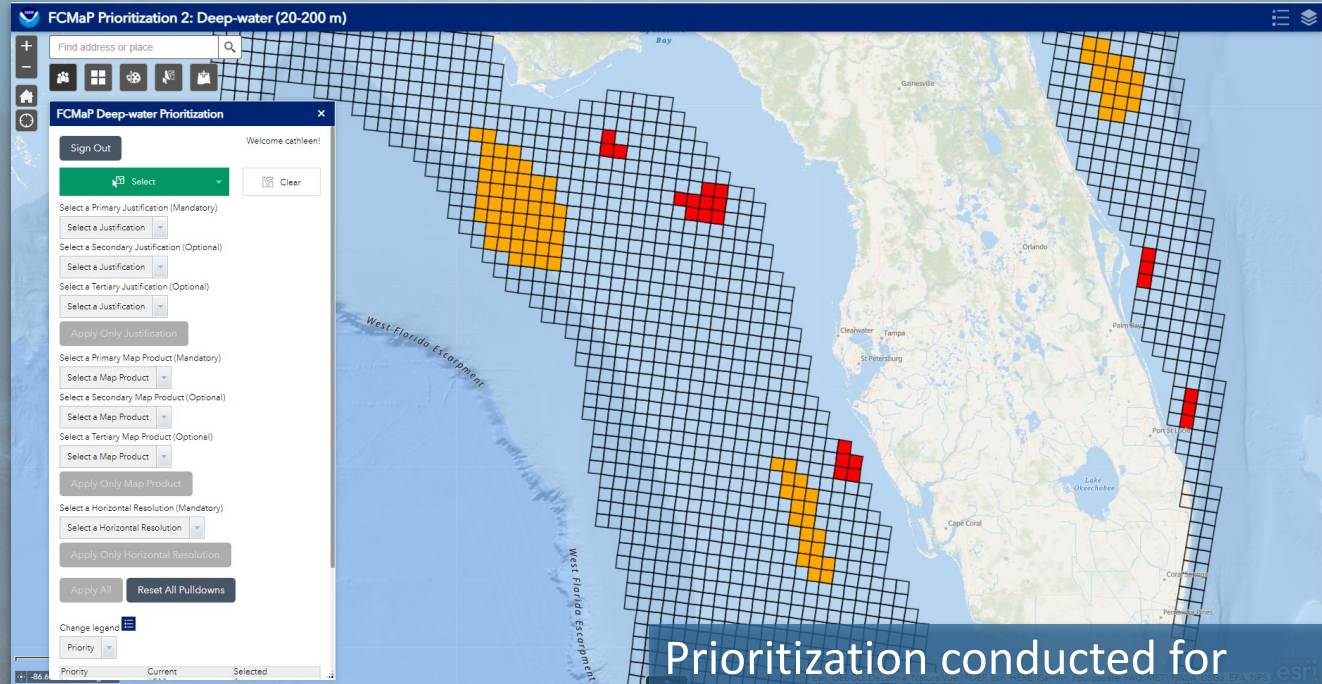
Develop and mature new and emerging science and technologies to map, explore, and characterize the U.S. EEZ

Build public and private partnerships to maximize non-Federal participation and cross-sectoral engagement



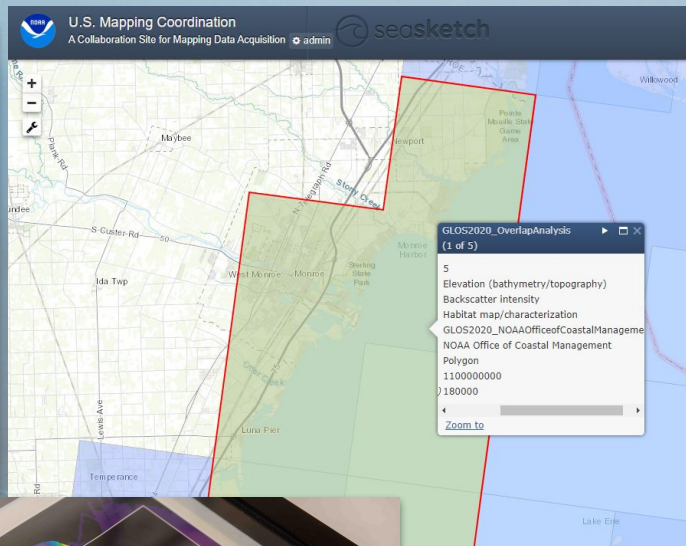
Spatial Priorities Studies: What are they?

- Support national and regional mapping efforts
- Assesses mapping priority areas across the region and across a wide group of stakeholders



Prioritization conducted for Floridian deep-waters (20-200m)

Goals of the Spatial Prioritization



Identify CC-CoP mapping data gaps and needs in a consistent, spatial way.

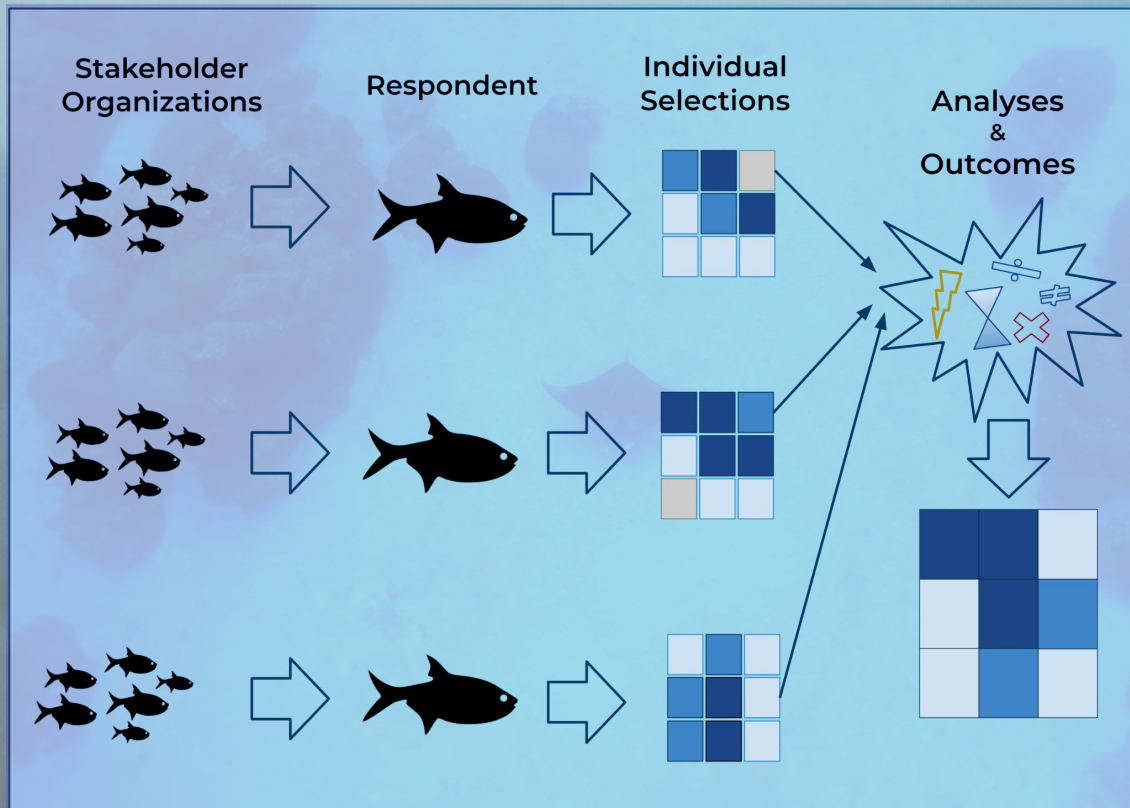
Clear outlines of CC-CoP mapping priorities identified by YOU to stack and analyze

Will support:

- Better coordination
- Shared funding
- Identifying partnerships
- Meet more reqs
- Less duplication

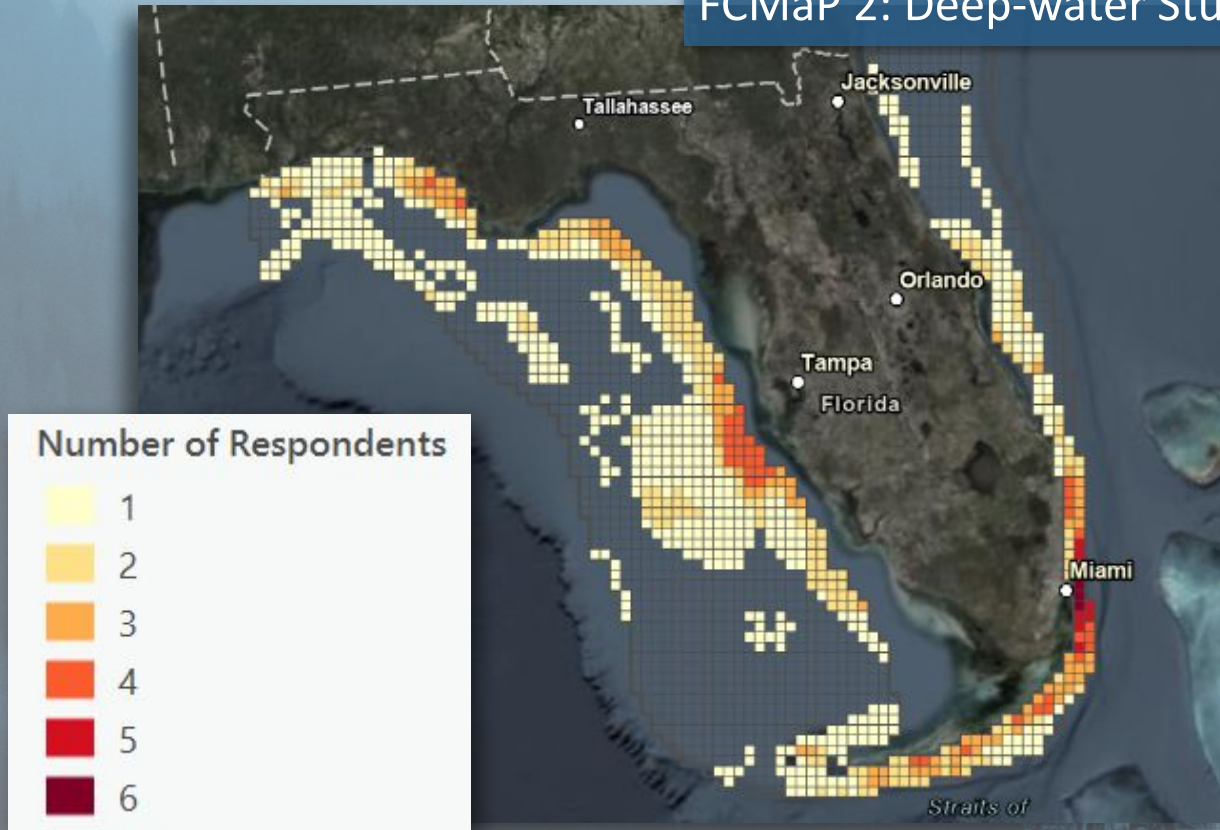
Methods

- Participatory GIS
- Surveys mapping interests
- Respondents prioritize specific areas
- Selections from the respondents are summarized and analyzed to look for patterns



Based on image from Battista et al. 2017. Sensors. 17,701

FCMaP 2: Deep-water Study Results



FCMaP 2: Deep-water Study Results

Frequency of Selected Map Products

Magnetometer Surveys

8.1%

Biological, Chemical, or Physical Samples

12.0%

Substrate/Sub-bottom Geologic Characterization

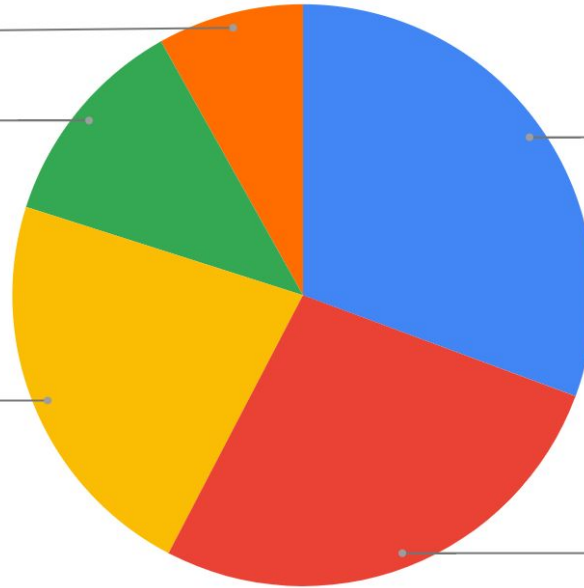
22.3%

Elevation (Bathy/Topo)

30.6%

Backscatter

27.0%



FCMaP 2: Deep-water Study Results

Frequency of Selected Justifications

Coastal/Marine Natural Hazards

13.5%

Water Column Exploration

16.1%

Modeling

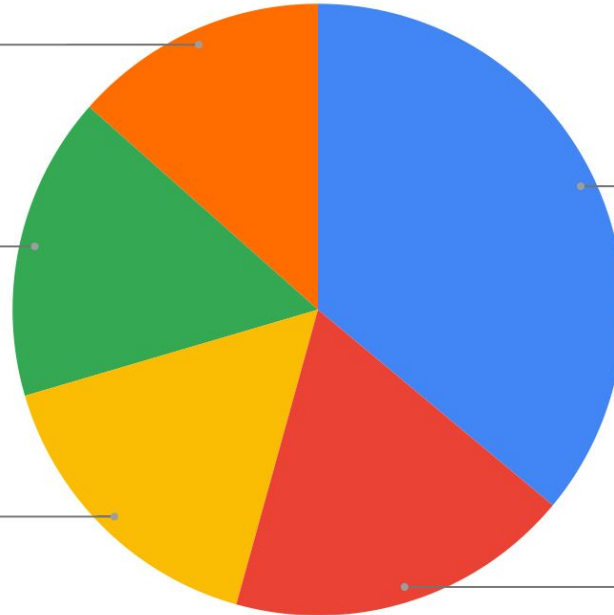
16.1%

Scientific Research

36.0%

Habitat/Biota/Natural Area

18.3%



Viewing and Using Results to Find Partnerships

U.S. Mapping Coordination
A Collaboration Site for Mapping Data Acquisition admin

seosketch

English take a tour ? help Cathleen Yung

Data Layers My Plans Participate

Data Layers Basemap Legend & Ordering

Search layers by name or keyword

Spatial Priorities Studies

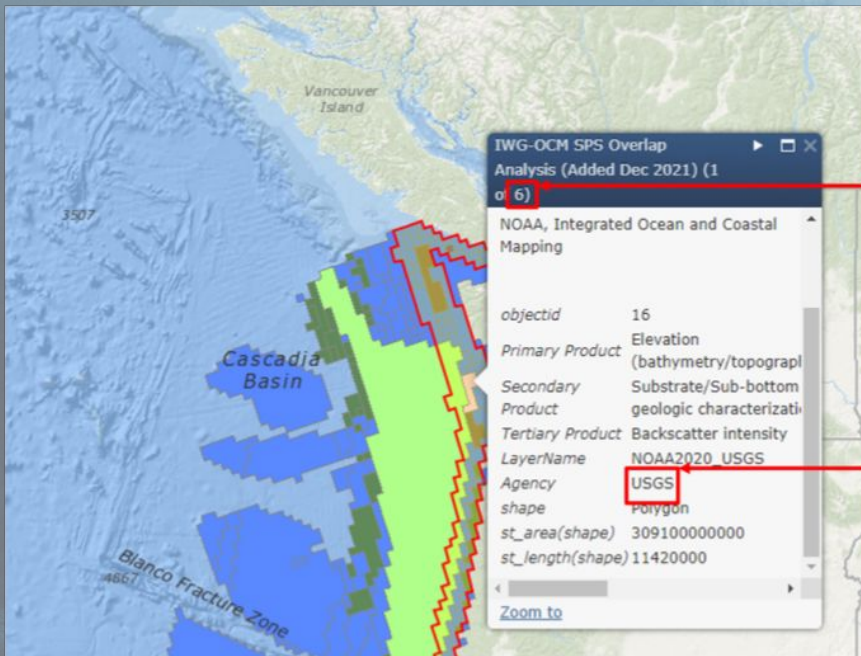
- Folder containing Federal, State, and Regional Mapping Priority Studies
 - IWG-OCM Studies
 - Alaska Spatial Priorities Study
 - Great Lakes Spatial Priorities Study
 - Federal/IWG-OCM Spatial Priorities Study
 - IWG-OCM SPS Overlap Analysis (Added Dec 2021)
Overlaps in priority selections between various respondents. Priority areas selected as part of the IWG-OCM/Federal Spatial Priorities Study. NOTE: If you do not see an organization here, that means they either did not submit a response for the spatial priorities study (see Submission Grids to confirm) or the organization's interest does not overlap with another organization.
 - Priority
 - Any Priority (Added Dec 2021)
 - High Priority (Added Dec 2021)

Powered by Esri and Seosketch

U.S. Mapping Coordination Site

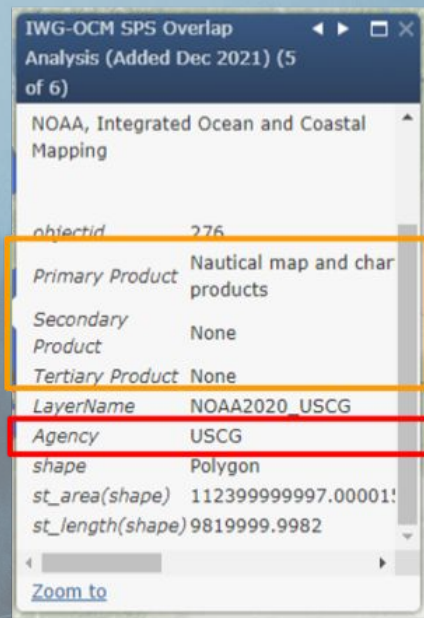
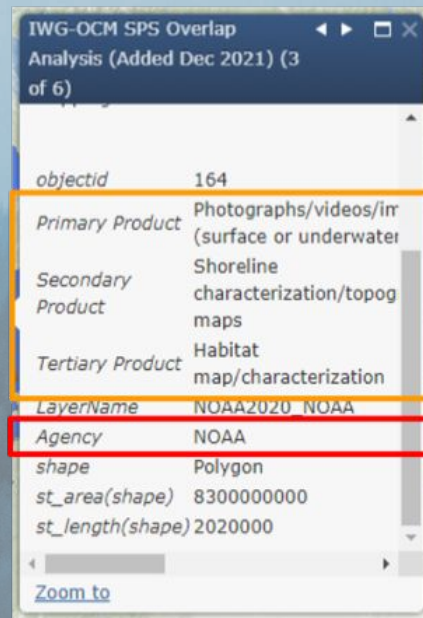


Overlap Analysis



Number of agencies

Name of Agency #1

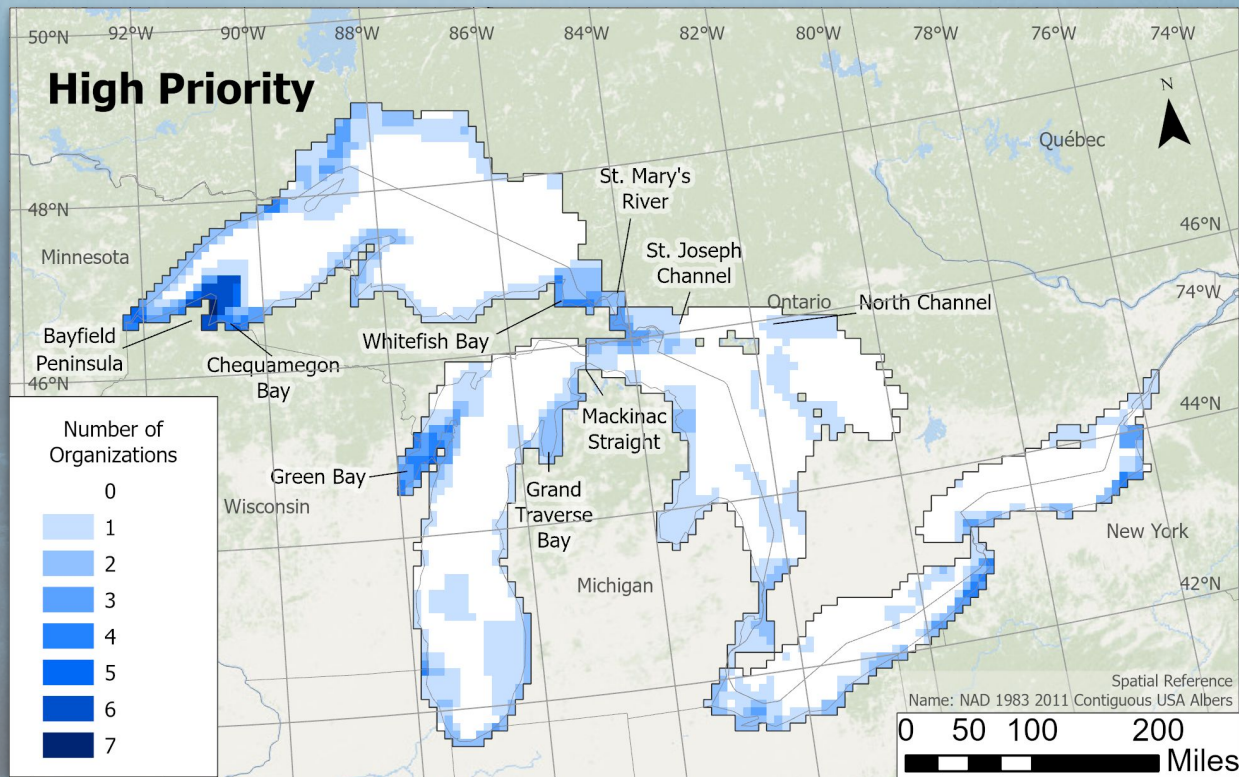


Products
Organization/Partner



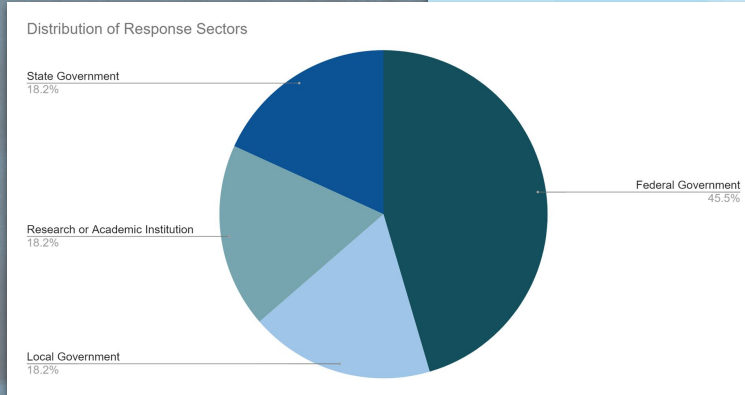
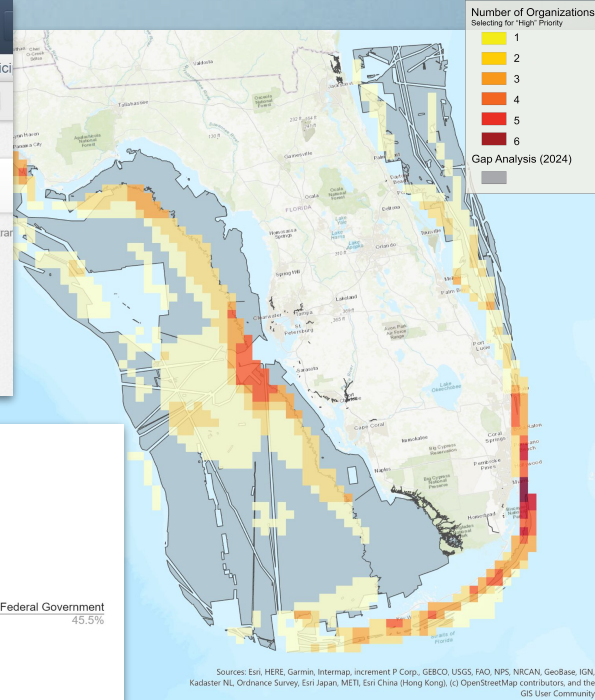
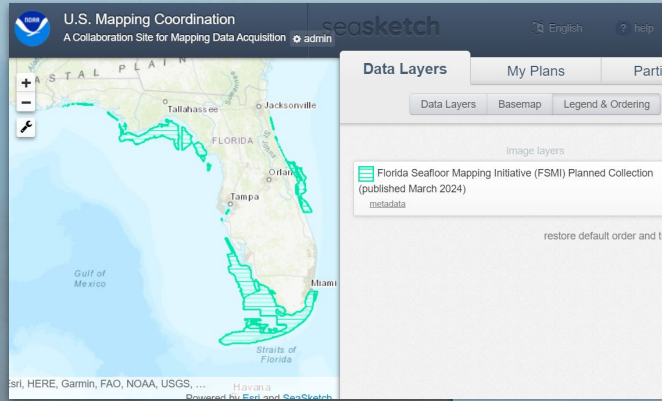
Great Lakes Observing System (GLOS) Study

- GLOS results, NMC capstone work
- Great Lakes Mapping Bill, \$200M authorization for mapping over 10 years



Florida Coastal Mapping Program (FCMaP)

- Informed FL Seafloor Mapping Initiative (FSMI) ~ \$100M for statewide bathy collection
- Shallow (0-20 m) water TBL collection now under contract
- Deep (20-200m) water prioritization & updated gap analysis guiding future offshore multibeam sonar acquisition



What is the Priorities Tool?

- Developed by NOAA's Ken Buja (NCCOS) using Web AppBuilder for ArcGIS
- Grid-based
- Users add their input to their organization's submission grid

FCMaP Prioritization 2: Deep-water (20-200 m)

Find address or place

Florida Escarpment

Sign Out Welcome cathleen!

Select

Select a Primary Justification (Mandatory)

Select a Justification

Select a Secondary Justification (Optional)

Select a Justification

Select a Tertiary Justification (Optional)

Select a Justification

Apply Only Justification

Select a Primary Product (Mandatory)

Select a Product

Select a Secondary Product (Optional)

Select a Product

Select a Tertiary Product (Optional)

Select a Product

Apply Only Product

Select a Horizontal Resolution (Mandatory)

Not specified

Apply Only Horizontal Resolution

Apply All Reset All Pulldowns

Change legend

Priority

Priority	Current	Selected
None	1834	0
Low	0	0
Medium	0	0
High	0	0
Total	1834	0

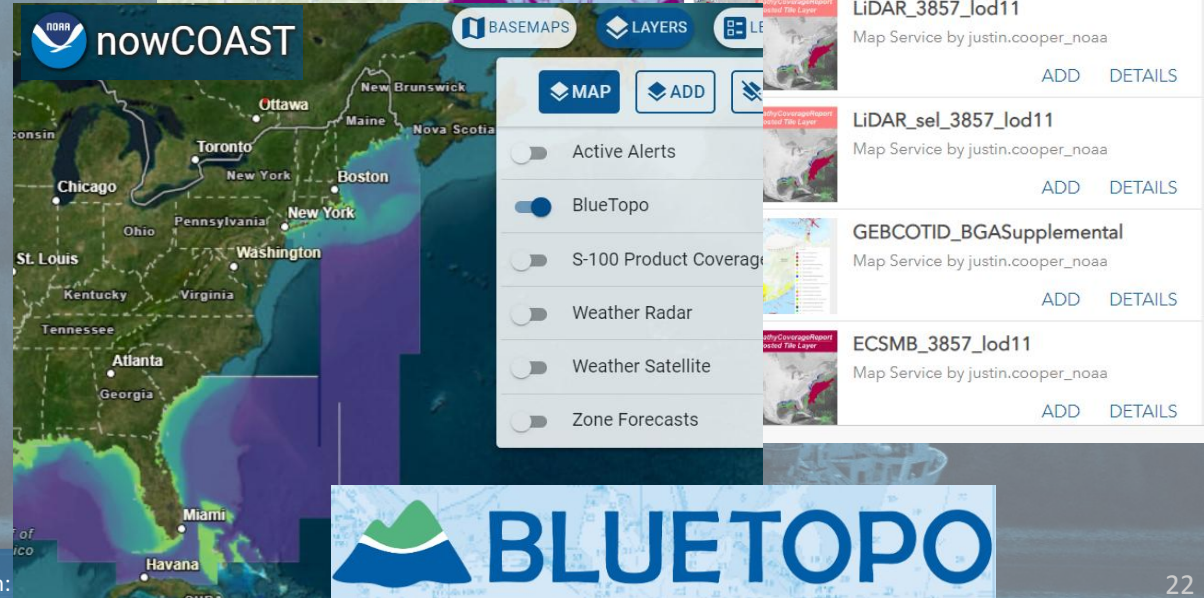
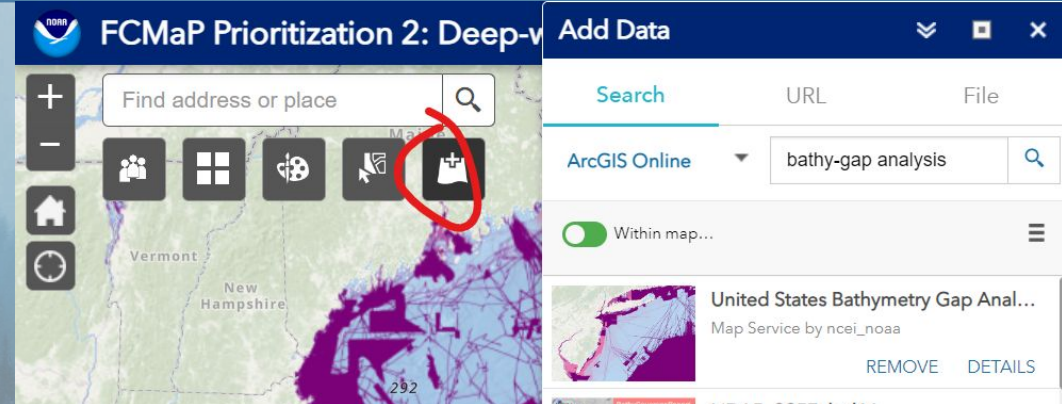
Choose a Priority

None

Apply Priority

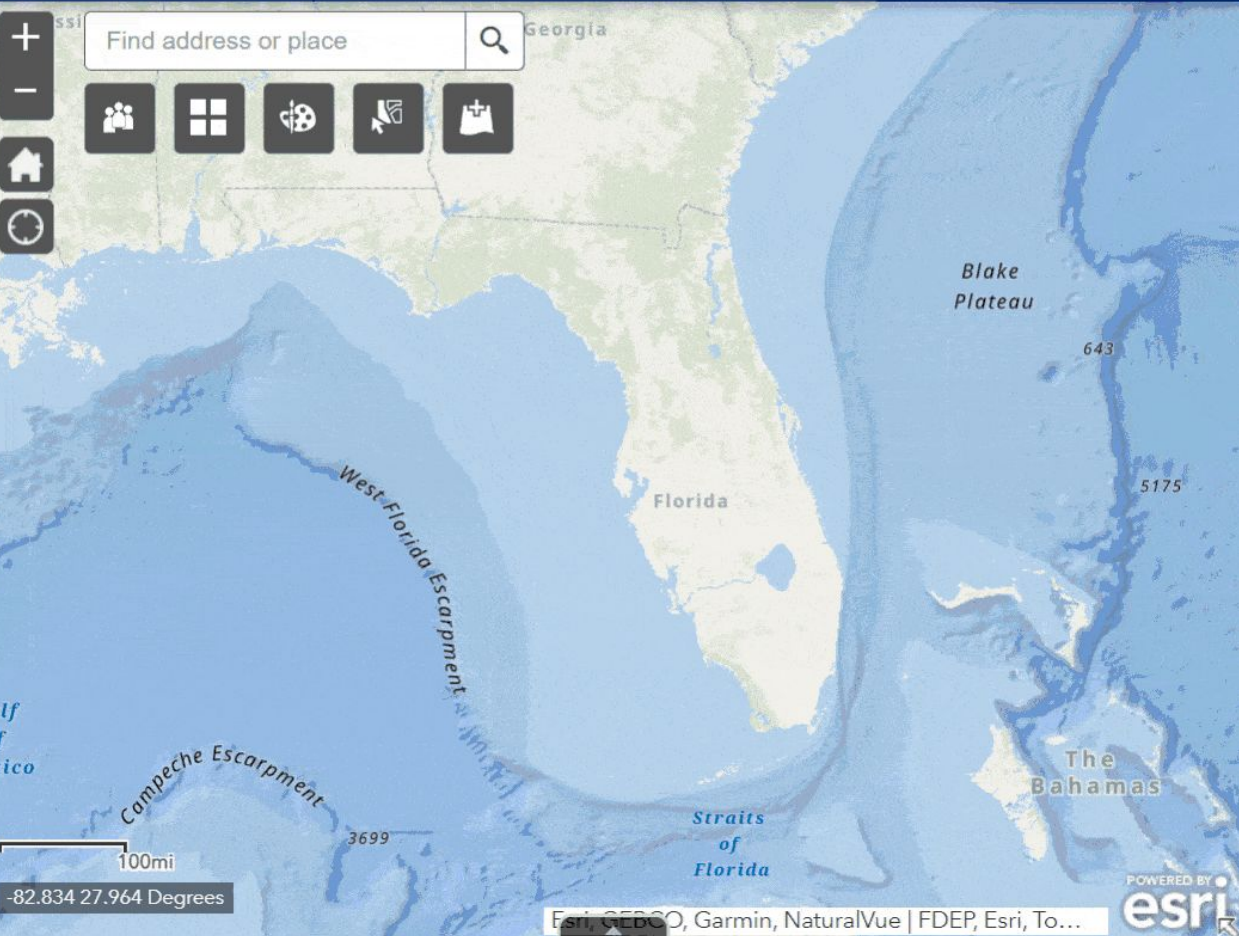


- Add your own reference layers from file or URL to the widget for help selecting data needs areas
- Use references to look for existing data/gaps, e.g. NCEI Bathy Viewer, National Bathymetric Source/Blue Topo, Bathy Gap Analysis, National Water Model, other sources





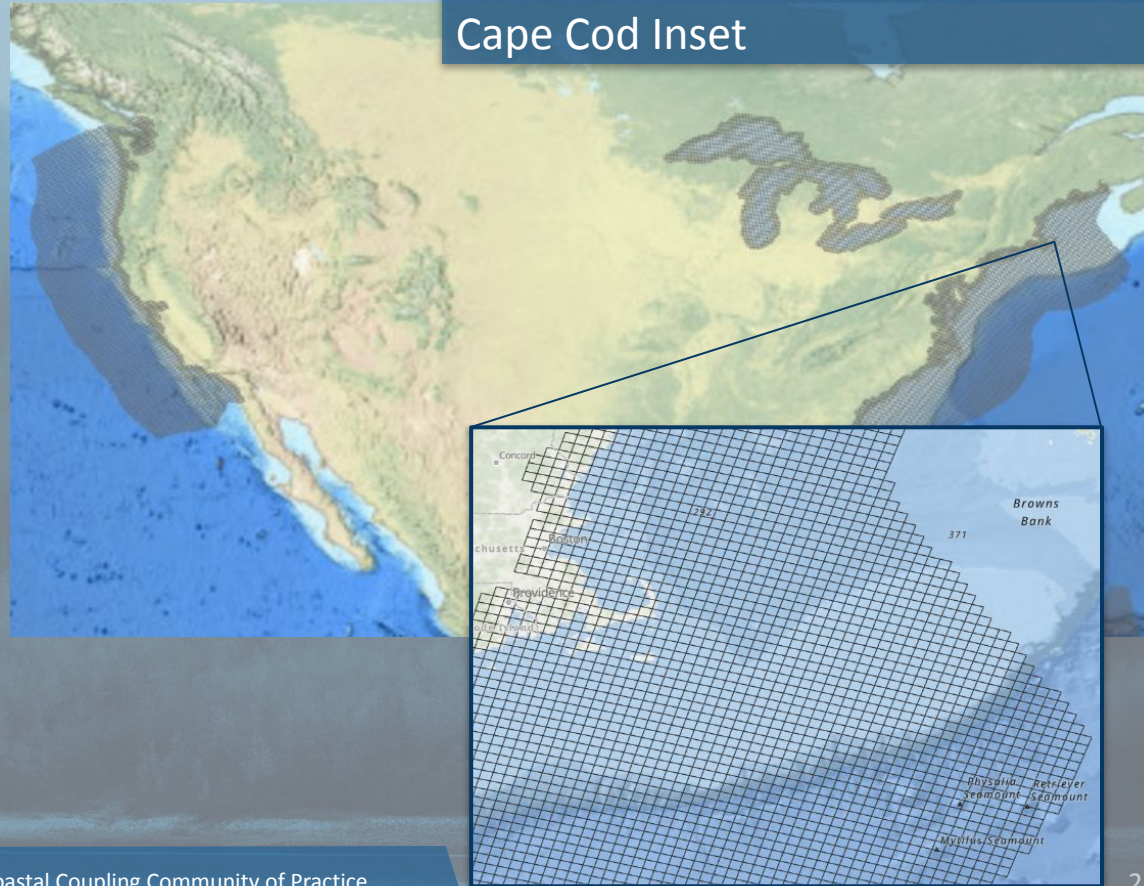
FCMaP Prioritization 2: Deep-water (20-200 m)



CC-CoP: Grid Selection

- USGS **3DEP** grid
 - 10x10 km cells
- Can be scaled nationally, divided by region
- Distance inshore/offshore?
 - Traditionally 10-20 km inland & offshore to EEZ

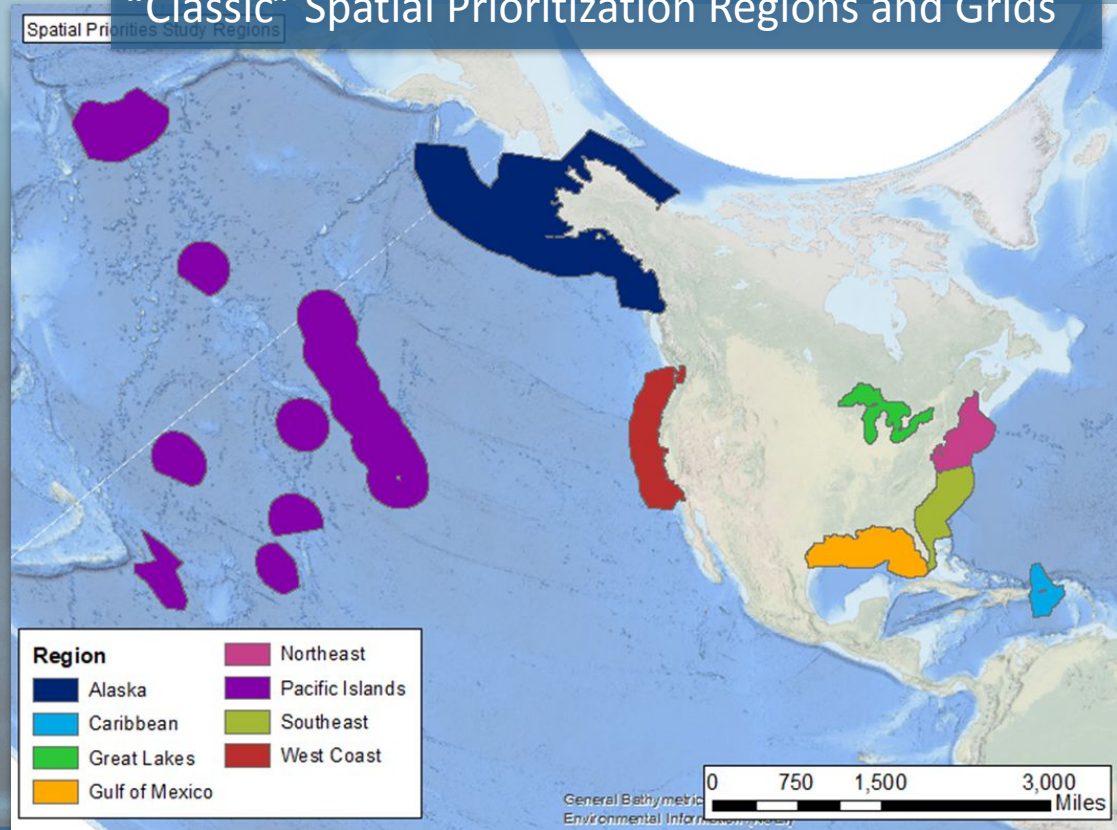
National IWG-OCM 3DEP Grid & Cape Cod Inset



CC-CoP: Grid Selection

- NATIONAL COVERAGE
- Can inform inland/coastal acquisitions for modeling
- Which region/gridding system will work best for the CC-CoP?

“Classic” Spatial Prioritization Regions and Grids



CC-CoP: Grid Selection

- NATIONAL COVERAGE
- Can inform inland/coastal acquisitions for modeling
- Which region/gridding system will work best for the CC-CoP?

CC-COP River Basin/HUC Delineation



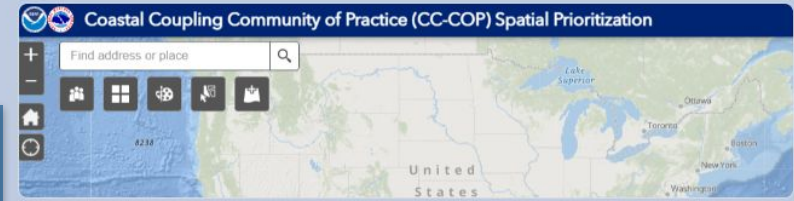
CC-CoP: Selection Criteria

Priority is defined as:

- **High:** 1-2 years (<10% of grid cells)
- **Medium:** 3-5 years (<25% of cells)
- **Low:** 6-10 years (<50% of cells)
- **Blank:** no urgent need

Customizable criteria:

- **Justification:** Why map? (i.e. Modeling, Water Column, Sediment Transport, Monitoring)
- **Map Product:** What do you need? (i.e. Topo/bathy elevations/DEMs, Shoreline, Charts, Samples)
- **Drivers:** Who says? Legislation, initiatives (i.e. Total Water Initiative, NOMEAC, Blue Economy)



CC-COP Spatial Prioritization Criteria Selection

Please respond to this form to help us delineate Justification, Map Product, and Driver criteria for the impending Coastal Coupling Community of Practice (CC-COP) Spatial Prioritization Study.

For further criteria definition, including definition of specific Justification and Products term, please refer to the white-page included in the email you received.

Criteria Definitions:

Justification: Purpose for mapping (i.e. "Benthic Exploration", "Infrastructure siting")

Map Product: Requested product following data collection (i.e. Photographs, Samples, or Charts)

Drivers: Legislation, campaigns, or initiatives that are "driving" a need for mapping (i.e. NOMEAC, Endangered Species Act, Blue Economy)

Please fill out the Google Form to tailor the Criteria to what CC CoP wants to see!



Next Steps

Selecting Participants

- Google Form question

Receiving your NOAA ArcGIS Online Account

- If you do not have a NOAA ArcGIS Online account, you will receive a temporary one for the study. Our administrators will work with you to set this up.

Priorities Submission

- Submit spatial priorities in the application, as seen today, further documented instructions will be provided

Results Publication

- Results will be published to the U.S. Mapping Coordination Site, we are happy to work with the community to synthesize additional products.



Questions?

Ashley Chappell/ IOCM

ashley.chappell@noaa.gov

Cathleen Yung/ IOCM

cathleen.yung@noaa.gov

iwgocm.staff@noaa.gov

