

Eric Reid, NEFMC, Subcommittee Chair | May 2023 | Key West, FL



CCC Area-Based Management Subcommittee

Composition of the CCC Area Based Mgmt Subcommittee

- Staff from all 8 Councils:
 - Michelle Bachman (NEFMC)
 - Jessica Coakley (MAFMC)
 - Mark Fitchett (WPFMC)
 - John Froeschke (GMFMC)
 - Kerry Griffin (PFMC)
 - Roger Pugliese (SAFMC)
 - Miguel Rolon & Liajay Rivera (CFMC)
 - Dave Witherell (NPFMC)
- With assistance from NOAA Fisheries:
 - Heather Sagar
 - Tim Haverland
 - Michelle Lennox



The Terms of Reference (TORs)

1. Assist CCC in reacting to 30 by 30 initiative.
2. Prepare report on Area-based Measures in U.S. EEZ:
 - Evaluate existing EEZ fishery area closures relative to the 30 by 30 initiative.
 - Discuss pros and cons of area-based management.
 - Objectives and expected benefits of area-based management tool for diversity of ecosystems under Councils' jurisdictions.
3. Prepare journal article on area-based measures for marine fisheries in U.S.



Meetings of the Subcommittee (since October 2022)

January 11, 2023

- Discussed progress on GIS contract, necessary revisions to report and journal article, and data inventory, including identification of gear restrictions for each area.

February 23, 2023

- Discussed progress on GIS contract, plan for finalizing report and journal article, including deadline for final edits to area inventory.

April 26, 2023

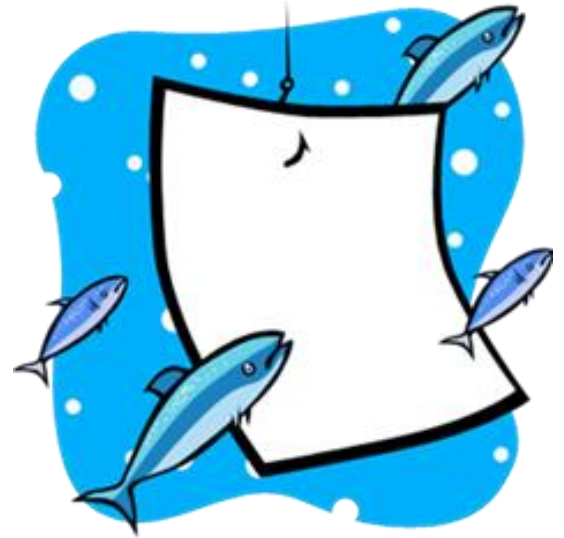
- Final update on GIS contract, discussed development of an ArcGIS Online Experience Application for data sharing, CCC meeting prep, created a plan to finalize the journal article.

Meeting minutes are available on request



Final Report - Highlights

- 3 Conservation Area Categories that include 648 different conservation areas in total
 - Ecosystem Conservation - currently >56% of EEZ is conserved
 - Year-round Fishery Management - 37% of EEZ conserved
 - Seasonal Fishery Management/Other - 4% of EEZ conserved



Final Report - # of Conservation Areas (Table 5)

Region	Ecosystem Conservation	Year-round Fishery Management	Seasonal Fishery Closures or Other	Total # (all areas)
New England	17	3	27	47
Mid Atlantic	37	2	6	45
South Atlantic	168	3	3	174
Gulf of Mexico	21	2	1	24
Caribbean	2	1	6	9
Pacific	79	27	0	106
North Pacific	194	20	7	220
Western Pacific	13	9	0	22
Total	531	67	50	648

Final Report - Coverage in nm² (Table 6)

Region	Total area (nm ²) of U.S. EEZ	Ecosystem Conservation	Year-round Fishery Management	Seasonal Fishery Management or Other	Total area (all areas combined; no overlap)	Total % (all areas combined; no overlap)
New England	55,947	21,945	3,202	44,185	48,390	86.5%
Mid Atlantic	53,307	31,100	0	5,720	36,276	68.1%
South Atlantic	143,768	20,217	56,416	41,918	78,946	54.9%
Gulf of Mexico	182,752	1,022	222	390	43	0.1%
Caribbean	57,651	5	13	25	1,634	0.9%
Pacific	231,748	208,718	15,927	0	219,231	94.6%
North Pacific	1,026,771	654,633	946,589	28,777	996,454	97.0%
Western Pacific	1,686,328	973,787	255,621	0	1,097,494	65.1%
Total	3,438,272	1,911,428 (56%)	1,277,991 (37%)	121,015 (4%)	2,478,466	72.1%

Final Report - Year-round coverage in nm², by gear (Table 7)

Region	Total area (nm ²) of U.S. EEZ	Year-round, Total area (nm ²)					% of Region (no overlap)				
		All bottom tending gears	Mobile bottom tending gears	Bottom trawl	Dredge	Other gears	All bottom tending gears	Mobile bottom tending gears	Bottom trawl	Dredge	Other gears
New England	55,947	3,703	21,915	24,041	34,009	22,778	6.6%	39.2%	43.0%	60.8%	40.7%
Mid-Atlantic	53,307	23	31,100	31,100	31,282	31,100	0.0%	58.3%	58.3%	58.7%	58.3%
South Atlantic	143,768	19,268	19,268	19,273	58,721	37,896	13.4%	13.4%	13.4%	40.8%	26.4%
Gulf of Mexico	182,752	945	1,038	1,038	1,244	1,150	0.5%	0.6%	0.6%	0.7%	0.6%
Caribbean	57,651	0	0	0	5	43	0.0%	0.0%	0.0%	0.0%	0.1%
Pacific	231,748	3,865	7,642	104,046	208,726	15,622	1.7%	3.3%	44.9%	90.1%	6.7%
North Pacific	1,026,771	148,165	224,633	625,852	192,426	947,557	14.4%	21.9%	61.0%	18.7%	92.3%
Western Pacific	1,686,328	1,014,403	1,014,403	1,014,403	1,014,403	1,014,403	60.2%	60.2%	60.2%	60.2%	60.2%
Total	3,438,272	1,190,342	1,319,970	1,819,753	1,540,787	2,070,548	34.6%	38.4%	52.9%	44.8%	60.2%

Final Report - Seasonal coverage in nm², by gear (Table 8)

Region	Total area (nm ²) of U.S. EEZ	Seasonal, Total area (nm ²)					% of Region (no overlap)				
		All bottom tending gears	Mobile bottom tending gears	Bottom trawl	Dredge	Other gears	All bottom tending gears	Mobile bottom tending gears	Bottom trawl	Dredge	Other gears
New England	55,947	0	0	2,807	1,904	15,841	0.0%	0.0%	5.0%	3.4%	28.3%
Mid-Atlantic	53,307	0	0	0	1,543	3,450	0.0%	0.0%	0.0%	2.9%	6.5%
South Atlantic	143,768	0	0	29,627	15,680	29,627	0.0%	0.0%	20.6%	10.9%	20.6%
Gulf of Mexico	182,752	390	390	390	390	390	0.2%	0.2%	0.2%	0.2%	0.2%
Caribbean	57,651	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pacific**	231,748	0	0	0	0	0	0.0%	0.0%	0.0%	0.0%	0.0%
North Pacific	1,026,771	795	40	3,399	40	0	0.1%	0.0%	0.3%	0.0%	0.0%
Western Pacific	1,686,328	83,092	83,092	83,092	83,092	83,092	4.9%	4.9%	4.9%	4.9%	4.9%
Total	3,438,272	84,277	83,522	119,315	102,649	132,400	2.5%	2.4%	3.5%	3.0%	3.9%

Final Report - New Maps for each Region (Appendix A)

New England Fishery Management Council



Mid Atlantic Fishery Management Council



South Atlantic Fishery Management Council



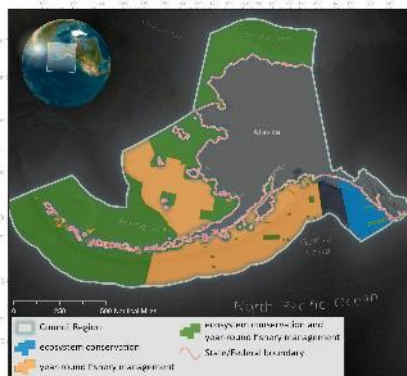
Caribbean Fishery Management Council



Gulf of Mexico Fishery Management Council



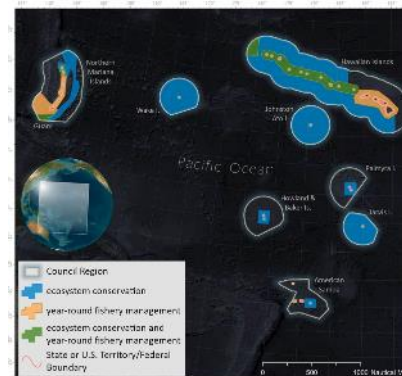
North Pacific Fishery Management Council



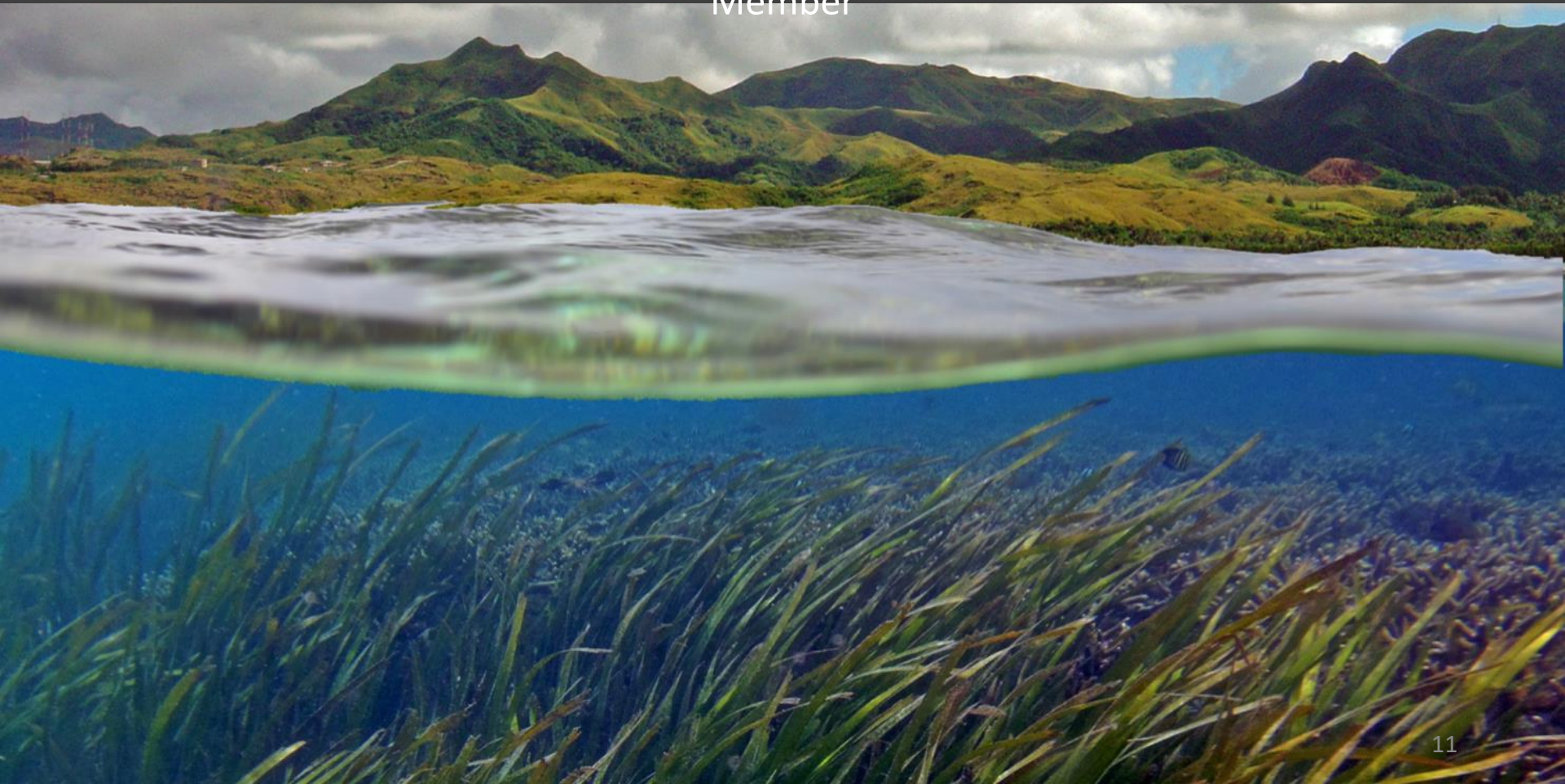
Pacific Fishery Management Council



Western Pacific Fishery Management Council



GIS Contract and Possible Next Steps | Michelle Bachman, NEFMC Staff, Subcommittee Member



GIS Contract with PSMFC (September 2022-April 2023)

Milestone	Summary	Completed?
1	Assemble list of areas and inventory spatial data, develop plan to address gaps.	✓
2	Clean spatial data, creating new files where needed; generate metadata.	✓
3	Calculate total conservation area by region and area category; prepare tables and maps.	✓
4	Finalize and publish geodatabase.	✓



Webmap and layer landing pages

For use online, without desktop software

For use with ArcGIS desktop software

Shortened url for sharing

Categories and tags are helpful when searching for maps

Description of the dataset w/ links

Download data here

U.S. Fishery Management and Conservation Areas webmap

This map provides information on United States fishery management, conservation areas, focusing on the Exclusive Economic Zone (EEZ) waters. Data have been compiled and organized for this report: "An Evaluation of Conservation Areas in the U.S. EEZ (OCC AGM Subcommittee, 2022). For additional details, please refer to the layer details and related activities.

Details

Tags

Categories

U.S. Fishery Management and Conservation Areas

Open in Map Viewer Classic

Open in Scene Viewer

Open in ArcGIS Desktop

Download

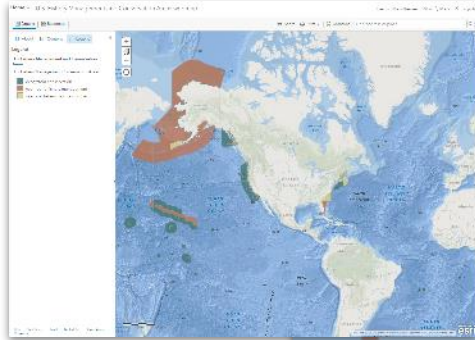
Download Link (1-8.6 MB, v3) SHA256: zipped file, geodatabase and metadata PDF Metadata PDF | View | Download

Logos for various fishery management councils: NORTH PACIFIC FISHERY MANAGEMENT COUNCIL, WEST PACIFIC FISHERY MANAGEMENT COUNCIL, GULF OF MEXICO FISHERY MANAGEMENT COUNCIL, NEW ENGLAND FISHERY MANAGEMENT COUNCIL, MID-ATLANTIC FISHERY MANAGEMENT COUNCIL, SOUTH PACIFIC FISHERY MANAGEMENT COUNCIL, and CFMC.

Webmap: <https://psmfc.maps.arcgis.com/home/item.html?id=0f5946eb61be4d899b88ac3916bb7691>

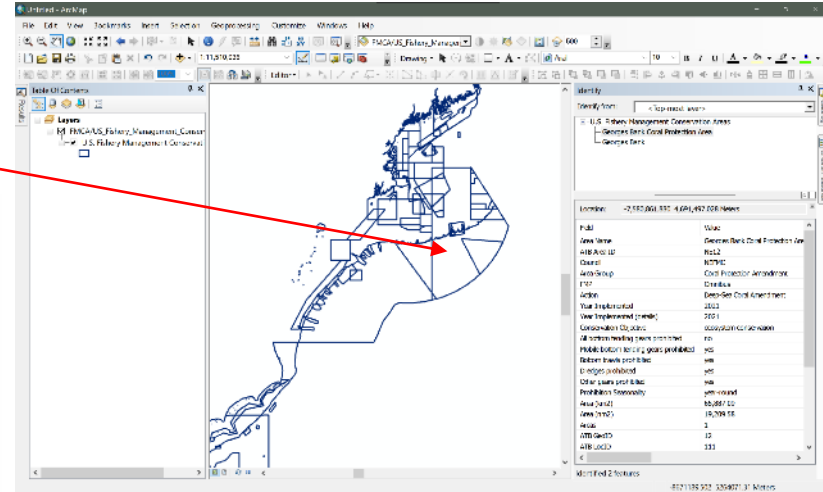
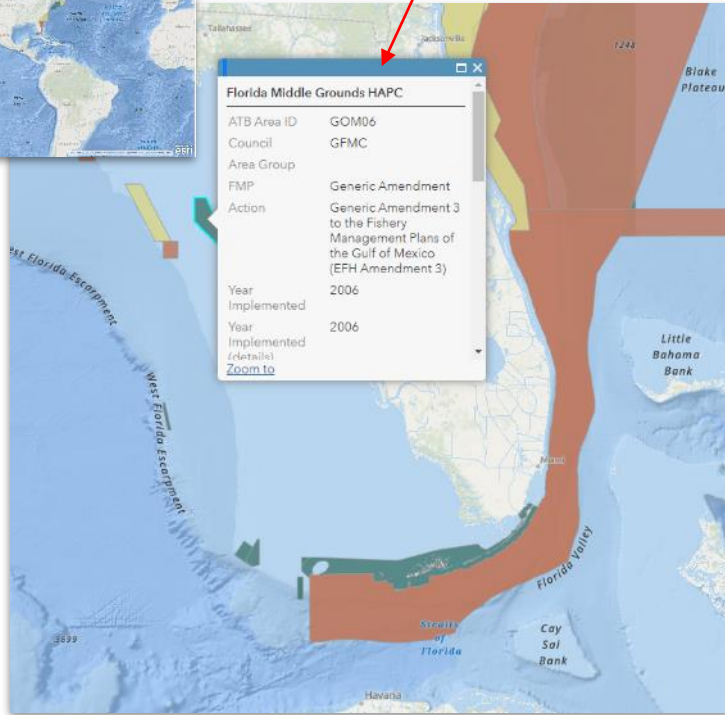
Layer: <https://psmfc.maps.arcgis.com/home/item.html?id=aba21f00d0014dae885deb546df2d6f5>

Learning more about each area



Clicking on a layer displays all of the metadata

As shown in the online map viewer



As shown in the ArcMap desktop application

Recommendations: Geodatabase storage and sharing

- PSMFC continues to host geodatabase on their ArcGIS Online GeoPortal, sharing with Councils and public via a published webmap and layer.
 - A direct link to the webmap can be shared through the CCC webpage, individual Council pages, etc.
 - The full geodatabase can be downloaded via the webmap.
 - Note that the GeoPortal is not the same as PSMFC's webpage; their GIS server is needed to host the data
- Can also share a link to the webmap through NOAA Fisheries GeoPortal.

Recommendation: Develop an interactive webmap application

- Through an additional short-term contract, create a customized online application based on the webmap that will include:
 - Text describing methods and caveats
 - Summary tables showing the total size of conservation areas by Council region and area category (i.e., ecosystem, year-round fishery, seasonal/other)
 - Gear restriction summaries by Council region and area category (e.g., % EEZ closed to bottom trawls)
 - Separate regional tabs for maps, data summaries, and discussion



<https://www.esri.com/content/dam/esrisites/en-us/media/fliers/experience-builder-slick-sheet.pdf>



ArcGIS Online Data Sharing Tools

Webmaps

- Great for sharing, viewing and downloading spatial data
- Can include some explanatory text
- Webmaps are the foundation for dashboards and experiences

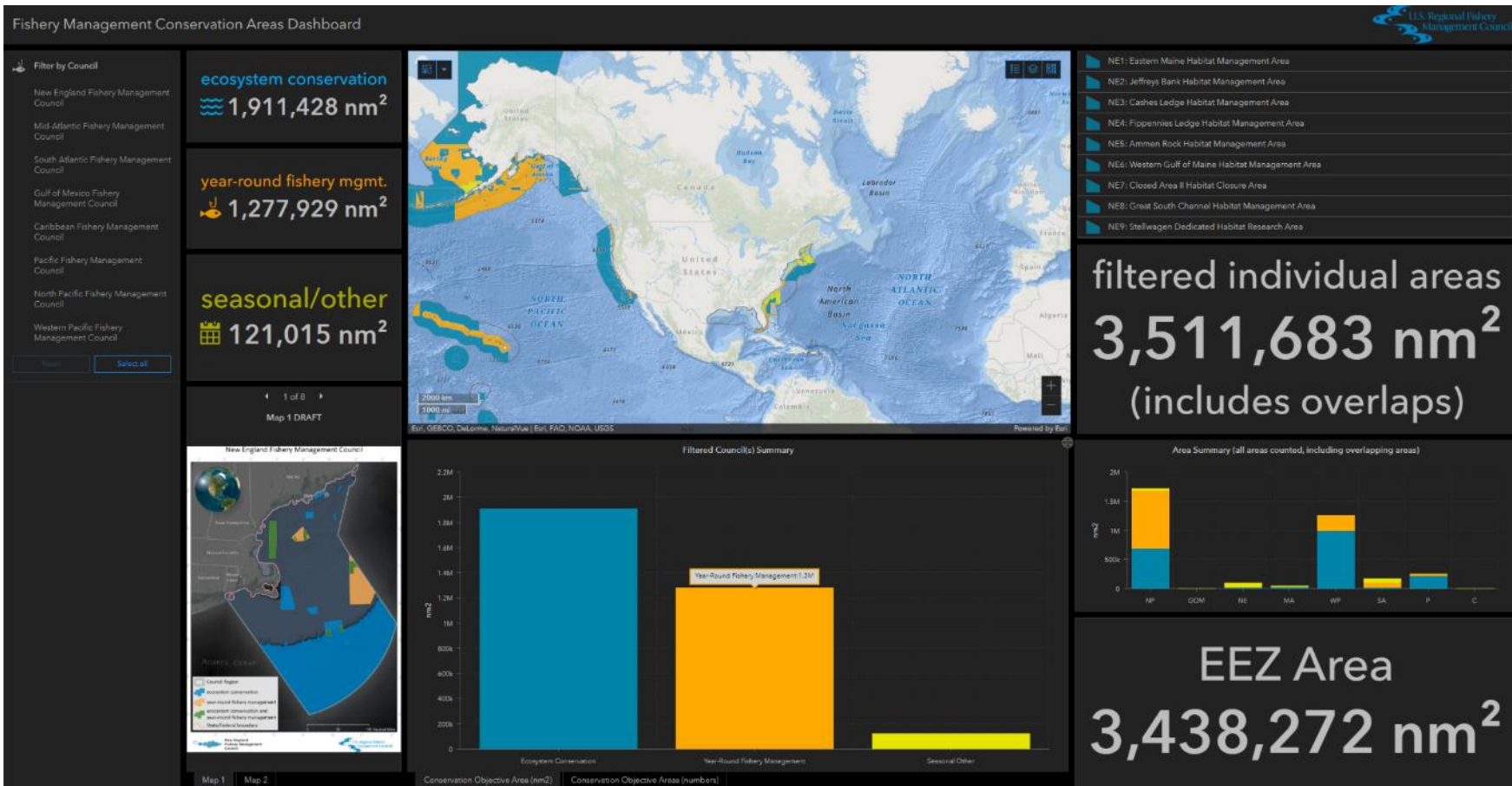
Dashboards

- Ideal for showing one or more maps and companion data summaries on a single screen
- Text generally as pop-ups/tooltips

Experiences

- More curated, in-depth way to explore a spatial data set and associated data summaries
- Allow for explanatory text narratives alongside information
- Multiple tabs can be added to the experience application, e.g., to show information by Council region
- Interface scales automatically to easily accommodate different devices and screen sizes


Draft ABM dashboard - for Subcommittee work




Examples of ArcGIS Online Experience Applications

Alaska, find your place. find your fish.

This interactive map is a guide to sport fishing opportunities across Alaska. Use the map and filters below to find popular fishing locations, species and run timing, fishing gear selection, as well as boat and angler access. Be sure to check out the ADF&G Regulations and Emergency Orders and News Releases before heading out.

 Help



[Sport Fishing Regulations](#)

[Buy Your Fishing License](#)

Filter fishing locations

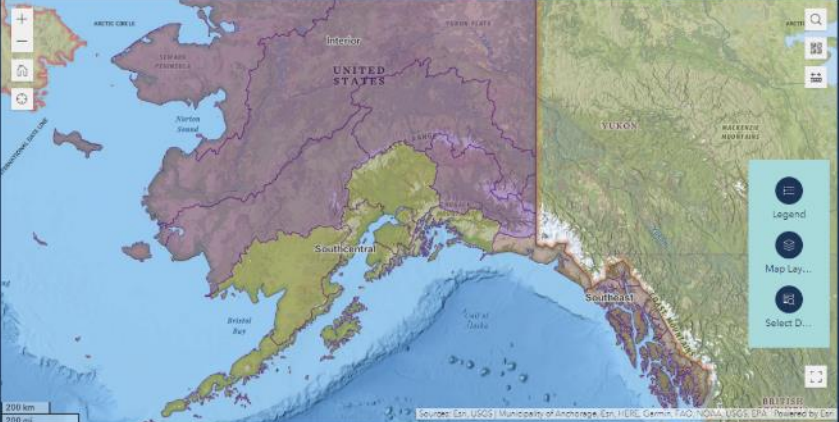
Filter access sites

Category
Species
Access Mode

Filter fishing spots by category

Saltwater/Marine
Stocked or Enhanced
Rivers

Lakes



Browse Fishing Spots

Browse Access Sites

Trails
Boat Launches
Harbors

Lunch Creek Trail

More Info

Lower Towah Creek Trail

More Info

Battery Point Trail

Pictures coming soon

Mortana Creek Trail

Pictures coming soon

Juneau-Glacier Bay

Selected Spot Info: Fishing

Selected Spot Info: Access

Amalga/Peterson Creek Outlet

Fish for Dolly Varden, outthroat trout, chum salmon, pink salmon, coho salmon.

The saltwater cove at Amalga, at the mouth of the salt chuck/Peterson Creek is a popular fishing spot and is part of Ernest Gruening State Historical Park. Chum fry are released at Amalga Harbor by Douglas Island Pink and Chum, Inc. (DIPAC) to enhance the commercial and sport fisheries in the Juneau area.

Run Timing	April-Oct.: Dolly Varden and outthroat trout; June: chum salmon; July: pink and chum salmon; Aug.-Oct.: coho salmon
Tackle	In general for saltwater herring or scented bait as well as spinner, spoon and flies.
Getting There	Located just off the Glacier Highway at about milepost 24 turn onto Amalga Harbor Road and follow to the end (~3/4 mile).
Parking	Several parking lots available near Amalga Harbor boat launch and closer to the Ernest Park entrance.
Amenities	Picnic table, fire pit, trail with interpretive signs, and outhouses near boat launch.
More Info	Contact ADF&G Juneau Sport Fish or call (907) 465-4270

Special Regulations

Emergency Orders

More info

Print this spot

GoFish Alaska

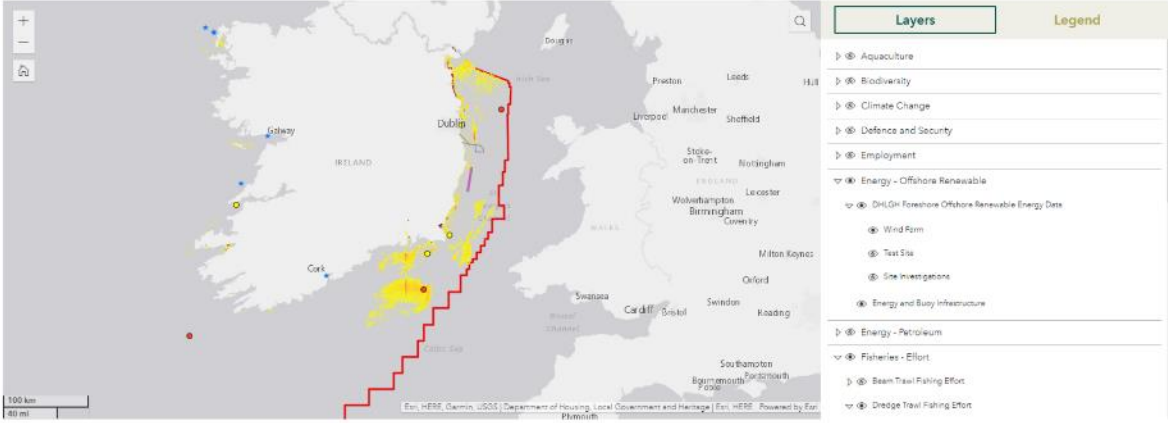
Examples of ArcGIS Online Experience Applications

gov.ie Home Activities Map (BETA) Activities Policies Map MSP Hub

Activities Map (BETA)

The map here will display marine activities. All activities are off by default and you can turn on each activity layer by clicking the eye icon. The legend for each layer is available once the layer is turned on. You can choose to turn on and off as many layers as you need but there will be slower response times when everything is turned on or very busy layers are resolving.

Please Note: The Layers and Legend lists may take a few moments to load. Some layers will not display until zoomed in (these layers appear listed in grey text until available).



100 km
60 mi

Maritime Area Planning Act 2021
Project Ireland 2040
National Planning Framework

Email: map@housing.gov.ie
Twitter: [@MSP_Ireland](https://twitter.com/MSP_Ireland)

An Roinn Tithíochta, Káilras Áiteil agus Oidhreacht
Department of Housing, Local Government and Heritage

[Irish Marine Spatial Planning](#)

Next Steps for the ABM Subcommittee

- Announce report
- Finalize and format journal article, submit for peer review
- Continue to coordinate with NOAA Fisheries on Atlas database
- Support the CCC on development of position statements
- If recommended by CCC, support GIS contractor in development of ArcGIS Experience Application to share results, maps, and spatial data





Questions?