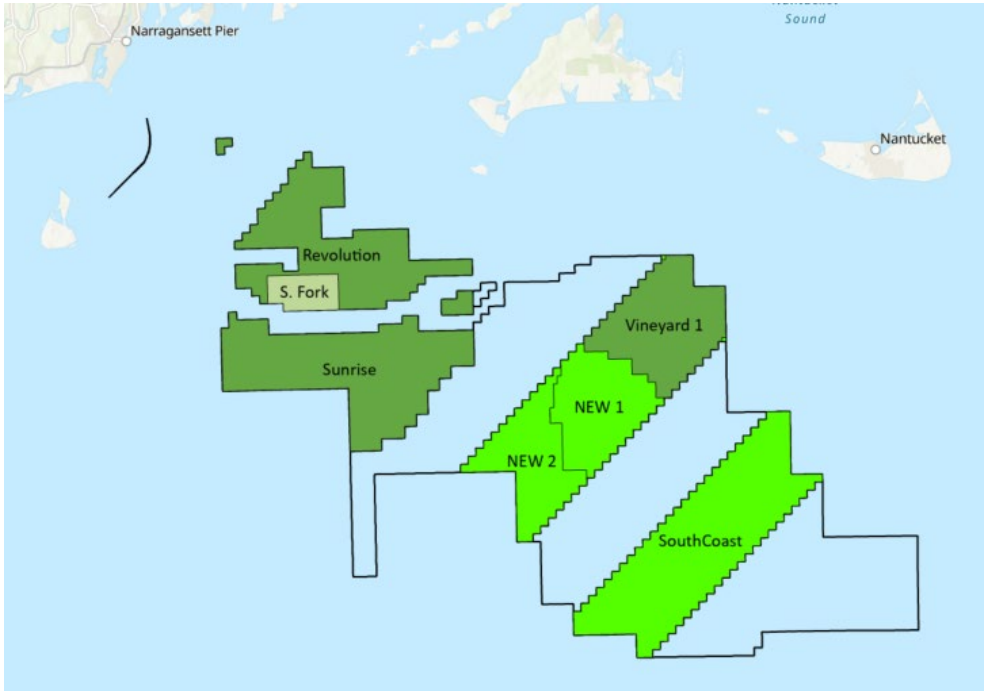
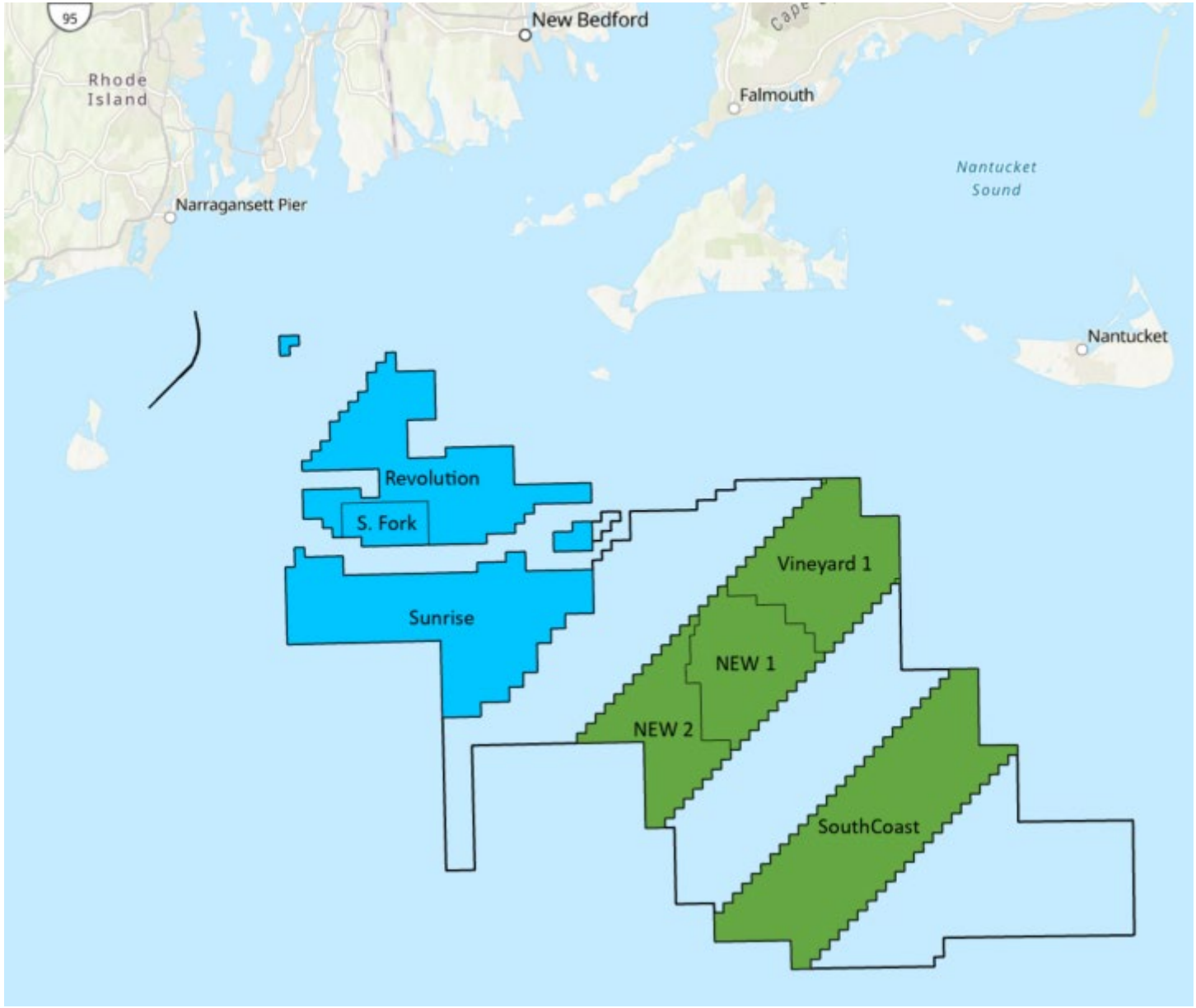
Fisheries Working Group Updates

- 4 projects are under construction / operating
  - South Fork, Vineyard Wind 1, Revolution, Sunrise
- 7 have signed Fisheries Compensatory Mitigation agreements with MA
  - above + New England Wind 1&2, SouthCoast Wind



- Focus for today:
  - Status of Community and Fisheries Innovation Fund, and Navigation Enhancement and Training Program
  - Boulder relocation plans & reporting
  - MassCEC research announcements
  - Industry and Developer Updates

Community Funds and Fisheries Innovation Funds Updates



Community Funds	South Fork	Revolution	Sunrise
Amount	$200k	$400k	$1mil

Purpose: provide funding for initiatives, research, and projects that will support the co-existence of the fishing and wind sectors

Oversight: Nine member Coastal Community Advisory Council

Status: Advisory Group to be appointed

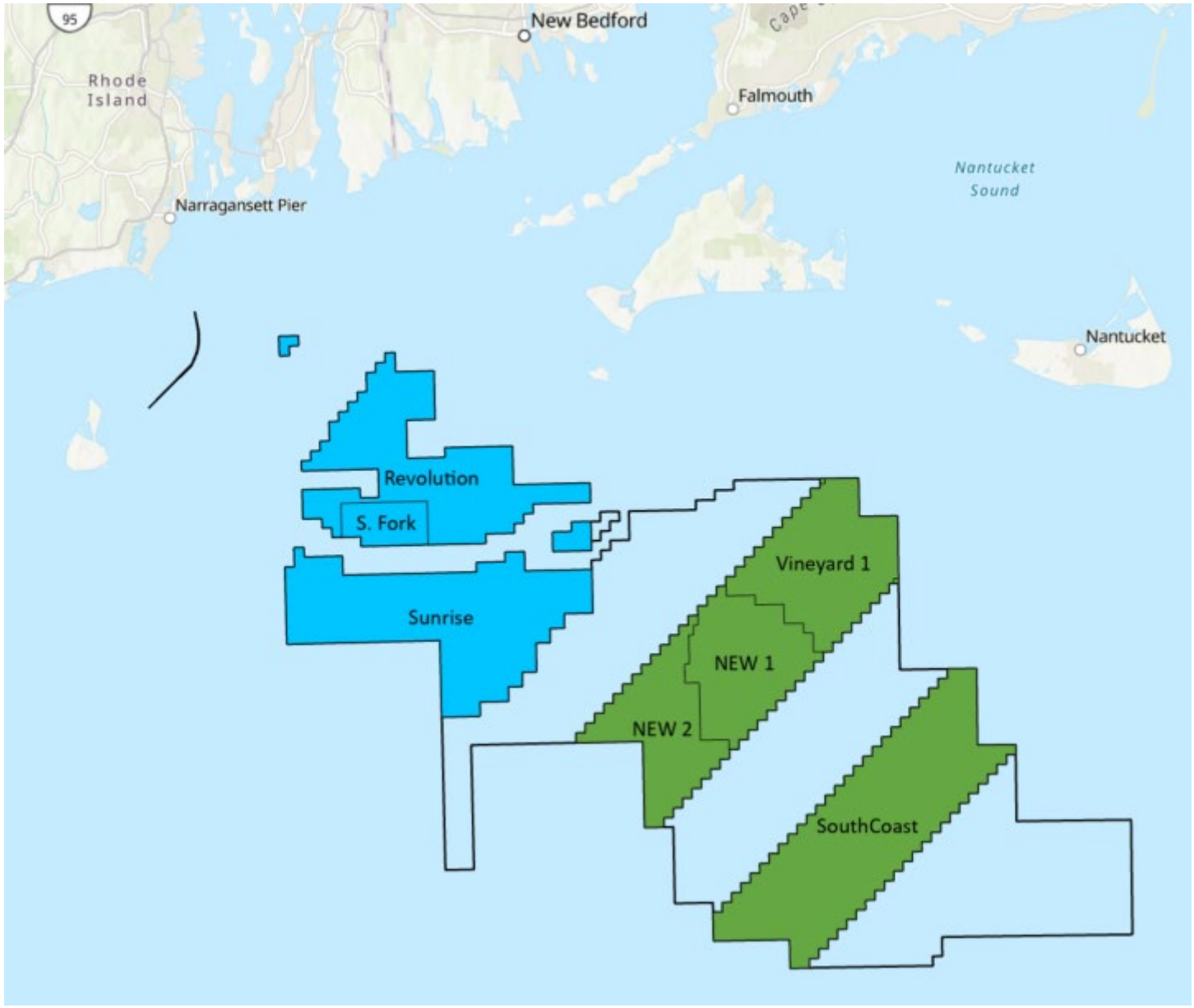
Innovation Funds	Vineyard 1	NEW 1 & NEW 2	South Coast
Amount	$1.75mil	$1.5mil	$1.5mil

Purpose: facilitate innovation that supports the co-existence of the fishing and wind sectors, support Massachusetts fishers' continued fishing in and around the Development

Oversight: Fisheries Advisory Panel

Status: First RFP for VW pending

Direct Compensation Fund Updates



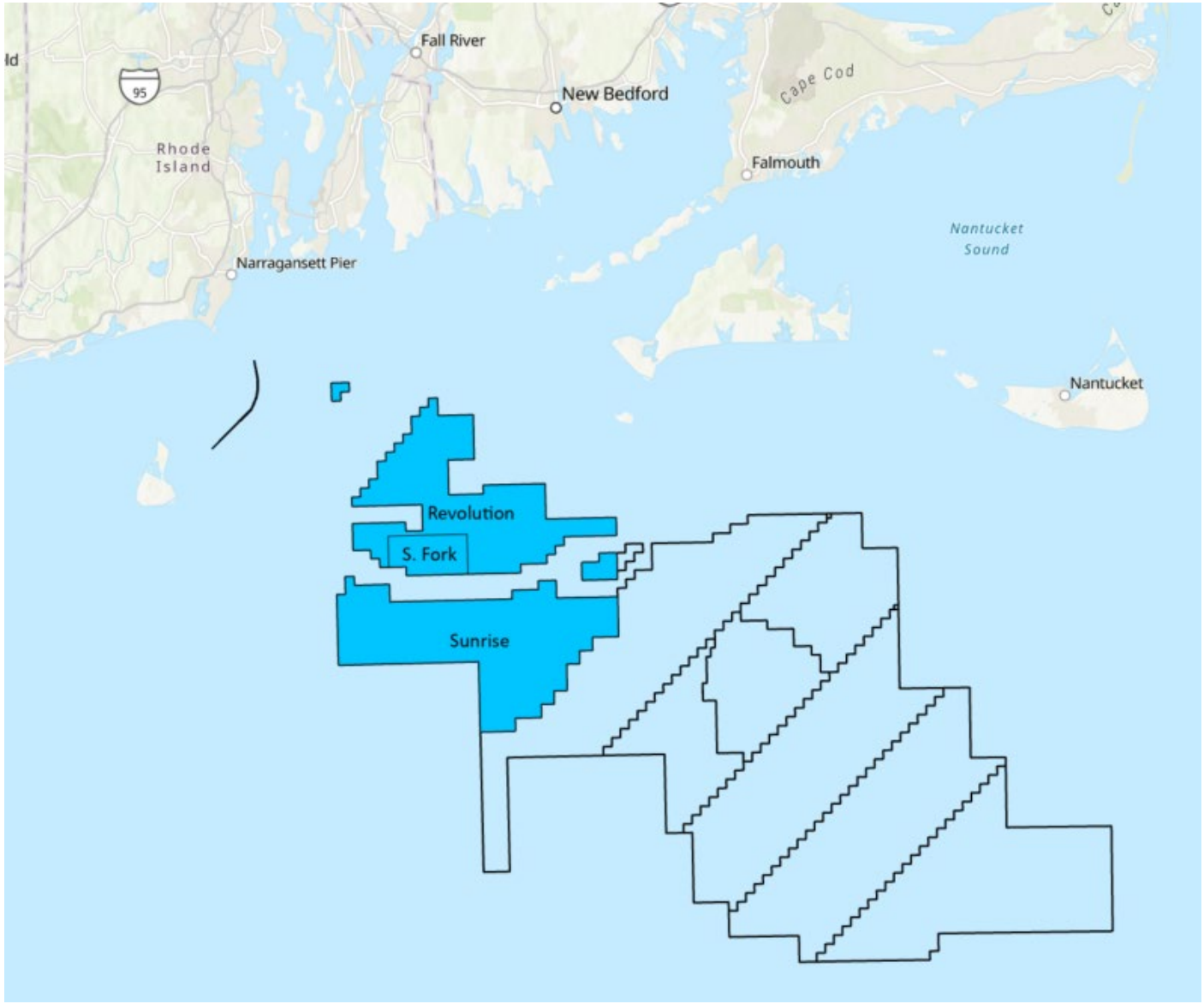
Direct Compensation	South Fork	Revolution
Amount	$2.1mil	$6.4mil
Third Party Administrator	PKFOD	PKFOD
Status	1 eligible, 8 in process	-

Eligibility: History of operating in area and incurred a direct impact/loss caused by SF/Revolution Wind.

Direct Compensation	Vineyard 1
Amount	$19.2mil
Third Party Administrator	De Maximis, Inc.
Status	Application period closed

Eligibility: Fishing activity in lease area, three years from 2016-2022

Navigation Enhancement and Training Program (NETP) Update



- Threshold for access to program reduced in past year
- MA vessel engagement greatly increased in past month
- Third-party administrator researching vessel eligibility
- Nav simulator (Middletown, RI) will be offered 2x year

NETP Funds	South Fork	Revolution	Sunrise
Nav HW Vouchers	7	15	0
Training Vouchers	4	24	0
Total Spend	$74,000	$174,000	$0
NETP Funds Remain	Up to $226,000	Up to $326,000	Up to $500,000

(as of 2/7/2025)

MassCEC Science and Research Solicitation: Award Portfolio

FWG

Lead Applicant	Project Title	Topic Area	PI
Gloucester Marine Genomics Institute (Gloucester, MA)	Evaluating the Effects of Offshore Wind Development on Fisheries Using Environmental DNA (eDNA)	Fisheries	Tim O'Donnell
Gulf of Maine Research Institute (Portland, ME)	Understanding Fishing Interactions: Gulf of Maine Fisheries and Floating Offshore Wind	Fisheries	Hannah MacDonald
New Bedford Port Authority (New Bedford, MA)	Modeling Fishing and Fishing Vessel Behavior and Assessing Access in and Around Wind Energy Areas	Fisheries	Blair Bailey
INSPIRE Environmental (Newport, RI)	Promoting Beneficial Colonization of Offshore Wind Infrastructure	Habitat/Ecology	Annie Murphy
ORE Catapult (Glasgow, UK)	WINDSENSE – Wireless Intelligent Nano-Devices, a Sensor Network for Sustainable Energy	Climatetech	Dan Allington
National Audubon Society (Washington, DC)	Safe Passage: Mapping Songbird Migration Routes and Altitudes over the Atlantic to Determine Potential Impacts of Offshore Wind	Wildlife	Jill Deppe
New England Aquarium (Boston, MA)	Comparative Analysis of Marine Mammal Density and Detection Rates from Aerial Surveys	Wildlife	Orla O'Brien

MassCEC Science and Research Solicitation: Award Portfolio-Cont'd

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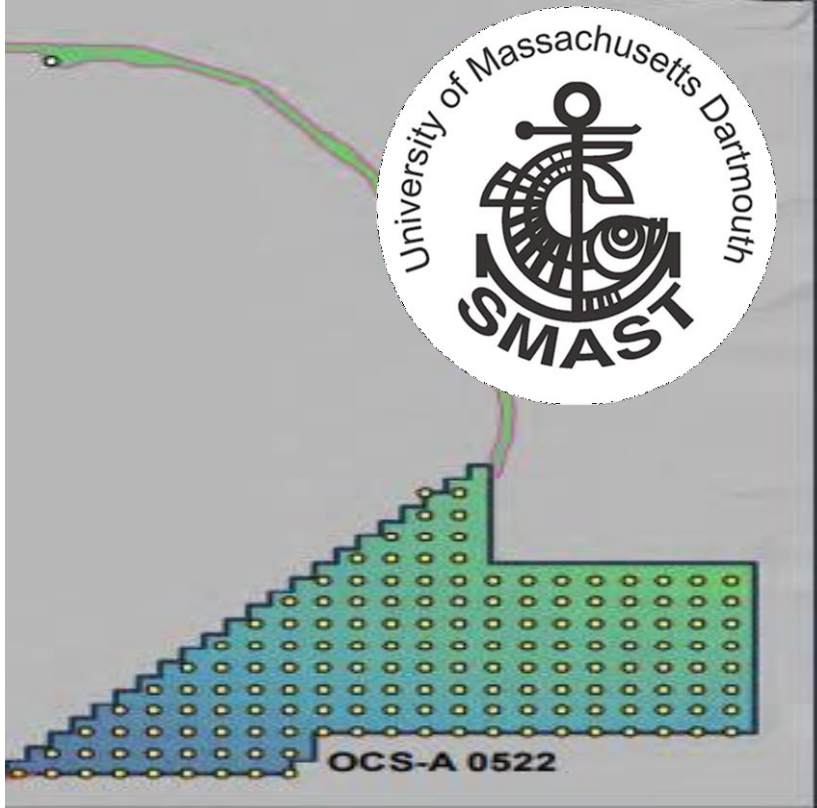
Draft Recommendations for Vineyard Offshore Fisheries Monitoring

Steve Cadrin, contracted by Vineyard Offshore
UMass Dartmouth, School for Marine Science & Technology

Massachusetts Fisheries Working Group on Offshore Wind Energy

February 14, 2025



Process Adopted ROSA Guidance

ROSA
Responsible Offshore Science Alliance

✓describe fishery resources in the area

~ consult with government agencies, researchers, and the fishing industry

✓define monitoring objectives and testable hypotheses

✓identify indicators to monitor specific species and habitats

✓define thresholds for detecting changes in indicators

✓develop sampling designs to meet objectives

✓develop sampling protocols to collect required data

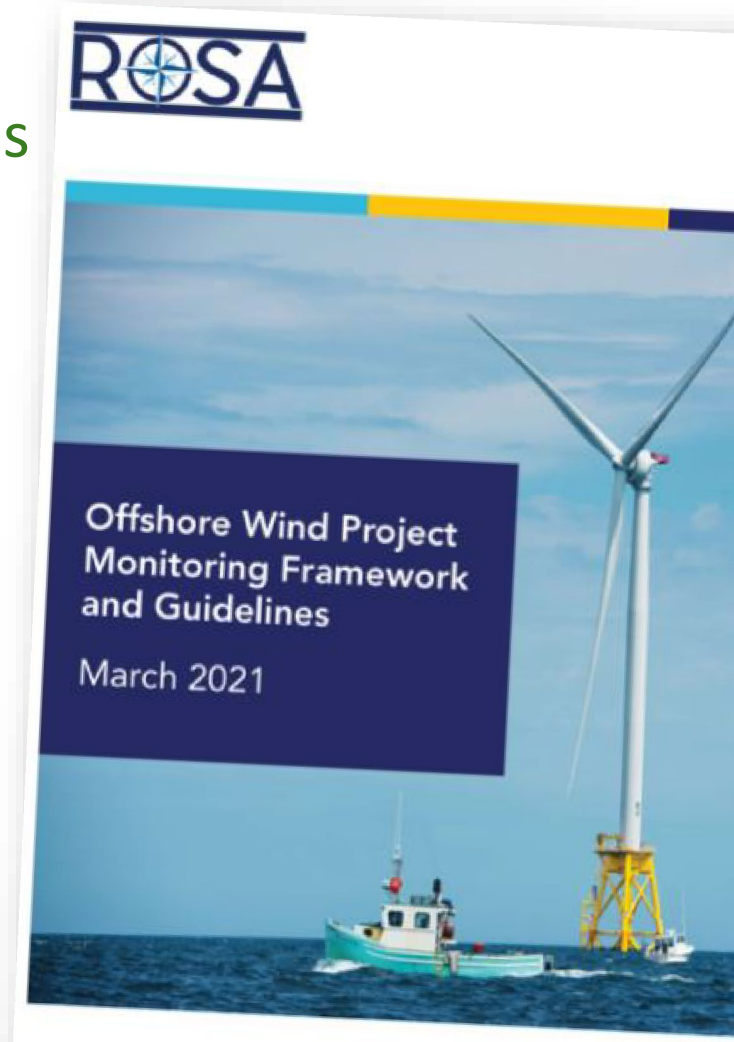
~ apply for appropriate permits

~ collect data using standardized protocols

~ analyze data to test hypotheses

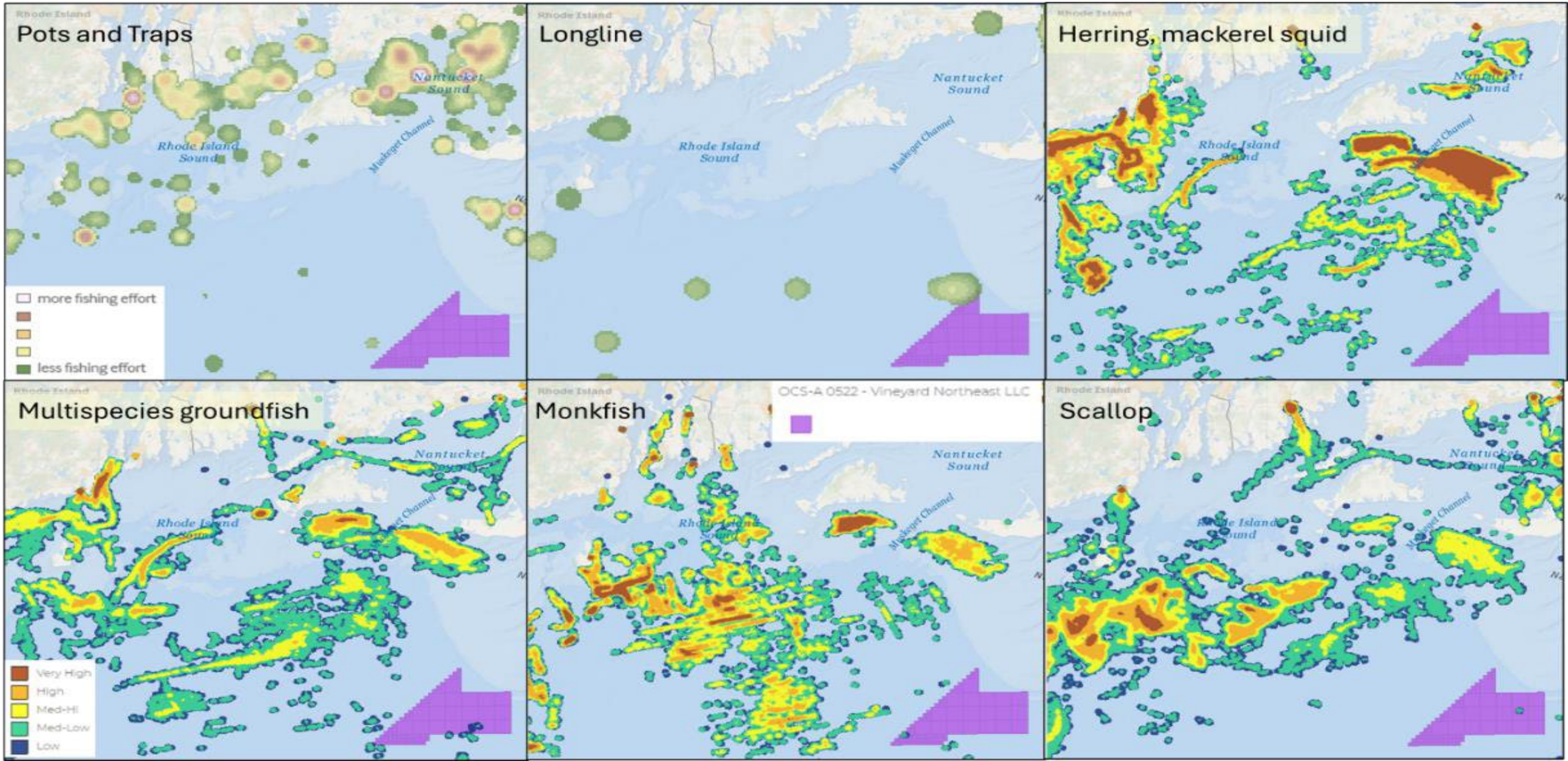
~ evaluate performance for meeting objectives

- adjust methods as needed
- store data in a secure database.

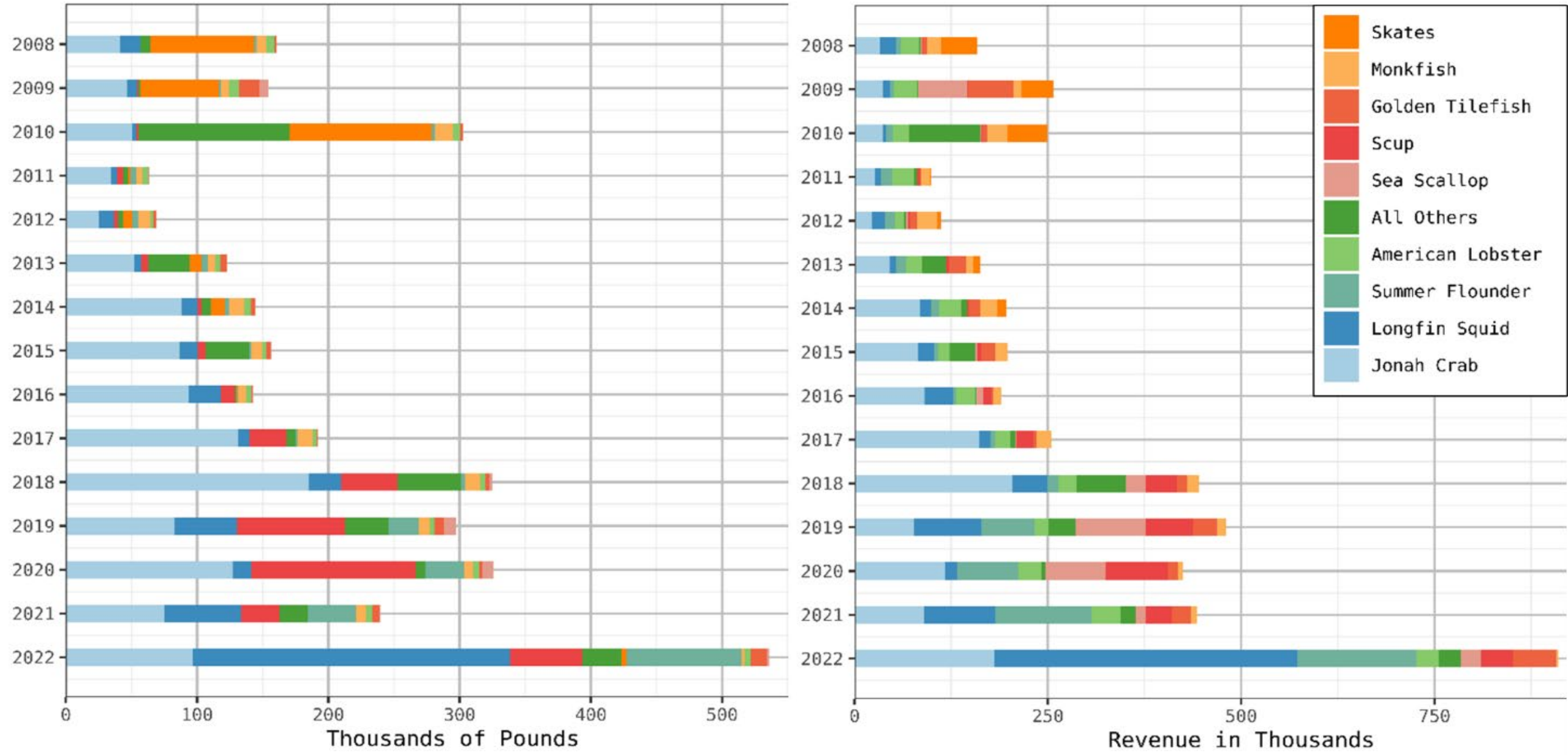


Commercial Fishing Effort in OCS-A 0522, 2011-2015

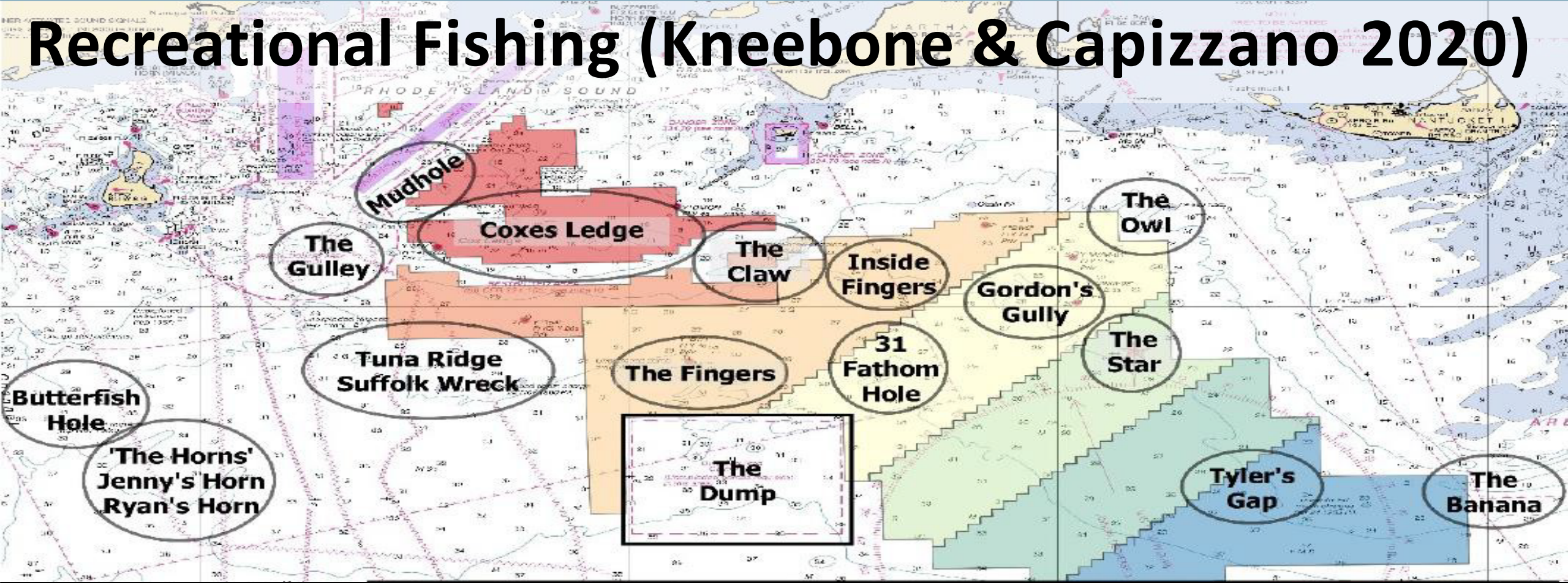
NORTHEAST OCEAN DATA
Maps and Data for Ocean Planning in the Northeastern United States



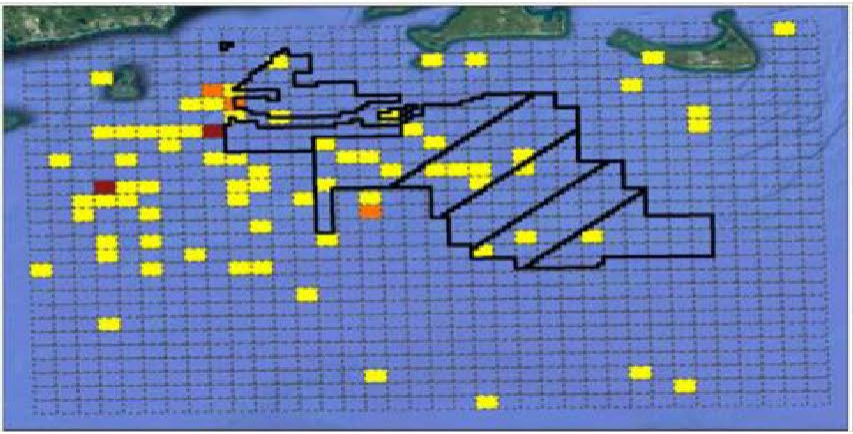
Commercial Fishery Landings in 522 (NMFS 2024)



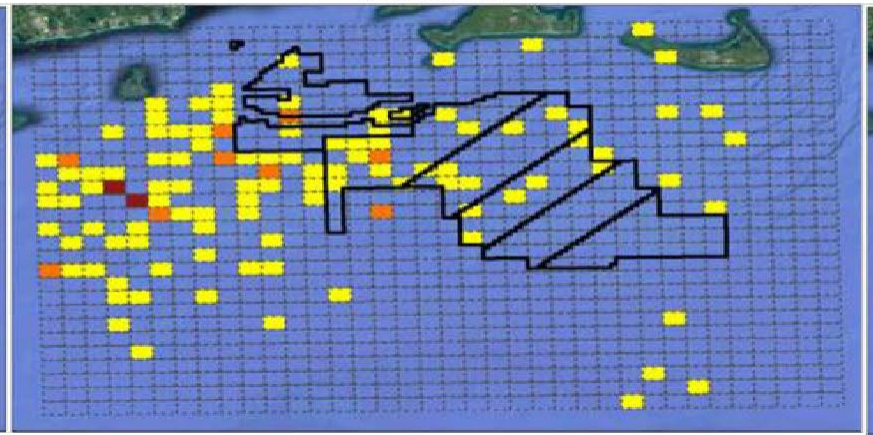
Recreational Fishing (Kneebone & Capizzano 2020)



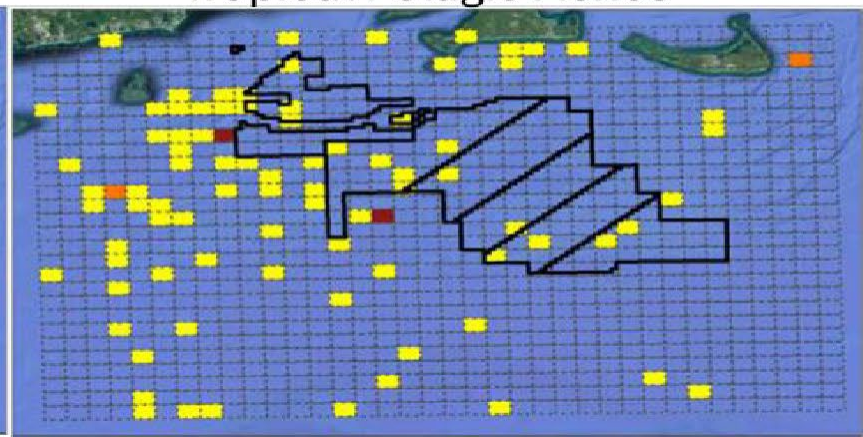
Atlantic Bluefin Tuna



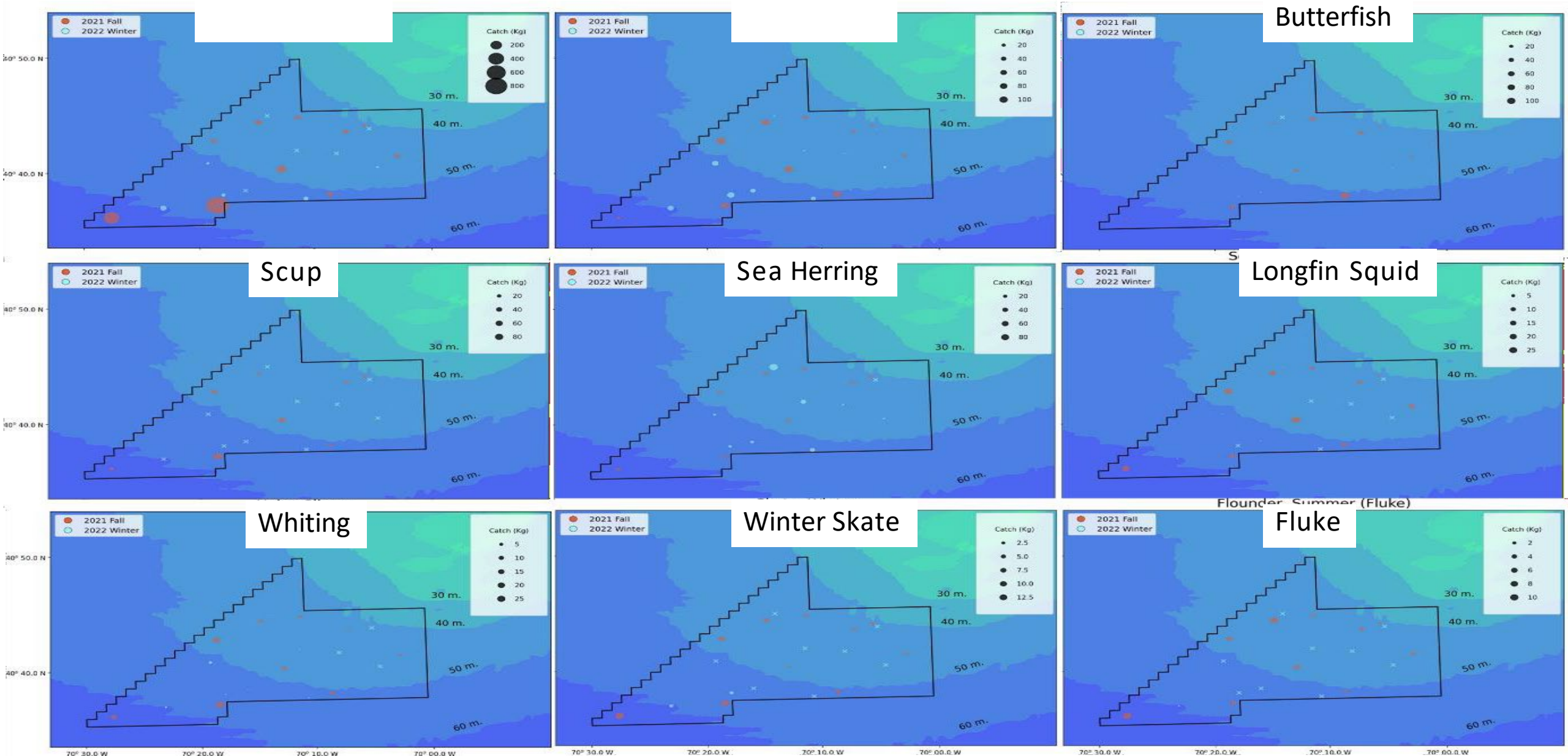
Sharks



Tropical Pelagic Fishes



Trawl Surveys in 522 (He & Rillahan 2022)

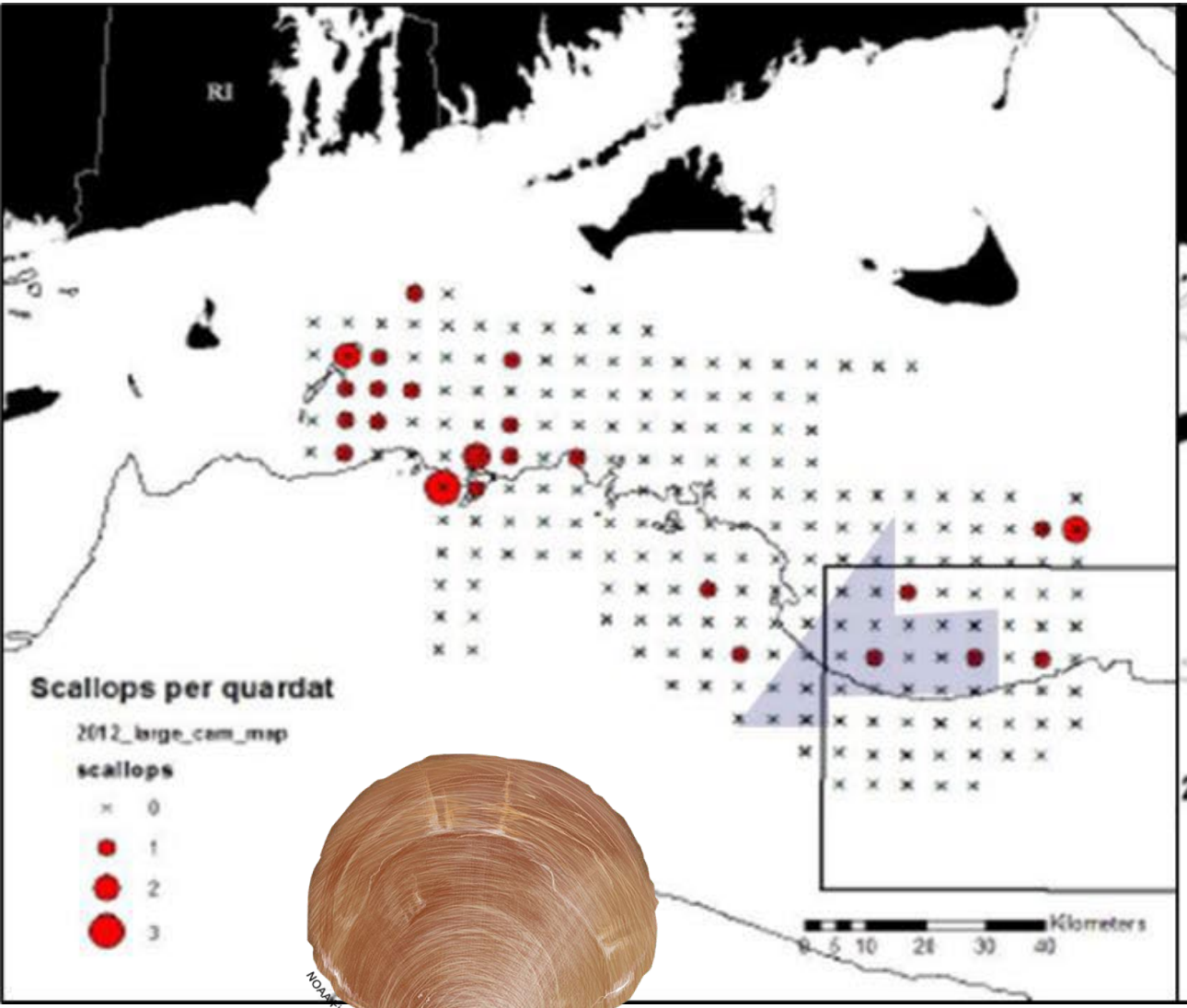


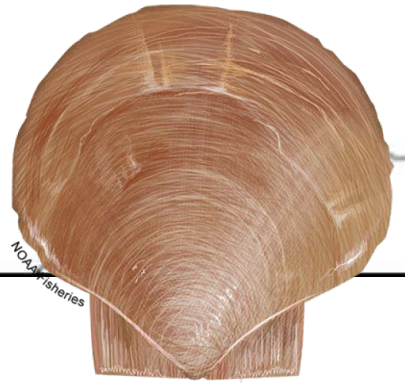
Trawl Surveys 2019-2022 in Area 522

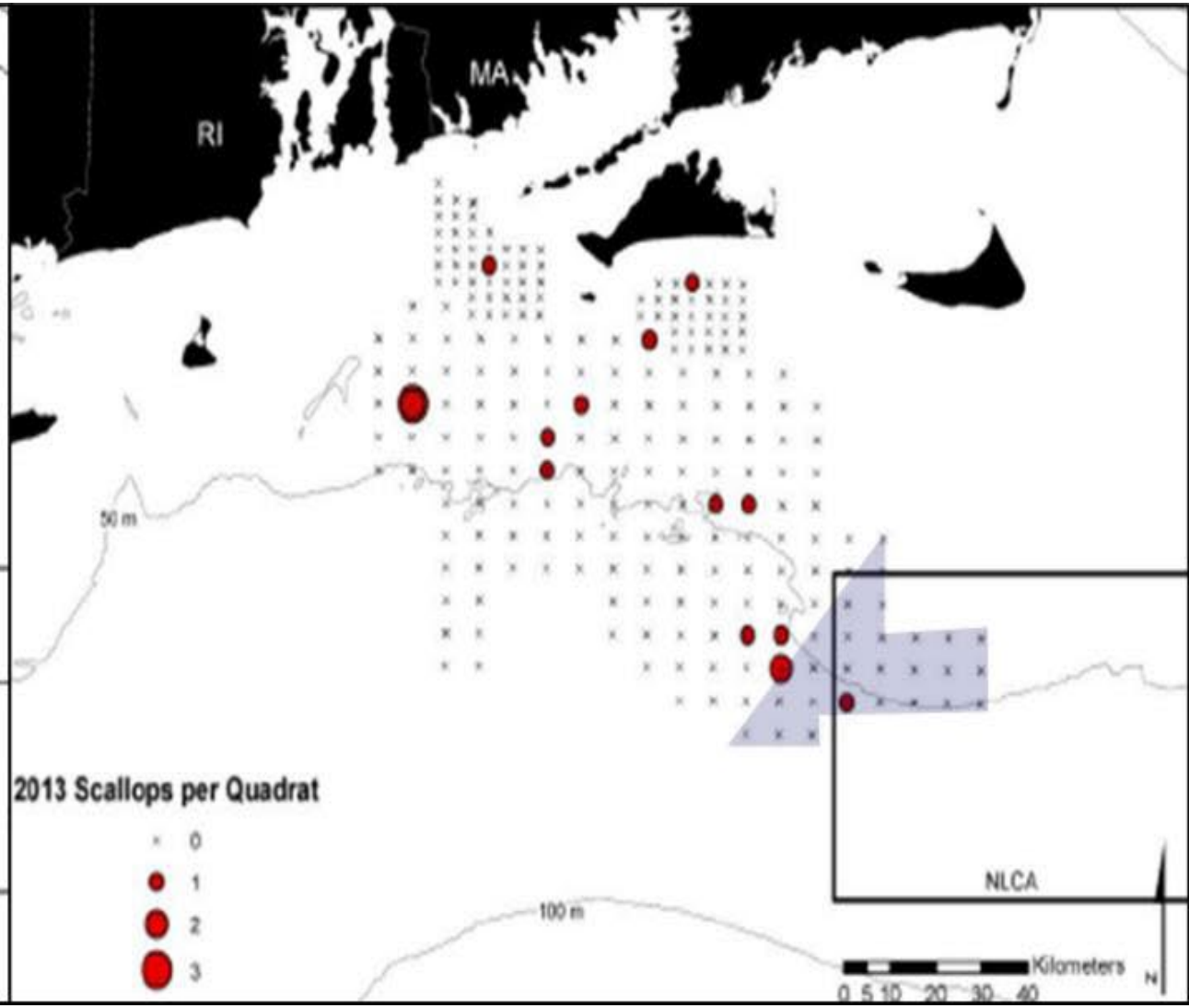
Species	Catch (kg)	% of Total
Dogfish, Spiny	7,818.0	26%
Scup	5,707.0	19%
Skate, Little	4,585.0	16%
Hake, Red	2,478.1	8%
Hake, Silver (Whiting)	1,665.0	6%
Butterfish	1,499.0	5%
Skate, Winter	1,001.0	3%
Alewife	843.1	3%
Skate, Barndoor	736.1	2%
Northern Sea Robin	621.0	2%
Squid, Atlantic Longfin	446.5	2%
Herring, Atlantic	376.2	1%
Monkfish	306.1	1%
Hake, Spotted	199.3	1%
Flounder, Summer (Fluke)	191.4	1%
Dogfish, Smooth	180.0	1%
Flounder, Fourspot	179.1	1%
Squid, Shortfin	109.0	0%
Sculpin, Longhorn	84.5	0%
Flounder, Windowpane	81.0	0%
Shad, American	80.0	0%
Atlantic Cod	48.0	0%
Bluefish	40.0	0%
Mackerel, Atlantic	39.4	0%

Species	Catch (kg)	% of Total
Crab, Cancer	36.0	0%
Ocean Pout	29.1	0%
Haddock	26.2	0%
Flounder, Gulfstream	23.0	0%
Weakfish	23.0	0%
Black Sea bass	18.4	0%
Herring, Blueback	12.0	0%
Flounder, Winter	9.0	0%
Eel, Conger	6.0	0%
Clam, Surf	5.0	0%
Sea Raven	5.0	0%
Sea Scallop	4.7	0%
Flounder, Yellowtail	4.4	0%
Hake, White	3.0	0%
Lobster, American	2.0	0%
Kingfish, Northern	1.4	0%
Atlantic Halibut	1.0	0%
Cutlassfish, Atlantic	1.0	0%
Menhaden, Atlantic	0.4	0%
Cusk	0.2	0%
Lizardfish	0.1	0%
Flounder, American Plaice	0.0	0%
Flounder, Witch (Grey sole)	0.0	0%
Shark, Dusky	0.0	0%

Area 522 Drop Camera Surveys (Stokesbury 2014)







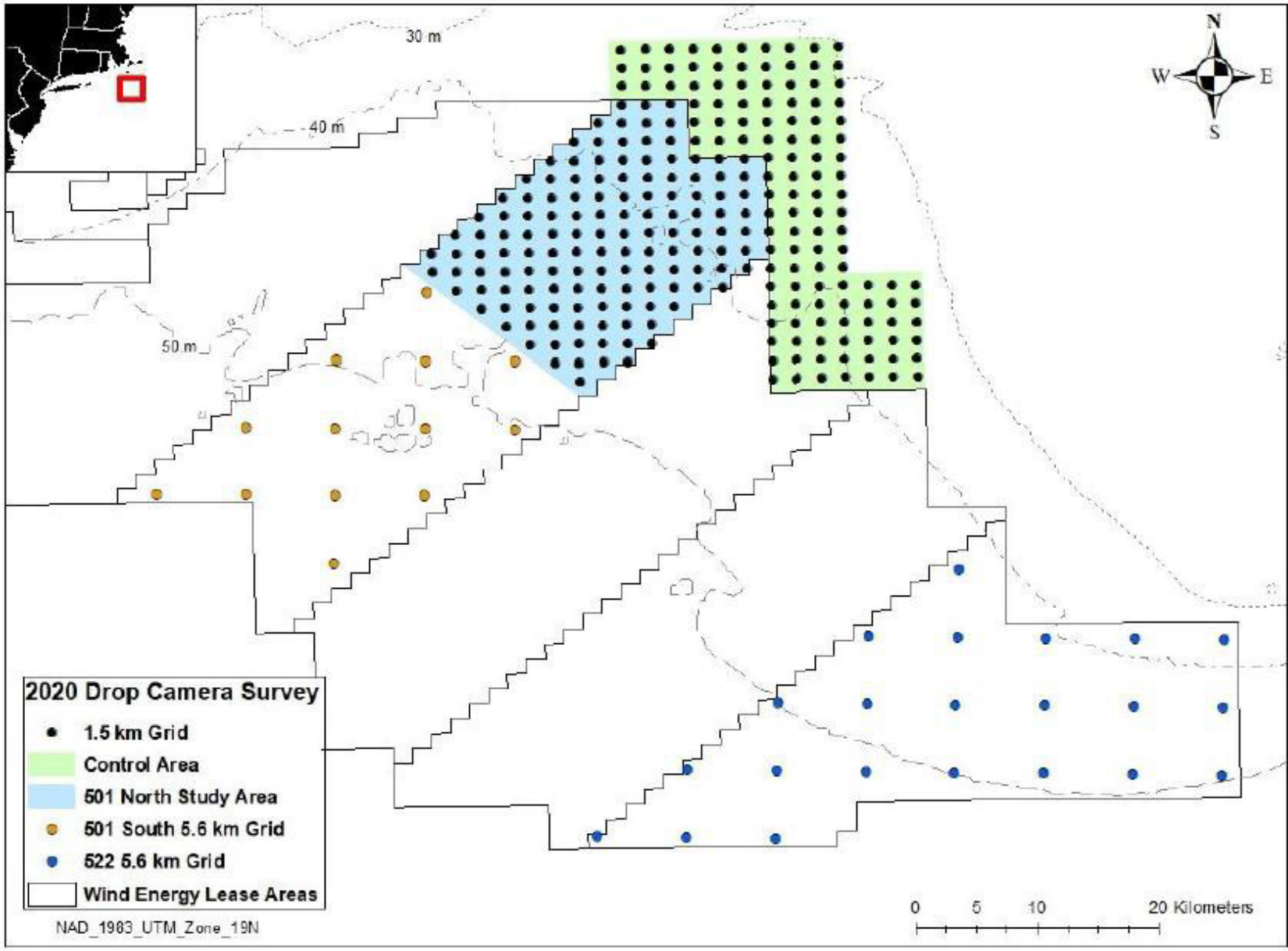
Drop Camera Surveys in Area 522

Animal Group	2019	2020	2021	2022	2023	Total
Holes (burrowing animals)	55	26	2	48	75	206
Sand Dollars	17	16	17	23	22	95
Hermit Crabs	18	2	18	9	37	84
Crabs (cancer spp.)	34	26	3	4	5	72
Red hake	13	11	1	21	5	51
Sea Stars	10	1	4	9	14	38
Silver hake	13	10	1	2	7	33
Detritus	20					20
Moonsnails	5		5	7	2	19
Skates	6	4	1	5		16
Bryozoans/Hydrozoans	4			9	3	16
Clams				7	3	7
Anemones	6					6
Moonsnail Egg Cases	5	1				6
Flatfish		1		2	1	4
Scallop	1	1			1	3
Sponges			1			1
Eel			1			1

Drop Camera Surveys in Areas 501 & 522

Number of Scallops

	501N	522
2019	0	1
2020	8	1
2021	5	0
2022	10	0
2023	6	1
2024	-	3



Objectives of Sampling Plan

- The primary objective is to detect substantial changes in abundance of juveniles and adult of commercially and recreationally important species.
  - This hypothesis can be tested by before-after-**control**-**impact** analysis.
  - Secondary objectives include detecting changes in spatial distribution, size distribution, diet, and larval density.
- Potential Indicator Species
  - Commercial: Jonah crab, longfin squid, scup, skates, summer flounder, monkfish, lobster, tilefish and scallop (NMFS 2024a).
  - Recreational: bluefin tuna and tropical pelagic species (Kneebone & Capizzano 2020).

Potential Monitoring Surveys - For Discussion

- Primary Monitoring: Trawl survey using NorthEast Area Monitoring and Assessment Program (NEAMAP) protocol, with environmental monitoring
- Supplemental Monitoring?
  - Fishery catch rates and outreach (logbooks) and highly migratory species (Large Pelagics Intercept Survey)
  - Ventless trap survey and outreach to confirm fishable densities of lobster or Jonah crab (Atlantic States Marine Fisheries Commission protocol)
  - Drop camera survey to detect scallop recruitment event.
  - Plankton surveys to monitor larval stages of commercially and recreationally important species (NOAA Ecosystem Monitoring program protocols).
- Data-reporting-review process to test impacts and recommend revisions to monitoring plan as needed.
- "*NMFS and BOEM are currently limiting the types of fisheries surveys that developers can conduct due to Endangered Species Act concerns*."