NOAA FISHERIES

Atlantic Large Whale Take Reduction Team

Day 1: May 9, 2022

Meeting Objectives

- Reconnect as Team
- Complete work on recommended measures for Phase 2 risk reduction in mid-Atlantic lobster trap/pot, U.S. East Coast multispecies trap/pot, and gillnet fisheries coastwide
- Begin Phase 3 preparation: Gauge conservation benefits from the Phase 1 rule, begin discussing data and analyses needed to inform future Phase 3 discussions

Dragon, 2020. Photo taken by CCS

Meeting email:
nmfs.gar.alwtrt2021@noaa.gov

Introductions

New Team Members

Jay Driscoll (new to Team)
Northeast Gillnet Fishery (NH)

Chris McDonough (new to Team)
South Carolina Department of Natural Resources

Grant Moore (previous alternate, new organization)
Northeast Offshore Trap/Pot Fishery

Cheri Patterson (old team member, new organization)
New England Fishery Management Council

Jeff Putnam (new to Team)
Maine Lobster Trap/Pot Fishery

Renee Zobel (previously an alternate)
New Hampshire Fish and Game Department

New(er) Alternates

Trap/pot
Heidi Henninger
Jon Williams

Gillnet
Scott McAllister

Conservation
Kathleen Collins
Sierra Weaver

State Managers
Kim McKown
Megan Ware

Federal Managers
Jessica Powell

Fishery Management
Terry Alexander
Kiley Dancy
Caitlin Starks

Scientists
David Matilla

Introductions

Key NMFS Support Roles:

Take Reduction:

Marisa Trego:	Take Reduction Team (TRT) Coordinator
Jennifer Goebel:	TRT plan implementation and HPTRT
Chao Zou:	Economist supporting take reduction analyses
Crystal Franco:	NEPA drafting and analyses
Kara Shervanick:	SE take reduction and marine mammal policy

Decision Support Tool

Project manager:	Mike Asaro
Creator:	Burton Shank
Modelers:	Alicia Miller
	Alessandra Huamani
	Laura Solinger
	Mareike Duffing Romero

Consensus Building Institute:

Facilitation:

Bennett Brooks
David Plumb
Elizabeth Cooper
Stephanie Horii

Zoom & Breakout Room Tech Support:

Cameron Hager

Meeting email for questions/suggestions: nmfs.gar.alwtrt2021@noaa.gov

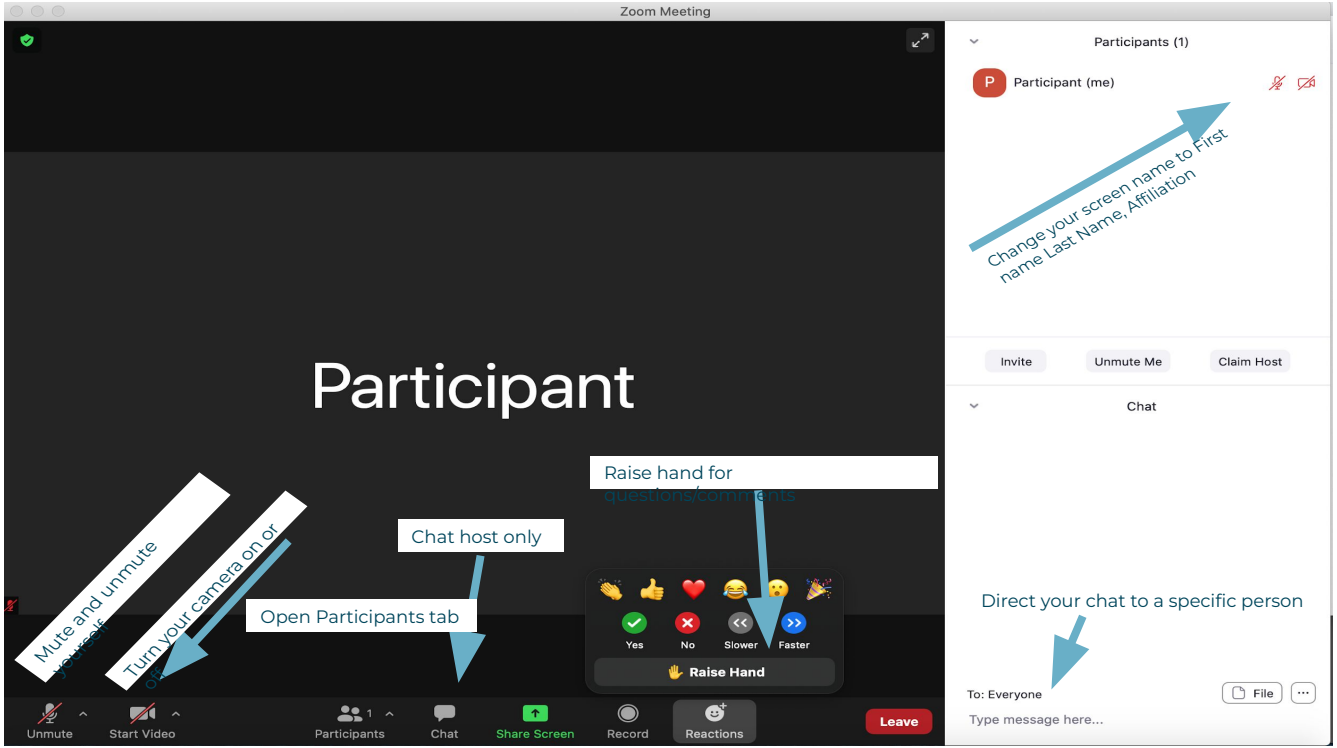
Overview for the Week

- **Monday:**
  - Welcome, meeting goals, recalibrating and reconnecting as a team
  - Informational briefings and initial review of potential measures
- **Tuesday:**
  - Detailed discussion of potential Phase 2 measures for mid-Atlantic lobster trap/pot, U.S. East Coast multispecies trap/pot, and gillnet fisheries coastwide
  - Crafting collections of measures to run through the Decision Support Tool.
- **Wednesday:**
  - AM – Phase 3 preparation: review conservation value of Phase 1 rule and consider data & analysis needed to develop Phase 3 recommendations.
  - PM – reviewing input so far on Phase 2 measures and receiving DST run results.
- **Thursday:** Reviewing and refining draft Team Phase 2 document
- **Friday:** Finalizing Team Phase 2 document

Monday, May 9 Agenda

1:00 p.m.	**Welcome and Getting Started**
1:30 p.m.	**Recalibrating and reconnecting as a team**
2:15 p.m.	**Informational Briefings and Updates** ● DST updates ● Relevant research
3:15 p.m.	**Break**
3:45 p.m.	**Initial discussion: Understanding conservation benefits tied to different OTP and Gillnet Measures**
5:15 p.m.	**Public comment**
5:30 p.m.	**Wrap-Up, Next Steps and Adjourn**

Attendee Controls



* Note- you will have to remember to put your hand down after you have spoken or it will remain up.

A Word About Meeting Structure

Aiming for mix of plenary and small-group breakouts (both cross- and within-caucus)

Providing templates as way to focus individual and group discussions

Capture evolving discussion through working draft Phase 2 document

May use polling* from time to time to gauge perspectives on issues under discussion; results reflected by caucus

CBI
CATALYZING COLLABORATION

*Any potential polling will be managed with care

Note: Agenda times may shift slightly later in the week

Ground Rules for Team Members

Discussion protocols:

- Contribute
- Make room for others - especially in small groups
- Ask questions of one another
- Strive to integrate perspectives

Agency not recording to encourage candor; media may be present

To contribute to the discussion:

- Primary members
  - **Encouraged** to keep your cameras on and stay on mute unless speaking
  - Raise a virtual "hand" (remember to put it down after)
  - Chat to host only with issues (emoji reactions available)
- Alternates
  - In plenary, engage as public unless sitting in for primary
  - In cross-caucus breakouts, observer in the same room as primary
  - In within-caucus breakouts, participate as you and your primary member see fit.

CBI
CATALYZING COLLABORATION

Ground Rules for Public Attendees

Public welcome to attend all plenary sessions

Comment protocols - opportunity each day

- **Input welcome during public comment portion**
  - Share thoughts in chat or via comment during that time
  - Please keep all comments on-point and respectful
- **Please remain on mute and video off at other times**
- Intent is to **manage public input as if we were all in room together**

To contribute during Public Comment period

- Raise a virtual "hand" or signal interest in chat

CBI
CATALYZING COLLABORATION

(Re)introductions and Greetings in Breakout Groups

In small breakout groups, share your thoughts on: What is your favorite spot along the Atlantic Coast?

Recalibrating and Reconnecting as a Team

Our interviews with you in early 2021

- Widespread frustration with TRT, yet nearly all still see continued value
- Clear goals from the Agency are key to focusing Team deliberations
- “One big meeting” not generating good outcomes
- Single-minded drive for consensus recommendation seems counterproductive at times
- Trust-building needed to put Team on stronger ground – with each other and with Agency

Recalibrating and Reconnecting as a Team - cont.

Key topics from spring 2021 Team meetings

- How the agency communicates with the Team as it prepares a proposed rule
- Using smaller groups (caucus and cross-caucus) to make progress
- Team composition
- Approach to consensus

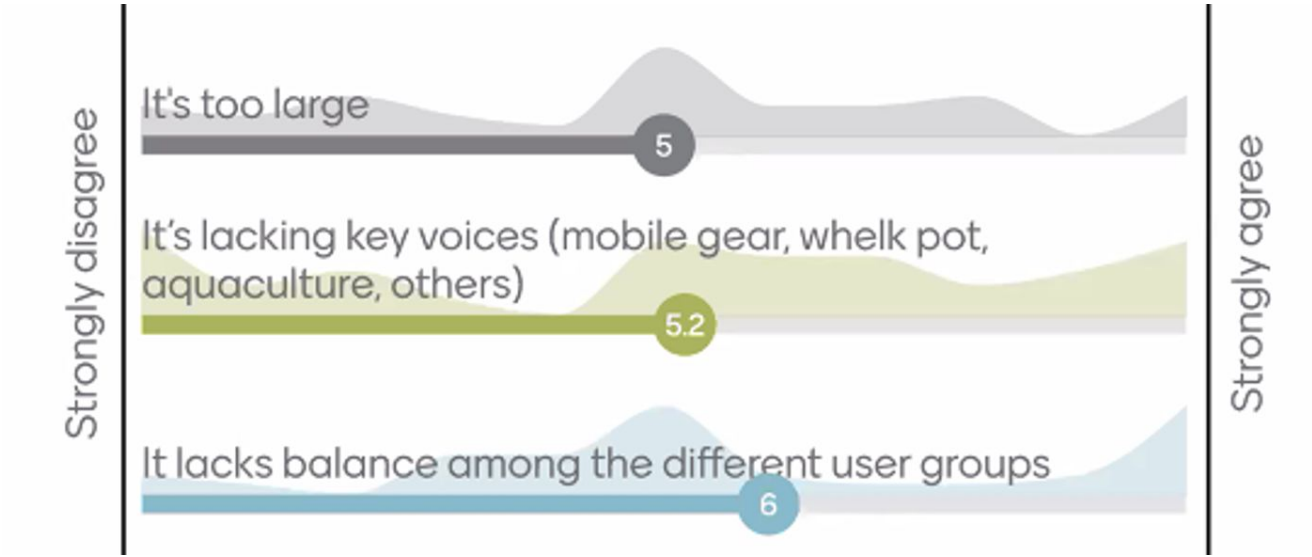
Issue 1: How the agency communicates as it prepares a rule

- The Team would like periodic updates around conversations with individual Team members

Issue 2: Using Smaller Groups to Make Progress

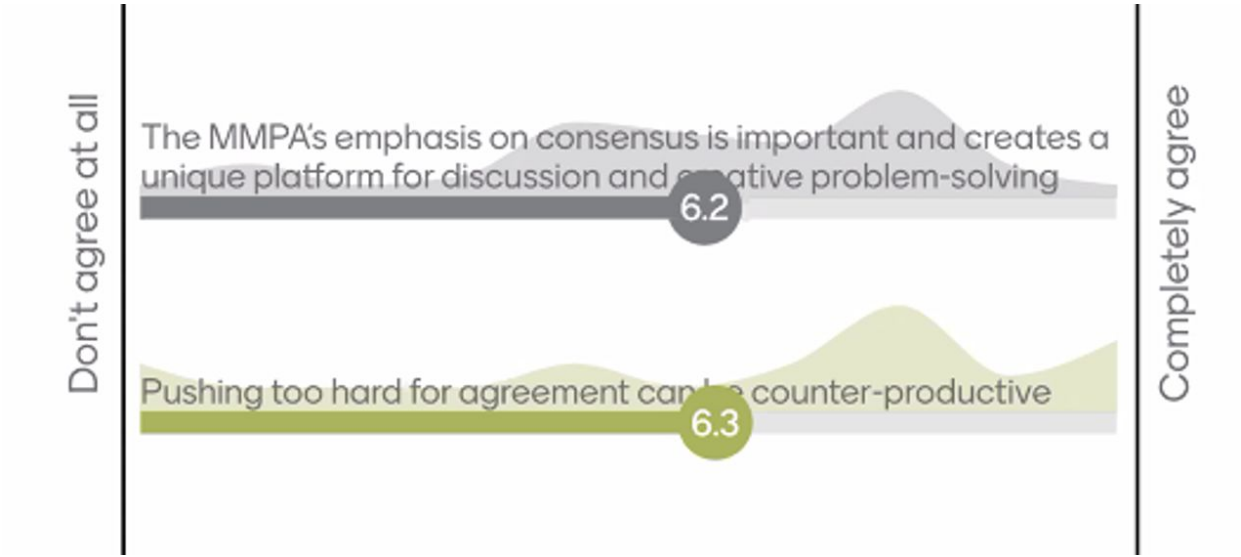
*The results only reflect participants in the May 10 meeting and should not be interpreted as data from the full Team.

Issue 3: Team Composition



*The results only reflect participants in the May 10 meeting and should not be interpreted as data from the full Team.

Issue 4: Approach to Consensus



*The results only reflect participants in the May 10 meeting and should not be interpreted as data from the full Team.

Individual Reflection

Ahead of breakout group discussions, consider:

1. Why is this team's work so challenging?
2. What can we do as individuals to address and mitigate these challenges?
3. What has this team done well? What can we build off of?

Make space for all voices in small groups

Team members in breakouts

Meeting will resume shortly

ALWTRT Decision Support Tool Updates

Decision Support Tool Development Team

Burton Shank
Alicia Miller
Alessandra Huamani
Mareike Duffing Romero
Laura Solinger
Mike Asaro

May 9, 2022

Updates to the DST: Code errors found / fixed

Relative encounter rate of gillnets vs vertical lines:

- Coding error was over-weighting the encounter rates of gillnets.
- Fixing this lowers the calculated encounter rates and risk associated with the gillnet fishery.

Risk reductions associated with weak rope:

- Coding error was over-estimating risk reductions from weak rope.

Will there be more?

- We certainly hope not.
- As we run additional scenarios on the updated model, we're closely scrutinizing model output for anything that seems wrong or inconsistent.
- If we find anything, we will fix it and let you know immediately.

NOAA FISHERIES

Updates to the DST for the May meeting.

- Whale vertical distributions for calculating encounter rates with gillnet panels:

- Had hoped to switch to an empirically-based model produced by NOAA based on data from tagged whales. Found this model to be inappropriate for our needs as it only calculates probability of being near the surface for ship strike modeling.

- Returned to using a vertical distribution model produced by a BOEM contractors.

Whale vertical distributions

The CSA model of whale vertical distributions: provides proportion of time at depth by behavior for:

- -three depths (<10m, 10-20m, 20+m)
- -three behaviors (Foraging, Migrating, and Calf Rearing)
- -with the proportion of time spent in each of the three behaviors
- -three regions (Northeast, Mid-Atlantic, Southeast)
- -by month

By weighting each behavior by time spent, we constructed an “Ensemble” model of whale behavior, which is our default for most model runs.

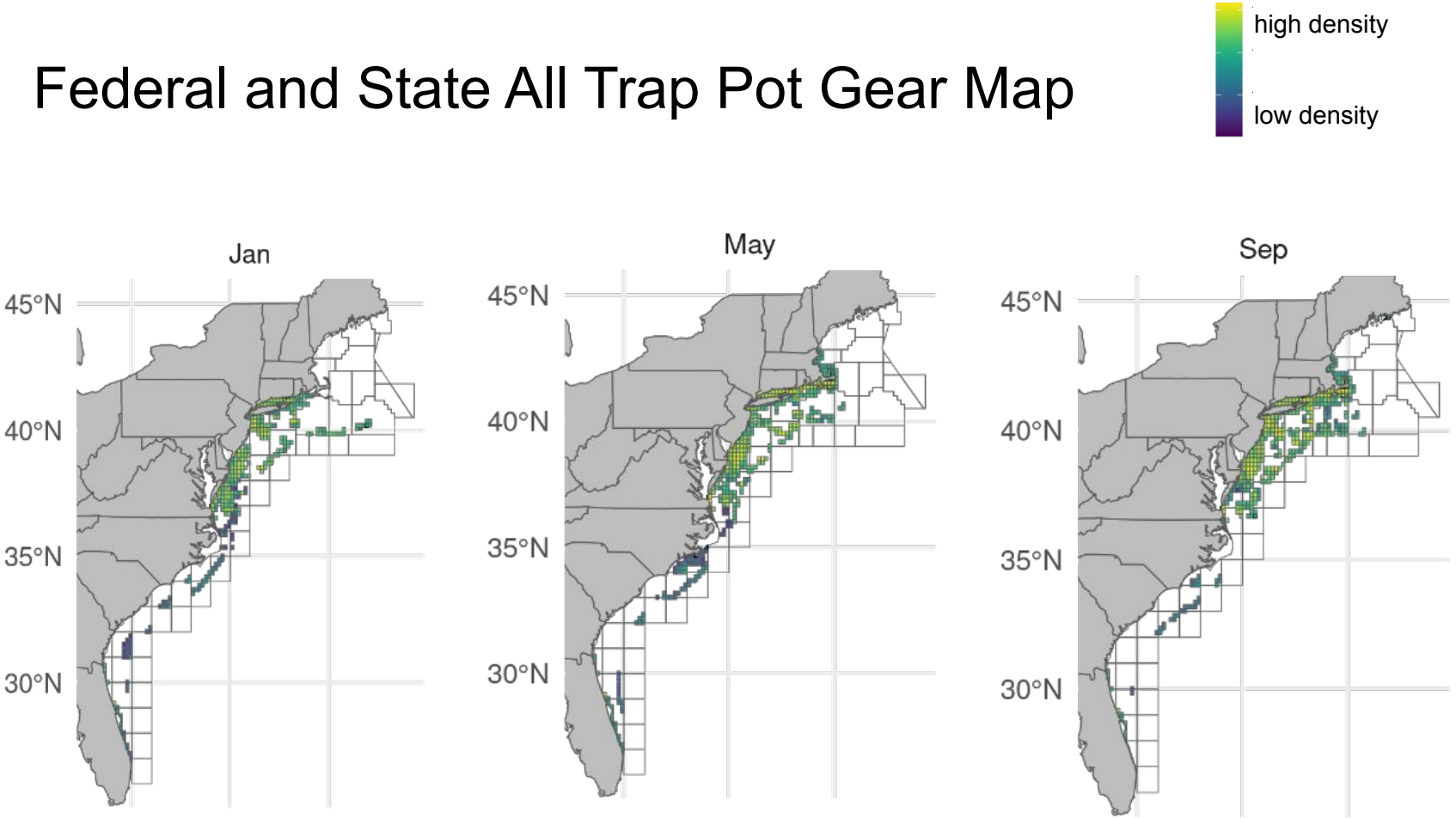
Region	Month	PropForaging	PropMigrating	PropCalRearing	Foraging<10m	Foraging 10-20m	Foraging 20+m	Migrating <10m	Migrating 10-20m	Migrating 20+m	Calf Rearing <10m	Calf Rearing 10-20m	Calf Rearing 20+m
Northeast	1	0.8	0.17	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Northeast	2	0.9	0.07	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Northeast	3	0.9	0.07	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Northeast	4	0.9	0.07	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Northeast	5	0.9	0.07	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Northeast	6	0.9	0.07	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Northeast	7	0.9	0.07	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Northeast	8	0.9	0.07	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Northeast	9	0.48	0.49	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Northeast	10	0.48	0.49	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Northeast	11	0.48	0.49	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Northeast	12	0.48	0.49	0.03	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Mid-Atlantic	1	0.05	0.88	0.07	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Mid-Atlantic	2	0.05	0.8	0.15	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0
Mid-Atlantic	3	0.15	0.7	0.15	0.84	0.1	0.06	0.71	0.29	0	0.85	0.15	0

What fisheries are included. How fisheries are organized: OTP and MAB lobster

STATE FED

Fishery Group	Species Included	States/ Fed Included
BlueCrab	Blue Crab, Stone Crab, Green Crab, Red Crab	Delaware, Maryland, Virginia, Florida, Federal
FishPot	Black Sea Bass, Tautog, Scup	Massachusetts, Connecticut, Rhode Island, New York, Federal
WhelkPot	Knobbed Whelk, Channeled Whelk, Conch	Massachusetts, Connecticut, Delaware, Rhode Island, New York, Virginia, Federal
LobsterPot	American Lobster	Massachusetts, Connecticut, Delaware, New York, Maryland, New Jersey, Virginia

Federal and State All Trap Pot Gear Map



What fisheries are included. How fisheries are organized: Gillnet

STATE

Fishery Group 2017-2019	Gear Config	Species Included
Flounders_AllStates	Anchor Large Mesh	Summer Flounder, Yellowtail Flounder
MonkfishSkate_NEStates	Anchor Large Mesh	Monkfish, SkateSpp
Groundfish_NEStates	Anchor Med Mesh	Cod, Winter Flounder
InshoreSpp_AllStates	Anchor Med Mesh	Striped Bass, Bluefish, Silver Hake, Scup, BSB, Striped Sea Bass, Tautog, Weakfish, Striped Bass, Bluefish, Black Drum, Shad, American Shad
InshoreSpp_AllStates	Anchor Small Mesh	Menhaden, Weakfish, Spanish Mackerel, Kingfishes, Bluefish, Atlantic Croaker, Atlantic Cutlassfish, Kingfishes, King Mackerel, Striped Mullet, Spot, Little Tunny
InshoreSpp_MABStates	Drift Small Mesh	Spot, Atlantic Croaker, Menhaden
SharkSpp_SEStates	Anchor Small Mesh	Spinner Shark, Thresher Shark, Atlantic Sharpnose Shark, Great Hammerhead Shark, Blacktip Shark
SmoothDogfish_SEStates	Anchor Med Mesh	Smooth Dogfish
Dogfish_MABStates	Drift Med Mesh	Spiny Dogfish, Smooth Dogfish
SpinyDogfish_SEStates	Anchor Small Mesh	Spiny Dogfish
Dogfish_NEStates	Anchor Med Mesh	Spiny Dogfish, Smooth Dogfish

FED

Fishery Group	Gear Sub Groups	Species Included
Dogfish 2017-2020	Anchor Large Mesh Anchor Med Mesh Anchor Smal Mesh Drift Med Mesh	Spiny Dogfish, Smooth Dogfish
InshoreSpp 2017-2020	Anchor Large Mesh Anchor Med Mesh Anchor Small Mesh Drift Small Mesh	Atlantic Croaker, Bluefish, Menhaden, Striped Bass, Summer Flounder, Black Sea Bass, Scup, Ribbonfish, Spotted Sea Trout, Spot, Spanish Mackerel, King Mackerel, King Whiting, Grey Sea Trout
MonkfishSkate 2017-2020	Anchor Large Mesh Anchor Med Mesh	Monkfish, Little Skate, Barndoor Skate, Smooth Skate, Thorny Skate, Winter Skate
NEGroundfish 2017-2020	Anchor Large Mesh Anchor Med Mesh	Cod, Pollock, White Hake, Yellowtail Flounder, Silver Hake, Winter Flounder, American Plaice, Witch Flounder, Windowpane Flounder
SharkSpp 2010-2020	Anchor Med Mesh Anchor Small Mesh	Thresher, Sharpnose, Blacktip, Spinner, Hammerhead, Finetooth, Porbeagle, Mako, Sandbar, Blue, Dusky

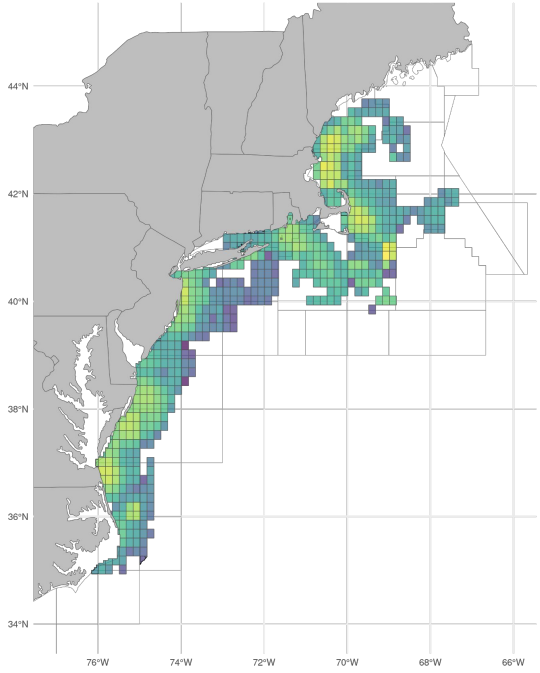
Federal Gillnet Fishery Groups

high density

low density

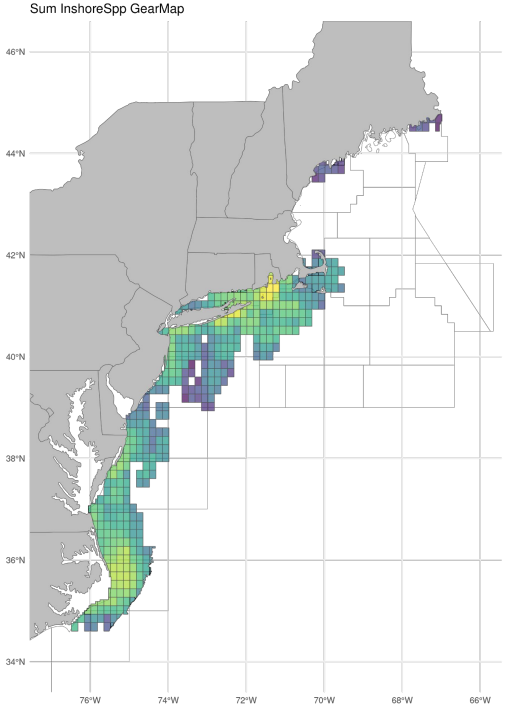
Dogfish	Anchor Large Mesh Anchor Med Mesh Anchor Smal Mesh Drift Med Mesh	Spiny Dogfish, Smooth Dogfish

Sum Dogfish GearMap



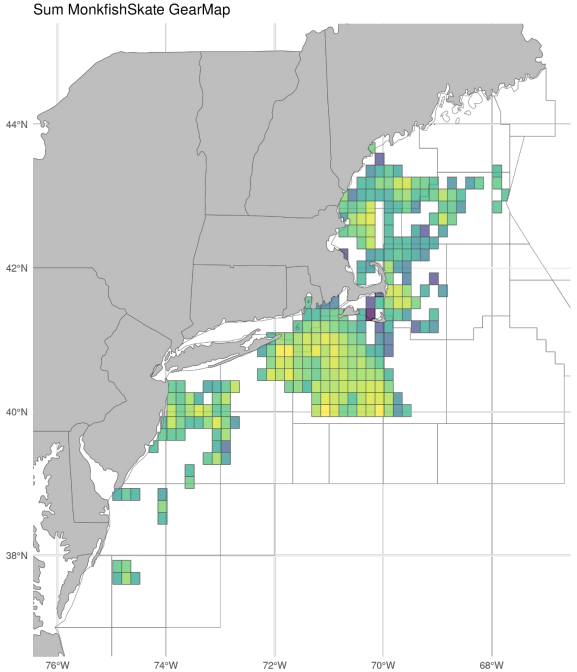
InshoreSpp	Anchor Large Mesh Anchor Med Mesh Anchor Small Mesh Drift Small Mesh	Atlantic Croaker, Bluefish, Menhaden, Striped Bass, Summer Flounder, Black Sea Bass, Scup, Ribbonfish, Spotted Sea Trout, Spot, Spanish Mackerel, King Mackerel, King Whiting, Grey Sea Trout

Sum InshoreSpp GearMap



MonkfishSkate	Anchor Large Mesh Anchor Med Mesh	Monkfish, Little Skate, Barndoor Skate, Smooth Skate, Thorny Skate, Winter Skate

Sum MonkfishSkate GearMap



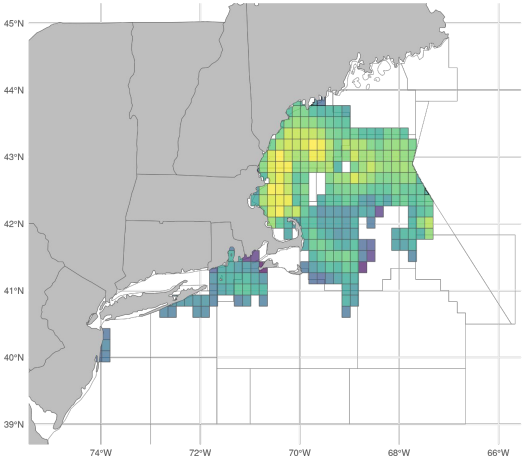
Federal Gillnet Fishery Groups

high density

low density

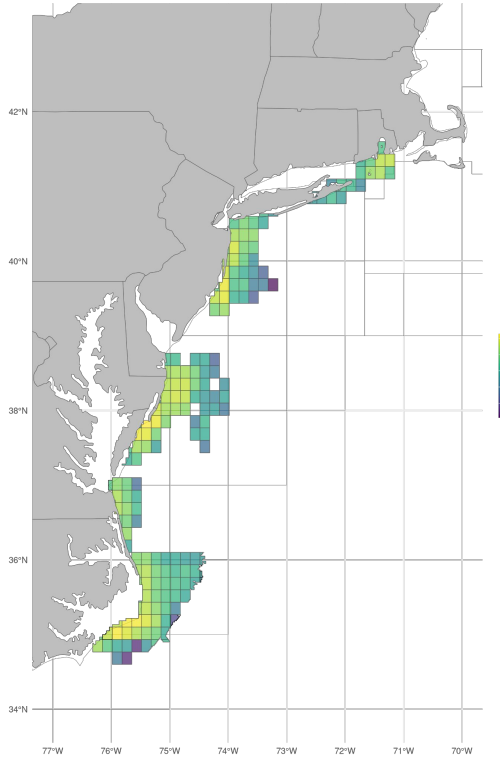
NEGroundfish	Anchor Large Mesh Anchor Med Mesh	Cod, Pollock, White Hake, Yellowtail Flounder, Silver Hake, Winter Flounder, American Plaice, Witch Flounder, Windowpane Flounder

Sum NEGroundfish GearMap



SharkSpp	Anchor Med Mesh Anchor Small Mesh	Thresher, Sharpnose, Blacktip, Spinner, Hammerhead, Finetooth, Porbeagle, Mako, Sandbar, Blue, Dusky

Sum SharkSpp GearMap

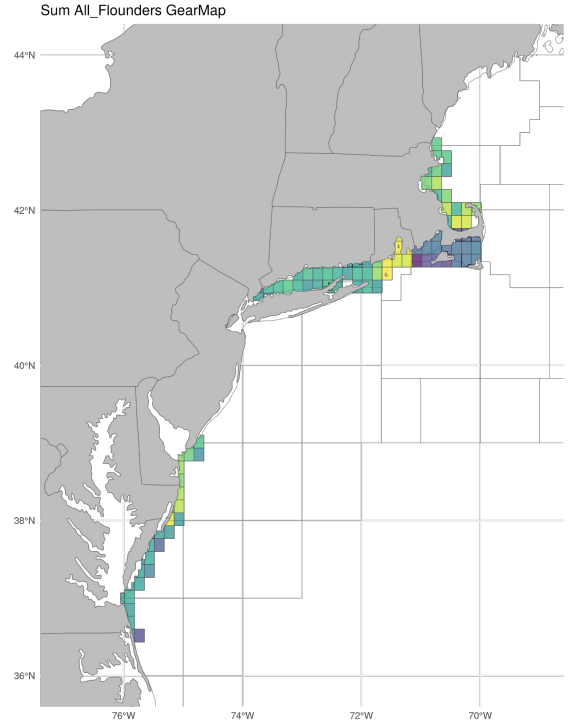


State Gillnet Fishery Groups

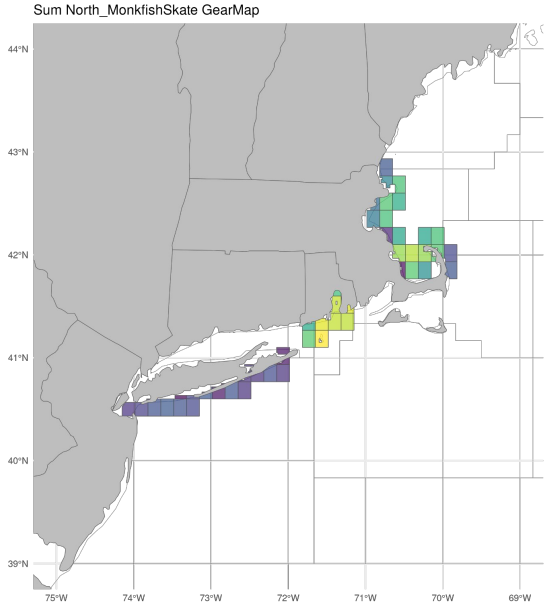
high density

low density

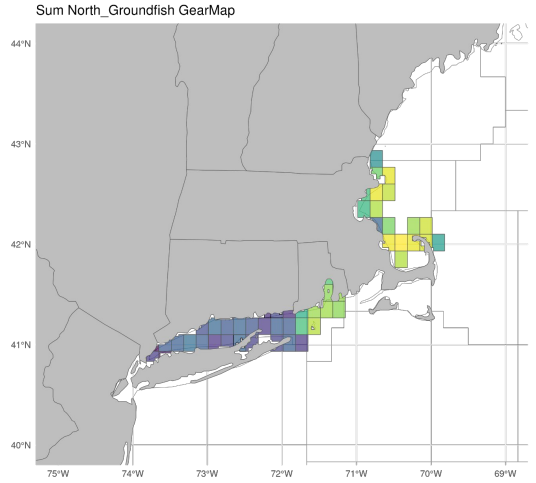
Flounders_AllStates	Anchor Large Mesh	Summer Flounder, Yellowtail Flounder



MonkfishSkate_NEStates	Anchor Large Mesh	Monkfish, SkateSpp

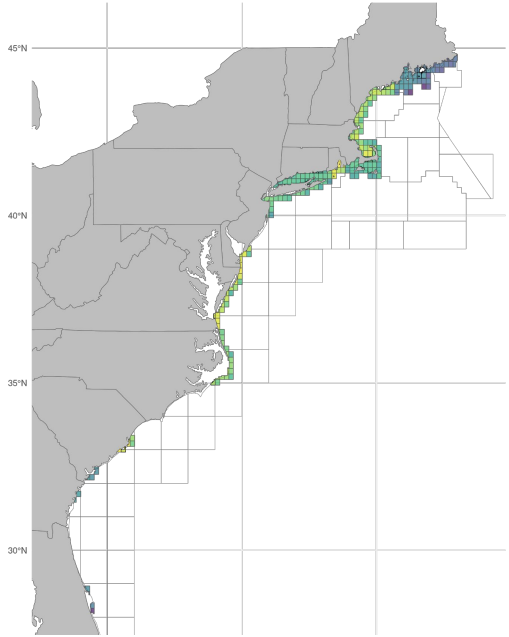


Groundfish_NEStates	Anchor Med Mesh	Cod, Winter Flounder

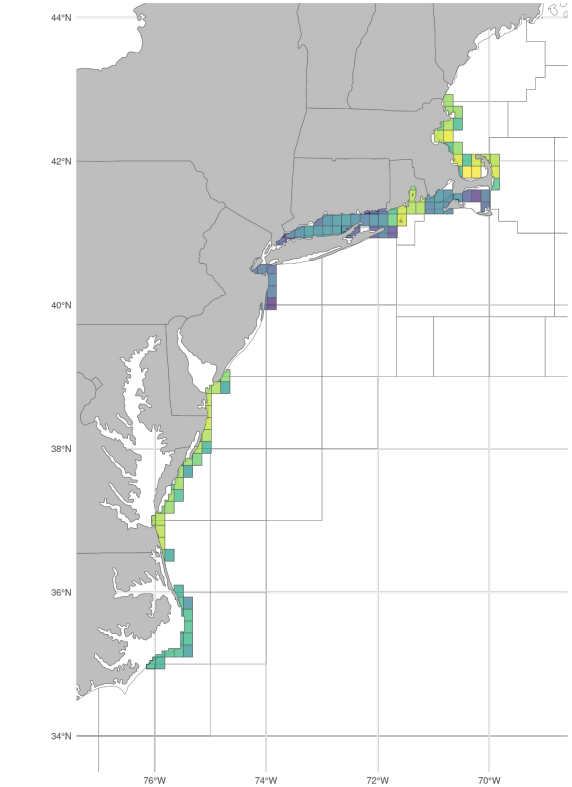


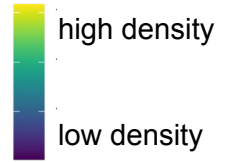
State Gillnet Fishery Groups

InshoreSpp_AllStates	Anchor Med Mesh	Striped Bass, Bluefish, Silver Hake, Scup, BSB, Striped Sea Bass, Tautog, Weakfish, Striped Bass, Bluefish, Black Drum, Shad, American Shad
InshoreSpp_AllStates	Anchor Small Mesh	Menhaden, Weakfish, Spanish Mackerel, Kingfishes, Bluefish, Atlantic Croaker, Atlantic Cutlassfish, Kingfishes, King Mackerel, Striped Mullet, Spot, Little Tunny
InshoreSpp_MABStates	Drift Small Mesh	Spot, Atlantic Croaker, Menhaden

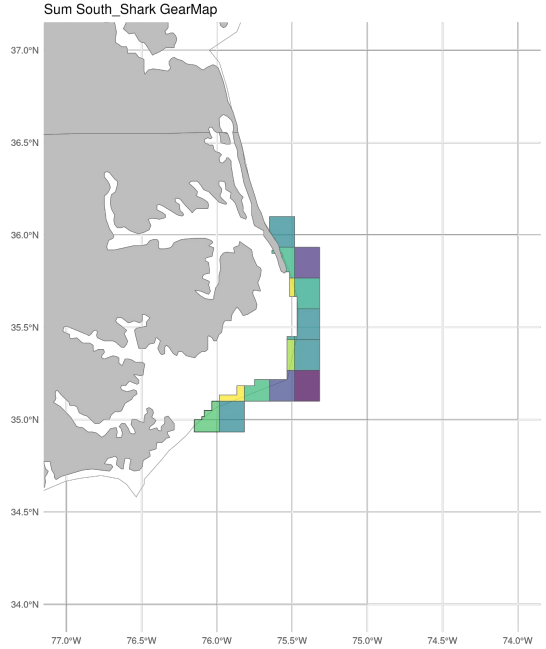


SmoothDogfish_SEStates	Anchor Med Mesh	Smooth Dogfish
Dogfish_MABStates	Drift Med Mesh	Spiny Dogfish, Smooth Dogfish
SpinyDogfish_SEStates	Anchor Small Mesh	Spiny Dogfish
Dogfish_NEStates	Anchor Med Mesh	Spiny Dogfish, Smooth Dogfish



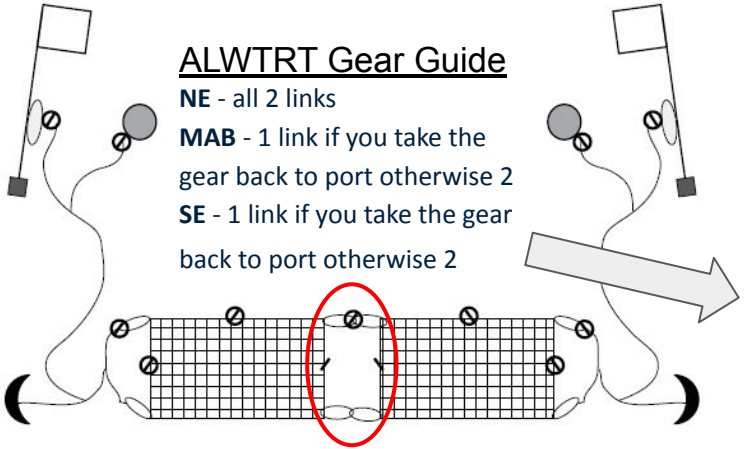


SharkSpp_SEStates	Anchor Small Mesh	Spinner Shark, Thresher Shark, Atlantic Sharpnose Shark, Great Hammerhead Shark, Blacktip Shark

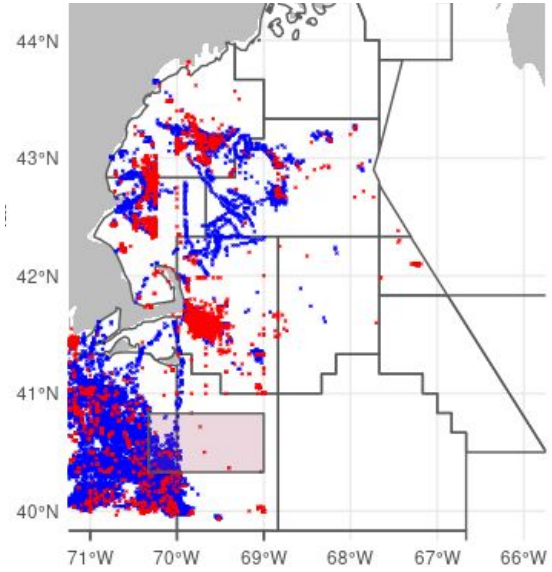


Gillnet Updates/Refinements

1. Updated closures
2. Adjust Nantucket Lightship area to reflect open to fishing
3. Apply appropriate weak link numbers in between panels
4. Adjust line diameter of headrope
   a. Met with fishermen and state scientists and determined vast majority are fishin ⅜ inch



NE - all 2 links
MAB - Drift nets - 1 link
Anchor nets - 2 links
SE - Drift nets - 1 link
Anchor nets - 2 links



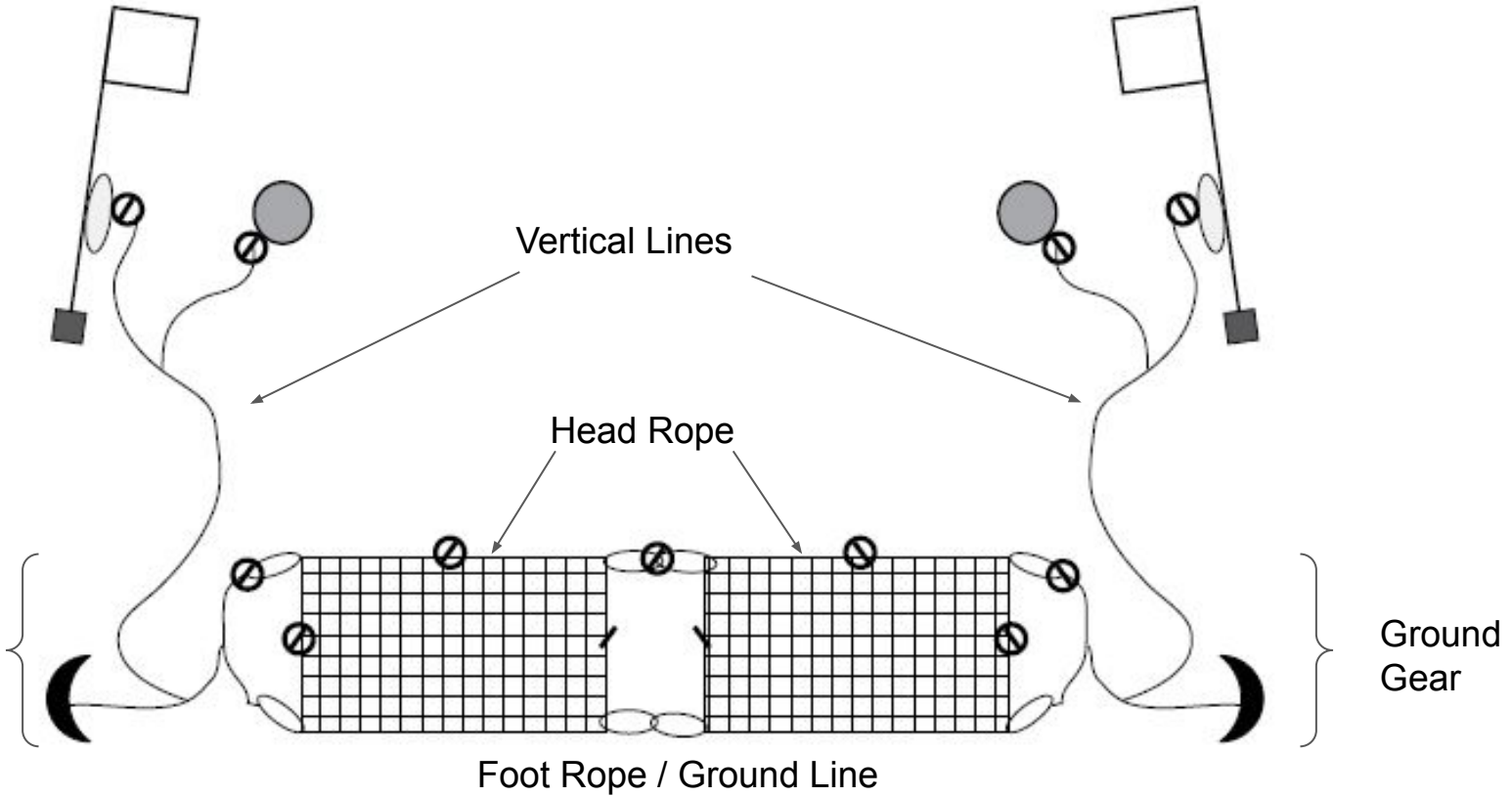
VMS Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017												
2018												
2019												
2020												

VMS Scalar Applied

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017												
2018				2	2	2						4
2019	4	4	4	2	2	2						
2020												

Standardized gear terminology.



Recap of the actions implemented in the DST

- Gear reductions - gear is specified as removed from the water.
- Gear Caps - Limits the quantity of gear that each individual fisherman can deploy at a time.
- Spatial Closures - Gear is removed from and area, redistributed to adjacent areas if possible, removed if redistribution is not possible.
- “Trawling up” - decreasing the number of traps or net panels fished in each string.
- Number of gear in a string with one endline.
- Maximum gear height - allows for lowering the height of net panels to decrease encounter rates
- Maximum Vertical Line Strength - allows for weakening of ropes
- Maximum Horizontal Line Strength - allows for further weakening of gillnet headropes.

Guidelines on requesting a model run.

Please be able to specify:

- The exact geographic region that you want to include in the model.
- Which fisheries you want to include.
- Which fisheries and the geographic region you want the management action to apply to.
- The time period (months) that you want each management action to apply to.
- For closures:
  - Do you expect the gear to come out of the water or redistribute?
  - If redistribute, do you expect the gear to stay near the closure boundary or broadly disperse?

We'll work with you make an initial attempt to translate your request into a working model run, then talk through what we did, what assumptions we made, and take feedback on ways we can better match your proposal with the model's capabilities.

What the DST model can / can't do:

The model contains basic information about fishing activities:
Spatial distribution of fishing effort
Basic gear configurations.

The DST does not know how fisheries are managed, what is legal or realistic.

Model works primarily on direct effects. Cannot anticipate indirect effects (i.e. complex behaviors by fishermen, thresholds where fishery dynamics change suddenly)

What we (the DST modelers) can / can't do.

We have experience gleaning necessary information from fishing data, setting up model runs and interpreting outputs.

We are not necessarily experts in each individual fishery. As proposals are developed and refined, it will be important to discuss these ideas with industry experts who can provide insight into how realistic a model runs, how it might be refined, and how much confidence we have with the results.

On Break

Meeting will resume at 3:45pm

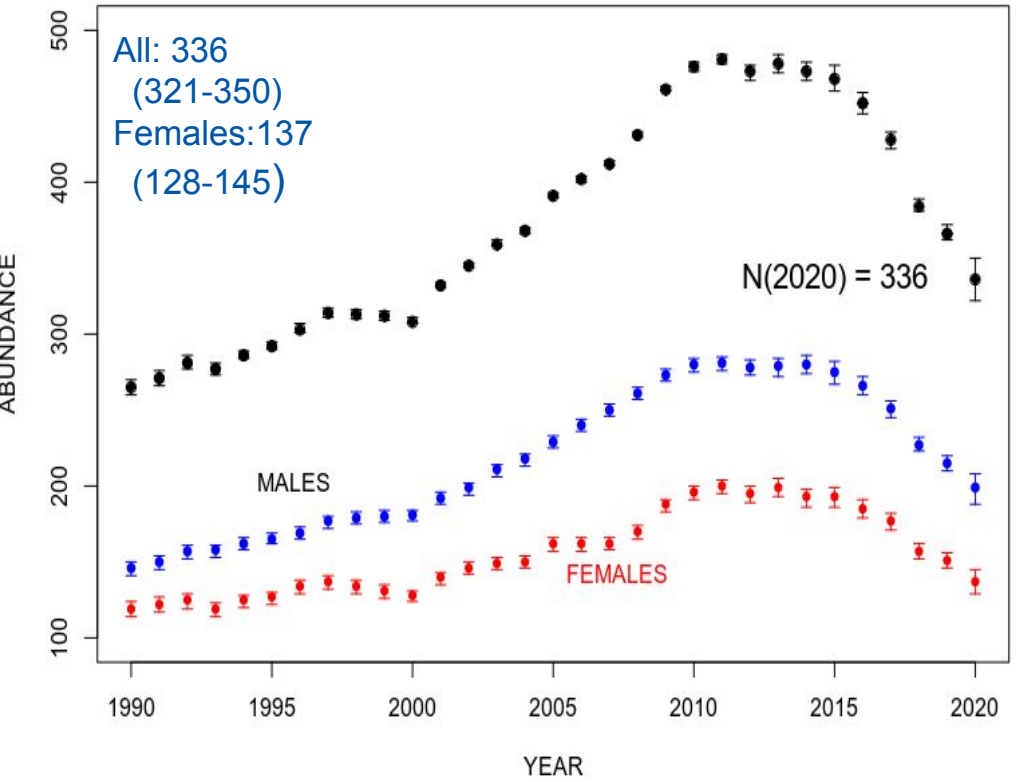
Reducing Right Whale Entanglement Risk in OTP and Gillnet Fisheries

Goals:

- Need to reduce mortality and serious injury of right whales below PBR
- Risk posed by different east coast fixed-gear fisheries
  - Buoy lines
  - Gillnet panels
- Coastwide risk reduction
  - Baseline risk maps
  - Example risk reduction using 2021 Team member ideas

Right whale population estimate (preliminary, as of early 2020)

Rangewide Estimated Annual Mortality



YEAR	EST Mort (median)	Obs Mort	Obs SI	Obs SI+M
2015	29	3	5	8
2016	30	4	9	13
2017	44	17	2	19
2018	22	3	6	9
2019	31	10	2	12

Risk reduction calculations

Use the most-recent 5 yr. observed M/SI ratio to apportion the total mortality estimate from Pace MRR model.
Across three country apportionment assumptions: 50%, 40%, or 30% US.

Country Apportionment	(a) PBR - draft 2021 SAR	(b) Annual average estimated mortality 2015-2019	(c) Assumed US proportion	(d) US mortality based on country assumption (columns b*c)	(e) US mortality - 70% EN Observed M/SI 2016-2020 (column d* 0.70)	(f) % Reduction Needed for US to achieve PBR assuming 70% EN ((e-a)/e)
50% US/ 50% CAN	0.7	31.2	0.50	15.7	11	93.6%
40% US/ 60% CAN			0.40	12.6	8.8	92.0%
30% US/ 70% CAN			0.30	9.4	6.6	89.4%

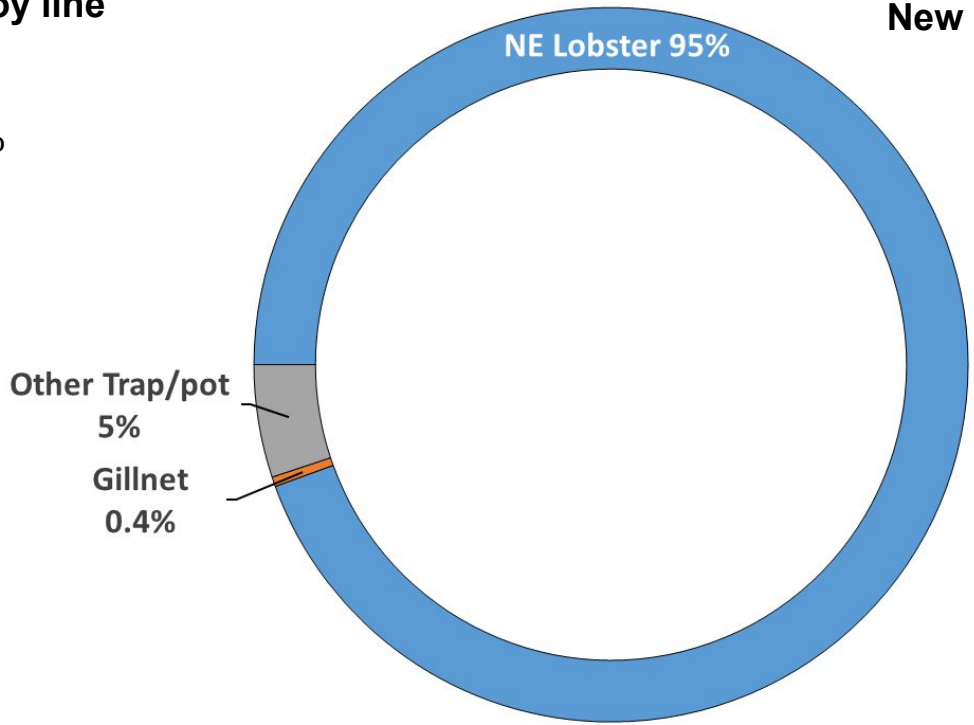
Description of Phased Rulemaking

- **Phase 1:** 60% risk reduction from Northeast lobster & Jonah Crab trap/pot fisheries
  - Minimum target from 2019 ALWTRT meeting
  - Completed 2021/2022
- **Phase 2:** 90% risk reduction from all other ALWTRT fisheries
  - Coastwide gillnet
  - Multi-species trap/pot
  - Mid-Atlantic lobster
  - New risk reduction estimate due to new population data
- **Phase 3:** remaining risk from NE lobster and Jonah crab to hit 90% estimated reduction needed to get to PBR

Buoy Lines By Fishery

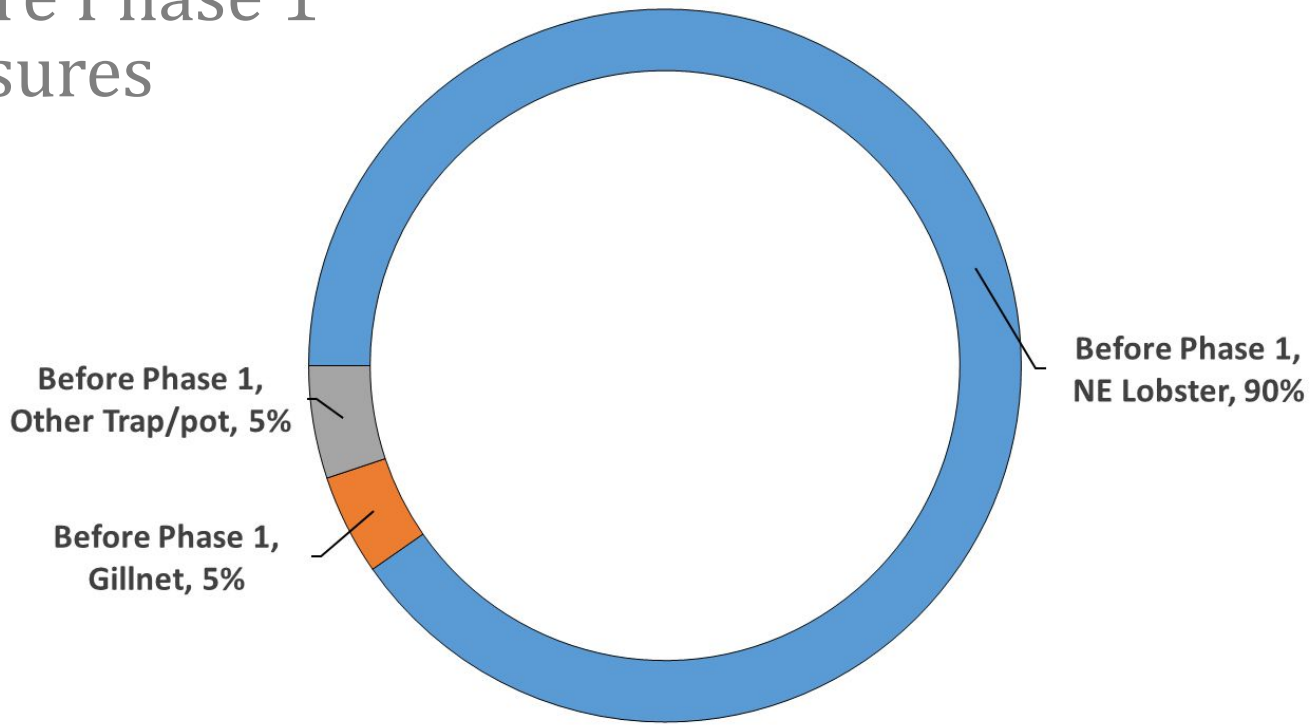
Previous IEC buoy line breakdown:
NE Lobster: 93%
Other trap/pot: 5%
Gillnet: 2%

New DST fishery maps, v3.7



Relative Risk By Fishery/Phase

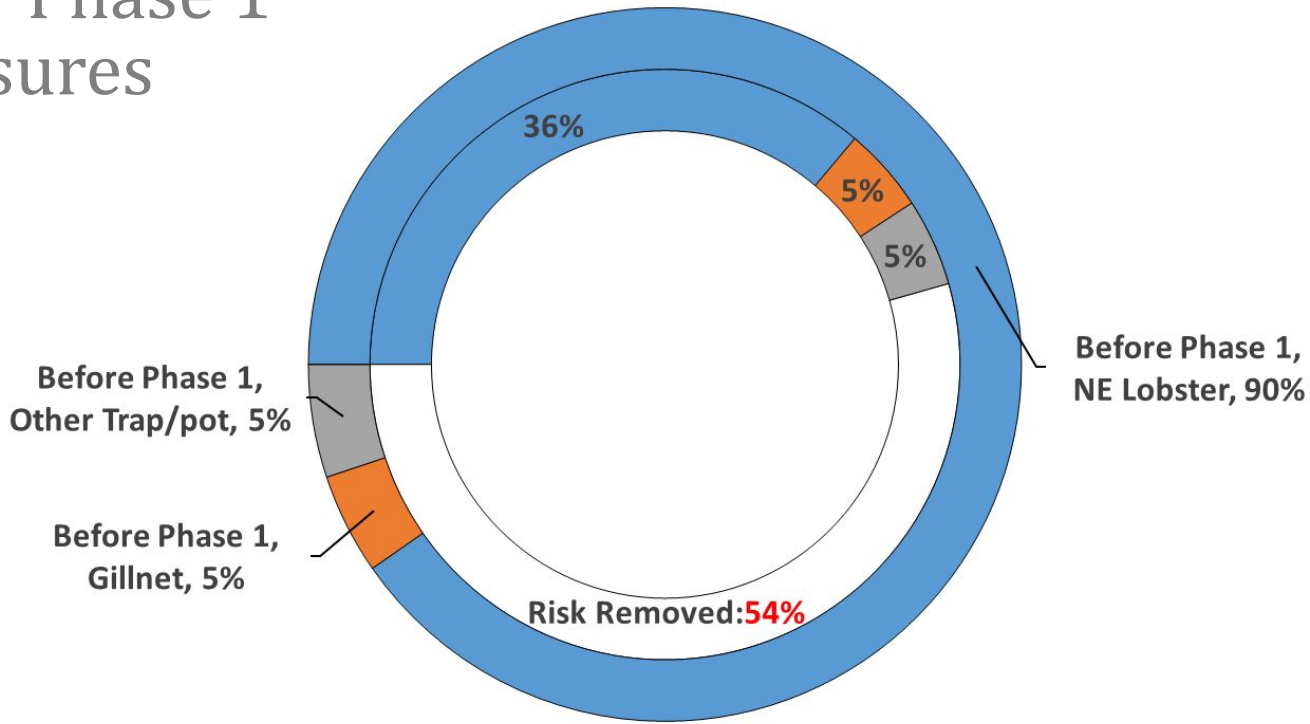
Before Phase 1 Measures



Buoy Line Risk Only

Relative Risk By Fishery/Phase

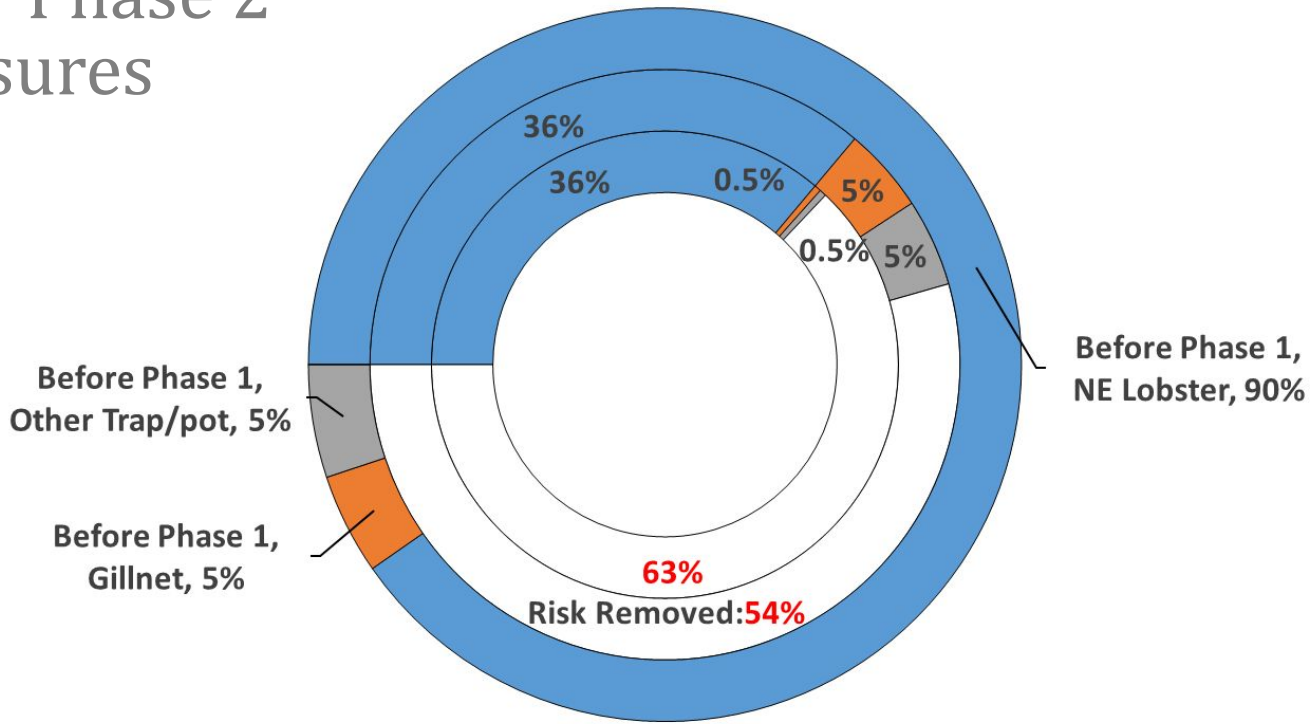
After Phase 1 Measures



Buoy Line Risk Only

Relative Risk By Fishery/Phase

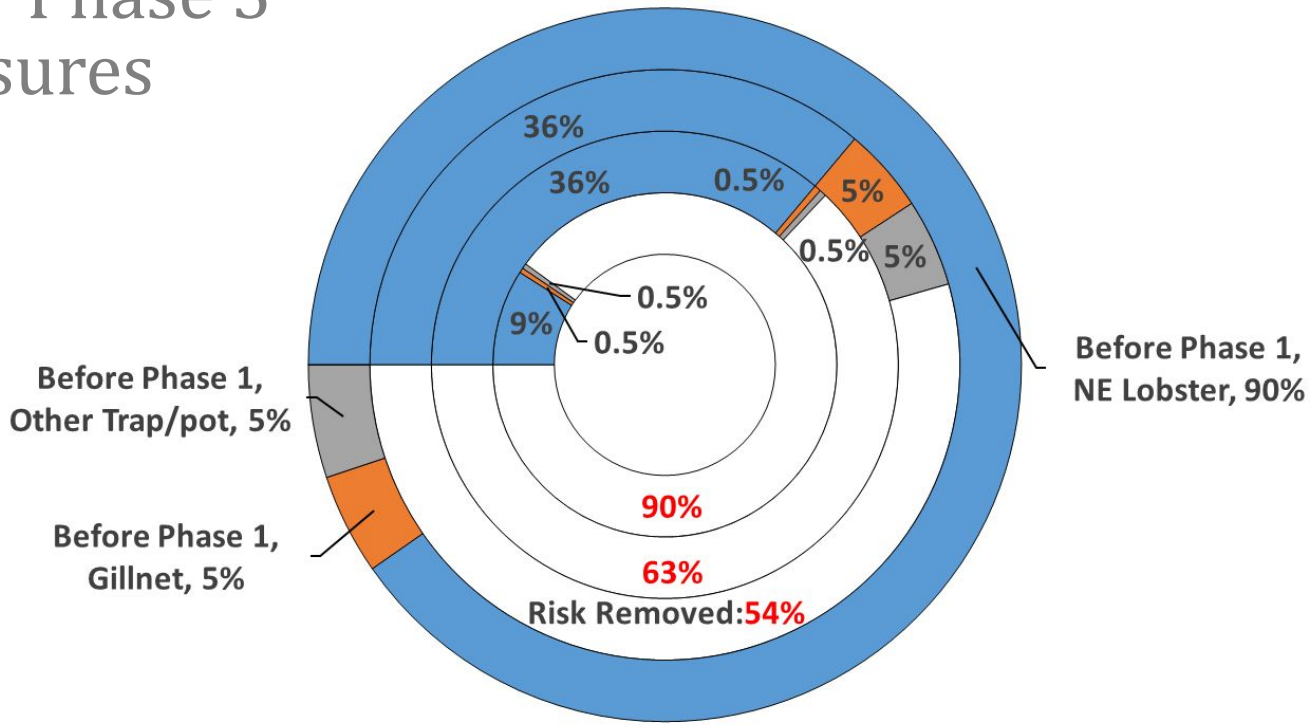
After Phase 2 Measures



Buoy Line Risk Only

Relative Risk By Fishery/Phase

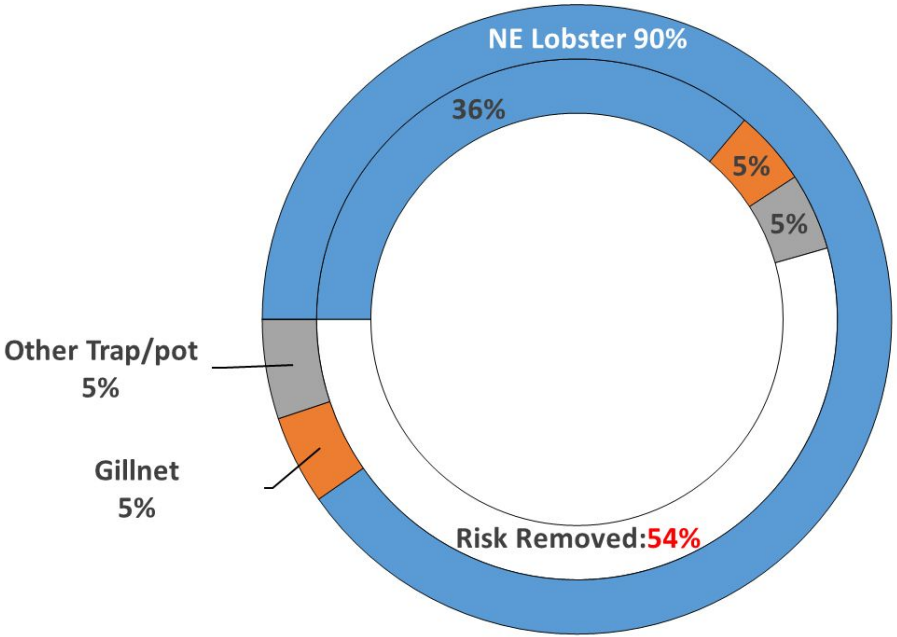
After Phase 3 Measures



Buoy Line Risk Only

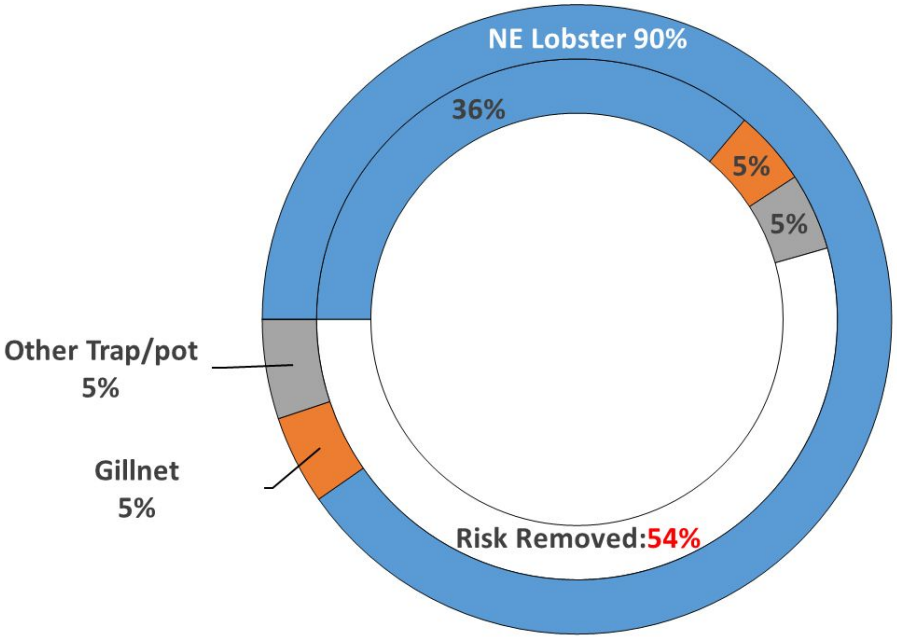
Considering Gillnet Panels

Buoy Line Risk

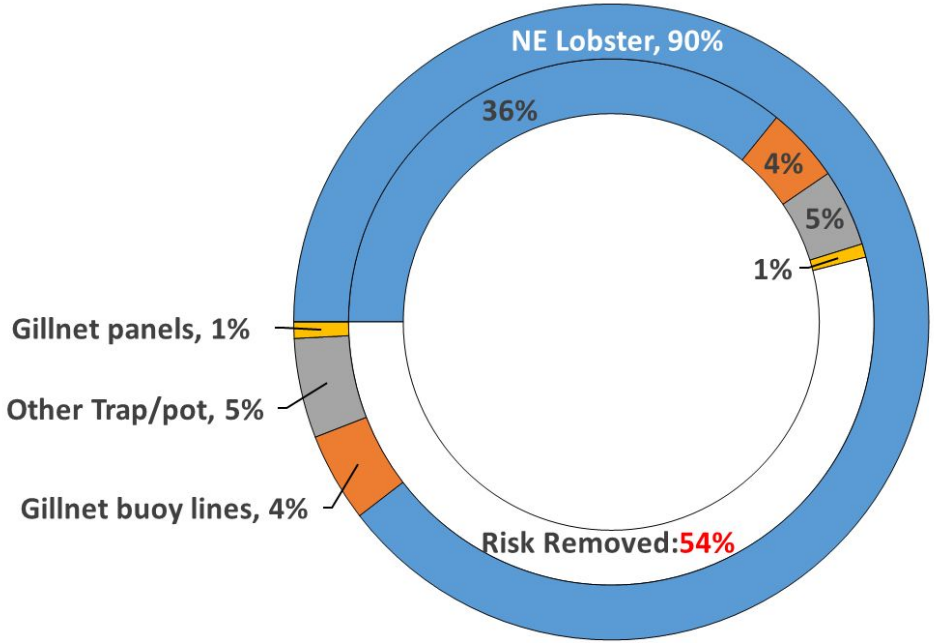


Considering Gillnet Panels

Buoy Line Risk



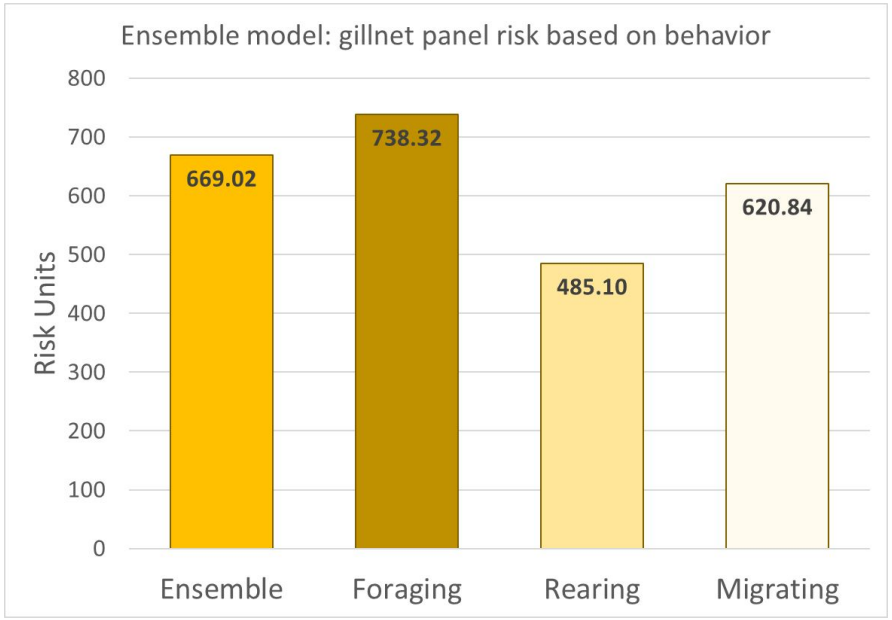
Line & Panel Risk:
Behavior-based vertical distribution

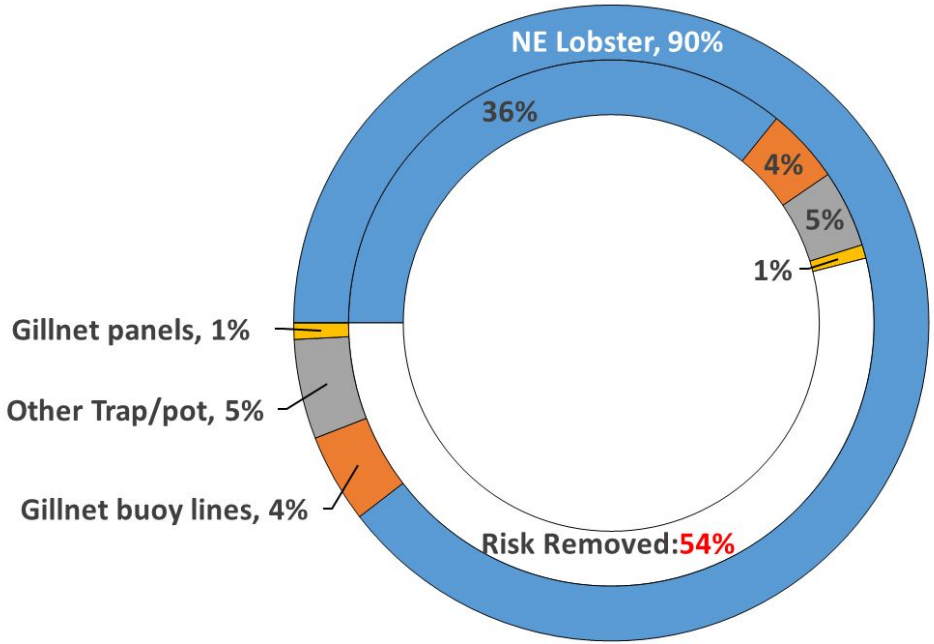


"Ensemble" distribution

Considering Gillnet Panels

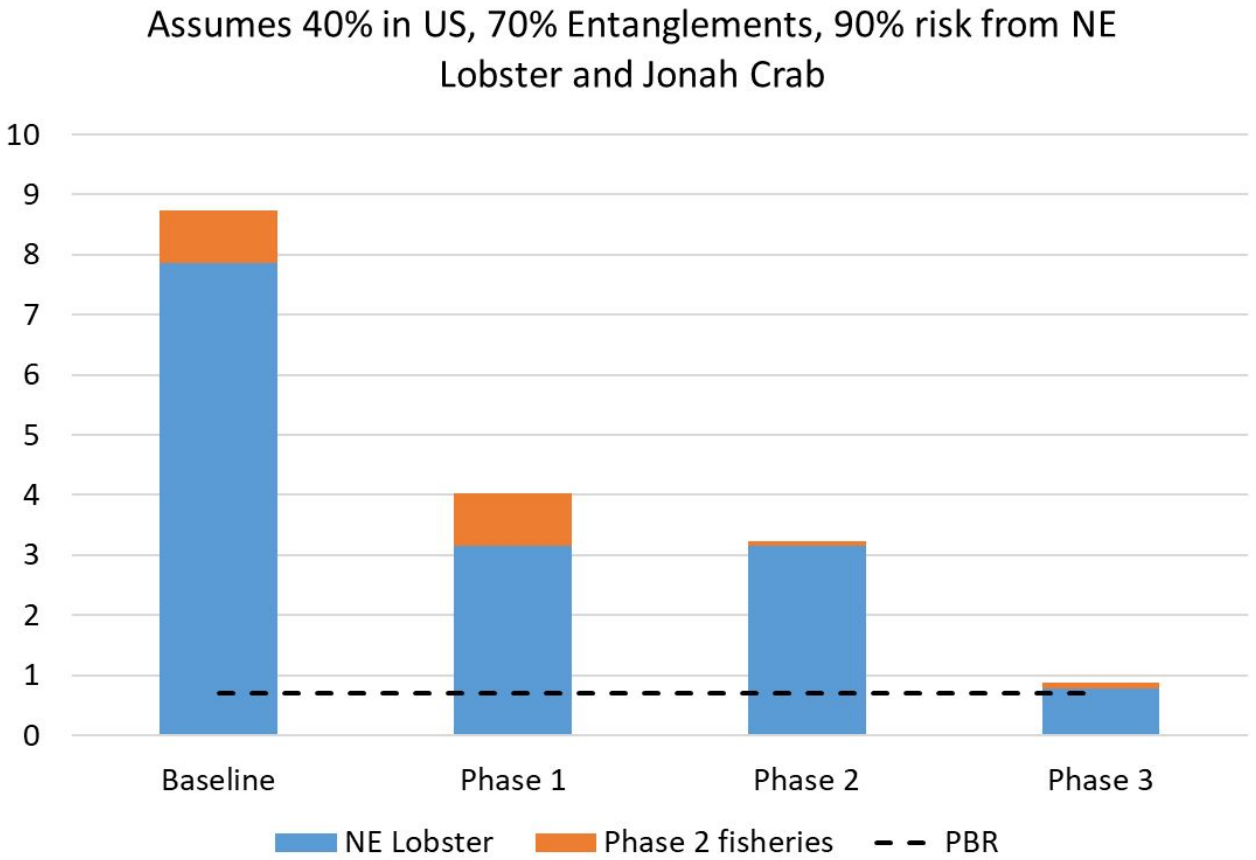
Line & Panel Risk:
Behavior-based vertical distribution





"Ensemble" distribution

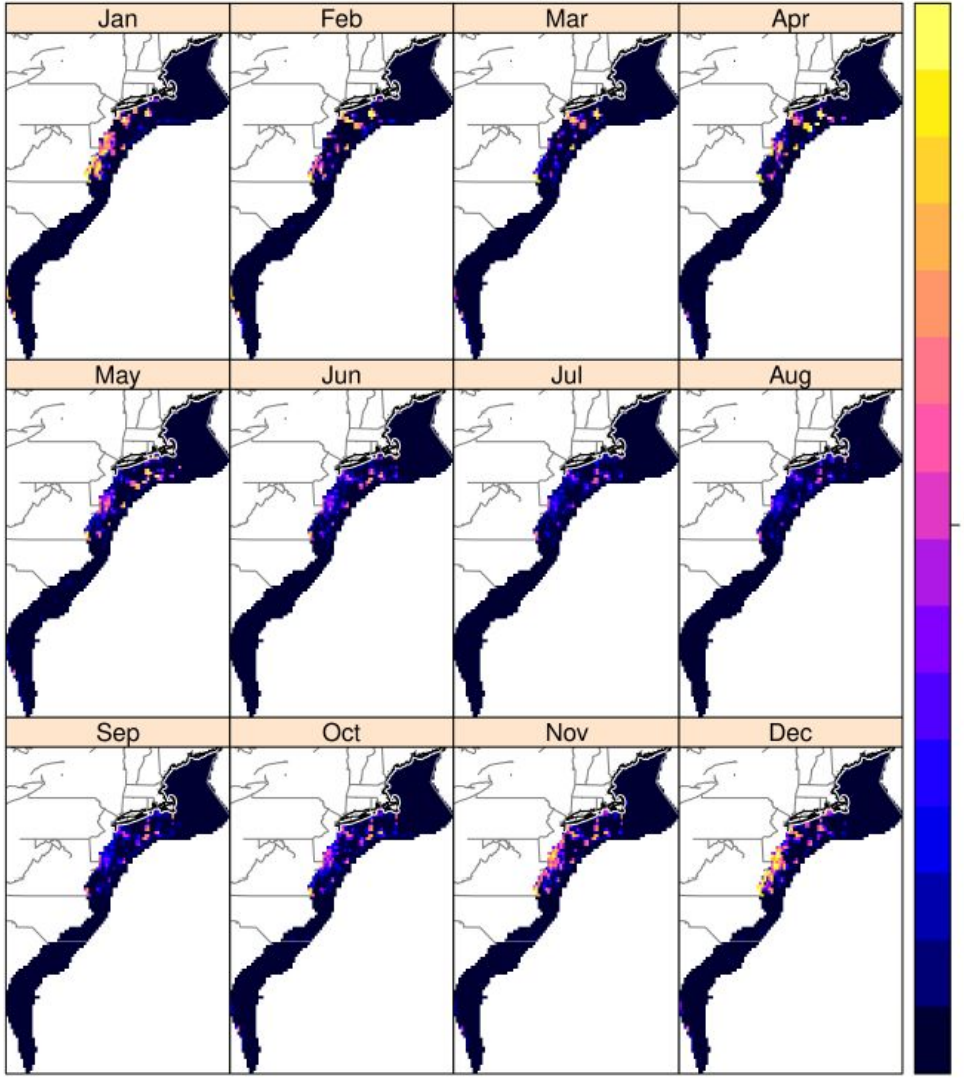
Annual Mortality and Serious Injury by Rulemaking Phase



Baseline Coastwide Phase 2 Trap/Pot Risk

- Most risk concentrated in Southern New England and mid-Atlantic Bight
- **NE:** OTP gear is able to catch lobster so risk may be better reflected in NE lobster layers
- **SE:** low effort + large closures reduce overlap during seasonal whale presence

This map shows risk (co-occurrence+gear strength)



* Risk reduction is calculated relative to other trap/pot fisheries only
** Map in log scale to aid visualization

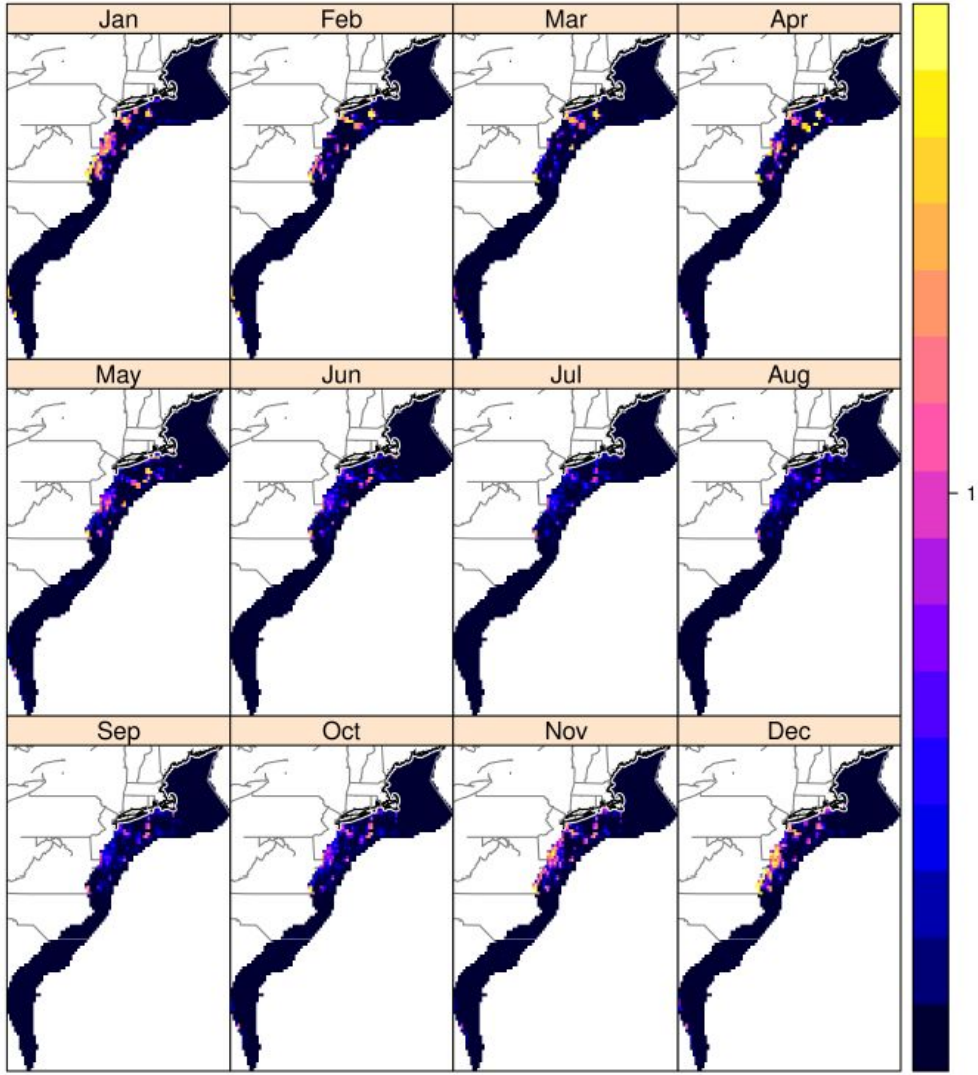
Phase 2 Trap/Pot Ideas

Collection of Team Member Ideas

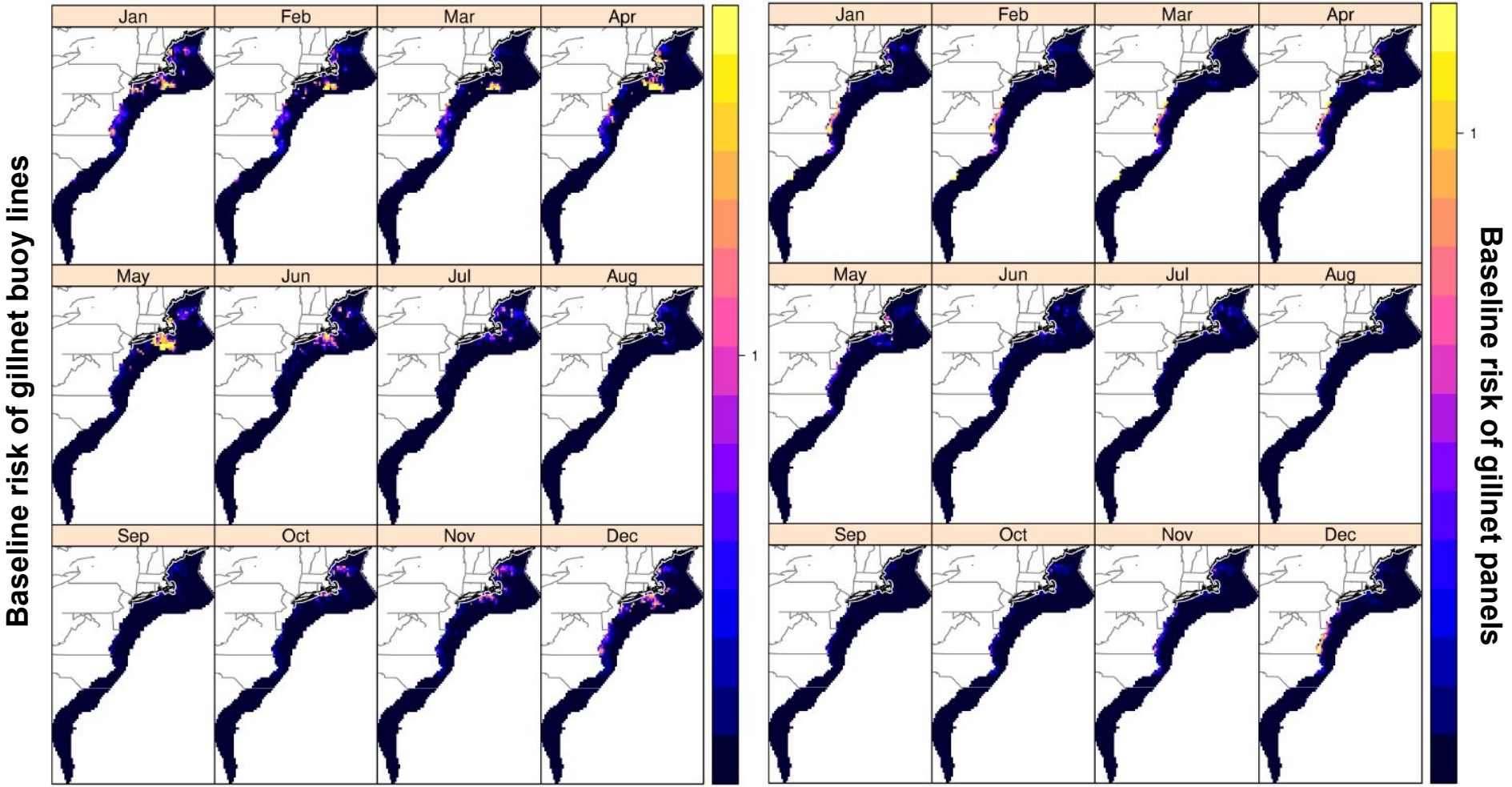
- **Northeast:** Phase 1 measures across gear types
- **Mid-Atlantic:** Weak inserts every 60ft in the top 75% of the buoy line (like MA and LMA2 Phase 1)
- **Southeast:** Full length weak rope
  - 1,700 lb everywhere else
  - Keep 1,500 lb in Florida state waters

- **25% Risk reduction***
- **10% Co-occurrence reduction***

This map shows risk (co-occurrence+gear strength)



* Risk reduction is calculated relative to other trap/pot fisheries only
** Map in log scale to aid visualization



These maps show risk (co-occurrence+gear strength)

* Note differences in scales
** Risk reduction is calculated relative to other gillnet fisheries only

Phase 2 Gillnet Ideas

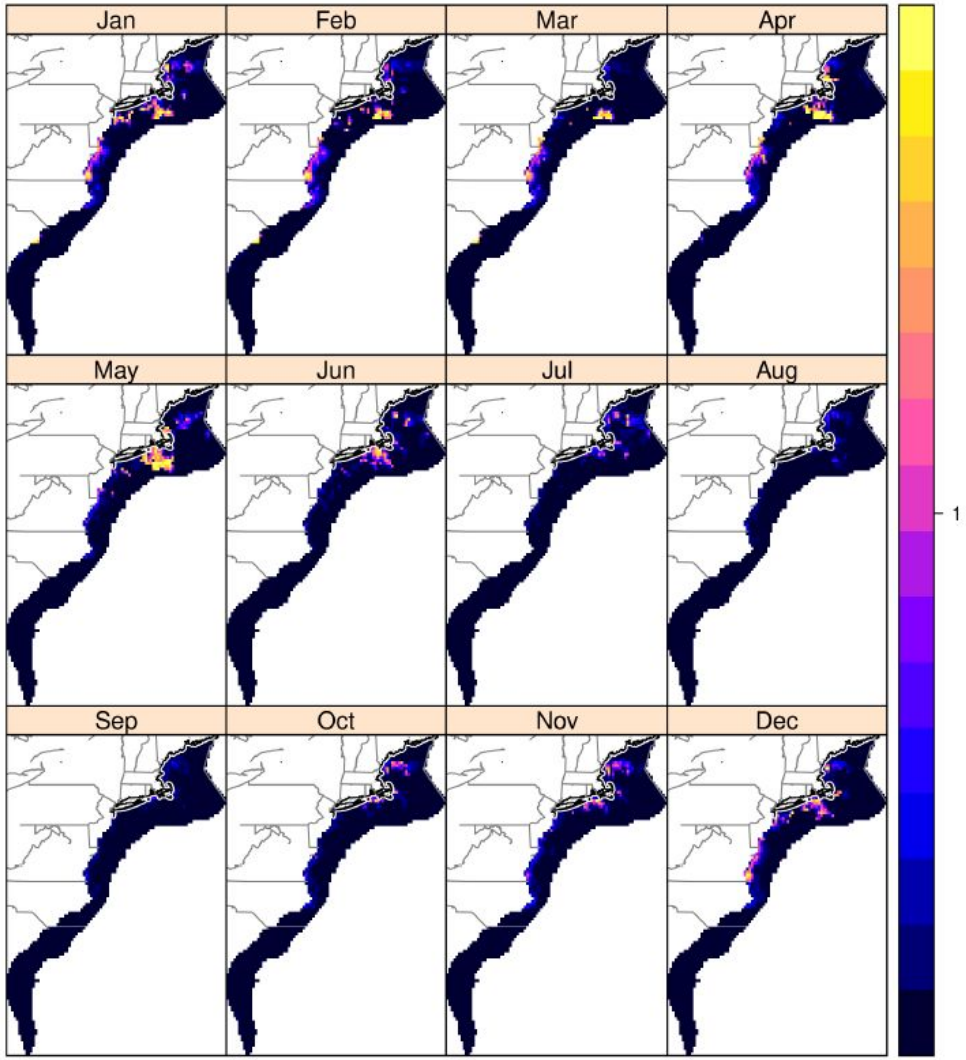
ALWTRT Recommendations

- **Northeast:** Trap/Pot closures & MA state water closure
- **Coastwide:** Weak inserts every 60ft in the top 75% of the buoy line

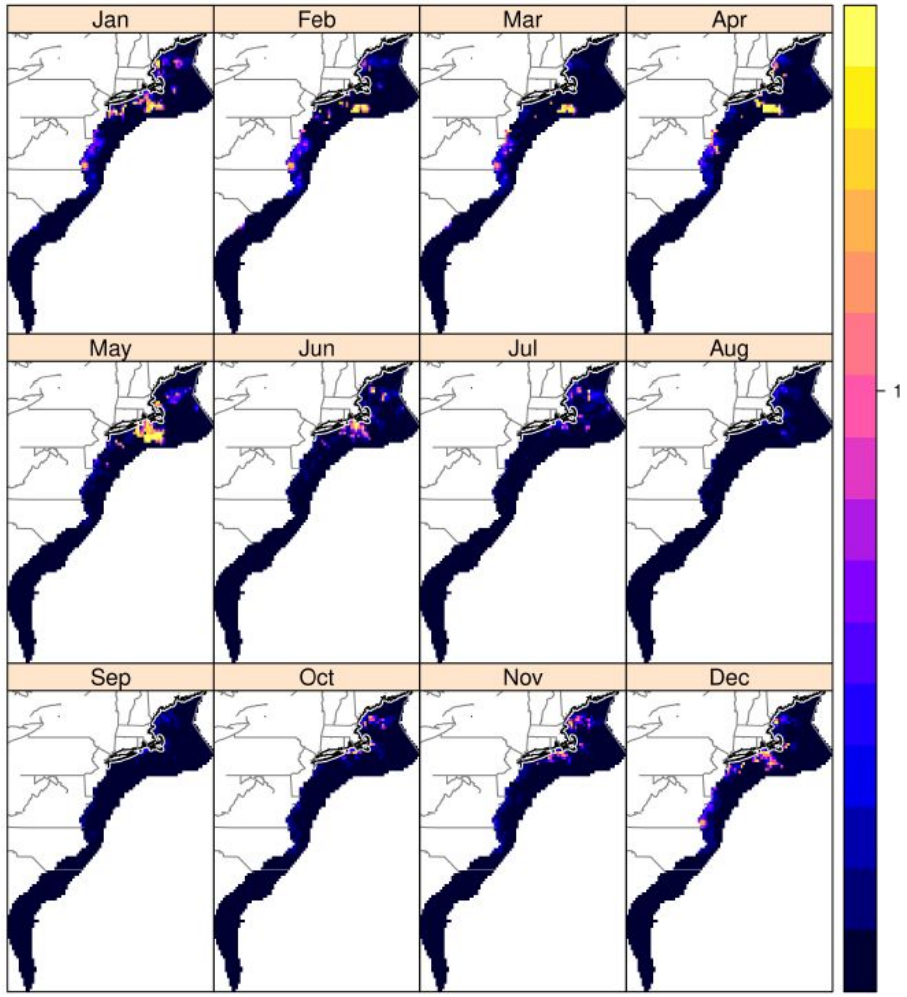
Risk Analyzed *without* Gillnet Panels
48% Risk reduction
26% Co-occurrence reduction

Risk Analyzed *with* Gillnet Panels
42% Risk reduction
22% Co-occurrence reduction

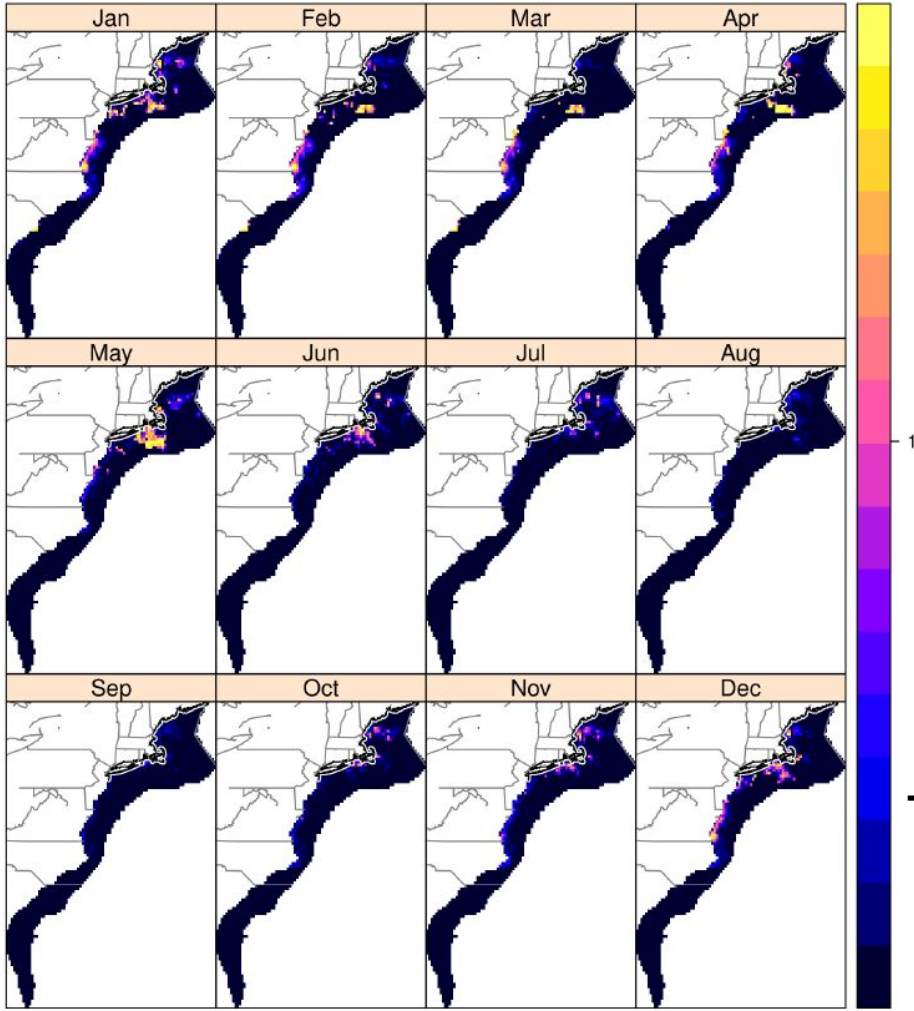
This map shows risk
(co-occurrence+gear strength)



* Risk reduction is calculated relative to gillnet fisheries ONLY *with* and *without* gillnet panels, respectively.
** Map of baseline risk with gillnet panels & lines



After: risk *without* panels



After: Risk *with* panels

These maps show risk (co-occurrence+gear strength)

* Note slight difference in scale; risk higher with inclusion of gillnet panels.
** ** Risk reduction is calculated relative to other gillnet fisheries only

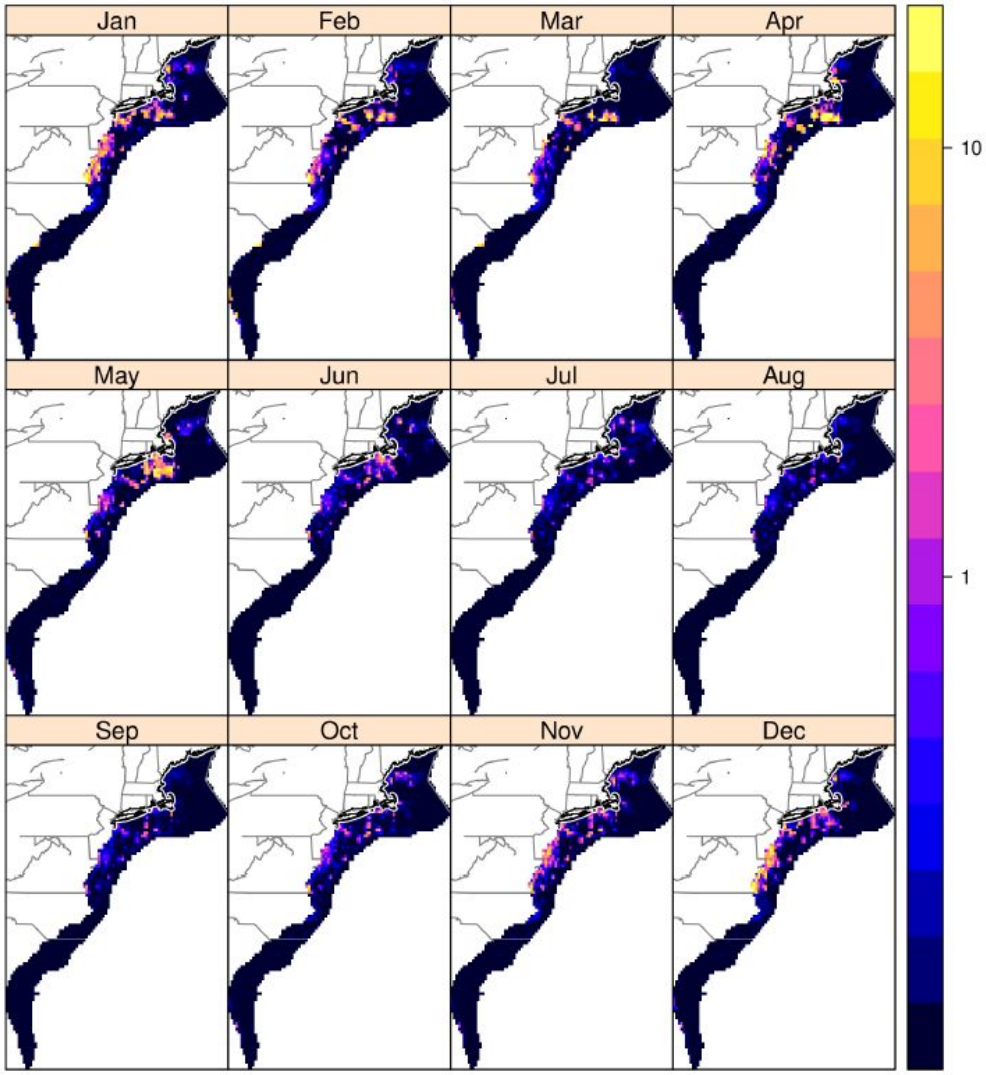
Phase 2 Risk Reduction Ideas: OTP and Gillnet

OTP + Gillnet Measures: Weak inserts every 60ft in the top 75% of the buoy line

Risk Analyzed *without* **Gillnet Panels**
37% Risk reduction
17% Co-occurrence reduction

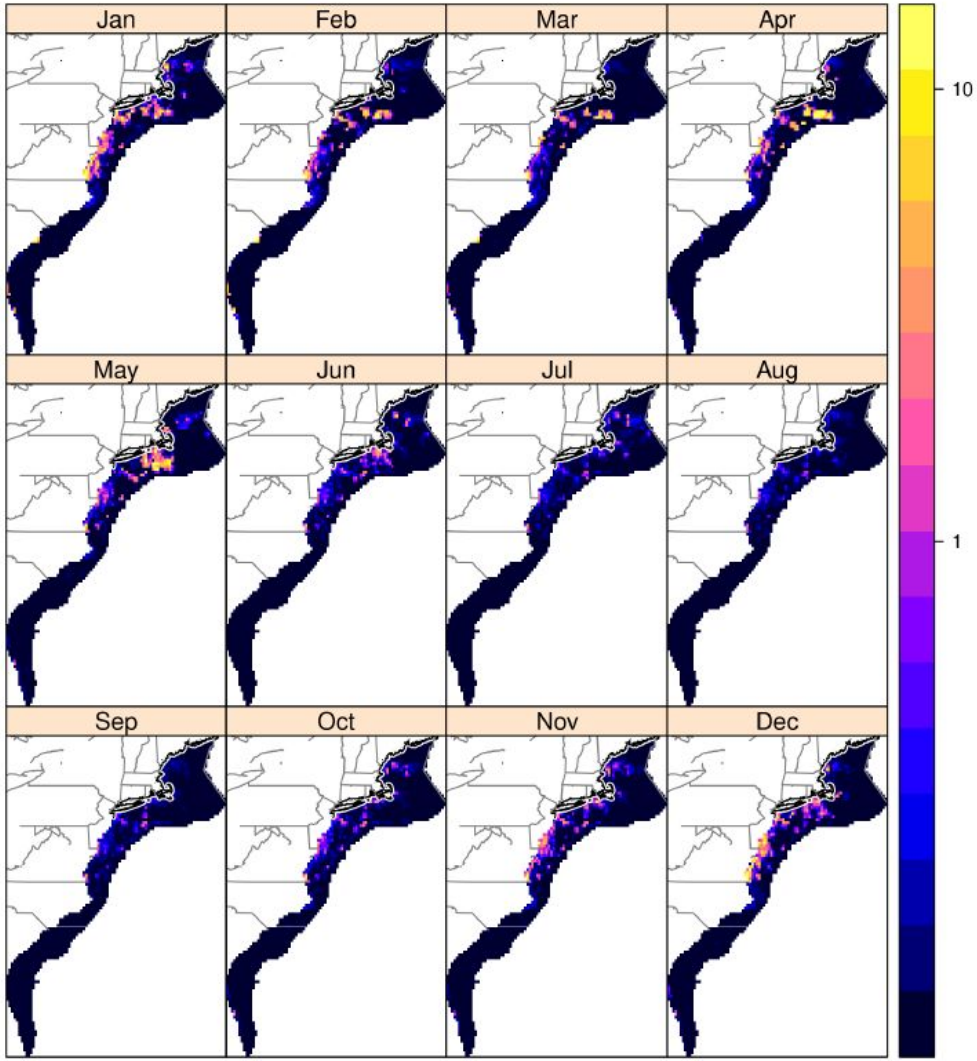
Risk Analyzed *with* **Gillnet Panels**
35% Risk reduction
17% Co-occurrence reduction

This map shows risk (co-occurrence+gear strength)



* Risk reduction is calculated relative to gillnet fisheries ONLY *with* and *without* gillnet panels, respectively.
** Map of baseline risk with gillnet panels & lines

Risk After Implementing Ideas: OTP and Gillnet



This map shows risk
(co-occurrence+gear strength)

* Risk reduction is calculated relative to Phase 2 fisheries
** Map of scenario risk with gillnet panels & lines

Summary

- Phase 2 fisheries have lower relative effort and dispersed risk
  - Challenging to reduce risk when broadly distributed
  - Effort reduction or relocation outside of high risk is key
  - Reducing line strength to reduce M/SI

- Panels increase encounter risk
  - Likely varies based on behavior
  - Reducing buoy line strength could further reduce M/SI in the case of an encounter with buoy lines or panels

- Remaining risk is predominantly in Southern New England, mid-Atlantic, and (for gillnets) the Gulf of Maine

Tips for Using Zoom

- ✔ **If you know you have less than optimal internet connection, please join the meeting via your computer for video and then opt to dial via phone audio.** When you are dialing in, please be sure to enter your participant ID.
- ✔ **Please mute yourself when you are not speaking.**
- ✔ **Rename yourself** in the Participants tab with First & Last Name, Your Affiliation.
  In front of your name-
  - Team members: please put a *
  - Alternates: please put a *ALT
- ✔ **Bring a tech-adaptive mindset** as we work to maximize engagement in this online setting!

CBI
CATALYZING COLLABORATION

Breakout Group Session

Preparing for This Week's Deliberations

Discussion objective:

- Ensure Team is ready to dive into its discussions

Approach:

- Cross-caucus breakouts (~5 Team members per group)
- Address following questions:
  - What else do you need to know about the Team's charge to have effective deliberations this week?
  - What else do you need to know about the DST tool to have effective deliberations this week?
- Make sure you hear from everyone in the group | come back with 1 or 2 key thoughts or questions to share
- Use template sheets if helpful | **No need** to send in your template forms.

Team members in breakouts

Meeting will resume shortly

Breakout Group Session - Report Back

Preparing for This Week's Deliberations

Hear key thoughts from groups:

- What else do you need to know about the Team's charge to have effective deliberations this week?
- What else do you need to know about the DST tool to have effective deliberations this week?

Public Comment

Public comments welcome

- Share thoughts in chat or via comment
- If wanting to comment, raise virtual “hand” or signal interest in chat
- Limit comments to 2 minutes; may need to adjust if many speakers
- Please keep all comments…
    - on-point
    - respectful
    - focused on issues (not individuals)
- Facilitators will intervene if ground rules are not honored; public member will be asked to leave the meeting

Wrap Up and Next Steps

Homework & Getbacks for Day 2:

- Email Cameron (chager@cbi.org) if you need a different arrangement than default groupings for tomorrow afternoon's caucuses

Tomorrow's focus:

- Detailed discussion of potential Phase 2 measures for mid-Atlantic lobster trap/pot, U.S. East Coast multispecies trap/pot, and gillnet fisheries coastwide;
- Crafting collections of measures to run through the Decision Support Tool.