ALWTRT Informational Webinar: Phase 1 Risk Reduction Update
The meeting will begin at 2:30 p.m.

Unmuted (green)   **Muted (red)**

This is the control panel

Find the **Control Panel** and open it by clicking the orange arrow. You can usually find this on the right hand side of your screen. You can expand the gray option bars by clicking the triangle on the left hand side of "Audio" and "Questions."
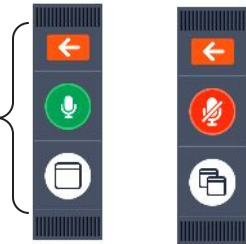
The **Control Panel** also allows you to mute/unmute by clicking the microphone symbol.

Computer Audio (Preferred)   **Cell phone for audio (limited internet)**
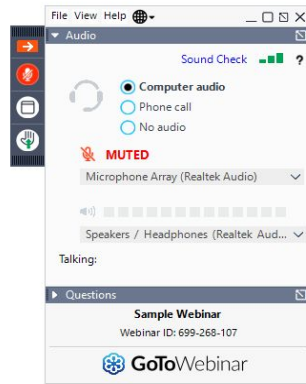
Make sure you can see a red microphone symbol next to your name in attendees. If you cannot, you will not be able to speak.

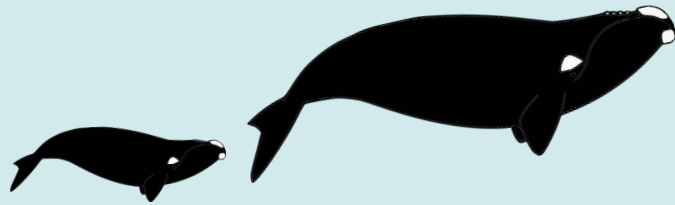Select your **audio settings**. Computer audio is recommended. If you dialed in on your phone and did not enter your audio pin, please redial and enter your audio pin.

Access the audio options by clicking on the gray bar that says "Audio."

This is the questions box

This is the **Questions box**, you will use this to get in line for the Q&A.

Access the questions box by clicking the gray bar that says "questions."

TRT Members: Participating in Today's Webinar

Please Note: *Today's event is being recorded* (including anything typed into the questions box) and will be available through the event registration page after the meeting.

Reminders for Team Members:
- Please direct questions to the presenters
- Please hold questions til the end UNLESS quick clarification on information presented
- Type QUESTION in the questions box to get in line.
- Include the slide number or topic of your question or type in your question into the questions box
- When you are called on, we will un-mute you, and then you will need to un-mute yourself to ask your question
- If you change your mind, say or type pass when your name is called

Non-Team Members: You are welcome, but Q&A time is reserved for Team members.

Recordings of past webinars on Decision Support Tool updates, overview of current coastwide regulations, and North Atlantic Right Whale population status are available on Atlantic Large Whale Take Reduction Team web page under "Team Meetings." Follow the registration link of the under the recent team meeting and the recording will begin.

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ALWTRT Phase I Risk Reduction Update

Decision Support Tool Development Team

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Aug 18, 2022

Recall that we're dealing with four changes to the fishery model:

1. Switch to inputs built by NEFSC instead of IEc
2. Updated lobster fishery data to average across recent years for most regions
3. Updated methods for spatially allocating effort for most regions
4. Update to RW 12 spatial distribution model

Changing multiple interacting inputs can make it challenging to understand observed changes in model estimates.

Overview of Risk Reduction Estimate Change

Primary improvements between last year's model (used for the FEIS) and the current model were updates to the fishery effort inputs and updated whale density inputs (v11 vs v12); there were no significant changes in model structure for the lobster fishery.

It updating both the whale density and fishery effort contributed to a apparent decrease in risk reduction.

Last year's estimate, used for FEIS

RIGHT WHALE MODEL

FISHERY INPUT		v11	v12
	Previous estimate	60%	55%
	Updated estimate	53%	48%

Current estimate

PRELIMINARY ANALYSES, SUBJECT TO REVISION

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Lobster Fishery Data in the Updated Model

- Maine Harvester Reporting 2015-2018; Allocated by Area and Depth

- Mass Trip Reporting 2015-2018; Allocated by Area

- NH State and Federal Trip Reporting 2015-2018;
  - Allocated by Area for State vessels
  - Allocated by Coordinates for Federal vessels

- RI State and Federal Trip Reporting 2015-2018;
  - Allocated by Area for State vessels
  - Allocated by Coordinates for Federal vessels

- Area 3 2015-2019; Allocated by Coordinates

Previous vs Updated: Fishing Effort Summaries

Month	Total Traps Fished	
	Previous	Updated
1	730,378	488,779
2	511,713	371,447
3	491,838	422,166
4	695,556	559,060
5	1,007,553	806,365
6	1,363,518	1,158,314
7	1,761,302	1,835,012
8	1,937,410	2,046,408
9	1,949,752	1,939,749
10	1,948,942	1,758,876
11	1,643,733	1,320,106
12	1,094,758	718,294
Total	15,136,451	13,424,576

Month	Total Trawls Fished	
	Previous	Updated
1	135,562	77,546
2	87,397	54,339
3	86,830	68,494
4	160,249	106,093
5	293,642	186,720
6	445,830	301,968
7	655,341	536,307
8	721,569	608,558
9	710,271	559,841
10	670,985	475,967
11	501,519	315,105
12	252,602	137,375
Total	4,721,796	3,428,311

Month	Total Vertical Lines Fished	
	Previous	Updated
1	168,403	106,616
2	109,827	75,981
3	108,287	94,027
4	187,891	138,143
5	329,004	228,441
6	492,317	361,531
7	710,966	628,456
8	780,448	706,299
9	771,095	653,663
10	734,921	564,428
11	562,807	386,308
12	298,250	179,896
Total	5,254,215	4,123,791

PRELIMINARY ANALYSES, SUBJECT TO REVISION

Previous vs Updated: Trap Densities

Density of Traps Fished from Previous Inputs

Density of Traps Fished from Updated Inputs

PRELIMINARY ANALYSES, SUBJECT TO REVISION
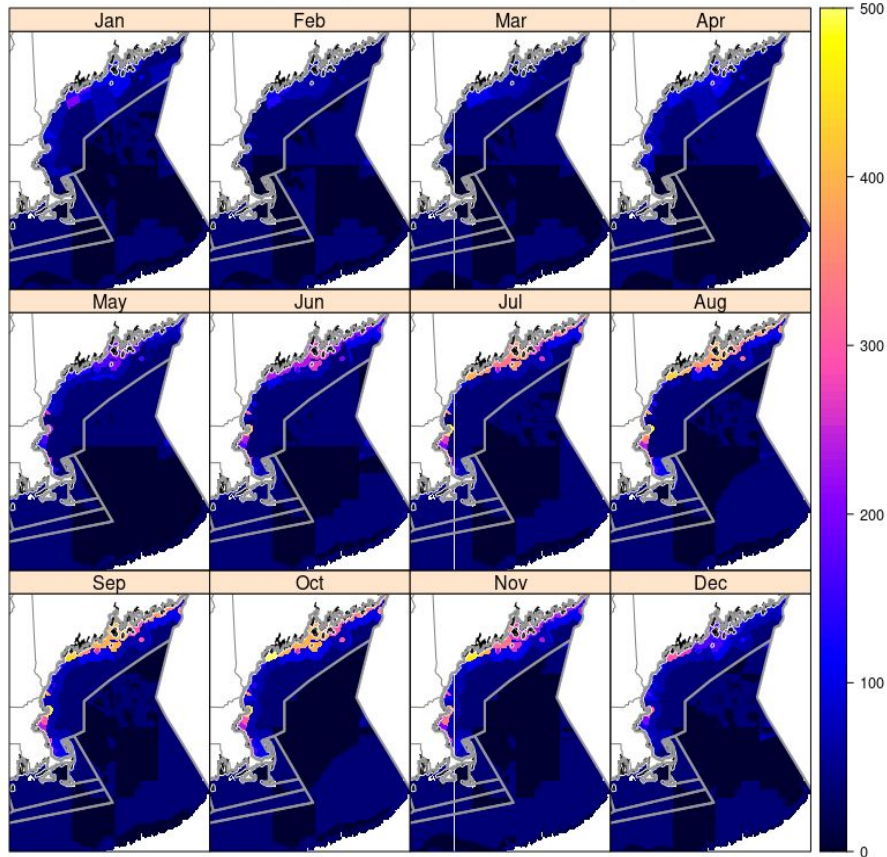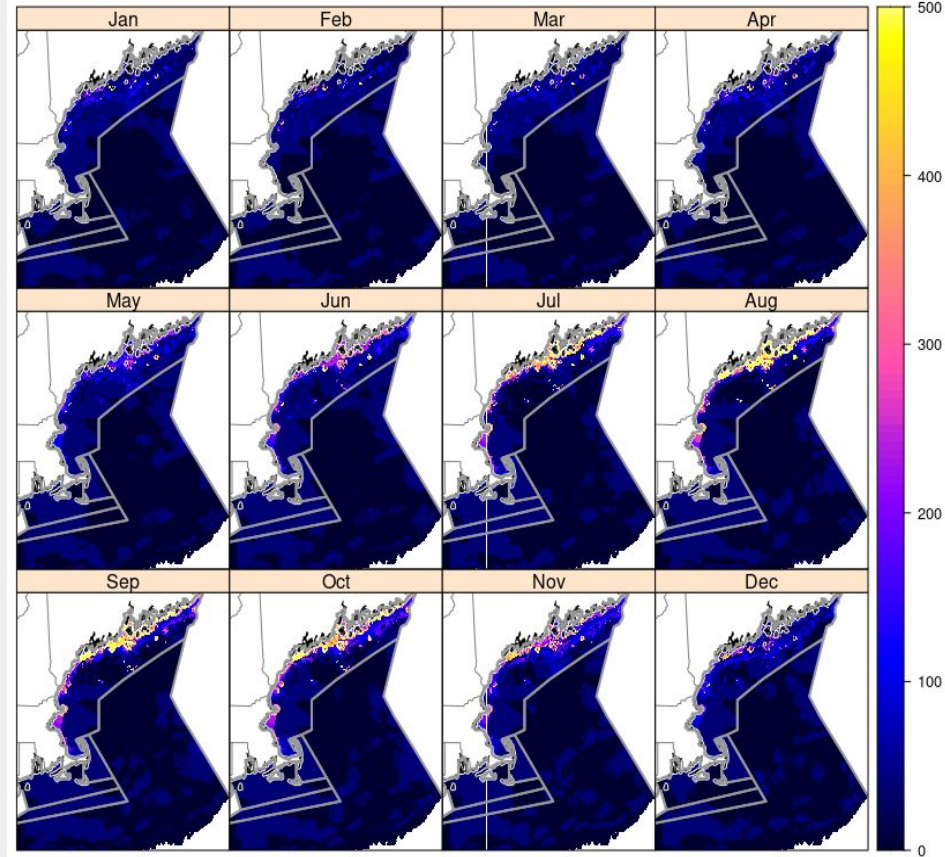
Previous vs Updated: Trap Densities

Shown as a log-scale/in orders of magnitude

Density of Traps Fished (log Scaled) from Previous Inputs
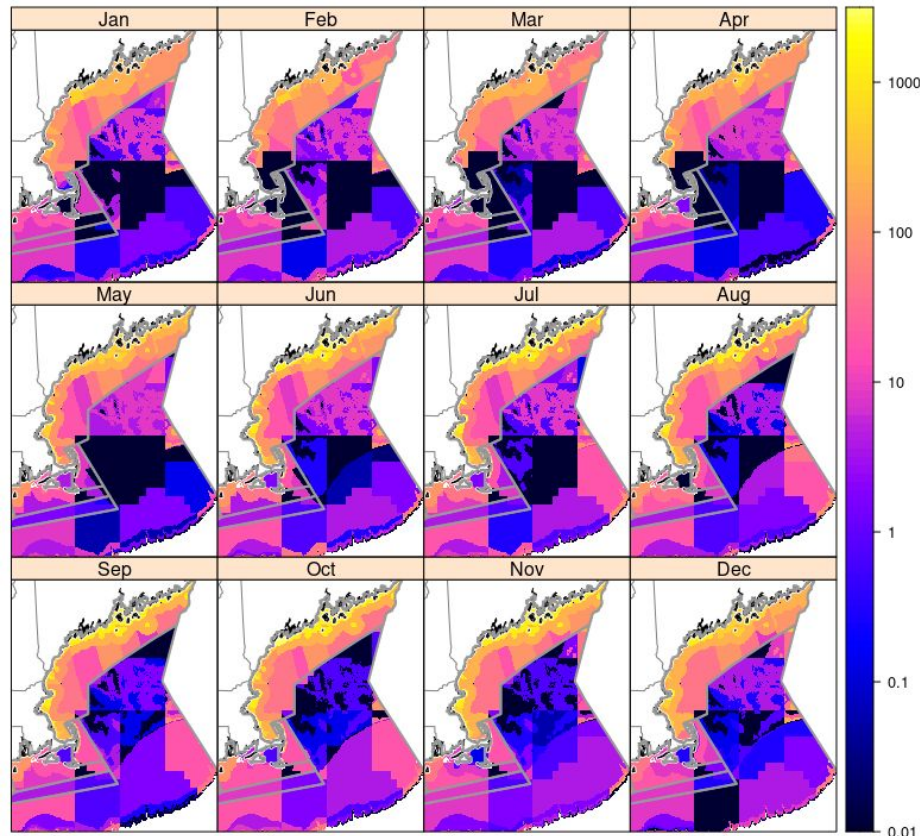
Density of Traps Fished (log Scaled) from Updated Inputs

PRELIMINARY ANALYSES, SUBJECT TO REVISION

Previous vs Updated: Line Densities

Density of Lines Fished from Previous Inputs

Density of Endlines Fished from Updated Inputs

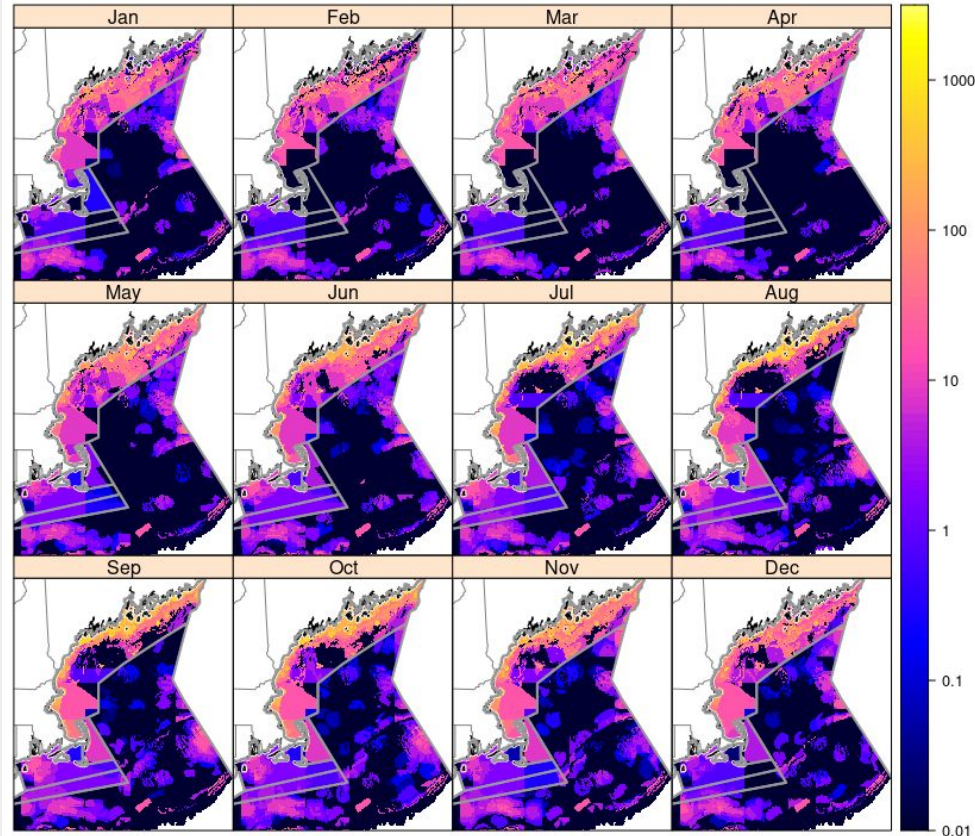PRELIMINARY ANALYSES, SUBJECT TO REVISION

Previous vs Updated: Line Densities

Shown as a log-scale/in orders of magnitude

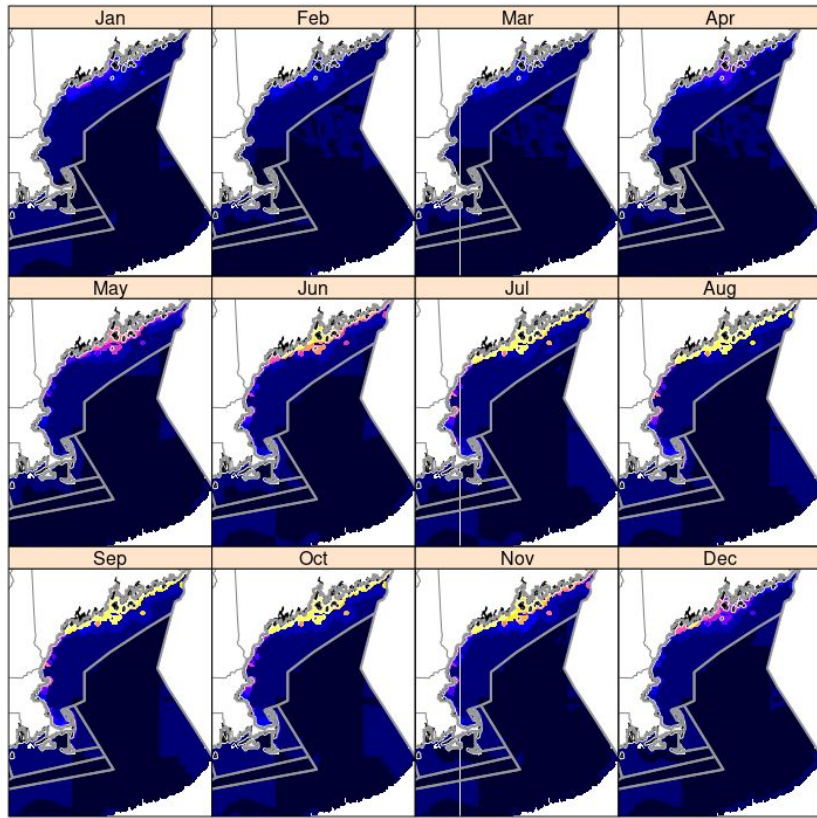

Density of Lines Fished (log Scaled) from Previous Inputs

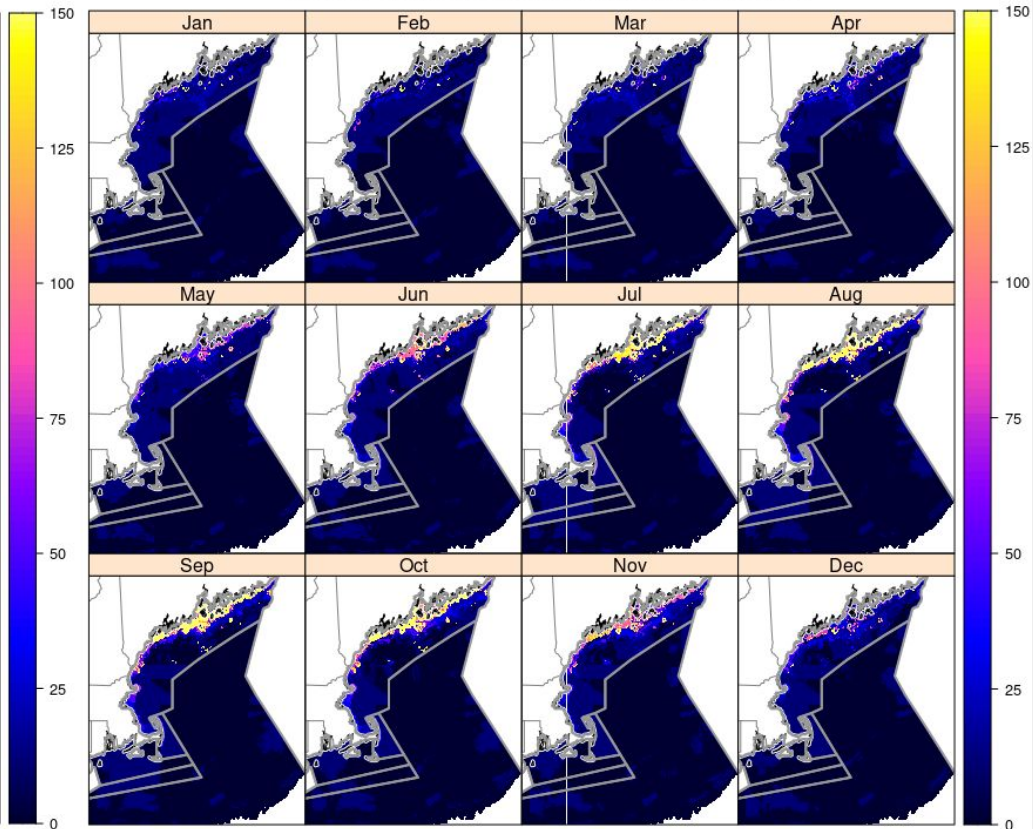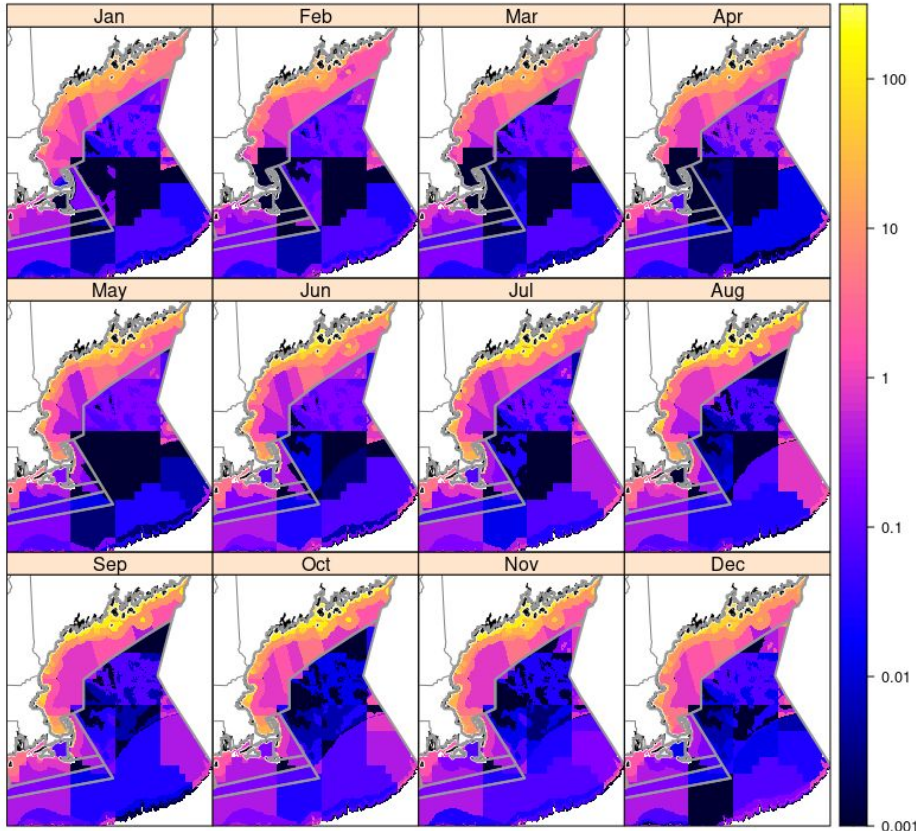Density of Endlines Fished (log Scaled) from Updated Inputs

PRELIMINARY ANALYSES, SUBJECT TO REVISION
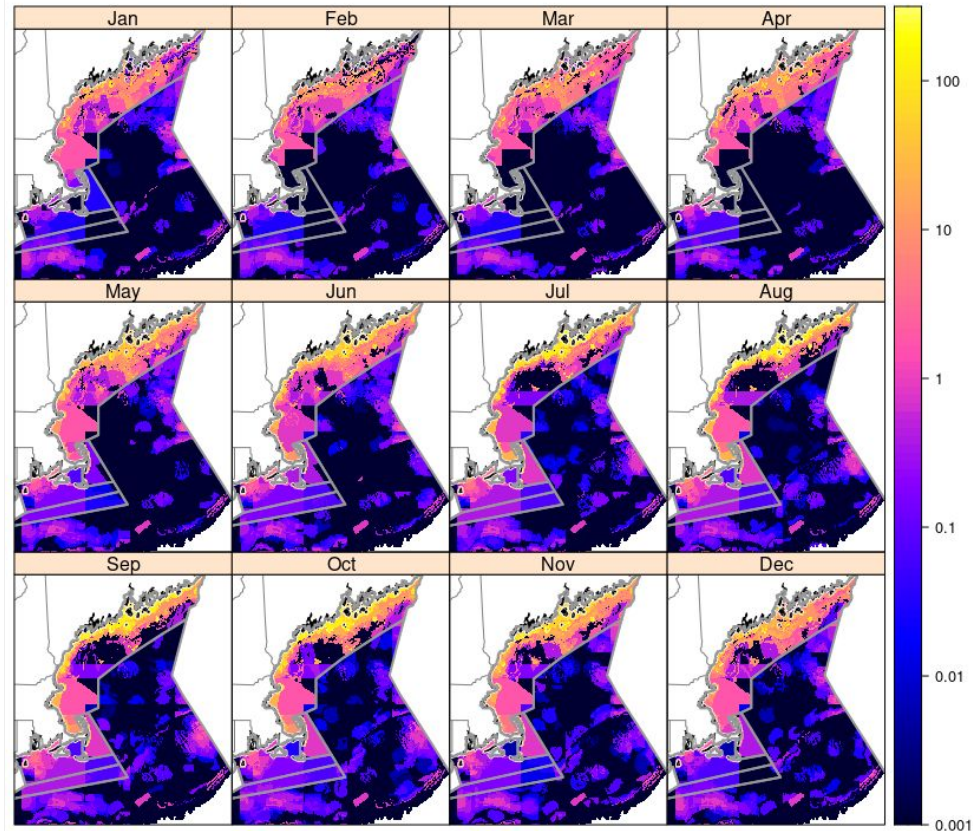
Updates to Gear Density Inputs: Maine LMA1

	Total Traps Fished	
Month	Previous	Updated
1	550,934	381,427
2	378,670	288,613
3	379,727	341,333
4	528,558	461,923
5	719,918	639,192
6	948,374	902,452
7	1,291,357	1,495,746
8	1,430,764	1,684,934
9	1,471,058	1,594,156
10	1,478,540	1,438,118
11	1,238,893	1,055,251
12	785,437	548,902
Total	11,202,228	10,832,046

	Total Vertical Lines	
Month	Previous	Updated
1	152,742	92,816
2	99,493	66,473
3	98,938	83,354
4	170,831	123,177
5	286,544	198,592
6	423,570	307,289
7	629,653	552,457
8	695,349	627,920
9	691,640	584,083
10	663,882	506,119
11	509,402	342,822
12	264,274	155,161
Total	4,686,317	3,640,263

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Updates to Gear Density Inputs: Massachusetts LMA1

Month	Total Traps Fished	
	Previous	Updated
1	86,060	47,830
2	41,744	27,362
3	38,456	27,598
4	68,082	43,462
5	160,284	90,242
6	223,824	146,495
7	262,916	208,712
8	291,937	232,770
9	296,051	226,156
10	289,179	218,818
11	268,162	172,787
12	180,543	98,592
Total	2,207,238	1,540,823

Month	Total Vertical Lines	
	Previous	Updated
1	8,071	6,226
2	3,663	3,561
3	3,564	3,554
4	6,935	5,762
5	24,233	14,350
6	39,765	26,721
7	49,145	39,993
8	52,861	44,216
9	51,710	40,882
10	47,113	36,385
11	36,991	26,569
12	21,744	14,064
Total	345,794	262,283

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Updates to Gear Density Inputs:
LMA2, 2-3 Overlap, and Outer Cape Cod (OCC)

Month	Total Traps Fished Previous	Total Traps Fished Updated
1	28,732	9,666
2	21,249	6,154
3	19,055	7,312
4	35,255	10,484
5	52,709	24,312
6	76,440	47,802
7	82,862	61,803
8	85,346	59,670
9	76,438	50,149
10	64,216	36,237
11	48,561	27,048
12	38,756	13,623
Total	629,618	354,259

Month	Total Vertical Lines Previous	Total Vertical Lines Updated
1	2,784	1,891
2	2,164	1,017
3	2,059	1,368
4	4,729	2,760
5	9,989	7,284
6	16,985	16,883
7	18,333	21,297
8	17,935	19,422
9	15,109	14,665
10	12,114	9,832
11	7,205	6,621
12	4,540	2,975
Total	113,944	106,015

Updates to Gear Density Inputs: LMA3

Month	Total Traps Fished	
	Previous	Updated
1	55,315	45,990
2	65,619	46,541
3	50,165	43,055
4	51,679	38,027
5	49,673	41,519
6	85,267	46,080
7	90,216	48,597
8	91,802	47,496
9	67,432	50,375
10	82,482	48,196
11	58,465	51,810
12	71,354	50,061
Total	819,468	557,749

| Month	Total Vertical Lines	
	Previous	Updated
1	3,287	2,404
2	3,818	2,436
3	2,962	2,304
4	3,100	2,024
5	2,825	2,245
6	4,686	2,490
7	5,063	2,618
8	5,063	2,555
9	3,599	2,754
10	4,478	2,648
11	3,422	2,841
12	4,377	2,669
Total	46,680	29,987

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Changes in Whale Density Model between v11 and v12

- Updated data to include most recent data:
  - **V11**: 2010 - 2018
  - **V12:** 2010 - 2020 (September)

- Re-fitted all statistical models with updated environmental parameters.

Right Whale Models: Compared
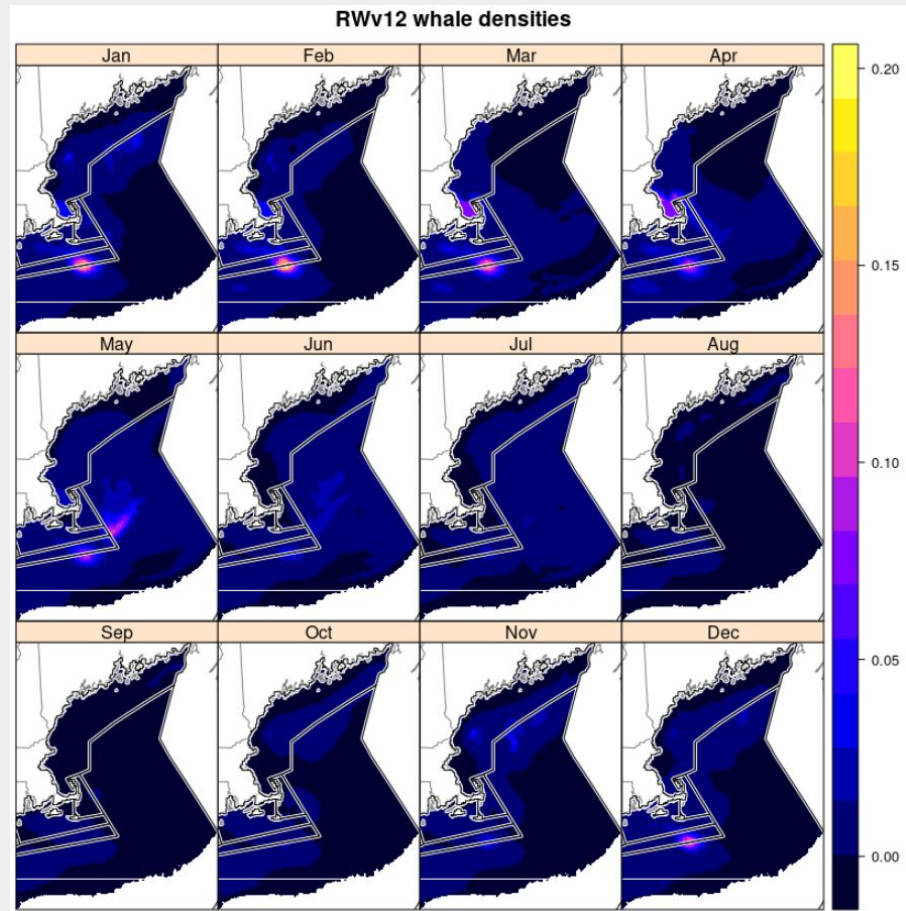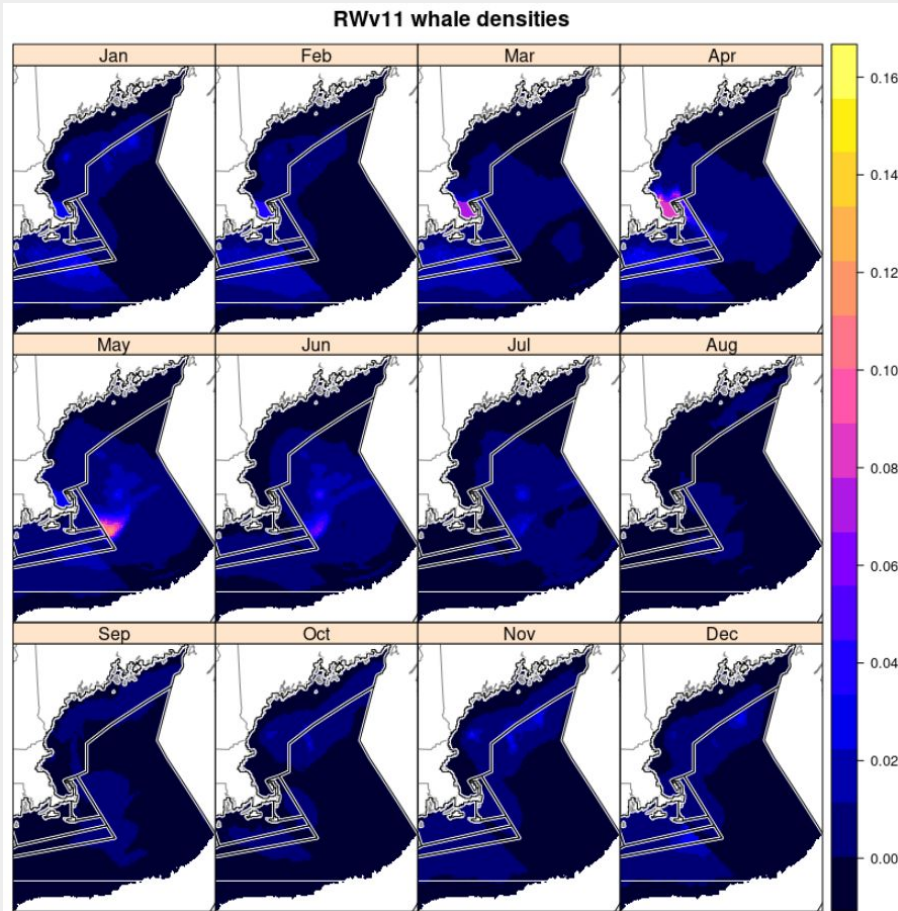
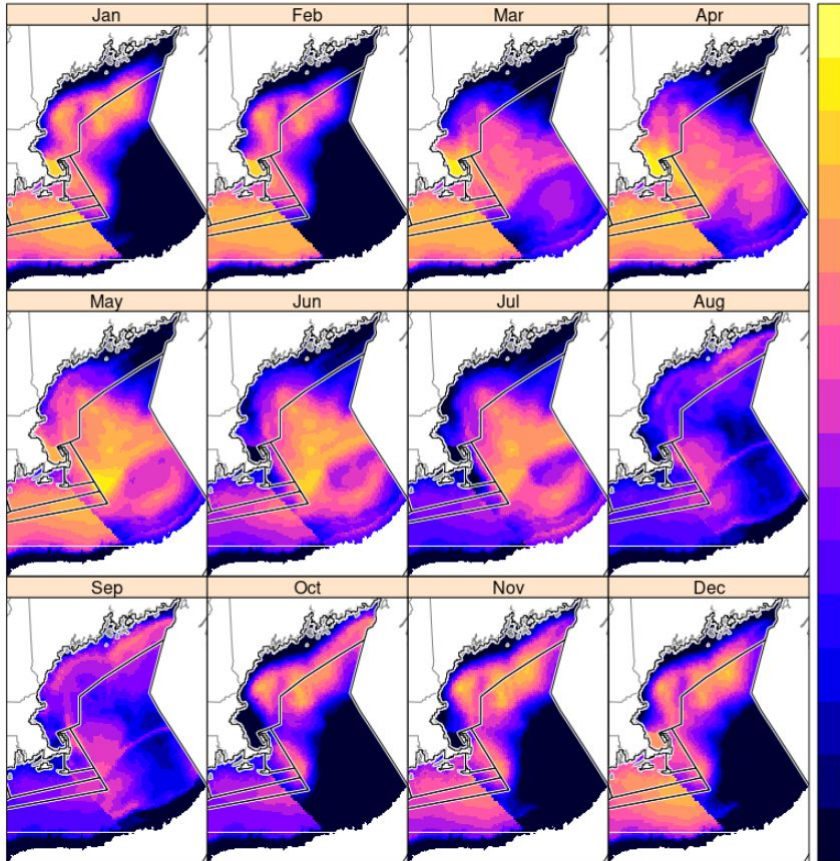PRELIMINARY ANALYSES, SUBJECT TO REVISION

Right Whale Models: Compared

Shown as a log-scale/in orders of magnitude

RWv11 whale densities, log-scaled

RWv12 whale densities, log-scaled

PRELIMINARY ANALYSES, SUBJECT TO REVISION
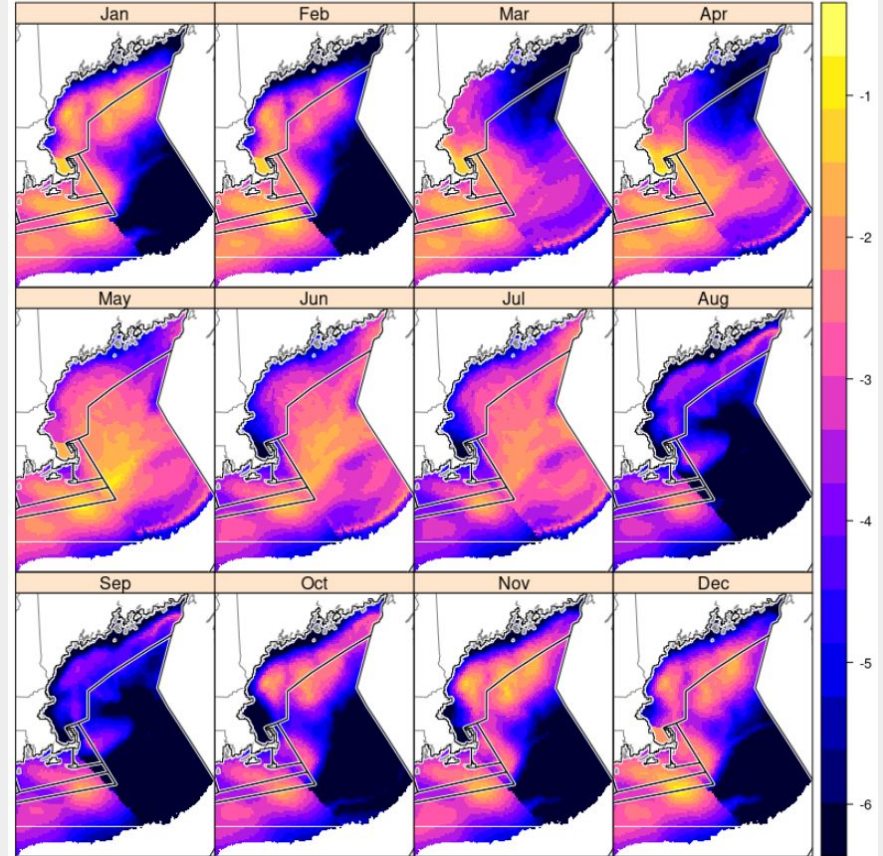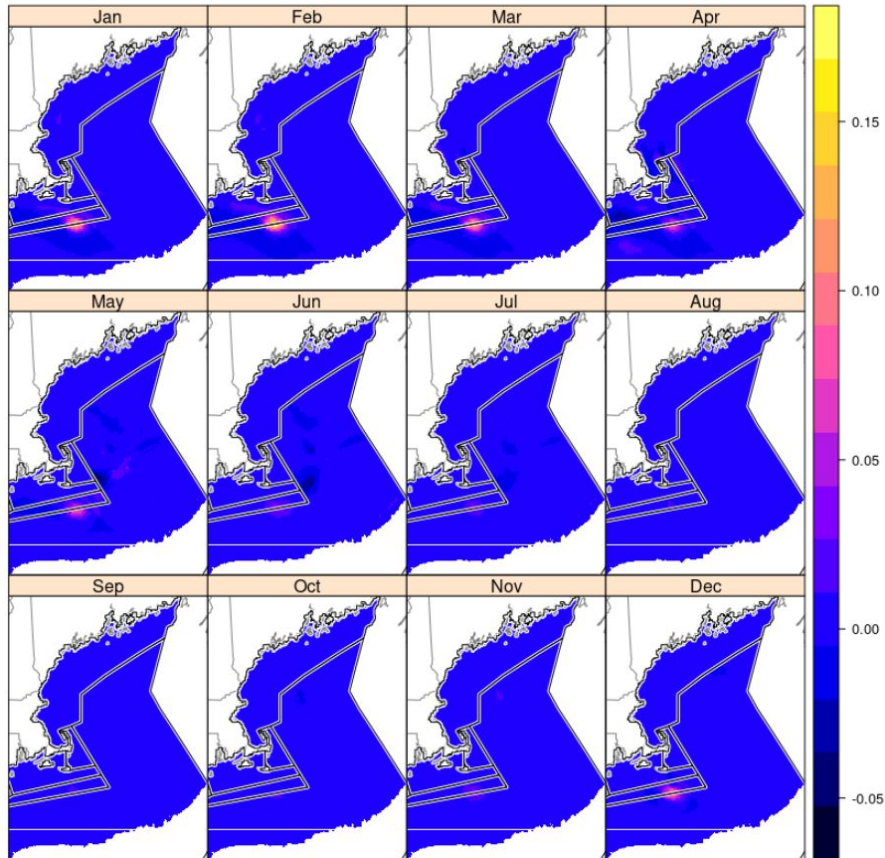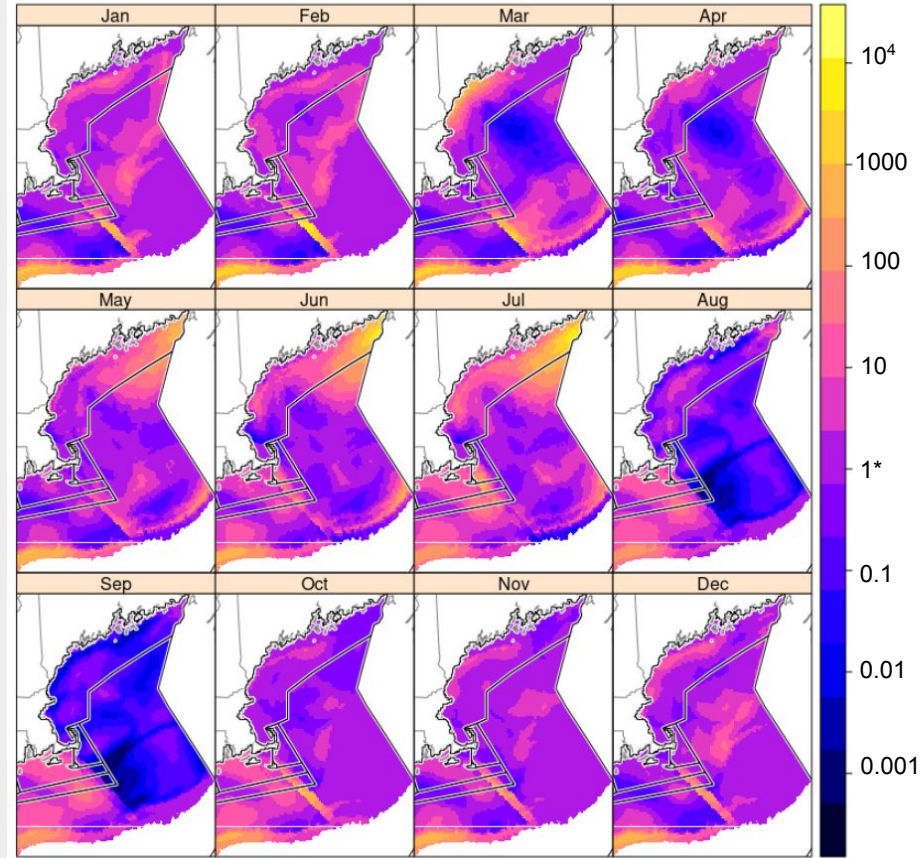
Right Whale Models: **Differences**

Shown as a log-scale/in orders of magnitude

Difference in whale density from RWv11 to RWv12

Difference in whale density from RWv11 to RWv12 in orders of magnitude

PRELIMINARY ANALYSES, SUBJECT TO REVISION

*No change

Overview of Risk Reduction Estimate Change

Primary improvements between last year's model (used for the FEIS) and the current model were updates to the fishery effort inputs and updated whale density inputs (v11 vs v12); there were no significant changes in model structure.

It appears that updating both the whale density and fishery effort contributed to a decrease in apparent risk reduction.

Last year's estimate, used for FEIS

RIGHT WHALE MODEL

FISHERY INPUT		v11	v12
	Previous estimate	60%	55%
	Updated estimate	53%	48%

Current estimate

PRELIMINARY ANALYSES, SUBJECT TO REVISION

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Previous vs Updated: Risk Estimates

Estimated Risk from Previous Inputs and RWv11
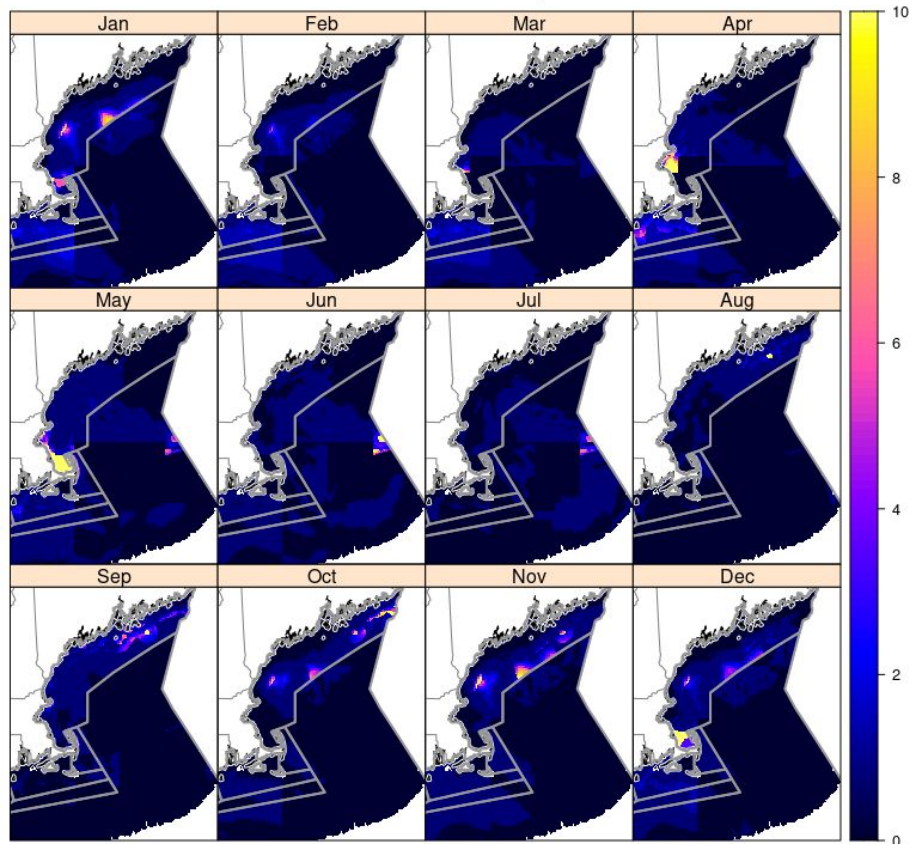
Estimated Risk from Updated Inputs and RW v12

PRELIMINARY ANALYSES, SUBJECT TO REVISION
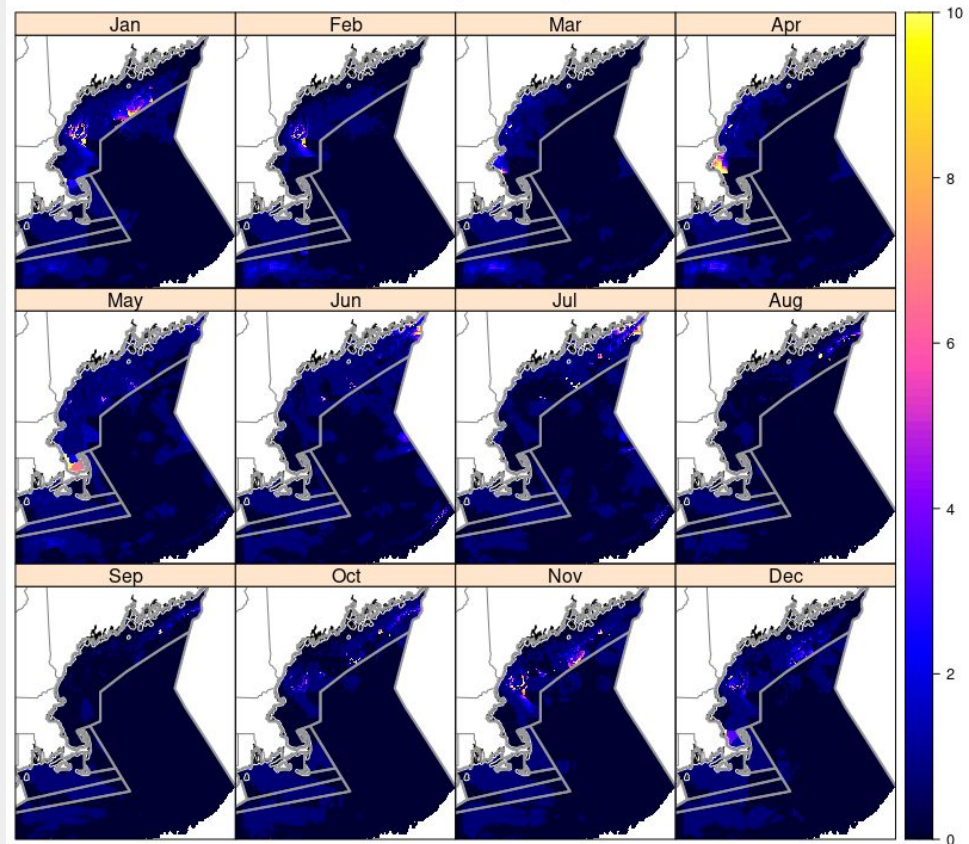
Previous vs Updated: Risk Estimates

Shown as a log-scale/in orders of magnitude

PRELIMINARY ANALYSES, SUBJECT TO REVISION
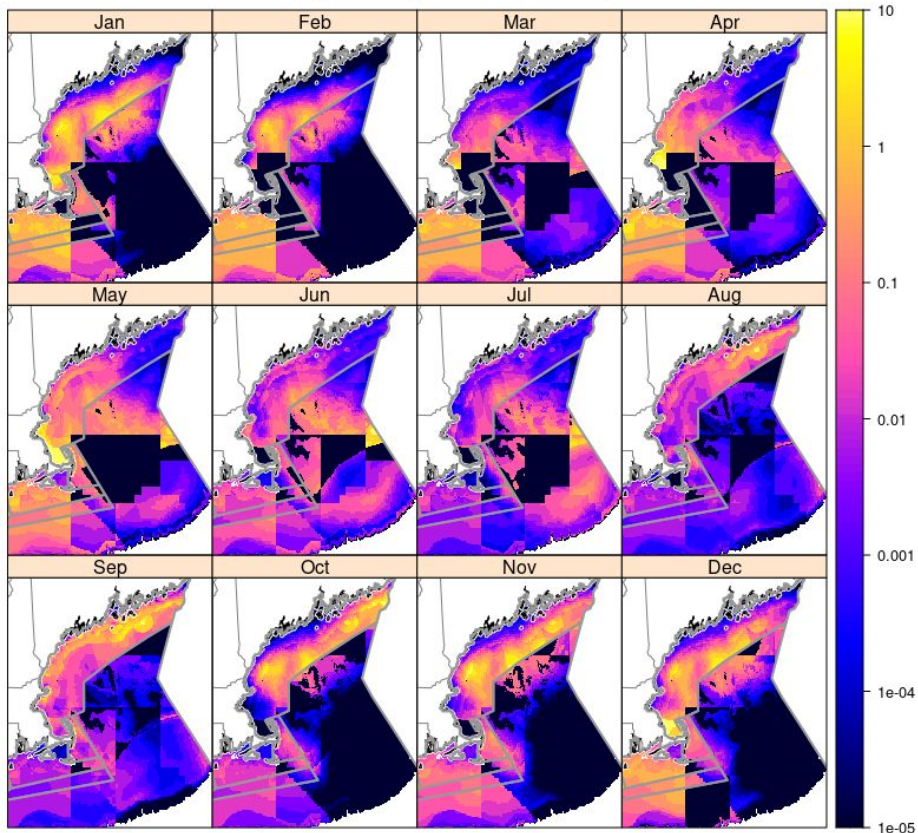
Mapping Change in Risk Between Versions

- Challenging to visualize how relative risk reduction changes with multiple underlying changes to the model.
- Workflow of calculating change in maps:

Mapping Change in Risk Between Versions

- Challenging to visualize how relative risk reduction changes with multiple underlying changes to the model.
- Workflow of calculating change in maps:

Map of baseline risk for Updated Inputs and RWv12	−	Map of risk after Phase 1 for Updated Inputs and RWv12	=	Map of change in risk from Phase I based on Updated Inputs and RWv12
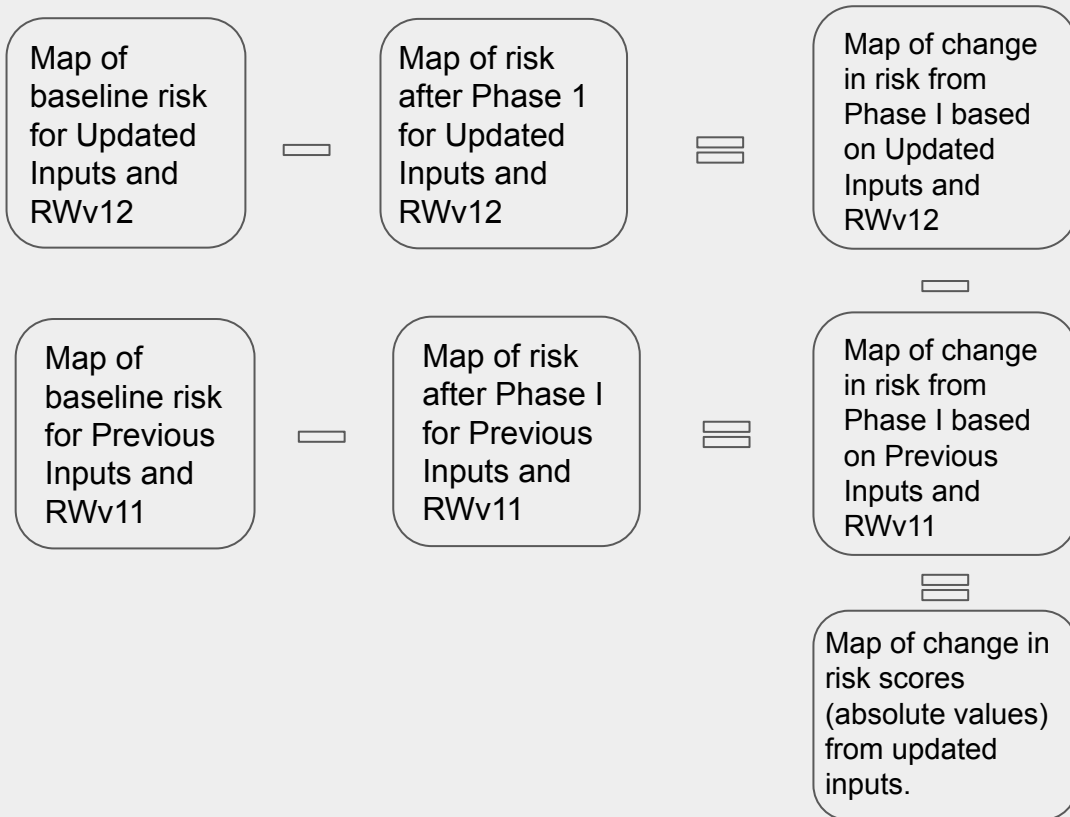
First **calculate change in risk** for the previous and updated models separately.

Map of baseline risk for Previous Inputs and RWv11	−	Map of risk after Phase I for Previous Inputs and RWv11	=	Map of change in risk from Phase I based on Previous Inputs and RWv11

Map of change in risk scores (absolute values) from updated inputs.

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Mapping Change in Risk Between Versions

- Challenging to visualize how relative risk reduction changes with multiple underlying changes to the model.
- Workflow of calculating change in maps:

Map of baseline risk for Updated Inputs and RWv12	−	Map of risk after Phase 1 for Updated Inputs and RWv12	=	Map of change in risk from Phase I based on Updated Inputs and RWv12
Map of baseline risk for Previous Inputs and RWv11	−	Map of risk after Phase I for Previous Inputs and RWv11	=	Map of change in risk from Phase I based on Previous Inputs and RWv11

Map of change in risk scores (absolute values) from updated inputs.

Then, **calculate differences between** Updated Model risk changes and Previous Model risk changes.

Note that the values in this final map are influenced by all four of the original risk maps. So interpretation is still challenging.
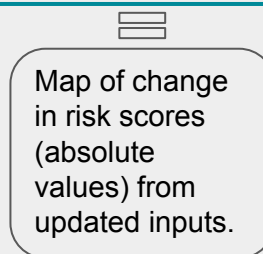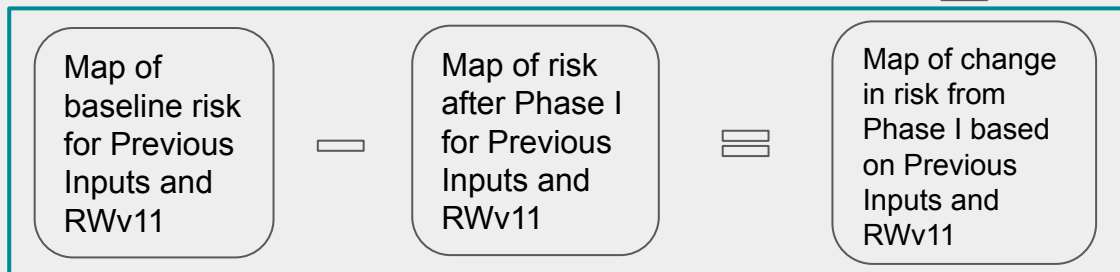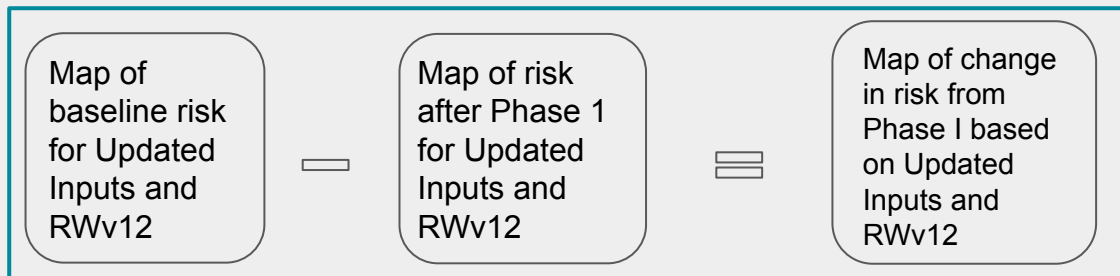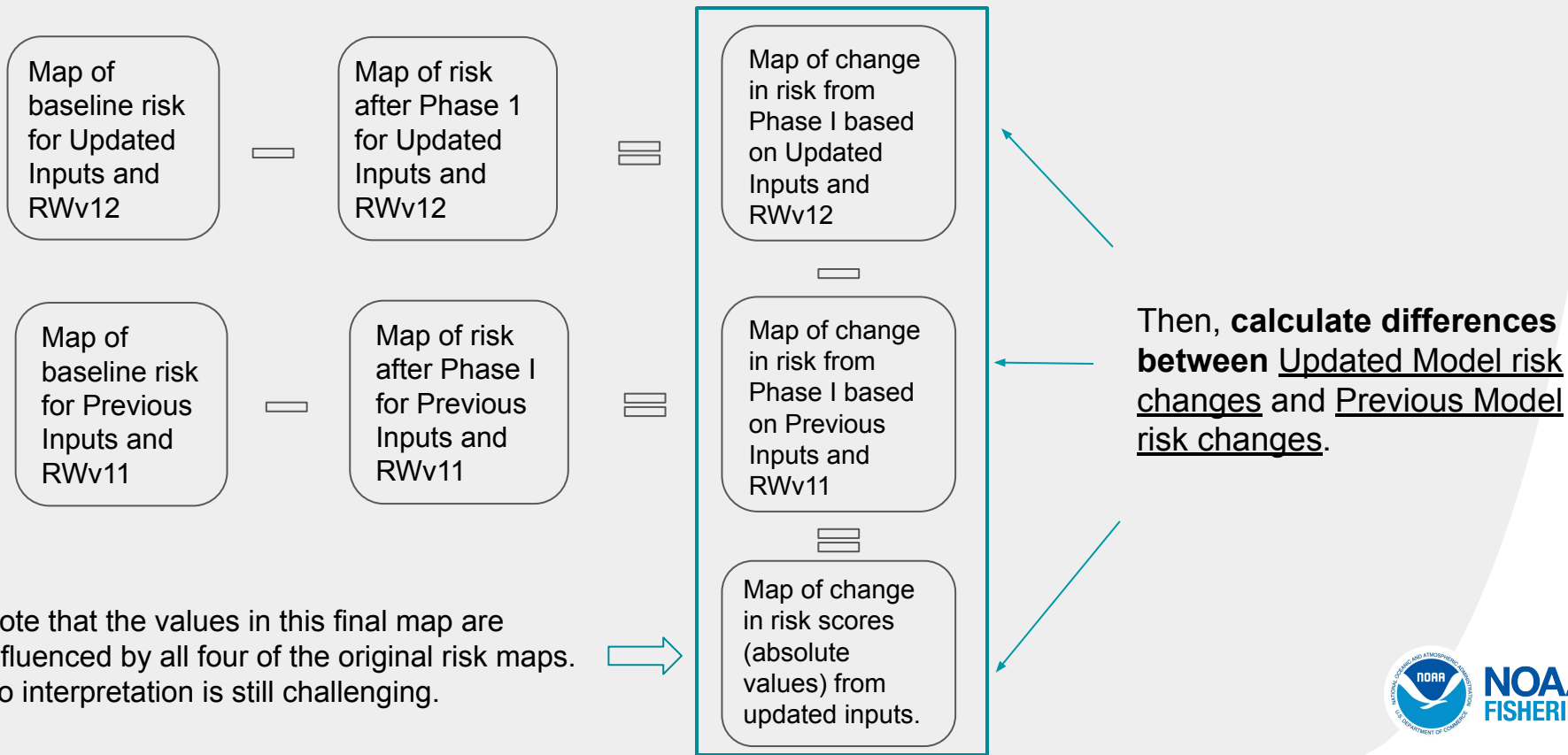
Mapping Change in Risk Between Versions

- Challenging to visualize how relative risk reduction changes with multiple underlying changes to the model.
- Workflow of calculating change in maps:

Map of baseline risk for Updated Inputs and RWv12 — Map of risk after Phase 1 for Updated Inputs and RWv12 = Map of change in risk from Phase I based on Updated Inputs and RWv12

Map of baseline risk for Previous Inputs and RWv11 — Map of risk after Phase I for Previous Inputs and RWv11 = Map of change in risk from Phase I based on Previous Inputs and RWv11

Map of change in risk scores (absolute values) from updated inputs.

These two maps are on the next slide for comparison.

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Risk Changes: Phase 1 Previous Inputs, RWv11

Estimated Risk (log Scaled) from Previous Inputs and RWv11

Change In Risk from Phase 1, Applied to Previous Inputs and RWv11

Shown as a log-scale/in orders of magnitude

Light areas are where absolute **risk went up** as a result of Phase 1
Dark colors are where absolute **risk went down** as a result of Phase 1
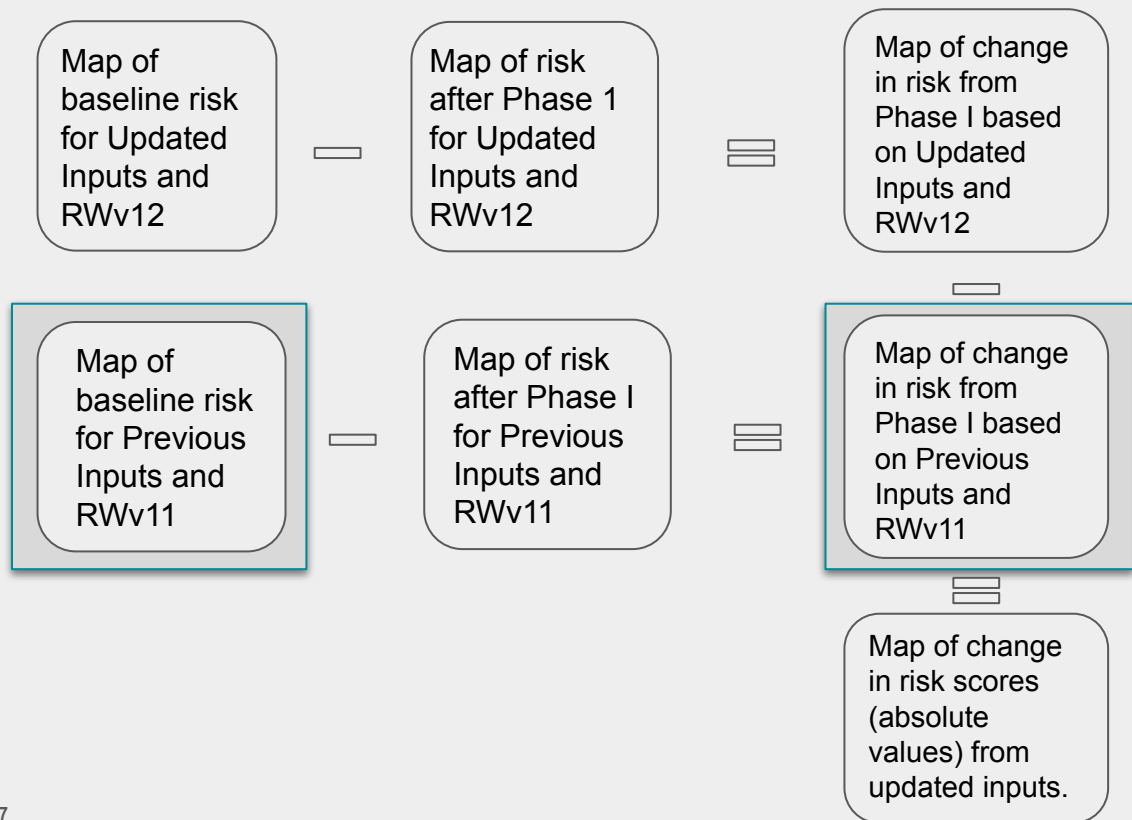Purple is **no change**

PRELIMINARY ANALYSES, SUBJECT TO REVISION
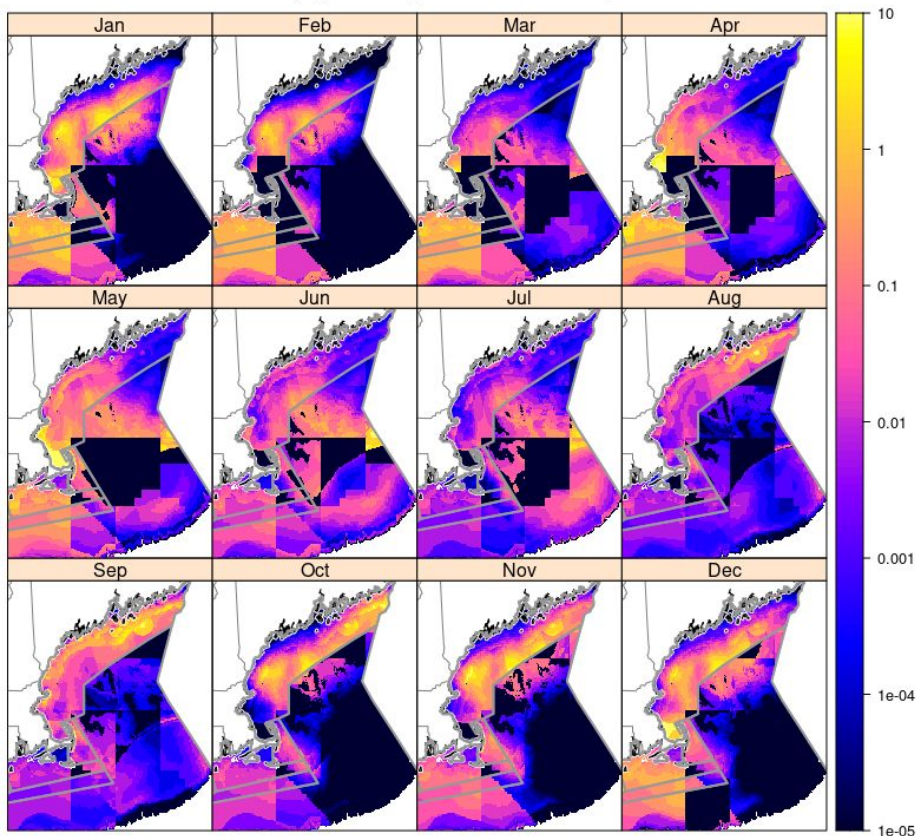
Mapping Change in Risk Between Versions

- Challenging to visualize how relative risk reduction changes with multiple underlying changes to the model.
- Workflow of calculating change in maps:

Map of baseline risk for Updated Inputs and RWv12

Map of risk after Phase 1 for Updated Inputs and RWv12

Map of change in risk from Phase I based on Updated Inputs and RWv12

Map of baseline risk for Previous Inputs and RWv11

Map of risk after Phase I for Previous Inputs and RWv11

Map of change in risk from Phase I based on Previous Inputs and RWv11

Map of change in risk scores (absolute values) from updated inputs.

These Two Maps on the next slide for comparison.
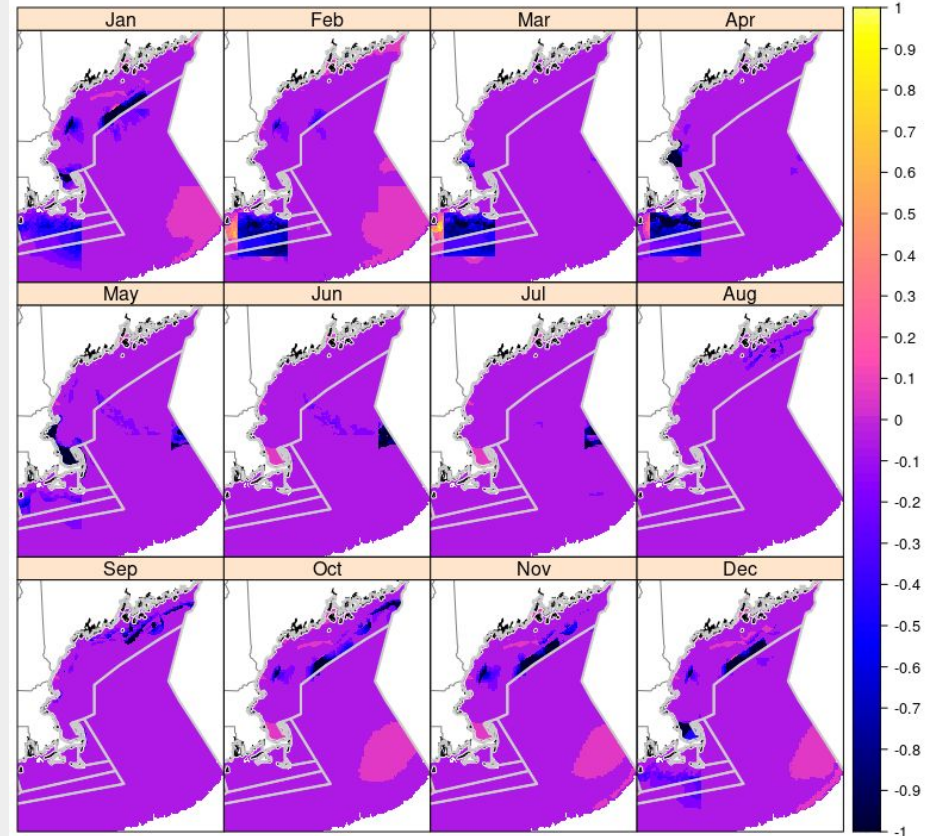
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Risk Changes: Phase 1 Updated Inputs, RWv12

Estimated Risk (log Scaled) from Updated Inputs and RW v12

Shown as a log-scale/in orders of magnitude
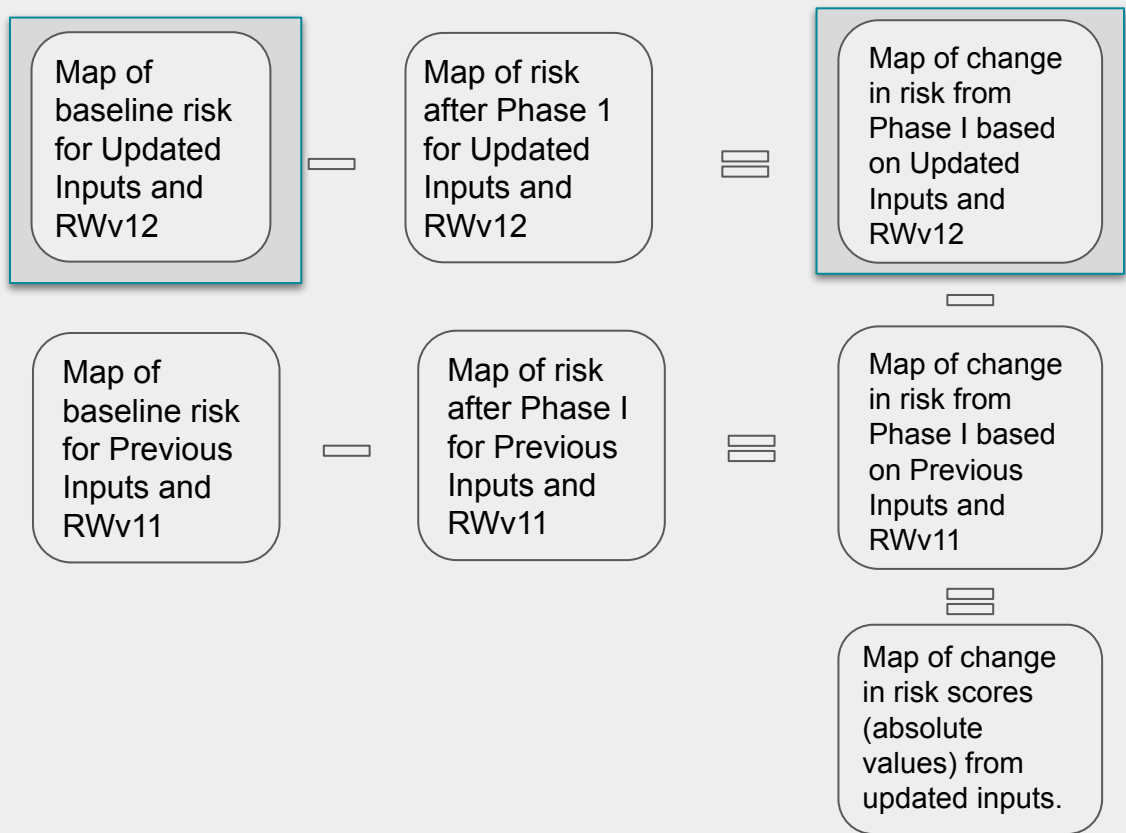
PRELIMINARY ANALYSES, SUBJECT TO REVISION

Change In Risk from Phase 1, Applied to Updated Inputs and RWv12

Light areas are where absolute **risk went up** as a result of Phase 1
Dark areas are where absolute **risk went down** as a result of Phase 1
Purple is **no change**
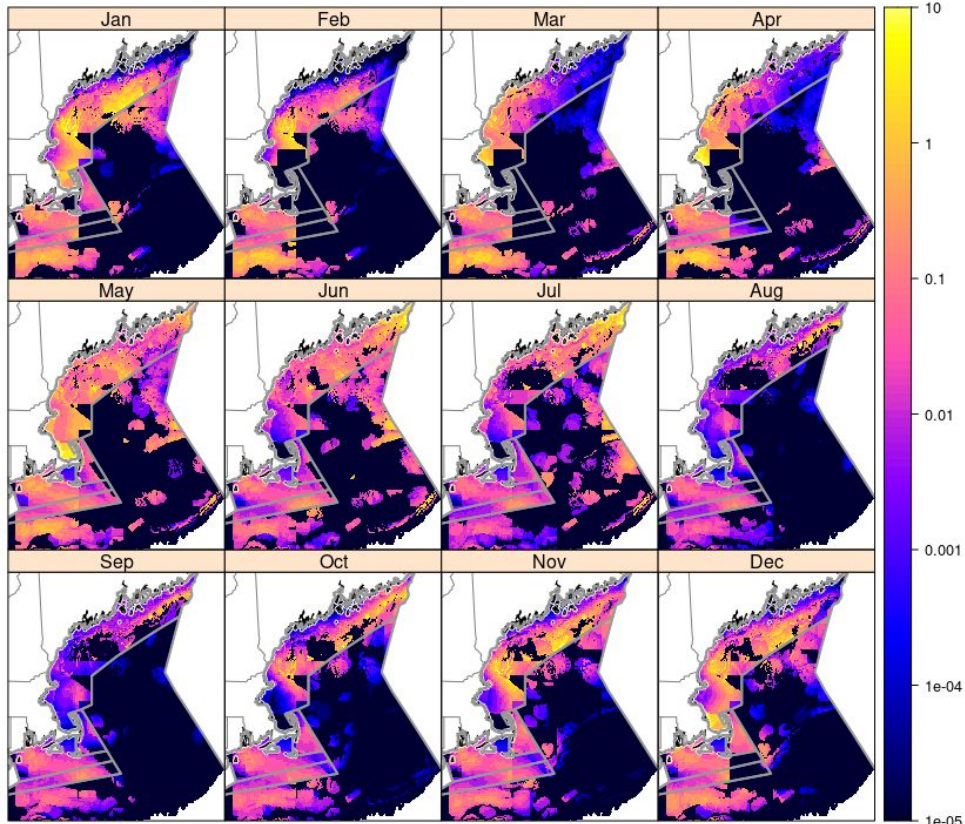
Mapping Change in Risk Between Versions

- Challenging to visualize how relative risk reduction changes with multiple underlying changes to the model.
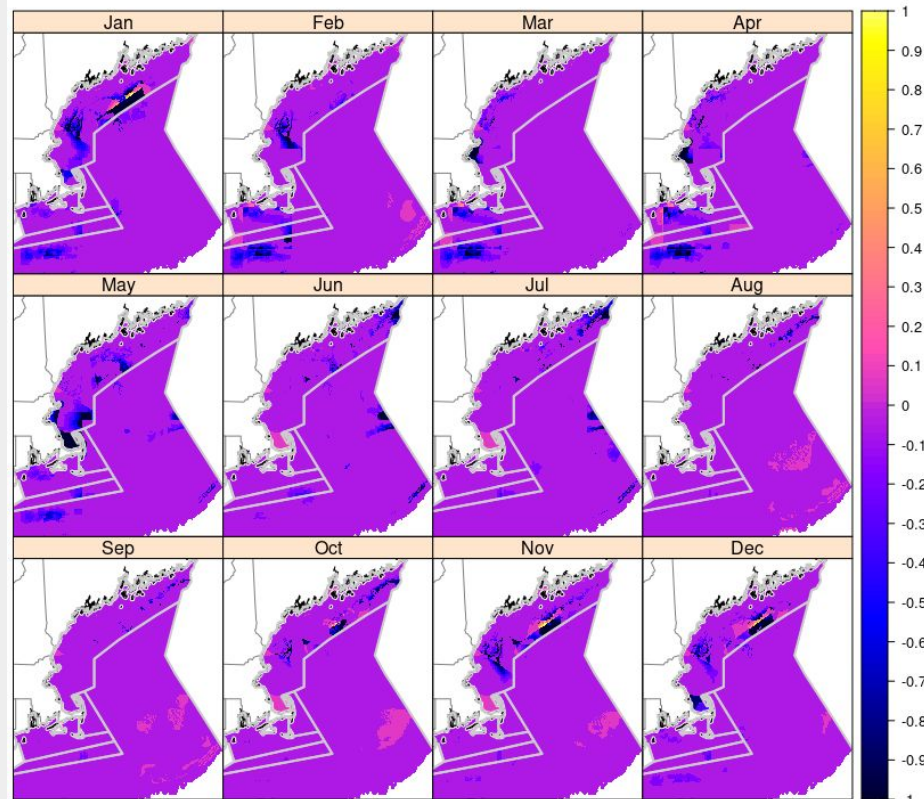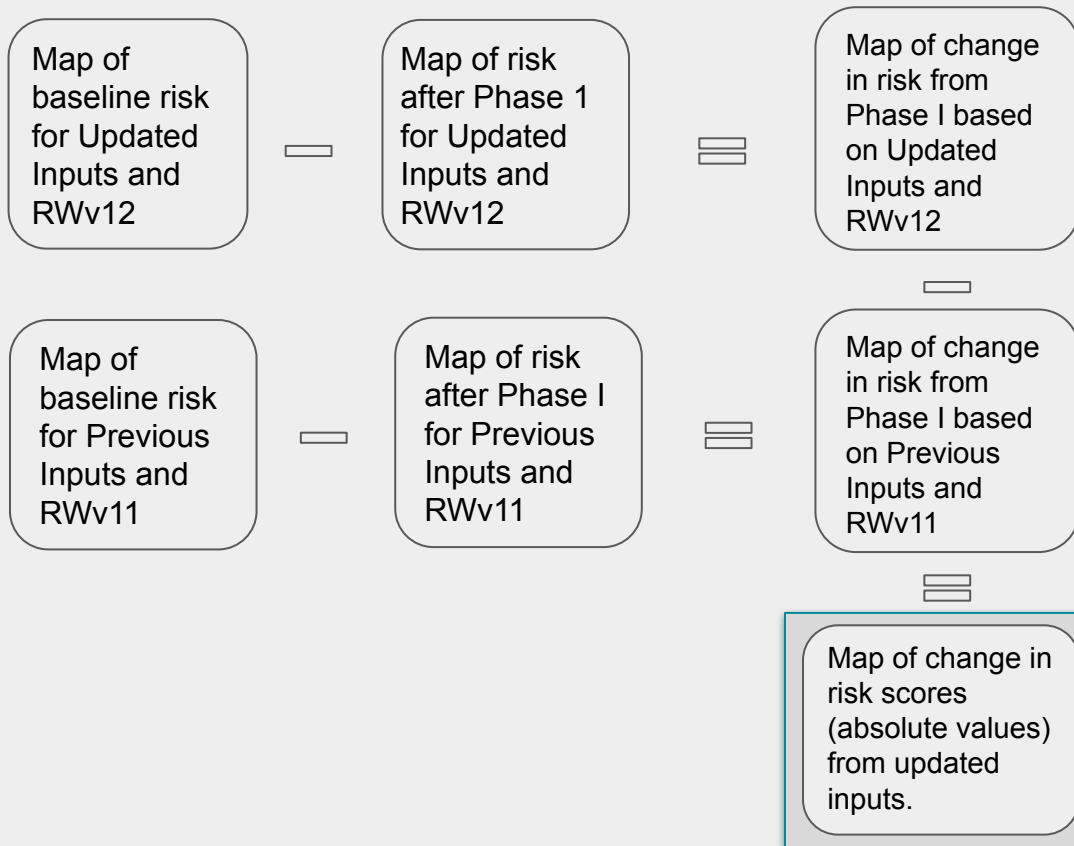- Workflow of calculating change in maps:

Map of baseline risk for Updated Inputs and RWv12 − Map of risk after Phase 1 for Updated Inputs and RWv12 = Map of change in risk from Phase I based on Updated Inputs and RWv12

Map of baseline risk for Previous Inputs and RWv11 − Map of risk after Phase I for Previous Inputs and RWv11 = Map of change in risk from Phase I based on Previous Inputs and RWv11

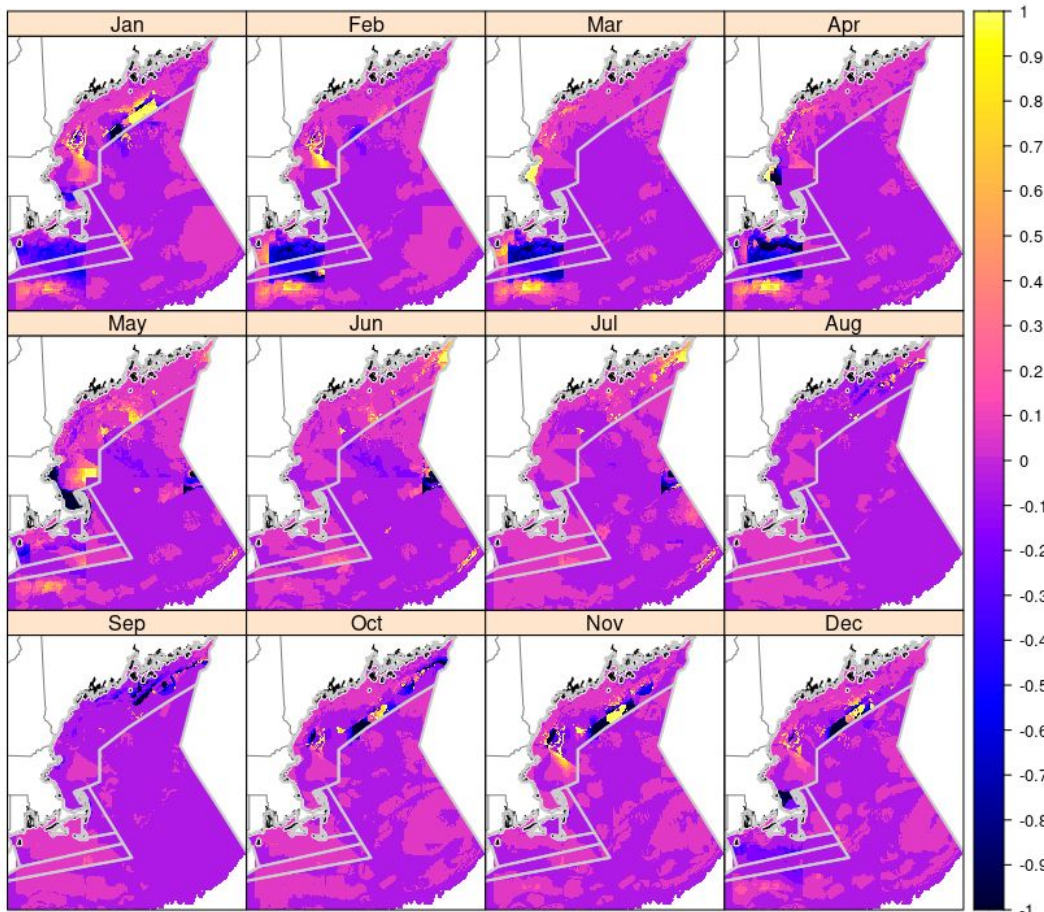Map of change in risk scores (absolute values) from updated inputs.

Ultimately, we get a **risk change map** between **model versions.**

This map is on the next slide

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How Risk Changed

Change In Risk Reduction from Updating Data and Whale Models

** Note: colors on this map mean different things from previous slides

- Map shows the difference in risk reduction with the **update in fishery data** and **whale density model.**

- Areas in **bright colors** are where we are getting **more total risk reduction** than before because:
  - Our mitigation measures are more effective than before <u>and/or</u>,
  - The underlying amount of risk went up and we're removing a similar proportion.

- Areas in **dark colors** are where we are getting **less total risk reduction** than before because:
  - Our mitigation measures are less effective than before <u>and/or</u>,
  - The underlying amount of risk went down and we're removing a similar proportion.
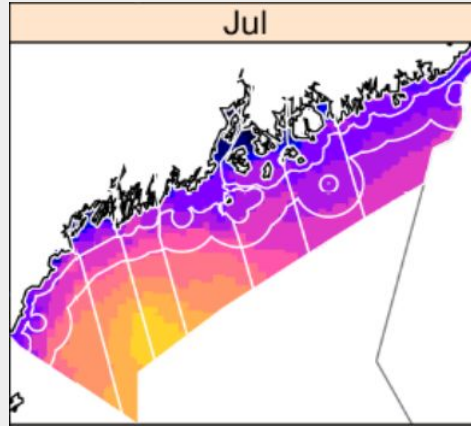
Risk Changes By Region: Maine LMA1

Month	Previous Risk	Previous Reduction	Updated Risk	Updated Reduction	Net Change In Risk
Jan	6,400	59%	8,281	53%	658
Feb	1,852	27%	2,512	25%	144
Mar	186	25%	1,358	22%	256
Apr	518	25%	1,454	23%	209
May	847	28%	3,046	32%	744
Jun	368	29%	5,432	24%	1,214
Jul	168	31%	7,399	26%	1,871
Aug	2,219	22%	1,628	28%	-43
Sep	7,370	24%	751	28%	-1,568
Oct	7,203	42%	3,408	46%	-1,472
Nov	8,415	53%	5,741	48%	-1,708
Dec	4,347	60%	3,378	47%	-1,050

- Risk change maps appear bright in Maine for June and July.
  - This is because the total amount of risk increased and Phase 1 measures are addressing a similar proportion.
  - This increase in total risk is largely driven by a estimated increase in whale densities around the Bay of Fundy

- Risk change maps appear darker in Maine for Sept-Dec.
  - This is largely because updating gear allocation methods tended to "move" gear away from deep basins where whale densities are higher.

PRELIMINARY ANALYSES, SUBJECT TO REVISION

NOAA FISHERIES

Risk Changes By Region: Maine LMA1

Month	Whale Presence	
	Previous	Updated
1	16.5	24.9
2	6.8	11.0
3	0.8	2.0
4	1.6	1.8
5	4.7	8.9
6	2.3	6.5
7	1.2	8.8
8	1.6	1.8
9	4.8	0.8
10	16.0	12.8
11	23.8	29.2
12	12.3	12.3
Total	92.1	120.8

RW v11 Model

Jul

RW v12 Model

Jul

Updated whale model indicates a proportionally large increase in whale presence for July, which seems to be driving the July risk map for Maine LMA1.

Updated Risk Map

Jul

PRELIMINARY ANALYSES, SUBJECT TO REVISION

NOAA FISHERIES

Risk Changes By Region: Maine LMA1

Month	Previous Risk	Previous Reduction	Updated Risk	Updated Reduction	Net Change In Risk
Jan	6,400	59%	8,281	53%	658
Feb	1,852	27%	2,512	25%	144
Mar	186	25%	1,358	22%	256
Apr	518	25%	1,454	23%	209
May	847	28%	3,046	32%	744
Jun	368	29%	5,432	24%	1,214
Jul	168	31%	7,399	26%	1,871
Aug	2,219	22%	1,628	28%	-43
Sep	7,370	24%	751	28%	-1,568
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PRELIMINARY ANALYSES, SUBJECT TO REVISION

NOAA FISHERIES
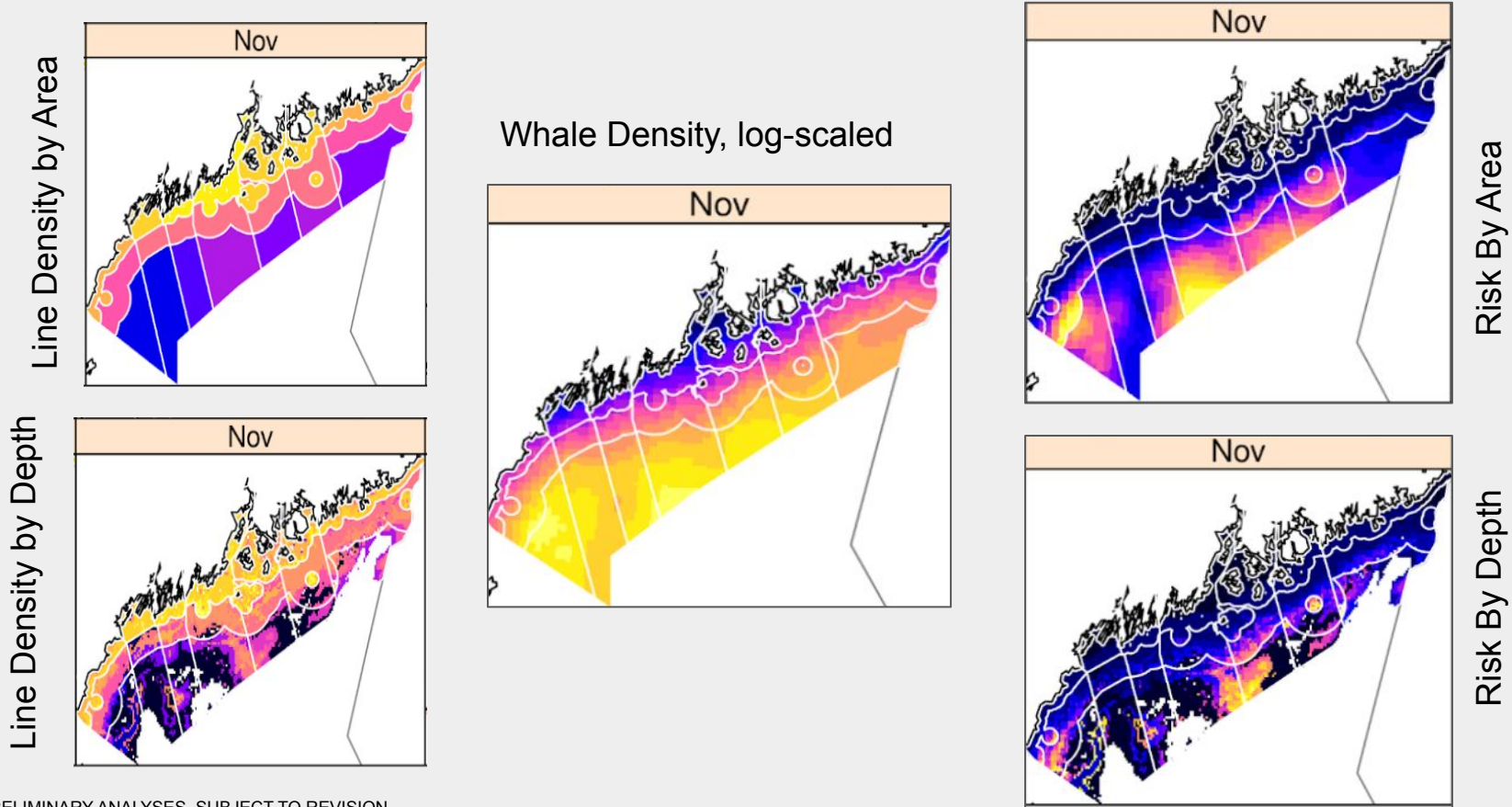
Risk Changes By Region: Maine LMA1
Effect of Allocation By Depth

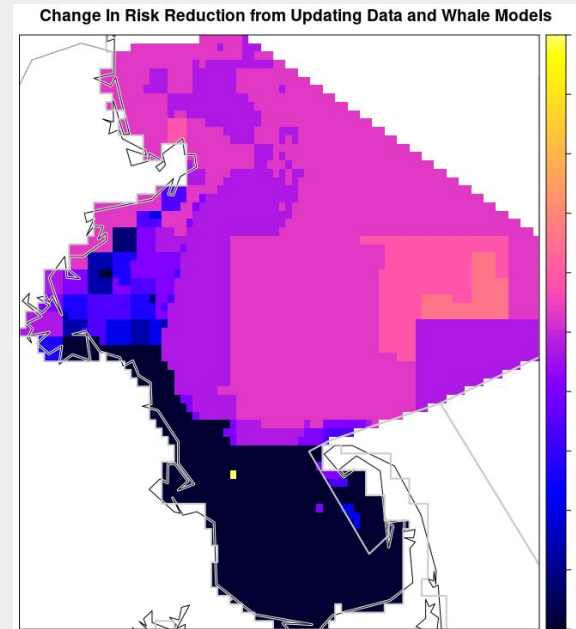Whale Density, log-scaled

PRELIMINARY ANALYSES, SUBJECT TO REVISION

Risk Changes By Region: Mass LMA1

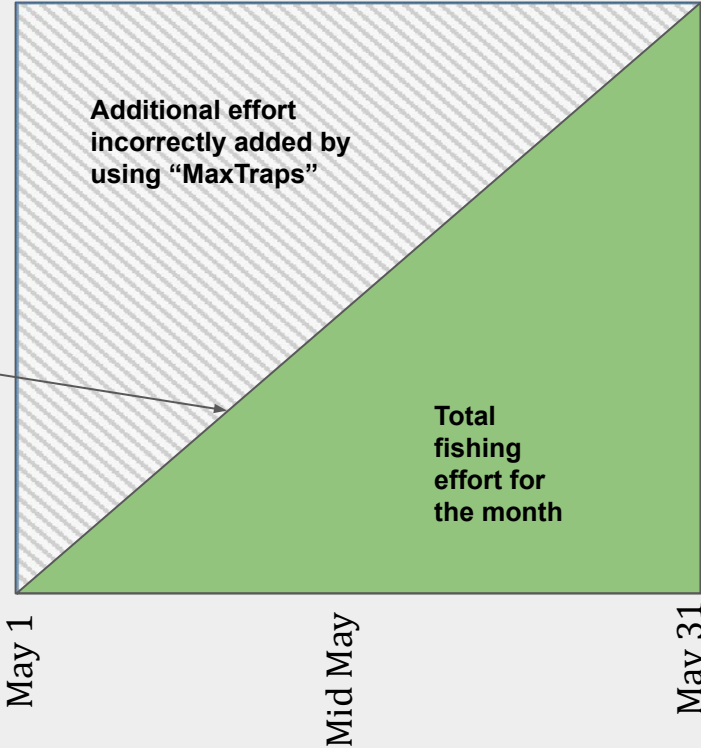| Month	Previous Risk	Previous Reduction	Updated Risk	Updated Reduction	Net Change In Risk
Jan	2,880	23%	2,362	25%	-83
Feb	300	21%	918	32%	231
Mar	1,056	67%	1,890	77%	752
Apr	9,501	72%	6,259	82%	-1,712
May	32,242	98%	8,646	97%	-23,075
Jun	168	18%	62	31%	-12
Jul	47	16%	92	31%	22
Aug	53	18%	28	33%	-1
Sep	338	21%	18	31%	-66
Oct	79	11%	81	33%	18
Nov	346	10%	736	32%	198
Dec	6,166	23%	2,205	23%	-889

Large discrepancy in initial risk in May between models.

Can be traced back to waters from Massachusetts Bay, where the vast majority of risk occurs in May.

Change In Risk Reduction from Updating Data and Whale Models

PRELIMINARY ANALYSES, SUBJECT TO REVISION

Why Updating the Fishery Inputs Changed Risk Reduction in Mass LMA1

800 Traps Fishing

Additional effort incorrectly added by using "MaxTraps"

Fisherman sets out gear over the course of a month

Total fishing effort for the month

0 Traps Fishing

May 1

Mid May

May 31

- Previous methods used the MaxTraps reported by fishers to estimate fishing effort by month.
- The Updated method uses total traps hauled and soak times for each trips, summed across a month, to estimate fishing effort.
- Under stable fishing conditions, the two methods should give similar results.
- However, the MaxTraps Fished becomes a problem in months at the beginning and end of the fishing season, when fishermen are deploying or bringing in gear for the year.
- This occurred with Massachusetts in May, where effort was overestimated in a month that had a high whale presence.
- The result overestimated the risk present and awarded a large risk reduction when the area was closed by management action.

NOAA FISHERIES

Risk Changes By Region: Mass LMA1

Month	Previous Risk	Previous Reduction	Updated Risk	Updated Reduction	Net Change In Risk
Jan	2,880	23%	2,362	25%	-83
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Dec	6,166	23%	2,205	23%	-889

Large discrepancy in initial risk in May between models.

Can be traced back to Massachusetts waters from Cape Cod Bay and North, where the vast majority of risk occurs in this month.

So this change is the result of updating the methods of estimating fishing effort that removed a previous bias.

Unfortunately, because this happened in a location that risk was largely addressed through a closure, we get a decrease in our overall risk reduction percentage.

PRELIMINARY ANALYSES, SUBJECT TO REVISION

NOAA FISHERIES

Risk Changes By Region: LMA2, 2-3 Overlap and OCC

Month	Previous Risk	Previous Reduction	Updated Risk	Updated Reduction	Net Change In Risk
Jan	4,088	46%	875	40%	-1,518
Feb	3,321	71%	702	69%	-1,880
Mar	3,216	67%	752	63%	-1,695
Apr	4,832	62%	879	62%	-2,459
May	2,380	56%	1,111	54%	-732
Jun	271	38%	519	45%	132
Jul	85	38%	369	44%	131
Aug	191	25%	240	44%	59
Sep	355	22%	294	46%	56
Oct	169	35%	328	39%	69
Nov	661	36%	492	35%	-62
Dec	2,202	44%	691	36%	-726

- Risk change maps are largely dark for this area for Jan - April, with a net decrease in risk removal.

  - This is primarily because of the update in the whale model that tended to better aggregate whales on Nantucket Shoals rather than spread them across the continental shelf in LMA2.

  - Also some contribution of changing methods of distributing fishing effort.
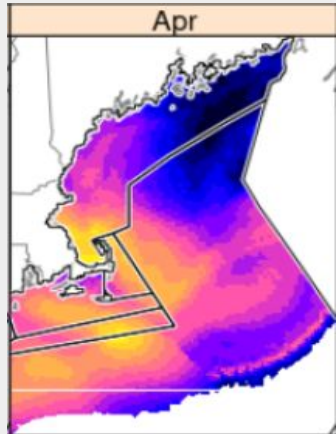
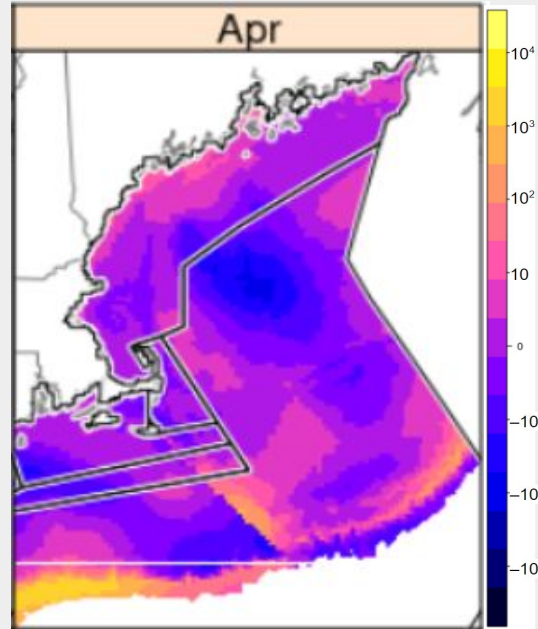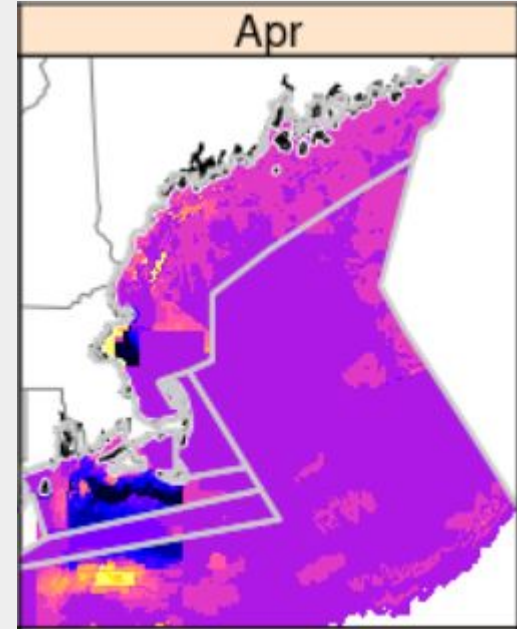# Risk Changes By Region: LMA2, 2-3 Overlap and OCC
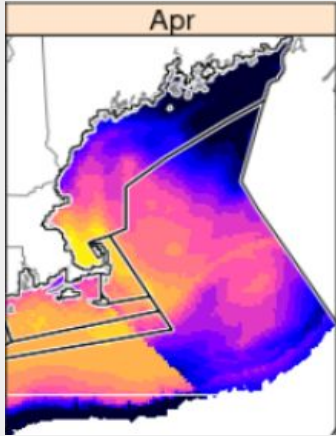
Change in Whale Density

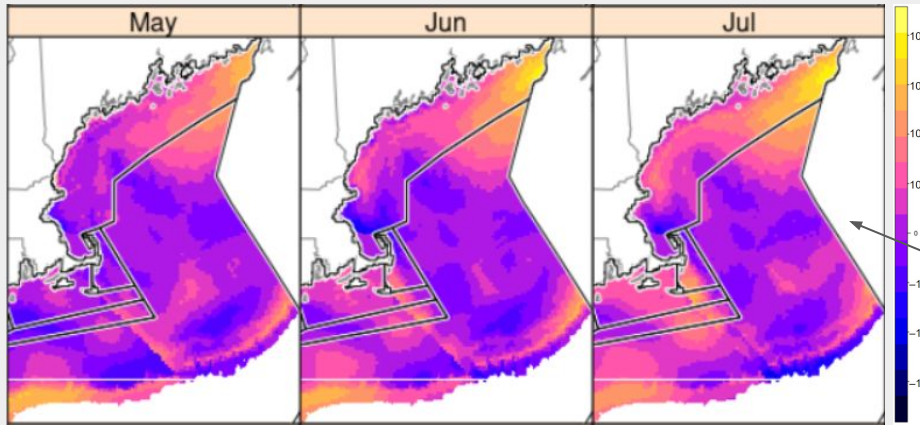Change in Risk

PRELIMINARY ANALYSES, SUBJECT TO REVISION

Risk Changes By Region: LMA3

Month	Previous Risk	Previous Reduction	Updated Risk	Updated Reduction	Net Change In Risk
Jan	2,849	45%	1,846	45%	-457
Feb	2,545	53%	2,170	45%	-381
Mar	2,141	51%	2,122	42%	-203
Apr	1,994	54%	2,217	44%	-94
May	2,845	50%	1,785	47%	-583
Jun	3,854	53%	1,901	48%	-1,135
Jul	2,331	53%	1,442	48%	-537
Aug	49	46%	90	45%	17
Sep	80	45%	148	44%	29
Oct	204	56%	275	47%	14
Nov	520	50%	487	49%	-25
Dec	1,211	46%	800	46%	-189

- Risk changes for LMA3 occur primarily in May - June where total risk removal is estimated to have decreased.

  - It is primarily driven by a estimated decline in whale abundance north of Georges Bank, resulting in less total risk.
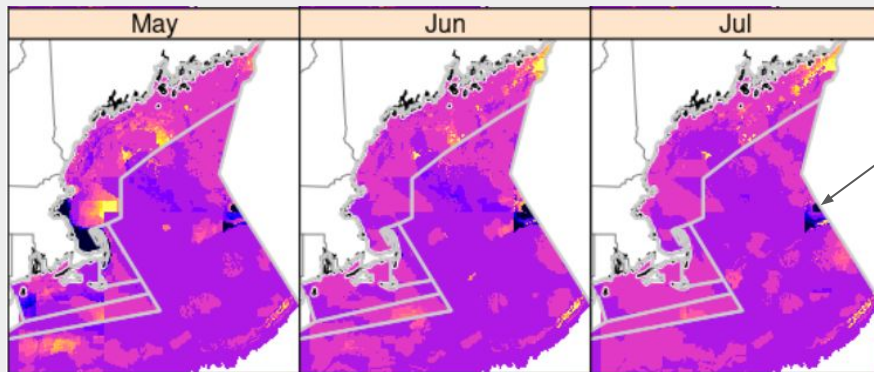
PRELIMINARY ANALYSES, SUBJECT TO REVISION

NOAA FISHERIES

Risk Changes By Region: LMA3

Changes in Whale Density

Changes in Risk

Decreasing Risk in LMA3 corresponds roughly with decreasing estimated whale abundance.

PRELIMINARY ANALYSES, SUBJECT TO REVISION

Concluding Statements

- While the change in risk reduction estimate with the model update was not anticipated, it should not be too surprising given the extent of the changes to the model inputs.
  - With the production of a easily-reproducible workflow, it should be easier to make more timely updates with smaller, incremental changes in the future.

- While subtle changes are difficult to track back to their original causes, the large changes observed were generally attributable to the common drivers of the model.

- Changes to the fishery inputs and updated methodology appear to have made the model more realistic in some cases and the process of averaging across multiple years of data should help stabilize gear distribution estimates.

Coast-wide Risk Maps

Pre-Phase 1 risk
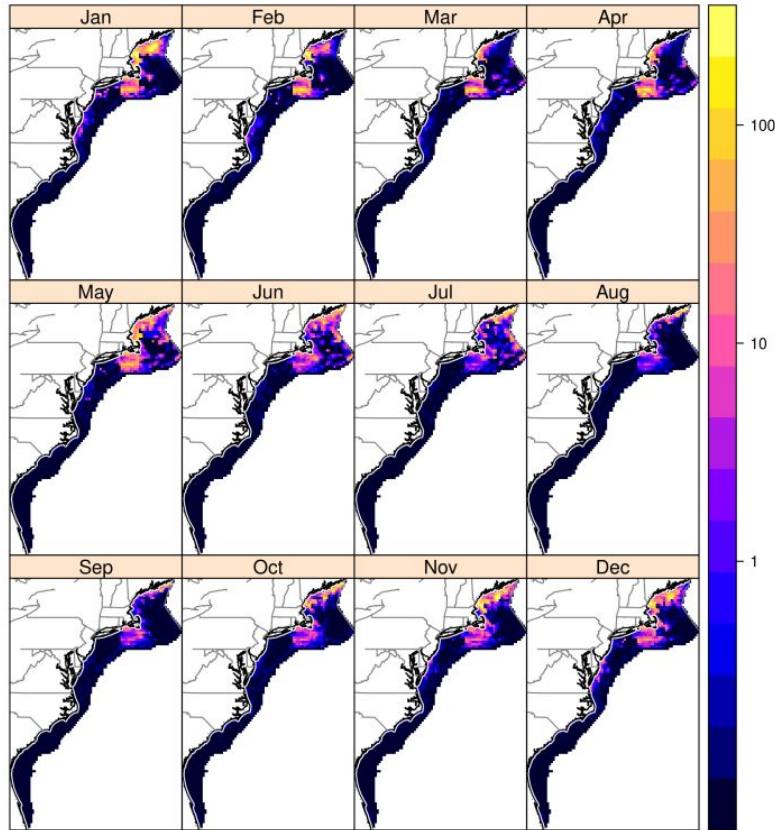
Post-Phase 1 remaining risk
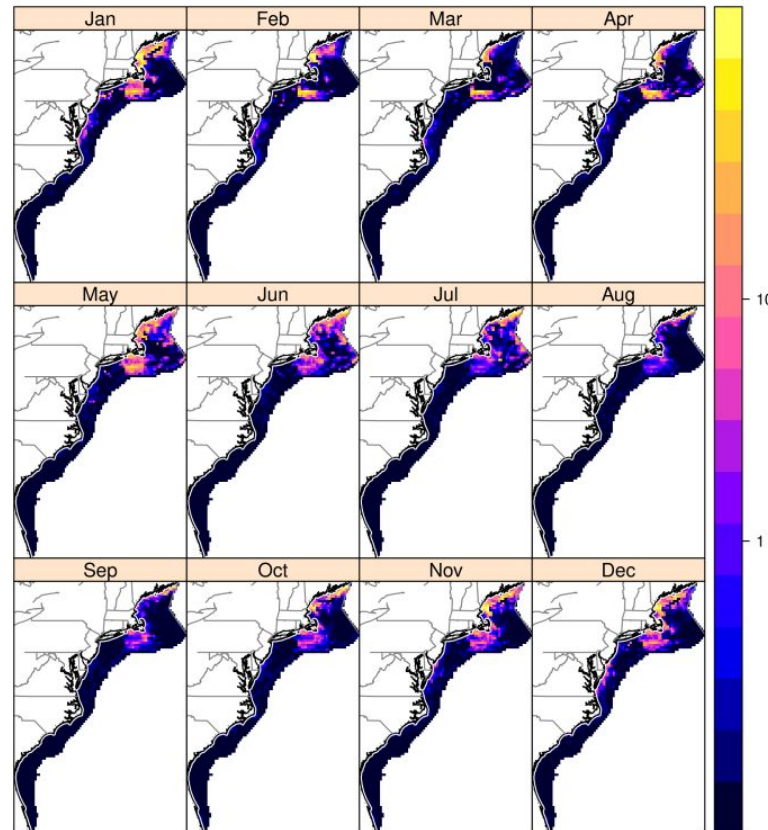
-Shown as a log-scale/ in orders of magnitude

- Note- scales are not the same.

- We will provide maps of the same scale during next week's webinar.

PRELIMINARY ANALYSES, SUBJECT TO REVISION

Questions
Use the 'Questions' box to get in line

Management Implications

More coastwide risk remaining than anticipated, see webinar on August 25
- ○ Phase 1 fisheries risk reduced by ~48 percent
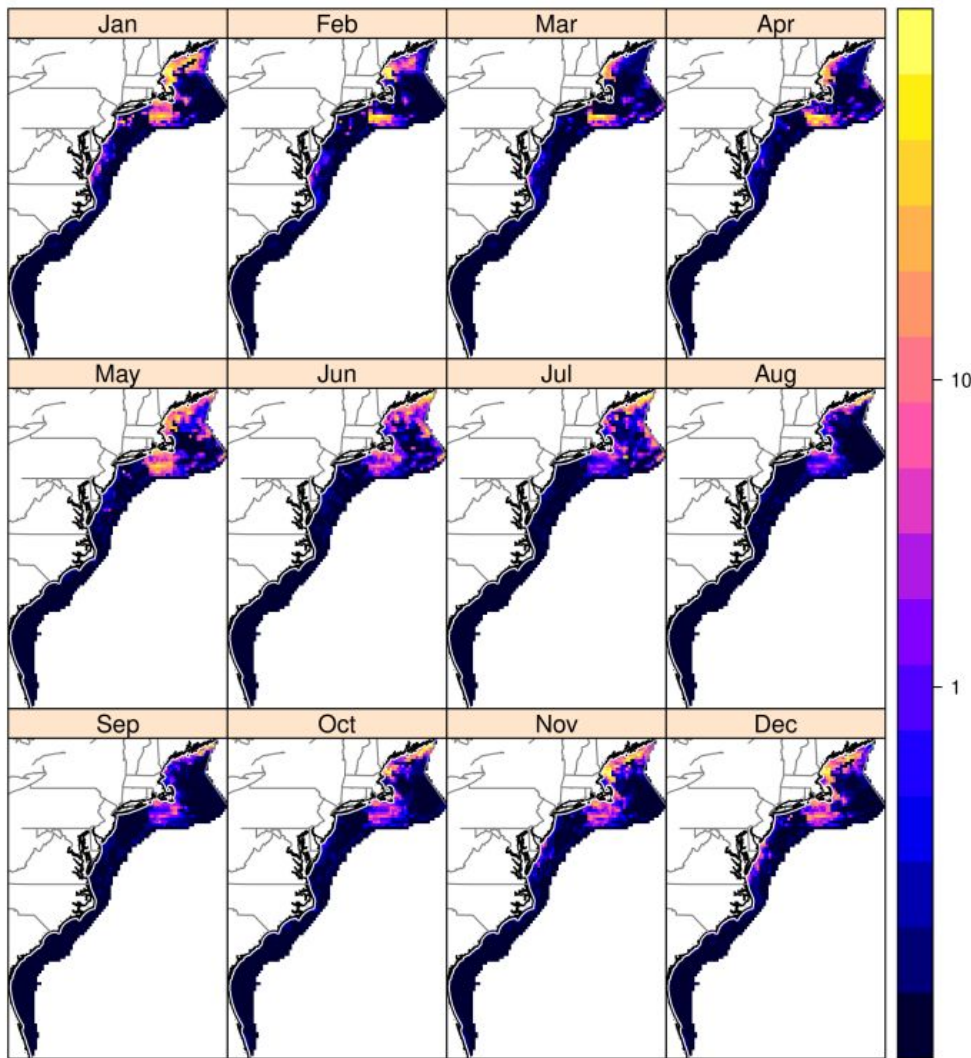- ○ Total US fisheries risk reduced by ~45 percent

Phase 2 idea "package" analyses near completion for September 8 webinar

Anticipated near term action:
- ○ Scoping Notice of Intent regarding additional risk reduction development for Northeast lobster and Jonah crab anticipated in September

Florida Fish and Wildlife Conservation Commission, taken January 1, 2000

Post-Phase 1 remaining risk

Litigation Update

***Center for Biological Diversity, et al. v. Raimondo, et al.*, Civ. No. 18-112 (D.D.C.)**

July 8, 2022 decision:
- ➤ 2021 rulemaking violated the MMPA for failing to develop measures that would reduce fisheries mortalities and serious injuries below the Potential Biological Removal Level within 6 months of implementation

Remedy Phase Schedule:
- ➤ August 12, 2022: Plaintiffs' remedy brief was submitted
- ➤ September 19, 2022: NOAA's remedy brief due
- ➤ October 7, 2022: Intervenor's remedy brief due
- ➤ October 21, 2022: Plaintiffs' reply brief due
- ➤ Decision on remedy to follow (date TBD)

Upcoming ALWTRT Informational Webinars

Thursday, August 25, 2:30 pm [Coastwide Baseline DST Fishery Updates](#)
- A presentation of the stable Phase 2 coastwide fishery layers that were refined based on input from the ALWTRT and state partners since May 2022

Tentative: **Thursday, September 1, 2:30 pm: Southeast Caucus Discussion** (*email to follow to those participants from the May 2022 Southeast Caucus*)
- Similar to the within-caucus groups from the May meeting, the Southeast Caucus will meet to start considering possible collections of measures to model in the DST given the comprehensive changes in the new Southeast fishery layers and data presented on August 25.

Thursday, September 8, 2:30 pm: [Updated DST Analyses from May 2022 Measure Packages](#)
- A look at risk reduction achieved by packages developed by the 4 cross-caucus working groups at our May 2022 meeting

Recordings of past webinars on Decision Support Tool updates, overview of current coastwide regulations, and North Atlantic Right Whale population status are available on Atlantic Large Whale Take Reduction Team webpage under "Team Meetings." Follow the registration link of the under the [recent team meeting](#) and the recording will begin.

Past ALWTRT Informational Webinars

These informational webinars function as extensions of our meeting materials, and they include important information on the Decision Support Tool, current fishery regulations relevant to Phase 2, and right whale population and mortality estimates. To watch these recordings, follow and fill out the registration links below.

- Update on Large Whale Population and Mortality Estimates (Nov 2021) Link
- Decision Support Tool Update (Mar 2022) Link
- Decision Support Tool Model Run Demonstration (Apr 2022) Link
- Overview of current coastwide regulations relevant to Phase 2 (Mar 2022) Link
- You may also find webinars from our Spring 2021 Informational Webinar Series, including Entanglement Summaries, Calving Updates, and Right Whale Monitoring, here