Scallop AP & Committee

Jonathon Peros & Sam Asci

December 2 & 3, 2021
Webinar

New England
Fishery Management Council

Framework 34

- **Today's meeting:**
  - Part I: Review options and draft impacts of FW34
  - Part II: Select preferred alternatives for FW34 (Sections 4.1 – 4.5)

- **Outlook:**
  - "Decision Draft" submission of FW34 in December.
  - Delay in Final Action by adding new measures that have not been analyzed will delay the Framework.
  - Implementation with Amendment 21 expected for April 1, 2022

FW 34 Overview – 5 actions

- 4.1 – OFL and ABC for 2022/2023
- 4.2 – Northern Gulf of Maine Management and TAL
- 4.3 – Specifications for FY 2022 and FY 2023 (default)
- 4.4 – LAGC IFQ fishing in Access Areas
- 4.5 – Where RSA compensation fishing can occur

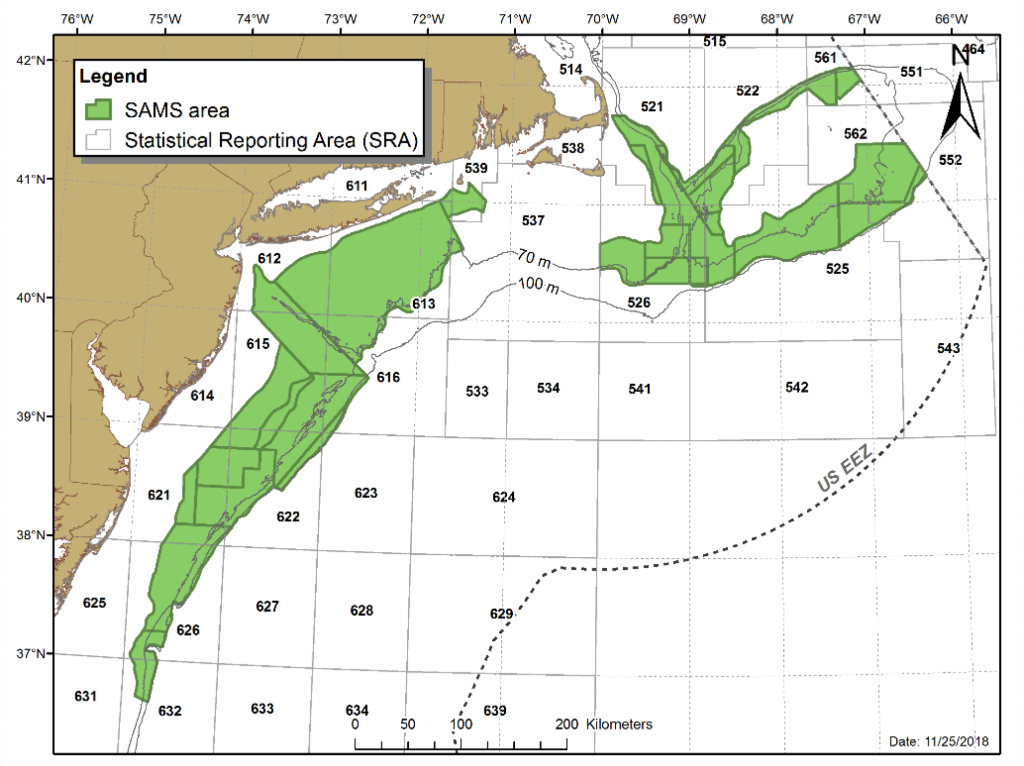
Framework 34: Purpose and Need

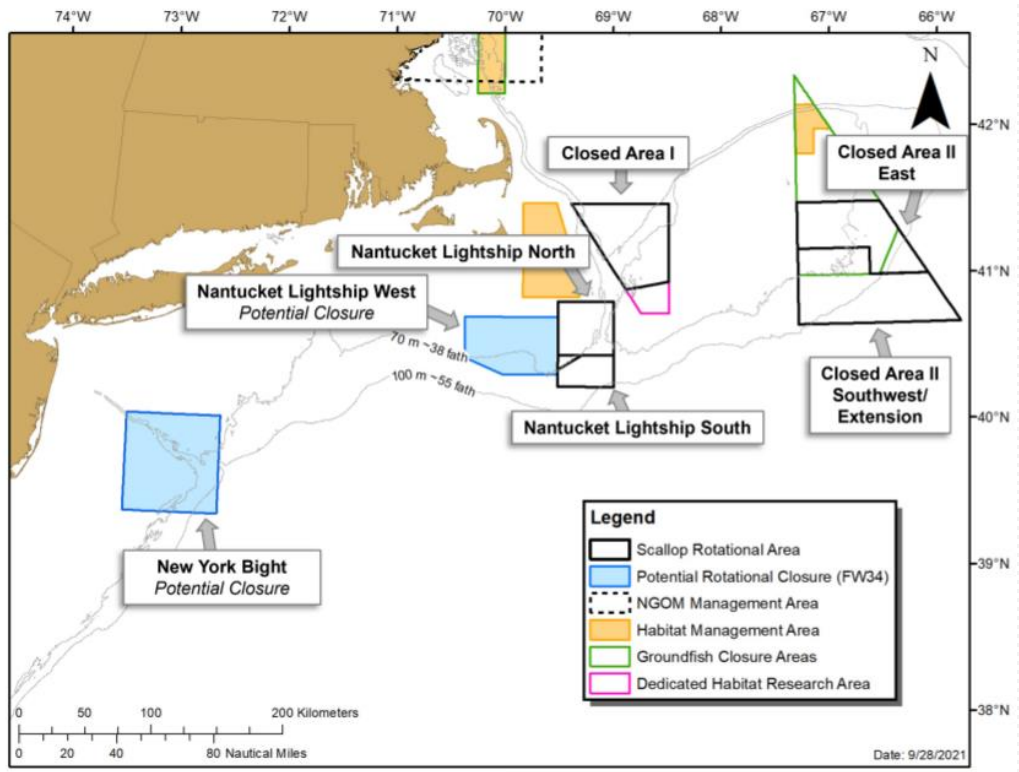
- **Need:**
  - Prevent overfishing
  - Improve yield per recruit
  - Manage total removals from NGOM
- **Purpose:**
  - Set Specifications, including Annual Projected Landings
  - Set landings limits from NGOM based on biomass

High Density in Nantucket Lightship.
Photo Credit: SMAST

Proposed FY 2022 ACL (F=0.45) 56.7 million pounds

"Spatial Management" FY 2022 Possible Landings 31.6 – 36 million pounds





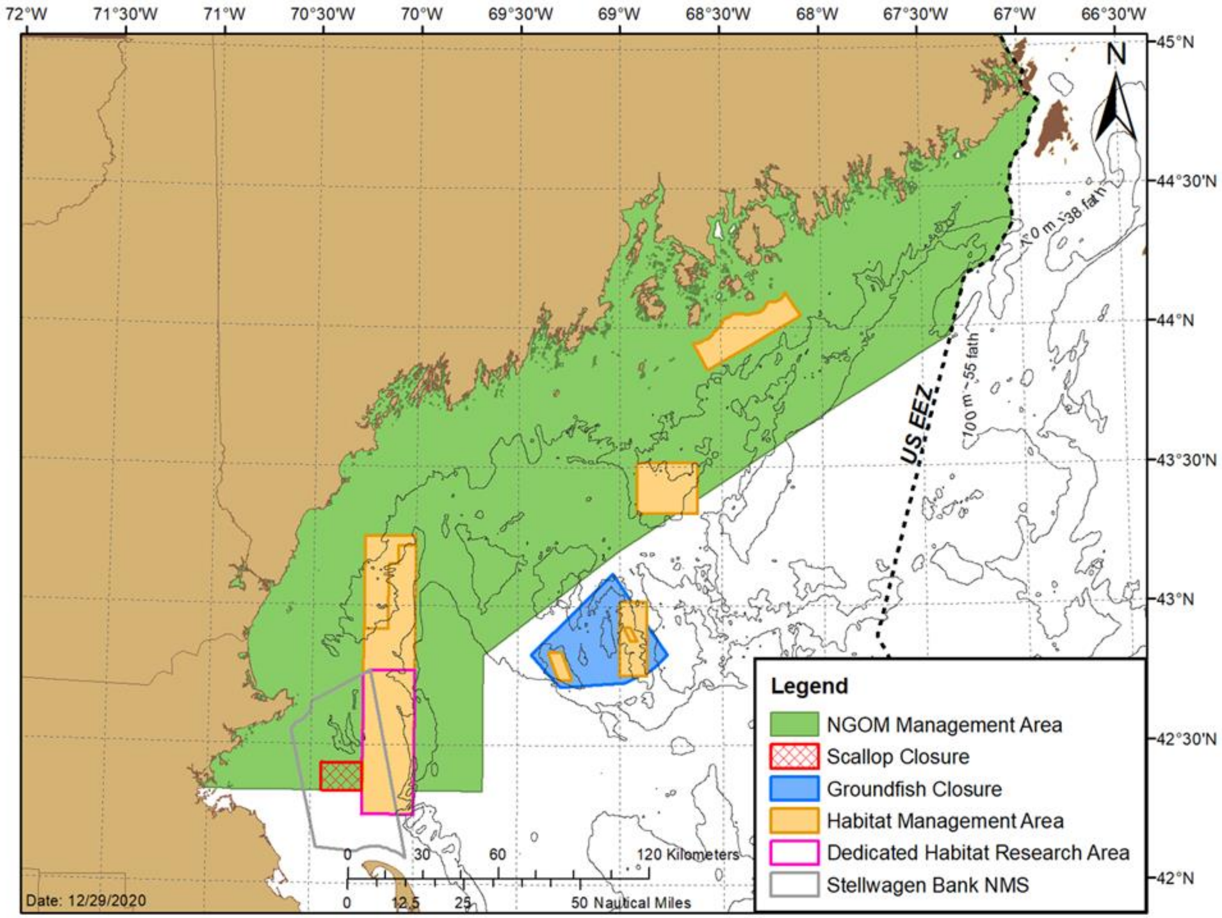
Section 4.1 – OFL and ABC

- The Atlantic sea scallop resource is considered healthy; the stock is not overfished, and overfishing is not occurring.
- Steady decreases in OFL and ABC as the exceptional 2012 and 2013 YCs were fished and experienced M. Below average recruitment in the Mid since 2013, some average recruitment on GB in recent period.
- Estimates now include biomass from NGOM/GOM areas.

Section 4.1	**OFL and ABC**		PDT Pref.	AP Pref.	CTE Pref.
4.1.1	Alt. 1	No Action for OFL and ABC			
4.1.2	**Alt. 2**	**Updated OFL and ABC for FY2022 and FY2023 (default)**	**		

Section 4.2 – NGOM Management and TAL

- **NEW** management approach recommended by the Council in Amendment 21.
  - New TAL sharing arrangement
  - Set-asides for observers and research
- Alt 2: Based on projected exploitable biomass on Stellwagen Bank, which would reopen after a two-year closure to improve YPR.
- Default measures based on 75% of 2022 NGOM Set-Aside.

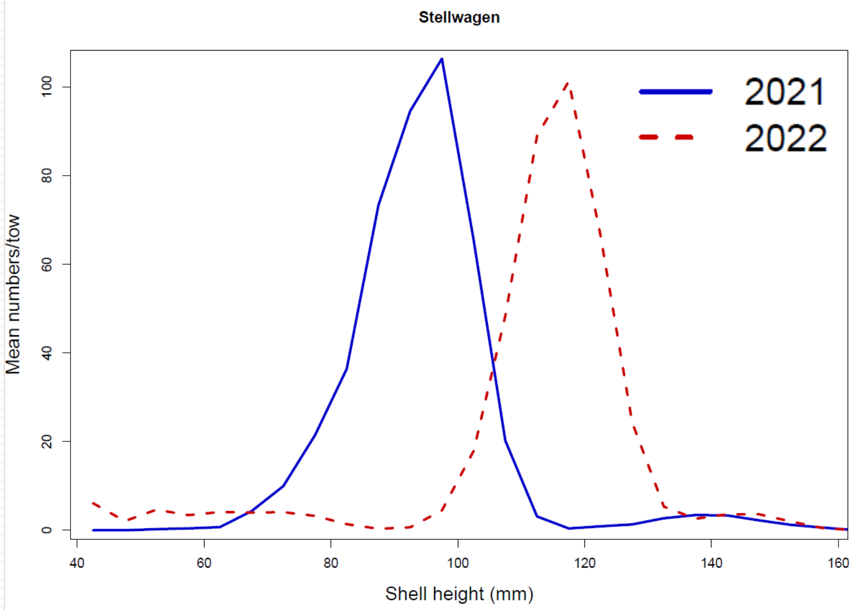


FY 2021 Management and FY 2022 Default

NGOM measures

Section 4.2 – Action 2 – Northern Gulf of Maine TAC Setting *If Alternative 2 is selected, choose one option in Section 4.2.2.1*		Preferred by		
		PDT	AP	CTE
Alternative 1 (Sec. 4.2.1)	No Action *FW33 Default TAC of 74,000 pounds in FY2022. LAGC share 72,000. Stellwagen Bank remains closed. No TAC for FY2023.*			
Alternative 2 (Sec. 4.2.2)	Northern Gulf of Maine Management and TAL Setting *Re-open Stellwagen Bank, set TAL using A21 approach*	X		
Alternative 2 Section 4.2.2.1 – Select Target F rate for NGOM TAL				
Option 1 *(4.2.2.1.1)*	*Set NGOM TAL at F=0.15* TAL=559,974 pounds, NGOM Set-Aside 519,895 pounds 2023 Default: 389,921 pounds	X		
Option 2 *(4.2.2.1.2)*	*Set NGOM TAL at F=0.18* TAL=661,387 pounds, NGOM Set-Aside 621,307 pounds 2023 Default: 465,980 pounds			
Option 3 *(4.2.2.1.3)*	*Set NGOM TAL at F=0.20* TAL=727,525 pounds, NGOM Set-Aside 687,446 pounds 2023 Default: 515,584 pounds			
Decisions/Questions/Information to Consider				
The PDT notes that growth assumptions for the Stellwagen Bank area of the NGOM are uncertain, and could be overestimated. The are where most of the fishing is expected to occur has been closed for two years and holds high densities of scallops. Recent experience has shown higher levels of mortality in these situations, such as in the NLS-West. Scallops in the area are relatively young, and still have growth potential. PDT recommends using conservative F rate in the first year of implementing a new management regime for this area, and use data from FY2022 to inform management for FY2023. The first year of a re-opening should use a low F, and plan to ramp up F in the following years. Stellwagen is the most productive area in the NGOM, and there are no other strong year classes in the management unit.				

- Overall NGOM TAL ranged from ~560k to ~728k pounds using F=0.15 – F=0.2.
- First year of new management approach for the area, PDT recommends conservative harvest.



NGOM Economic and Social Impacts

Data and Values	FY2022		
	Alternative 2		
	Option 1	Option 2	Option 3
	(F=0.15)	(F=0.18)	(F=0.20)
LAGC share - scallop lbs.	519,895	621,307	687,446
· Estimated LAGC revenue	$6,683,250	$7,986,901	$8,837,118
· DAS (trips) @ 200lbs trip	2,599	3,107	3,437

- Re-opening of Stellwagen expected to lead to higher overall landings from a large cohort in this area. This will increase revenue and economic benefits from the management area.
  - Revenue estimates range from ~$6.7 to ~$8.8 million dollars ($12.86 average price). Best used to make comparisons between options.
- Positive social impacts of Alternative 2, and compared to No Action.

Specification Alternatives

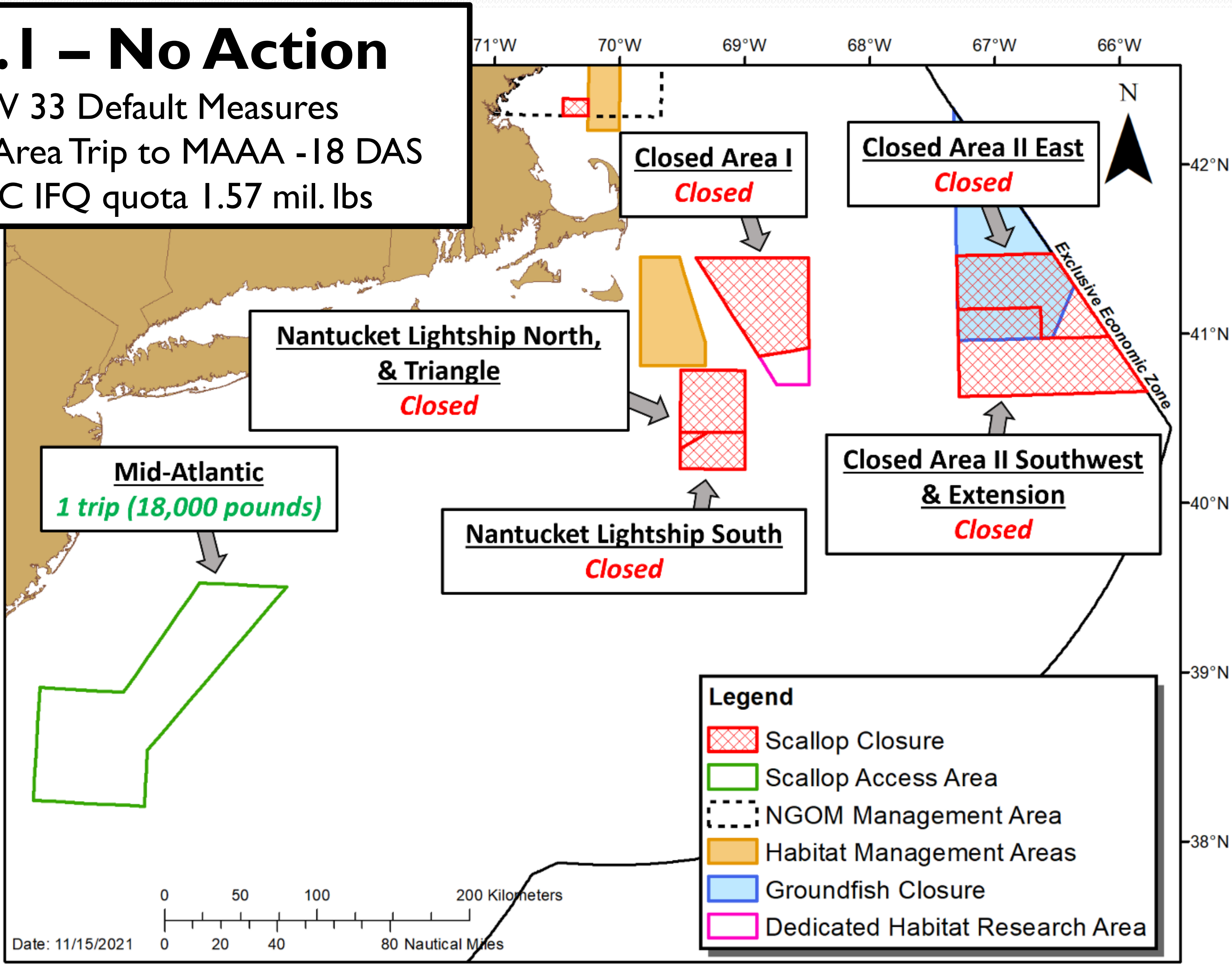
Document 3a, p.5

- ***5 Total Options developed in the action, including No Action.***
  - ***2 Spatial Management Options – HCS closed vs. open***
  - ***2 DAS options (20 or 26) fully analyzed, plus sensitivity analyses for 22 and 24 DAS for both alternatives.***
- Options in this action would result in allocations for 2022 that range between 31.6 – 36 million pounds.
- Access area trips in two regions: Closed Area II, NLS-South. Lower trip limits proposed (15,000 pounds).
- LAGC IFQ and RSA compensation fishing in CAI.

Section	Overall F	Open Area F/(DAS)	Annual Projected Landings (APL)	APL w/ set-asides removed	LA share (94.5%)	LAGC IFQ share (5.5%)
4.3.1	0.07	0.28 (18)	19,940,812	17,319,516	16,366,942	952,573
4.3.2.1	0.23	0.34 (20)	31,667,199	29,045,903	27,448,379	1,597,525
4.3.2 22 DAS	0.23	0.39	33,150,910	30,529,615	28,850,486	1,679,129
4.3.2 24 DAS	0.24	0.42	34,605,961	31,984,665	30,225,509	1,759,157
4.3.2.2	0.24	0.47 (26)	36,030,147	33,408,852	31,571,365	1,837,487
4.3.3.1	0.23	0.33 (20)	31,649,562	29,028,267	27,431,712	1,596,555
4.3.3 22 DAS	0.23	0.37	33,142,092	30,520,796	28,842,152	1,678,644
4.3.3 24 DAS	0.24	0.39	34,039,373	31,418,077	29,690,083	1,727,994
4.3.3.2	0.25	0.45 (26)	36,043,375	33,422,079	31,583,865	1,838,214
4.3.4	0.27	0.3	33,686,634	31,065,338	29,356,744	1,708,594

4.3.1 – No Action

FW 33 Default Measures
Access Area Trip to MAAA -18 DAS
LAGC IFQ quota 1.57 mil. lbs



4.3.2 – Alternative 2

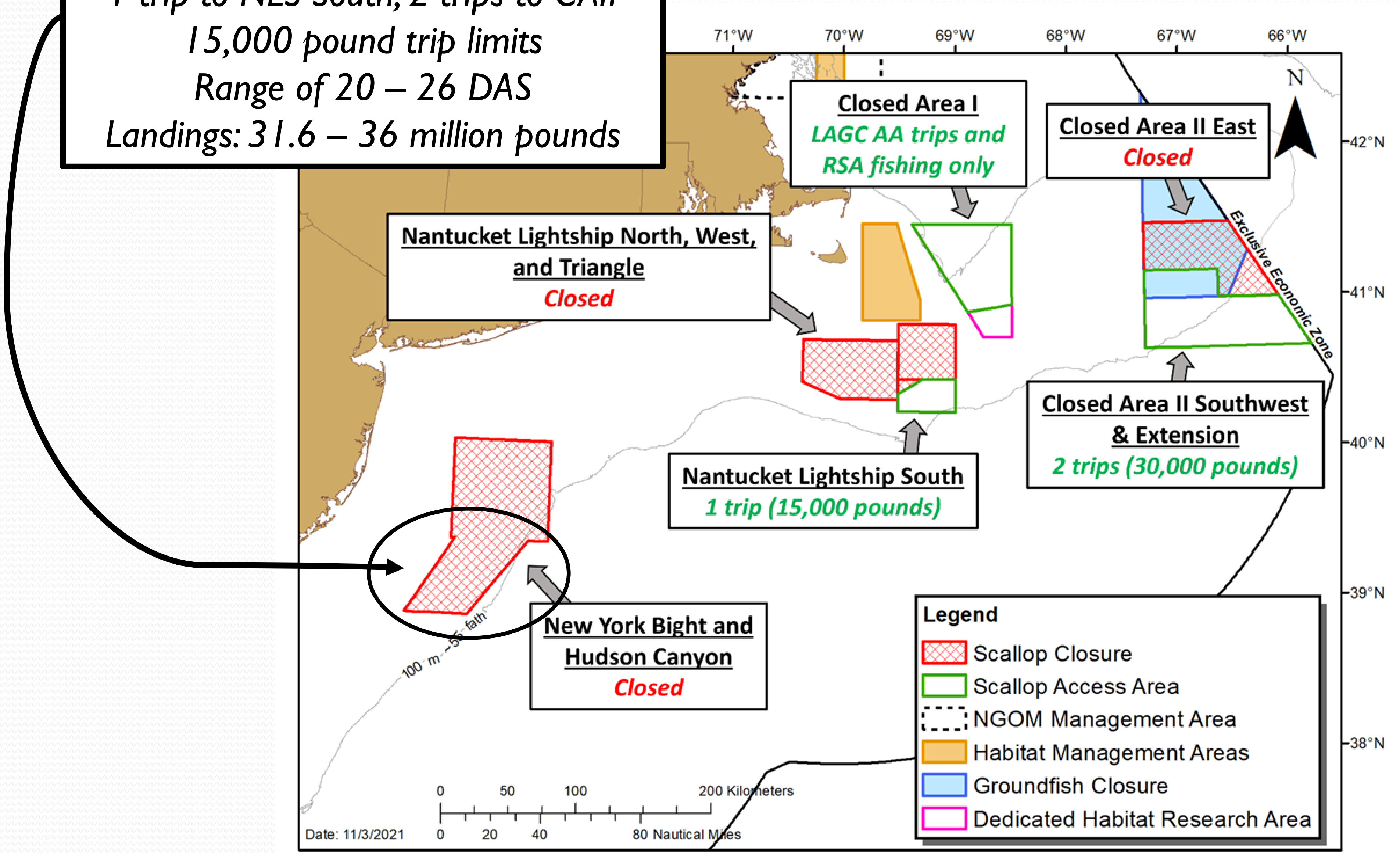
NYB and HCS Closed

1 trip to NLS-South, 2 trips to CAII

15,000 pound trip limits

Range of 20 – 26 DAS

Landings: 31.6 – 36 million pounds



4.3.3 – Alternative 3

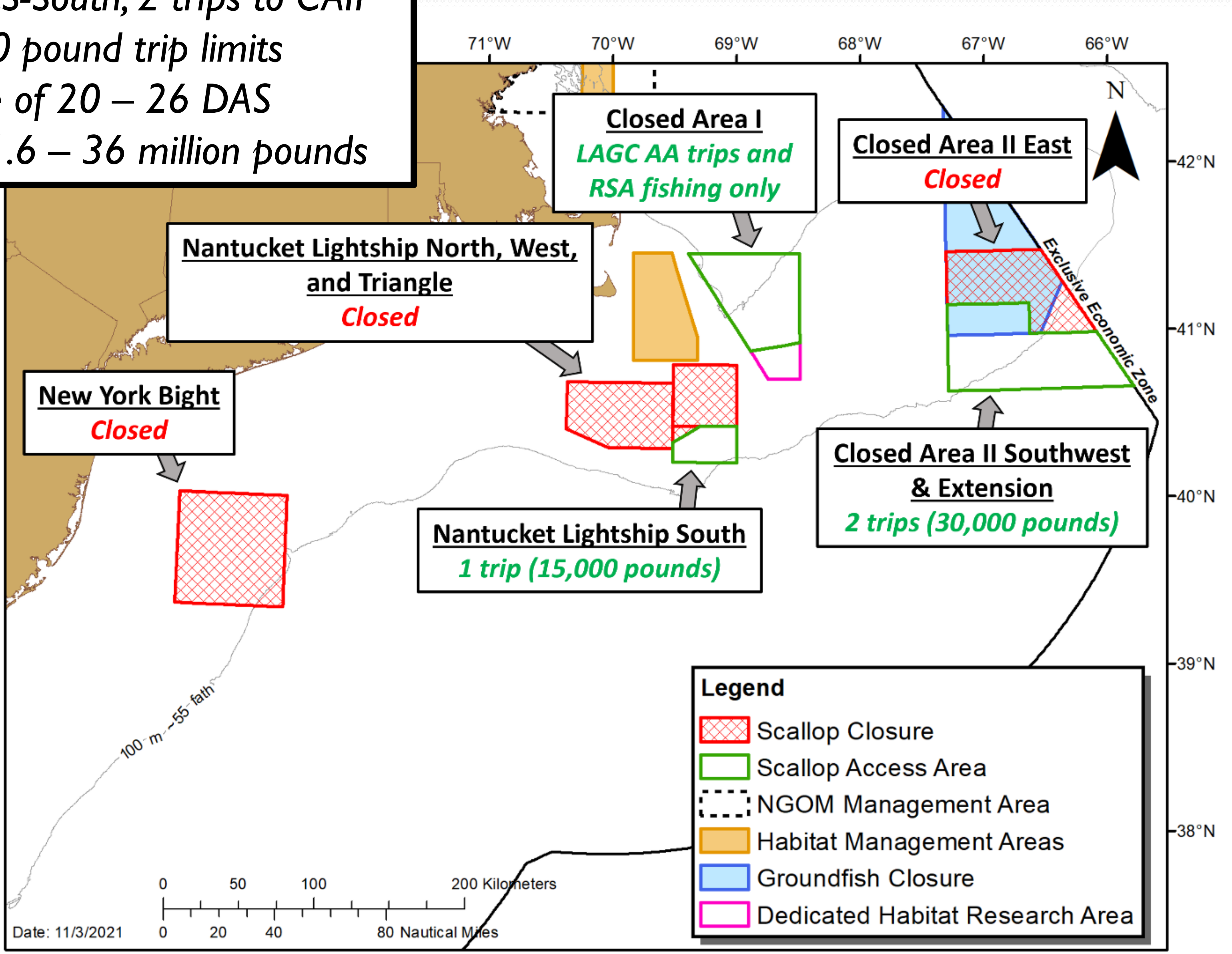
NYB Closed

1 trip to NLS-South, 2 trips to CAII

15,000 pound trip limits

Range of 20 – 26 DAS

Landings: 31.6 – 36 million pounds



FY 2023 Default Measures

- LA – 75% of DAS, one access area trip in CAII.
- LAGC IFQ – 75% of 2022 allocations, LAGC access area trips would be available in the areas selected in Action 4.4 (LAGC IFQ Access Areas).

LA Part Time Allocations

- 40% of Full Time Allocations; DAS either 8 or 10.4
- PT AA allocation: one (1) 9,000-pound trip to NLS-S, one (1) 9,000-pound trip to CAII

Payback Measures for 2022 MAAA Default

- If a vessel fishes any of their 2022 MAAA default trip, they will lose both trips to CAII in 2022.

Opportunity to finish 2022 MAAA trips

- The MAAA will not revert to open bottom until June 1, 2022 (after the first 60 days of the 2022 FY). This is to allow vessels to finish up any remaining allocations before open bottom fishing begins.

Opportunity to Fish AA Trips in FY 2023

- Like previous actions, LA access area trips allocated for FY 2022 would be available for the first 60 days of FY 2023, even if the area is scheduled to close in FY 2023.

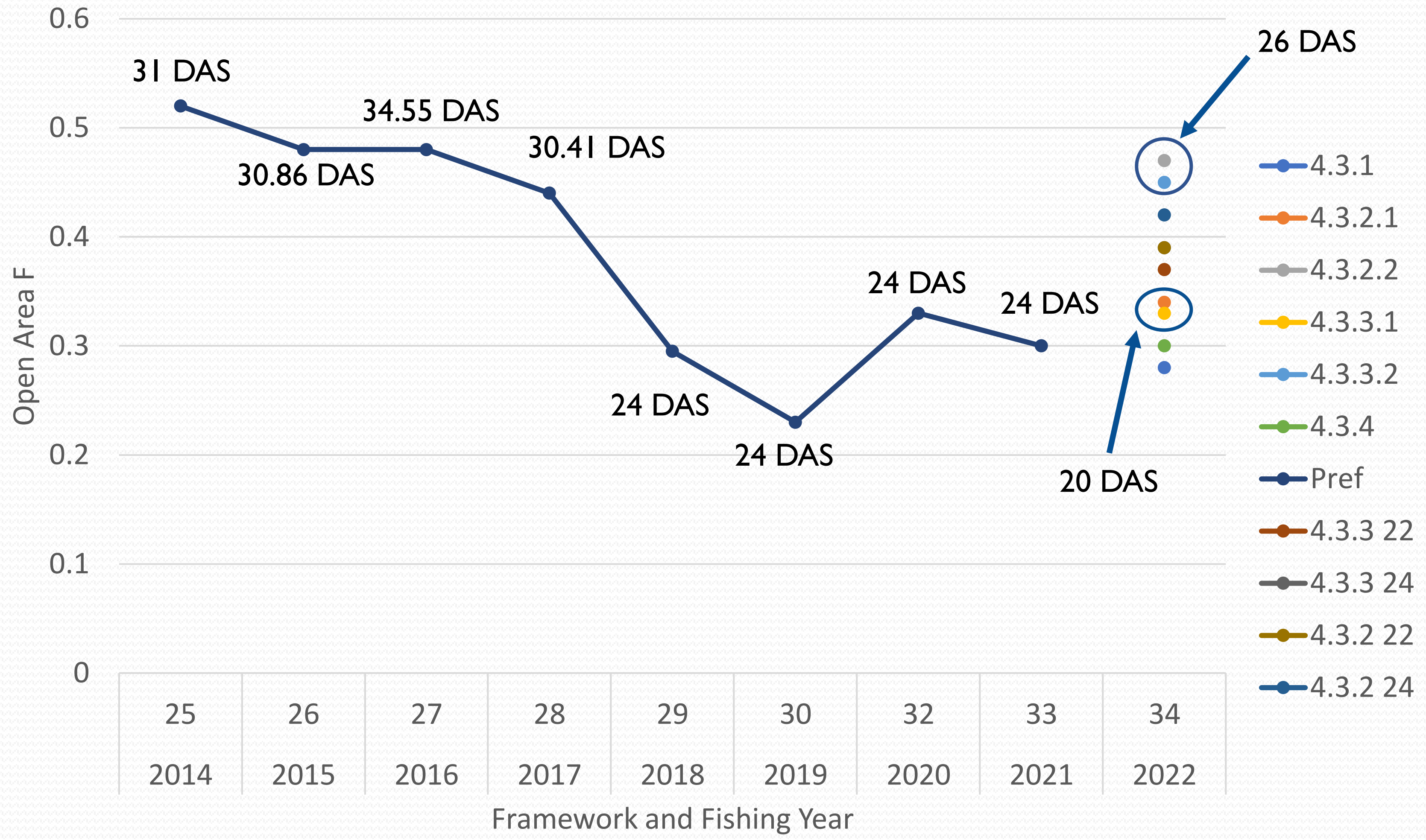
NLS-South LA crew limits

- Crew limits be increased by 2 from the maximum crew limits in regulation.
  - Full Time Limited Access, Max = 10
  - Single dredge, Max = 8

Biological Considerations

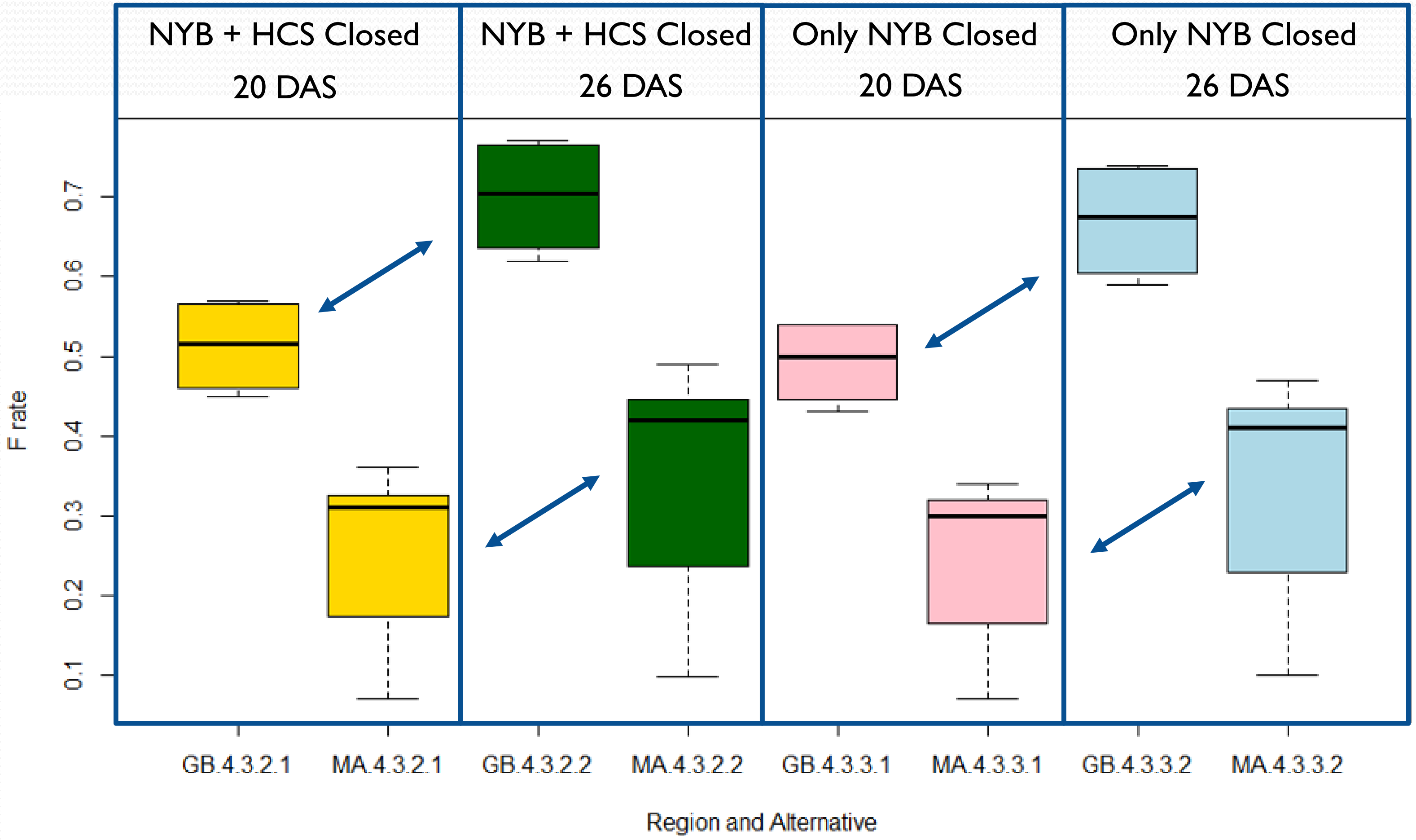
- Overall F for all runs less than F=0.27 (ABC set at F=0.45).
- Risk of overfishing is low for all alternatives under consideration.
- Recent years: decline in biomass from record highs, below-average recruitment.
- Harvest levels in 2022 will have impacts on available biomass for 2023 and beyond.
- 2019, 2020, 2021 projections were overly optimistic in most areas. Adjusted growth expectations downward.
- LPUE for open bottom estimated at over 2,300 pounds a day. Some signs of pre-recruits, but no major incoming recruitment.
- High density areas in CAII, NLS-South, pre-recruits found in NLS-West
- Changing dynamics of fishery, with majority of biomass now found on Georges Bank. Twilight and end of exceptional 2012- and 2013-year classes.
- F rates for open bottom fishing elevated for Southern Flank, Northern Flank, and Great South Channel.

Open Area F rate comparisons



Open Area F rate Comparison By Alternative and Region

- Anticipate above average F rates for Georges Bank SAMS areas (green & blue).
- Higher F rates for GB open bottom when HCS is closed – effort redirects.
- Impacts of 22 and 24 DAS would be within the ranges shown below.



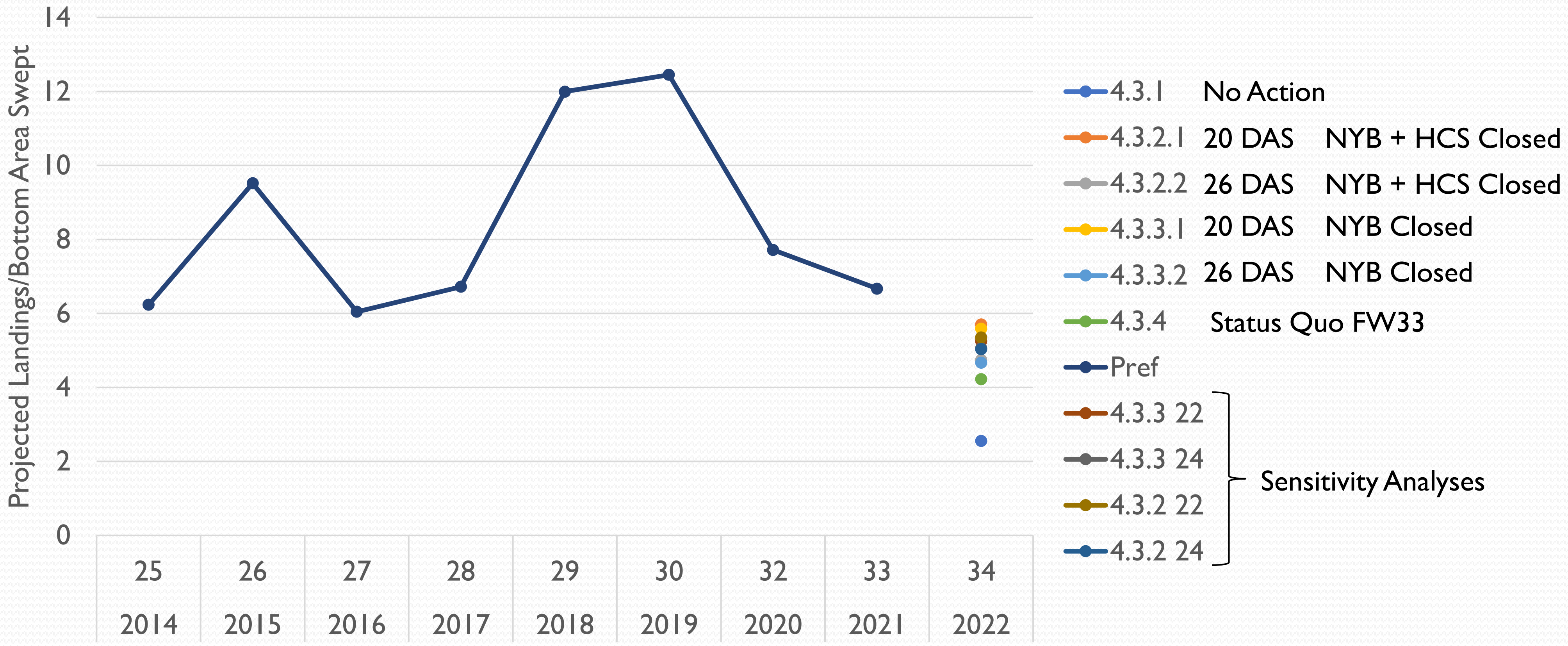
Summary of Economic Impacts

Alternatives/Runs	Alt1 NA 4.3.1	Alt2 20das 4.3.2.1	Alt2 22das	Alt2 24das	Alt2 26das 4.3.2.2	Alt3 20das 4.3.3.1	Alt3 22das	Alt3 24das	Alt3 26das 4.3.3.2
Landings (mil lbs)	19.9	31.6	33.1	34.6	36	31.6	33.1	34	36
Revenue (mil.$)	$269.63	$409.61	$427.02	$443.91	$460.18	$409.33	$426.91	$437.37	$460.40

- Revenue estimates range from $409 to $460 million dollars across Alternatives 2 – 3 using price estimates from 2021 data.
- Difference in landings, revenue driven by DAS allocations.
- Differences in benefits of specification alternatives would be small in the long-term.
- Positive social impacts relative to No Action, and with continued flexibility.

Summary of EFH Impacts

- Spatial management focuses harvest on high densities in two access areas.
- Habitat efficiency declines from recent years, likely lowest since 2014.



Summary of Protected Resources Impacts

- There are fewer PR interaction concerns in GB access areas (turtles or sturgeon) vs. Mid-Atlantic.
- Harvest in Mid-Atlantic is expected to lower in 2022 compared to recent levels.
- More DAS fishing on GB, options keep DAS effort similar to recent levels (24 DAS)
- NGOM fishery harvest levels higher than in recent years, season could extend beyond mid-May.

Impacts: Flatfish Bycatch Estimates

- Preliminary estimates are around or below expected sub-ACLs for FY 2021, except for NWP.
- The projections are forecasts (with error) and should not be taken as precise estimates.
- Significant observer data limitations due to pandemic, especially on Georges Bank.
  - Uncertainty with underlying observer data and scallop projections – could result in error as high as 50%

	NWP	**SWP**	**SNE MAYT**	**GBYT**
2022 sub-ACL	**31 mt**	**129 mt**	**2 mt**	**19 mt**
Range (Alt 2 - 3) *20 DAS – 26 DAS*	86 – 115 mt	73 – 82 mt	2 – 3 mt	15-19 mt

Data limitations

- Recent observed trips only from fall/winter 2020 to early spring 2021 – known to be high bycatch season for northern windowpane
- Adjustments made to account for skewed observer data (see Doc.3c):
  - 2019 – 2021 (to date) observer data used
  - Open area estimates adjusted to account for seasonal trend in windowpane bycatch (i.e., high bycatch Oct – Apr, lower bycatch May – Sept)
  - Only 1 observed trip in CAII-SW → averaged with 2017 data

Bycatch Discussion Points

- Projections are based on forecasts of scallop biomass and fishing behavior – realized bycatch will depend on fishing behavior
  - Ex: if more open area fishing happens in Mid-Atlantic, NWP bycatch could be lower
- PDT adjustments (i.e., observer data used, seasonal stratification) are best estimate, but uncertainty due to data limitations still very high
- Note: NWP reactive AM (5-row apron gear) will be in place for FY2022, expected to reduce impacts to flatfish in CAII

Section 4.4 – LAGC IFQ AA Allocations

- *New for 2022:* 800-pound trip limit in access areas.

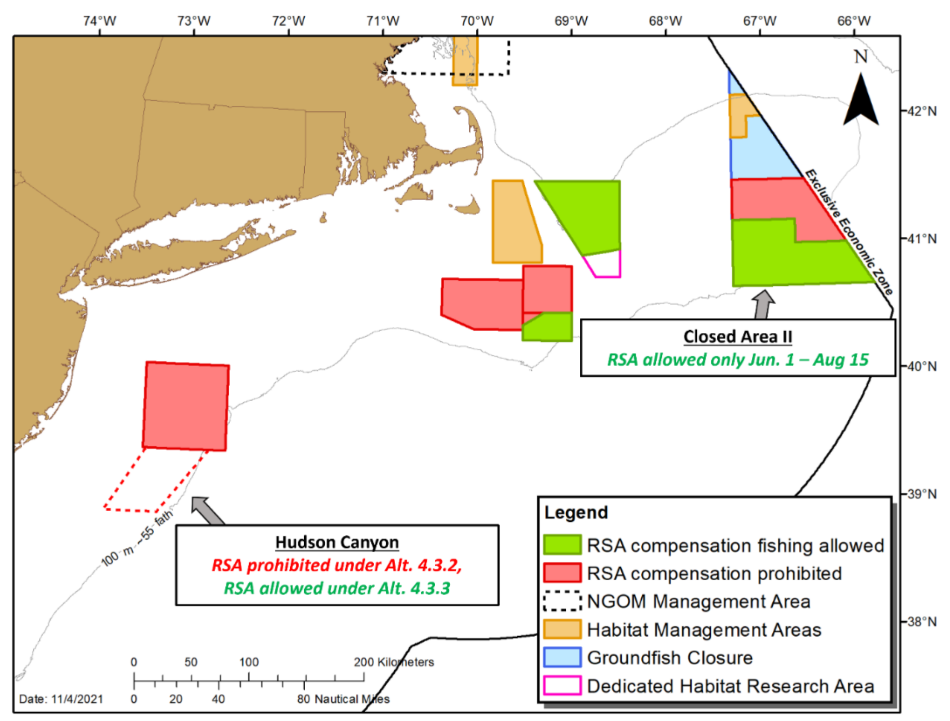
- Alt. 2 redistributes CAII AA allocation to Closed Area I.
- Alt. 3 redistributed CAII AA allocations between NLS-South and CAI.

Number of trips allocated with each alternative:

	Alt. 1	Alt. 2	Alt. 3
MAAA	571	0	0
NLS-S	0	357	714
CAI	0	714	357

Section 4.5 – RSA Compensation Fishing

Section 4.5 – RSA Compensation Fishing			PDT Pref.	AP Pref.	CTE Pref.
4.5.1	Alt. 1	*No Action* RSA Compensation fishing in open bottom only, no access areas.			
4.5.2	Alt. 2	*Open bottom areas, NLS-South, Closed Area II, and Closed Area I, with limited RSA compensation fishing in the NGOM Management Area*	**		



RSA Compensation allowed in all open access areas under Alternative 2.

Seasonal window for RSA compensation fishing in CAII from June 1 – Aug. 15. → focus additional effort when bycatch concerns are the lowest

Additional Slides

GB estimates

- Bycatch by SAMS area for GB YT and NWP in Table 2
- Projections based on assumption of fishing behavior – expectation is that bulk of open area fishing will happen in SF, Channel, NF
- Note minimal bycatch in CAII despite ~10 million lbs of expected landings
  - Hard to reconcile, underscores data limitations despite adjustments made by PDT
- NWP projection over sub-ACL, but not greater than overall ABC (160 mt)

Table 2 - Estimated FY2022 bycatch for GB YT and NWP from Alternative 3, 24 DAS sensitivity, by SAMS area (mt).

FY	CA1-N	CA1-M	CA2-SE	CA2-SW	CA2-Ext	SCH	NF	SF
Georges Bank Yellowtail Flounder								
2022	0.24	0.12	0	2.24	0.15	0.98	3.46	9.82
Northern Windowpane Flounder								
2022	0.47	3.39	0	1.2	0	28.2	5.93	59.84