

# SSC Review of OFL/ABC for Framework 33

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**SSC Meeting  
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New England  
Fishery Management Council

# FW33 – Management Alternatives

**OFL and ABC** – The same control rules developed in A15 and used for FW21-32, with updated survey and fishery data

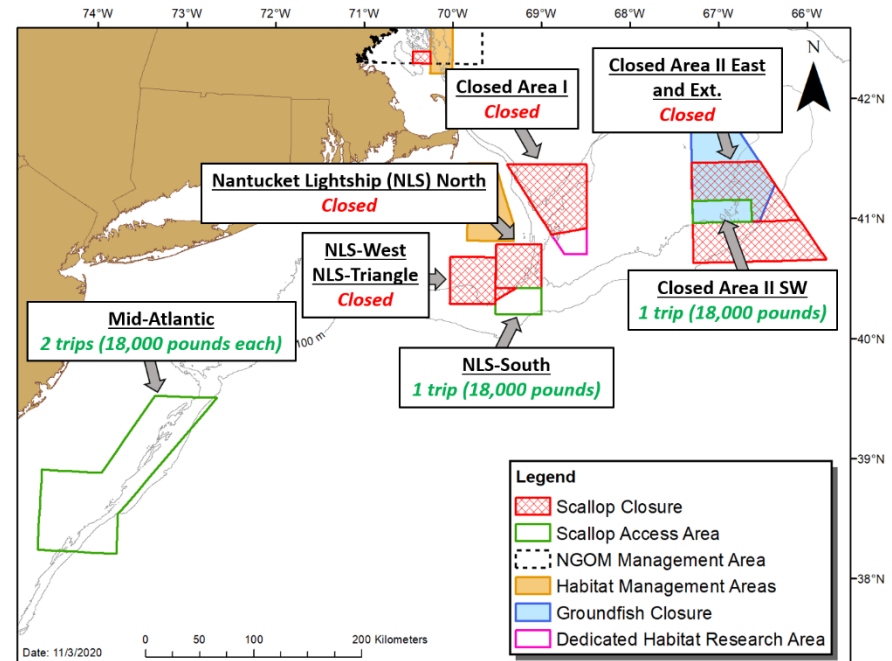
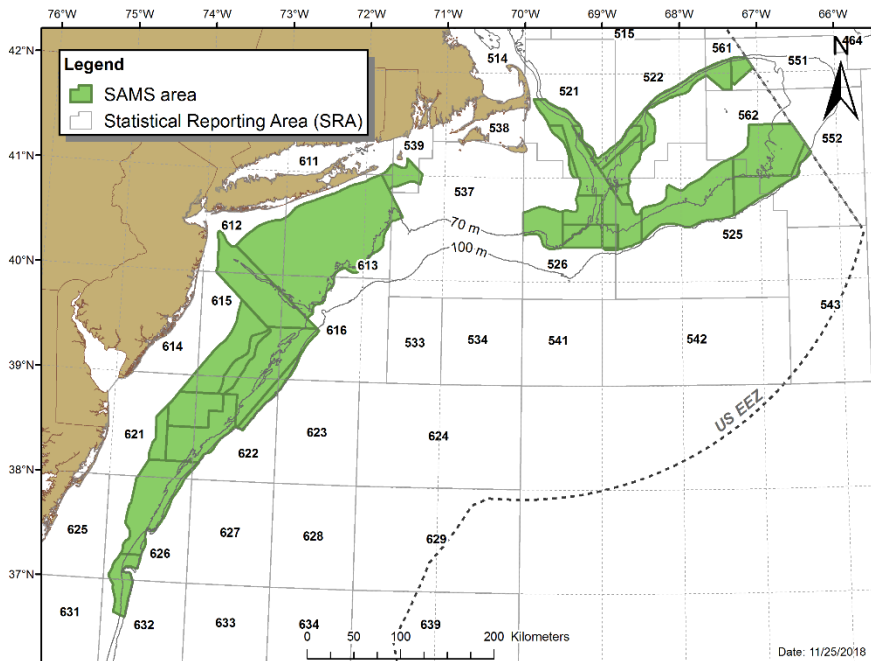
- OFL - equivalent to the catch associated with  $F_{msy}$  ( $F=0.61$ )
- ABC control rule – catch set at 75% probability of remaining below the  $F$  associated the OFL ( $F=0.45$ ). Risk is evaluated in terms the probability of overfishing compared to the fraction loss of yield.

*The fishery has not exceeded ABC/ACL since A15*

*Stock status: Not overfished and overfishing not occurring*

**Proposed FY 2021  
ACL  
(F=0.45)  
~67.2 million lbs**

**“Spatial Management”  
FY 2021 Possible  
Landings  
~40 million lbs (TBD)**



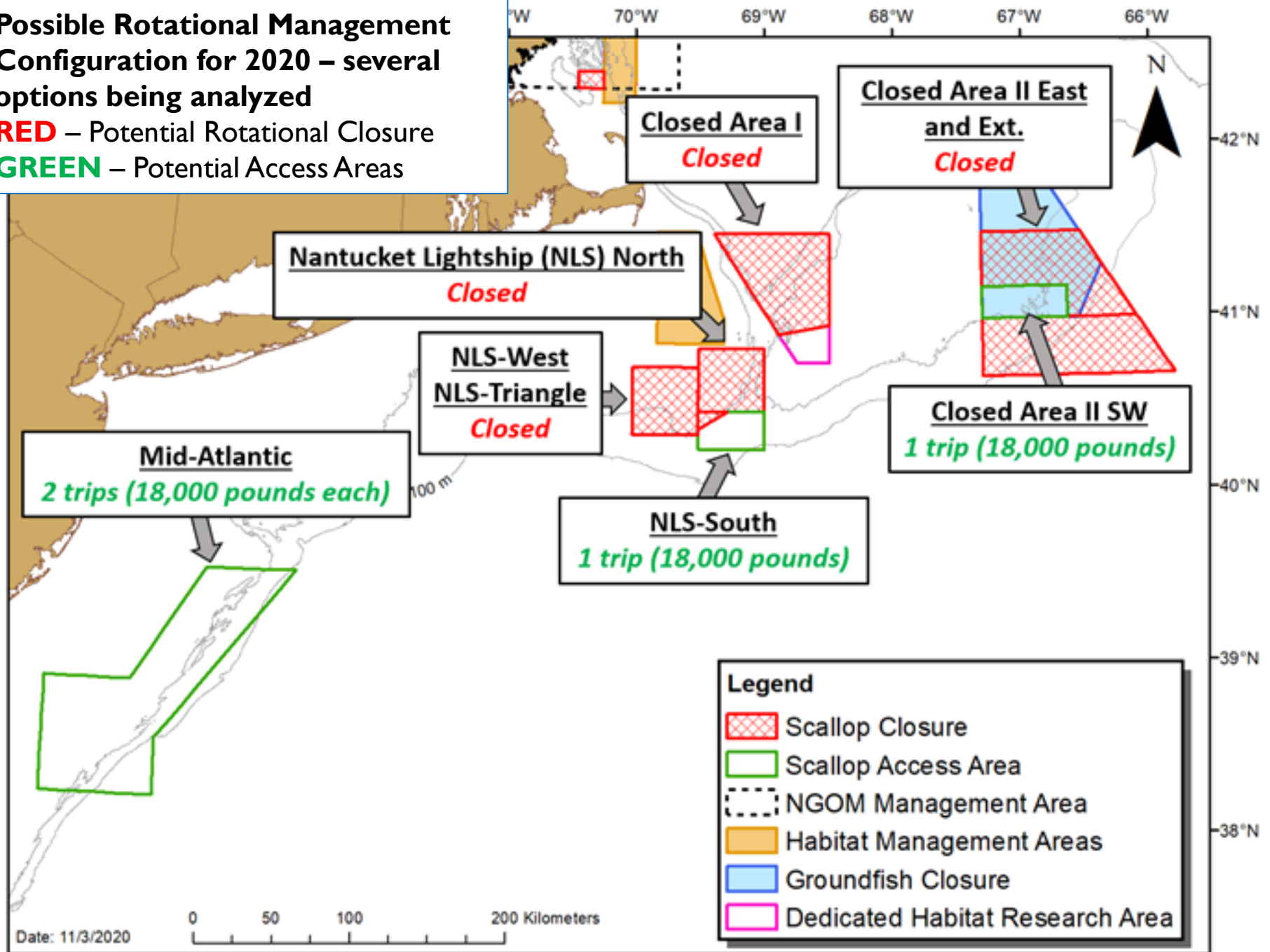
# Fishery Specifications for 2021

- No Action – 18 DAS, 1 access area trip in Mid-Atlantic Access Area, ~2 mil lbs for LAGC IFQ.
- Considering access in several rotational areas, including:
  - Closed Area II, Nantucket Lightship South, Mid-Atlantic Access Area
- Likely implementation ~June 1, 2021 (vs. April 1, 2021).

**Possible Rotational Management Configuration for 2020 – several options being analyzed**

**RED** – Potential Rotational Closure

**GREEN** – Potential Access Areas



# SSC Action on FW33 - TORS

1. Review changes to **meat weights** and **dredge efficiency** used to develop 2020 survey estimates, and **growth** and **selectivity parameters** used in the SAMS model to project biomass. Evaluate the PDT's approach for **addressing survey data gaps** that resulted from canceled surveys due to the COVID-19 pandemic. Provide the Council with a recommendation as to whether these changes are appropriate.
2. Using reference points updated by the management track assessment (2020), and considering the Council's Risk Policy Statement, review the Scallop PDT's updated projections for the scallop resource, and provide the Council with OFL and ABC recommendations using the Council's ABC control rule for fishing years 2021 and 2022 (default).

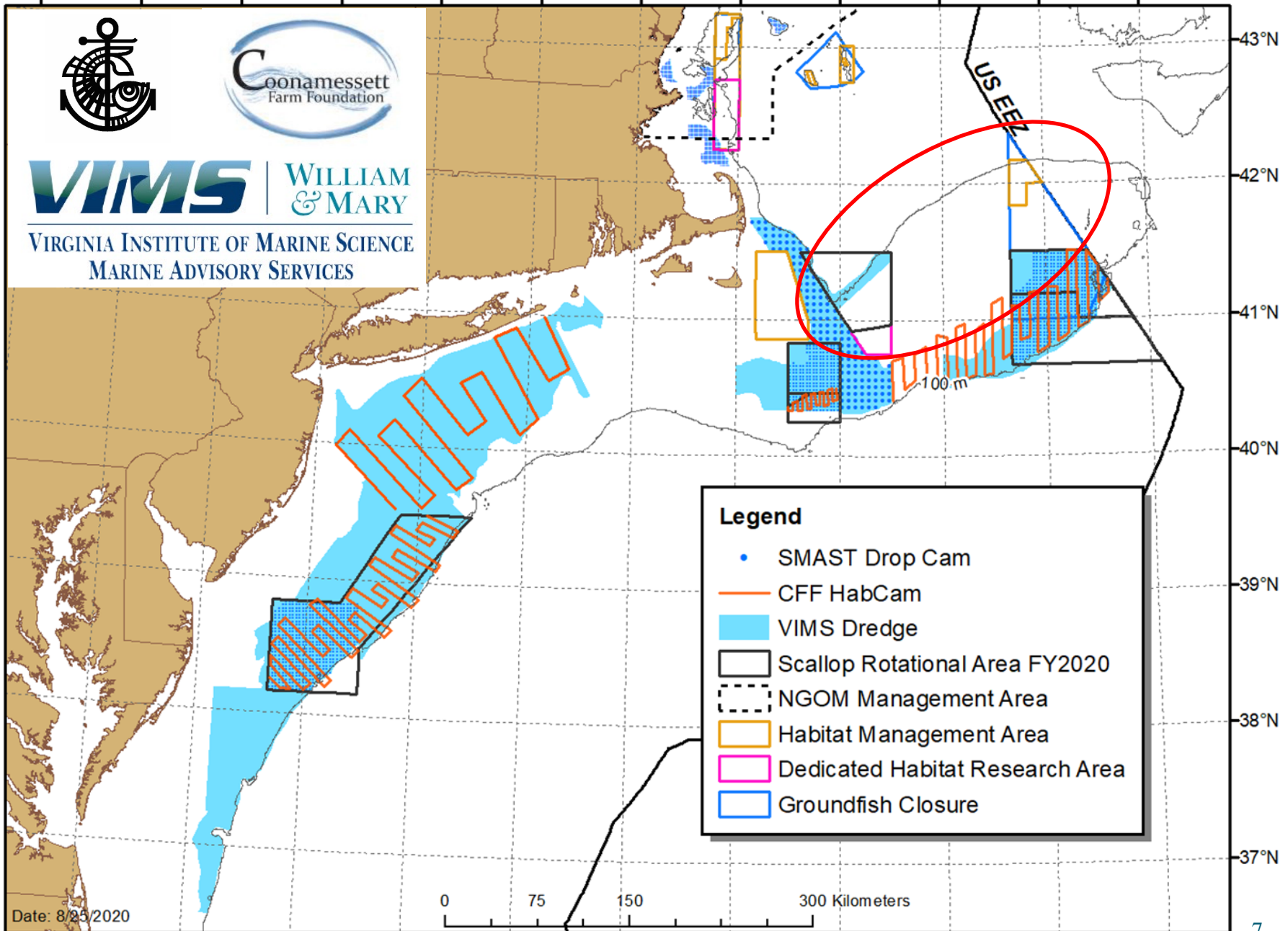


77°W 76°W 75°W 74°W 73°W 72°W 71°W 70°W 69°W 68°W 67°W 66°W



**VIMS** | **WILLIAM & MARY**

VIRGINIA INSTITUTE OF MARINE SCIENCE  
MARINE ADVISORY SERVICES



**Legend**

- SMAST Drop Cam
- CFF HabCam
- VIMS Dredge
- Scallop Rotational Area FY2020
- - - NGOM Management Area
- Habitat Management Area
- Dedicated Habitat Research Area
- Groundfish Closure

Date: 8/25/2020

0 75 150 300 Kilometers

# PDT's 2021/2022 OFL and ABC Recommendations

To address this the PDT is recommending four data adjustments that impact the OFL/ABC estimates:

- Adjustments to **SH-MW** parameters and **dredge efficiency** in the **Nantucket Lightship region**.
- Reducing **growth** expectations in most areas to account for slower than expected growth/overly optimistic projections.
- Applying **fishery selectivity** in the **NLS-South** that better reflects the size distribution of scallops that will be in the fishery.



# Changes to the SAMS forecasting model for 2020

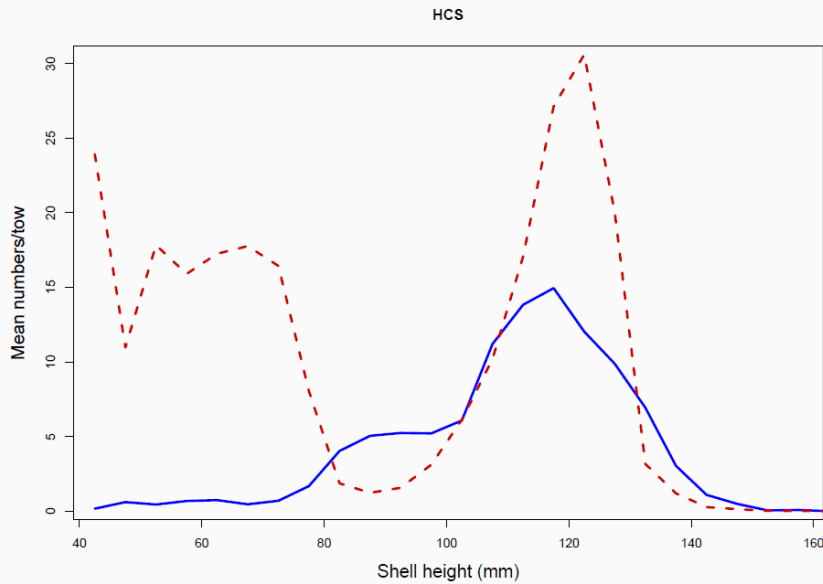
- Growth in the SAMS model differs by area, based on shell ring analysis.
- Biomass forecasts for 2020 were in most areas overestimated
- The CASA model reduced growth in the most recent period, based on empirical observations
- Growth in the SAMS model was reduced commensurate with the CASA reductions, except in two areas: Nantucket Lightship South (already slow growth), and Closed Area II Southwest (surveys indicate the dominant year class is growing well)
- Special shell height to meat weight conversions were used in the Nantucket Lightship Area, based on recent dredge surveys.

# Why do projections differ from observations?

- Error in surveys - for example, if both the 2019 and 2020 surveys in an area have 20% CVs, projections and surveys could differ by up to 50% due to survey error alone.
- Projections were 12 months after 2019 surveys but 2020 surveys were  $\sim$  14 months after 2019 ones. In most areas, the mortality over the extra two months would be less than 0.1. However, no fishing from 2019 to 2020 was assumed in access areas not fished in 2019; thus, projections in areas such as NLS-N and CAI-SE would be expected to be overestimates. Smaller scallops may be larger than projected due to the extra two months growth.
- Fishing and/or natural mortality and/or growth may be different than that assumed in the projections.

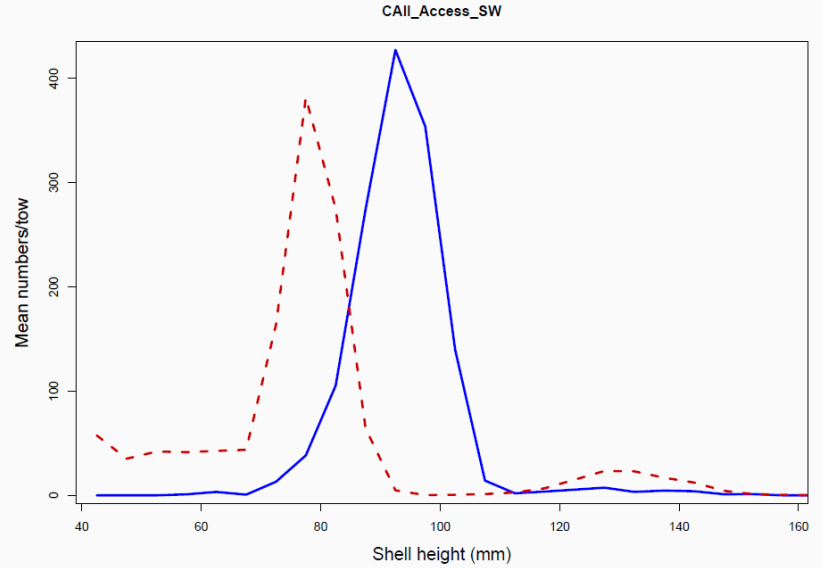
## HCS Access Area

Red dashed line - Projection from 2019    Blue line - 2020 surveys



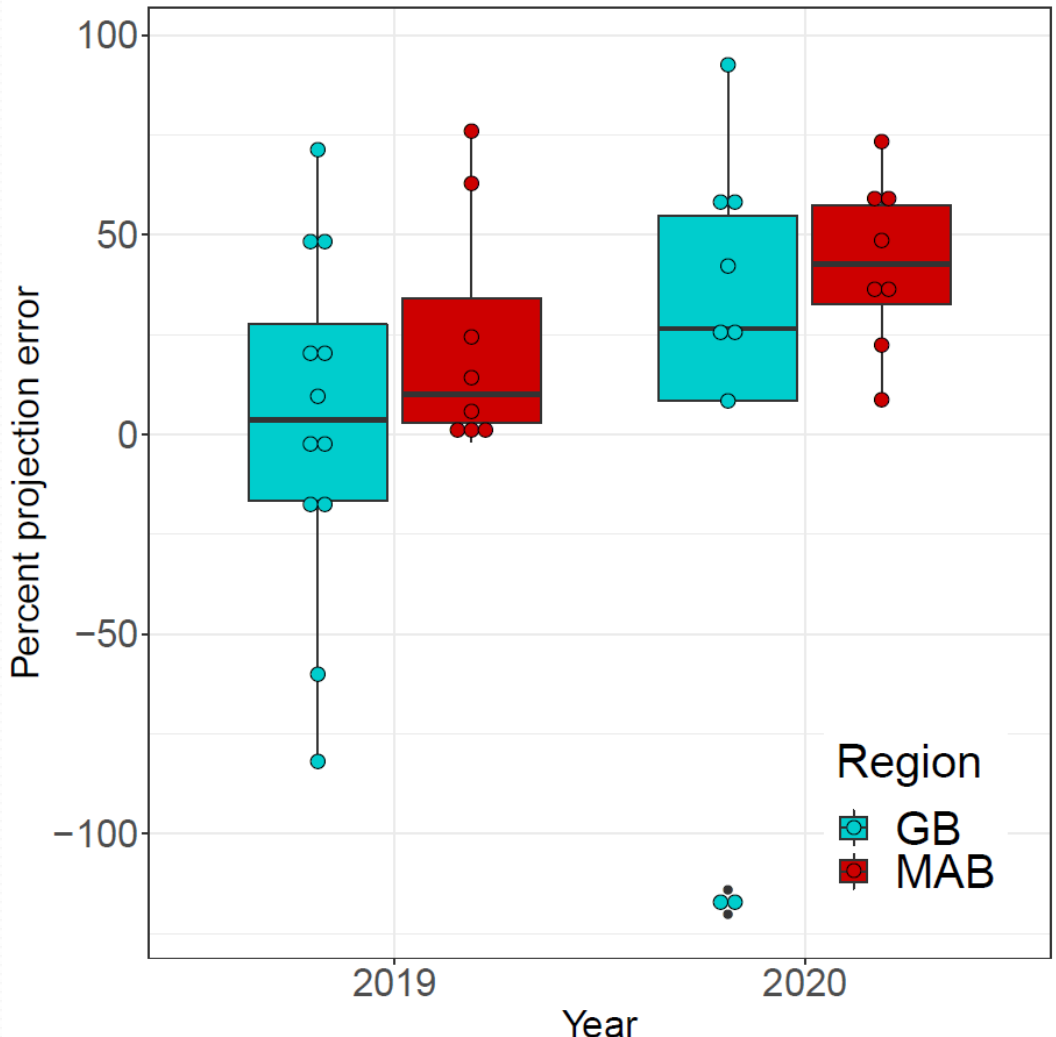
## CAII-Southwest

Red dashed line - Projection from 2019    Blue line - 2020 surveys



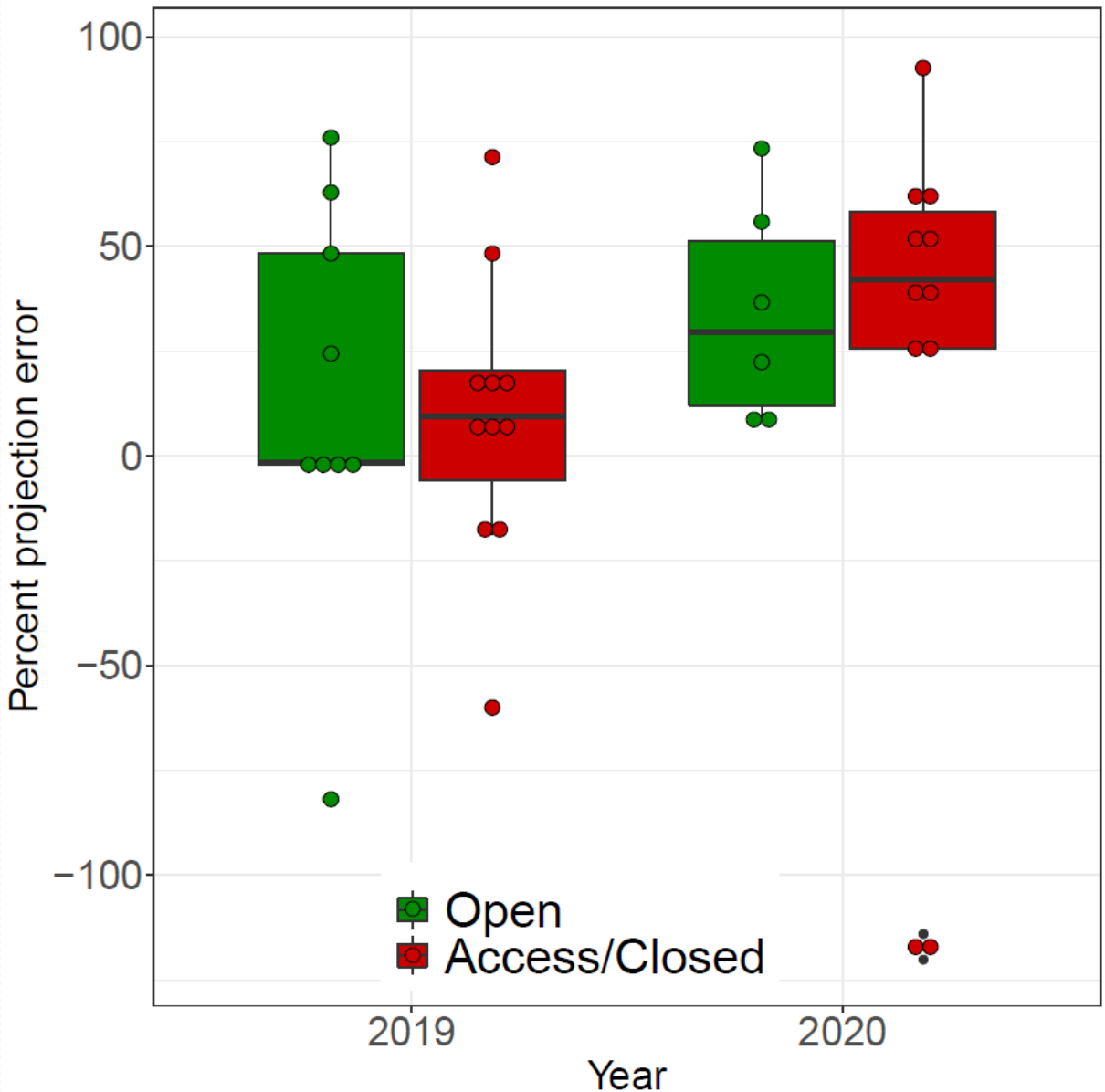
# Comparison of Projections and Survey Estimates

The %error is calculated as  $100 * (\text{predicted} - \text{observed}) / \text{predicted}$ . Positive errors mean the projection was an overestimate, and negative is an underestimate. The most positive points on GB for both years is NLS-W, where the projections were overestimates. The two areas where the projections were severe underestimates in 2020 were CL2-SE and CL2-Ext. In part, the underestimation was due to strong recruitment in these areas. Similarly, the overestimate in MA during both years is in part due to poor observed recruitment.



# Comparison of Projections and Survey Estimates

The %error is calculated as  $100 * (\text{predicted} - \text{observed}) / \text{predicted}$ . Comparison of AA and Open Areas.



## ACL/OFL methods

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- The SAMS model was initialized to 2020 survey data (or in a few cases, 2020 forecasts from 2019) and projected to 2021 based on 2020 management measures.
- ACL landings were calculated by assuming  $F = 0.45$  in all areas in 2021 and 2022. Discards/incidental mortality were estimated as 5% of biomass in the Mid-Atlantic, and 10% on Georges Bank, based on estimates from the 2018 benchmark assessment.
- OFL landings in 2021 were calculated by assuming  $F = 0.61$  in all areas. OFL landings in 2022 were calculated by assuming  $F = 0.45$  in 2021, and then  $F = 0.61$  in 2022. Discards were calculated similarly to the ACL.

# OFL and ABC Recommendations

Year	ABC-Land	ABC-Disc	<b>ABC-Tot</b>	OFL-Land	OFL-Disc	<b>OFL-Total</b>
2021	30,517	5,110	<b>35,627</b>	38,714	6,678	<b>45,392</b>
2022	28,074	4,798	<b>32,872</b>	35,636	6,290	<b>41,926</b>

*SSC would recommend the **bold values** for OFL and ABC.*