



Atlantic Chub Mackerel 2021 Specifications



SSC Meeting
September 8, 2020

Meeting Objective

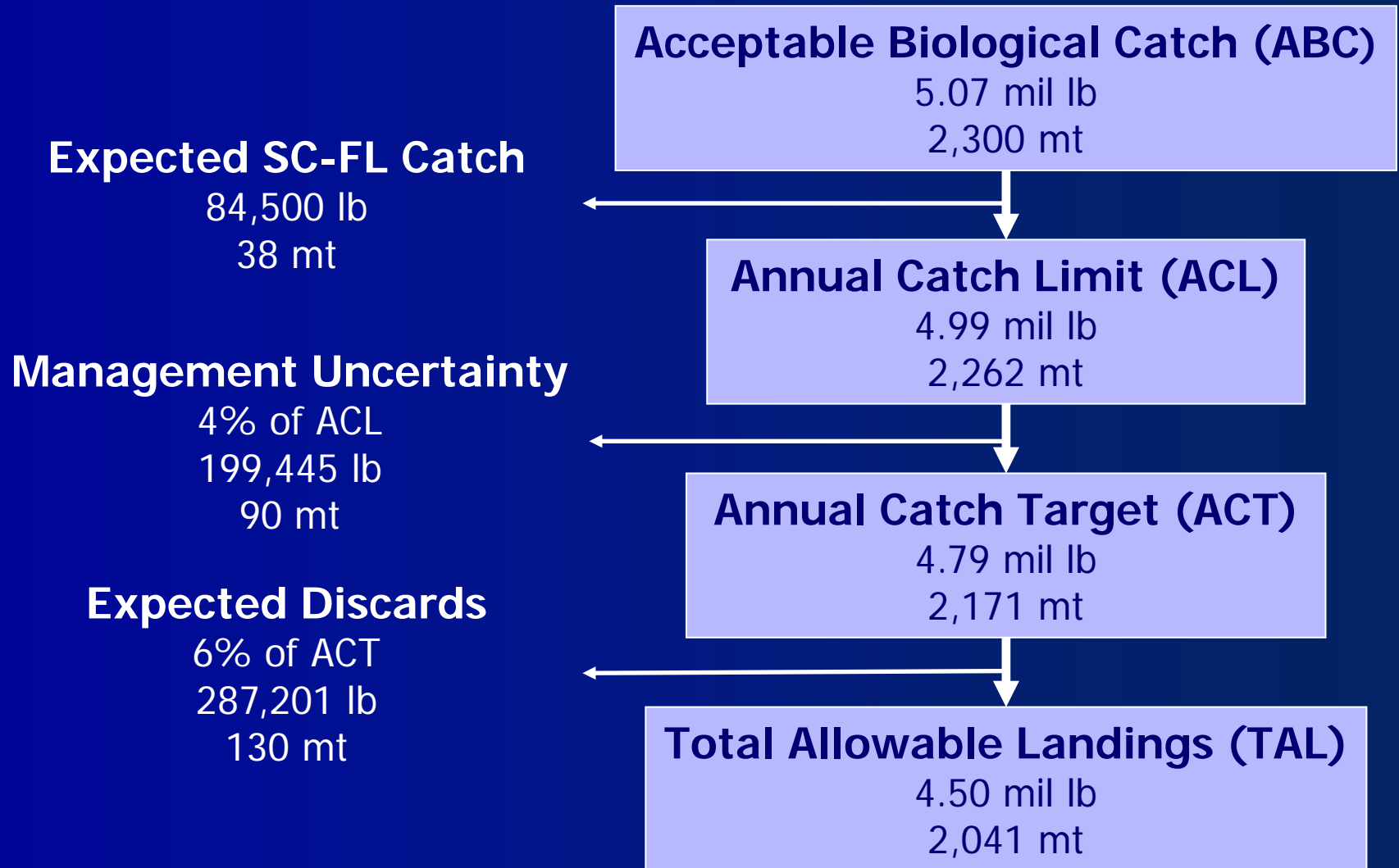
- Review
 - Management history
 - Recent fishery information
 - AP Fishery Performance Report
- Consider if revisions are needed to 2021 ABC



Management

- **First measures implemented through Unmanaged Forage Amendment**
 - Effective Sept 2017
 - Commercial permit requirement
 - 2.86 million lb annual commercial landings limit
 - Once limit is reached, 40K lb possession limit
- **Amendment 21 to MSB FMP**
 - Effective Sept 2020
 - ABC, ACL, ACT, TAL, AMs, EFH
 - Vessel (commercial and party/charter), and dealer permit and reporting requirements
 - Commercial possession limits
 - 40,000 lb after 90% of TAL projected to be landed
 - 10,000 lb after 100% of TAL projected to be landed

2020-2022 Specifications



Stock Status

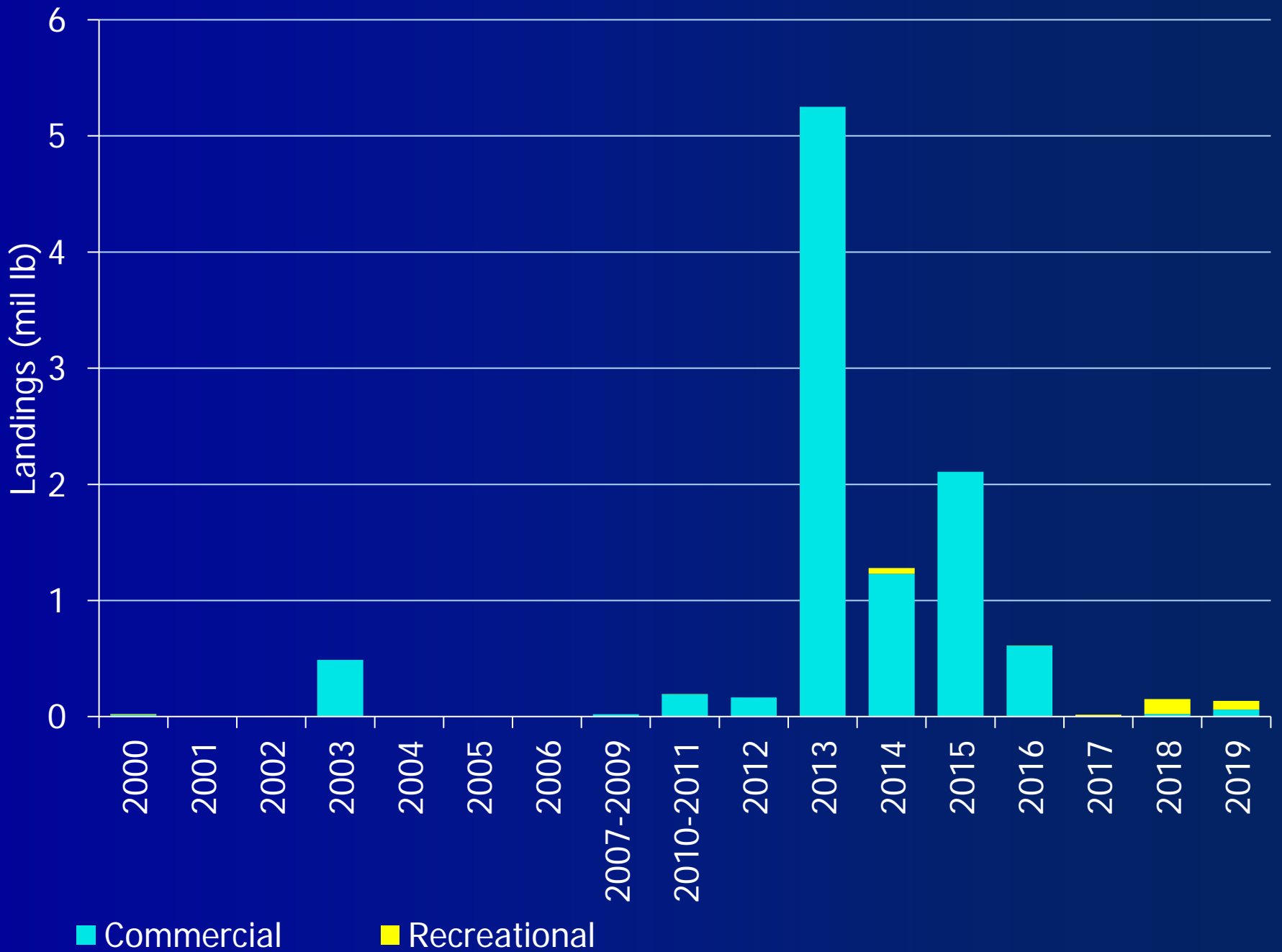
- No stock assessment – stock status unknown
- Sparse catches in NEFSC fall survey, none in spring
- Abundance/availability fluctuations partly based on environment
- In 2018, SSC assumed biomass likely at sustainable levels

Previous ABC Recommendation

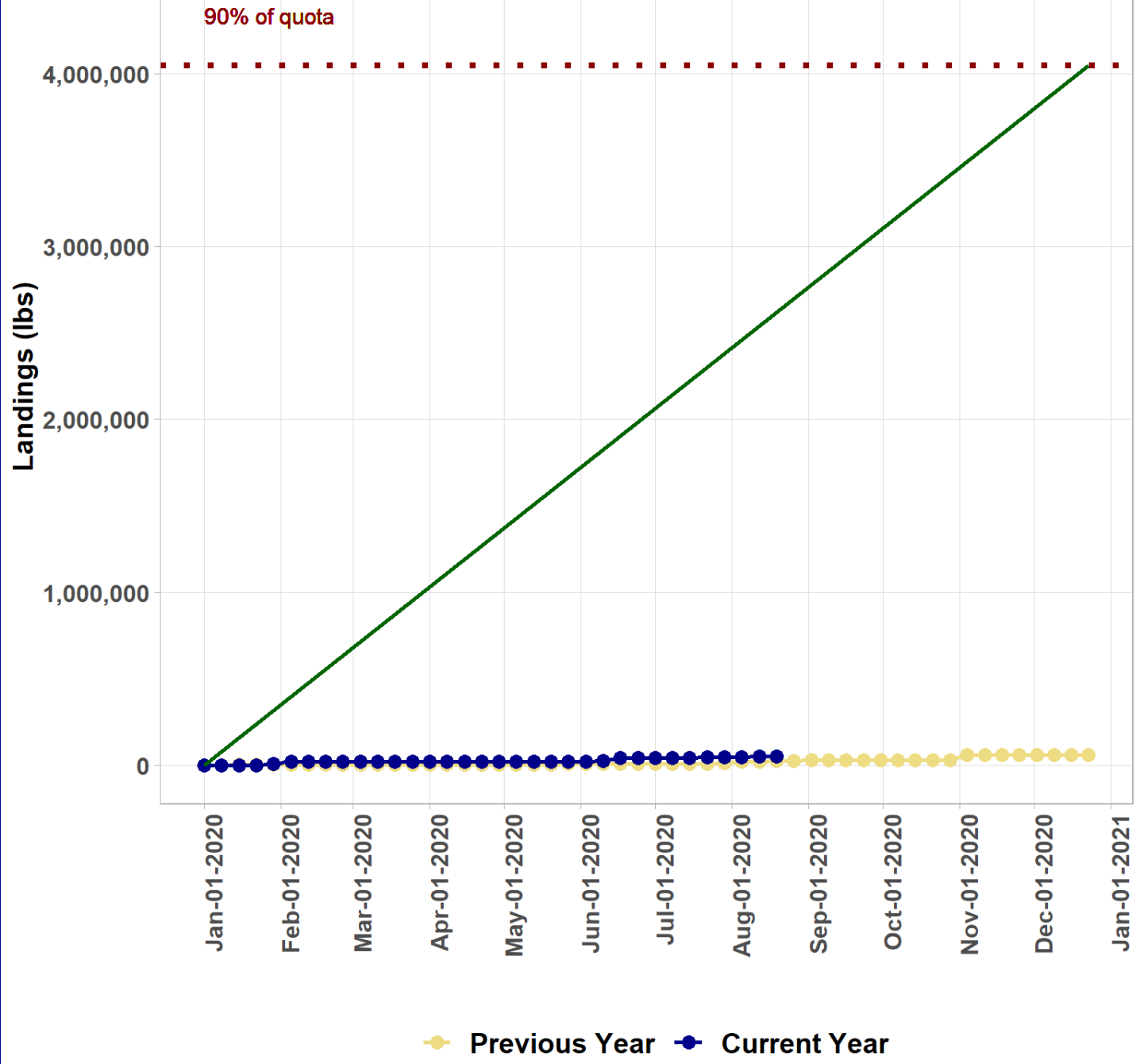
- Insufficient info exists to assess status and trends in NW Atlantic.
- OFL cannot be specified.
- $ABC = 2,300 \text{ MT} = 5.07 \text{ mil lb.}$
 - Based on expert judgement.
 - Based loosely on historic high for landings and assumptions about discards.
 - Prevents fishery from reaching historic high, but allows higher catch than in all other years.
 - Unlikely to result in overfishing given general productivity of species worldwide combined with low fishery capacity in this region.
- ME-FL Catch applies to ABC.

Sources of Uncertainty in ABC

- Stock size and productivity cannot be determined. No information to determine reference points for stock biomass levels, and little information exists to determine reference points for fishing mortality rates.
- No information on the source of recruits; it is unknown whether chub mackerel are episodic in the Mid-Atlantic, whether this is a range expansion with localized spawning, or neither.
- No information on predation mortality, or on the role of chub mackerel in predator diets.
- Very high uncertainty in rec. landings and discards. Observer coverage on fisheries likely to catch chub mackerel may be low (*///ex* fleet, Mid-Atlantic small mesh bottom trawl).



Quota: 4,499,486 lbs



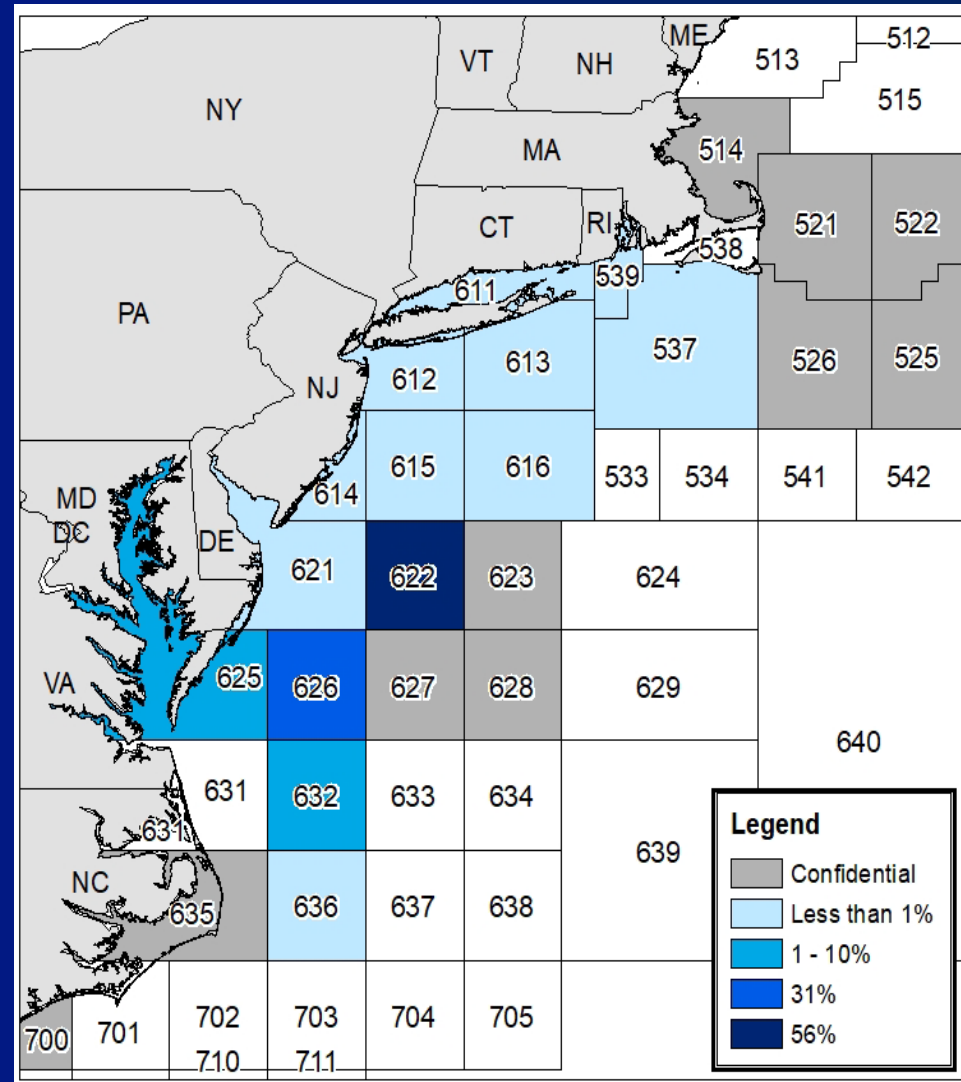
Commercial Fishery

- Overlap with *Illex* squid fishery
 - Vessels, time of year, area
 - “Bailout” species/alternative fishery
- 95% of com. landings, 2000-2019, from fewer than 5 vessels, fewer than 3 dealers
- 96% landings from bottom trawl
- 97% landings from June-October
- \$0.49/lb on avg, 2000-2019 (adjusted to 2019 \$)



Commercial Fishery

- Commercial landings from federal VTRs, 2000-2019
- 97% of landings from stat areas south of NY



Recreational Fishery

- Sporadic landings
- Potential species ID issues
 - MAFMC and GARFO distributed ID guides
 - MRIP added to core list of species for APAIS sampler trainings
- On avg. 2000-2019 (though variable):
 - 57% harvest from state waters, 43% federal
 - 44% harvest from NY, 39% NJ, 10% CT, all others less than 5%
 - 45% private/rental, 41% party/charter, 15% shore
 - 76% wave 4 (July-Aug), 18% wave 5 (Sept-Oct), 6% wave 3 (May-Jun)



AP Fishery Performance Report

Relationship with *///ex* squid fishery

- Vessels responsible for most past landings have been focusing on *///ex* past 3 years.
- 2013 levels of targeted fishing effort not seen since.
- If *///ex* not available in 2021, chub landings could return to 2013 levels.
- Chub mackerel likely not caught in other fisheries because vessels need high horsepower.
- 2020 has been a good year for *///ex* (but not extremely good). Likely won't see high chub mackerel landings in 2020.

AP Fishery Performance Report

Environmental Conditions

- An “emerging stock” due to climate change.
- Increased rec. catches could indicate increased availability.
- Can be found close to shore (FID statement misleading).
- *Illex* may push out chub mackerel.

AP Fishery Performance Report

Management Issues

- 3 advisors said ABC should increase to allow expanded fishing opportunities on this emerging stock. Availability likely to continue to increase and expand into other areas (e.g., New England).
- Need to consider bigger picture ecological implications of management measures.
- Consider tradeoff of increased chub mackerel ABC vs. ecological value of protections for other forage species implemented through Forage Amendment. Ecosystem considerations always seem to cut one way.

AP Fishery Performance Report

Research Recommendations

- What research is needed to allow for consideration of increased ABC?
- Ongoing HMS diet study
 - Should consider spatial/temporal variations in diet. Discrete pulses of chub availability could be important.
 - If HMS don't eat chub, what does?
 - If allow expansion, need to protect structure and function of ecosystem.
 - Can't consider only impacts of chub harvest on HMS status. Need to also consider HMS mgmt.
- Is length frequency info provided by industry helpful?

AP Fishery Performance Report

Other Issues

- Chub mackerel are valuable as bait and human food. Most human food markets are in Europe and Africa.
- A few participants in AP call are associated with companies that have participated in chub mackerel fishery, but AP members with more on the water experience in the fishery were not present.

Additional AP Comments

- Provided after AP meeting
 - Current TAL well above 2000-2019 avg. landings
 - Chub discards often due to lack of market
 - Recreational fishing input (including HMS) missing from AP webinar

Discussion

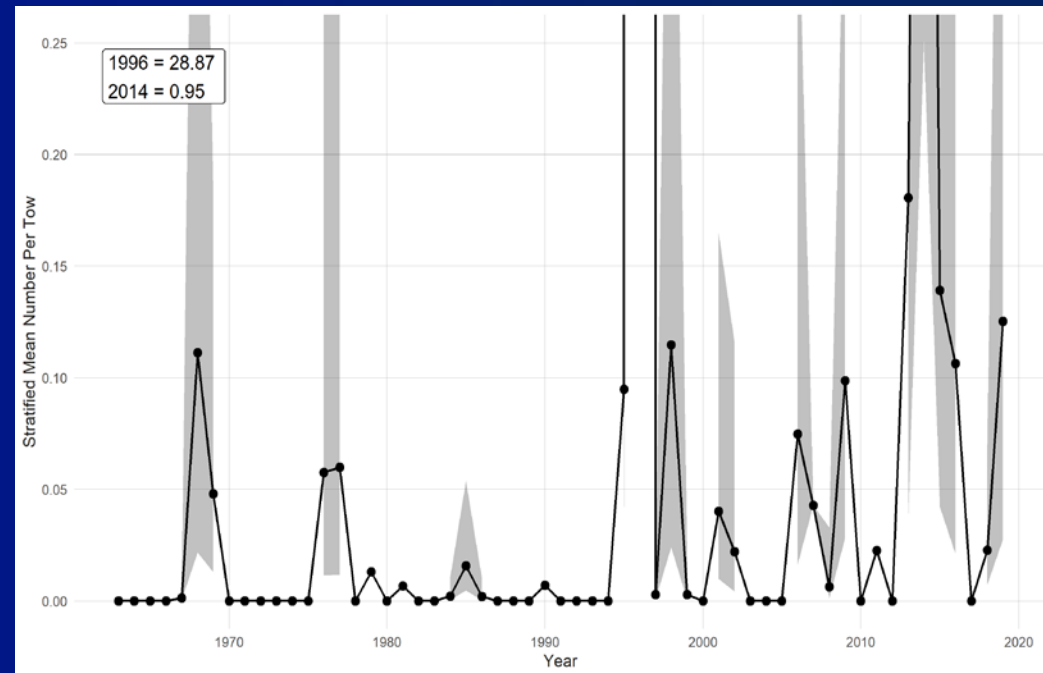
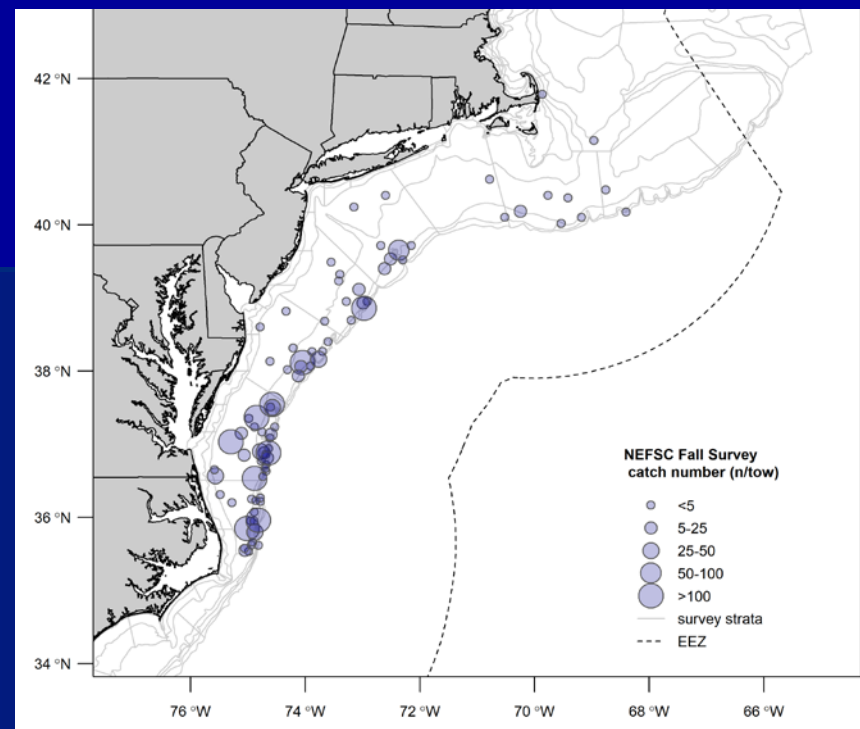
- Should the previously-recommended 2021 ABC be revised?
 - 2,300 mt / 5.07 mil lb
 - Staff recommend no changes



Backup slides

NEFSC Trawl Survey

- 84 tows during fall survey caught chub mackerel, 1963-2019. No catches in spring survey.
- Stratified mean #/tow low with spike in 1996.
- Have become more prevalent since 2013.



"Characterization of the Atlantic Chub Mackerel Fishery and Stock"

- Dr. Robert Leaf, University of Southern Mississippi
- SCeMFIS funded project
- Samples collected from industry partners at Lund's Fisheries and SeaFreeze Ltd.
- Length frequency distributions, 2007-2019
 - Slight bimodal pattern, peaks at 25 and 32 cm TL. But considerable variation by year.
 - No month/length relationship.
- Age, length, weight, maturity 2016-2017 (separate report – published in *J. Northw. Atl. Fish. Sci.* 2019)