



Atlantic Chub Mackerel



SSC Meeting

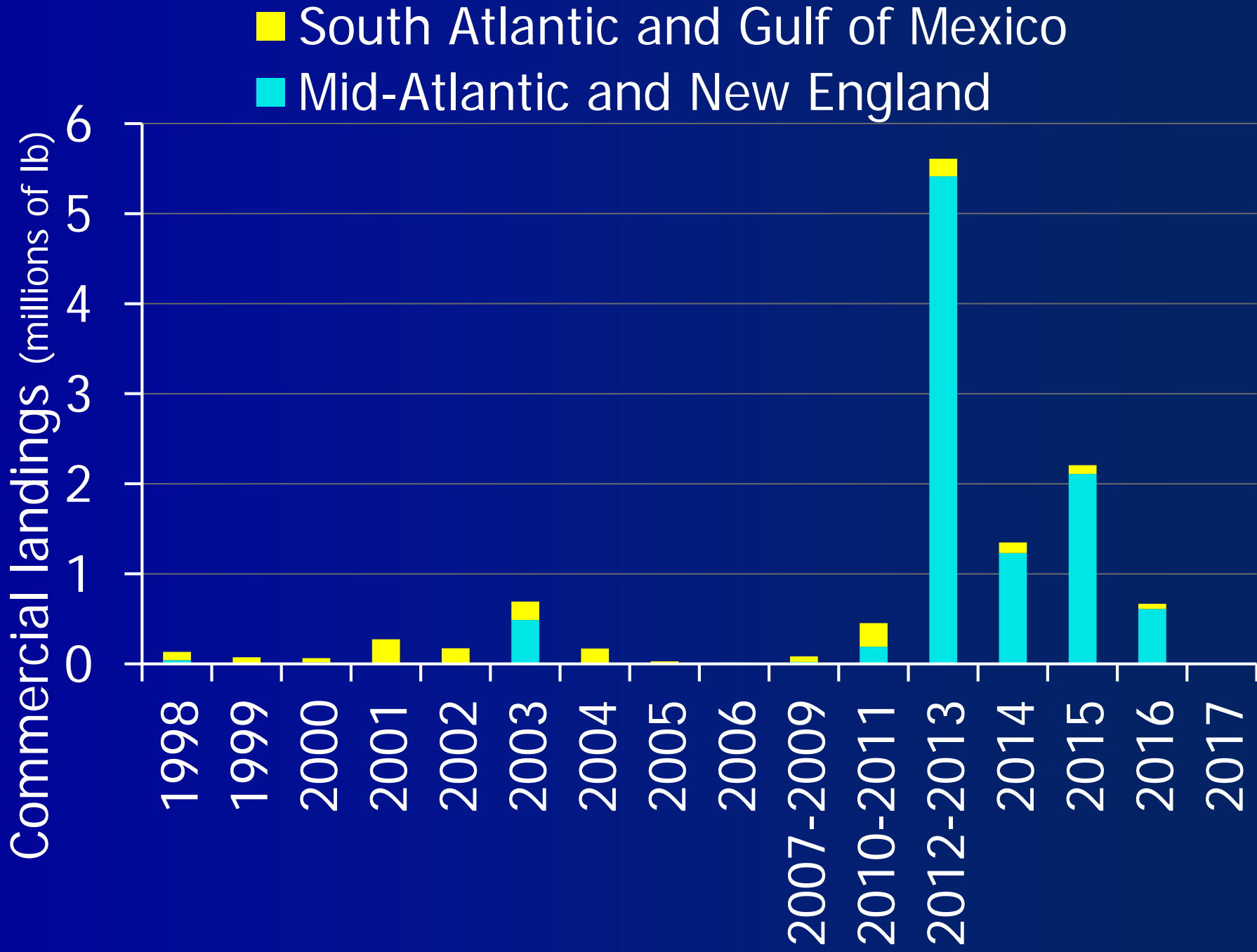
July 17, 2018

Outline

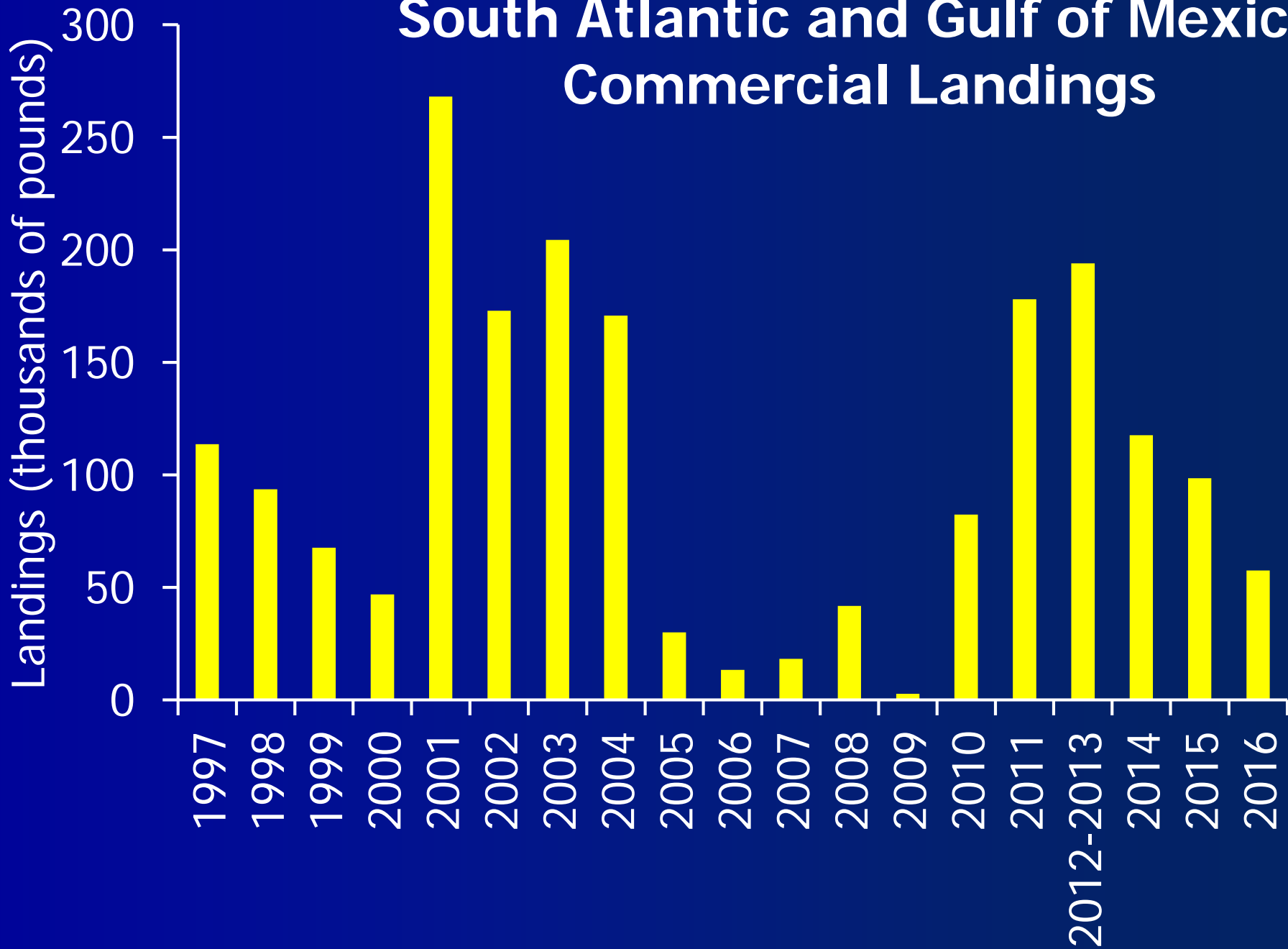
- Background
- Amendment goals and objectives
- AP fishery performance report
- ABC considerations
- AP and Committee recommendations
- Rough catch estimates
- Discussion

Forage Amendment

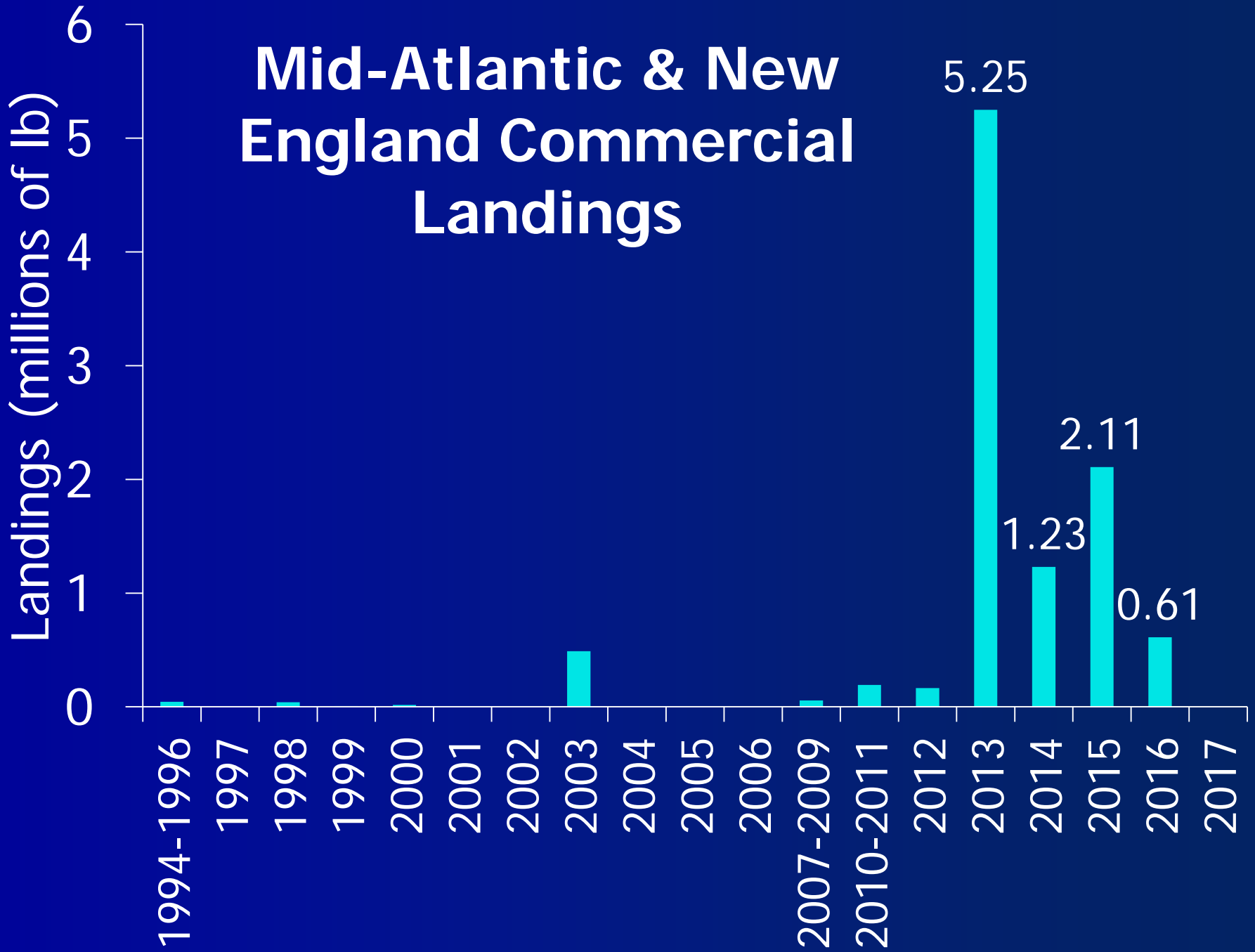
- 2.86 million lb annual landings limit (New England and Mid-Atlantic)
- Once limit is reached, 40K lb possession limit (Mid-Atlantic only)
- Measures expire Jan 1, 2021
- Not a stock in fishery or ecosystem component



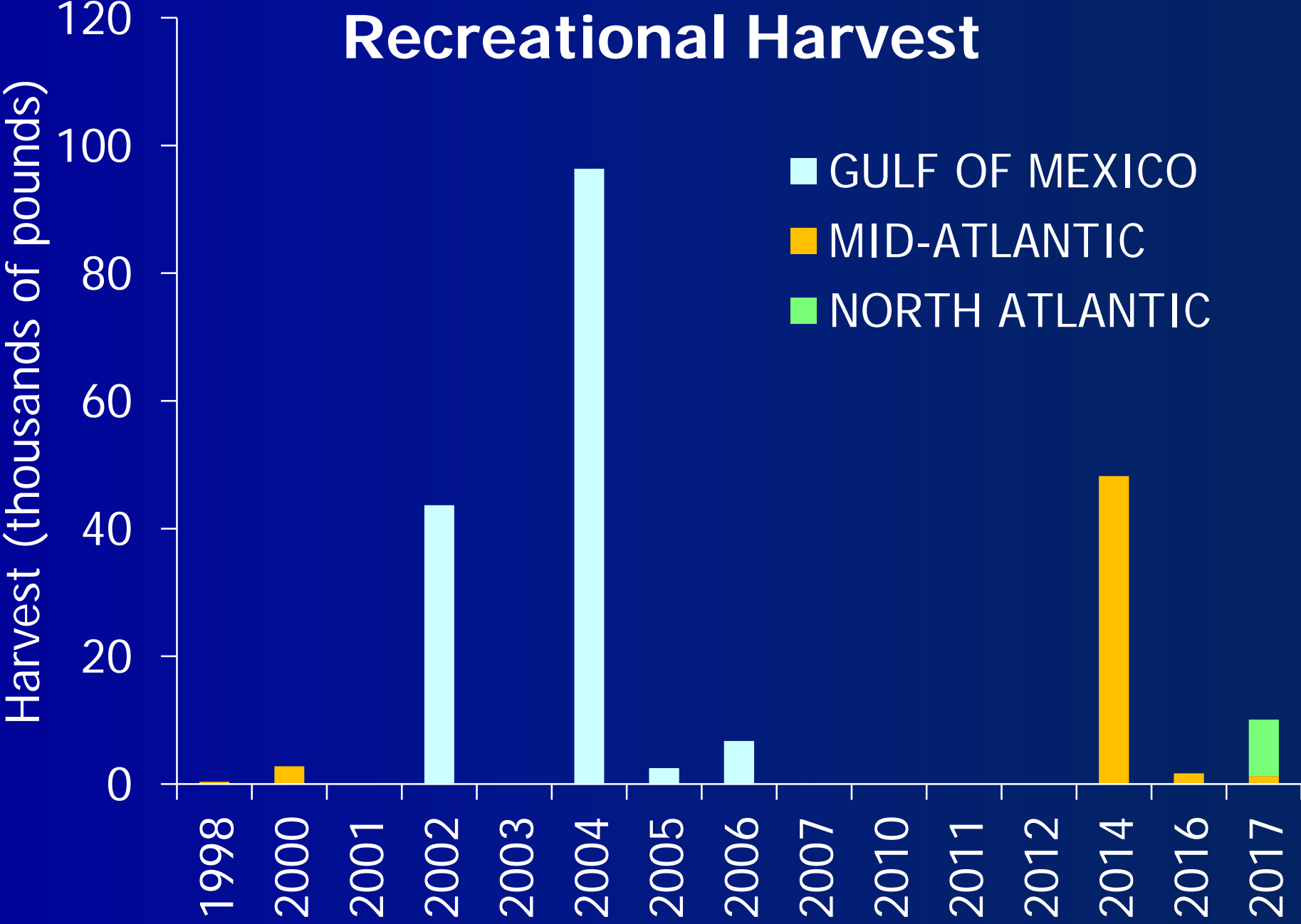
South Atlantic and Gulf of Mexico Commercial Landings



Mid-Atlantic & New England Commercial Landings



Recreational Harvest



Amendment Goals, Objectives

Goal 1: Maintain a sustainable chub mackerel stock.

- *Obj. 1.1:* Prevent overfishing and achieve and maintain sustainable biomass levels that achieve OY in the fisheries and meet the needs of chub mackerel predators.
- *Obj. 1.2:* Consider and account for, to the extent practicable, the role of chub mackerel in the ecosystem, including its role as prey, as a predator, and as food for humans.

Goal 2: Optimize economic & social benefits from utilization of chub mackerel, balancing the needs & priorities of different user groups.

- *Obj. 2.1:* Allow opportunities for com. & rec. chub mackerel fishing, considering the opportunistic nature of the fisheries, changes in availability that may result from changes in climate & other factors, & the need for operational flexibility.
- *Obj. 2.2:* To the extent practicable, minimize additional limiting restrictions on the *Illex* squid fishery.
- *Obj. 2.3:* Balance social & economic needs of various sectors of the chub mackerel fisheries (e.g. com., rec., regional) & other fisheries, including rec. fisheries for HMS

Goal 3: Support science, monitoring, and data collection to enhance effective management of chub mackerel fisheries.

- *Obj. 3.1:* Improve data collection to better understand the status of the chub mackerel stock, the role of chub mackerel in the ecosystem, and the biological, ecological, and socioeconomic impacts of management measures, including impacts to other fisheries.
- *Obj. 3.2:* Promote opportunities for industry collaboration on research.

AP Fishery Performance Report

- *Illex* is biggest determinant of effort, landings
- There has always been a market
- Difficult/costly to harvest due to fast swimming speed, preference for warm water
- Abundance is variable, sometimes “bunched”
- Mixed with *Illex* to some extent during beginning and end of season (~May and Oct)
- Possible influence of env. on south Atlantic landings

AP – Predator/Prey Issues

- Fishery operates inshore of canyons
- Management should be based on science, not public opinion
- Chub mackerel are not important prey
- Results of new HMS diet study will be inconclusive
- Public comments are important – spatial/temporal management should be considered

Note: these are not consensus statements

ABC Considerations

Chub Mackerel Distribution

- No information on stock structure, movement/migration in this region
- In eastern Atlantic:
 - Regional differences in morphology, life history
 - Genetically uniform across broad areas; however, genetic differentiation between W & E Atlantic
 - “Considerable” seasonal migrations



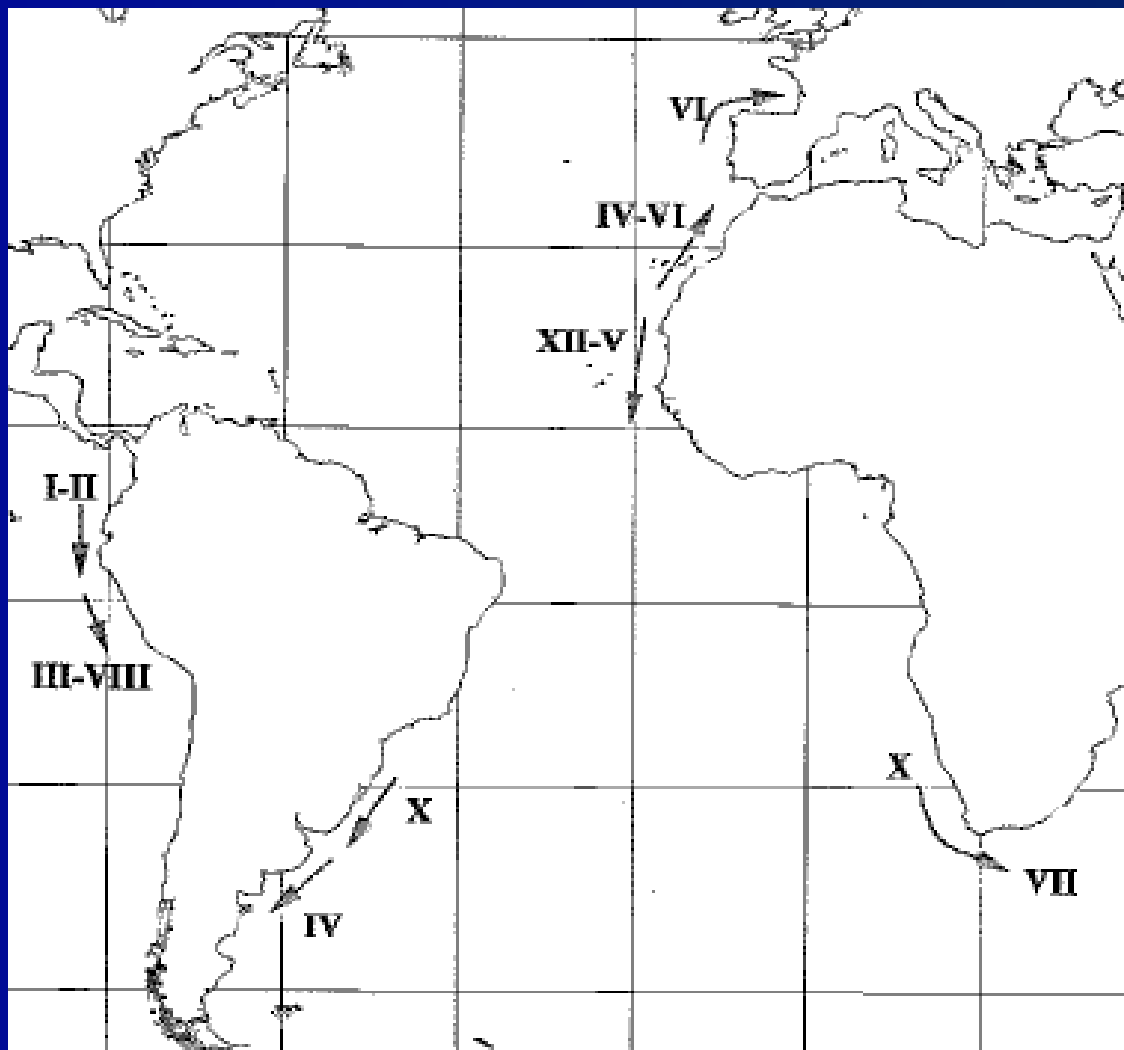


Figure 9. Schematic migratory paths and local movements of *Scomber japonicus*. (Roman numerals indicate the starting and finishing months of migration.)

Hernández, J. J. C. and A. T. S. Ortega. 2000. Synopsis of biological data on the chub mackerel (*Scomber japonicus* Houttuyn, 1782). FAO Fisheries Synopsis No. 157.

Management Unit

- NS 3 – stocks should be managed as a unit throughout their range
- One FMP for entire range is preferred
- “Coordination” with other entities should be sought
- Measures need not be uniform throughout the management unit
- ABC should apply to entire mgmt. unit, could apply beyond

FMAT – Management Unit

■ ME-TX, pros:

- Would allow efficient reaction to future changes in the fishery
- Fishery mostly operates at seasonal northern edge of range
- Should not decouple management & biology
- Spawning in Gulf of Mexico

■ ME-TX, cons:

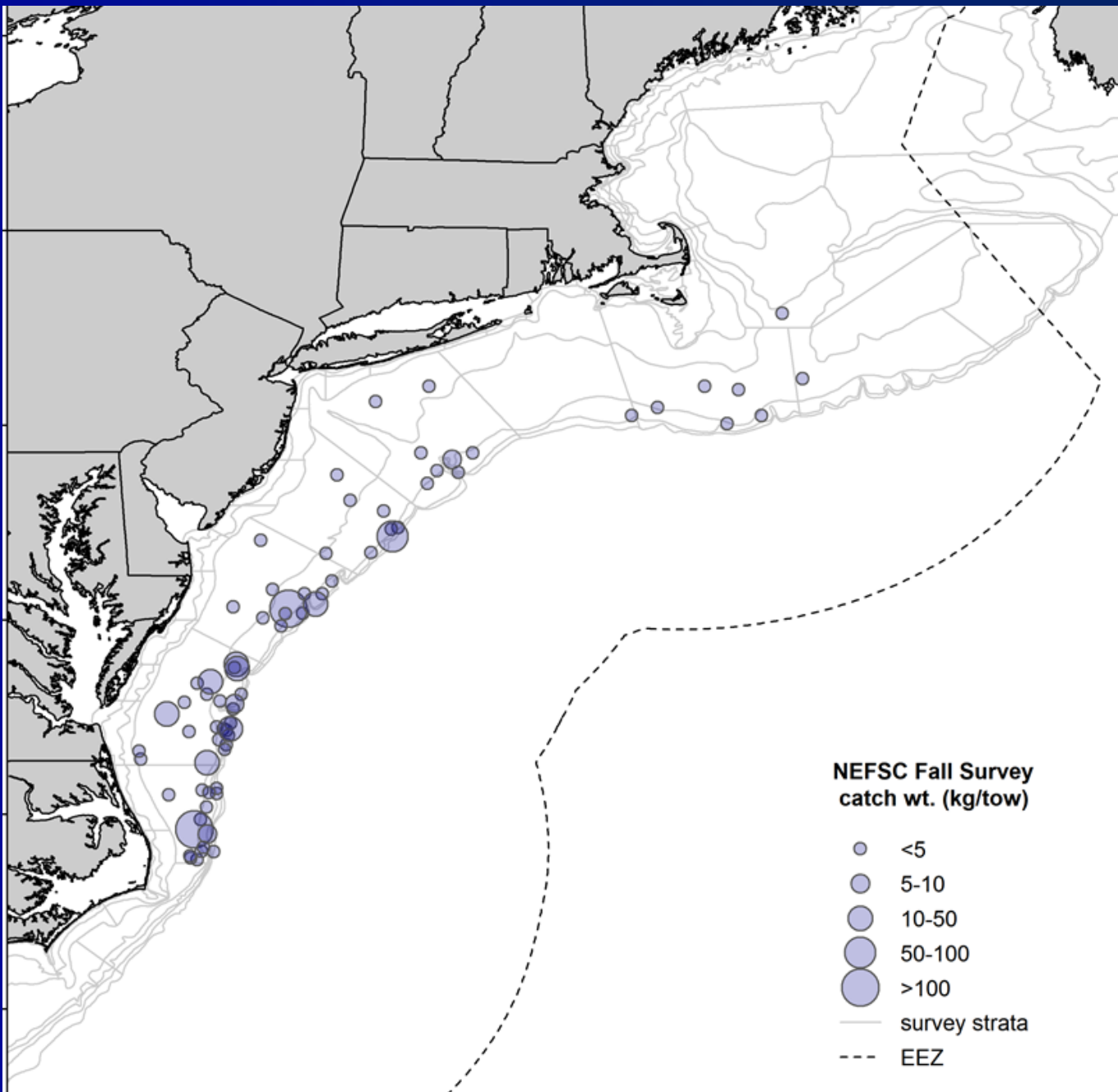
- May be more difficult to control catch and implement measures than ME-FL or ME-NC

AP/Committee – Mgmt Unit

- Atlantic mackerel example – expected Canadian catch deducted from ABC
- Essentially a regional allocation decision
- Need to start with the “right” number – wait to recommend mgmt. unit until after SSC recommends ABC
- Regional differences in fleet capacity

Survey Catches

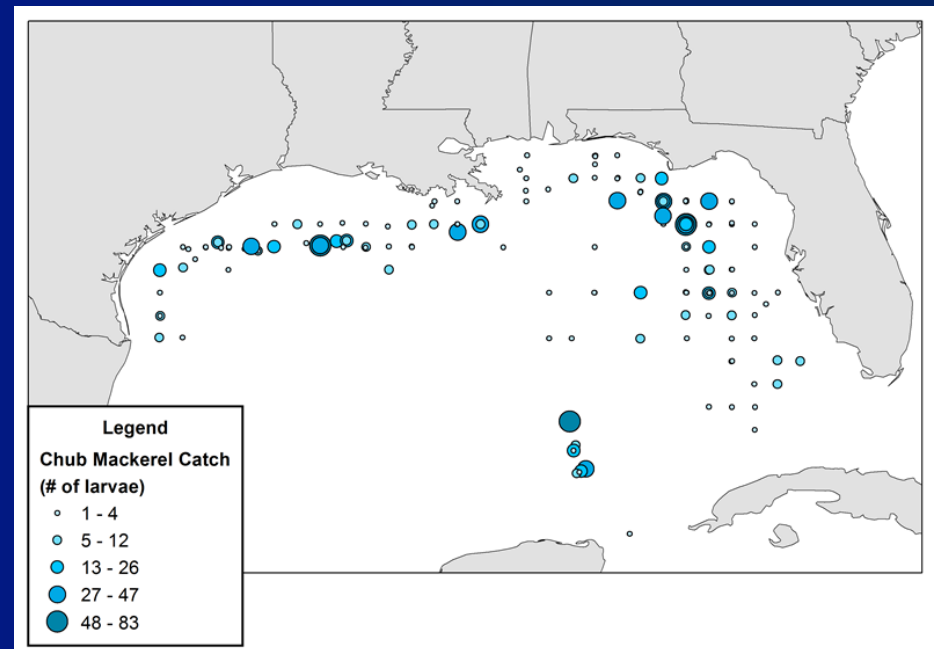
- Low and sporadic
- NEFSC bottom trawl surveys
 - No catches in spring survey, 1963-2016
 - Periodically encountered in fall survey – mostly at warm temps, S. of Hudson Shelf Valley
- Minor catches in state surveys



Survey Catches

■ Larval surveys

- ECOMON – 67 chub larvae IDed, 1977-2016
- SEAMAP – 1,748 larvae collected throughout the northern GOM, 1983-2014
- Richardson et al. (2010) – straits of FL



Other Data Concerns

- Influence of factors other than abundance on CPUE (*Illex* fishery, environment)
- Outside of Daley 2018, no known data on growth and maturity in U.S. Atlantic waters
 - Females mature at 2.16 years, 27.39 cm
 - Spawn during Jan – April in N GOM
 - Fast growth rate
- Uncertainty regarding stock structure

AP – ABC

- Fishery should be allowed to grow
 - Large fisheries in eastern Atlantic
 - A way for pelagic fishermen to stay in business
- Fishery should not grow beyond current limit
 - Ecosystem impacts are unknown
- SSC should consider ABCs ranging from 2,000-5,000 MT (~4-11 million lb)

Note: these are not consensus statements

Committee – ABC

- Recommend that the SSC consider a range of ABCs from 1,300 MT (current limit) to 5,000 MT.
- “In the event that the ABC is reached in three consecutive years, potential management options to limit the ABC will be considered by the Council and implemented through frameworking or changes to the FMP.”

Committee – ABC

- High ABC will allow for fisheries-dependent data collection, could be coupled with additional data collection requirements
- However, SSC shouldn't recommend an ABC based on a data need
- Some interest in postponing further amendment development until more data is available to support ABC

Committee – ABC

- Council not required to manage as stock in fishery once SSC recommends an ABC
- May need to manage as stock in fishery, or not at all
- Ecosystem Component not an option
- Tenuous legal justification to continue managing as neither EC nor stock in fishery

Committee – ABC

- Consider fisheries in eastern Atlantic
- Request multiple ABC options based on multiple mgmt. unit options



Avg. com. & rec. landings in lb

Time Period	ME-NC	ME-FL	ME-TX
2003-2017	675,188	677,709	762,867
2008-2017	963,871	967,620	1,041,141
2013-2017	1,852,235	1,852,621	1,916,182
2013-2015	2,878,810	2,879,439	2,966,221
2013	5,249,567	5,250,807	5,295,612

Commercial Discards

Years	NEFOP Discard %	VTR Discard %
2003-2017	6% (217 trips)	3% (1,894 trips)
2008-2017	5% (199 trips)	3% (1,869 trips)
2013-2017	4% (156 trips)	3% (1,540 trips)
2013-2015	4% (95 trips)	3% (740 trips)
2013	3% (27 trips)	1% (120 trips)

Recreational Discards

Year	Region	Discard %
2002	Gulf of Mexico	7%
2003	Gulf of Mexico	100%
2004	Gulf of Mexico	1%
2010	Gulf of Mexico	13%
2012	Mid-Atlantic	100%
2014	Mid-Atlantic	17%
2016	Mid-Atlantic	16%
2017	North Atlantic	8%
2017	Mid-Atlantic	63%
2017	Gulf of Mexico	1%

Rough Catch Estimates

Time Period	ME-NC	ME-FL	ME-TX
2003-2017	715,699	718,372	808,639
2008-2017	1,012,065	1,016,001	1,093,198
2013-2017	1,926,324	1,926,726	1,992,829
2013-2015	2,993,962	2,994,617	3,084,870
2013	5,407,054	5,408,331	5,454,480

