



**Mid-Atlantic Fishery Management Council**  
800 North State Street, Suite 201, Dover, DE 19901-3910  
Phone: 302-674-2331 | FAX: 302-674-5399 | [www.mafmc.org](http://www.mafmc.org)  
Richard B. Robins, Jr., Chairman | Lee G. Anderson, Vice Chairman  
Christopher M. Moore, Ph.D., Executive Director

## MEMORANDUM

**Date:** March 10, 2016  
**To:** Ecosystem and Ocean Planning Advisory Panel  
**From:** Julia Beaty  
**Subject:** Materials for March 17 Advisory Panel meeting

The following materials are provided for consideration prior to the March, 17, 2016 Ecosystem and Ocean Planning Advisory Panel meeting.

- 1) Summary of Council recommendations for the Unmanaged Forage Omnibus Amendment
- 2) List of species approved by the Council for possible inclusion in the amendment
- 3) Summary of the March 2, 2016 Unmanaged Forage Fishery Management Action Team (FMAT) meeting
- 4) Draft timeline for amendment development
- 5) Updated comprehensive FMAT list of species (with percent diet composition) – available at: <http://www.mafmc.org/council-events/2016/eop-ap-meeting-2>

## Summary of February 2016 Council decisions on Unmanaged Forage Omnibus Amendment

- **List of Unmanaged Forage Taxa:** The Council adopted a list of unmanaged forage taxa (shown on next two pages) to be included in the public hearing document for the amendment. The list is a modified version of a list adopted by the Ecosystem and Ocean Planning Committee in January 2016. It is meant to include ecologically important forage species and species which are or could become the target of directed fisheries. The list may be modified in the future based on input provided at public hearings and recommendations from NOAA Fisheries, the FMAT, advisors, and the EOP Committee.
- **Goal Statement:** The Council agreed to strike “recreational” from the goal statement; therefore, the amendment will henceforth focus on commercial fisheries for unmanaged forage species. The Council added recreational management measures to the list of “frameworkable” items.
  - The draft goal statement reads: *“The goal of this amendment is to prohibit the development of new and expansion of existing directed commercial fisheries on unmanaged forage species in Mid-Atlantic Federal waters until the Council has had an adequate opportunity to both assess the scientific information relating to any new or expanded directed fisheries and consider potential impacts to existing fisheries, fishing communities, and the marine ecosystem, in order to advance ecosystem approaches to fisheries management in the Mid-Atlantic.”*
  - The following draft objectives accompany the goal statement: 1) *Develop criteria to identify unmanaged forage species that are important for Council-managed predators,* 2) *Regulate catch of those species, and,* 3) *Allow new fisheries for those species to develop, or existing fisheries to expand, only after the Council has had an adequate opportunity to both assess the scientific information relating to the fishery and consider potential impacts to existing fisheries, fishing communities, and the greater marine ecosystem*
- **Management alternatives:** The following draft management alternatives were approved by the Council.
  - 1: No Action
  - 2: Alternatives to regulate harvest
    - 2A: Prohibit all possession
    - 2B: Allow an incidental possession limit
    - 2C: Prohibit possession once a catch limit (e.g. a directed fishery possession limit or an annual landings limit) is met
    - 2D: Allow an incidental possession limit once an annual catch limit is met
  - 3: Administrative alternatives
    - 3A: Modify list of approved fisheries and gear types (50 CF 600.725)
    - 3B: Frameworkable items
      - List of Ecosystem Component species
      - Spatial and seasonal closures
      - Gear regulations
      - Possession limits
      - Recreational fishing regulations

# Unmanaged Forage Taxa

As approved by the Council on 2/10/16

The table below contains a list of unmanaged forage taxa approved by the Mid-Atlantic Fishery Management Council for potential inclusion in the Unmanaged Forage Omnibus Amendment. The right-hand column includes examples of species and groups which are encompassed by each taxonomical grouping. This list will be presented during public hearings and may be modified in the future based on public input and recommendations from the Council's advisory bodies and NOAA Fisheries.

Unmanaged Forage Taxa	Examples of unmanaged species or groups found in Mid-Atlantic federal waters
<b>Engraulidae</b> The anchovy family	<ul style="list-style-type: none"> <li>• Striped anchovy, <i>Anchoa hepsetus</i></li> <li>• Dusky anchovy, <i>Anchoa lyolepis</i></li> <li>• Bay anchovy, <i>Anchoa mitchilli</i></li> <li>• Silver anchovy, <i>Engraulis eurystole</i></li> </ul>
<b>Clupeidae</b> The herring family	<ul style="list-style-type: none"> <li>• Round herring, <i>Etrumeus teres</i></li> <li>• Scaled sardine, <i>Harengula jaguana</i></li> <li>• Atlantic thread herring, <i>Opisthonema oglinum</i></li> <li>• Spanish sardine, <i>Sardinella aurita</i></li> </ul>
<b>Argentinidae</b> The argentine family	<ul style="list-style-type: none"> <li>• Striated argentine, <i>Argentina striata</i></li> <li>• Pygmy argentine, <i>Glossanodon pygmaeus</i></li> </ul>
<b>Atherinopsidae</b> The neotropical silverside family	<ul style="list-style-type: none"> <li>• Rough silverside, <i>Membras martinica</i></li> <li>• Inland silverside, <i>Menidia beryllina</i></li> <li>• Atlantic silverside, <i>Menidia menidia</i></li> </ul>
<b>Ammodytidae</b> The sand lance family	<ul style="list-style-type: none"> <li>• American sand lance, <i>Ammodytes americanus</i></li> <li>• Northern sand lance, <i>Ammodytes dubius</i></li> </ul>
<b>Sternoptychidae</b> The pearlside/marine hatchetfish family	<ul style="list-style-type: none"> <li>• Muller's pearlside, <i>Maurolicus muelleri</i></li> <li>• Weizman's pearlside, <i>Maurolicus weitzmani</i></li> </ul>
<b>Chlorophthalmidae</b> The greeneye family	<ul style="list-style-type: none"> <li>• Shortnose greeneye, <i>Chlorophthalmus agassizi</i></li> <li>• Longnose greeneye, <i>Parasudis truculenta</i></li> </ul>
<b>Trichiuridae</b> The cutlassfish family	<ul style="list-style-type: none"> <li>• Atlantic cutlassfish (also referred to as ribbonfish), <i>Trichiurus lepturus</i></li> </ul>
<b>Scombridae</b> The tuna and mackerel family	The Council specified the following species: <ul style="list-style-type: none"> <li>• Atlantic chub mackerel, <i>Scomber colias</i></li> <li>• Bullet mackerel, <i>Auxis rochei</i></li> <li>• Frigate mackerel, <i>Auxis thazard</i></li> <li>• Little tunny/false albacore, <i>Euthynnus alletteratus</i></li> </ul>

<b><i>Scomberesox saurus</i></b> Atlantic saury	
<b>Hemiramphidae</b> The halfbeak family	<ul style="list-style-type: none"> <li>• Flying halfbeak, <i>Euleptorhamphus velox</i></li> <li>• Balao, <i>Hemiramphus balao</i></li> <li>• Ballyhoo, <i>Hemiramphus brasiliensis</i></li> <li>• False silverstripe halfbeak/American halfbeak/Meek's halfbeak, <i>Hyporhamphus meeki</i></li> </ul>
<b><i>Peprilus paru</i></b> Harvestfish	
<b><i>Tautogolabrus adspersus</i></b> Cunner	
<b>Ophidiiformes</b> The cusk eel order	<ul style="list-style-type: none"> <li>• Chain pearlfish, <i>Echiodon dawsoni</i>, carapidae family</li> <li>• Fawn cusk-eel, <i>Lepophidium profundorum</i>, ophidiidae family</li> <li>• Striped cusk-eel, <i>Ophidion marginatum</i>, ophidiidae family</li> </ul>
<b>Pelagic molluscs</b>	<ul style="list-style-type: none"> <li>• Ommastrephidae (the arrow squid family) <ul style="list-style-type: none"> <li>- Sharptail shortfin squid, <i>Illex oxygonius</i></li> <li>- Neon flying squid, <i>Ommastrephes bartramii</i></li> <li>- Oceanic squid, <i>Todarodes sagittatus</i></li> </ul> </li> <li>• Loliginidae (the pencil squid family) <ul style="list-style-type: none"> <li>- Atlantic brief squid, <i>Lolliguncula brevis</i></li> </ul> </li> <li>• Sepiolidae (the bobtail squid family) <ul style="list-style-type: none"> <li>- Odd bobtail squid, <i>Heteroteuthis dispar</i></li> <li>- Big fin bobtail squid, <i>Rossia megaptera</i></li> <li>- Warty bobtail squid, <i>Rossia palpebrosa</i></li> <li>- Lesser shining bobtail squid, <i>Semirossia tenera</i></li> <li>- Butterfly bobtail squid, <i>Stoloteuthis leucoptera</i></li> </ul> </li> <li>• Cranchiidae (the glass or bathyscaphoid squid family)</li> <li>• Sepiidae (the cuttlefish family)</li> <li>• Order octopoda (octopods) <ul style="list-style-type: none"> <li>- Tuberculate pelagic octopus, <i>Ocythoe tuberculata</i>, family Ocythoidae</li> </ul> </li> <li>• Pteropods <ul style="list-style-type: none"> <li>- Order gymnosomata (sea angels)</li> <li>- Order thecosomata (sea butterflies)</li> </ul> </li> </ul>
<b>Copepods, krill, amphipods and any other species under 1 inch as adults</b>	<ul style="list-style-type: none"> <li>• Calanidae (the copepod family)</li> <li>• Euphausiidae (the euphausid krill family)</li> <li>• Order amphipoda (amphipods)</li> <li>• Class ostracoda (ostracods)</li> <li>• Order isopoda (isopods)</li> </ul>



## Unmanaged Forage Fishery Management Action Team

### March 2, 2016 Meeting Summary

The Unmanaged Forage Fishery Management Action Team (FMAT) met via webinar on Wednesday March 2, 2016. The goal of this meeting was to further develop management alternatives for the Unmanaged Forage Omnibus Amendment.

**FMAT members in attendance:** Carly Bari (GARFO), Julia Beaty (MAFMC), Jay Hermsen (GARFO), Min-Yang Lee (NEFSC), Shanna Madsen (ASMFC), Katie Richardson (GARFO), Laurel Smith (NEFSC), David Stevenson (GARFO).

**Others in attendance:** Katie Almeida, Purcie Bennett-Nickerson, Greg DiDomenico, Warren Elliott, Joseph Gordon, Pam Lyons Gromen, Jeff Kaelin, Meghan Lapp, Genny Nessler, Rick Robins, Ryan Silva, Kate Wilke.

### Exempted Fishing Permits

The Council is interested in the use of Exempted Fishing Permits (EFPs) as a first step in a process to allow new fisheries to develop for the forage species which are ultimately included in the amendment. The process for applying for an EFP and the necessary components of an EFP application are described in detail in NMFS' [Research Documentation Guidance](#).

Ryan Silva, Cooperative Research Specialist with GARFO, discussed the process for obtaining EFPs from GARFO. Ryan explained that EFPs allow vessels to pursue activities (usually research activities) that are otherwise prohibited by regulations. He noted that EFPs are intended to be discrete tools to look at focused issues and are not meant to become operational components within FMPs. Most EFPs are issued for one year, but can be renewed annually.

As with other fisheries actions, NMFS is required to evaluate the impacts of EFPs on managed species, protected species, habitat, and human communities. EFPs must be in line with the applicable management program (e.g., the FMP from which the exemption is being requested).

GARFO attempts to process EFP applications within 60 days. Applications are first reviewed to ensure that they are complete. They are then subject to a public comment period, which usually lasts 15 days. After the public comment period, GARFO decides whether or not to approve the application. Councils are generally notified of EFP applications relevant to their FMPs prior to the public comment period.

The regulations which describe how to apply for an EFP and which give NMFS Regional Administrators the authority to approve or disapprove EFPs are codified at 50 CFR 600.745. These are national regulations and the Council does not have the authority to modify them. Regulations for EFPs in the Greater Atlantic Region can be found at 50 CFR 628.12. The Council does have the authority to modify these regulations; however, these regulations cannot supersede the national regulations at 50 CFR 600.745. For example, if the Council were to develop an additional process for Council review of EFP applications, this would not prevent individuals from submitting applications directly to GARFO, as is allowed in the regulations.

The Pacific Council developed a process for Council, SSC, and advisory panel review of EFP applications. Council approval of EFP applications prior to submission to NMFS is considered beneficial; however, it is not required. Their process does not prevent individuals from submitting EFP applications directly to NMFS.

Ryan Silva stated that GARFO processes EFP applications as efficiently as possible; however, the agency is nonetheless criticized for the amount of time needed. The Council may want to be cautious of adding additional steps which would significantly increase the time needed to review EFPs.

### List of Unmanaged Forage Species

In February 2016, the Council approved a [list of unmanaged forage taxa](#) for potential inclusion in the Unmanaged Forage Omnibus Amendment. The FMAT has some concerns about this list, namely that it is not clear why certain taxa are on the Council-approved list and others are not. For example, as described later in this document, it appears that only a small percentage of sand lance, harvestfish, and Atlantic silverside landings in the Mid-Atlantic over the past 20 years were caught in Federal waters. The Unmanaged Forage Amendment will impose new regulations on Federally-permitted vessels in the Greater Atlantic Region; therefore there may be little benefit to including these species in the amendment.

Bullet mackerel and frigate mackerel are on the Council's list, but are not found in the diets of Council-managed predators and have not yet been identified as bycatch in Council-managed fisheries (though the FMAT has to date only examined bycatch in bottom trawl fisheries). Because the Unmanaged Forage Omnibus Amendment will be an amendment to the Council's existing FMPs, the forage species which are included in the amendment must be linked to one or more FMP fisheries, either as prey for the managed species or as bycatch in the managed fisheries. The FMAT recognized that some Council members are concerned about expanding fisheries for little tuna; however, they did not think it was appropriate to add little tuna as an Ecosystem Component to existing FMPs through the Unmanaged Forage Amendment, both because little tuna are not a forage species and because no link to the Council's FMPs has yet been identified.

### Management Alternatives

The Council is currently considering the following management alternatives for the Unmanaged Forage Omnibus Amendment:

- 1: No Action
- 2: Alternatives to regulate harvest
  - 2A: Prohibit all possession
  - 2B: Allow an incidental possession limit
  - 2C: Prohibit possession once a catch limit (e.g. a directed fishery possession limit or an annual landings limit) is met
  - 2D: Allow an incidental possession limit once an annual catch limit is met
- 3: Administrative alternatives
  - 3A: Modify list of approved fisheries and gear types (50 CF 600.725)
  - 3B: Frameworkable items
    - List of Ecosystem Component species
    - Spatial and seasonal closures
    - Gear regulations
    - Possession limits
    - Recreational fishing regulations

The FMAT recommended that Alternatives 2C and 2D focus on landings limits, rather than catch limits. The FMAT agreed that catch limits have a higher likelihood of creating negative unintended consequences, compared to landings limits. The FMAT also noted that the amendment is focused on directed fisheries for unmanaged forage species and that landings, not discards, define a directed fishery.

One FMAT member clarified that just because an item is listed as frameworkable, doesn't necessarily mean it can be completed more efficiently than if it were implemented through an amendment. The level of NEPA analysis required for a framework depends on the analysis included in the initial action documentation and on the alternatives considered through the framework. As the management alternatives are currently written for this amendment, spatial and seasonal closures, gear regulations, and recreational fishing regulations would not be analyzed as full alternatives; therefore the final amendment document may not contain sufficient analysis to support framework actions for these items. The Magnuson Act contains requirements for frameworkable items and it is generally left to NMFS General Counsel to determine if a particular item meets those requirements.

## Landings Data

The FMAT discussed landings data for certain species on the list approved by the Council and discussed how these data could be used to develop recommendations for possession limits and landings limits. The FMAT examined landings data from Maine through North Carolina from 1996 through 2015. Landings data were only available for 14 species on the list approved by the Council. In some cases, landings data were not available because there were no associated species codes in the dealer data base. In other cases, there were codes but no reported landings. One FMAT member noted that it is a relatively simple process to add codes to the dealer database and that dealers are required to report all species they purchase, though it is not always possible to identify every species to the species level.

The landings data were presented in four categories:

- 1) Species for which the majority of landings were from non-GARFO-permitted vessels
- 2) Species with relatively low landings
- 3) Highly migratory species
- 4) Species with relatively large amounts of landings by GARFO-permitted vessels

### Majority of landings from non-GARFO-permitted vessels

From 1996 through 2015, four species of interest (sand lance, harvestfish, ribbonfish<sup>1</sup>, and Atlantic silverside) were landed predominantly by vessels which did not have GARFO permits (Table 1, Figure 1). These vessels may have had state permits or South Atlantic permits. This implies that most of these landings came from state waters or from the South Atlantic; however, one FMAT member cautioned that under the permitting requirements in the 1990s, some vessels may have been able to harvest these species in Mid-Atlantic Federal waters without a GARFO

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<sup>1</sup> Ribbonfish (family trachipteridae) are not on the list of species approved by the Council in February 2016. One Council member noted that cutlassfish (family trichiuridae), which are on the Council's list, are often called ribbonfish; therefore, the FMAT decided to examine landings data for both "cutlassfish" and "ribbonfish".

permit. Council staff reproduced Table 1 for the years 2006-2015 after the FMAT meeting. These data show a similar pattern as the data for 1996-2015 (Table 2).

If most of these landings were in fact from state waters or the South Atlantic, as the data imply, then possession limits or landings limits implemented through the Unmanaged Forage Amendment would likely have a minimal impact on overall landings of these species as the amendment is intended to apply to Mid-Atlantic Federal waters.

**Table 1:** Dealer reported landings of sand eel, harvestfish, ribbonfish, and Atlantic silverside, 1996-2015.

Pounds landed by vessel permit type, 1996-2015	Permit type		Grand Total
	GARFO	non-GARFO	
Row Labels	GARFO	non-GARFO	Grand Total
EEL, SAND (LANCE)	2,898 (4%)	78,136 (96%)	81,034
HARVEST FISH	448,881 (16%)	2,291,872 (84%)	2,740,753
RIBBONFISH	75,586 (25%)	229,405 (75%)	304,991
SILVERSIDE, ATLANTIC	18,674 (4%)	463,698 (96%)	482,372
<b>Grand Total</b>	<b>546,039</b>	<b>3,063,111</b>	<b>3,609,150</b>

**Table 2:** Dealer reported landings of sand eel, harvestfish, ribbonfish, and Atlantic silverside, 2006-2015.

Pounds landed by vessel permit type, 2006-2015	Permit type		Grand Total
	GARFO	non-GARFO	
Row Labels	GARFO	non-GARFO	Grand Total
EEL, SAND (LANCE)	2,798 (5%)	56,516 (95%)	59,314
HARVEST FISH	335,688 (17%)	1,638,335 (83%)	1,974,023
RIBBONFISH	61,546 (26%)	175,050 (74%)	236,596
SILVERSIDE, ATLANTIC	490 (0.4%)	113,285 (99.6%)	113,775
<b>Grand Total</b>	<b>400522</b>	<b>1983186</b>	<b>2,383,708</b>

### Species with relatively low landings

Four species on the Council's list – argentine, bay anchovy, and octopus – had relatively low dealer-reported landings (i.e., less than 40,000 pounds) from 1996-2015 (Table 3).

**Table 3:** Dealer reported landings of argentine, bay anchovy, and octopus, 1996-2015.

Pounds landed by vessel permit type, 1996-2015	Permit type		Grand Total
	GARFO	non-GARFO	
Row Labels	GARFO	non-GARFO	Grand Total
ARGENTINE	19,111 (62%)	11,790 (38%)	30,901
BAY ANCHOVY	8,486 (84%)	1,668 (16%)	10,154
OCTOPUS	23,880 (67%)	11,688 (33%)	35,568
<b>Grand Total</b>	<b>51,477</b>	<b>25,146</b>	<b>76,623</b>

### Highly Migratory Species

The FMAT considered landings data for three highly migratory species – bonito, blackfin tuna, and little tuna (Table 4). The FMAT examined these data because the list of species approved by the Council includes: "Scombridae (chub, bullet, frigate, little tuna)". The Council likely intended to include only chub mackerel, bullet mackerel, frigate mackerel, and little tuna (also known as false albacore). Council staff will clarify this in the future.

**Table 4:** Dealer reported landings of bonito, blackfin tuna, and little tuna 1996-2015.

Pounds landed by vessel permit type, 1996-2015	Permit type		Grand Total
	GARFO	non-GARFO	
Row Labels	GARFO	non-GARFO	Grand Total
BONITO	1,441,875 (75%)	491,872 (25%)	1,933,747
TUNA, BLACKFIN	79,630 (49%)	83,325 (51%)	162,955
TUNA, LITTLE	2,331,151 (60%)	1,526,234 (40%)	3,857,385
<b>Grand Total</b>	<b>4,092,179</b>	<b>2,226,083</b>	<b>6,318,262</b>

Species with relatively high landings by GARFO-permitted vessels

The FMAT noted that, compared to the other species with available landings data, there were relatively high dealer-reported landings of cunner, Atlantic cutlassfish, chub mackerel, and frigate mackerel from 1996-2015 (Table 5). Bullet mackerel did not have a species code in the dealer database. An internet search revealed that bullet mackerel and frigate mackerel can be very difficult to distinguish.

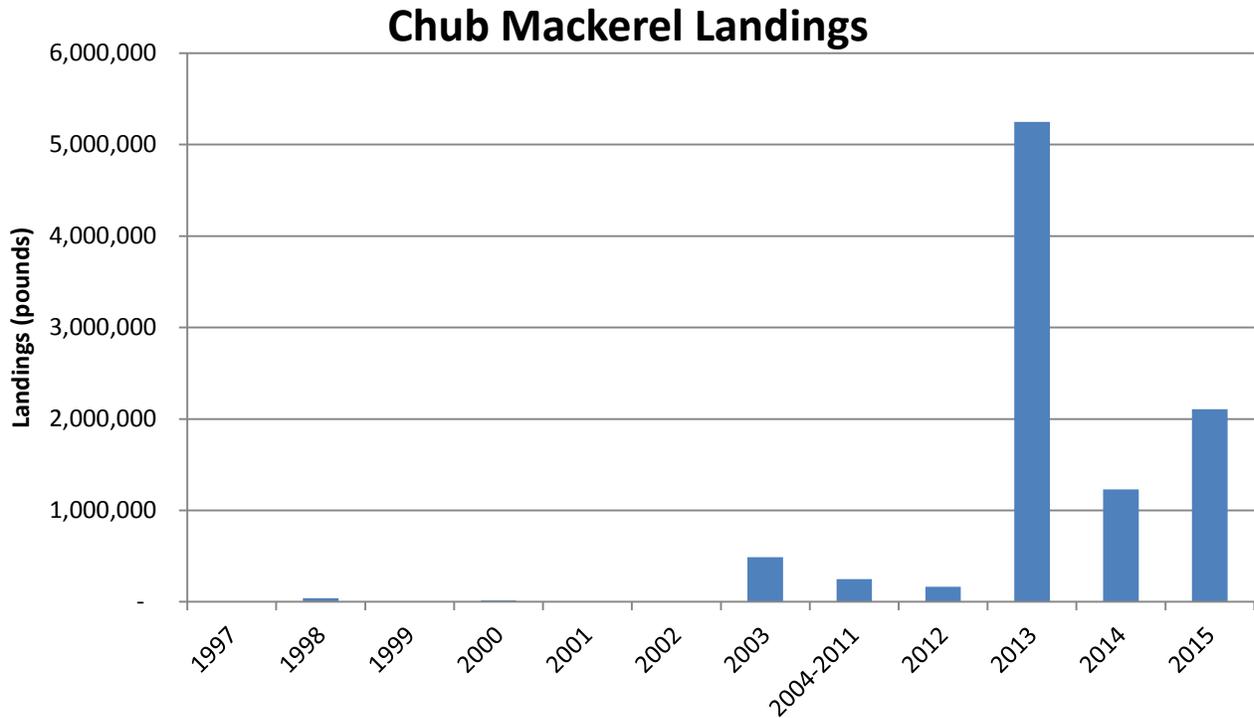
The FMAT examined dealer reported landings of chub mackerel by year (Table 6, Figure 1). Chub mackerel had much higher landings over the 1996-2015 time series than any other species on the Council's list.

**Table 5:** Dealer reported landings of cunner, Atlantic cutlassfish, chub mackerel, and frigate mackerel, 1996-2015.

Pounds landed by vessel permit type, 1996-2015	Permit type		Grand Total
	GARFO	non-GARFO	
CUNNER	155,898 (86%)	26,359 (14%)	182,257
CUTLASSFISH, ATLANTIC	438,995 (73%)	164,882 (27%)	603,877
MACKEREL, CHUB	9,575,371 (99%)	6,137 (1%)	9,581,508
MACKEREL, FRIGATE	77,774 (79%)	20,557 (21%)	98,331
<b>Grand Total</b>	<b>10,248,038</b>	<b>217,935</b>	<b>10,465,973</b>

**Table 6:** Dealer-reported chub mackerel landings, 1997-2015. Landings from 2004 through 2011 were summed for confidentiality.

Year	Chub mackerel landings (pounds)	Revenue (dollars)	Price per pound
1997	5,013	824	\$0.16
1998	40,219	7,354	\$0.18
1999	6,443	2,291	\$0.36
2000	16,246	5,218	\$0.32
2001	4,384	4,339	\$0.99
2002	471	205	\$0.44
2003	488,316	24,429	\$0.05
2004-2011	247,989	47,198	\$0.19
2012	164,847	62,858	\$0.38
2013	5,249,686	997,378	\$0.19
2014	1,230,411	334,121	\$0.27
2015	2,108,337	485,472	\$0.23



**Figure 1:** Dealer-reported chub mackerel landings, 1997-2015. Landings from 2004 through 2011 were summed for confidentiality.

Summary statistics for all species with dealer-reported landings

The FMAT examined summary statistics for trip-level landings from 1996-2015 (Table 7). Trip-level landings of most species showed highly skewed distributions, with the vast majority of trips landing relatively small amounts and a very small percentage of trips landing high volumes. This is illustrated in Table 7 for Atlantic cutlassfish, chub mackerel, ribbonfish, and other species where the mean is much higher than the median. Frequency distributions were not shown to protect confidentiality.

**Table 7:** Summary statistics (in pounds) for trip-level landings, 1996-2015. Numbers in parentheses are the number of trips which landed at least the number of pounds shown. Confidential data is labeled “C” (in cases where the number of dealers and/or vessels which purchased or landed more than the amount of landings shown is confidential).

Species	Median	Mean	75 <sup>th</sup> percentile	90 <sup>th</sup> percentile	95 <sup>th</sup> percentile	99 <sup>th</sup> percentile	Total Landings	Total Trips
Argentine	207 lb (35 trips)	441 lb (22 trips)	C	C	C	C	30,901	70
Atlantic cutlassfish	10 lb (1,303 trips)	238 lb (464 trips)	100 lb (635 trips)	718 lb (254 trips)	1,509 lb (128 trips)	3,247 lb (26 trips)	603,878	2,535
Atlantic silverside	175 lb (967 trips)	251 lb (584 trips)	300 lb (482 trips)	480 lb (203 trips)	680 lb (98 trips)	C	482,372	1,920
Bay anchovy	5 lb (88 trips)	62 lb (20 trips)	15 lb (45 trips)	90 lb (18 trips)	428 lb (9 trips)	C	10,154	164
Chub mackerel	16 lb (485 trips)	9,919 lb (93 trips)	114 lb (242 trips)	7,815 lb (97 trips)	C	C	9,581,508	966
Cunner	4 lb (5,491 trips)	18 lb (1,950 trips)	12 lb (2,609 trips)	38 lb (1,040 trips)	68 lb (521 trips)	247 lb (103 trips)	182,260	10,220
Frigate mackerel	11 lb (594 trips)	84 lb (189 trips)	37 lb (296 trips)	154 lb (118 trips)	300 lb (61 trips)	1,403 lb (12 trips)	98,331	1,167
Harvest fish	8 lb (21,722 trips)	66 lb (6,378 trips)	32 lb (10,667 trips)	108 lb (4,195 trips)	233 lb (2,095 trips)	868 lb (404 trips)	2,740,767	41,820
Little tuna	36 lb (14,814 trips)	127 lb (6,071 trips)	100 lb (7,490 trips)	260 lb (2,964 trips)	468 lb (1,473 trips)	1,479 lb (295 trips)	3,751,024	29,439
Octopus	12 lb (511 trips)	35 lb (290 trips)	39 lb (257 trips)	90 lb (102 trips)	145 lb (51 trips)	298 lb (11 trips)	35,638	1,010
Ribbonfish	19 lb (566 trips)	271 lb (163 trips)	100 lb (287 trips)	532 lb (113 trips)	1,306 lb (57 trips)	4,480 lb (12 trips)	304,991	1,125
Sand eel	25 lb (1,215 trips)	36 lb (744 trips)	43 lb (574 trips)	65 lb (233 trips)	84 lb (114 trips)	C	81,034	2,258

## Management alternatives to regulate harvest

The FMAT agreed that developing and implementing separate possession and/or landings limits for each species ultimately included in the amendment could create an undue burden on fishermen, dealers, and GARFO. Depending on which species are included, some of them may be difficult to distinguish, which will pose challenges for reporting. It could also be burdensome in terms of monitoring and implementing in-season actions, if any are necessary. GARFO already monitors landings of many species on a weekly basis and adding several more landings limits for individual forage species could significantly increase this workload. The FMAT recommended that the Council consider options for a small number of groupings of forage species, each with their own possession and/or landings limits. The FMAT wished to examine additional data on which species co-occur in terms of catch and landings before recommending possible landings limits. The FMAT also recommended that the advisors and the public provide advice on how the species should be grouped in such a way that the landings limits would not create undue burdens or unintended negative consequences.

The FMAT decided to compile additional data on which species are landed together, starting with the species shown in Table 5. The FMAT will meet again via webinar on March 14, 2016, to discuss this data and to discuss possible possession and landings limits in more detail. The FMAT brainstormed some ideas of how to develop these recommendations. They discussed the idea of implementing an overall annual landings limits to account for the highest level of landings in recent years (as a way of “freezing the footprint”), with an incidental possession limit enforced once the annual landings limit is reached. The incidental possession limit could be based on a certain percentile of trip-level landings in recent years. The FMAT also discussed the idea of having no landings cap for those species with minimal or no reported landings. If this idea were to be implemented, the FMAT recommended monitoring these landings on an annual or biannual basis so the Council and GARFO could react to increases in landings if necessary. The FMAT also recommended that only key species of concern be monitored on a weekly basis and that others be monitored on an annual or biannual basis to prevent creating an undue burden on GARFO. If annual or biannual landings reports show a substantial increase in landings, weekly monitoring could then be implemented.

The FMAT did not recommend adding a species code to SAFIS for every species which may be included in the amendment. Rather, they recommended that new codes be added as they are needed, noting that it should be a relatively simple process for a dealer to request that a new code be added by calling the SAFIS help desk.

## Public comment

One individual said that if the Council reviews EFP applications prior to submission to GARFO, then the Science and Statistical Committee and advisory panels should review the applications as well.

Two individuals said only a small number of vessels commercially target chub mackerel and there is little potential for expansion of this fishery. One individual said that possession limits in the chub mackerel fishery would effectively prevent the fishery from operating, as the few boats which target them rely on very high catches.

One individual commented that landings limits (as opposed to catch limits) would allow forage species to be caught in the Mid-Atlantic but landed in a different region.

One individual requested that HMS, harvestfish, and cutlassfish be removed from the amendment. He said that harvestfish and cutlassfish are harvested with fixed gear such as pound nets and weirs and that there is no potential for those fisheries to expand. He said that little tuna, bonito, and frigate mackerel are commercially targeted with gill nets and that they are caught together. He said this fishery is highly regulated, difficult to pursue, and also has no potential to expand. Another individual commented that little tuna and bonito are targeted together in a gillnet exemption area off Rhode Island in Federal waters.

### *Draft timeline for amendment development and implementation*

<i>Date</i>	<i>Action</i>	<i>Location</i>
December 2014	Council passes motion to protect unmanaged forage species	Council meeting Baltimore, MD
April 2015	Council discusses next steps	Council meeting Long Branch, NJ
May 2015	FMAT formed	---
June 2015	Council approves scoping plan	Council meeting Virginia Beach, VA
June 2015 – late 2016 (subject to change)	FMAT develops alternatives	---
August - October 2015	Public scoping hearings	8 locations from RI to NC, including a webinar
October 2015	Council considers scoping comments, passes motion for omnibus amendment	Council meeting Philadelphia, PA
December 2015	Council discusses range of alternatives, draft purpose and need statement, and preliminary list of species	Council meeting Annapolis, MD
January 2016	Ecosystem and Ocean Planning Advisory Panel and Committee meetings to develop recommendations for amendment	Webinar
February 2016	Council adopts list of species for possible inclusion in amendment, adopts draft goal statement and draft management alternatives	Council meeting New Bern, NC
March 2016	Ecosystem and Ocean Planning Advisory Panel and Committee meetings to develop recommendations for amendment	Linthicum Heights, MD
April 2016 (subject to change)	Council approves amendment for public hearings (expected)	Council meeting Montauk, NY
May 2016 (subject to change)	Public hearings	TBD
June or August 2016 (subject to change)	Council considers comments received during public hearings, FMAT analysis, and other recommendations, and selects preferred management alternatives	Council meeting Newark, DE (June) or Virginia Beach (August)
Fall 2016 (subject to change)	Staff submits relevant documents to NMFS for secretarial approval	---
Late 2016/early 2017 (subject to change)	Final rule effective	---