



**MONKFISH FISHERY PERFORMANCE REPORT**  
**DRAFT as of May 2, 2022**

This Fishery Performance Report provides a brief overview of the biology, stock condition, management system, and fishery performance for monkfish, with an emphasis on the last few years. This report is intended to help the Monkfish Committee, Scientific and Statistical Committee, and Councils understand the fishery and to help interpret fishery data; it may help understand trends in and relationships between landings and abundance.

The Monkfish Advisory Panel (AP) met on May 4, 2022 [insert link to meeting summary when ready], to review the data in this report and develop input on fishing effort, market trends, environmental changes, and other factors impacting the fishery. For more information about the monkfish fishery, visit the [Monkfish Fishery Management Plan webpage](#) of the New England Fishery Management Council (NEFMC) and the [Commercial Fishing Performance Measures](#) webpage of the Northeast Fisheries Science Center.

**Key Facts:**

- [insert 5-6 highlights, after Advisory Panel provides input.]

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## BASIC BIOLOGY

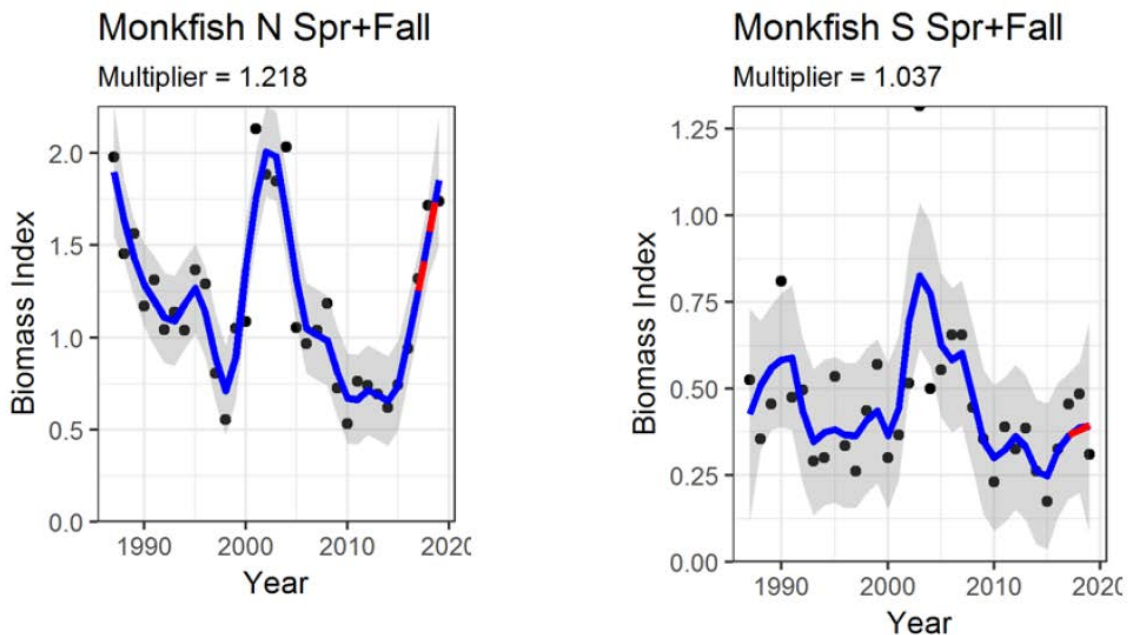
Monkfish (*Lophius americanus*), also called goosefish, occur in the Northwest Atlantic Ocean from the Grand Banks and northern Gulf of St. Lawrence south to Cape Hatteras, North Carolina (Collette & Klein-MacPhee 2002). Seasonal onshore-offshore migrations occur (from inshore areas to depths of at least 900 m) and appear to be related to spawning and possibly food availability (Richards et al. 2008). Stock structure is not well understood, but two assessment and management areas for monkfish, northern and southern, were defined in 1999 through the original Fishery Management Plan based on patterns of recruitment and growth and differences in how the fisheries are prosecuted (NEFSC 2020).

## STATUS OF THE STOCK

An overfishing limit (OFL) for each the northern and southern monkfish stocks has been defined as the product of the fishing mortality threshold ( $F_{max}$ ) and the current estimate of exploitable biomass ( $B_{current}$ ). The stock assessments in 2010 and 2013 concluded that the northern and southern monkfish stocks were not overfished and overfishing was not occurring but recognized significant uncertainty in this determination. After the 2013 assessment, the OFLs were lowered for FY 2014-2016 to 17,805 mt and 23,204 mt for the northern and southern stocks, respectively.

The stock assessments in 2016 and 2019 did not update the growth model that had been used since 2007 to assess the monkfish stocks after its use was rejected by age validation research in 2016. Instead, the stock was assessed using the “Plan B” method. These assessments concluded that many of the biological reference points were no longer appropriate due to invalidation of the growth model, and thus were not updated. The OFLs have remained at the levels set for FY 2014. The 2019 assessment determined that a strong recruitment event in 2015 led to an increase in biomass in 2016-2018 (Figure 1), though abundance declined in 2019 as recruitment returned to average levels (NEFSC 2020; Richards 2016). The status of the stocks will be revisited with updated data in the 2022 Monkfish Management Track Assessment, which will be peer reviewed in September 2022.

Figure 1. Results of "Plan B" analysis from 2019 monkfish assessment (NEFSC 2020).



Note: Points are observed biomass indices, lines are loess-smoothed indices, “multiplier” is slope of log-linear regression through terminal three smoothed points. Results using spring and fall indices.

## ***MANAGEMENT SYSTEM***

The monkfish fishery in U.S. waters has been jointly managed since 1999 under the Monkfish Fishery Management Plan (FMP) by the NEFMC and the Mid-Atlantic Fishery Management Council (MAFMC), with the NEFMC having the administrative lead. The fishery extends from Maine to North Carolina out to the continental shelf margin. The fishery is managed as two separate stocks; the Northern Fishery Management Area (NFMA) covers the Gulf of Maine (GOM) and northern part of Georges Bank (GB), and the Southern Fishery Management Area (SFMA) extends from the southern flank of GB through the Mid-Atlantic Bight to North Carolina. The fishery is primarily managed with a yearly allocation of days-at-sea (DAS) and landing limits.

Specifications follow a hierarchy of an acceptable biological catch (ABC), and an annual catch limit (ACL) set equal to the ABC, an annual catch target (ACT) set equal to 97% of the ACL, and total allowable landings (TAL) set equal to the difference between the ACT and expected discards. These specifications are set for each management area to reduce the likelihood of the ACL being exceeded. The NFMA monkfish fishery is closely integrated with the Northeast multispecies fishery, and is primarily a trawl fishery, while the SFMA fishery is primarily a gillnet fishery targeting monkfish (with some vessels also landing skates). The differences between the two areas have resulted in some variations in management measures, such as landing limits and DAS restrictions.

Fishery specifications are set every three years. For FY 2020-2022, the ABC in the NFMA increased by 10% and was status quo in the SFMA relative to FY 2017-2019 (Table 1). The discard deduction from the ACT, as a percent of ABC, increased for FY 2020-2022 (set using fishery data from the prior three years). The discards for the NFMA increased from 13.9% to 18.2% of the ABC; the SFMA discards increased from 24.6% to 50.8% over the same timeframe. The large increase in SFMA discards is likely due to the large 2015-year class and predominantly the discards in dredge gear.

**Table 1. Specifications for FY 2020-2022 (Framework 12).**

|                                     | <b>Northern FMA</b> | <b>Southern FMA</b> |
|-------------------------------------|---------------------|---------------------|
|                                     | <b>(mt)</b>         | <b>(mt)</b>         |
| <b>ABC = ACL</b>                    | 8,351               | 12,316              |
| <b>ACT (97% of ACL)</b>             | 8,101               | 11,947              |
| <b>Expected Discards</b>            | (-18.2%) 1,477      | (-50.8%) 6,065      |
| <b>Federal TAL (ACT – discards)</b> | 6,624               | 5,882               |

## ***FISHERY PERFORMANCE***

### ***Permits and Vessels***

The Monkfish FMP has [seven types of federal permits](#): six categories of limited access permits (A-D, F, H) and one open access permit (E, Table 2). The number of fishing vessels with limited access vessels has lowered over the past decade, from 670 to 562 (Table 3). Of those vessels, about 35-48% landed over 1 lb of monkfish each year and about 9-20% landed  $\geq 10,000$  lb of monkfish. Permit category C and D vessels consistently account for the greatest portion of vessels with monkfish permits and landing monkfish (Table 3, Table 4).

**Table 2. Monkfish permit categories.**

| Permit Category | Description |  |
|-----------------|-------------|--|
| Limited Access  | A           | DAS permit that <i>does not</i> also have a groundfish or scallop limited access permit (possession limits vary with permit type). |
|                 | B           |  |
|                 | C           | DAS permit that <i>also</i> has a groundfish or scallop limited access permit (possession limits vary with permit type).           |
|                 | D           |  |
|                 | F           | Seasonal permit for the offshore monkfish fishery.   |
|                 | H           | DAS permit for use in the Southern Fishery Management Area <i>only</i> .   |
| Open Access     | E           | Open access incidental permit.   |

**Table 3. Fishing vessels with federal monkfish permits, with number of vessels landing over 1 lb and 10,000 lb, FY 2012-2021.**

| Permit Category | 2012       |            |            | 2015       |            |           | 2018       |            |           | 2021       |            |            |
|-----------------|------------|------------|------------|------------|------------|-----------|------------|------------|-----------|------------|------------|------------|
|                 | All        | >1lb       | >10K lb    | All        | >1lb       | >10K lb   | All        | >1lb       | >10K lb   | All        | >1lb       | >10K lb    |
| A               | 22         | 6          | 4          | 22         | 4          | *         | 20         | *          | *         | 18         | 8          | 6          |
| B               | 44         | 9          | 5          | 42         | 4          | *         | 38         | 6          | 4         | 38         | 19         | 15         |
| C               | 295        | 148        | 60         | 267        | 128        | 30        | 268        | 110        | 30        | 255        | 114        | 42         |
| D               | 292        | 94         | 28         | 242        | 59         | 10        | 226        | 77         | 18        | 229        | 115        | 50         |
| F               | 9          | 6          | 4          | 17         | 9          | *         | 17         | 14         | 4         | 14         | 13         | 0          |
| H               | 8          | 5          | 4          | 8          | 6          | 5         | 7          | 6          | 3         | 8          | *          | 0          |
| <b>Total LA</b> | <b>670</b> | <b>268</b> | <b>105</b> | <b>598</b> | <b>210</b> | <b>51</b> | <b>576</b> | <b>214</b> | <b>60</b> | <b>562</b> | <b>270</b> | <b>113</b> |
| E               | 1,743      | 338        | 19         | 1,578      | 247        | 8         | 1,525      | 247        | 20        | 1,485      | 176        | 7          |

Source: GARFO Permit database and DMIS as of April 2022.

**Table 4. Proportion of monkfish landings by permit category to total monkfish landings in the year, FY2012-2021.**

| Permit Category   | 2012        | 2015        | 2018        | 2021        |
|---|-------------|-------------|-------------|-------------|
| <b>A and B</b>  | 15%         | 13%         | 16%         | 12%         |
| <b>C and D</b>  | 75%         | 80%         | 77%         | 83%         |
| <b>F</b>  | 2%          | 2%          | 1%          | >1%         |
| <b>H</b>  | 1%          | 1%          | 1%          | 0%          |
| <b>E</b>  | 7%          | 5%          | 5%          | 4%          |
| <b>All</b>  | <b>100%</b> | <b>100%</b> | <b>100%</b> | <b>100%</b> |
| <i>Source: GARFO Permit database and DMIS as of April 2022.</i> |             |             |             |             |

*Fishery Effort*

Effort controls such as possession limits and Days-at-Sea (DAS) are used to help ensure that the fishery landings remain within the TAL. Framework 10 established the possession limits and DAS allocations for FY 2017-2019, and these remain unchanged through FY 2022.

*Use of Days-At-Sea allocated*

DAS allocations have remained the same since FY 2017 ([FW10](#)). Limited access vessels are allocated 45.2 monkfish DAS per vessel per fishing year, 37 of which can be used in the Southern Fishery Management Area. An average of 575 permits were allocated DAS between FY 2019 – FY 2021, where permit categories C and D accounted for the greatest number of allocated DAS with about 10-11,000 DAS allocated for each (Table 5). There is a substantial amount of latent effort in the monkfish fishery; the number of DAS used is far below the DAS allocated. Further, the number of active vessels, where vessels used at least one monkfish DAS, is also less than the total number of monkfish permits issued. More specifically, in FY 2021 between 4 – 38% of vessels used at least one monkfish DAS (range varies based on permit category), FY 2020 and FY 2019 show a similar trend of between 6-62% and 9-64% of active vessels, respectively.

**Table 5. Monkfish DAS usage, FY 2019 – 2021.**

| Permit Category  | All Vessels        |               |          | # of Active Vessels |
|--|--------------------|---------------|----------|---------------------|
|  | Total # of Permits | DAS Allocated | DAS Used |                     |
| <b>FY 2019</b>   |                    |               |          |                     |
| <b>A</b>   | 21                 | 909           | 385      | 11                  |
| <b>B</b>   | 39                 | 1,689         | 750      | 25                  |
| <b>C</b>   | 273                | 11,821        | 583      | 24                  |
| <b>D</b>   | 238                | 10,305        | 850      | 42                  |
| <b>FY 2020</b>   |                    |               |          |                     |
| <b>A</b>   | 15                 | 650           | 193      | 9                   |
| <b>B</b>   | 37                 | 1,602         | 444      | 23                  |
| <b>C</b>   | 268                | 11,604        | 334      | 17                  |
| <b>D</b>   | 229                | 9,916         | 490      | 32                  |
| <b>FY 2021</b>   |                    |               |          |                     |
| <b>A</b>   | 18                 | 779           | 130      | 5                   |
| <b>B</b>   | 37                 | 1,602         | 280      | 14                  |
| <b>C</b>   | 255                | 11,042        | 177      | 11                  |
| <b>D</b>   | 223                | 9,656         | 397      | 24                  |
| <p><i>Source:</i> NMFS Vessel Permits and Allocation Management System (AMS) databases, accessed March 2022.</p> <p><i>Notes:</i> *Active = vessels that used &gt;0 monkfish DAS. Permit categories F and H account for a minor number of permits, DAS allocated, and DAS used, thus, are not included in table.</p> |                    |               |          |                     |

*Fishery Catch*

*Total Catch – Year-End ACL Accounting*

At the end of each fishing year, GARFO tabulates monkfish catches into a few bins and compares the total to the annual catch limit. The year-end calculation of discards is estimated on a fishing year basis, with different methods than those used to estimate the calendar year discards for stock assessment and specification setting purposes.

From FY 2017-2020, the ACL was exceeded in the NFMA twice (99-107%) and never in the SFMA (72-80%; Table 6). Commercial landings (includes party-charter catch) made up 77-90% of total catch in the NFMA and 30-59% in the SFMA. State landings, defined as vessels that have never had a federal fishing permit, consistently make up under 0.5% of catch. Recreational catch is consistently under 3% of catch. In the NFMA, discards were 9% of catch in FY 2017 and increased to 28% and lowered to 20% and 19% of catch in FY 2018-2020. In the SFMA, discards were higher in FY 2017-2019 (41-43%) but lowered to 13% in FY 2020.

**Table 6. Year-end monkfish annual catch limit (ACL) accounting, FY 2017-2020.**

| Catch accounting element                                  | Pounds            | Metric tons  | % of ACL      |
|---|-------------------|--------------|---------------|
| <b>FY 2017</b>  |                   |              |               |
| <b>Northern Fishery Management Area (ACL = 7,592 mt)</b>  |                   |              |               |
| Commercial landings                                       | 15,003,103        | 6,805        | 89.6%         |
| State-permitted only vessel landings                      | 60,031            | 27           | 0.4%          |
| Estimated discards  | 1,567,883         | 711          | 9.4%          |
| Recreational catch (MRIP landings and discards)           | 11,725            | 5.3          | 0.1%          |
| <b>Total Northern monkfish catch</b>                      | <b>16,631,017</b> | <b>7,544</b> | <b>99.4%</b>  |
| <b>Southern Fishery Management Area (ACL = 12,316 mt)</b> |                   |              |               |
| Commercial landings                                       | 8,392,979         | 3,807        | 30.9%         |
| State-permitted only vessel landings                      | 66,936            | 30           | 0.2%          |
| Estimated discards  | 11,531,614        | 5,231        | 42.5%         |
| Recreational catch (MRIP landings and discards)           | 1,627             | 1            | 0.0%          |
| <b>Total Southern monkfish catch</b>                      | <b>19,991,529</b> | <b>9,068</b> | <b>73.6%</b>  |
| <b>FY 2018</b>  |                   |              |               |
| <b>Northern Fishery Management Area (ACL = 7,592 mt)</b>  |                   |              |               |
| Commercial landings                                       | 13,237,011        | 6,004        | 79.1%         |
| State-permitted only vessel landings                      | 37,468            | 17           | 0.2%          |
| Estimated discards  | 4,666,815         | 2,117        | 27.9%         |
| Recreational catch (MRIP landings and discards)           | 6,977             | 3.2          | 0.0%          |
| <b>Total Northern monkfish catch</b>                      | <b>17,941,294</b> | <b>8,138</b> | <b>107.2%</b> |
| <b>Southern Fishery Management Area (ACL = 12,316 mt)</b> |                   |              |               |
| Commercial landings                                       | 10,133,407        | 4,596        | 37.3%         |
| State-permitted only vessel landings                      | 64,841            | 29           | 0.2%          |
| Estimated discards  | 11,505,833        | 5,219        | 42.4%         |
| Recreational catch (MRIP landings and discards)           | 742,988           | 337          | 2.7%          |
| <b>Total Southern monkfish catch</b>                      | <b>21,704,081</b> | <b>9,845</b> | <b>79.9%</b>  |
| <b>FY 2019</b>  |                   |              |               |
| <b>Northern Fishery Management Area (ACL = 7,592 mt)</b>  |                   |              |               |
| Commercial landings                                       | 13,673,898        | 6,202        | 81.7%         |
| State-permitted only vessel landings                      | 16,474            | 7            | 0.1%          |
| Estimated discards  | 3,418,346         | 1,551        | 20.4%         |
| Recreational catch (MRIP landings and discards)           | 164,771           | 75           | 1.0%          |
| <b>Total Northern monkfish catch</b>                      | <b>17,273,489</b> | <b>7,835</b> | <b>103.2%</b> |
| <b>Southern Fishery Management Area (ACL = 12,316 mt)</b> |                   |              |               |
| Commercial landings                                       | 8,236,922         | 3,736        | 30.3%         |
| State-permitted only vessel landings                      | 66,673            | 30           | 0.2%          |
| Estimated discards  | 11,174,259        | 5,069        | 41.2%         |
| Recreational catch (MRIP landings and discards)           | 11,410            | 5            | 0.0%          |

|  |                   |              |              |
|--|-------------------|--------------|--------------|
| <b>Total Southern monkfish catch</b>   | <b>19,489,264</b> | <b>8,840</b> | <b>71.7%</b> |
| <b>FY 2020</b>   |                   |              |              |
| <b>Northern Fishery Management Area (ACL = 8,351 mt)</b>   |                   |              |              |
| Commercial landings  | 11,684,519        | 5,300        | 63.5%        |
| State-permitted only vessel landings   | 13,416            | 6            | 0.1%         |
| Estimated discards   | 3,503,282         | 1,589        | 19.0%        |
| Recreational catch (MRIP landings and discards)  | 22,739            | 10           | 0.1%         |
| <b>Total Northern monkfish catch</b>   | <b>15,223,956</b> | <b>6,905</b> | <b>82.7%</b> |
| <b>Southern Fishery Management Area (ACL = 12,316 mt)</b>  |                   |              |              |
| Commercial landings  | 4,944,794         | 2,243        | 18.2%        |
| State-permitted only vessel landings   | 20,749            | 9            | 0.1%         |
| Estimated discards   | 3,078,040         | 1,396        | 11.3%        |
| Recreational catch (MRIP landings and discards)  | 359,106           | 163          | 1.3%         |
| <b>Total Southern monkfish catch</b>   | <b>8,402,689</b>  | <b>3,811</b> | <b>30.9%</b> |
| <i>Notes:</i>  |                   |              |              |
| <ul style="list-style-type: none"> <li>• “Total catch” does not include recreational landings as the Annual Catch Limit does not include recreational landings.</li> <li>• “Commercial landings” includes all monkfish landings by vessels with a permit number greater than zero and party/charter landings.</li> <li>• “State-permitted only vessel landings” are landings from vessels that never had a federal fishing permit (so the permit #=0).</li> <li>• “Estimated discards” is based on landings of all species and monkfish discards on observed trips extrapolated to all commercial landings of all species (weighted by area, gear, etc.) to calculate total monkfish discards(discard estimation method differs from how discards are estimated during specifications setting, which uses the NEFSC method).</li> <li>• “Recreational catch” includes landings and discards from party charter vessels and private anglers, from MRIP data.</li> </ul> |                   |              |              |
| <i>Source:</i> Commercial fisheries dealer database and Northeast Fishery Observer Program database; FY 2017 data accessed October 2018; FY 2018 data accessed March 2020; FY 2019 data accessed March 2021.   |                   |              |              |



*FY 2021 landings*

Through March 2021, 71% of the FY 2021 TAL had been landed in the northern area and 30% in the southern area (Table 7). In the northern area, monthly landings were lower in May-November 2021 relative to December-March (312-417 lb/month vs. (501-654 lb/month). Otter trawls accounted for 80% of the FY 2021 landings to date. In the southern area, monthly landings were highest in May and June 2021 (439-535 lb/month), then dropped to a low in July-November (9-59 lb/month), then have been moderate since December (117-227 lb/month).

**Table 7. FY 2021 Preliminary commercial monkfish landings by stock area and gear type: May 2021 – April 2022 (landings in live weight).**

|                  | MAY - 2021 | JUN - 2021 | JUL - 2021 | AUG - 2021 | SEP - 2021 | OCT - 2021 | NOV - 2021 | DEC - 2021 | JAN - 2022 | FEB - 2022 | MAR - 2022 | May-March, FY2021 | FY 2021*                       |              |
|------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------------|--------------------------------|--------------|
|                  |            |            |            |            |            |            |            |            |            |            |            |                   | March, 21 as a % of Target TAL | Target TAL   |
|                  |            |            |            |            |            |            |            |            |            |            |            | Metric Tons       | Metric Tons                    |              |
| <b>NORTHERN</b>  | <b>312</b> | <b>417</b> | <b>364</b> | <b>348</b> | <b>372</b> | <b>338</b> | <b>342</b> | <b>539</b> | <b>549</b> | <b>501</b> | <b>654</b> | <b>4,736</b>      | <b>71%</b>                     | <b>6,624</b> |
| OTTER TRAWL      | 280        | 294        | 208        | 167        | 208        | 234        | 280        | 493        | 530        | 482        | 602        | 3,774             | 57%                            |              |
| GILLNET          | 25         | 103        | 150        | 178        | 164        | 96         | 58         | 45         | 18         | 14         | 37         | 888               | 13%                            |              |
| DREDGE           | 0          | 1          | 3          | 2          | 1          | 8          | 3          | 1          | 1          | 0          | 0          | 20                | 0%                             |              |
| OTHER GEARS      | 7          | 19         | 5          | 1          | 1          | 0          | 1          | 0          | 0          | 5          | 15         | 54                | 1%                             |              |
| <b>SOUTHERN</b>  | <b>535</b> | <b>439</b> | <b>59</b>  | <b>19</b>  | <b>9</b>   | <b>9</b>   | <b>24</b>  | <b>227</b> | <b>117</b> | <b>120</b> | <b>219</b> | <b>1,777</b>      | <b>30%</b>                     | <b>5,882</b> |
| OTTER TRAWL      | 26         | 14         | 7          | 1          | 5          | 6          | 11         | 43         | 36         | 41         | 43         | 233               | 4%                             |              |
| GILLNET          | 443        | 342        | 29         | 8          | 0          | 1          | 11         | 153        | 63         | 62         | 160        | 1,272             | 22%                            |              |
| DREDGE           | 39         | 30         | 23         | 10         | 4          | 2          | 1          | 11         | 9          | 4          | 11         | 144               | 2%                             |              |
| OTHER GEARS      | 27         | 53         | 0          | 0          | 0          | 0          | 1          | 20         | 9          | 13         | 5          | 128               | 2%                             |              |
| <b>ALL AREAS</b> | <b>847</b> | <b>856</b> | <b>423</b> | <b>367</b> | <b>381</b> | <b>347</b> | <b>366</b> | <b>766</b> | <b>666</b> | <b>621</b> | <b>873</b> | <b>6,513</b>      |                                |              |
| OTTER TRAWL      | 306        | 308        | 213        | 168        | 211        | 240        | 291        | 536        | 566        | 523        | 645        | 4,007             |                                |              |
| GILLNET          | 468        | 445        | 179        | 186        | 164        | 97         | 69         | 198        | 81         | 76         | 197        | 2,160             |                                |              |
| DREDGE           | 39         | 31         | 26         | 12         | 5          | 10         | 4          | 12         | 10         | 4          | 11         | 164               |                                |              |
| OTHER GEARS      | 34         | 72         | 5          | 1          | 1          | 0          | 2          | 20         | 9          | 18         | 20         | 182               |                                |              |

Source: [GARFO quota monitoring website](#), accessed April 15, 2022.

*Landings relative to TAL*

The NFMA has a higher TAL and higher possession limits relative to the SFMA. Landings relative to TAL in the NFMA have been between 80-107% since FY 2016 (Table 8), which could be a combination of revised management measures (possession limits) and the large 2015-year class. The NFMA TAL was increased by 10% for FY 2020-2022 (relative to FY 2017-2019) and the individuals from the 2015-year class have grown large enough to be retained by the fishery and are less likely to be discarded because of minimum size regulations. The landings relative to TAL in the SFMA have been lower than the NFMA, between 39-51% since FY 2016.

**Table 8. Recent landings (live weight, mt) in the NFMA compared to target TAL.**

| Fishing Year | Northern Area |               |                         | Southern Area |               |                         |
|--------------|---------------|---------------|-------------------------|---------------|---------------|-------------------------|
|              | TAL (mt)      | Landings (mt) | Percent of TAL achieved | TAL (mt)      | Landings (mt) | Percent of TAL achieved |
| 2014         | 5,854         | 3,403         | 58%                     | 8,925         | 5,415         | 61%                     |
| 2015         | 5,854         | 4,080         | 70%                     | 8,825         | 4,733         | 53%                     |
| 2016         | 5,854         | 5,447         | 93%                     | 8,925         | 4,345         | 49%                     |
| 2017         | 6,338         | 6,807         | 107%                    | 9,011         | 3,802         | 42%                     |
| 2018         | 6,338         | 6,168         | 97%                     | 9,011         | 4,600         | 51%                     |
| 2019         | 6,338         | 6,211         | 98%                     | 9,011         | 3,785         | 42%                     |
| 2020         | 6,624         | 5,299         | 80%                     | 5,882         | 2,294         | 39%                     |
| *2021        | 6,624         | 4,736         | 71%                     | 5,882         | 1,777         | 30%                     |
| 2022         | 6,624         |               |                         | 5,882         |               |                         |

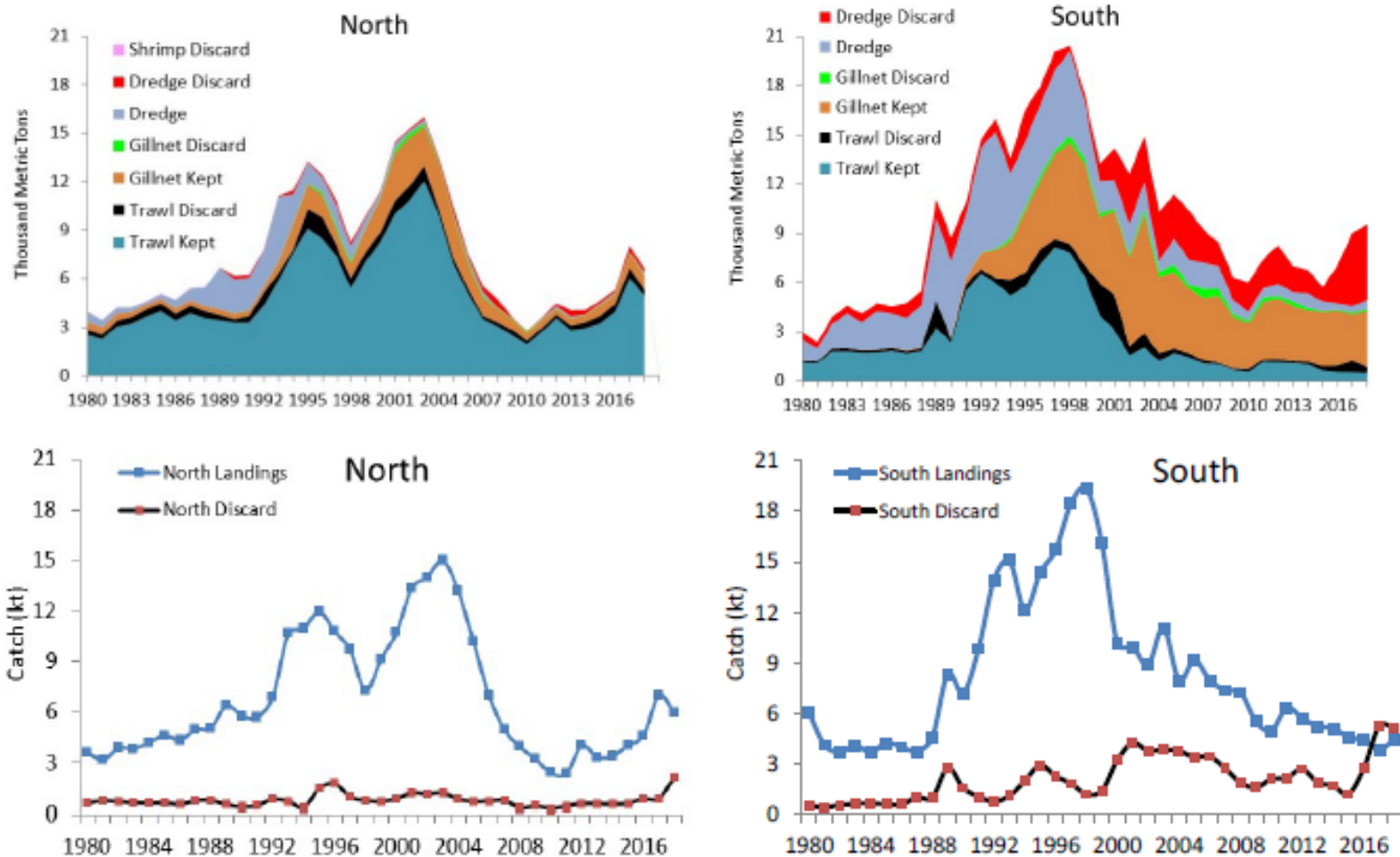
\*Data as of March 21, 2022.  
 Source: GARFO quota monitoring [data](#), accessed 4/18/2022.

*Landings and Discards by gear type*

Monkfish discards are calculated by NMFS for each fishing year in year-end ACL accounting (by GARFO) and for each calendar year through the assessment process (by NEFSC). For each calendar year, discards are estimated by gear, half year and management area using observer data. For otter trawls and gillnets, the observed monkfish discard-per-kept-monkfish ratio is expanded to total monkfish discards. For scallop dredges and shrimp trawls, the observed monkfish discard-per-all-kept-catch ratio is expanded to total monkfish discards. Monkfish discard mortality is assumed to be 100% across all gear types, though recent research suggests that monkfish discard mortality may be lower, at least in scallop dredge year (Weissman et al. 2021).

The northern and southern areas have distinctions in terms of gear type. Since at least 1980, monkfish landings in the northern area have largely been by vessels using trawls (Figure 2). In the southern area, landings were primarily by vessels using dredges and trawls from 1980 to the early 1990s. Through the 1990s and to today, gillnets have been the predominant gear for vessels landing monkfish. Discards have traditionally been higher in the south relative to the north, and recently, southern discards have approximated or exceeded landings.

Figure 2. Monkfish landings and discards by gear type (top panel) and total (bottom panels) for North (left) and South (right).



Source: NEFSC (2020, Figure D5).

Revenue

Monkfish fishery revenue has generally declined in recent years, from \$42.2M in CY 2005 to \$10.3M in CY 2021 (Table 9, not adjusted for inflation). Since at least CY 2011, about half of this revenue is from trips where monkfish was over 50% of total revenue (Table 10). There is a declining number of vessels that had trips where the revenue was over 50% of total revenue, from 206 in CY 2011 to 70 in CY 2020. CY 2020 and 2021 were particularly low revenue years.

**Table 9. Total monkfish revenue, CY 2005-2021.**

| Calendar Year | Revenue | Calendar Year | Revenue |
|---------------|---------|---------------|---------|
| 2005          | \$42.2M | 2014          | \$18.7M |
| 2006          | \$38.0M | 2015          | \$19.1M |
| 2007          | \$28.9M | 2016          | \$20.0M |
| 2008          | \$27.2M | 2017          | \$18.4M |
| 2009          | \$19.6M | 2018          | \$14.8M |
| 2010          | \$19.2M | 2019          | \$14.5M |
| 2011          | \$26.6M | 2020          | \$9.3M  |
| 2012          | \$27.1M | 2021          | \$10.3M |
| 2013          | \$18.7M |               |         |

*Source:* ACCSP data, accessed April 2022.  
*Note:* Revenues not adjusted for inflation.

**Table 10. Monkfish revenue and revenue dependence on trips where over 50% of revenue is from monkfish, CY 2011-2020.**

| Calendar Year | Vessels | Monkfish Revenue |            | Non-Monkfish Revenue |            | Total Revenue | % Monkfish |
|---------------|---------|------------------|------------|----------------------|------------|---------------|------------|
|               |         | Total            | Per vessel | Total                | Per vessel |               |            |
| 2011          | 206     | \$16,517,143     | \$80,180   | \$3,354,458          | \$16,284   | \$19,871,601  | 83%        |
| 2012          | 196     | \$15,138,030     | \$77,235   | \$3,339,764          | \$17,040   | \$18,477,794  | 82%        |
| 2013          | 164     | \$8,994,464      | \$54,844   | \$2,414,798          | \$14,724   | \$11,409,262  | 79%        |
| 2014          | 173     | \$9,307,800      | \$53,802   | \$3,042,854          | \$17,589   | \$12,350,654  | 75%        |
| 2015          | 140     | \$9,319,537      | \$66,568   | \$2,286,111          | \$16,329   | \$11,605,648  | 80%        |
| 2016          | 127     | \$9,654,776      | \$76,022   | \$1,957,503          | \$15,413   | \$11,612,280  | 83%        |
| 2017          | 135     | \$9,471,858      | \$70,162   | \$2,545,266          | \$18,854   | \$12,017,124  | 79%        |
| 2018          | 108     | \$7,001,537      | \$64,829   | \$1,660,777          | \$15,378   | \$8,662,314   | 81%        |
| 2019          | 96      | \$7,021,724      | \$73,143   | \$1,912,752          | \$19,924   | \$8,934,476   | 79%        |
| 2020          | 70      | \$2,700,687      | \$38,581   | \$995,332            | \$14,219   | \$3,696,019   | 73%        |

*Source:* NEFSC SSB.  
*Note:* Revenues adjusted to 2020 USD. CY2021 data will likely be available at the end of June.

### Fishing communities

Primary and secondary monkfish fishing ports are identified for the Monkfish FMP. Here, the following criteria are used:

**Primary Port Criteria.** The monkfish fishery primary ports are those that are substantially engaged in the fishery. The primary ports meet at least one of the following criteria:

1. At least \$1M average annual revenue of monkfish during 2010-2019, or
2. A ranking of very high (factor score  $\geq 5$ )<sup>1</sup> for engagement in the monkfish fishery on average in 2016-2020 according to the NOAA Fisheries [Community Social Vulnerability Indicators](#) (Table 13).

**Secondary Port Criteria.** The monkfish fishery secondary ports are those that may not be as dependent or engaged in the fishery as the primary ports but are involved to a lesser extent. The secondary ports meet at least one of the following criteria:

1. At least \$100,000 average annual revenue of monkfish, 2010-2019, or
2. A ranking of high (factor score 1-4.99) for engagement in the monkfish fishery on average in 2016-2020 according to the NOAA Fisheries [Community Social Vulnerability Indicators](#) (Table 13).

**Monkfish Primary and Secondary Ports.** Based on these criteria, there are six primary ports in the Monkfish fishery (Table 11). Of these, the highest revenue ports are New Bedford, Gloucester, and Boston, MA (Table 12). There are 14 secondary ports. The primary and secondary ports comprised 66% and 28% of total fishery revenue, respectively, during 2010-2019. There are 138 other ports that have had more minor participation (6%) in the fishery recently. More community information is available from the NEFSC [Social Sciences Branch website](#) and in Clay et al. (2007).

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<sup>1</sup> A score of 1.0 or more places the community at 1 standard deviation above the mean.

**Table 11. Primary and secondary ports in the monkfish fishery.**

| State | Port                      | Average revenue 2010-2019 |       | Monkfish Engagement, 2016-2020 |           | Primary/Secondary |
|-------|---------------------------|---------------------------|-------|--------------------------------|-----------|-------------------|
|       |                           | >\$100K                   | >\$1M | High                           | Very High |                   |
| ME    | Portland                  | √                         |       | √                              |           | Secondary         |
| NH    | Portsmouth                | √                         |       | √                              |           | Secondary         |
| MA    | Gloucester                |                           | √     |                                | √         | Primary           |
|       | Boston                    |                           | √     |                                | √         | Primary           |
|       | Scituate                  | √                         |       | √                              |           | Secondary         |
|       | Chatham                   | √                         |       | √                              |           | Secondary         |
|       | Harwichport               | √                         |       | √                              |           | Secondary         |
|       | New Bedford               |                           | √     |                                | √         | Primary           |
|       | Westport                  | √                         |       | √                              |           | Secondary         |
| RI    | Little Compton            | √                         |       | √                              |           | Secondary         |
|       | Newport                   | √                         |       | √                              |           | Secondary         |
|       | Narragansett/Point Judith |                           | √     |                                | √         | Primary           |
| CT    | New London                | √                         |       | √                              |           | Secondary         |
| NY    | Montauk                   | √                         |       |                                | √         | Primary           |
|       | Hampton Bays/ Shinnecock  | √                         |       | √                              |           | Secondary         |
| NJ    | Point Pleasant            | √                         |       | √                              |           | Secondary         |
|       | Barnegat Light/Long Beach |                           | √     | √                              |           | Primary           |
|       | Cape May                  |                           |       | √                              |           | Secondary         |
| VA    | Chincoteague              | √                         |       |                                |           | Secondary         |
|       | Newport News              |                           |       | √                              |           | Secondary         |

**Table 12. Fishing revenue (unadjusted for inflation) and vessels in top Monkfish ports by revenue, calendar years 2010-2019.**

| Port               | Average revenue, 2010-2019 |                     |            | Total active monkfish vessels, 2010-2019 |
|--------------------|----------------------------|---------------------|------------|--|
|                    | All fisheries              | Monkfish only       | % Monkfish |  |
| New Bedford, MA    | \$368,627,420              | \$4,240,639         | 1%         | <b>479</b>                               |
| Gloucester, MA     | \$48,514,248               | \$2,924,748         | 6%         | <b>190</b>                               |
| Boston, MA         | \$15,999,540               | \$1,809,192         | 11%        | <b>44</b>                                |
| Pt. Judith, RI     | \$47,753,305               | \$1,604,760         | 3%         | <b>214</b>                               |
| Long Beach, NJ     | \$26,124,402               | \$1,459,529         | 6%         | <b>74</b>                                |
| Chatham, MA        | \$11,764,003               | \$817,736           | 7%         | <b>57</b>                                |
| Little Compton, RI | \$2,398,385                | \$802,384           | 33%        | <b>31</b>                                |
| Montauk, NY        | \$17,192,554               | \$726,690           | 4%         | <b>116</b>                               |
| Hampton Bay, NY    | \$5,746,477                | \$578,235           | 10%        | <b>64</b>                                |
| Portland, ME       | \$24,798,943               | \$559,798           | 2%         | <b>71</b>                                |
| Other (n=146)      | \$368,846,866              | \$3,750,338         | 1%         |  |
| <b>Total</b>       | <b>\$937,766,141</b>       | <b>\$19,274,049</b> | <b>2%</b>  |  |

Source: NMFS Commercial Fisheries Database (AA data), accessed April 2022.  
 Note: "Active" defined as landing > 1 lb of monkfish.

The Engagement Index can be used to determine trends in a fishery over time. Those ports with very high monkfish engagement in 2016-2020, generally had very high engagement in 2006-2010 and 2011-2015, except for Boston, MA, which had increasing engagement over this time (Table 13). There are 14 ports that have had high or very high engagement during all three periods, indicating a stable presence in those communities.

**Table 13. Changes in monkfish fishery engagement over time for all ports with high engagement at least one year, 2006-2020.**

| State | Community                 | Engagement Index |           |           |           |
|-------|---------------------------|------------------|-----------|-----------|-----------|
|       |                           | 2006-2010        | 2011-2015 | 2016-2020 | 2020 only |
| ME    | Portland                  | High             | High      | High      | High      |
| NH    | Portsmouth                | High             | Med.-High | High      | High      |
| MA    | Gloucester                | Very High        | Very High | Very High | Very High |
|       | Boston                    | High             | High      | Very High | Very High |
|       | Scituate                  | High             | High      | High      | High      |
|       | Chatham                   | High             | High      | High      | High      |
|       | Harwichport               | Medium           | Medium    | High      | High      |
|       | New Bedford               | Very High        | Very High | Very High | Very High |
|       | Westport                  | Med.-High        | High      | High      | Med.-High |
| RI    | Tiverton                  | Med.-High        | Medium    | Medium    | Medium    |
|       | Little Compton            | High             | High      | High      | High      |
|       | Newport                   | High             | High      | High      | High      |
|       | Narragansett/Pt. Judith   | Very High        | Very High | Very High | Very High |
| CT    | Stonington                | Med.-High        | Med.-High | Med.-High | High      |
|       | New London                | Med.-High        | High      | High      | High      |
| NY    | Montauk                   | Very High        | Very High | Very High | High      |
|       | Hampton Bays/Shinnecock   | High             | High      | High      | High      |
| NJ    | Point Pleasant            | High             | High      | High      | High      |
|       | Barnegat Light/Long Beach | Very High        | Very High | High      | High      |
|       | Cape May                  | High             | High      | High      | High      |
| MD    | Ocean City                | High             | High      | Med.-High | Med.-High |
| VA    | Chincoteague              | High             | High      | Medium    | Medium    |
|       | Newport News              | Med.-High        | High      | High      | High      |
| NC    | Wanchese                  | High             | Med.-High | Med.-High | Med.-High |
|       | Beaufort                  | Medium           | Med.-High | Med.-High | Medium    |

Source: <http://www.st.nmfs.noaa.gov/humandimensions/social-indicators/index>.

Landings by state

During CY 2012-2021, monkfish were landed in 11 states, mostly in Massachusetts (61%), followed by Rhode Island (13%), and New Jersey (9%, Table 14). Massachusetts continues to account for the greatest proportion of all monkfish landings.

**Table 14. Monkfish landings by state, CY 2012-2021.**

| STATE        | Monkfish landings (mt) |              |               |              |              |              |              |               |               |               |               |             |
|--------------|------------------------|--------------|---------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|-------------|
|              | 2012                   | 2013         | 2014          | 2015         | 2016         | 2017         | 2018         | 2019          | 2020          | 2021          | Total         |             |
| ME           | 488                    | 115          | 257           | 345          | 243          | 178          | 219          | 170           | 411           | 442           | <b>4,062</b>  | 4%          |
| NH           | 57                     | 86           | 74            | 38           | 50           | 68           | 123          | 119           | 175           | 213           | <b>1,463</b>  | 2%          |
| MA           | 5,247                  | 3,812        | 4,972         | 4,303        | 4,227        | 4,581        | 5,067        | 5,943         | 6,306         | 6,057         | <b>55,961</b> | 61%         |
| RI           | 1,303                  | 1,598        | 2,122         | 1,495        | 1,488        | 1,819        | 1,648        | 1,560         | 1,412         | 2,306         | <b>11,441</b> | 13%         |
| CT           | 347                    | 305          | 457           | 547          | 724          | 380          | 464          | 275           | 246           | 324           | <b>2,123</b>  | 2%          |
| NY           | 841                    | 766          | 1,059         | 1,183        | 773          | 748          | 827          | 1,193         | 829           | 1,005         | <b>5,996</b>  | 7%          |
| NJ           | 1,003                  | 1,418        | 1,676         | 1,389        | 1,351        | 1,740        | 1,250        | 1,335         | 1,229         | 1,205         | <b>7,946</b>  | 9%          |
| DE           | 0                      |              |               |              |              |              |              |               |               |               | <b>0</b>      | 0%          |
| MD           | 51                     | 83           | 98            | 69           | 86           | 78           | 36           | 51            | 32            | 19            | <b>285</b>    | 0%          |
| VA           | 412                    | 402          | 638           | 567          | 413          | 352          | 259          | 218           | 88            | 142           | <b>1,748</b>  | 2%          |
| NC           | 10                     | 27           | 10            | 3            | 38           | 47           | 56           | 33            | 36            | 20            | <b>244</b>    | 0%          |
| <b>Total</b> | <b>9,758</b>           | <b>8,612</b> | <b>11,365</b> | <b>9,940</b> | <b>9,394</b> | <b>9,992</b> | <b>9,949</b> | <b>10,897</b> | <b>10,765</b> | <b>11,735</b> | <b>91,271</b> | <b>100%</b> |

Source: ACCSP database, accessed April 2022.

Research-Set-Aside program

Monkfish regulations indicate that 500 DAS be made available for cooperative research through the Research-Set-Aside (RSA) program (this total is deducted from the 46 DAS allocated to each limited access permit; currently, each permit receives 45.2 DAS for commercial fishing). When the Experimental Fisheries Permit is approved for an RSA research project, the project has a DAS cap and poundage cap, calculated by setting each RSA DAS to be equal to double the possession limit for vessels with permit categories A and C fishing in the SFMA. There is no possession limit on RSA trips, and vessels may not switch from using a monkfish DAS to an RSA DAS mid-trip.

Use of RSA DAS and landings allowed has generally declined since FY 2013 (Table 15). Of the three monkfish awards made in 2018/2019, one of the projects was successful in using almost all their DAS, while the other two less so. About half of the anticipated revenue was generated for research (~\$200,000). Use of 2020 and 2021 RSA DAS has been low.

**Table 15. Monkfish RSA awards compared to RSA landed catch, FY 2013-2021.**

| Fishing Year | DAS Awarded | DAS used       | % DAS Used | Allowed (lb) | Landed (lb)   |
|--------------|-------------|----------------|------------|--------------|---------------|
| 2013         | 426         | 342            | 80%        | 1,363,200    | 1,207,174 89% |
| 2014         | 500         | 354            | 71%        | 1,600,000    | 1,289,243 81% |
| 2015         | 500         | 301            | 60%        | 1,600,000    | 1,290,238 81% |
| 2016         | 500         | 332            | 66%        | 1,776,000    | 1,541,240 87% |
| 2017         | 500         | 117            | 23%        | 1,776,000    | 679,180 38%   |
| 2018         | 500         | 285            | 57%        | 2,307,000    | 1,236,288 61% |
| 2019         | 500         | 249            | 50%        | 2,307,000    | 1,024,955 50% |
| 2020         | 500         | Awards ongoing |            |              |               |
| 2021         | 500         |                |            |              |               |



## ***MONKFISH ADVISORY PANEL INFORMATION***

### ***Discussion Questions***

1. What factors have influenced recent fishing activity and how (e.g., domestic and foreign markets, costs, environment, fish distribution, regulations)?
2. How might these factors change in FY 2022? How do you expect the fishery to adjust?
3. How has the global pandemic changed the fishery? Do you see the fishery returning to a pre-pandemic state or is there a new normal emerging?
4. Considering the fishery data, are there specific regional or port differences in fishery performance that are important?
5. Are the current fishery regulations appropriate? How could they be improved and how would the improvements affect the fishery?
6. Have any recent regulatory changes affected the fishery and how (e.g., implemented in 2020, vessels using the Interactive Voice Response system now must submit a trip declaration within an hour of leaving port, like vessels using the Vessel Monitoring System)?
7. What would you recommend as research priorities?
8. What is hindering the use of RSA DAS to raise funds for monkfish research? How might the Monkfish RSA program improve?
9. What else is important for the Council to know (e.g., impacts of right whale regulations, offshore wind development)?

### ***Market/Economic Conditions***

### ***Biological/Environmental Conditions***

### ***Management Issues***

### ***Research***

### ***Other Issues***

## ***REPORT CONTRIBUTORS***

*Plan Development Team members:*

TBD

*Advisory Panel members:*

TBD

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