New England Fishery Management Council
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Eric Reid, *Chair* | Thomas A. Nies, *Executive Director*

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Groundfish Committee

Webinar
January 20, 2022

The Groundfish Committee (Committee) met on January 20, 2022, via webinar to discuss and make recommendations on: 1) Fishing Year 2022 Recreational Measures; 2) Council Priorities for 2022; 3) Atlantic Cod Stock Structure Workshops; 4) Atlantic Cod Research Track Working Group; and 5) other business, as necessary.

MEETING ATTENDANCE: Rick Bellavance (Chair), Libby Etrie (Vice Chair), Togue Brawn, Peter Christopher (Greater Atlantic Regional Fisheries Office (GARFO)), Mark Godfroy, Melanie Griffin, Megan Ware (proxy for Patrick Keliher), John Pappalardo, Mike Pierdinock, Paul Risi (Mid-Atlantic Fisheries Management Council (MAFMC)), Geoff Smith, Wes Townsend (MAFMC), and Alan Tracy; Dr. Jamie Cournane, Robin Frede, and Angela Forristall (New England Fishery Management Council (NEFMC) staff); Frank Blount (Recreational Advisory Panel (RAP) Chair); Dr. Russel Brown and Scott Steinback (Northeast Fisheries Science Center (NEFSC)); Dr. Linas Kenter (New Hampshire Sea Grant (NHSG)); and Dr. Lisa Kerr (Gulf of Maine Research Institute (GMRI)). In addition, approximately 31 members of the public attended, including Eric Reid (NEFSC Chair); Hank Soule and Jackie Odell (Groundfish Advisory Panel (GAP)); Rip Cunningham (RAP); Daniel Caless, Mark Grant, Kyle Molton, Liz Sullivan, Spencer Talmage, and Samantha Tolken (GARFO); Glenn Chamberlain, Gabrielle Clardy, Dr. Richard McBride, and Paul Nitschke (NEFSC); Mitch MacDonald (NOAA General Counsel (NOAA GC)); Irene Andrushchenko and Divya Varkey (Department of Fisheries and Oceans Canada (DFO MPO)); Dr. Steve Cadrin (UMass Dartmouth School for Marine Science and Technology (SMAST)); Kelly Whitmore (Massachusetts Division of Marine Fisheries (MASS DMF)); Matthew Gates (Connecticut Department of Energy and Environmental Protection); Gareth Lawson and Allison Lorenc (Conservation Law Foundation); Chris Kellogg, Tom Nies and Janice Plante (NEFMC staff).

SUPPORTING DOCUMENTATION: Discussions were aided by the following documents and presentations: **(1)** Meeting Memorandum from the Groundfish Committee Chair, dated January 13, 2022; **(2)** Agenda; **(3a)** Recent catch and effort summary for the Gulf of Main cod and Gulf of Maine haddock; **(3b)** Summary of measures and options from the bioeconomic model; **(3c)** Presentation: Council and NEFSC Staff; **(4)** 2022 Council Priorities; **(5a)** Recreational Advisory Panel, meeting motions, Nov. 29, 2021; **(5b)** Groundfish Committee, meeting motions, Nov 30, 2021; **(6)** Correspondence; **(7a)** Summary Report of the 2021 Atlantic Cod Stock Structure Workshops; **(7b)** Presentation: 2021 Atlantic Cod Stock Structure Workshops; **(7c)** Presentation: Atlantic Cod Research Track Working Group.

The meeting began at approximately 9:30 a.m.

KEY OUTCOMES:

- The Groundfish Committee recommends to the Council the following recreational fishery measures:
    - Gulf of Maine cod- Adjust the open season, same for all modes, with a slot limit
        - Open season: September 1 - October 7; April 1 - 14
        - Slot size: 22 inches to 28 inches
        - Possession limit: 1 fish per day
    - Gulf of Maine haddock – Increase the bag limit to 20 fish (from 15 fish)
        - Open season: May 1–Feb 28/29; April 1–30
        - Minimum size: 17 inches
        - Possession limit: 20 fish per day

RECREATIONAL ADVISORY PANEL (RAP) REPORT, MR. BLOUNT

Mr. Blount provided an overview of the RAP's discussions and motions.

Questions and comments on the presentation:

One Committee member asked if the RAP had discussed the locations where cod and haddock fishing would occur under the different proposed seasons and lengths. Mr. Blount informed him that during the RAP discussion individuals expressed that an earlier opening in September was more beneficial, and only one member voiced support for a season running later into the fall. Another committee member asked if the RAP discussed the impacts fishing behavior changes due to the COVID-19 pandemic might have had on the data. Mr. Blount responded that the RAP focused their discussion on looking at the sub-ACL scores for the different options and the impacts that increasing the haddock bag limit might have on cod mortality. The new MA DMF cod avoidance charts were noted as a tool that for-hire and private anglers could use to avoid high-abundance cod areas when targeting haddock.

There was discussion on how the recreational community can become involved in non-groundfish recreational issues and recreational issues managed by the MAFMC. The discussion stemmed from comments and concerns on the MAFMC's proposed cuts to recreational and commercial Atlantic mackerel allocations and the recent listening sessions. One committee member commented that in the past there has been a recreational representative on the herring and habitat committees. They also brought up the idea of a hybrid recreational panel that could discuss issues like this. Eric Reid (NEFMC Chair) noted there had been an opening for a recreational representative on the MAFMC's squid/mackerel/butterfish AP last year, but no one from the New England recreational community expressed interest and perhaps this could be an onramp for recreational concerns the next time there is an opening. Mr. Reid also noted that the NEFMC will be receiving an update on the Atlantic mackerel rebuilding process from the MAFMC at the upcoming February meeting, which will outline the rebuilding amendment process and future opportunities for public comment.

AGENDA ITEM #1: FISHING YEAR 2022 RECREATIONAL MEASURES

PRESENTATION: RECREATIONAL GROUNDFISH FISHERY FISHING YEAR 2022 MEASURES, DR. COURNANE (NEFMC) AND MR. STEINBACK (NEFSC)

MEETING GOALS

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Dr. Cournane provided an overview of the meeting goals and Fishing Year 2021 (FY 2021) recreational measures for Gulf of Maine cod and Gulf of Maine haddock. She stated the Committee is tasked with looking at the RAP's recommendation and the bioeconomic model simulations to develop a recommendation to the Council on what management measures would most closely achieve but not exceed the recreational sub-ACL (sub-Annual Catch Limit). Dr. Cournane provided a table of recent recreational catches for FY 2018-2020 and the Council's current and proposed catch limits for FY 2021 and FY 2022. She noted the recreational sub-ACL has not been exceeded in the past three years, nor are they anticipated to be in FY 2022.

Questions and Comments on the Presentation:

One committee member asked if there had been any discussion on split measures for charter boats. Dr. Cournane noted that more modeling would be needed to analyze split measures, but there was not any interest from private anglers on continuing this management approach. Dr. Cournane explained anglers supported split measures when there were restrictions in place because of the COVID-19 pandemic, but because restrictions are lessening there was more support for harmonizing measures between modes and expanding the season. Mr. Blount noted split-measures typically comes up every year at the RAP, but this year it did not.

Another committee member asked if the committee wanted to consider split measures, would this be the meeting to do so. Dr. Cournane clarified yes, this would be the meeting. A third committee member asked if the fishing community felt they were at a different enough place from 2020 and 2021 to approach management differently. Mr. Blount explained that in 2020 the split-measures were put into place to allow the for-hire fleet to operate in the fall in an attempt to recuperate business lost during the spring. He noted COVID-19 concerns did not come up during the RAP discussions this year. Dr. Cournane explained in 2020 the Council was asked to consider several recommendations to minimize the impact of COVID-19 restrictions on recreational and commercial fisheries and stated the next few slides would clarify what the expected situation was for the coming year.

SUMMARY OF RECENT RECREATIONAL CATCH AND EFFORT DATA

Mr. Scott Steinback (NEFSC) presented an overview of recent recreational catch and effort data from the Marine Recreational Information Program (MRIP). The presentation focused on the most recent two years of data, noting that FY2021 data is incomplete since the season is ongoing. Mr. Steinback explained that the last four months (Wave 6 and Wave 2) of fishing data from FY2020 were used as proxies for the last four months of FY 2021.

Highlights from the Gulf of Maine data summary are as follows:

- FY 2020 had the highest number of cod/haddock angler trips in several years. There was a slight decline in FY 2021, but trip numbers were still high relative to years past.
- For cod, there was a decline in number of fish caught and landed (8%) and weight of caught fish (18%) from FY 2020 to FY 2021.
    - A decline in effort combined with the decline in average size of fish caught resulted in a 25% drop in cod removals from FY 2020 to FY 2021.
- For haddock, there was a larger (about 30%) decline in removals due to a decrease in the number of fish caught per trip. The average size of the fish remained about the same.
- When comparing trip mode, in both FY 2020 and FY 2021 most trips targeting cod and haddock were private trips.

    - Mr. Steinback noted the importance of knowing which mode cod and haddock contribute the most to in order to understand portfolio diversity within modes. Trips targeting cod and haddock made up over 60% of all Gulf of Maine head boat trips, but only 10% of all private trips.
- 81% of cod removals in FY 2020 were due to private trips. Only 12% of removals were from head boat trips and 7% from charter boat trips.
    - Haddock removals followed similar trends. Private removals were a slightly lower percentage but still the dominant mode.

Questions and Comments on the Presentation:

A committee member asked what makes a trip a cod/haddock trip. Mr. Steinback explained that a cod/haddock trip is defined as a trip that an angler has indicated in an MRIP interview they were targeting cod or haddock on that trip *or* they caught cod or haddock on that trip, even if they were fishing for a different species or no species in particular. The member then asked what the MRIP interview coverage is. Mr. Steinback stated it varies and explained MRIP is a stratified random sampling approach designed to get the best possible representation in the GOM. He noted that sampling is difficult in the shoulder season, and he does not know the exact proportion of cod/haddock trips intercepted. Mr. Steinback informed the committee member they could find the percent standard errors (PSEs) for recreational data on the MRIP website, and the larger the PSE the more uncertainty there is in the data.

Two committee members asked if 2022 assumptions should be based on years without COVID-19 restrictions (2019) or if behavior is predicted to be similar in 2022 to what was observed during the pandemic (2020 and 2021). Mr. Steinback explained that there is a lot of uncertainty on this topic, but indications from boat sales, tackle shop sales, and MRIP effort indicate private effort is not going to drop to 2019 levels in the near future. He also noted that stock conditions are different in 2022 than they were in 2019 and 2020, which is captured in the bioeconomic models.

One committee member asked about the distribution of haddock catch per trip, noting that the average catch per trip was lower in 2021 then in 2020. Mr. Steinback responded that there is a distribution tail of catch per trip all the way to the 15 fish bag limit, but most trips are clustered around the four-fish average. Another committee member pointed out the average cod catch of 1.7 fish per trip and inquired how that is possible if the bag limit is one. Mr. Steinback explained 1.7 fish is the total catch per angler trip, including fish tossed back. He also noted this number includes trips outside of the open season.

Mr. Bellavance shared a link to a video that describes the MRIP catch estimation process: *https://players.brightcove.net/659677166001/4b3c8a9e-7bf7-43dd-b693-2614cc1ed6b7_default/index.html?videoId=6280365749001*

BIOECONOMIC MODEL

Mr. Steinback gave a brief overview of the bioeconomic model. He noted that it is the same model that has been used since 2013, with a few improvements made from 2017 to the present. On the biological side, the model calculates the expected encounters per trip – how many fish anglers are expected to catch on a given trip and what the length of the fish would be. Fish kept and released are a function of the length structure of the model, selectivity, and regulations. On the economic side, the model estimates the probability that an angler trip would occur under FY 2022 stock conditions and alternative regulations. The model predicts how many cod and haddock trips anglers would take in total, and how many fish would be retained or discarded. These numbers of fish are then converted into weights to estimate total FY 2022 mortality.

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The FY 2022 biological model used an annual MRIP length-frequency distribution. Mr. Steinback noted that in years past monthly length-frequencies have been used but due to data limitations resulting from the COVID-19 pandemic there was not enough data to make robust estimates. Using an annual length-frequency results in lost seasonal changes, but this was not predicted to have a major impact on model estimates.

Economic parameters were updated based on the 2019 economic survey of individuals that caught or targeted GOM cod or haddock. The value of keeping cod relative to haddock increased when compared to the findings of the 2014 economic survey. Mr. Steinback explained that this make sense given that cod stocks are at very low levels and haddock stocks are at very high levels - angler behavior will be more responsive to policy changes in cod harvest over haddock harvest since effort will change more.

A graph of the model predicted mortality estimates compared to the final MRIP estimates for the past eight years showed that the model has overestimated mortality in four years and underestimated mortality in four years, and that the recreational sub-ACLs were exceeded in 2013, 2014, 2016, and 2017.

FISHING YEAR 2022

Mr. Steinback described the FY 2022 mortality projections for the different bioeconomic model runs. He noted that because anglers catch cod in the two - four age range and the high prevalence of age two cod, anglers will be catching smaller fish in 2022 than in 2021. Status quo regulations would therefore result in a lower metric ton cod mortality in FY 2022 than in FY 2021. Haddock open seasons and regulations from FY 2021 were maintained in the model runs (open season of May - Feb 28, April 1 – April 30; 17-inch size limit; 15 fish catch limit). For cod, simulation options included:

- Cod size of 21-inches (status quo), 22 inches, or a slot limit of 22-28 inches;
- Fall season length ranging from four to six weeks during the weeks of September 1st to October 14th.

No models looked at increasing the cod limit above one fish or altering the April 1 – April 14 opening. For status quo cod regulations, 100% of simulation runs were below the sub-ACL. The two options that performed the worst had six-week fall open seasons from September 1st – October 14th and either a 21- or 22-inch size limit. Around 70% of simulations were below the sub-ACL for these six-week options. Options that had only a four-week fall opening were simulated to be below the sub-ACL 80-90% of the model runs. The three options that varied the season length but utilized a slot limit scored below the sub-ACL 90-96% of the time.

Questions and Comments on the Presentation:

One committee member asked what is known about cod bycatch on trips targeting haddock or other species. Mr. Steinback said he has not looked at this, but one could estimate cod bycatch by querying on the MRIP webpage for cod catch per trip during the open cod season and the closed seasons. He noted that there is no doubt cod are caught when haddock is targeted. Another committee member noted that for-hire boats are better at shifting off cod stocks during the closed seasons than private boats are since private boats are less aware of areas with high cod abundance. A third committee member brought up the MA DMF cod avoidance charts again and stated that they are available for private anglers to use. A committee member who previously asked a question regarding the 1.7 average cod catch per trip asked if this wouldn't be the answer to the question about bycatch per trip, since the limit is only one cod. Mr. Steinback clarified that the 1.7 fish number does not help to understand bycatch because this is the

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average number of cod caught each trip across the entire FY 2021 (open and closed seasons). He stated that to get to answer the bycatch question one would want to compare the catch rates for when the season is open and when it is closed separately.

A committee member asked what the discard mortality rate is for cod and haddock. Mr. Steinback stated it is 15% for cod and varies for haddock depending on if the fish is greater than or less than 19 inches long and if it is in the spring on in the fall. The member then asked since the incentive to catch cod is now higher, does that create a greater incentive for private anglers to stay over areas where cod are aggregating in attempt to catch a big cod. Mr. Steinback clarified that the incentive comparison is looking at the value of keeping a cod versus keeping a haddock, and the value of keeping a cod has increased because the encounter rates are lower and the regulations only allow you to keep one during a few weeks a year. The member then asked what information the 2017-2019 data was contributing to during the cod age projections. Mr. Steinback explained that the age projections were from the 2022 stock assessment, but the 2017-2019 data was used to convert these ages into lengths. He explained that a three-year average is used to make this conversion, but since there was no data from 2020 a range of 2018-2020 could not be used. The 2017-2019 range was not anticipated to have any negative impact on the validity of the data. The committee member asked what the age of maturity for cod is. Dr. Cournane stated cod are mature around ages 2-3, but this varies slightly between males and females and fish of different lengths.

One committee member noted recreational anglers primarily catch age two to four fish and asked what this represents from a size standpoint. Mr. Steinback stated this varies from 12 to 27 inches. The member then wanted clarification that the only model options that exceeded the sub-ACL were the options with a six-week fall cod season. Mr. Steinback clarified that the median for all options kept the cod mortality under the sub-ACL at least 70 percent of the time, but for the six-week options the top ranges of the model runs exceeded the sub-ACL. The committee member then asked if, in the future, there would be a way to see if the MA DMF cod aggregation reports are impacting where private anglers are fishing.

A committee member said that the slot limit looks great on paper and asked if there are any other groundfish fisheries with slot limits. Mr. Steinback stated the GOM cod slot limit option was evaluated because the Georges Bank (GB) recreational cod fishery is operating under a slot limit in the coming year.

Motion #1: Pierdinock/Godfroy
Move to recommend to the Council the following recreational fishery measures:

Gulf of Maine cod - Adjust the open season, same for all modes

- Open season: September 1 - October 7; April 1 - 14
- Minimum size: 21 inches
- Possession limit: 1 fish per day

Gulf of Maine haddock – Increase the bag limit to 20 fish (from 15 fish)

- Open season: May 1–Feb 28/29; April 1–30
- Minimum size: 17 inches
- Possession limit: 20 fish per day

Rationale for the motion

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The maker of the motion stated that the cod mortality sub-ACL has not been exceeded for the past three years, and the haddock mortality sub-ACLs have not come close to the limits. They stated that the proposed measures are justified and 2022 sub-ACLs should not be exceeded under them.

Discussion on the motion

One committee member stated they were uncomfortable with the measures for cod because 95% of the sub-ACL was achieved in 2020 and the level of fishing pressure from 2020 is assumed to continue. Another committee member stated they wanted to have a discussion on slot limits.

Motion #1a: Ware/Brawn
Move to amend **Motion #1**, as:

To recommend to the Council the following recreational fishery measures:

Gulf of Maine cod - Adjust the open season, same for all modes, with a slot limit
- Open season: September 1 - October 7; April 1 - 14
- Slot size: 22 inches to 28 inches
- Possession limit: 1 fish per day

Gulf of Maine haddock – Increase the bag limit to 20 fish (from 15 fish)
- Open season: May 1–Feb 28/29; April 1–30
- Minimum size: 17 inches
- Possession limit: 20 fish per day

Rationale for the motion

The maker of the motion stated that the Council has recently recommended the slot limit for GB cod. They noted it is known the current two-stock management structure for cod does not reflect the biological stock structure and there are GOM winter spawners in areas that are currently under GB cod measures. A discrepancy between the GB and GOM cod recreational size limits would mean fish from the same stock are subject to different management measures depending on where they are caught. They also noted that the proposed measures are closest to the option where 95% of the model runs were under the sub-ACL and it re-aligns the GOM cod season between private anglers and charter/party vessels.

Discussion on the motion

One committee member pointed out that the RAP ultimately voted down the slot-limit option after discussing that a slot limit would result in increased discards. They also noted that this was the first year the committee was presented with a large suite of options with cod mortality below the sub-ACL.

Three committee members appreciated the consideration the maker of the motion had for the new information about cod stock structure. Dr. Cournane noted that none of the options with a 20 haddock bag limit were simulated by the bioeconomic model, but there will be an attempt to do a model run of what the committee recommends to the Council.

One committee member noted that discard concerns came up when the GB cod slot limits were discussed. They asked if most of the fish are already being caught within the proposed slot. Mr. Steinback stated that the number of fish caught outside of the slot limit are very low, but they do make up a larger proportion of the sub-ACL because they weigh more. Dr. Cournane clarified that the slot limit for GB cod is the same

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as what was proposed in the motion. Another committee member noted that slot limits have been successful in the lobster fishery, and they support any measure that increased protection for the larger cod that make up the brood stock.

Several committee members stated they were uncomfortable with slot limits. Concerns included enforcement considerations, increased discards, impacts to private anglers, blanket 15% release mortality applied to cod, catch of large cod by commercial fishermen, and the actual biological impacts a slot limit would have when applied to a fishery that is only four to six weeks long. Mr. Blount reiterated that the slot limit was discussed by the RAP and was ultimately voted 7-3 in opposition.

Motion #1a to amend Motion #1 ***carried*** *on a roll call vote (6/3/3) and became the main motion.*

Motion #1a as the main motion
Move to recommend to the Council the following recreational fishery measures:

Gulf of Maine cod- Adjust the open season, same for all modes, with a slot limit
- Open season: September 1 - October 7; April 1 - 14
- Slot size: 22 inches to 28 inches
- Possession limit: 1 fish per day

Gulf of Maine haddock – Increase the bag limit to 20 fish (from 15 fish)
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- Minimum size: 17 inches
- Possession limit: 20 fish per day

Motion #1a as the main motion ***carried*** *on a roll call vote (8/0/4).*

AGENDA ITEM #2: 2022 COUNCIL PRIORITIES

The Committee received a short presentation from Dr. Cournane on the Council's 2022 priorities. Dr. Cournane noted the annual priorities included setting ABCs/ACLs for roughly half of the groundfish stocks for FY2023-2025, revising rebuilding plans for GOM cod and SNE/MA winter flounder, and revising ABC control rules for Northeast Multispecies stocks in consultation with the SSC. Multi-year priorities included developing metrics to be used in the review process that will evaluate the monitoring system, as per Amendment 23 and allocating Georges Bank cod to the recreational fishery and establishing Accountability Measures.

Questions and Comments on the Presentation:

One committee member clarified that the GOM and GB haddock research track assessments were originally planned to be conducted at the same time but are now separate. Dr. Cournane stated yes. The committee member wanted to highlight this, as the extended process may impact staff time in the coming months.

AGENDA ITEM #3: ATLANTIC COD STOCK STRUCTURE WORKSHOPS

PRESENTATION: 2021 ATLANTIC COD STOCK STRUCTURE WORKSHOPS, DR. KENTER (NHSG), DR. BROWN (NEFSC), DR. COURNANE (NEFMC)

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Dr. Kenter provided an outline of the two phases of the Atlantic cod stock structure process - 1) the Atlantic cod stock structure working group and 2) the two sets of workshops. He also outlined the objectives of the science/assessment workshops and the management workshops. Dr. Brown presented the findings of the first phase of the process – through an interdisciplinary review of cod stock structure the working group determined there are five distinct cod stocks in U.S. waters, not two. Dr. Brown described how the science/assessment workshops focused on reviewing available data and determining which proposed areas may be data deficient if data was partitioned into multiple management areas. Dr. Cournane provided background on the five management workshops and described how the middle three were regionally or sector focused with different discussion topics. Discussion topics included monitoring requirements, spawning closures, and improvements to and utilization of recreational data. In the final workshop, participants evaluated the trade-offs of four different management scenario options (the status quo two-unit structure, a three- or four-unit structure, or a two-unit inshore/offshore management structure).

Questions and Comments on the Presentation:

Multiple committee members inquired about the potential challenge of analyzing recreational data over multiple management areas. One committee member asked if any mock scenarios had been done to see what PSEs were if recreational data was broken into the three or four management units. Dr. Brown acknowledged that this is a concern since there are already assumptions made about where recreational catch is landed. He noted that mock scenarios have not yet been completed. Another committee member asked if there is any work being done by the states to modify how recreational catch is reported so that data is attributed to where catch occurs instead of port of landing. Dr. Brown stated not at this time. He explained that MRIP is statistically designed to generate coast-wide estimates of recreational catch that can be parsed down to the state level. The data is over all species that are recreationally caught and not tailored to specific stock structures. A third committee member noted it is particularly difficult to properly attribute catch to the correct management area when tourists and for-hire boats move north and south through Cape Cod.

One committee member asked if the under-development Woods Hole Assessment Model that incorporates more environmental factors is being considered by the working group. Dr. Brown stated that the working group will look at a suite of modeling approaches. He clarified that the model is complete, under peer-review and currently being utilized by other working groups. The member then brought up that there is no aging data coming out of the NEFSC aging lab due to the COVID-19 pandemic and asked what the long-term ramifications might be. Dr. Brown clarified that there is still some aging work being done both at the lab and at individual's homes. Aging has not stopped completely, but efficiency has been impacted.

Dr. Cournane was asked a clarifying question about the map displaying the five distinct biological cod stocks in U.S. waters. The committee member noted small segments of the Western Scotian Shelf and Bay of Fundy cod stocks (under Canadian management) are in U.S. waters. Dr. Cournane stated that all U.S. catch will be assigned to one of the U.S. management units. Dr. Brown stated catch that occurs in the identified areas would likely be attributed to the proposed Eastern GOM and Western GOM management areas. Dr. Cournane and Dr. Brown assured the member the map will be updated to make this clearer in future iterations.

A committee member asked if there needs to be the same number of assessment areas and management areas. Dr. Brown stated that it is preferable if you can have assessment and management areas line up in some way but pointed to the two mixed stocks in the Western GOM (spring spawners and winter spawners) as an example for where this can become difficult. Dr. Brown stated that there was not a lot of

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support for assessing these two stocks differently because they are harvested together and the only way to distinguish between them is otolith analysis. Attorney MacDonald (NOAA GC) brought up National Standard 3 and added a note of caution - management units should not be determined only by biological decisions but should be chosen based on the biological, social, geographic, economic, and technical objectives of the FMP.

One committee member asked if it was possible to share some of the themes that emerged during the management workshop. Dr. Cournane directed them to look at *Chapter 3, Section C Management Tools and Themes* of the Cod Stock Structure Report.

Jackie Odell (Northeast Seafood Coalition) noted that there are many spawning closures in place, but there is concern that these areas have not been adequately studied post implementation. She stated the successes or failures of current spawning area closures need to be discussed during considerations of future ones. She also raised concerns about an overall lack of available data. She cautioned that a new management structure should not be selected solely for biological reasons but must consider the resources available to conduct proper assessments.

AGENDA ITEM #4: ATLANTIC COD RESEARCH TRACK WORKING GROUP

PRESENTATION: ATLANTIC COD RESEARCH TRACK WORKING GROUP, DR. KERR (GMRI, COD RESEARCH TRACK WORKING GROUP CHAIR)

Dr. Kerr provided an overview of the Research Track Working Group membership and timeline, noting that the process is scheduled for completion in Spring 2023. She provided an outline of the eight established Terms of Reference (ToRs) approved by the Northeast Regional Coordinating Council (NRCC) and a proposed nineth ToR currently under review. Dr. Kerr described the current approach for each ToR and possible alternative approaches identified by working group members. The working group has categorized the ToRs into four groups. They are currently focusing their efforts on the three ToRs that encompass larger scale issues and recommendations that influence approaches to the following ToRs. Dr. Kerr explained how the working group reviewed new information on the biological stock structure of cod, the outcomes of the workshops, and currently available data to develop their recommendation. The working group ultimately recommended the four stock unit management approach. Dr. Kerr outlined the working group's next step, which includes future stakeholder engagement meetings.

Questions and Comments on the Presentation:

One committee member commented on the process for the approval by the NRCC on the nineth ToR and asked if modifications to any of the existing ToRs would have to go through a similar review process. Dr. Brown responded that the NRCC intended the ToRs to be fixed so that the research tracks would have a measure of consistency among assessments. The committee member then noted that one stakeholder engagement meeting may not be sufficient to fully consider the complexities associated with changing the management structure of cod. Dr. Kerr responded that the working group intends to have multiple meetings to address different issues, and the goal for the currently scheduled one is to initiate outreach.

Another committee member asked about ToR 2 and noted past challenges with incorporating electronic monitoring (EM) data into assessments. He commented that vessels participating in EM pilot projects behave differently than those not being continually monitored by video cameras. He also noted that if increased monitoring requirements per Amendment 23 are implemented there may be further changes to and challenges with analyzing EM data appropriately. Dr. Kerr acknowledged these concerns but noted

the working group hasn't gone into depth on data discussions yet. She noted this will be coming up in the following working group meetings.

One committee member asked if this was the time for the committee to give feedback on the proposed four stock unit management approach. Dr. Kerr noted that this will be an ongoing discussion with regular meetings for individuals to provide input. Dr. Cournane stated that some discussion can happen at this meeting, but management implications are also set to be discussed at the upcoming February Council meeting.

Jackie Odell (Northeast Seafood Coalition) asked about the Plan B assessment models discussed under ToR 8. Dr. Kerr noted that additional index-based approaches aside from PlanBsmooth and DLM may come back on the table to be evaluated, and if PlanBsmooth is selected for the Plan B assessment model the working group will address recent issues that have been identified with it. Ms. Odell asked what would happen if the working group set out to analyze five stocks and then determined there was insufficient data. Dr. Kerr noted that the working group felt there was sufficient data to move forward with the four unit management structure. She acknowledged that data poor areas like Southern New England or the Eastern GOM may have challenges, but these will be discussed when the working group addresses ToRs 2 and 3. She also noted that these decisions will be made collaboratively with NEFSC, GARFO, and the Council.

AGENDA ITEM #5: OTHER BUSINESS

None.

The Groundfish Advisory Panel meeting adjourned at approximately 3:30 p.m.

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