PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

WINTER FLOUNDER MANAGEMENT BOARD

Webinar
October 19, 2020

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Proceedings of the Winter Flounder Management Board Webinar
October 2020

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ATTENDANCE

Board Members

Megan Ware, ME, proxy for P. Keliher (AA)
Cheri Patterson, NH (AA)
G. Ritchie White, NH (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)
Dan McKiernan, MA (AA)
Raymond Kane, MA (GA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)
Conor McManus, RI, proxy for J. McNamee (AA)
David Borden, RI (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)
Matt Gates, CT, proxy for J. Davis (AA)
Willian Hyatt, CT (GA)
John McMurray, NY, proxy for Sen. Kaminsky (LA)
Joe Cimino, NJ (AA)
Tom Fote, NJ (GA)
Adam Nowalsky, NJ, proxy for Asm. Houghtaling (LA)
Mike Millard, USFWS

(AA = Administrative Appointee; GA = Governor Appointee; LA = Legislative Appointee)

Ex-Officio Members

Paul Nitschke, Technical Committee Chair

Staff

Robert Beal
Toni Kerns
Tina Berger
Maya Drzewicki
Pat Campfield
Dustin Colson Leaning
Chris Jacobs
Jeff Kipp
Laura Leach
Savannah Lewis
Sarah Murray
Caitlin Starks
Deke Tompkins
Geoff White

Guests

Karen Abrams, NOAA
Pat Augustine, Coram, NY
Richard Balouskus, RI DEM
Linda Barry, NJ DEP
Peter Benoit, Ofc. of Sen. King
Jeff Brust, NJ DEP
Mike Celestino, NJ DEP
Heather Corbett, NJ DFW
Jessica Daher, NJ DEP
Aubrey Ellertson, CFR
Catherine Fede, NYS DEC
Allison Ferreira, NOAA
Cynthia Ferrio, NOAA
Tony Friedrich, SGA
Willy Goldsmith, SGA
Melanie Griffin, MA DMF
Carol Hoffman, NYS DEC
Amanda Hooper
Rob LaFrance, Quinnipiac Univ
Wilson Laney
Chip Lynch, NOAA
John Maniscalco, NYS DEC
Jerry Morgan
Allison Murphy, NOAA
Gerry O'Neill, Cape Seafoods
Derek Orner, NOAA
Tara Scott, NOAA
Melissa Smith, ME DMR
Corinne Truesdale, RI DEM
Beth Versak, MD DNR
Mike Waine, ASA
Anthony Wood, NOAA
Christopher Wright, NOAA
Erik Zlokovitz, MD DNR
Rene Zobel, NH F&G

The Winter Flounder Management Board of the Atlantic States Marine Fisheries Commission convened via webinar on Monday, October 19, 2020, and was called to order at 11:00 a.m. by Chair David V. Borden.

CALL TO ORDER

CHAIR DAVID V. BORDEN: First start with the Administrative Issues.

APPROVAL OF AGENDA

CHAIR BORDEN: You have an agenda that's been distributed. Are there any comments, changes, additions, deletions to the agenda, and if not any objections to following the agenda as distributed? Any objections? I see no hands up. We'll take the agenda in the order that it was distributed.

APPROVAL OF PROCEEDINGS

CHAIR BORDEN: The proceedings from February, 2019 has been distributed with the meeting packet. Any comments on the proceedings? If you want to comment, please raise your hand. I see no hands up. Any objections to approving those proceedings as distributed? There are no hands up, so the proceedings stand approved.

PUBLIC COMMENT

CHAIR BORDEN: We afford the public an opportunity to comment, and this is the time. If you have comments, it's supposed to be for the purpose of commenting on items that are not on the agenda. We would ask that you keep your comments brief. Any members of the public with a hand up? I can see none.

Toni, if you see someone with a hand up, please interrupt me and I'll call on them.

REVIEW OF THE 2020 ASSESSMENT UPDATES FOR THE GULF OF MAINE AND SOUTHERN NEW ENGLAND FLOUNDER STOCK

CHAIR BORDEN: There are no members of the public with a hand up, so I'll take the next item on the agenda, which is Review of the 2020 Assessment Updates for the Gulf of Maine and Southern New England Flounder Stock**.** We have two presentations, I think I'll start with the first one, which is Paul.

PRESENTATION OF GULF OF MAINE STOCK ASSESSMENT REPORT

MR. PAUL NITSCHKE: This is going to be a summary of the Gulf of Maine winter flounder Management Track Assessment, which was recently reviewed in mid-September. This was a Level 2 Assessment, a Level 2 Review. The last assessment was in 2017, the 2017 Operational Assessment. This Assessment is a 30 plus centimeter Survey Area-Swept Assessment.

There is no analytical model for this stock. Just to let people know, there is more information on the Data Portal at the Northeast Fisheries Science Center webpage. There is a document on there that has tables and figures, if people are interested in more of the gory details than this. As I said, this is a 30-centimeter Area-Swept Assessment.

It was developed as a Plan B in SARC-52 in 2011. It has been updated several times, in 2014, '15, and 2017. This was the first Area-Swept Assessment for groundfish, so there is a little bit of history with this one. For stock status, it has not changed. Overfished status is unknown, and overfishing is not occurring. This stock is not in the rebuilding plan. It was never declared overfished. I'll give you a little history on this assessment. In GARM III and at SARC-52, the analytical models did not pass review. We tried many different models. However, all the models have severe retrospective issues.

Basically, there is a conflict between the large change, the large reduction in catch over the

time series, with little change in the survey indices, and/or the size structure in the commercial removals, and also in the surveys. We're now basing this assessment on just the Survey Area-Swept direct estimate of biomass from the surveys.

Just to remind people, this is the Gulf of Maine stock, which was historically the smallest of the three winter flounder stocks north of Cape Cod. Almost all of the catch comes out of Statistical Area 514, coming out of like Mass Bay, Cape Cod Bay, Stellwagen Bank. Almost all the removals are coming from that small area.

For this assessment we updated the raw survey indices for the Northeast Fisheries Science Center, Mass DMF, and the Maine-New Hampshire Survey. We estimate the 30 plus Area-Swept biomass from 2009 to 2019. This is done using non-overlapping strata between those three surveys, and we updated the catch from 2009 to 2019 for the commercial and recreational landings and discards.

Here are the landings trend. Since the 1980s you can see there has been a large decline in the landings over the time period. The landings in 2019 was at a record low for the stock. On the bottom there is just the proportional makeup of the marking categories in the commercial landings.

You can see there really isn't that much of a change in the marking category makeup, which is part of the reason why the models have some difficulty, since there isn't a lot of dynamics in the change in the size of the fish coming out of the removals. Here is a breakdown of the total catch. For this assessment we updated the recreational estimates using the new calibration coming out of MRIP.

That has changed the perception a little bit for this stock. Those recreational estimates pretty much have doubled. Most of the recreational removals were in the 1980s. You can see now with those new estimates, the recreational component is actually larger than the commercial component during that time period.

However, starting in the early nineties, the recreational catch decreased to very low levels since then. Those numbers still doubled, but there is just doubling of a very small number, so it's not as dramatic. Commercial removals just continue to decline to a point now where in 2019 we have a record low catch for Gulf of Maine winter flounder. I think it was around 109 metric tons.

Here is just a comparison between the new and old MRIP estimates. On top of the landings you can see how those estimates on average doubled in size with the new calibration. On the bottom the B2s also have a pretty big change. However, keep in mind that the B2s are a very small component of the recreational removals, given this 15 percent mortality rate on the discards. This plot just shows the combined effect of landings and B2s added together. The same sort of story as before. Here are the raw survey indices on top of the Northeast Fisheries Science Center Bottom Trawl Survey. In the middle is the Mass DMF Survey, spring and fall, and on the bottom is the Maine-New Hampshire Survey.

In general, you can see these trends are fairly flat over the time period. From the 1980s to now they continually catch on average about the same amount of fish. This assessment now is based on the Survey Area-Swept. We don't have a survey that covers the entire stock, so we use three different surveys with none overlapping strata to hopefully cover the whole stock as best we could.

This table shows the breakdown of each survey contributing to that total estimate. On the top row is the survey area in nautical square miles. The Mass DMF survey in the middle is the smallest area wise, however that survey is important for winter flounder. They catch a large amount of fish in that small area.

The Maine-New Hampshire survey catches a lot of fish, and there is a large area. However, most of the fish in that survey are smaller than 30 centimeters, so it doesn't contribute as much. The next row is just the total footprint, the assumed footprint for each tow on the wingspread. Then the expansion factor is just the total area divided by that footprint.

Here are the length frequencies coming out of the Maine-New Hampshire Survey, and as you can see the numbers drop off very quickly when you get up to 30 centimeters, and there were a lot of fish caught in that survey. For new sources of information that went into this assessment, we had more tow data from the twin-trawl experiment, the efficiency experiment.

Tim Miller was kind enough to update the estimates of efficiency using new model and increased sample size. That work is summarized in the working paper on the data portal. We also updated the MRIP recreational catch. However, just keep in mind that this assessment now is 100 percent survey based, so those estimates don't really affect the assessment.

The only thing they can affect is whether the stock is overfishing or not, but that has not changed. This is the basic equation for the exploitable biomass. We're calling exploitable biomass 30 plus centimeter biomass index per tow, multiply it by this expansion factor, which is the total survey area divided by the total footprint times Q. Q in this case, you can think of Q as the efficiency of the survey gear between the wingspread.

It's an important assumption, the exploitable biomass is pretty sensitive to this assumption. The exploitation rate is then just simply the catch over this 30-centimeter biomass estimate. The biological reference points were based on F40 from a length-date yield per recruit model, with the same 30-centimeter knife edge selectivity pattern.

These are the inputs that went into the yield per recruit back in SARC-52. It's using the same M and that 30-centimeter selectivity, and the long-term growth goes into this estimate. Using many years of age data go into that estimate. These are the plots that Tim produced on the efficiency. He accounted for day/night effects and also length effects in the estimates. On the left is the efficiency during the day. Keep in mind we're only using 30 plus centimeter cutoff here. During the day there is a bigger difference in efficiency between the Bigelow gear and this more efficient flat mat used during the experiment. However, at night there wasn't really that much of a difference between the two gear types.

Out of Tim's work he accounts for specific tow day/night effect and length effects, and comes up with these implied efficiencies coming out of the survey for each year and each survey. We basically took the average efficiencies over this time period as an estimate of Q, to go into our calculations of Areas-Swept.

This is what was updated in this assessment. To give you some history on how the Q changed in this assessment, back at SARC-52 there wasn't any information really on what the efficiency should be. The Review Panel at SARC-52 came to this conclusion of assuming a Q of 0.6. At that time, we presented a range of different Qs and the effects on the assessment.

In 2017 we had some experimental data from the Sweep Study. That work at the time estimated a Q of 0.866. However, the sample size was a little bit low at that point. That Q increased from 0.6, so when the Q increases the biomass estimate decreases. For this update we have some more information, and the Q estimate for this update went down to 0.71, so it's a little bit of decrease in the Q. That will increase the biomass estimate coming out of this method.

Here are the total estimates of 30 plus biomass from the spring and fall survey. On the top is

the spring survey, and the colors on the bars represent the amount of fish in each survey. In the spring you can see that there is a greater proportion of the stock within the state surveys, which makes sense. In the spring the fish are more inshore, spawning in the shallows, so there is a greater proportion in the state surveys.

In the fall there is a greater proportion in the Northeast Fisheries Science Center survey. In the past we used the fall survey as the estimate, because there was some concern that we're missing fish in the spring, with some fish being inside the estuaries where there is no survey conducted. However, as we update this assessment, the estimates between the spring and the fall are very similar at this point.

However, we're still using the fall survey, because we have some estimates of efficiency of the gear for the Center Survey, where we don't have any experiments on the state surveys. We're basically just using the same Q for the state survey gear, even though that gear is quite a bit different than the Center gear. But it's a little more uncertainty in the spring estimates, because a greater proportion is in the state surveys, where we don't have that information on efficiency.

We'll still using the fall survey for the catch advice. However, it doesn't really matter that much, because the two surveys are producing very similar results. Here are the exploitation rates coming out of the two surveys, and they are pretty much lined up pretty well. The exploitation has been low over the entire Bigelow time series, far below the overfishing definition of 0.23.

One of the sources of concern is the decreasing biomass, you know from the beginning of the time series under these low exploitation rates, which doesn't really follow what you would expect out of the population dynamics. That can also be seen in these plots. On the left is the biomass trend. You can see that declining trend in the biomass under the low exploitation rates on the right. One of the changes going forward coming out of this review. The reviewers suggested using two years of information to inform the catch advice.

In the past we all just used the terminal year for the three surveys. That basically results in ignoring every other year. To stabilize the catch advice, we're now using a two-year average using all the new information, every time the assessment is updated going forward. It doesn't really have a huge effect, but it should stabilize the catch advice going forward.

As seen in this plot, you can compare the two-year average point estimate versus the annual estimates coming out of the fall survey. The ABCs for the stock are basically calculated as 75 percent of the exploitation rate at 40 percent, multiplied by this 30 plus Area-Swept biomass estimate. At this point we're using the average of two fall surveys for that estimate.

For sources of uncertainty, as I said the biomass and exploitation rates are sensitive to the Q assumption. We do have some more information on that with this assessment. That should improve things a little bit. However, we don't have any information on the efficiency of the state surveys, so that still remains a source of uncertainty.

As a general concern, there is still some concern with very low exploitation rates and little response to the biomass or the indices for the stock. Why that is occurring is not really known. The other concern for this method is we don't have a biomass status coming out of this method. That is the end of my little summary, I can take any questions.

CHAIR BORDEN: Questions for Paul. Any hands? If you want to ask questions, please put up your hands. We have no hands up, at least that I can see. Toni, do you see any hands up?

MS. TONI KERNS: I do not, David.

CHAIR BORDEN: Okay, so Paul, let me just ask a question in regards to rebuilding. You just expressed the point that I was going to make. Is it possible to increase this population, or is this a case where we have environmental drivers that are pretty much determining what the status of the biomass is? Are there ways we could rebuild this?

MR. NITSCHKE: It's not really clear why the catch keeps going down, but it doesn't seem to affect the survey trends. You don't really see an effect on the size structure. That has remained constant since the 1980s overall for this stock. Now that's not true for the Southern New England stock. This stock was never put into a rebuilding plan. It was never declared overfished.

But there is really, I mean there is no mandate to rebuild the stock. However, we don't really have a biomass target out of this method, so it's kind of a big unknown. One of the things that you hear the conflicting trends between the recreational fishery and the commercial fishery on how well the stock is doing. One of the things that could be occurring is just a guess at this point, is that perhaps in the 1980s more of the stock was in shallower water, whereas now if there was a shift into deeper water, that would explain why the survey trends have remained fairly constant, whereas there is a bigger decline inside the estuaries that we don't really have any information.

CHAIR BORDEN: Thank you, I've got Dan McKiernan.

MR. DANIEL McKIERNAN: I have two questions for Paul. First, what is the workload associated with conducting an efficiency study for the state trawl surveys, and the second one I would ask Paul to comment on the problems that are going to be created by this year's cancellation of the trawl surveys, and with an unknown restarting time for those surveys What is the workload associated with these efficiency studies, and comment on the lack of trawl surveys this year.

MR. NITSCHKE: It's a pretty good workload for the efficiency studies. Basically, you need that. All this work was done on the Twin Fall, so you need a specialized, where they can tow two nets at the same time. If this work would be done probably you need a specific vessel for that. Instead of using the Bigelow Net, you would use the state survey net to compare to the industry standard for the most efficient gear that they use.

But you need a good amount of tows within an area where they have pretty good catch rates for winter flounder. In terms of going forward, next year if we don't have any surveys, I mean I guess we lose some information here. I guess we can't use an average, we're back to using a single year for the catch advice. I mean it causes some uncertainty, but we just can use the information we've got going forward.

PRESENTATION OF SOUTHERN NEW ENGLAND/MID-ATLANTIC STOCK ASSESSMENT REPORT

CHAIR BORDEN: Does anyone else have a question? If not, we'll move on to the Southern New England stock. Okay, so let's do that, move on to the Southern New England stock. The next presentation is by Mr. Wood.

MR. ANTHONY WOOD: I'm going to give a quick run through just like Paul did of the Southern New England winter flounder assessment. Again, as Paul mentioned, the full details can be found on our data portal, along with tables and figures and model files, as well as some working papers that will provide a lot of information to some questions that you might have.

This stock was last assessed in 2017 for the Statistical Catch at Age Model. The reference points at the time were FMSY reference points with an FMSY of 0.34, and an SSBmsy of about 25,000 metric tons. The stock status was overfished but overfishing was not occurring.

The first term of reference from this assessment was to estimate catch from all sources.

This model uses commercial landings, commercial discards, recreational landings and recreational discards. For the purpose of this update we used the new calibrated MRIP estimates for the recreational information. All these sources of data are compiled into a single fleet to be input into the model.

For commercial landings in 2019, almost the lowest in the time series. If we ignore the years of moratorium around 2010, we're at the lowest in the time series. Our landings were 202 metric tons for 2019. Discards were 105 metric tons, well below the time series average. Recreational landings were at a time series low as well, 500 kilograms were recreational landings, so recreational landings have basically fallen off of a cliff for this stock, and have remained low since about all throughout the 2000s.

Represented in red here are the old MRIP numbers, and the blue shows how the new MRIP calibrations scaled up both landings and discards in the next plot, very similar to how it was pictured in Gulf of Maine. For 2019 recreational discards were 2.4 metric tons. Again, well below the time series average.

Presented out of the total catch, looking at total catch using old MRIP numbers and the new MRIP calibrated data that actually went into this assessment update. The 2019 total catch was 310 metric tons. Total catch components, you can see that recreational landings have fallen off drastically, almost 98 percent is commercial data now going into this assessment.

The next term of reference was to evaluate the indices. There are now 12 indices that go into this assessment, some regional indices, some state-specific indices, and a couple of young of the year indices. We have three Science Center surveys. For this update we have brought in the NEAMAP spring survey.

We also have spring surveys from Massachusetts, Rhode Island and Connecticut, two surveys from New Jersey and one from the University of Rhode Island, as well as two young of the year surveys from Massachusetts and Connecticut. The next few slots are going to be scaled indices. First slide here is the four regional survey indices. That would be the three Science Center surveys and the NEAMAP spring survey.

They also are fairly similar defined starting at about 2000 down to present. We see a similar thing in all the state surveys. I know the plot gets messy, but if you squint you can see over the entire time series a general decline for all these surveys, down to almost time series low values for every survey in 2019.

Then finally, the two young of the year surveys, Massachusetts is pretty flat over the time series. Other than a couple of peaks for Connecticut, we also see somewhat of a decline from late '90s, 2000 to 2019. That covers the fishery dependent and independent data run of the assessment. Biological data is carryover from the benchmark in 2011, that SARC-52.

We assume a constant M of 0.3. Maturity information from 1982 to 2008 from the Massachusetts spring survey was used. These input values were retained for this 2020 operational. Now the meat of the assessment comes in this Term of Reference 3. This is actually run the model and get the model estimates, and include any bridge runs.

Now we're kind of limited by what we can do for these operational assessments, but this assessment was a Level 3, so I was able to make quite a few changes. Most of the changes that I made were spurred on by comments from the New England Fisheries Management Council SSC. In 2017 the operational model configuration was the same as the model used

from SARC-52. The single fleet that included commercial and recreational landings and discards. We had two selectivity blocks, 11 survey indices, and a bunch of penalties. Most of these penalties were actually unnecessary if they weren't turned on on the objective function. For one of the steps here in my model bridge, I turn those off, and I'll get to that. To build a bridge from the SARC-52 model to our current assessment model, I started with the continuity run and updated that through 2017, since the 2017 update only included data through 2016.

Then I switched that model over to new MRIP calibrated data, and updated that through 2019, and turned off or removed the needless penalties. That had no effect on the model estimates. Moving on to the next step, these are the changes that were recommended by the SSC at the last Panel Review, and that was to include a new selectivity block.

I chose from 2010 to present, to try and get some even temporal resolution in these selectivity blocks, and also to include a flat top of fleet selectivity, as opposed to estimated selectivity at age. This was to get rid of some cryptic biomass that is showing up in the model. Then the final thing was to add the new NEAMAP Survey.

That brought us to a final model. With a single fleet using commercial and recreational landings and discards, three selectivity blocks with flat top selectivity, as opposed to selectivity at age. Twelve survey indices and a single penalty to start off the model with numbers in Year 1. I'm not going to get into very much, if any, of the model diagnostics.

Again, they're all presented in the full presentation that I presented to the Review Panel. They are all available on our portal, and I believe they were made available to the Board. You can see that adding a third selectivity block or having any selectivity blocks at all, doesn't really have that much of an impact.

Flat top selectivity is pretty similar between the three time periods chosen. The 2019 biomass estimates, total biomass was estimated at about 5,200 metric tons, with SSB at about 3,700 metric tons. F was at the lowest of the time series, at a value of 0.077. Recruitment has remained pretty low throughout the 2000s, and 2010s. Current estimate is 2.3 million fish, not quite the lowest in the time series.

The retrospective bias has increased a bit. I feel like it's mostly a result of forcing that flat top on the fleet selectivity, although the patterns are still considered minor for F and SSB, so we didn't make any retrospective adjustments when it came to determining stock status. Moving on to Term of Reference 4 was to re-estimate our update to reference points.

Previous reference points, again coming out of methodology developed at SARC-52, were based on a Beverton-Holt stock recruit relationship. The SSC felt that these were providing recruitment estimates that were unrealistic, given the current recruitment regime that we seem to be in, so we moved away from using this Beverton-Holt stock recruit relationship, and went to a proxy reference points.

Previously the stock was overfished, but overfishing was not occurring, and reference points were based on stock recruit relationship. Here is a plot showing the stock recruit relationship. It is based on a fixed steepness, and it is probably not the best model to fit to these data. It almost appears that the Southern New England has a linear relationship in the stock recruit data. Again, we moved away from that for this assessment to develop reference points. Using SPR based reference points F40 percent came in at 0.284 compared to 0.26, which is what it would have been if we used the old methodology.

Spawning stock biomass reference point at 12,000 metric tons currently sit at 27 percent of the F threshold, 30 percent of the target, and 60

percent of the SSB threshold. The stock remains in the same status. We are currently overfished, but overfishing Is not occurring, and there was a minor retrospective bias, so no adjustment was made.

Some of the sources of uncertainty carry over from SARC-52. We have a fixed natural mortality based on longevity equations. The recreational discard length information is pretty bad, and we do have a retrospective bias that is bordering on a major retrospective, so we might have to make adjustments going forward.

Then some research needs just listed from panelists comments over the years, additional studies on maximum age, incorporating new information on maturity, looking at migration rates between stocks and additional investigations into sub-stock structure, and incorporate an environmental influence on a stock recruit relationship. Some of these have been looked at, some of them are ongoing, and there have been recent publications for a couple of these. With that I'll take any questions you might have.

CHAIR BORDEN: All right, questions for Tony? I've got Conor McManus, Dr. McManus.

MR. CONOR McMANUS: Thank you, Tony, for your presentation. I was just curious on your last bullet. Some of the research as of late has shown environmentally explicit relations with stock recruit dynamics, and I was just curious, has the Winter Flounder Working Group or yourself thought or discussed future plans to include that work, and how it might improve or change our perceptions on projections?

MR. WOOD: Yes, so the Bell et al paper in 2018 is a starting point, really for this work going forward. Rich and I, Rich Bell and I have updated that work, and we did have a working paper. I'm not sure if it was provided to the Board or not, but I would encourage you to look at that working paper. You'll see where the current status of that work is, and we are exploring different model types going forward, to actually include that in the assessment model. But for this process and for this assessment, we're kind of handcuffed by what we were allowed and what we weren't allowed to change.

One of the things we aren't allowed to change is the model type. In order to incorporate that kind of information, we need to switch to the different model. It's on the forefront of what we're working on, and what we're working towards. But until we have a research track or until another publication comes out with a new assessment model, we're not going to be able to include that assessment model to provide management advice.

MR. McMANUS: Thank you, and just to follow up, is there plans for a research track assessment for Southern New England winter flounder?

MR. WOOD: It's not currently on the schedule, and I can't speak to whether that will change or not. There was some blowback at the FSC meeting that this environmental model isn't being considered, since it does exist. But again, we're handcuffed by the process, and I don't know. I think the next possibility for winter flounder to be on the research track is 2026.

MR. McMANUS: Great, thank you.

CHAIR BORDEN: Megan Ware.

MS. MEGAN WARE: I have a question. I was looking at the meeting materials, the assessment overview that was provided. My sense is that stock biomass isn't great, and potentially at its lowest level. But I thought that catch productions were pretty high, and I was just wondering how that, I'm trying to grapple how those two things work together. I didn't know if that was a result of recruitment assumptions, or how those projections are so high.

MR. WOOD: It is a result of recruitment assumptions. While we moved away from using a stock recruit relationship in the projections, we still are using the entire time series, the entire time series of empirical recruitment, and the projections are basically pulling a median from those values, which is still well above the recruitments that are being realized.

But again, we're not only limited by what we can change through the assessment process, but I kind of wanted to stay away from making that many changes for a Level 3 assessment. I made a lot of changes as it was, so I didn't really want to change the recruitment standard that was going into the projections. The resulting change in the type of recruitment estimates going into the projections did bring down the SSB reference point quite a bit.

If we limit the recruitment stands at say the last 10, 15, or 20 years, it does bring down those projections quite a bit as well. Now, Paul can probably speak better to this, but I believe at the recent SSC meeting they've done what they did in previous years, and used the three-year-average catch, as opposed to using the projections for management advice, further reason that you just brought up.

CHAIR BORDEN: Any other questions? No hands up. Tony, you raised the issue of the Bell paper. I just note, I guess this is a question for staff. In the minutes of the last meeting of the discussion. Doug Grout, myself and others talked about the Bell paper and the need to have the PDT review it. Could the staff comment, did that take place, or is there a work in progress?

MR. DUSTIN COLSON LEANING: Hi, this is Dustin, just chiming in here. A decision was made to discuss this at the NRCC level, so I'm wondering if Toni Kerns would like to comment on progress there.

MS. KERNS: I think this conversation will continue at NRCC. It was our understanding that the Bell et al paper would be worked into the assessment conversations that we had. The NRCC, I understand from Tony Woods perspective that they were going to provide (broken up) management track discuss this. I think that wasn't communicated well during the NRCC meeting, so we'll have to talk about this some more, and continue on the conversation, and we can bring it back up at the next Board meeting, David

CHAIR BORDEN: All right thanks, Toni. Any other questions?

MS. TINA L. BERGER: David.

CHAIR BORDEN: Yes?

MS. BERGER: Paul Nitschke asked to be recognized to speak to that point.

CHAIR BORDEN: Okay, go ahead.

MR. NITSCHKE: Yes, with the Bell paper. Like Tony said, it can be addressed through a research track, unless the rules have changed for the management track. Tony is working on that work, but until the rule is changed, it can't really be addressed to a management track. The other question about the projections.

Tony is correct, the SSC basically went with the average catch approach. The main reason is because this stock is still in a rebuilding plan, and it wasn't deemed appropriate to put the big increase in the catch advice, if it can't rebuild by the end date. Those projections like was said, are pretty high compared to recent catches, so there is some concern with that.

CHAIR BORDEN: Okay, thank you. Anyone else, comments? That is a piece of continuing work that we'll no doubt get a report on at the next meeting. Are there any other questions on either one of these reports, and if not, I have to move on?

ELECT VICE-CHAIR

No hands up, so next item of business is to Elect a Vice-Chair of the Committee**.** Do I have any nominations? Toni.

MS. KERNS: There is a nomination. David, I thought we had someone to make it.

MR. COLSON LEANING: Yes, David, I don't know if you recall. We discussed a potential candidate leading up to this meeting. Is it inappropriate for the Chair to provide the nomination?

MS. KERNS: Totally fine to do so.

CHAIR BORDEN: We would prefer to have somebody on the Board provide the nomination.

MS. KERNS: Mr. Chairman, Megan Ware has one.

CHAIR BORDEN: Megan.

MS. WARE: Thank you, Mr. Chair. A vision has come to me, and I will nominate Bill Hyatt as Vice-Chair.

CHAIR BORDEN: Okay, do we have a second?

MS. CHERI PATTERSON: Cheri Patterson seconds.

CHAIR BORDEN: Any comments on the motion? Any objections to the motion? **The motion stands approved as suggested.**

ADJOURNMENT

CHAIR BORDEN: Any other business to come before the Committee? If not, meeting stands adjourned, and I'll turn it back over to Toni.

(Whereupon the meeting adjourned at 11:51 a.m. on October 19, 2020.)