

DRAFT

#3



DRAFT Scallop PDT Meeting

March 11 and 12, 2009

Falmouth, MA

PDT members in attendance: Deirdre Boelke, Cate O’Keefe, Pete Christopher, Kevin Kelly, Erin Kupcha, Rula Deisher, Bill DuPaul, Julie Olsen, Dvora Hart, Demet Haksever, Sarah Pautzke, Kim Murray

About 8 audience members attended. Amy VanAtten from the Observer Office and Jamie Goen from NERO also attended.

Opening Discussion

The PDT first discussed the opening of ETA and Delmarva on March 1. Pete Christopher conveyed that the big storm delayed the number of access area trips for several days, but trips have been steady ever since. Erin Kupcha from the Observer Office reported that so far there has been about 20% coverage in ETA and 12% in Delmarva. Several PDT members voiced that level of coverage may not be necessary since there are no finfish or turtle issues this time of year. It was recommended that the agency may want to target lower levels of coverage at first to “save” days for other areas and seasons. Several industry members in the audience explained that they are seeing lots of seed in both areas and there is a high quantity of 10-20s now that should be larger and in great shape in a few months. The ETA is a little beat up, but the yield is coming back a bit. One added that the stock in the west of Elephant Trunk Area is a little beat up.

Deirdre Boelke announced that due to the needs of A15 and FW21 analyses, the PDT may need to meet once a month for the next few months until at least September.

Amendment 15: ACL/AM Development

Section 3.2 overall (Compliance with Reauthorized MSA, i.e. ACLs/AMs) has been updated with information and input from the SSC. Additionally, 3.2 and 3.2.1 has been updated to reflect the definitions and requirements of the Final Rule (Guidelines for establishing ACLs/AMs).

Scientific Uncertainty

A qualitative description of scientific uncertainty was provided to the SSC and while they appreciated the description, they wanted a more quantitative analysis for the determination of a 10% buffer between OFL and ABC. The SSC also had several specific suggestions about changing some of the qualitative discussion related to uncertainty in the parameters. The PDT discussed their ideas and agreed to several changes based on SSC input. For example, it was discussed that it is better to have an age structure assessment; but age does not necessarily mean growth. With scallops length is measured as a proxy for age and is routinely measured. In general, the PDT agreed with the SSC that growth can have an uncertainty measurement of 2.

With respect to the shell-height/meat-weight relationship, the SSC said that there was more uncertainty because the spatio-temporal variation wasn’t taken into account. However, it was pointed out that the assessment does take into account when and where fishing takes place – the

DRAFT

analysis incorporates the seasonality of the meat weights. It was noted that interannual differences are not taken into account. The general consensus was that an uncertainty measurement of 2 is fine compared to 1 to recognize the interannual differences.

Similarly, the SSC recommended that the uncertainty associated with natural mortality should be high. The PDT agreed to an uncertainty measurement of 3, compared to 2.5.

The SSC recommended adding “stock-recruit relationship” and “density dependence” as additional parameters. It was discussed that the assessment did look at analyses to assess density dependence, but was not able to identify this relationship in scallops in the growth or shell-height/meat-weight relationships. However, it was noted that there is density dependence in the juveniles. It was decided that these two parameters will be added with discussion and ranks for the PDT to consider in the future.

Management Uncertainty

The PDT discussed management uncertainty. General agreement is that LPUE is the main source of management uncertainty. It was discussed that one way to assess the uncertainty is through a comparison of previous LPUE projections to what actually occurred. It was pointed out that scallop landings were previously underestimated due to reactivated latent effort and an expansion of the GC fishery, which together probably accounted for 20% of the difference between projected and actual catch; both are capped now because all but one permit is activated and GC vessels are under IFQs. The PDT discussed adding a table to the A15 management uncertainty section that includes percent DAS and percent access area trips for 2000-2007 to show that the % of total effort under DAS has declined, thus management uncertainty has declined because access areas have a possession limit.

Additionally, it was discussed that the PDT could re-estimate LPUE based on updated biomass estimates to better quantify management uncertainty related to estimated LPUE. Overall, the PDT is going to work on a few more analyses related to management uncertainty. The current recommendation remains 10% of ACL to account for this source of uncertainty, but the PDT hopes to develop more analyses to further justify this recommendation. The PDT also discussed that a caveat could be considered related to the 10% reduction between ACL and ACT; specifically, if the fishery is found to be above ACL but it is learned that the reason is that projected LPUE was underestimated and projected biomass is still well above Bmsy, AMs would not be triggered. (would this meet the AM requirement?)

ACL Flowchart Discussion

- *NGOM*

The PDT discussed that since the NGOM is under federal jurisdiction, it needs an ACL and AMs. It was discussed that the final rule is more clear on this issue.

- *State Waters*

The PDT discussed that the Council does not have the authority to set AMs on state fisheries and vessels, as such we will not have ACLs or AMs for harvest in state waters from vessels that have state permits only. The PDT discussed that the only states with state scallop permits are Maine,

DRAFT

New Hampshire, Massachusetts, and potentially Rhode Island. Harvest from these states will be taken into account in the flowchart: estimated catch will be added into the overall OFL and removed again before the ABC/ACL is identified. The PDT is not sure if NMFS can require states to report catch from state permitted vessels, but it was identified as an issue in terms of when and how catch from this source will be available and integrated into the overall ACL process. Catch from vessels with federal permits that fish in state waters will be included in the overall estimate of OFL because they are required to report landings to NMFS because they have a federal permit.

- *Discards*

It was pointed out that discards (including dead discards) are already taken into account during the development of OFL because the YPR relationships already include a discard estimate. A 20% mortality of these discards is also incorporated into the SAMS and YPR models. Incidental mortality (mortality on scallops impacted by gear while fishing but not brought on deck) is also included in the OFL estimate. Therefore, the PDT discussed clarifying that those two sources of mortality are already removed before calculating OFL and the PDT decided to add the estimated poundage associated with each to the overall flowchart in the OFL box.

- *Incidental Catch*

It was discussed whether incidental catch should be considered an ACL or not. There are roughly 240 incidental permits that are allowed to catch 40 lbs per trip; which accounts for a very small percent of overall catch. It was decided that even if this component of the fishery grew out of control, total catch would still be within the 10% difference between ACT and ACL. One PDT member did point out that identifying it as a sub-ACL may still be a policy decision the Council may want to consider so that component of the fishery has specific AMs if projected catch from that component of the fishery is exceeded. The PDT agreed not to identify this component of the fishery with an ACL at this time; but considering new sub-ACLs should be added as a frameworkable item. Therefore, if in a few years, a reassessment shows they are catching in excess of >50,000 lbs, we could reconsider whether the incidental permits need an ACL.

Buffer based on change of fishing year alternative and overfishing definition alternative

Previously we have suggested that the buffers between OFL - ABC, and ACL - ACT could be reduced if certain alternatives are selected in this action that would help reduce uncertainty in biomass projections and fishery specifications. For example, if the FY is moved to May 1, incorporating more recent survey data would be possible and modifying the OFD would provide more accurate estimates of fishing mortality overall. The PDT discussed that the current language should be changed to recognize that if either of these alternatives are selected, the buffer between ACL and ACT should be reduced, not OFL and ABC because in reality both of these alternatives are linked to management measures in place, not scientific constraints. It was noted again that the PDT has not been specific in how much the buffers could be reduced and whether we could *choose* to reduce the buffer, instead of *have to*. The PDT would prefer to leave the language not specific – but is that possible?

AM Discussion

- *General Category AMs*

The PDT discussed that an IFQ program should be sufficient to keep that component of the fishery under their sub-ACL, but technically individuals could exceed their allocations. It was suggested by a member of the public that the hard TAC (or overall IFQ) could be considered the AM – a way of preventing the fishery from exceeding ACL – and the penalty for exceeding the IFQ is enforcement action. However, the PDT is under the impression that while enforcement action may follow an IFQ overage, it alone would not qualify as an AM. It seems the intent of an AM is a measure to correct or mitigate overages – either applied to the offending individual or overall fishery. The PDT’s advice is that if an individual exceeds their allocation, there should be an individual-based AM, not an AM for the IFQ vessels overall. Additionally, a member of the public added that a fine or temporary suspension might still be worth exceeding an individual’s IFQ, but if the individual knew any overage would be deducted from the subsequent year’s IFQ, incentive to exceed would be reduced. The PDT also discussed that with regards to leasing, the penalties and/or AMs for any overages would apply to the lessee, not the lessor.

AM for LAGC IFQ vessels: If an individual vessel exceeds their IFQ or leased IFQ in a given fishing year, their IFQ the following fishing year would be reduced by the same amount. If they exceed their IFQ in excess of their allocation the following year, any outstanding overage would carry over to future fishing years.

- *Limited Access AMs*

It was suggested by a member of the public that we may not need a triggered AM for access areas, only for open areas. Also, he suggested that the ACT is not required, but does qualify as an AM. He argued that by selecting an ACT with a buffer, we have an AM already to prevent us from exceeding ACL. One response to that suggestion was that we would have to define overages as management uncertainty or define the gap between ACL and ACT as a potential for overages. If the ACT is an AM, overages must be built into it. The PDT recommends that the primary AM for the limited access fishery is the use of an ACT. The buffer between ACL and ACT would act as a proactive in-season AM. Setting allocations to ACT rather than ACL would reduce the likelihood of exceeding the ACL. The PDT recommends that if the sub-ACL for the limited access fleet is exceeded, the simplest, cleanest AM would be an overall DAS reduction in the subsequent year to account for any overages. The PDT also recommends consideration of a disclaimer to this AM: if biomass was underestimated by a particular amount the year the overage occurred, then the AM would not be triggered. Another PDT member suggested that rather than a disclaimer, we should be more proactive and plan on reevaluating the ACL system more regularly to adjust ABC/ACL/ACT values if new information suggests that biomass is higher or lower than expected.

The PDT did discuss the potential complications of how ACLs are going to be monitored in a timely way. For example, if an ACL is exceeded in 2012, NMFS and/or the PDT would likely not know that until several months into FY2013; so, if AMs are triggered they may have to be implemented mid-year. One suggestion was to allocate DAS as planned for FY2013, but after data is evaluated, announce that DAS may be reduced in 2013. Perhaps NMFS could announce a reduction in DAS on June 1 for example.

- *NGOM AMs*

It was suggested that having an AM for NGOM (and the corresponding ACL) is a policy decision. If it is set as a sub-component of the overall ACL, then it will be removed from everything. However, there has to be a way to account for exceeding the NGOM TAC where the rest of the fleet does not have to be affected by an overage. If we set it as an ACL, it needs its own AM. Technically, the NGOM already has an in-season AM because when the TAC is predicted to be reached, the fishery is closed. The PDT recommends that if that component of the fishery exceeds the overall TAC after all data is final, then the hard TAC the following year could be reduced by that amount mid season (i.e. reduction on June 1 if necessary).

- *Incidental Catch AMs*

This is a target TAC, not a hard TAC. However, it should be noted that this is not an ACL, so it does not need an AM. If in the future, this component of the fishery exceeds the target TAC and the Council decides that overages should be “paid for” by these vessels and not the overall fishery, then an ACL could be considered at a later date.

Potential Non-Target and Ecosystem Component Species

The PDT has already discussed potential non-target and ecosystem species at previous meetings but revisited the discussion using more updated information. Total discards of species within the scallop fishery were compared to the overall landings plus discards of those species. The PDT still recommends that non-target ACLs need to be identified in primary FMPs before the Scallop FMP develops associated AMs. To date, the only species that has been identified for the scallop fishery is yellowtail flounder. Since the data presented is only a snapshot of one year, it was suggested that staff should pull out information for the species with higher bycatch ratios from recent assessments to complement this work. The PDT will also summarize discard information from GARM II for winter, windowpane and yellowtail flounder, as well as the most recent skate, monkfish and fluke assessments.

The PDT maintains their previous recommendation that no specific ecosystem component species should be identified at this time.

Estimating scientific uncertainty of sea scallop reference points

The PDT discussed how to respond to the SSC request for more quantified analyses of scientific uncertainty. In general, the PDT plans to quantify uncertainty in OFL and ABC, as well as uncertainty related to projected biomass. The PDT discussed that it would identify the value used for each parameter in the assessment, as well as an estimate as to its uncertainty. The PDT will summarize which parameters are based on a quantified estimate and which are not. Next, the PDT could identify reasonable probability distributions for each parameter, taking into account correlations among parameters when applicable. A series of simulations would then be run, with the parameters being drawn randomly from their estimated distributions. This would produce an empirical distribution of F_{\max} estimates, which could then be used to determine an appropriate level of precaution. Dr. Dvora Hart gave an initial presentation about estimating uncertainty in several of the parameters used in the assessment. The PDT provided some input

DRAFT

and agreed that Dr. Hart should continue working on this model and bring similar results for other parameters back to the PDT at the next meeting.

The PDT also plans to provide more quantitative analyses related to projected biomass, but nothing has been completed to date. Currently, the survey biomass is bootstrapped based on an input of initial conditions for the first year. There is uncertainty about the assumptions used to set up the analyses, giving confidence intervals for the initial conditions. The PDT plans to identify the range of projected biomass values to quantify the uncertainty of projected biomass, and Dr. Hart will present these analyses at a future meeting.

Production model and fishing power adjustments (FPA)

Dr. Demet Haksever gave a presentation about the production model and fishing power adjustments. Dr. Haksever has updated the model based on input from the PDT meeting in December. Overall, the model suggests that an adjustment factor should be applied to DAS leasing and stacking on the order of 0-20% depending on which permits are combined. The PDT supports applying the adjustment on a group basis of roughly 15 groups; vessels would be binned based on current upgrade restrictions for horsepower and gross tonnage. There was a recommendation to add a third decimal place to the table because DAS are calculated down to the hour. Several ideas were discussed about possible scenarios that could be run.

Dr. Haksever also evaluated whether having more DAS per vessel would impact LPUE and the analyses (Cobb-Douglas model) suggest that as DAS increase, landings increase disproportionately. For example, an increase of 1% DAS results in a 2% landings increase. Dr. Haksever also ran a translog production model (as suggested by an SSC member); but the PDT discussed that it is more complex and does not have any advantages. The PDT supported these analyses and agreed that vessels with higher LPUE tend to use all allocated DAS and when a vessel has more DAS, flexibility is increased so efficiency increases. One PDT member noted that at high abundance levels LPUE is lower than expected because vessels are limited by shucking capacity. Overall, the PDT discussed that an additional adjustment should be applied overall to account for increased LPUE with increased DAS per vessel. The analyses suggest that an additional 10% should be considered for this trend.

In addition it was discussed that there are other factors that increase LPUE that cannot be modeled, so if the Committee considers a second adjustment for the LPUE issue described above it should also include something to account for “other factors that influence fishing power.” For example, the public has reported that modifications can be made to increase fishing power that are outside the vessel upgrade restrictions. The PDT discussed that since single vessel owners will likely be the most impacted as a result of stacking and leasing if overall DAS have to be reduced as a result of increased fishing power, then it would be important to consider adjustments that would “share” the “extra efficiency” that results from stacking/leasing. The PDT discussed that even if adjustments are charged, there will still be incentive to stack and lease because it will ultimately reduce their fixed cost (e.g. maintaining 2 boats instead of 1, etc.). It was suggested that the PDT provide a range of percentages for the Committee to consider; for example the second adjustment applied could be 10% for the LPUE/DAS issue and

5-10% to address the other factors that influence fishing power that are not incorporated in the production model (i.e. reduction gear ratio).

Amendment 15 clean up

- *Leasing provisions*, pg. 50, 3.3.3.3
- ❖ Current legal advice is that the Scallop FMP does not have authority to limit vessels in other fisheries unless there is a link to scallop conservation. The PDT will present some tables for the Committee on permits and catch of other species by LA vessels, but this is a legal/policy discussion for the Committee.
- ❖ The PDT noted that there are some inconsistencies in the leasing alternative section that should be cleaned up, specifically whether leasing between gear types is permitted. The PDT expressed reservation about allowing stacking between gear categories. There are significant differences in LPUE between small and large dredge vessels, so the PDT discussed that the Committee should clarify if vessels from different categories should stack/lease, and if so specific adjustments may need to be considered because the allocations and restrictions for some permit types are very different.
- ❖ In addition, the PDT suggested that for CPH vessels, an FPA should be applied as well. Since CPH permits are not attached to vessels they will not fit in the HP/GRT tables, so the PDT suggests that the most precautionary approach would be to consider all CPH permits in the lowest HP/GRT category. Therefore, if an active vessel leases or purchases effort from that permit, the maximum FPA would be applied for the transaction. A PDT member expressed reservation about fairness – perhaps the active vessel could lease or purchase effort equivalent to the HP/GRT category the CPH originated from.

- *Ownership cap*, page 51.

The PDT discussed that the ownership cap provisions are not specific enough, particularly the way they are worded. It was decided that several PDT members should try to draft more specific language for the Committee to consider.

- *Allow LAGC permit and/or quota to be split from other permits on that vessel*, 3.4.2.5

The CCHFA provided correspondence describing why this alternative should be included for consideration. The PDT did not have specific input on this issue. An industry representative in the audience expressed concern that many of the recent suggestions to modify the LAGC IFQ program contradict the vision statement from Amendment 11 and will not maintain the historical make-up of the general category fishery.

Framework 21

FW21 will contain the specifications for FY2010 only; FY2011 and 2012 will be in FW22, after ACLs are adopted. The PDT briefly discussed workload issues and expressed concern that both actions are on the same timeline. It was discussed that the deadline for new survey data should be August 1. PDT members Dr. Bill DuPaul (VIMS) and Cate O’Keefe (SMASST) will still be surveying in July and do not believe that results will be available until mid August the earliest, so the PDT may have to rely on 2008 survey data to set and analyze measures. The PDT briefly

DRAFT

discussed a potential new rotational area in the Great South Channel. However, industry expressed concern about this area being closed off for open area trips. The PDT also discussed potential issues that could be considered in the framework, but voiced concern about loading too much in since there will be very limited time to work on anything in addition to A15 analyses and required analyses for specifications in FW21.

- *Turtle Biological Opinion RPM*

The first RPM and Terms and Condition have been changed to similar wording as recommended by the Council. The PDT discussed that measures considered in FW21 will have to integrate the requirements of the opinion in terms of effort limits by area and season. The PDT will likely have to revisit *more than minor* analyses that were completed last summer. In addition, Dr. Kimberly Murray suggested that new analyses could be done using sea surface temperature to evaluate measures and potentially identify more refined areas and time periods within the term and condition language.

- *Observer Program Adjustments*

The PDT discussed if any specific changes to the observer program should be considered. The PDT supports using different reimbursement rates for areas with different LPUEs, and NMFS has the authority to do this already. Amy VanAtten from the Observer Program mentioned that there are issues with vessels not paying for observers as required. The agency has to track outstanding balances and technically there is no prohibition, so the agency is limited in what they can do to ensure payment. The PDT does not recommend considering major changes to the observer program at this time primarily because of workload issues. Only two specific alternatives were suggested: 1) prohibit vessels from not paying for observers; and 2) address the loophole for observed general category access area trips.

- *Switching from trawl to dredge gear: GC fishery*

Generally, the PDT supports directing scallop effort from nets to dredges to reduce scallop mortality on smaller scallops, but at this time the PDT does not think this alternative should be pursued. In addition, after A11 is fully implemented the risk of increasing fishing mortality from this practice will be reduced.

- *Access Area Adjustments for YTF*

The PDT agrees that more options should be considered to reduce YT bycatch in access areas. Options that take a lot of Committee time to develop or PDT resources to analyze should not be considered at this time because it would be rushed. The only thing there may be time for is to allocate access area trips differently. The approach could be modified so that vessels are allocated access based on the amount of scallop effort that is expected to catch the available YTF TAC. Another option could be in terms of how trips are allocated throughout the year. The PDT could evaluate if a different opening date to help reduce bycatch. Lower scallop possession limits could be considered to keep the area open longer, or the framework could consider measures designed to improve incentive to reduce bycatch. For example, allocate half a trip for first quarter, and if YTF is still available, allocate the other half in the second quarter. The PDT added that because access on GB in 2010 may be split between NLS and CA1 – this may be less of an issue because access area trips will be split between CC/SNE and GB YTF stock areas.

DRAFT

An audience member commented that conceptually, he preferred a performance-based measure that puts the onus on the industry to implement operational changes as well as gear modifications to reduce bycatch. He argued that if the industry had a performance-based measure (or scale) and it was up to them to achieve a certain level, they'd have more success.

A PDT member asked if an economic analysis should be performed that compares the tradeoffs between the preservation of YTF and the amount of unharvested scallops. This was discussed and staff replied that the Interspecies Committee is interested in something like this as well, but it was not decided when that should be done and by whom. It was discussed that groundfish actions are going to consider how much TAC to give the scallop fishery in future years, so that may be the most appropriate place to evaluate these issues.

The conversation evolved into possible accountability measures for the YT sub-ACL for the scallop fishery. Ultimately, the PDT recommends that the stock wide ACL be applied to the full area and it would be more advantageous to have AMs applied to open areas rather than access areas. Specifically, the PDT recommends that access area programs within YT stock areas should proceed as allocated and no vessels should be shut out of access areas. The Scallop FMP wants to keep fishing in areas with high catch per unit of effort, so if the total YT ACL is exceeded, open area DAS in that stock area should be limited or reduced to account for any overages. The PDT discussed that this may have to be a subsequent year AM, but monitoring programs could potentially be modified to monitor YT catch rates in season if the Council wanted to consider in-season AMs as well. It was discussed that the Committee could also consider an in-season AM like the existing YT bycatch TAC in access areas. Once the full ACL is projected to be caught, the full stock area would close.

The primary AMs identified at this meeting were:

- Seasonal closure of entire stock area (in-season)
- Seasonal closure of portion that we pre-identify as areas with high bycatch (in-season)
- Shift DAS and/or access area trips from one stock area that reached ACL to another stock area (in season or subsequent FY)
- Institute fleet max DAS that could be used in stock area for the subsequent year to account for overage of ACL the previous year

The PDT also discussed other possible AM ideas that would need more development. For example, if an area is projected to close due to catch of the full YT ACL but there is another rotational area that is closed in a different YT stock area, perhaps the unused effort in the first stock area could be diverted there. For example, if the SNE YTF TAC is caught in NLS and only half the access area trips are taken, the remaining trips could be diverted to CAII. The PDT also discussed possible using a time-averaging principle whereby if the scallop fleet catches less than the allocated YTF and more the subsequent year, if the moving average is less than the ACL, then the AM is not triggered. Another option offered was a seasonal and spatial closure of areas with high YTF bycatch rates. There may be areas and seasons with lower bycatch rates so the PDT could examine specific spatio-temporal effort limits; however, detailed analyses of observer data would be necessary. An audience member asked if the fishery could get additional TAC in a subsequent year following an underage from the previous year and if that should be

area specific. As an aside, it was mentioned that the closing of access areas for having caught the whole YTF ACL qualifies as an in-season AM.

LPUE Presentation

Dr. Hart provided a presentation of average LPUE from 1994-2007. She reported that the analyses suggest that the relationship between biomass and LPUE has changed since A10. She argued that something has changed to make vessels more efficient since that time. Some suggestions were: effects of 4" dredge; lower-DAS vessels are more concentrated in areas with higher catch rates and don't bother to fish in more marginal areas; with higher biomass, crew is spending more time shucking and captains tend to shuck now compared to earlier years; vessels have been replaced with more efficient vessels; etc. Dr. Hart suggested that we use a different estimate of LPUE for FW21 to account for increased efficiency. One PDT member requested that both formulas be used so the PDT can further consider. A member of the audience asked if biomass in areas outside the survey area could be affecting this. Dr. Hart replied that the model does incorporate area fished from VTR data and the federal survey has been expanded so she did not believe that is a major source of this increased efficiency. It was also pointed out by the PDT that some of this work could be incorporated into future analyses of management uncertainty; if we believe our estimates of future catch are more precise, arguably the buffer between ACL and ACT could be revisited.