



## Scallop PDT Meeting

December 16, 2008

Mansfield, MA

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PDT members in attendance: Rula Deisher, Dvora Hart, Kimberly Murray, Sarah Thompson, Bill DuPaul, Cate O'Keefe, Lynn Lankshear, Pete Christopher, Deirdre Boelke, Sarah Pautzke, Kevin Kelly, Demet Haksever.

12 members of the public attended.

The meeting opened with Ms. Boelke providing a brief overview of the agenda items then explaining that Document 1 shows a timeline for Amendment 15 development. The timeline has been pushed back by 1 Council meeting.

### **Agenda Item 1: ACL and AM development**

ACL and AM development documents include documents 2 and 2b. The PDT discussed inclusion of non-target species, whether we have state/federal issues, uncertainty within assessment parameters, and the layout of OFL through ACT.

#### Non-target species

A PDT member asked if, in addition to yellowtail flounder, whether monkfish, fluke, or skates would be identified as non-target species. It was explained that other species have been noted later in the text, but A15 will not designate non-target species until the FMP under which that species is managed has identified it as needing an ACL. Legal advice is that the FMP does not have to identify non-target species, just the target species, which means that other FMPs should identify an ACL for other species caught in the scallop fishery – before the scallop FMP identifies a non-target ACL. It was discussed that MSRA does not restrict which FMP should have the AMs, as long as the AMs are developed and implemented on time. In terms of non-MSRA-managed species like turtles and sponges, input so far is that we do not need to include species that are primarily managed under other laws, or those species that are not managed under an FMP, like sponges.

#### State-federal issues

There was some disagreement as to whether the NGOM TAC would be considered an ACL. Because we have a TAC for NGOM, it was argued that was enough. Another point of view is that the TAC is an ACL for which there should be an AM. It was argued though that because it is removed before the assessment, it is removed before determining ACLs. However, it was pointed out that because we close the area when we hit the TAC, we may already have a qualified AM, thus it would not be an issue to consider NGOM an ACL. The PDT decided to revisit this issue later in the meeting, but ran out of time.

#### Biological assessment parameter uncertainties

The first point raised was that there is a big difference between variability and uncertainty. Variability is generally included in modeling, but even if you are certain, the variability can affect forecasting. For example, we are relatively certain about growth, but there is still

variability in yield because the seasonality of the fishery is unpredictable. There is variability within and between years, and that will affect forecasting. Additionally, un-surveyed biomass contributes to uncertainty, which may be added to the biological uncertainty section of the amendment. The PDT discussed whether a more systematic approach should be taken to better describe sources of biological uncertainty. The PDT decided to rank each parameter used in the scallop assessment and forecast models to assess the level of uncertainty associated with each parameter. In addition, the PDT decided to qualify the uncertainty of each parameter in terms of importance or effect, a value was given to describe the sensitivity of each parameter, i.e. whether the level of uncertainty has a small or large impact on the overall assessment of the resource. These rankings will be incorporated into the OFL/ACL/ACT framework by aiding in establishing the buffers between each term. Uncertainty was described on a scale of 0 to 4 (0 = certain and 4 = uncertain), and importance or effect was described on a scale of 1 to 3 (1= low, 2=moderate, and 3=high effect). Staff will update this section in the ACL document for the next Committee meeting.

- Growth

This was identified by PDT members as the primary, most important parameter in terms of having an impact on the overall estimate of biomass. If it is misestimated, the ramifications are consequential. It can cause an over- or under-estimation of available biomass and is particularly important for forecasting. For example, growth was overestimated in Hudson Canyon and the three year projection for that area was much higher than reality – the biomass was much lower than originally projected. There is a standard error associated with growth, which is a built-in measure of uncertainty.

**Uncertainty = 1            Importance/effect on assessment = 3**

- Maturity and fecundity

A PDT member explained that this has little effect on the outcome of the assessment; in fact, because there is so little data on this parameter, it is not used in the assessment. There is uncertainty associated with the shell height / egg number relationship because it is based on a study in Canada, which may not be exactly fitting for Georges Bank or the Mid-Atlantic; further, the relationship may vary annually. So, there is uncertainty with this parameter, but it is not incorporated in the assessments as far as estimates are concerned – it is just used to ensure there is enough spawning.

**Uncertainty = 2 to 3    Importance/effect on assessment = 1**

- Shell height / Meat weight relationship

A PDT member explained that the SH/MW relationship has a moderate effect on the outcome of the assessment and there is a little uncertainty associated with it due to inter-annual variation. There is also water gain during transport and only a small number of observed trips are used to estimate the shell height/meat weight relationships used (in comparison to the overall fishery). However, it was pointed out that these two issues have a minor contribution to uncertainty. Overall, our understanding of this relationship is high, but it varies inter-annually, so there is a little uncertainty due to the moderate variability.

**Uncertainty = 1            Importance /effect on assessment = 2**

- Natural mortality

There is better information in the scallop fishery than in most other fisheries because of the ability to assess natural mortality through assessing clappers' state of decomposition. Additionally, we have Closed Areas in which there are un-fished areas to analyze natural mortality. However, overall there is still a lot of uncertainty associated with this parameter.

**Uncertainty = 2-3      Importance/effect on assessment = 2-3**

- Catch data

It was discussed that although this is a large part of the assessment, this may not need to be included. However, another argument is that there is uncertainty about this due to unreported landings and inaccurate data entries. Inaccurate landings estimates would impact assessment results. It was noted, though, that landings reports have gotten much better in the General Category fishery, which is where a large part of the uncertainty used to be. Catch data impacts the CASA model primarily and will have a small impact on the assessment.

**Uncertainty = 1      Importance/effect on assessment = 2**

- Discards/Discard mortality

It was advised to break these into two different categories, not lump them. We have good information for discards, but not for discard mortality, which can vary depending on season, water temperature, and air temperature, among other factors. Both have a small effect on the outcome of the assessment, which has a fairly low sensitivity to discard mortality and discards. It was pointed out that since 4-inch rings were implemented, discards and discard mortality has likely reduced. However, there is much uncertainty about the 20% discard mortality estimate used in the assessment; this is an area that needs more research.

**Discard mortality uncertainty = 3      Discards uncertainty = 1  
Importance/effect on assessment = 1**

- Incidental mortality

Incidental mortality has a moderate effect on the assessment, more so than discard mortality. The findings of the two studies that examined this issue were conflicting; one found fairly high incidental mortality while the other saw little or none. SARC39 conducted a sensitivity analysis of this parameter on per-recruit calculations and found that the effects of incidental mortality on reference points is modest, but non-negligible.

**Uncertainty = 3      Importance in assessment = 2**

- Commercial Shell Height Data

Shell height data from observed commercial trips has been incorporated into the CASA model, and uncertainty has reduced in the more recent years as the number of observed trips has increased. In the past, commercial shell heights were obtained from port samples that were likely biased, which had a substantial effect on assessment results.

**Uncertainty = 1      Importance/effect on assessment = 3**

- Commercial Gear Selectivity

A study that estimated the selectivity of commercial dredge gear with 4” rings was recently published (Yochum and DuPaul), so it is well understood. Commercial gear selectivity is used in forecasting, but is not directly used in the CASA model.

**Uncertainty = 1      Importance/effect on assessment = 1**

- Survey Gear Selectivity

Current evidence suggests that the survey dredge has flat selectivity for scallops >4 cm. Modest deviations from flat selectivity would have only modest effects on the assessment.

**Uncertainty = 1      Importance/effect on assessment = 2**

Staff was advised to add commercial and survey dredge efficiencies to the parameters for the assessment of uncertainty. The CASA model does not directly make an assumption about dredge efficiency for the commercial or survey dredges, but in the end it calculates efficiencies for both. The relative efficiency of the commercial versus survey dredges is known, but the absolute efficiency is more uncertain.

- Commercial Dredge Efficiency

Evidence from a number of studies indicates that commercial dredge efficiency is between 40-60%; efficiency is near the higher end on relatively smooth sandy bottoms, such as occurs in the Mid-Atlantic, and at the lower end of this range on rocky bottoms. No assumption for commercial dredge efficiency is used in either the CASA assessment model or the SAMS forecasting model. It is used, however, in estimation of biomass from commercial dredge surveys.

**Uncertainty = 1.5      Importance/effect on assessment = 1**

- Survey Dredge Efficiency

The survey dredge has lower efficiency than commercial dredges (~70% that of commercial dredges), probably due to the liner used in the survey dredge to catch small scallops. Thus, the survey dredge efficiency is between 28-42%. The CASA assessment model does not use an assumption on survey dredge efficiency, but it is used in the SAMS model and in estimating biomass from survey-dredge surveys.

**Uncertainty = 1.5      Importance/effect on assessment = 2**

### Management uncertainty

Management uncertainty pertains to uncertainty in the outcomes of our actions, i.e. what catch results from effort allocated. One PDT member suggested that the PDT could consider ranking management uncertainty for each management measure similar to the biological uncertainty sensitivity analysis described above. Another PDT member also suggested that in describing the degree of management uncertainty, we should also discuss our ability to adjust to these uncertainties. He pointed out that the scallop fishery has a frequent information (data) flow and many mechanical factors in place such that we can respond to emergencies better in this fishery than other fisheries can. Additionally, having 3 biological surveys creates less biological uncertainty in our actions, which means that our management uncertainty will then be less. The PDT discussed that the only real source of management uncertainty left is LPUE from open area DAS – and we are getting better at predicting that compared to the past. Another source noted was carry-over DAS. One PDT member estimated that catch in 2008 may end up closer to 50

million pounds, compared to the projected 44.5, which could be due to carry over DAS from 2007. A member of the audience suggested that another reason could be that catch rates were higher in open areas in 2008 than projected. A discussion followed supporting the use of day-at-sea management because DAS are almost self-regulating because that system is linked to abundance. When biomass is high, LPUE is higher and when biomass is low, LPUE is lower – but overall F is constrained by the DAS. If vessels were under a quota, fishing time would be linked to catch and not F.

#### OFL-ABC/ACL-ACT discussion

Staff further developed the ACL section of the amendment and identified that:  $OFL > ABC = ACL > ACT$ . Biological uncertainty is accounted for in the buffer between OFL and ABC, and management uncertainty is accounted for in the buffer between ACL and ACT. These buffers can grow or shrink depending on our level of uncertainty. The PDT noted that one major difference with the new MSRA requirements for ACLs is a switch from managing for fishing mortality – the focus now is on yield. In the past, the scallop plan was set up to maintain fishing mortality below certain reference points. This process would convert F rates into catch amounts in pounds.

The PDT and some audience members agreed that there would be a benefit to having an ACT set lower than the ACL so that AMs are not triggered when the target is exceeded. Many people, including PDT and audience members, voiced concern about the possibility and consequences of exceeding ACLs, which results in triggering AMs, and so are wary of diminishing the buffers. It was pointed out that the buffer between ACT and ACL might qualify as an automatic AM. A PDT member said that the ACT corresponds to the  $F_{target}$ , and the ABC would be higher (like 80% of 0.29 (or  $F_{threshold}$ )). An audience member commented that fishing at a lower  $F_{target}$  has provided well for the industry and that the main mistake has usually been the location of harvest. The main decision we must make is what level of buffer we want between the various terms. It was suggested that we keep ACL equal to 80% of 0.29 (equal to  $F_{target}$ ) and the ACT set for different frameworks as it is done now - lower than the  $F_{target}$  to be precautionary. However, that 20% can be divided differently – for example, 10% for the buffer between OFL and ABC/ACL and 10% for the buffer between ABC/ACL and ACT. Overall, the PDT is comfortable with keeping a 20% difference between OFL and ACT. It was discussed that for the time being, the buffers should be equal – 10% reduction between OFL and ABC and ACL and ACT.

The recommendation from the PDT would be a 20% reduction between OFL and ACT to account for uncertainty. Using exploitable biomass estimate for 2009 as an example:

OFL:  $F = 0.29$ , 61 million lbs  
ABC:  $F = 0.26$  (90% of 0.29), 54.9 million lbs  
ACL: equals ABC =  $F = 0.26$ , 54.9 million pounds  
ACT:  $F = 0.23$  (80% of 0.29), 48.8 million lbs

It was pointed out that if the overfishing definition is altered to account for the spatial problems that it currently has, management uncertainty will be reduced allowing for a lesser buffer between ACL and ACT. Converting open area DAS into access area trips may also reduce management and biological uncertainty.

### ACL adjustment if OFD measure is approved

The question brought before the PDT was whether we should provide a concrete example or just leave the adjustment between the ACL and ACT frameworkable. The PDT was reminded that Amendment 10 provides that the PDT can recommend a different  $F_{\text{target}}$  if localized overfishing is occurring; we could imitate the wording from A10. As a reminder, the percentages between OFL and ABC/ACL, and ABC/ACL and ACT need to be provided in pounds. Several PDT members agreed to work on how best to lay this section out before the Committee meeting on January 22.

### **Agenda Item 2: Converting Open Area DAS to trips**

Background about converting open area DAS to access area trips is included in documents 3-3b and 5. Several documents were submitted by the Committee Chair for the PDT to consider and Document 5 was a preliminary analysis of LPUE in regards to open area effort compared to access area effort. The discussion of this alternative started with concerns about enforcement. Switching systems from DAS to trips may require an additional layer of enforcement and there is a danger of increasing at-sea transfers (although some public in the room strongly disagreed and argued that at-sea transfers is not an issue). The Coast Guard representative PDT member said she was unsure if eliminating DAS would affect enforcement at sea; she expressed that it was probably more of a dock-side NMFS-enforcement issue. An issue raised by both an audience member and PDT member was that scallops can increase in weight due to water absorption en route to the dock, which means that fishermen's catch weighs in more than it did at sea, resulting in stiff penalties. There is concern about that with regards to switching to all trip allocations and not DAS. Another PDT member said there might need to be an allowance for a small overage, otherwise people may not be able to fish.

### Discussion of LPUE data

A production model was developed for the fishing power adjustment alternatives in A15. That model was further refined to separate out open area effort and access area effort to see if different adjustment alternatives were necessary if open area DAS were converted to trips with possession limits in open areas. Individual LPUE (summarized in groups) for all full-time vessels were considered with records that matched in the DAS database and dealer database. Not all trips were included in this analysis, but it is a very robust sample. The results of the production model can help identify potential "fishing power adjustments" that may have to be made if the Committee decides to consider alternatives that allocate trips in open areas rather than DAS. In terms of the vessel characteristics, horsepower does seem to have the largest influence on catch per DAS. The initial run of this model kept open area and access area data together; once separated, gross tonnage is also identified as a significant factor that influences catch per DAS.

It was pointed out that we will have to check the data to see how access areas counted in earlier years because access area trips used to be charged a DAS equivalent. It was also pointed out by an audience member that there are ways vessels can maintain HP while increasing their capacity (bigger reverse wheel, bigger propeller, etc). It was explained that unfortunately we cannot analyze certain engineering factors because those data are not collected.

Ultimately, the PDT discussed two alternatives that would convert open area DAS into trips:

- 1) Allocate equivalent trips to all vessels by permit category (equal possession limit), or
- 2) Adjust the possession limit by LPUE ratio derived by production model.

The ratio could be based on grouping vessels, or possibly on an individual basis. Although we could not take all factors into account, there are some factors that affect landings. We could drive some adjustment factor while converting open area DAS to trips. For example, if we estimate OA landings at 14 millions lbs and keep the possession limit at 18K lbs, we can estimate how many total trips there will be, then average the number of trips per vessel. On average at 14 million pounds, there are 2.9 trips per vessel at the 18K possession limit. We could give every vessel the same limit (Alternative 1) or we could adjust based on LPUE ratios derived from the production model (Alternative 2). Alternative 2 may raise some management and implementation complexities that we may not be able to handle. For example, to do so would be opened to disputes over actual fishing power so that a vessel could increase its limit. We also will have to pick a base value for the whole fleet. It was noted that there will be some arbitrariness associated with this approach as well.

#### PDT input on open area conversion alternative

Following the presentation of the LPUE data, the PDT discussed the conversion of open area DAS alternative in general. Overall, some issues with this approach were expressed, and ultimately a few potential alternatives were discussed.

#### **Alternatives**

1. No Action – leave open area DAS as is
2. Equal allocation of trips and possession limits for each permit category
  - Option 1 – small dredge, same allocation
  - Option 2 – small dredge, lower allocation

The allocation of number of trips and possession limits are based on number of vessel characteristics. The model now has seven different determinants of vessel landings: horsepower, gross tonnage, crew size, day-at-sea used, dredge size, number of dredges, and a small dredge indicator (a dummy variable that is equal to “1” if a vessel has small dredge and “0” if it has a regular dredge). The PDT will consider simplifying the model by eliminating some variables for which it is hard to get accurate data, such as crew size. Data from 2000-2007 would be used to evaluate LPUE per vessel. Open area would not be divided into New England/Mid-Atlantic providing more flexibility for vessels and less administrative burden (trading/monitoring etc.).

#### **Discussion**

Several PDT members commented that if a possession limit is allocated, provisions for broken trips will have to be allowed as well as a small overage allowance. For example, if you have a broken trip such that you can keep going out until you catch your allocated possession limit, it's a quota. Others raised concerns about enforcement, arguing that enforcing DAS is easier than monitoring trips with broken trips and possession limits because the need for dockside monitoring increases with the trip system. A member of the audience spoke against this approach explaining that fishing under a possession limit is nerve wracking. There are stiff violations for being over a possession limit and if the entire fishery was managed that way it could be problematic. In addition, the speaker did not see how there would be large vessel

savings because catch rates in open areas are much lower than access areas so vessels may have to spend a significant amount of time fishing open areas to catch a full possession limit.

Overall some PDT members raised concerns that this approach could change the nature of the fishery and the Council will have to consider fairness issues because all vessels are not equal. More importantly, the PDT raised the concern that this alternative would ensure a certain catch, but not a certain fishing mortality, and ensuring a specific fishing mortality is more important in terms of preventing overfishing. It was pointed out that one benefit of open area DAS is that they are, in a sense, self-regulating. If projections are high and there is less biomass available, then catch per DAS will decline accordingly. However, if vessels were given a possession limit, they would have a higher F to catch that poundage. Also, size of scallops harvested is an important issue to consider. When vessels are under DAS the potential to target smaller scallops is reduced; however, under a possession limit per trip vessels are more likely to catch their possession limit however they can (i.e. harvest more smaller scallops if that is what is available). Concern was expressed that assuming the benefits of access area trips to the open area was not appropriate because catch rates are very different. In addition, it was discussed that there is a lot of flexibility under current RAM to shift more effort into access areas.

A commenter from the audience added that if the current system works well, why we would get rid of open area DAS. Lastly, the PDT discussed whether carry-over provisions would still be allowed (10 DAS carry-over provision currently permitted). It was asked if the carry-over would be in pounds under this system, and if it were, whether it would then be a quota. The PDT did not make a final recommendation about how many broken trips should be permitted etc., but did recognize that something should be permitted.

### **Agenda Item 3: AMs for Groundfish**

To date, the only ACL under another FMP that may be set for the scallop fishery is a yellowtail flounder ACL under the Multispecies FMP (for both the GB and SNE/MA stocks). The Scallop Committee requested that the Scallop PDT work with the GF PDT to develop and consider AMs for Scallop Amendment 15.

The Scallop PDT discussed that in-season AMs could be possible, but since this ACL will involve open areas as well as access areas, that would require a major change in monitoring requirements. Access area trips generally have higher observer coverage rates (~10%), and if the ACL is going to be monitored the same way the YT TAC is currently monitored in access areas, then at a minimum more observer coverage would be needed. Therefore, it probably makes more sense to take the final estimate of YT catch from all observed trips (access and open areas) at the end of the fishing year to determine the total YT catch. Then if the fishery is over its ACL in 2010, an AM would be effective the following year (FY2011) rather than the second half of 2010 (for example).

While this issue has been addressed to some degree with the in-season closures of access areas when the scallop fishery is projected to catch 10% of the YT TAC, it has not been considered for open areas to the same degree. Therefore, the PDT needs to evaluate more data and options before final recommendations can be made. Two overall approaches were discussed.

First, it was suggested that in future frameworks the scallop PDT could determine the projected catch for scallops for the access program and the areas outside access areas that are within these YT stock areas. Then, based on recent bycatch rate data (YT to scallop catch), a total YT catch amount could be determined that would be needed to potentially harvest the scallop catch available in those areas. It is currently implied that under A16, the YT ACL for the scallop fishery could fluctuate, but at a minimum would be 10%. Therefore, future GF frameworks could consider allocation amounts between 10% and the “needed” amount provided by the Scallop PDT necessary to harvest the available scallop catch in those areas. If less than that amount of YT is allocated to the scallop YT ACL, then the scallop framework will have to consider measures to account for that. Whether the “needed” amount or an amount higher or lower is allocated for the YT ACL, AMs are still required in case the ACL is exceeded. It was also pointed out that there could be timing issues with this approach if annual adjustments are needed and/or GF and Scallop actions are out of sync.

Second, there was agreement that more “preventative measures” should also be considered in addition to the required “accountability measures,” which are more after-the-fact unless used in-season. The PDT agreed to consider more “preventive” measures in future frameworks that would reduce YT bycatch and increase incentives to reduce YT bycatch in the scallop fishery. Some examples that were mentioned that will be explored in future scallop frameworks are: changing the opening date of access areas (currently June 15), gear adjustments (modify twine top and hanging ratios), reduced possession limits, spreading access area trips and/or DAS out during the year, and more set-aside for additional observer coverage (to help identify times and areas of YT occurrence and interaction with the scallop fishery). These may help keep the fishery under the YTF ACL for the scallop fishery (especially gear restrictions), but since they do not ensure that the ACL is not exceeded, some backstop may still be required.

General concerns were raised about the potential need to further subdivide the YT ACL between scallop fisheries (limited access and general category). Similar monitoring concerns were raised about this approach that were raised during discussions about subdividing the current access area YT TAC. In addition, the PDT is concerned that recently a 10% allocation has not been workable for attaining scallop catch in access areas (even when only one trip is allocated per vessel), so it is unlikely that a similar amount will be sufficient for future years when YT catch in open areas is incorporated as well. Lastly, there may be timing issues between GF A16 and SC A15 development. GF A16 includes the ACL for the scallop fishery with respect to YTF, but it is unclear if AMs will be published in the GF or SC amendment. Presumably, if the AM is retrospective so that the penalty occurs in the subsequent year, having the AMs published in 2011 may not be an issue. In-season AMs may pose a problem though if they need to be in place by 2010.

#### *Potential AMs*

Initial input is that a following-year AM may work better under current monitoring system. If it is determined that the scallop fishery exceeded its ACL, potential AMs the following year could be:

- reduced possession limit for all access area trips for all vessels the following year
- reduced # of total general category trips allocated the following year

- restricted fishing in YT stock area the following year (options could be: limit total number of fleet DAS that can be used in stock area, limit # of individual DAS that can be used in that area, limit % of GC IFQ that can be fished there, close portion of stock area with higher bycatch rates the following year, close portion of entire stock area during certain time of year)
- in addition to the ideas in the staff white paper, if there is a closure because ACL exceeded, then GF DAS leasing could be another option for scallop vessels that still want to fish in those areas

*Questions:*

- It was discussed that the Council recently reviewed a staff white paper about potential options for addressing this issue. The Council decided that this topic would be forwarded to the new Interspecies Committee. It was unclear to the PDT if that group will be addressing this in time for integration in A15 and/or A16, or if that will be too late?
- Council recently requested that NMFS investigate how observer coverage is currently monitoring this issue and this analysis may shed light on some issues. Should we wait for that response and do we know when it is coming?
- Since this is a component of the total ACL for YT, and scallop effort varies by year in these areas, would it be worth considering an AM that is based on a series of years?<sup>1</sup> This may address the issue that in some years, the GF fishery will not use all their ACL and in some years less scallop effort will be allocated in access areas so YT bycatch should be lower.

#### **Agenda Item 4: Overfishing Definition**

Dr. Dvora Hart has developed a “hybrid” overfishing definition (OFD) with the status-quo  $F_{\text{threshold}}$ . The  $F_{\text{target}}$  must always be set less than the status-quo threshold to prevent overfishing. The hybrid OFD would give us a systematic way of setting the target while keeping the present simple OFD threshold that is relatively simple to assess. Management measures would be set to the  $F_{\text{target}}$  the same way as the proposed A10 alternative. That is, target fishing mortality rates in the open and access areas would be set individually to levels that would obtain optimal yield. In open areas, effort would be set to 80-90% the  $F_{\text{MSY}}$  proxy (currently 0.29, resulting in a target between 0.23 and 0.26), whereas targets in access areas would generally be set higher, using the principle of time-averaging. With the hybrid OFD, the end result is an open area  $F_{\text{target}}$  and access area  $F_{\text{targets}}$ . The open area  $F_{\text{target}}$  will change only slightly. For comparison:

Status quo:  $F_{\text{threshold}}$  (0.29) and  $F_{\text{target}}$  (0.20) for all areas

Proposed:  $F_{\text{threshold}}$  (e.g. 0.34 for 2009), which is an average of the open area  $F_{\text{target}}$  (0.26) and access area  $F_{\text{targets}}$  (>0.29 due to time-averaging). The actual threshold varies from year to year, depending on the details of the access areas open that year.

Hybrid:  $F_{\text{threshold}}$  (0.29), which is maintained from the status quo  $F_{\text{threshold}}$ , and the  $F_{\text{targets}}$  of the proposed OFD (open area = 0.26; access areas >0.29).

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<sup>1</sup> Section (g) of proposed rule: AMs based on multi-year average data – some fisheries w/highly variable annual catch lack reliable in-season or annual data on which to base AMs. If data is insufficient, AMs could be based on comparisons of average catch to average ACL over 3-yr moving average period or, if supported by analysis, some other appropriate multi-year period. Evaluation of moving average catch to average ACL must be conducted annually. If average catch exceeds average ACL >1 in last 4 years, ACL, ACT, and AM system should be re-evaluated. Initial ACL and mgmt measures should incorporate info from previous years so AMs based on average ACLs can be applied from the first year. (page 32544)

For comparison, here are examples based on the Framework 19 analysis:

2008	Open area F	Total F	Overall F	OF Threshold	DAS allocated	Projected Catch
Status Quo	0.29	0.29	0.22	0.29	35	43650
A10 Proposed	0.26	0.28	0.21	0.34	32	42011
Hybrid	0.26	0.28	0.21	0.29	32	42011
2009	Open area F	Total F	Overall F	OF Threshold	DAS allocated	Projected Catch
Status Quo	0.26	0.22	0.18	0.29	42	46294
A10 Proposed	0.26	0.22	0.18	0.34	42	46294
Hybrid	0.26	0.22	0.18	0.29	42	46294

The PDT and audience members agreed that the hybrid definition is good and some audience members expressed relief that the  $F_{\text{threshold}}$  is not going to change under the hybrid definition (what triggers whether overfishing is occurring is not going to change). Dr. Hart agreed to draft an alternative for the Committee to consider on January 22 that describes the hybrid OFD.

### **Agenda Item 5: CCCHFA Sector Application**

In general, the PDT did not have much time to review this application before the meeting, but did not find any major issues after a quick glance. There was a question about managing species bycatch within the sector or obtaining a quota, but staff response was that this will probably have the same issues we are experiencing with the YTF ACL – specifically, that it’s hard to monitor small quantities of catch on NMFS’ side. Staff identified a few issues with the application to the applicant that was present because some issues have already been considered by the Committee and rejected (i.e. allocation by area and attaining limited access permit to be fished on general category vessel). One question was asked about the bullet about 10% ownership, and another PDT member thought it was probably fine because under A11 each sector is permitted to attain up to 20%. This application will be forwarded to the Scallop Committee for January 22.

### **Other Business**

The issue was raised again by a member of the audience that the 5% ownership cap for limited access permits needs to be applicable to 5% of DAS allocated and/or lbs allocated, not 5% of permits. Five percent of occasional permits is a very different ownership level than 5% of full-time permits. The reply from staff was that issue has come up in the A15 process, and we will have to check what the status of that discussion is.