

Joint Meeting of the
ASMFC ATLANTIC HERRING SECTION &
NEFMC ATLANTIC HERRING COMMITTEE

Holiday Inn
Peabody, Massachusetts
October 7, 1997

Attendance

Section/Committee Members

Robin Alden, Chair, ME
Eric Smith, CT, proxy for Ernest Beckwith
Dr. David Pierce, MA, proxy for Phil Coates
Arthur Odlin, (ex-officio) Advisory Panel Chair

Pat White, ME Gov. Appte.
William Adler, MA Gov. Appte
Rep. Dennis Abbott, NH Leg. Appte.
Tom Hill, MA

Staff

Jack Dunnigan ASMFC
Paul Howard, NEFMC

Dr. Joseph Desfosse, ASMFC
Tom Nies, NEFMC

Guests

Fred Bayley, K&J Fisheries
Mary Beth Nickell, F/V Starlight
Jeff Kaelin, Maine Sardine Council
Wayne Bassett, Canal Marine Fisheries
Niaz Dorry, Greenpeace
Bob Ross, NMFS NERO
David Abdoo, Office of Senator Tarr
Tom Dykstra, K&J Fisheries
Vito Calomo, Gloucester Fisheries Comm.
John Melquist, Port Clyde Canning
Maggie Raymond, AFM Groundfish Group
Sarah Steur, Pew Charitable Trust
Jim Odlin, Atlantic Trawlers Fishing
Steve Saltonstall, CLF
Matt Lebretton, Citizens for Peter Torkildsen
William Blanchard, MA Dept of Food and Agriculture

Ed Tooley, F/V STARLIGHT
Dave Ellenton, World Wide Trading
Al West, Stinson Seafood
Chris Finlayson, Maine DMR
Martin Jaffe, NMFS NERO
Mike Love, F/V Atlantic Star
Peter Mullen, F/V Western Venture
Geir Munson, Seafreeze Ltd.
Drew Kitts, NMFS NEFSC
Dr. David Stevenson, Maine DMR
Priscilla Brooks, CLF
Jennifer Atkinson, CLF
Maggie Mooney-Seus, NE Aquarium

There may have been others in attendance who did not sign the attendance sheet.

Joint Atlantic Herring Section/Herring Committee

October 7, 1997

MOTIONS

1. ***“The Council and Commission herring plan should use a target TAC approach with effort controls, rather than quota controls”.***

Motion by Mr. White, seconded by Dr. Pierce. The motion passes: NEFMC 3-1; ASFMC 4-0.

2. ***“Motion to delete Objective IIF as one of the objectives”.***

Motion by Mr. Hill, seconded by Mr. Abbott. Mr. Smith moved to table this motion, seconded by _____. The motion to table was adopted (3-2). The objective will be discussed at the next joint Committee/Section meeting.

Ms. Alden, Section Chair, opened the joint meeting of the ASMFC Herring Section and the NEFMC Herring Committee at 9:50 a.m. and asked if there were any changes or additions to agenda. The Section/Committee agreed to discuss a draft letter on marine mammal interactions in the herring fishery under "other business. Ms. Alden also said the Section needed to discuss whether any adjustments were necessary for the next fishing season, since it was clear the FMP would not be completed before next spring. Mr. White asked what the intention was for the beginning of the fishing year for the herring fishery; Ms. Alden said this would be an issue for the new plan. The minutes of the July 8th meeting were approved, with Mr. Kaelin commenting that it was difficult to adequately review the minutes if they are not distributed in advance of the meeting.

Tom Nies reviewed the comments from the scoping hearings. At the scoping hearings, there was general support for vessel and dealer permits, vessel and dealer reporting, and voluntary observer programs; there was general agreement against mandatory observers and trip limits. There was also broad support for a vessel size limit. Other measures received various comments. The NEFMC will submit the herring FMP to NMFS by the end of May, 1998. In order to meet this timeline, a public hearing document must be prepared by January, 1998. Ms. Alden pointed out that this schedule means that significant progress must be made by the Section/Committee between this meeting and mid-December, so that staff has time to prepare the document prior to the January NEFMC meeting.

Mr. Odlin pointed out that the Herring Advisors would have to meet several times prior to December in order to provide input to the FMP. Ms. Alden asked if that would be possible; Mr. Nies answered that the herring FMP was a high priority for the NEFMC and the staff would support the advisors any way possible. Mr. Dunnigan pointed out that budget concerns may hamper ASMFC; Mr. Smith noted that funding issues could be worked out between the Commission and the Council so that the FMP will be completed.

Mr. Calomo asked if the NEFMC had formally appointed herring advisors yet. Mr. Smith answered the Council was completing its advisor assignments.

Technical Committee Report

Dr. Stevenson gave a brief review of the status of herring assessments. The herring assessment will not be reviewed through the SAW until the spring of 1998. The New England Aquarium is sponsoring a workshop on Herring Assessment in early December, and the SARC Steering Committee decided to postpone the herring review until spring in order to incorporate any information learned from the workshop into the review. Because of the FMP timeline, there is a need to move forward on the assessment and biologic advice received from the Technical Committee(TC)/Plan Development Team (PDT), even in the absence of a SARC review.

Dr. Stevenson made the following points:

- The 1996 catch at age estimates are now available. 1996 saw an approximate 20K mt increase in catch over 1995. Age composition of the 1995 and 1996 catches is very similar; catch at age data does not signal over-exploitation of the resource.
- The Coastal Stock Complex Virtual Population Analysis (CCS VPA) is not yet complete but is being updated. Final numbers are not available. Two more years of catch at age data (1995 and 1996) are being added to the VPA. Early indications are that the VPA provides "iffy" estimates on biomass estimates for the most recent two years. The most recent estimates tend to show significant variability because of the difficulty in determining the size of year classes that have not yet recruited to the fishery. The result is that as the VPA is updated with new catch at age information, the biomass estimates for earlier years tend to decrease. In some cases the estimates

decrease by as much as 50 per cent. Dr. Stevenson advised against using the biomass of two year olds, or the total stock biomass which is heavily dependent on two year olds, as a basis for management but instead suggested using a more conservative estimate of spawning stock biomass.

- The Technical Committee/PDT believes that the MSY estimate of 285,000 mt is becoming more attractive as a management benchmark; the current estimates of stock biomass is clearly inflated for the current years.
- The stock production model is estimating biomass as just over a million tons; the VPA estimates numbers of three-five million tons. The stock production model is probably more reliable.
- The 1996 and 1997 biomass estimate is uncertain. Dr. Stevenson recommended that the technical Committee/PDT continue to base its advice on the estimated biomass for 1994. One current VPA run, for example, for the 1994 Spawning Stock Biomass (SSB) is 690,000 mt, with total biomass estimated at 1.3 million mt. The earlier VPA estimated SSB at 1.5 million mt, and total biomass at 2.9 million mt. The VPA is clearly overestimating stock biomass in the recent years.

Dr. Pierce asked if the number of juveniles is in doubt, how can the total biomass be estimated. Dr. Stevenson answered that catch information in later years helps to refine the estimates. Dr. Pierce commented that the Section/Committee needed to remember that the stock size estimates are uncertain and there is lots of room for error. The VPA for the Gulf of Maine (GOM) is not yet completed, but should be finished prior to the next Section/Committee meeting. All biomass estimates still show an increasing stock size. Given the uncertainty in the VPA estimates, it would be a cause for serious concern if they begin to show a declining stock size. Dr. Pierce emphasized that the estimates are uncertain and this should be considered when developing management measures. In terms of tracking stock size, we will always be two years behind. If we do go the route of quota management, it will be unlikely that we will be able to have any estimates of recruitment that we can use to develop TACs.

Dr. Pierce asked if future advice will only be for age 2+ fish. Dr. Stevenson said that if we want accurate estimates of age 2+ fish, we should go back two or three years. We are better off waiting until the young age groups enter the fishery. Dr. Pierce asked if this meant that if we ever need to restrict catch in the juvenile fishery, we will be unable to do so because we don't have good estimates of how many juvenile fish are in the stock.

Ms. Alden noted that everyone should understand that we are using estimates from previous years to guide management. The implication is that the number of fish that we thought we had are not really entering the fishery. The public needs to understand this, otherwise the FMP will be questioned based on its use of stock size estimates from previous years. Dr. Stevenson suggested that, as an alternative, the stock production model could be used as it generates more reliable data. The surplus production model says that the current size of the stock, if cropped, would support a larger harvest. Dr. Pierce said that when the Technical Committee/PDT gives advice in the future, the Section/Committee will have to make a policy call on how to handle the estimates. There is always a tendency to overestimate stock size and underestimate mortality.

Mr. White asked for a clarification of the earlier comment that "cropping" the stock could result in larger sustainable catches. Dr. Stevenson explained that the stock is so large scientists are seeing significant reductions in growth and delays in onset of maturity. A smaller stock size may grow more quickly and allow a greater yield.

Mr. Odlin asked if the technical advice is 285,000 mt for long-term sustainable yield. Dr. Stevenson

answered that those are the current numbers based on stock size and MSY; revised numbers will be completed by November 10th. Ms. Alden asked that the TC/PDT give advice on changing the ASMFC allocation process/model at the November meeting. Dr. Stevenson cautioned that the GOM assessment (if feasible to do one) may result in scary numbers. Current estimates of mortality in the GOM could be as high as 0.5.

Mr. Kaelin asked if directed acoustic surveys next fall would help the estimates. Dr. Stevenson acknowledged that the surveys should help, as they provide an independent estimate of stock size. Acoustic surveys won't be useful in the VPA until a times series is developed, but they will provide independent estimates of stock size but there is still a level of uncertainty.

Mr. Finlayson suggested that the discussion include a precautionary note on the size of the stock. As a historical note, DFO scientists once viewed this issue of erratic VPA estimates as an interesting technical problem and never communicated it to management. The policy issue is how to deal with this knowledge, that the three year old estimates are the most accurate.

Ms. Alden noted that these are current estimates of stock size at an earlier time based on the most recently available data -- not "out of date" estimates.

Mr. Ellenton asked for a clarification -- does this mean that in the short term the industry can harvest more than the long-term yield, without hurting the stock? Dr. Stevenson said that in the short term you can catch more fish in order to reduce the stock size. Ms. Alden followed up by asking if Dr. Stevenson could give some sort of framework for understanding -- if the fishery is harvested at the 285,000 mt long term yield level, is that enough to "crop" the stock? Dr. Stevenson said he didn't know the answer to that question.

Mr. White asked if there was any relationship in stock size reduction based on landings. Dr. Stevenson answered by saying we don't know the current stock size. Currently, an estimated 5 per cent of the stock is being removed by fishing. The good news is the population appears to be still growing. Mr. Ellenton asked if the Canadians use more recent stock assessments; Dr. Stevenson replied they do not.

Mr. Mullen asked if the bycatch of herring in the mackerel fishery is being considered. Dr. Stevenson replied that it has not been factored in because the scientists aren't sure how to account for it. Ms. Alden asked if the advisors could suggest an approach for how to put numbers on this.

Mr. Calomo said that the scientists at Woods Hole are estimating the biomass at 3.6 million mt. How can there be such a difference? The industry is confused by the different numbers being presented and needs the best available data to plan for the future. Ms. Alden said that was the reason she wanted to discuss this report. Woods Hole is part of the TC/PDT and their numbers are being updated; this is a cooperative effort. Mr. Calomo said the industry would be more than willing to offer their vessels to help scientists with their surveys.

Mr. Adler asked if the estimates are for herring throughout the range including Canada; Dr. Stevenson answered they include New Brunswick catches. Dr. Stevenson said that natural mortality is assumed to be 18 per cent. Mr. Adler asked that the TC/PDT give some guidance on what catch level would be a cautious approach to managing herring. Mr. White asked if the TC/PDT would provide guidance on any age selectivity necessary to reduce stock size. Dr. Stevenson replied that any stock reduction should be balanced across a range of ages; a specific age group should not be targeted. Ms. Alden pointed out that by the next Committee/Section meeting, the TC/PDT needs to decide on a number to use to manage the

fishery. She asked if since the SARC herring review was delayed, is there some procedure to be used to review the assessments? Ms. Alden said that at the next meeting, there should be a specific decision on whether to use the number that comes from Dr. Stevenson's estimates.

Mr. Dunnigan commented that while peer review of the assessments is normally accomplished through the SARC, there are two other options. First, a fully independent outside review could be scheduled. Second, ASMFC could identify a small group not associated with the estimates to review it. The type of review chosen would depend on the circumstances. It would be best to talk to the SAW steering committee before choosing one of these alternatives.

Dr. Pierce asked if the previous advice on the GOM -- long term potential yield of 70,000 mt of age 2+ herring -- was still valid. Dr. Stevenson said it was too early in the review to say. Mr. Ellenton cautioned that numbers should not be discussed unless the scientists are certain they are valid. He also asked why the SARC assessment was being postponed if this is a critical issue. The assessment is critical to completing this FMP on a fast track. Ms. Alden said that the herring workshop in the second week of December may help the SARC conduct its assessment in the spring. Mr. Kaelin asked if the TC/PDT advice is to pay more attention to the surplus production model, why is the GOM assessment based on a VPA? Dr. Stevenson said the surplus production model cannot be done in the GOM because it requires a survey.

Dr. Pierce asked for clarification on some of the previous estimates provided. Dr. Stevenson said that the numbers provided in July were based on 1995 catch at age data. Ms. Alden pointed out that in this particular case, surplus referred to what had not yet been caught.

Ms. Alden suggested that the emergency regulations discussion be postponed until after lunch.

FMP Goals and Objectives

Ms. Alden began the discussion of the management goals and objectives. A paper (see attached) was circulated with the existing goals and objectives from the ASMFC management plan, and the draft objectives that were in the scoping document with comments from the public annotated.

The first objective addressed was Objective C on the second page. Mr. Hill was concerned that this objective appeared to limit opportunities in the herring fishery to those displaced from other fisheries. The Section/Committee should be emphasizing the positive -- the attempt to provide opportunities to all fishermen in the northeast, depending on the type of management measures chosen. We need to have controlled opportunities for all fishermen, rather than emphasizing we are controlling opportunities for fishermen that are being displaced. Mr. Smith said he didn't like the original draft language; it sounded too much like a preference for people impacted by groundfish restrictions. Opportunities need to be regulated to prevent going too far in either direction. Mr. Hill said the record should reflect that we are trying to leave opportunities for people who have been displaced. Mr. Adler asked if the objectives addressing orderly development, and the objective providing controlled opportunities could be combined. Mr. Smith suggested the following language.

"To provide for the orderly development of the offshore and inshore fisheries, and to provide controlled opportunities for fishermen and vessels in other fisheries in the northeast."

Mr. Dunnigan asked if the Section/Committee was comfortable with the word "development". The inshore resource is intensively fished, with high mortality -- does this send the right message on what we want to do with this resource? Dr. Pierce agreed with Mr. Dunnigan and said development of any

inshore fishery should be outside the Gulf of Maine. Mr. Kaelin said the Maine Sardine Council suggested including the inshore fishery in this objective, to make sure there was controlled development in both inshore and offshore areas. Some fish should be set aside for the fixed gear fishery to return; this could be hard to plan for, but it may just happen. Ms. Alden said that these objectives came about because of a desire for an assertive statement in the plan that the fishery expand in an orderly fashion, and with vessels in the northeast.

Mr. Smith commented that the goals and objectives appeared to fall into logical groups. There are three major goal statements, plus some objectives. The first is the Magnuson requirement for optimum yield, the second is to provide orderly development taking into account current participants, and the third is to provide controlled opportunities. Preventing overfishing, maintaining biomass -- these sound like objectives.

Mr. Dunnigan said if what we are concerned about is sudden and excessive capitalization, let's say that. Any objectives should be defined in a way that are measurable. Mr. Smith said objectives B and J do appear to be objectives. Dr. Stevenson asked if two of the objectives were consistent -- how can a high biomass be maintained, while allowing sustainable harvest?

The Committee/Section broke for lunch at 12:05.

ASMFC Emergency Action

Upon the Section/Committee return, Ms. Alden began the discussion on the ASMFC emergency actions. Dr. Desfosse summarized the public hearings held on the action. At five public hearings, the majority of comments were in favor of the emergency regulations implementing a vessel size limit restriction and prohibiting directed mealing. Some of the comments supported keeping the emergency regulations in place as part of the new plan. Questions were raised on the definition of directed mealing. One voice was in opposition to the regulations as discriminatory. Ms. Alden said the emergency action needed some refinement in order to be implemented. The changes could not be considered because there were only four states present. Mr. Smith commented that while Connecticut supported the measures, there may be an issue with the state's rule-making and regulatory process. Dr. Pierce commented that the restriction on directed mealing required better definition.

FMP Goals and Objectives (cont.)

Ms. Alden resumed the discussion on goals and objectives by focusing on the biological objectives. The Section/Committee agreed that the optimum yield definition should be a goal of the FMP, not an objective. The current overfishing definition (20% of MSP) would be kept as a placeholder objective and changed if the overfishing definition is revised by the overfishing definition review. The objective to prevent overfishing of discrete spawning stock units was retained.

Mr. Kaelin asked for clarification on the overfishing definition review. Mr. Smith said this was a Sustainable Fishery Act requirement and the Council's approach was to make these evaluations by one review panel.

Ms. Alden began the discussion on the objectives that suggested cooperation with other federal and state FMPs, and with Canada, and to cooperate on research issues. Dr. Pierce supported the establishment of complementary management with Canada, and separating research issues into another objective. It's still unclear how the Canadian catch will impact the U. S. catch; the usual practice has been to reduce the U. S. catch by the Canadian catch. The burden is always on the U. S. fishermen. Dr. Pierce favored an objective which would promote complementary measures, rather than implement measures with Canada.

Mr. Smith suggested the following changes:

"To promote U. S. and Canadian cooperation in order to establish complementary management practices."

"To implement management measures in closed coordination with other Federal and State FMP's."

The objectives were adopted by consensus.

Mr. Howard said that in the future, herring would be on the agenda during the Council's quarterly meetings with the Canadians.

Ms. Alden discussed the research objectives. The Section/Committee adopted:

"To promote research and improve the collection of information in order to better understand herring population dynamics, biology and ecology, and to improve assessment procedures in cooperation with Canada."

There was a discussion concerning the objective of preventing adverse patterns of fishing mortality by age. Dr. Pierce mentioned there is always the possibility of the juvenile fishery resurging; it's important to include an objective that would prevent overfishing of juveniles. The objective was revised to read:

"To avoid patterns of fishing mortality by age which adversely affect the age structure of the stock."

The objective was adopted by consensus, but referred it to the TC/PDT for validation.

Dr. Pierce suggested the objective on maintaining a high biomass be added to the overall goal of the FMP. Ms. Dorry supported the suggestion to include this as a goal, but emphasized that it should be a separate goal. Mr. Kaelin pointed out that the habitat committee was currently meeting, and perhaps a presentation on habitat should be included for the November meeting. Mr. Howard said the second priority of the habitat committee was herring, and it should be reviewed shortly.

Ms. Alden began the discussion on the social and economic objectives. Objectives IIC, D, and E had been consolidated during the morning session. Dr. Pierce questioned the objective that refers to the viability of the current participants. Mr. Smith said that, as a goal statement, he had suggested the language:

"To provide for the orderly development of the offshore and inshore fisheries, taking into account the viability of current participants in the fishery."

Ms. Alden asked if Mr. Smith was differentiating between goals and objectives. Mr. Smith defined the objectives as being much more concrete.

Mr. Hill questioned the intent of the draft objective which takes into account "future viability of "current participants" in the fishery. Does that mean they will be protected from competition? It is open to interpretation and does not guide the development of management measures. Mr. Smith said that if we want to provide orderly development of the fisheries, we also need to be concerned over current participants. Mr. Hill said he still has trouble with how it would be interpreted. Mr. Dunnigan said that this would be yet another objective statement that is already required by the law. Mr. Hill said he felt this objective meant we would protect current participants and did not support the objective. He also expressed concern that it might conflict with the national standards. The objective was accepted by

consensus as:

"To provide for the orderly development of the offshore and inshore fishery, taking into account the viability of the current participants in the fishery."

Mr. Smith supported the revised language of objective IIC (see above). The objective was adopted by consensus.

Ms. Alden lead the discussion on maximizing shoreside utilization and value added product. Dr. Pierce asked if this was consistent -- does maximizing shoreside utilization result in value added product? The use of herring for bait maximizes shoreside utilization, but does not maximize value added product. Mr. Adler asked if "value added product" needed to be included; Dr. Pierce suggested deleting this comment. Mr. Hill said it sounds like the goal is to get more out of the individual fish. Ms. Alden suggested the following language:

"To maximize shoreside use and encourage value-added product utilization."

Mr. Dunnigan suggested some thought needed to be given if the conservation program encouraged specific products. The record needed to be built to support this objective. Mr. Hill agreed and said the direct result of this objective would be to prohibit mealing. Mr. Adler commented that he still had problems with the value added product wording. Mr. Abbot asked if it was appropriate to tell the fisherman we should encourage value added product -- it's like telling a fisherman to make money.

Mr. Munson commented that the objective was an attempt at business management, not resource conservation. Mr. Munson's boats pack frozen herring at sea for Japan, the highest value product ever -- the Committee/Section is saying that this is wrong. Mr. Kaelin said the best value was in sardines processed ashore, stimulating local economies. There needs to be a standard in the plan that will send fish ashore when the resource gets tight. Mr. Ellenton agreed with Mr. Munson; we don't tell canneries where to get their fish from, we shouldn't be telling the fishermen where to take their fish. Ms. Alden said that this objective did not attract attention at the scoping hearings. Mr. (Jim) Odlin said this issue should be left to the marketplace -- the market can't be predicted. Mr. Hill said the objective did not give clear guidance on how to develop management measures.

Mr. Hill moved (Mr. Abbott second):

"To delete Objective IIF as one of the objectives."

Mr. Smith moved to table this motion. The motion to table was adopted (3-2). The objective will be discussed at the next Committee/Section meeting.

Catch Control Measures Discussion

Ms. Alden opened the discussion on catch control measures by pointing out there was no interest at the scoping hearing in Maine for any form of quota management. Dr. Pierce asked if effort controls and catch quotas are viewed as mutually exclusive. He asked if under catch quotas, the fishery would be closed if the quota was reached. Ms. Alden said that he was correct. Mr. Smith suggested that before discussing management measures, the Section/Committee should decide which general approach would be followed. In managing for the future, is it better to let people know that we would use a hard quota, or via indirect means? Before talking about the kinds of measures, it's important to discuss the approach. Most people would say quotas give more of a chance of hitting the target, but give more burdens on society. Effort controls give less burden on society, and require more adjustments; the inherent risk is that the target may never be reached and therefore you increase the risk of overfishing. Depending on the philosophy of the moment, we should forewarn the industry what we will use. Somewhere down the

line, measures may be more painful than they would be otherwise.

Ms. Alden said there was no support for quotas at the Maine scoping hearing. The main reason is the need for a steady supply of herring in the market, and fear of disruption if the fishery was closed. Mr. Smith said that with all the problems with quota management in other species, he is leery of being an advocate for it due to the costs to society.

Mr. Odlin suggested that a target TAC approach could be adopted.

Dr. Pierce supported Mr. Smith's concerns over quota management and the problems with discards and waste it generates. He supported the target TAC because of the current robust herring resource. He said adjustments can be made in the future; if we are unable to fine tune our approach to the target TACs, then maybe it will be time to go to catch quotas. In light of public hearing comments, Dr. Pierce said he favors the TAC approach.

Mr. Hill noted that it was an inappropriate characterization to say that definable catch limits create waste. He said clearly there won't be waste if the fishery is closed when the TAC is reached, other than bycatch -- which can be accommodated by bycatch limits in other fisheries. In the recent assessment of overfished fisheries prepared by NMFS, only the Northern Pacific Council does not have any overfished fisheries -- and they use a quota system. Mr. Hill suggested that if we are already near the TAC for the GOM, there should be some measure that would shut down the fishery when the TAC is reached. He did not object to other measures, but definable mortality limits should be considered. He stated that while a trip limit may be wasteful, a quota system is not necessarily wasteful.

Dr. Pierce said that at the scoping meeting in Gloucester, which he chaired, there was widespread objection to any form of trip limit. The concern was on the waste that can be generated. Ms. Alden asked if there was some combination of these two ideas that could be used; the next question would be whether to set TACs by area.

Mr. Hill said it seemed clear that with a large resource and a realistic quota, there isn't any threat of a closure being triggered by the defined quota. It is the scale by which things are measured and gives the industry a clear benchmark of where they are going. For those fisheries where the limit is being approached, if the industry doesn't like trip limits, why leave a fishery open where the danger is overfishing? The Councils have struggled historically with having to stop fishing when the industry reaches the amount that is supposed to be caught.

Ms. Alden pointed out trip limits are different from quotas. Mr. Hill said that a closure isn't wasteful. He said that it seemed there was confusion between trip limits and quotas. Dr. Pierce asked how fishing will be controlled in the GOM where the TAC is being reached. Clearly, if assessment advice says the target TAC of 100,000 mt is being reached in the GOM, how do we deal with additional catches over the TAC in the GOM? Dr. Pierce said that if a target TAC is chosen, we have to choose what we can select that will prevent us from reaching the target TAC. If the Section/Committee can do that, fine; if they can't, if there are no combinations of measures that are acceptable to the industry, maybe it's time for a closer look at quotas in the GOM, and these could be restrictive. According to Dr. Pierce, we don't want to have an escalation of effort in the GOM which causes problems.

Mr. Odlin suggested that the Section/Committee should adopt a target Total Allowable Catch (TAC) as the basis for any management measures. If 80% or 90% of the target TAC is met, trip limits or days at sea kick-in or other controls could kick-in that keep the catch within the target, yet keep the product

flowing. If there is a hard target, the truncated fishery won't be acceptable to the industry. Trip limits may be problematic, but there may be other measures that can be used to restrict effort.

Ms. Alden said she believed there were two options on the floor: one that is retrospective (at the end of the year, catches are examined to see if the target was reached and adjustments are made in the following year), and Mr. Odlin's suggestion that if the target level is reached, the effort controls are implemented in the current fishing year.

Dr. Pierce expressed concern that if a hard quota is set, the industry could wind up suffering because of the Canadian catch. A percentage of the TAC would have to be allocated to the foreign catch. Then the issue becomes all the allocation concerns -- between states, juvenile and adult fisheries, etc. For these reasons, he prefers the target TAC with effort restrictions that slow down catch. He suggested that rather than have all effort controls start at a pre-determined level, perhaps some could begin at the start of the fishing year to slow catch rates -- particularly in the GOM, where the catch is nearly at the TAC level already.

Mr. Hill emphasized that the Council needs to prevent overfishing. To achieve optimum yield without going beyond it is the goal. He does not believe there is much difference on an annual basis between a target TAC and a quota system. There needs to be a guarantee that an expanding herring fishery does not result in overfishing. Mr. Hill said there should be guarantees in this fishery -- bottom-line guarantees that insure the stock is not overfished.

Ms. Alden said that the same thing happens in quota systems, because of problems with figuring out the actual mortality -- fluke is an example.

Mr. Hill reiterated that the North Pacific Council, which uses quota systems, is the only Council that does not have overfished fisheries. He hopes the Council and the ASMFC recognize the only difference between the two approaches is a moral and ethical commitment that the catch level will not be exceeded. If there is no constraint at the end of the fishing season, there is no reason for industry to make sure the allowed catch lasts the remainder of the year. These are fundamentals he has learned in management in New England.

Mr. Munson pointed out that all management decisions are being made on dated information. He said the government needs to use private resources to assess fish stocks, as is done throughout the world; without better data, the Council/Section is guessing, not managing. Mr. Munson agreed with Mr. Hill--there must be some absolute way to control catch levels. He believes the best way is vessel quotas, but that takes a long time to set up, to determine who gets what, and so forth. Mr. Munson pointed out that herring is very cheap -- if controls make fishing too inefficient, there will not be any profit in it. If there are all kinds of controls, nothing will happen -- there will be a lot of fish in the ocean, but it won't benefit anyone.

Ms. Alden said that information will be updated using 1996 catches and spring 1997 trawl survey. The data will be used to update the 1994 stock estimates. This is not that different than what is done in a number of other fisheries.

Mr. Kaelin commented that from his perspective, processor shares or ITQ's would be the best solution. Fish are needed year round in the sardine industry, and in the bait market. He said a vessel quota might make sense, but that assumes we are willing to limit the number of boats, or the number of boats in an area. He asked what is the appropriate number of boats? This is hard to judge until we know where we

are in relation to the target TAC. According to Mr. Kaelin, a limit on the number of boats in the GOM may be appropriate. At some point there will need to be a limit on the number of boats to keep the target TACs on track. Mr. Kaelin said none of this is going to work unless we know if we have too many boats or not. All of us are interested in the maximum number of vessel participants. A limit on the number of boats is going to have to kick in at some point.

Ms. Dorry relayed Greenpeace's support for a TAC. The Section/Committee can't guarantee anything, and no one is sure whether quota based management has been successful in the North Pacific. Ms. Dorry said the MSFCMA emphasizes protection of the ecosystem. If we use ecological principles, we may successfully manage the fishery based on biological issues.

Ms. Alden asked if Ms. Dorry supported a target TAC or a hard quota. Ms. Dorry said she was undecided; if the target TAC has measures that prevent overfishing, she would support the target TAC versus an overall quota.

Mr. White made the following motion for the NEFMC and ASMFC:

"The Council and Commission herring plan should use a target TAC approach with effort controls, rather than quota controls." (Seconded by Dr. Pierce)

Mr. Hill said the most fundamental issue is whether there is a definable removal level that triggers a closure or whether a target exists that is only a goal. He asked if there are certain thresholds -- do we believe we are going to close a fishery at a certain level? If so, he asked if it will be broken up into discrete areas? Mr. Hill stated he has difficulty agreeing that a TAC is better than some other measure. He said he will oppose the motion since it is not the appropriate method to control mortality.

Mr. White said that under a TAC, a trigger could be established that would allow us to reach the TAC without using a quota based management system.

Ms. Alden clarified that the motion meant there would not be a closure if the target was reached. The motion, however, does not preclude additional management measures that would be implemented at a certain level of TAC. The distinction is that a target TAC may result in modified behavior, but does not result in a closure.

Mr. Smith supported the motion with the comment that as the target TAC is approached, more strict measure be imposed. Typically the Council calls these framework measures, but he said they could even make it more definite than that. He does not like the market disruption of an absolute closure. As the motion was presented, there is no requirement to close the fishery after the TAC is reached. Mr. Smith suggested referring to the mackerel plan.

Mr. Hill said the same arguments were made for monkfish. He said the Council has been unable to resolve the allocation fights, and suggested the same thing will occur in herring -- as soon as there is a trigger mechanism, even if it is with a TAC, the arguments will begin on who has to sacrifice what. According to Mr. Hill, there is no reason to come to common cause since there is no closure mechanism. He believes that as soon as there is a hard line catch restriction, who gives up what becomes contentious.

Dr. Pierce commented that a catch quota will cause just as much trouble as a target TAC. He said a target TAC should create a better environment for the collection of data for improving the assessments.

Mr. Odlin said he views a TAC as having a level, say 80%, that implements controls. If they don't work,

the fishery could still be closed.

Dr. Pierce asked for a clarification: does this motion mean the target TAC could eventually lead to a closure? Ms. Alden clarified that the motion, as discussed, would not lead to a closure. Mr. Smith said the motion meant there would be a target TAC with effort controls to keep within the TAC -- that would be the preferred approach for the management plan.

The motion passed (NEFMC 3-1; ASFMC 4-0).

Ms. Alden asked if target TACs should be developed by area. There are currently three management areas in the current plan -- should they be kept?

Mr. White supported TACs by area, but there are concerns over the Area 1 line. Ms. Alden asked that the discussion be kept separate. Dr. Stevenson said from a scientific view, area specific TACs are needed, but the key area is Management Area 1. The biological arguments may not be so compelling for Areas 2 and 3.

The identification of TACs by area was adopted by consensus by both groups.

Ms. Alden suggested referring the issue of revised management area designations to the Technical Committee/PDT. Dr. Pierce commented that changes to Area 3 would cause conflicts with Canada because of the historical Canadian assessment of the Georges Bank herring spawning stock. If Areas 2 and 3 are combined, it would create a huge biomass that would cause problems with Canada. Dr. Pierce stated he believed there should be a continued distinction between Areas 2 and 3.

Ms. Alden mentioned that at the last meeting with Canada, it was very important that Area 3 have its own management regime. Dr. Pierce said the target TAC would complicate issues with Canada, and maybe there should be a specific upper limit for Area 3.

Dr. Stevenson mentioned that a more critical issue concerns the New Brunswick and eastern Maine catches. The New Brunswick fishery (10,000-20,000 mt) is considered part of the U.S. Stock. If there is a target TAC, what should be done with the Canadian catch? This catch is only from fixed gear, but it is not just restricted to juveniles, according to Dr. Stevenson.

Ms. Alden commented there has been discussion that the Area 1 outer boundary is too far offshore. Is it appropriate to refer this to the TC/PDT? Dr. Stevenson reminded the Section/Committee that there had been problems during the IWP discussion in the spring; it may be wise to reconsider the definition of the areas based on the old ICNAF definitions. Ms. Alden asked if the goal of the management area lines is to divide along biological boundaries, rather than fisheries. If so, she believes this is a biological exercise, not a fishing practice exercise. Dr. Pierce agreed that the lines should be drawn with consideration to the biological distribution of herring, and asked why the Area 1 boundary should be moved to the west?

Mr. Odlin replied that current restrictions in Area 1 mean that boats have to go 60-70 miles offshore in order to fish. Dr. Pierce suggested the lines be tailored to the biological aspects of the herring.

Ms. Alden asked if the lines should be tailored to the assessment boundaries. In particular, she asked if the southern and southeastern line of Area 1 should be changed. Dr. Pierce suggested that perhaps there should be an inshore/offshore area in Area 1: if estimates can be generated by geographic area, this may

provide some logic to such a delineation. Dr. Stevenson pointed to Cashes Ledge as an example of an offshore area where herring are being taken. Mr. White agreed Area 1 could be subdivided.

Mr. Mullen mentioned that he had recently been finding herring in 90 fathoms of water. The current boundary is forcing people farther offshore. It takes 10-12 hours to get out past the boundary, and there are many herring in the deeper water inside this line. According to Mr. Mullen, the result is boats are tempted to go up to Maine rather than make this transit; the boundary is forcing boats to do things that aren't necessary. He is concerned that if the Area 1 line is changed, Area 3 includes more fish and the Canadians will have more control over the overall catch. It would be better to draw some sort of line inside Area 1. Ms. Alden referred this issue to the TC/PDT. She also suggested they begin looking at spawning area closures, as this will come up later.

Dr. Pierce asked if Area 3 had been resolved with the Canadians: how are they doing their Area 3 assessments? How many of the landings for the assessment have come from the offshore area of Area 1? Dr. Stevenson said the catch statistics are reported by three digit statistical area -- there is information on the times of year, gear types, and areas on where catches are coming from. Dr. Pierce asked the TC to provide information on the catch statistics. He believes the issue is the same in setting target TACs -- the Section/Committee will have to know something about the distribution of fish in the GOM stock. Ms. Alden asked the TC/PDT to explain the catch distribution at the next Committee meeting -- particularly from (spawning closure) Area 1D, the Jeffreys Ledge area.

Ms. Alden summarized that the Section/Committee had agreed to look at TACs by area. Dr. Pierce asked if Management Area 3 had been resolved; Ms. Alden suggested that Area 3 be considered at the next meeting. Dr. Stevenson offered to describe how the Canadians perform their assessment at that meeting.

Ms. Alden began a discussion on other effort controls. She pointed out that there was support for limited entry at the scoping hearing in Maine. Mr. Smith commented that while limited entry may be necessary in the long term, it should not be used before its time. He said once the discussion begins -- talk of control dates, who should be included, etc.--the plan development process would bog down.

Mr. Hill asked if the committee would entertain a defined mortality goal that, if reached, would then close the fishery. He asked if the TAC was exceeded by a certain percentage, would the Committee/Section entertain a closure mechanism at that point? He described this as a fail safe; what is the point of having a TAC if it can be exceeded by 10, 20, or 30 percent. Mr. Smith said the assumption is that at some percentage of the TAC, controls would guide effort to the TAC -- it would serve as a backstop to make sure the catch did not get away from managers. Dr. Pierce asked for clarification. Mr. Hill said that if the catch exceeds the TAC by a defined number of tons, it would trigger a closure.

Mr. Calomo suggested there is a similar system in place for haddock -- the trip limit reverts to 1,000 pounds per day after a certain percentage of the TAC is reached. He believes this works for haddock and suggested the herring target TAC could work the same way. He also stated the Gloucester Fisheries Commission is definitely against any form of limited entry. Mr. Kaelin said limited entry may not be necessary now, but there must be some kind of effort limitation. He said we need to plan for how we will prevent too many entrants into the fishery, and it is not shut down before the end of the fishing year.

Ms. Alden returned the discussion to effort control measures. Mr. Hill offered to defer his comments until the next Committee/Section meeting. Ms. Alden said that a quota can result in a derby style fishery. Mr. Hill said his experience has been the same mentality exists with a target TAC in place.

Mr. Adler asked what the advisory panel recommended. Ms Alden said they had not discussed these specific measures yet.

Ms. Alden asked if limited entry should be dealt with differently in different areas. Mr. Smith said catch levels and stock assessment advice for Area 1 may support that argument. Ms. Alden then asked if the plan would include limited entry, and, if so, would it be done by area. Mr. Hill asked why limit the number of players if the number of tons of herring caught is not going to be limited. Ms. Alden said if we are interested in effort controls as opposed to hard quotas, why not use limited entry. Mr. Hill said that groundfish is an example of where there are more permits than are necessary with the result limited entry was ineffective. He believes limited entry can be a good tool if it actually controls mortality.

Dr. Pierce said one of the plan objectives is to provide controlled opportunities, that language suggests some sort of controlled access. He said we may potentially be in the position of having to impose more stringent effort controls. His perception of the hearing in Gloucester is that people there solidly opposed limited entry; the Massachusetts perspective is to not use a limited entry system. Dr. Pierce recognized there is at least one segment -- in Maine -- which supports limited entry, at least in the GOM. Dr. Pierce said in Massachusetts there is a perspective that there is no need for limited entry -- the industry is doing what they have been encouraged to do.

Ms. Alden said that there are very distinct needs in different areas. She pointed out that in the GOM, the industry is highly developed. As a result, she said there are very distinct needs in the different areas of the fishery. She asked the TC/PDT for advice on what effort tools to use to manage the fishery, including by area. She said if we are looking at extremely restrictive effort controls in Area 1, there may be a need for limited entry. In other areas, we are trying to develop the fishery. Yet it is difficult to separate these issues, since people traditionally fish in all areas. Ms. Alden asked how can we employ these measures differently in Area 1?

Mr. Smith asked if the 80% TAC criteria is adopted, what tools would be used to restrict effort? He said there does not seem to be many options available when the industry hits the trigger level. He suggested the alternatives are a trip limit or fishing time.

Mr. Adler asked if the Section/Committee was trying to give some guidance to the PDT/TC so they could write the draft plan. Ms. Alden asked the PDT/TC to provide a plan outline. Mr. Smith said that there is not much of a technical issue -- the Advisory Panel should give some input on what the trigger level should be and what measures should be imposed to slow down landings. He does not believe there is a need for a technical analysis yet. Ms. Alden asked for some practical advice from the PDT on management measures and whether they should be tailored for different areas.

Ms. Alden asked if there were any other measures that could be used to slow down catch. Dr. Pierce suggested that closed areas and closed seasons could impact overall landings. He also suggested that spawning area closures could be enlarged or extended if the TAC is being approached; perhaps large areas could be defined that could be used if necessary. He believes this could have an impact on overall landings at a time when landings were very high; taking pressure off fish when they are aggregated for spawning is important.

Ms. Alden asked if this concept meant a small spawning closure could be enlarged if catch exceeded the trigger. Mr. Adler suggested that closed areas throughout the year, limits on fishing time, scoping document measures 5 and 6 were items that should be zeroed in on. He said some of these measures may be used throughout the year in order to limit catch. Combinations of these items could be put together.

Mr. Adler said that is the information that is needed from the advisory panel.

Mr. Odlin said that he felt the charge of the Advisory Panel was clear, but he had hoped the choices would be reduced some. He asked if limits on days at sea (DAS) was out; Ms. Alden said that in the context of the discussion where a trigger level was passed, the DAS concept should be kept in. She felt it was important the advisors put this in context of assuming the worst when a TAC is being approached.

Mr. Adler said that closed seasons probably needed little discussion as they were opposed at the scoping hearings, and the Advisory Panel could quickly eliminate some other choices. Ms. Alden reminded Mr. Odlin that some of these measures could apply in one area and not another; consideration should be given to what would happen to the market.

Mr. Mullen said that five years from now, whether we like it or not, there will be limited entry. He believes if open access is allowed, the result will be the same as in the groundfish fishery. We have to accept that down the road there will be limited entry.

Ms. Dorry said she agreed with Mr. Hill that there should be a mechanism in place that stops fishing if the TAC is reached. She also said we may want to look at how we are determining the overfishing definition; if the current definition is added to natural mortality, that adds up to removals of almost 50 per cent a year.

Mr. Smith updated the Committee on NEFMC advisors. The Council's Executive Committee is discussing the subject of advisors with the Chairman of the Herring Committee. Ms. Alden said the ASMFC advisors are set. Ms. Alden suggested not having a closed session on the advisors at the end of the meeting.

Ms. Alden referred to an issue raised by the Marine Mammal Committee. Mr. Nies explained that at a recent Marine Mammal Committee meeting, concerns were expressed over possible interactions between mid-water herring trawlers and marine mammals. The Committee had prepared a draft letter asking NMFS/NERO to look into this issue. Mr. Smith emphasized the letter was intended to determine the impacts of a type of fishing, and not of a particular vessel; it was inappropriate for the draft letter to include the name of a particular vessel. Mr. Odlin said the letter should include a request for information on the amount of herring bycatch in the mackerel fishery. The Section /Committee decided not to send the letter; Ms. Alden directed the TC/PDT to obtain the needed information informally.

Ms. Alden adjourned the meeting at 5:20 p.m.