

NEW ENGLAND FISHERY MANAGEMENT Council

Scallop Survey Advisory Panel

STATUS

- A. Meetings: The Advisory Panel met on March 4, 2008 at the NMFS Falmouth Technology Park office. The meeting was chaired by Dr. Russell Brown, NEFSC who reviewed the new committee structure and terms of reference. A second meeting will be scheduled in May or early June, before the annual scallop survey commences.

The committee reviewed the plans to use and calibrate the new survey dredge aboard the RV Sharp (a University of Delaware vessel), which would conduct the 2008 scallop survey. Calibrations would be conducted via three methods, reoccupying 2007 stations in closed areas, shadow surveys by industry vessels with old survey and commercial dredges, and a shadow survey conducted with the Habcam video equipment. The panel reached a consensus on the final configuration of the new survey dredge. It also discussed expansion of state and industry surveys into unsurveyed areas, like the Northern Gulf of Maine area which will be managed using a TAC. Future development and integration of multi-purpose video surveys into the scallop survey was also discussed.

- A. The SSAP Terms of Reference are:
1. Provide guidance on sampling technologies and platforms to continue to provide data that will be directly input into science advice for management. This includes sampling at different spatial scales, e.g. site specific, stock wide.
 2. Provide advice on the development and application of new and existing technologies and platforms to advance the science advice from single stock biological information to advice at the ecosystem level.

COUNCIL ACTION

- A. No Council action is required at this time.

INFORMATION

1. March 4, 2008 meeting summary
2. February 28, 2008 letter from Jim Fletcher

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**Scallop Survey Advisory Panel
DRAFT Meeting summary
Falmouth, MA
March 4, 2008**

Attendance: Dvora Hart, Ron Smolowitz, Kevin Kelly, Richard Taylor, Bill DuPaul, Scott Gallagher, Russel Brown, Peter Hughes, Cate O'Keefe, Mike Marino, and Andrew Applegate

Summary:

This was the first meeting of the newly constituted Scallop Survey Advisory Panel (SSAP), which included two Council members each from the New England and Mid-Atlantic Fishery Management Councils. Since the meeting had been scheduled before all appointments had been made and there were some medical issues, Council members were unable to attend the meeting. Dr. Russell Brown agreed to chair the meeting as a substitute, bridging the transition between the old and new panels. Dr. Brown stated that this would be a one-time event because NMFS wants to maintain a hands off approach to an advisory panel.

The following issues were discussed:

- Panel compositions and terms of reference
- Previous progress and accomplishments of the SSAP
- 2008 survey plans
- Deployment of the new survey dredge on the RV Sharp
- Changing survey tow duration
- RSA funding process and timing
- Development and integration of video survey technology
- Expansion of state surveys into unsurveyed areas
- A letter of issues submitted by Jim Fletcher

Background and Terms of Reference

Dr. Brown gave a brief background of the SSAP, its accomplishments, and for the new more formal structure. Originally, the panel was modeled after the trawl survey advisory panel, since both scientists and industry approached the Center with a desire to have a similar process in place for the scallop surveys. The initial process was chaired by Ron Smolowitz when the Council formed the SSAP. It had positive effects on gear redesign of the new survey dredge and on RSA planning.

More recently, the Center and Council established a more formal process, reconstituting the panel with a somewhat different membership. Dvora Hart and Vic Nordahl are official NMFS representatives. Dave Simpson (chair) and Jim Salisbury are NEFMC members. Rick Robins and Dennis Spitsbergen are MAFMC representatives. Other technical and industry members were added to the panel, which was limited to 15 members.

Dr. Brown explained that Federal regulations govern how the science center interacts with stakeholders. FACA is the primary regulation, which is why the Councils are involved – they are not subject to FACA. Panel advice would be reported to the Council, which then would pass that advice on to NMFS. Federal Register notices are made in advance. There had been a problem scheduling this meeting and in the future there will be an email check to attempt to schedule meetings. The key piece in the SSAP process is to be transparent, recommendations should be vetted. The meetings are public and anyone is welcome to contribute to the discussion, even if they are not official panel members.

Concerning documentation of meetings, Dr. Brown said it is important to communicate out what happens here. In addition to recordings, a short meeting summary will be generated, distributed at Council meetings, and will be part of Council briefing material.

As part of SSAP reconstitution, the Terms of Reference (TOR) were redrafted, simpler than they had been and focused more on the annual survey. The new Terms of Reference were drafted by the Center Director, with input from Center staff. Dr. Brown elaborated that the second term of reference is a key element for the panel to focus on. The old Terms of Reference of the previous panel were folded into the new ones. For example, some of them map well, for example the old TOR #4 maps into new TOR #2. The old Term of Reference #2 has been finished by the old SSAP. Dr. Hart commented that the SSAP also needs to make recommendation with respect to old TOR #2, with turtle chains, etc.

Dr. Brown also reported that the Center has completed a draft EIS under NEPA for all NE region fishery surveys. Nationwide, there has been a bit of tension between Science Centers and Regional Offices. Some surveys in other regions have been shut down until the EIS's have been completed. The issue of needing to use turtle chains arose within this NEPA review. Trawl surveys regularly catch turtles, partly because of the increase in abundance. The new survey trawl will probably have a higher catchability of turtles than the old survey trawl had.

An appropriate TOR not explicitly spelled out is a potential expansion of state and other surveys in state and other unsurveyed waters. NMFS does not have the ability to operate dredge in the Gulf of Maine and the relative value of the resource compared with the cost of surveying it does not make sense [in the agency priorities]. Dr. Brown explained that the new TORs are broader than they were for the previous SSAP.

As background, Dr. Brown explained that the Trawl Survey Advisory Panel made most of its decisions by consensus; only 5-6 decisions were made by voting. Strong concern was expressed by attendees from SMAST that decisions would be made excluding certain groups. Dr. Brown replied that the informal December meeting was an RSA coordination meeting where no formal decisions were made, not part of the SSAP process. He thought that at this meeting, the SSAP could make a recommendation relative to RSA processes.

Dr. DuPaul agreed, but he thought pragmatically TOR #1 is a priority and should be the primary work of the SSAP instead of getting very involved in benthic monitoring at this time. Dr. Hart commented that the SSAP also needs to consider that this year the survey will be conducted on

the RV Sharp – and that decisions need to be made about the gear that will be used. She added that resource abundance has changed and that may be affecting catchability. Decisions about areas to be surveyed also need to be made. Also she commented that new technologies are developing and the SSAP needs to be looking at developing technology to improve the survey.

Mr. Smolowitz commented that the RSA solicitation process needs work. He thought that there were some illegal processes announced in the RFP. Dr. DuPaul suggested that survey research could be handled better as a cooperative agreement, rather than as annual grants. Dr. Hart commented that we need more control over the RSA survey component. As presently administered, there is too much overlap and too many holes in what is currently funded by the RSA.

Panel composition

Mr. Smolowitz commented that there is a lot of technology stuff to consider and the right mix of people is not on the panel. He explained that many other people are also working on survey issues, for example groups concerned about changes in habitat: Rutgers, NMFS habitat faculty in NH, Dr. Page Valentine at USGS. Dr. Hart thought it would be worthwhile to have a meeting inviting all the people involved in habitat and other types of surveys. For example, Scott Gallager said he was interested in participating in the panel, because what is useful is to generate products that are needed for management, not just scallops, but entire benthic habitat.

Dr. Brown replied that the NEFSC provided a very broad list of potential panelists, some of which were approved by the Council's Executive Committee. The list focused on people who were practical and knowledgeable about what the Council needs as data and information for management.

Mr. Taylor thought that the process doesn't preclude the SSAP from asking for an expansion in membership and more inclusiveness. Missing or ignoring assets by limiting panel membership is not a good policy, he said.

Dr. DuPaul concurred and he thought most serious oversight was not including SMAST. Dr. Hart was uncomfortable making a recommendation without the Council members here, but thought the SSAP could inquire about the matter. Mr. Taylor explained that the membership decisions had been made in closed Executive Committee session, so he thought that the best course would be directly at the problem.

Dr. Brown felt that the credibility of process could be improved by having a more inclusive membership. Dr. Hart welcome constructive participation.

The SSAP agreed that additional expertise needed and that SMAST should be represented, coordination with other surveys, multiple survey technologies are needed. Mr. Gallager thought the SSAP could benefit from the addition of Vince Guida at Sandy Hook for habitat/ecosystem processes. Mr. Gallager suggested that the panel could generate a list of experts to access for specific subjects, for example something related to benthic habitat ecology.

Discuss siting of meetings and teleconference capabilities.

2008 Survey Plans

The immediate survey plans were in part a key achievement of the previous advisory process, explained Dr. Brown. It allowed for an implementation of changes and the importance of taking critical look at differences between old and new survey gear. Hands on workshops were conducted. The basic dredge frame has been maintained. Most of the focus was on the hanging and configuration of the chain bag. RSA projects focused on dredge testing and calibration.

The 2008 survey to be conducted on the RV Sharp, a Univ. Delaware survey vessel. There will probably be no opportunity to get a direct calibration between Albatross and new survey vessel, however. Instead, 84 stations in closed areas will be reoccupied in the 2008 survey, shadow surveys by Mr. Smolowitz and Dr. DuPaul using current survey dredge and new survey dredge which reoccupied the Albatross survey in 2007. The Center would like to use the same commercial vessels this year to shadow and reoccupy stations on the 2008 survey. The other part of the calibration analysis would be the Habcam comparisons on Albatross survey stations as an absolute estimate of abundance – an effort that should be continued on the 2008 Sharp survey.

Survey dredge design and reconfiguration

Dr. Brown summarized the prototype survey dredge modifications, which included:

- Attachment of a wheel on the bail of the dredge
- Hanging brackets to attach turtle chains
- Rehanging and reconfiguration of the bag and twine top
- An angled plate to attach bail extension
- A new inclinometer bracket mounted on bail
- A shortened of the 5/8" chain sweep with 1/4" hanging chains
- Extensions to skirt were widened, replacing the 3" hanging rings which elongated during a survey, and
- Addition of 14x14" turtle chains using 3/8" chain.

Features that were not modified included: heel shoes and wearing pads, basic design, and the pressure plate

Using RSA funding, gear testing was conducted. There were five comparisons, 55 tows on RV Celtic. In addition there were liner/no liner comparisons on 24 tows at various speeds during Oct 2007.

This year, NMFS has scheduled 36 days-at-sea to conduct the 2008 survey, two 18-day legs on Univ. Delaware RV Sharp.

Russ: Gradual evolution of dredge survey from primary sampling device to a ground truthing mechanism for collecting biological samples, making calibration less important

Consensus on new survey dredge to be deployed on RV Sharp in 2008 survey

The SSAP reached a consensus on the following issues, to be implemented for the 2008 survey:

- Dredge: New configuration is more reliable
- Wheel: Considered revised wheel position to raise bridle, effecting a more consistent position and fewer hang-ups – good to obtain new inclinometer data with new wheel position – no decision at this time, but NMFS will move the wheel to an alternate position if the data are suggest that there is an improvement
- Speed: 3.8 knots (status quo)
- Scope: 3:1 ratio (status quo)
- Direction of tow: Adjusted to maintain constant depth, thereby reducing the variation of scope during a tow. The previous protocol was to tow toward the next station, regardless of changes in depth and scope.
- Tow duration

Discussion of 10 vs. 15 minute tows

Some thought that a shorter tow duration would allow more tows during a survey cruise and reduce the amount of time needed to process and measure the catch, particularly now that the scallop resource has been rebuilt. Others thought that a greater proportion of the 10-minute tow may be a time of instability. In closed areas having high abundance, a 10 minute tow might be sufficient and allow efficient processing of catch. One suggestion was to use 10-minute tows in closed areas, but changing closed area boundaries would compromise comparability between years.

The SSAP consensus was to pursue more analysis of tow time by deriving information about optimum tow length based on Habcam data. Mr. Gallager thought that a 10-minute tow seems sufficient over the patch scale that has been observed on continuous sampling surveys (Habcam), but that it would be worthwhile to do a more detailed analysis.

It was noted that the RV Sharp has lighter wire, which could effect dredge performance, but will be part of the calibration. Because of the lighter wire, previous scope/speed experiments may not apply to the new vessel. With a lighter wire, a higher scope ratio may improve performance by keeping the survey dredge on the bottom.

RSA funding process and timing

Particularly for survey projects, the SSAP agreed that timing is critical to getting optimum results. The delay in getting out the RFP for the 2008 year was getting to be a threat to the plans to conduct survey calibrations using commercial vessels and RSA funds. Some work could be done on a pre-award basis, but the proposal would have to be approved before that could happen. Concern was expressed about the length of the review process. Questions were raised about how priorities are interpreted by the review committees, how the reviews are conducted, and who does the reviews. Mr. Applegate explained that the Council considers the management priorities as part of its framework adjustment process, and these priorities are used in evaluating the

proposals. He thought that the SSAP could have a role in suggesting research needs related to conducting surveys.

There was also concern about important areas of scallop research that had not been funded, particularly if there were RSA funds not being allotted. These needs included research on:

- Turtle bycatch and mortality
- Scallop mortality
- Predation on scallops
- Finfish bycatch reduction

Future development and integration of video technology into the regular annual survey

Dr. Brown discussed taking a broader approach to estimating scallop abundance and biomass. There is a NMFS buy-in from Center and Agency leadership to investigate new methodology. A working group had been formed to evaluate an ecosystem/benthic survey that also samples scallop abundance. There are also commitments from Center to partner with OAR in NOAA, requirements document that describes needs and protocols – Acoustics, research planning, environmental processes, survey groups participating. There may be some funding in 2009 agency budget for developmental survey work, Dr. Brown reported.

Mr. Gallager added that there is a new initiative called CAMEO to combine with IOS long term ecosystem monitoring data. He explained that the Habcam process records about 85% of observable scallops in optimum areas like Georges Bank, but less in other areas, for example where conditions are silty. Dr. Hart suggested development a protocol to manually validate images by human eye to calibrate automatic detection. Planned stereoimaging might improve scallop detection and measurement.

In a more integrated survey approach, Dr. Hart thought that the acoustic information could inform dredge sampling program of where and how frequently to sample various bottom types, combining the results from other survey technology to measure scallop biomass.

Dr. Brown thought that ecosystem surveys are becoming more easy to sell than single species surveys, so the scallop survey needs to be improved to collect more information about the benthos. Different technologies offer different advantages at various scales, so integration of survey types is needed.

Mr. Taylor suggested that the first cut should be to define the sampling products, list them and then prioritize them.

Peter Hughes disagreed and felt that a single species scallop survey would be needed, rather than a broad scale benthic survey, whether it is done by NMFS, a research organization, or by industry itself. Dr. Hart replied that there are pros and cons associated with using industry vs. research vessels for surveys, probably should be discussed at a future meeting.

Expansion of state surveys into unsurveyed areas

Maine has conducted an annual survey in their state waters, but federal waters in the Gulf of Maine have not been surveyed since 1983. The Northern Gulf of Maine management area will be managed by a hard TAC – and therefore needs to be surveyed. SMAST is preparing a proposal to survey Gulf of Maine and state waters, in coordination with the Maine dredge survey. Most of scallops are in relatively shallow areas, may not need to survey deep areas to estimate TAC.

The panel suggested a surveying a coarse grid to determine where to adaptively sample areas more frequently in the higher density areas, reducing variance with a minimum of samples. The panel thought this would be a good approach to estimate northern area TACs, and wanted ensure that the discussion [between SMAST and Maine] continues.

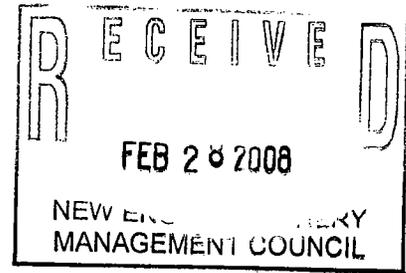
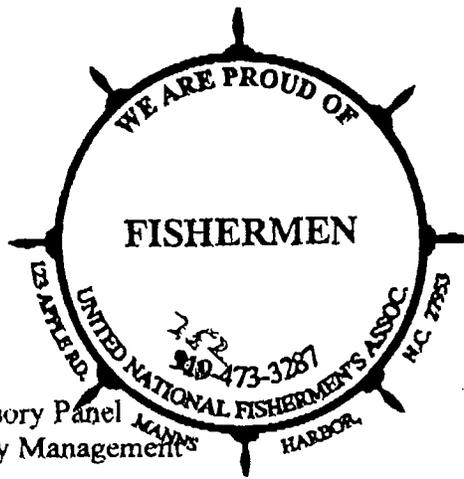
Letter from Mr. Fletcher

The SSAP discussed the issues in Mr. Fletcher's letter. Some of the NMFS staff would respond to the issues. In general, the SSAP felt that abundance of predators like starfish was an important issue, and data on this had been collected since 2000. It was generally felt that although the RV Albatross pulls the gear from directly astern, prop wash was not a significant factor in what was being caught by the survey dredge, particularly since a liner was in use. It was felt that a toothed dredge would not be appropriate, since tooth dredges are used for scallops that had much different morphology and bottom profile. The SSAP thought that it would be a good idea to provide teleconferencing whenever possible, because many SSAP members would otherwise come from great distance. In general Internet broadcasting was not supportable at this time, but it might be explored.

Future meetings and format

The next level of SSAP discussions should be with strawman documents. RSA project coordination is needed, either within the panel process or with an outside process. The SSAP thought that the next meeting should occur in May, shortly before the annual scallop survey commences.

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Sea Scallop Survey Advisory Panel
 C/O New England Fishery Management
 50 Water St
 Newburyport MA. 01950
 Fax 978-465 3116

Dear Panel,

Concerns:

Scallop Survey historically does not referenced starfish abundance in exact numbers per area towed; converting to starfish per mile or a ratio of scallop to starfish in area specific locations.

Starfish size comparison to number of small scallops vs. large starfish & scallops size / abundance should to be incorporated into survey results.

The dredge gear will operate differently if used on the R/V Bigellow thus the closer towing points to the propeller will make propeller washing small scallops out of the dredge an issue of discussion.

The Highly skewed fixed pitch propeller and closer towing points of R/V Bigellow necessitate prop wash be discussed for future surveys.

A discussion relating to setting of variable pitch propeller of the Albatross propeller affecting past surveys is worthy of discussion.

The possibility of prop wash from propeller settings affecting abundance estimates has always been a concern. Evidence exist indicating the scallop stock bio-mass has been underestimated due to propeller setting and "prop wash." (different vortex in water flow created by the propeller at different pitch setting & speed).

The new dredge should be a spring toothed scallop dredge from Japan. With greater catch efficiency if utilized it would show a historic under estimation of the scallop bio-mass by historic surveys when compared to the dredge presently utilized.

Please address as many of my concerns as possible.

I request that the meeting be on the internet in real time.

Thank You,

James Fleicher 02-28-08

CC: AJA 1/2/28/08