



**New England Fishery Management Council  
Habitat/MPA/Ecosystems Oversight Committee  
Meeting Summary**

**April 23, 2009  
Portsmouth, NH**

**Committee members:** Mr. David Preble (chair), Mr. Lou Chiarella, Mr. Jim Fair, Mr. Dave Goethel, Mr. Doug Grout, Mr. Gene Kray

**Council staff:** Mr. Chad Demarest (PDT chair), Ms. Michelle Bachman

**NMFS staff:** Dr. David Stevenson

**Others:** Approximately 8-10 additional audience members

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The Habitat/MPA/Ecosystems Committee met in Portsmouth, NH on April 23, 2009 to discuss the March 18, 2009 SSC review of the Phase II modeling approach, review preliminary model outputs, review PDT progress on integrating geological and biological habitat components, examine the updated Phase II timeline, and discuss any new information about non-fishing consultations.

**Science and Statistical Committee review**

The meeting began promptly at 9:30 a.m. The first order of business was to discuss the SSC's March 18 review of the Phase II modeling approach (results of the review were presented to the Council on April 14). The Committee reviewed the SSC memos to the Council and the PDT, and the PDT chair summarized the team's responses to the SSC's comments (see also the March 26-27 PDT meeting summary).

Briefly, the SSC found that:

- Phase II was broadly consistent with Phase I
- The methodology may not be broadly appropriate for evaluating non fishing impacts, in particular because recovery from these types of impacts will vary
- The literature review is adequate
- The matrix-based vulnerability assessment is an appropriate approach, but that geological and biological components must both be included
- The spatial analysis approach is appropriate
- There should be a more formal approach to generating sensitivity scores based on susceptibility and recovery

- Higher spatial resolution of fishing effort would be helpful
- We are at a point where separate geological and biological matrices will be required but at some point they should be more closely integrated

Overall, the Committee Chair was pleased with the SSC's comments. The PDT Chair reviewed these comments, point by point, as outlined in the memo from the SSC to the Council (Document 2, see also Document 3).

One comment on the literature review was that the non-fishing impacts literature could be used to inform recovery rates. This literature will be incorporated into the feature descriptions themselves, as necessary; these feature descriptions will be used when evaluating matrices. The SSC noted that biological components will need to be addressed before the model can be used to inform management. This integration was not well developed at the time of the SSC review, but the PDT is moving forward aggressively on the issue presently. There were few recommendations on the SASI model, which is used to estimate contact-adjusted area swept. The PDT Chair emphasized the SSC's call for sensitivity testing. Although the tool is essentially qualitative, the Council will want to understand potential sources of error and bias, and the degree of variability in the data if the tool is to be informative for management decisions. Generally, the published literature will be used to inform parameter estimates, and these assumptions will be tested with empirical or modeled data wherever possible. One example of sensitivity testing is using observed sand ripples from the SMAST video survey to evaluate the depth criteria used in determining high and low energy spatially within the model.

A few issues were raised specific to the spatial model. First was the use of trawl survey hangs to represent boulder-dominated seabed. One solution might be to have boulders as a geological feature in another substrate-dominated environment. The issue of combining disparate data sources in averaged spatial cells (i.e. when multiple smaller than 3 km<sup>2</sup> were combined) is currently being investigated; using the modal substrate may be a better approach.

#### *Committee discussion*

Two committee members noted that fishermen's hang data from state trawl survey databases might be useful, but another emphasized that hangs are hard bottom are not equivalent. Another committee member suggested a percentage approach for cells that need to be averaged together, and a second agreed that the current averaging approach is problematic. Another committee member highlighted the SSC's suggestion to use analytical hierarchy approaches to improve the repeatability and transparency of assigning susceptibility and recovery scores. The PDT Chair stated that these approaches might be more appropriately used at the sensitivity testing stage, and that use of such procedures at the matrix stage would be extremely time-consuming. In general, the matrix-based vulnerability assessment, and in many ways the Phase II modeling on the whole, is qualitative. While numeric results might not be exactly replicated by a different group of analysts, broad trends should be repeatable. Also, the PDT's intends to use consensus values for the matrices, as opposed to the average values currently found in the document.

A committee member raised the issue of how gear buoyancy and hydrodynamics are incorporated in the analysis. The PDT Chair emphasized that SASI is based on linear effective width and that hydrodynamic issues are not explicitly incorporated. Another Committee member pointed out that the gear impacts literature is based on the results of real gear's actions on the seabed, and that these gears likely have typical hydrodynamic properties. To that end, hydrodynamic forces and gear weights are implicitly incorporated into the gear-specific matrix cell values. A suggestion was made to refer explicitly to these issues in the document. The Committee Chair reiterated that the purpose of the tool is to aid decision making and direct research efforts, and that new funding for gear research should address these types of issues.

Another issue was raised regarding the averaging of disparate trawl footrope types into one generic otter trawl category. While staff acknowledged that this was a significant issue, much of the fishing effort data does not specify footrope type, and although this information is available in the observer data, estimating the relationship between observed trips and total effort is difficult.

Another point was raised about the assumptions of the model related to additive effects of multiple passes. Staff noted that the model assumes linearity; staff and the committee agreed that these assumptions should be more explicitly stated. There is some literature on this topic that should be more formally investigated and discussed in the document; some analysis of the frequency of tow overlap can be done using the VMS data. The PDT Chair noted that the NPFMC PDT assumed a functional form for multiple passes and impact during their habitat analyses, and that their SSC did not approve that approach for use in management due to insufficient empirical data on which to test such an assumption.

#### *Audience discussion*

Ron Smolowitz (Fisheries Survival Fund) noted his concern that enough time was not being allocated towards developing alternatives, and that the Committee should consider what alternatives could be evaluated using the model. Drew Mienkiewitch (Fisheries Survival Fund) noted his opinion that the SSC's concerns about repeatability seemed to be understated – in other words, science should be repeatable. Mr. Smolowitz felt that the assumption that gear impacts vary by energy ignored seasonal effects.

Next, the PDT Chair raised the issue of the low spatial resolution of VTR data, meaning that maps of area swept closely resemble maps of the statistical areas. He pointed out that some of the papers prepared for GARM III suggested that even binning by statistical areas is perhaps inaccurate at the individual trip level. Also, the SSC's comments regarding the veracity of the functional relationship relating  $S$ ,  $R$ , and  $S_e$  were also raised.

#### *Committee discussion*

The committee acknowledged the major discrepancy between VTR and VMS, and noted that this should be discussed in the text.

The combination of S and R into one Se score is a lynchpin issue – S and R must be able to be combined into one Se to apply the information to the spatial analysis. Moving forward, the PDT will examine ecological theory and figure out which curves are best to use to determine if there is support for the use of one curve over another.

One committee member argued that S and R scores are somewhat subjective and asked if we should acknowledge in the document that we are subjectively assigning scores and then combining them? Staff agreed, acknowledging that this is exactly what we are doing. In particular, in taking the step from contact-adjusted to sensitivity-adjusted area swept, we are essentially moving from math to ordinal ranks. Another committee member was concerned that there are various combinations of S and R that produce the same Se value, and questioned if this was valid, ecologically speaking. He wondered if, moving to the right in the Se matrix, if Se should always increase (in other words, regardless of S, if R is greater should the Se value be greater, or, the highest Se value in one column should be lower than the lowest Se in the next column). Does theory support that recovery is truly the deciding factor?

The incorporation of prey was discussed briefly. The PDT Chair wondered if there was any evidence to suggest that benthic prey were limiting for any managed species. A PDT member noted that incorporating prey could be done using a similar framework to the one being developed for incorporating biology. A committee member noted that he viewed the prey component as important; but another stated that he felt that since benthic structures could be used by prey species or by managed species, that the analysis might be adequate, as-is.

#### *Audience discussion*

Maggie Raymond (Associated Fisheries of Maine) noted in regard to fishing effort and statistical areas that she had been surprised at the low number of vessels reported to have fished in more than one statistical area on a single trip (based on analyses of VMS data completed for the multispecies plan). The PDT Chair acknowledged that this was true, but that this number was not likely to be as low as the VTR data would suggest (i.e. 2%).

Finally, the Committee discussed the options for a second SSC review. If the SSC calendar is full in the near term, two other options may be considered: an independent review, or a review by a subset of the SSC. Given the time required to educate another panel on the approach, the Committee noted that the second option is preferable.

#### **Presentation - preliminary model results**

The PDT Chair presented some updated preliminary model results (Document 8). In response to a committee member's question, he stated that the PDT's intention was to have the fixed gears analysis completed in time for the SSC review in early fall. Ongoing work includes the influence on sensitivity-adjusted area swept of changing the depth threshold component of high/low energy classification, as well as a comparison between vessel trip report and vessel monitoring system data, in terms of both the numerical and spatial representations of area swept.

*Committee discussion*

A committee member noted that it may be better to exclude the year-round closure areas from the statistical areas across which VTR-based fishing effort is averaged. Staff agreed, and will make the change.

**Presentation – geological and biological integration**

Staff presented the PDT's efforts towards integrating geological and biological habitat components in the Vulnerability Assessment and Spatial Model (Document 9). Briefly, this approach will include a series of combined geological and biological matrices specific to sediment, energy environment, and gear type. Only the geological and biological features that occur in a particular substrate/energy environment will be evaluated in each matrix. In addition, the relative abundance of features will be estimated (regionally, if necessary) so that the sensitivity scores resulting from these matrices can be combined into a single sensitivity scaler for each spatial model cell.

*Committee discussion*

One committee member noted that the presence of biological features is highly correlated with depth, and wondered how this would be incorporated into that analysis. Staff noted that this is addressed in various ways: first, the features are general, such that although the actual species will differ by depth, the presence or absence at the feature level may be less variable with depth. The use of depth criteria for assigning high/low energy allows for two levels of depth-related variation. Finally, regional relative abundance tables may be able to effectively incorporate a substantial portion of this variation. A Committee member questioned how seasonal and latitudinal variation would be accounted for, and staff stated that latitudinal variation will most likely be addressed via the regional relative feature abundance tables. Seasonal aspects are to be addressed by the recovery scores, in that the shortest recovery time period is less than one year. Thus, any species that has an annual cycle, and as a result is likely to recover from disturbance within a single year, would be considered to have fast recovery. Another Committee member questioned why the various biological features are at different taxonomic levels (e.g. phylum vs. order vs. class). Staff responded that some phyla (e.g. cnidarians) are highly variable and that features were grouped at the highest level at which susceptibility and recovery values were expected to be fairly homogenous, noting that the feature descriptions are currently being refined, and the groupings may change slightly as the analysis moves forward.

### **Timeline for completion of Phase II**

Next, the Committee reviewed the timeline for completion of Phase II (Document 6).

#### *Committee discussion*

A committee member asked how long the biological and prey integration could be expected to take. Another expressed his concern about rushing through the process, especially given the upcoming changes in staffing. The issue of coordination with other FMPs was raised - the longer this Omnibus goes, the harder it is to justify deferring other FMPs impacts analyses to the Omnibus. One particular issue raised was coordination with the upcoming Scallop amendment. Staff pointed out that the scallop amendment will need to address Closed Area I habitat closure boundaries only, and that the analyses associated with this issue should be somewhat discrete.

This issue of the completion of the Phase I DEIS was also raised: there was an unmet April 6 deadline for completion of the Phase I maps. Staff estimated that this work would take approximately one month but work at the Science Center had likely not yet begun.

#### *Audience discussion*

Mr. Smolowitz noted that a Phase I EIS independent of Phase II is makes little sense.

In terms of integrating model and management alternatives development, there was consensus that alternatives should not be developed until the model is finalized, or at least nearly so. A schedule for moving forward was offered by the PDT Chair. After a short recess, the Committee approved the following motion:

#### **Motion 1 –**

**Mr. Stockwell moved and Mr. Grout seconded that the Committee recommend that the Plan Development Team complete development of the Phase II model in as short a time period as possible and that the Committee reviews the completed model before it is submitted to the Science and Statistical Committee for their final review. The anticipated timeline is for the Committee to meet in August, and the SSC in October. At the August meeting, the Committee will also begin preliminary development of alternatives to minimize the adverse effects of fishing on habitat to the extent practicable. 5/0/0**

A Committee member noted that when and how the Advisory Panel should participate should be discussed further. Another Committee member asked for some legal advice regarding the Phase I FEIS, and questioned how the work will be completed.

### **Other business**

Lou Chiarella summarized the winter flounder egg EFH issue that arose at the PDT meeting on 26-27 March (see Document 4 for additional information). At that meeting, the US Army Corps of Engineers presented some data to the PDT that indicated that the bulk of winter flounder eggs in New York Harbor are in shallow waters (i.e. < 5 m). Other interesting aspects of their presentation included increased flow in shallower areas due to the presence of channels, and the generally irregular winter flounder recruitment observed over their time series.

The Phase I EFH designations changed the maximum depth of winter flounder egg EFH from 5 to 20 m. The ACOE interest in this issue stems from the fact that increasing the depth of winter flounder egg EFH could potentially influence their ability to conduct dredging operations. NERO staff are also concerned about the depth increase; their concern is that if the depth of EFH were increased, this would allow a number of projects to move forward that would dredge shallow (<5 m) habitats, because even after dredging these habitats would remain shallower than 20 m and thus within the EFH depth range, in spite of the habitat alteration caused by dredging operations. Following the ACOE presentation, the PDT asked for egg density and depth relationships to be analyzed.

The PDT Chair reported on a meeting with a Special Agent from the US Dept. of Interior's Office of Inspector General overseeing a Congressionally-requested review of the Cape Wind EIS. He noted the thoroughness and professionalism with which this review was being conducted. One new piece of information of particular interest was the use of large mobile repair rigs anchored to the bottom with four vertical "legs" to be used for routine maintenance of the turbines –these could potentially have a large impact on fish habitat and these impacts were not addressed in the EIS. There was consensus among the Committee that this and other energy siting issues will be ongoing. A Committee member requested that staff complete the draft template letter, requested at the January 15 Committee Meeting, that can be forwarded to any/all such project proponents and regulating agencies detailing the potential aspects of offshore energy generating facilities/projects that may have an adverse impact on essential fish habitat, fishing grounds and fishermen.