

## **8.0 HABITAT**

All relevant habitat-related information appropriate for this SAFE report is incorporated by reference to the Essential Fish Habitat (EFH) Technical Team's Habitat Annual Review Report for 1999. Each year, during the annual development cycle for the Council's SAFE reports, a single habitat report will be developed by the Council's EFH Technical Team. The habitat report includes newly available habitat-related information as well as options, where appropriate, for modifying Council EFH and habitat area of particular concern designations and for measures to reduce any adverse impacts to habitat associated with fishing activity. This report is presented to the Council's Habitat Committee for review and the Habitat Committee develops and presents recommendations to the full Council based on the information and analyses in the annual habitat report.

The newly available information related to the habitat of species managed by the Council varies from year to year. Therefore, there may not be specific information related to all Council-managed species in each report. In 1999, the annual habitat report focused on Atlantic cod and a general discussion of how to address habitat following submission of the initial EFH amendment last fall. This year's report does, however, provide an overview of the Council's habitat management process and summarizes current habitat-related research projects, including several focused on scallop habitat as well as the effects of scallop gear. In future years, the annual habitat reports will focus on other Council-managed species, including sea scallops, to the extent that new information becomes available. These future reports may include information that leads to the modification of the sea scallop EFH designation, the designation of sea scallop habitat area(s) of particular concern, or options to protect sea scallop habitat from any adverse impacts associated with fishing activities.

## **9.0 INDUSTRY OBSERVATIONS AND RECOMMENDATIONS**

See Appendix I.

## **10.0 DATA AND RESEARCH NEEDS**

### ***10.1 Biological***

A series of research needs and recommendations are given in the benchmark assessment, conducted by the Stock Assessment Review Committee (NEFSC 1999b). In addition to these issues raised by the SARC, an improved assessment model is needed using more than two cohorts to assess the population. In addition to better estimating fishing mortality and biomass, a better assessment model could provide the information necessary to estimate MSY directly, rather than rely on proxy values from yield-per-recruit parameters. Improvements might also be possible with a more spatially-explicit model that accounts for regional differences in the time of settlement and variations in growth.

Another problem that should be addressed by additional research is estimation of commercial and survey dredge efficiency over a wide range of bottom types and conditions. Swept-area biomass and catch projections were dependent on an estimate of dredge efficiency only in Closed Area II during 1998.

If dredge efficiency is higher elsewhere, then the estimates provided in this document are higher than the true values, and vice versa.

The research survey was not designed to estimate scallop biomass or density on small areas that the Council may consider to close for rebuilding or allow access once rebuilt. Although NMFS conducts a considerable number of scallop tows during the research survey, sampling variability is high and the sampling frequency is insufficient to estimate abundance in relatively small areas, like the VA/NC Closed Area. One exceptional (and possibly anomalous) tow can inflate the mean weight per tow in a stratum, giving a mis-leading estimate in a small area. For larger areas, especially for the entire stock, these errors balance out and the survey gives a relatively robust estimate of changes in abundance and biomass at size. To enhance the survey capabilities and allow a more complex area management system, more detailed surveys with known sampling characteristics are needed.

A final problem is the timing of the annual framework adjustment and when analyses of the management effects in the current year are needed. As a result of this mis-match, it is currently impossible to use the current year research survey to give management advice. It may be possible to incorporate gross estimates from the survey in the impact analyses performed for the final framework adjustment document, but shifting the fishing year back some months will allow time to collect and analyze data, develop management options, and analyze their impacts before adopting management changes for the next fishing year. Shifting the fishing year back so the beginning coincides with the research survey in late July and August would also greatly simplify the analysis of fisheries data.

## **10.2 Economic**

Preparation of the 1999 Scallop SAFE Report revealed areas in need of economic data and research. In particular, methods used to estimate dockside demand models need to be reviewed, taking into account the proper way to specify imports and meat count given current market and management regimes. Dockside demand models are used to predict prices and estimate net benefits.

A second area needing research is the processing, marketing and distribution of domestic landings and scallop imports. The last study of this kind was done over 20 years ago. This research would support demand estimation and make it possible to evaluate the impacts of scallop fishery regulations on the seafood sector of the economy and on consumers.

## **10.3 Social**

Fishermen, captain, owner surveys are needed to develop baseline social-cultural data for future assessments of social impacts.

## **10.4 Data collection**

In addition to specific scientific needs, some progress could be made by fine-tuning the current data collection systems:

- Improve the vessel trip report system to make it more timely and usable. One improvement would be to require dealers to give vessel captains a landings or “trip-ticket” number and require vessel captains to include that number on the VTR submission.

- Another possibility is to require the reporting of a call-in number or VTS date sailed + permit number as an entry on logbooks and dealer forms for the trip. This process would allow better data matching for analysis of future management actions.

## 11.0 PDT CONTRIBUTIONS AND PARTICIPATION

Significant contributions to this document were made by Paul Rago, Dvora Hart, Steve Edwards, and Julie Olsen of the Northeast Fisheries Science Center in Woods Hole, MA; Steve Correia of the MA Division of Marine Fisheries; Stan Wang of the Northeast Regional Office in Gloucester, MA Robert Higgins, USCG in Boston, MA; Andrew Applegate and Demet Haksever from the New England Fishery Management Council in Saugus, MA. In addition to these contributions, many others provided valuable comment and advise during and in between PDT meetings.

The following table is a list of the PDT meetings that were dedicated to developing this report. Included is a list of PDT attendance at those meetings. In addition to these people, others from the Council and Industry attended and freely offered their advice.

<b>June 21-22, 2000</b>	<b>July 24-25, 2000</b>	<b>August 15, 2000</b>	<b>August 28, 1999</b>
Andy Applegate	Andy Applegate	Andy Applegate	Andy Applegate
Steve Correia	Steve Correia	Peter Christopher	Steve Correia
Steve Edwards	William DuPaul	William DuPaul	William DuPaul
Dvora Hart	Steve Edwards	Steve Edwards	Dvora Hart
Demet Haksever	Demet Haksever	Paul Rago	Demet Haksever
Paul Rago	Dvora Hart	Robert Higgins	Paul Rago
Kevin Stokesbury	Peter Christopher	Julie Olsen	Stanley Wang
Stanley Wang	Kevin Stokesbury		

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## **13.0 APPENDIX I: Management Proposals from Industry and Other Proposals for Management Measures in the 2000 Fishing Year**