



OCT 28 2005

MEMORANDUM FOR: Nancy Thompson
 Director, Southeast Fisheries Science Center

FROM: *John H. Dunnigan*
 John H. Dunnigan
 Director, Office of Sustainable Fisheries

SUBJECT: Management Needs for Upcoming Large Coastal Shark (LCS)
 Stock Assessment

Thank you for conducting a large coastal shark (LCS) stock assessment in 2005/2006. The Office of Sustainable Fisheries (SF) appreciates the work and dedication of the Southeast Fisheries Science Center (SEFSC) staff with regard to sharks. Per the request of SEFSC staff, SF is providing this memo to outline the SF's needs in order to use fully the results of the stock assessment to manage the LCS fishery.

1. In the 2002 stock assessment, the SEFSC determined that LCS "may" be overfished and that overfishing "may" be occurring. SF requests that the stock assessment report explicitly include the stock status determination relative to the threshold criteria provided on pages 3-3 through 3-15 of the 1999 Fishery Management Plan (FMP) for Atlantic Tunas, Swordfish, and Sharks. SF can provide copies of those criteria if needed.
2. SF would also like the stock assessment to include final estimates of maximum sustainable yield (MSY), F_{MSY} , B_{MSY} , $F_{current}$, $B_{current}$, and other threshold points, as appropriate.
3. In the 2003 Amendment to the FMP, SF established a rebuilding timeframe for LCS. As such, SF requests that all model projections determine the probability of rebuilding LCS by the year 2030, which is the end of the rebuilding timeframe. Such projections should consider catch strategies such as harvest (including commercial landings, dead discards, and recreational harvest) remaining the same, increasing, or decreasing. Under the 1999 FMP, NMFS is required to take action to ensure a greater than 70 percent probability of rebuilding within the rebuilding timeframe.
4. The 2003 Amendment to the FMP established a method of calculating the commercial quota based on the estimate of MSY (or percent of MSY that would allow LCS to rebuild within the rebuilding timeframe) and the percent mortality by commercial landings, dead discards, and recreational harvest. To ensure that SF can calculate the appropriate commercial quota based on the stock assessment, SF will require, at a minimum, the estimates of MSY, reduction of harvest needed to reach MSY (if appropriate), commercial landings, dead discards, and recreational harvest. Landings and harvest need to be provided in both weight and numbers.
5. Previous stock assessments have included assessments of sandbar shark, blacktip shark, and the entire LCS complex. SF would like those three assessments to continue. As time allows, SF would also like the workshop participants to consider one additional assessment of the LCS complex without dusky (assessment to be released later this year), sandbar, blacktip, and prohibited sharks. This approach would allow workshop participants and/or managers to determine/consider the status of other LCS without the confounding effects of species where the status is known or species that are not authorized to be caught. This may provide a greater indication of which species are

driving the status of LCS. It may also provide a method of addressing the concerns of the 2002 peer reviewers (i.e., inference by subtraction) or determine if such concern is warranted.

6. Except for the 2002 stock assessment, previous stock assessments included information regarding the significance of catch-per-unit effort (CPUE) trend series for each species or species group. SF finds these series useful for management and, if such trend information is available, would like the final stock assessment to include these types of trend series to the stock assessment.
7. Five species have been prohibited since 1997 and an additional 14 have been prohibited since 1999. SF would like the SEFSC, where appropriate, to provide any available information regarding the status of these species or harvest data. This information could take many different forms including: if the species is landed, where they are landed and who (e.g., state or Federal fishermen, incidental or directed permit holders) lands them; CPUE trends, if available; or separate stock assessment model runs, if time permits.
8. While this is not a management requirement, SF would like the SEFSC staff to review the peer reviews of the 2002 stock assessment and consider including some of their recommendations. Some of their recommendations include, but are not limited to:
 - a. Continued investigation of age and age/sex/area models;
 - b. Investigation of alternative harvest policies in contrast to a constant catch policy;
 - c. Fully describing each model used including all data variables, model parameters, objective functions, and equations;
 - d. Continue to include sensitivity trials;
 - e. Consider retrospective analyses where one year of data is left out to explore the stability of the model; and
 - f. Continue to explore the impact of open and closed populations.

SF is aware that the SEFSC is conducting the LCS stock assessment in a manner similar to the Southeast Data, Assessment, and Review (SEDAR) process. As such, the SEFSC will not have complete control over what participants at the data and assessment workshops decide to include in the stock assessment. However, the above items are critical to proper management of LCS and NMFS' goal of sustainable fisheries. As such, SF requests the SEFSC to ensure that the participants of the workshops are aware of these needs and include them in their final reports. SF staff will be available to answer any questions that arise as a result.

CC: Gerry Scott, Enric Cortes, Julie Neer, Margo Schulze-Haugen