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New England Fishery Management Council
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To: Tom Nies, Executive Director
From: Scientific and Statistical Committee
Date: August 29, 2016

Subject: Review of red crab interim acceptable biological catch (ABC) control rule and development of 2017-2019 Overfishing level (OFL) and acceptable biological catch (ABC) recommendations.

The SSC met on August 10, 2016 in Boston, Massachusetts, to address the following terms of reference (TORs):

1) Review red crab landings, discard and discard data and analyses provided by the Red Crab Plan Development Team (PDT).
2) Review interim acceptable biological catch (ABC) control rule for and develop ABC recommendations for fishing years 2017-2019.

To address these TORs, the SSC considered the following information:

C.1 Red Crab Presentation - SSC Meeting August 10, 2016
C.2 Red Crab PDT Memo to SSC Chair - July 21, 2016
C.3 Red Crab Landings and Discard Estimates - August 10, 2016
C.4 Application of risk policy implementation for red cab specifications - PDT Memo to SSC Chair – July 21, 2016
C.5 SSC Report – Red Crab September 2013 - Memo from the SSC to the Paul Howard re Review of red crab interim acceptable biological catch (ABC) control rule and development of 2014-2016 ABC recommendations
C.6 PDT Meeting Summary - July 21, 2016

Since implementation of the ACL framework, catch advice for the Atlantic red crab fishery has been based on a data-limited approach using the depletion-adjusted average catch (DCAC) method. Available fishery-independent surveys suggest that depletion of the red crab stock has been minimal, so the DCAC outcome is simply the time series average landings. DCAC does not allow estimation of reference points needed to calculate OFL, but information provided in the past by the PDT led the SSC to conclude that DCAC is likely below OFL.

Updated information provided by the PDT shows that the fishery continues to be relatively data-poor, but that the available indicators suggest biological and economic stability. Furthermore, the risk policy matrix and supporting information illustrate that risk factors associated with the fishery (small fleet size, geographic isolation from other fisheries, etc.) do not suggest cause for concern. Therefore, the SSC does not recommend a change at present in the approach to developing catch advice. Consequently, OFL for the stock remains unknown, and ABC should not exceed 1,775 mt.

Industry representative Jon Williams noted that the fleet has made multiple investments in research and monitoring, and that the incentive to continue those investments would be greater if the outcomes could be formally incorporated into management. For example, surplus-production models of red crab have been developed but are not yet considered ready for providing catch advice. A potential advantage of this approach is that production models can provide MSY-based reference points. Similarly, the SSC sees potential to incorporate other information (e.g., CPUE, mean size or size frequency, etc.) into a refined control rule. The upcoming five-year review of Council research priorities presents an opportunity to more formally evaluate approaches to developing catch advice that incorporate additional information, and the SSC suggests that this be considered as a potential research priority.

Summary of recommendations

1. **The DCAC-based approach to developing catch advice for the Atlantic red crab fishery should remain in place at present. OFL remains unknown and ABC should not exceed 1,775 mt for fishing years 2017-2019.**
2. **Additional information, including the outcomes of industry-funded research, could potentially be incorporated into a revised control rule. New approaches should be evaluated, perhaps as a Council research priority.**