



New England Fishery Management Council

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MEETING SUMMARY

Atlantic Deep-Sea Red Crab PDT Webinar

July 1, 2016 at 9:30

MEETING ATTENDANCE: Jessica Joyce (Chair), Toni Chute (NEFSC), Barbara Rountree (NEFSC), Allison Murphy (GARFO), and Danielle Palmer (GARFO). Council Staff Chris Kellogg and Michelle Bachman participated as well as one member of the public.

KEY OUTCOMES:

- The PDT reviewed and discussed updated red crab fishery data and other relevant data and regulations since 2013.
- The PDT planned the preparation of materials for the August SSC and September Council meetings.

AGENDA ITEM #1: Review of 2013 Specifications

Following an introduction of the PDT members, the Chair, and Council staff, Chris Kellogg provided an overview of the 2013 specifications process and some current information on the fishery:

- Red Crab is a data-poor fishery, and we have had insufficient information to estimate the Over Fishing Limit (OFL) or Maximum Sustainable Yield (MSY).
- Since 2011, the Acceptable Biological Catch (ABC) has been estimated based on long-term historical landings of males.
 - This ABC has been 1,775 metric tons (mt)
- For the new specifications, the PDT's role is to characterize the status of the fishery and any trends, and the SSC will make the decision on the ABC.
- Chris spoke with Jon Williams, and he mentioned the fishery might land all of the quota this fishing year (March 1, 2016 – February 28, 2017). This indicates market conditions may not have been as constraining as in the past.

AGENDA ITEM #2: Analysis of New Fishery-Dependent Information for Red Crab

Toni Chute presented new information for landings, landings per unit effort (LPUE), and port samples:

- FY 2015 landings were close to the quota (though below the Total Allowable Limit [TAL]), indicating there is a good niche market developing for red crab.
- FY 2015 landings increased from the previous 3 years. This allayed earlier concerns that catch was down because the stock size was lower than estimated, and indicates the market is a primary driver of catch.

- With respect to the three fishing regions, the fishery had been landing in one area more than the other in the past. Recently landings have been balancing out in the three regions.
- On average, the maximum trip size has increased slightly since 2010 (noting that in 2010, the 75,000-lbs trip limit was removed).
- LPUE is a basic indicator of stock condition, which is slightly increased in 2015. The caveat is that the VTR data it is based on is variable (she used hauls/trip and gear quantity/gear size). There's not been much of a change in LPUE over time.
 - There's nothing in particular to note about LPUE by region.
- For port samples, the carapace width data mirrors the fishery and their culling patterns, which has landed larger crabs in FY 2015. A condition of their MSC-certification was to target an increased carapace size or at least keep the size stable. There is a better market for larger crabs, and they are easier to process.
 - There was a question about survival of discards, which are smaller crabs and females. One study estimated a 5% mortality rate, but this is likely a low estimate as the study only looked at survival and barotrauma when crabs were hauled from depth, handled on deck and returned in the trap, and not after the crabs were returned to the water without a trap. However, there has not been much of a change in the length frequency and numbers of females, which are subject to heavy discarding. Toni noted it would be helpful to have a third reference point.
- Review of port sampling data by region indicates every region has been catching larger crabs, and in the southern region (3), there are bigger crabs than other regions. They have changed the cull pattern in the last couple of years.
- Captains are required to report discards on VTR forms and 100% of the trips in the fishery have reported discards in the last two years, though some estimates are likely inaccurate as it appears they are round numbers that might have been entered after the trip.
- The discard/kept catch ratio is less than one (highest 10 and lowest 10 trips were excluded from the analysis).
 - There was a question about whether this dataset includes any observed trips. There haven't been any observed trips since 2008, though NMFS is working on a protocol to observe trips in the future, collecting data on both the amount of discards and sizes.
- Red crab discards by other fisheries from July 2014 – June 2015 were 108 mt. These were estimated using observer data as the base, and then expanded the discard/kept ratio on observed trips to the entire fleet. So this dataset can be variable.
 - There was a question on what spatial area was used; statistical area or region. As VTR reports used to not include lat/long, the analysis uses stat area, which turned out to be an issue. (For the data QA/QC, if reported lat/long didn't match, the stat area wins, and then they define the area as lat/long in the middle of that stat area.) This issue has been corrected since ~ 2006/2007 and the accuracy of the stat areas has improved.

AGENDA ITEM #3: New Research and Regulations

Toni mentioned the availability of two new research projects and papers on red crabs. One was a paper by Brad Stevens (University of Maryland Eastern Shore) and Vincent Guida (NEFSC, Sandy Hook Lab) on depth and temperature distribution, and morphometrics of *Chaceon quinque-dens*. They looked at allometry by measuring various body parts of crab (carapace or chela), and the growth rate of those parts to determine the relationship to maturity. However, they measured a large number of crabs and did not find a relationship to determine age at maturity. They also looked at female red crabs to determine whether they had eggs and found a 50% maturity rate at 61.6 mm, which is smaller than previously thought.

A second study looked at the South American species of red crab, *Chaceon notialis*, reviewing spatial patterns and long-term effects of fishing. It is interesting because the species is fished at approximately the same rate and time of year as the Northeast Region. They did not find a female larger than a certain size that had eggs, so there was concern that there was limited mating for larger females b/c they couldn't find a male large enough to mate with (males have to be 50% larger than females to mate). They did find a higher proportion of molting oviparous females in shallow waters, indicating that if a fishery was to be limited spatially, the shallow areas could be restricted to protect reproduction.

Michelle Bachman reviewed relevant sections of the Omnibus Habitat Amendment, which will be Amendment 2 to the Atlantic Deep-Sea Red Crab Fishery Management Plan (FMP), and is in the final stages of rulemaking. The Amendment increased the depth of Essential Fish Habitat (EFH) designations for red crab. While there were changes to spatial management areas, they are all outside of where the red crab fishery occurs, thus the fishery will not be affected by these regulations.

Michelle provided an overview of the Deep Sea Coral Omnibus Amendment, which has been ongoing since 2010, though development was suspended until the Omnibus Habitat Amendment was finalized. Currently, the Council has approved alternatives for analysis and the Habitat PDT is conducting a preliminary impact analysis on conservation and fishing impacts. Due to the small size of the fishery and the deep waters where crabs are targeted, there is an alternative in this Amendment that would exempt the red crab fishery from regulations. If the fishery was not exempt, the preliminary estimates of economic impacts vary from under \$200,000 to around \$500,000, depending on whether discrete or broad zones are selected as the preferred alternative. It will be important to ground truth these numbers and ensure consistency wherever possible between analyses that support the Coral Amendment and red crab specifications.

The MAFMC has a similar action using discrete and broad zone measures (Amendment 16 to the Mackerel/Squid/Butterfish FMP), which is under final review and may be implemented early 2017. The red crab fishery is exempt from these measures as for at least 2 years.

Michelle also mentioned there is an emerging dataset for information on the slope and canyon environments in both New England and the Mid-Atlantic. Data were collected with remotely operated vehicles (R/V Okeanos Explorer) and towed camera systems (R/V Henry B. Bigelow), generally at depths between 500-2000 m. Data are still being processed but numerous red crab were observed during these surveys.

The Obama Administration (in particular the Council on Environmental Quality) is reviewing recommendations and consulting with agencies, environmental non-governmental organizations, and industry around the proposal for a National Monument designation to protect canyons and seamounts in the New England region. The monument could include canyons between Oceanographer and Lydonia, as well as some of the eastern canyons around Heezen Canyon, plus the four seamounts in the EEZ. At this time, it is unclear whether there will be a designation and what activities might be restricted, but conservation measures could restrict the red crab fishery. Toni inquired about mapping trips at a finer spatial scale (VTR-reported point) to facilitate the assessment of impacts on the fishery. Michelle mentioned that Geret DePiper at the Social Sciences Branch of NEFSC already analyzed spatial distribution of effort and the confidence intervals are very wide for this fishery. There was also a question about whether vessels in the fishery carry Vessel Monitoring Systems (VMS), and the answer was unknown at the time of the call, though suspected that they do not carry VMS.¹ Jessica and Chris will look into the potential effect a National Monument designation would have on setting the red crab specifications should it occur prior to the September Council meeting, where final action is expected.

Danielle provided an update on protected species. In 2014, new regulations were finalized for the Atlantic Large Whale Take Reduction Plan (ALWTRP) for vertical line. However, there was no change in regulations affecting the red crab fishery. Right whale critical habitat has recently been expanded, although there is no impact to any fishery as a result, including red crab. There is a new listing status for green sea turtles, though the distinct population segment (DPS) in the Northeast region is the same population that we've always had, so there are no new impacts on the fishery from this status change. Other than those, there is nothing new over the past couple of years or in the near future unless the candidate species, porbeagle shark and thorny skate are listed; however it's unlikely final action will be taken with those species before September 2016.

Barbara provided an overview of red crab markets and new research. There was an experiment last summer with live red crabs in Newport News, VA, sponsored by a VA Fisheries Resource Grant, where they unloaded 300,000 pounds and kept 50,000 live in a marine seawater recirculating system. The experiment has been successful. Jon Williams also has a new vessel, the F/V Sea King, with a capacity of 15,000 lbs and better water-cooling capabilities to keep live crabs onboard. He is apparently exporting live crab to China. Jon Williams is also considering submitting a new exempted fishing permit (EFP) application to target females, which he has studied before.

¹ Subsequent to the meeting, it was confirmed that there are no requirements for vessels in the red crab fishery to carry VMS:

AGENDA ITEM #4: PDT Schedule and Supplementary Information Review (SIR) Process

Jessica reviewed the following PDT schedule:

- July 1 - PDT webinar to discuss any updated data/landings for red crab late June/early July
- ~July 27 - submit background documents to the SSC
- Aug. 10 - SSC meeting to review information from PDT and develop ABC recommendations
- mid- to late- August – PDT meeting to prepare Council decision document
- ~Sept. 6 - submit decision documents to the Council
- Sept. 20-22: NEFMC meeting (Boston, MA) – Council decision

Allison Murphy reviewed the SIR process for Sarah Gurtman (who was unable to join the meeting), which is the approach the Council and NMFS used for the 2014-2016 specifications. A SIR is a decision document that provides a concise explanation of why a supplemental NEPA analysis is unnecessary.

CEQ regulations (40 C.F.R. § 1502.9(c)) require an EIS to be supplemented when the following two conditions exist.² Courts have applied the same requirements to EAs that are required for EISs.³ An EA and an EIS must be supplemented when there is:

1. Substantial change(s) to the proposed action that is/are relevant to environmental concerns; or
2. Significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

If neither of these conditions are met after all new information is reviewed, then the Council will prepare an SIR for the 2017-2019 red crab specifications package, as the analysis in the original environmental assessment (EA) in 2011 is still accurate.

AGENDA ITEM #5: Next Steps

Jessica will prepare the background documents and a presentation for the August 10 SSC meeting. She will send out a Doodle Poll to schedule the next PDT meeting in mid-August. All PDT members and the chair will start to draft their appropriate sections in the specifications document, incorporating the new data and regulations mentioned during this call.

There was no other business, and the call was adjourned at approximately 11:05 a.m.

² Agencies may also prepare supplements when the agency determines that the purpose of the Act will be furthered by doing so 40 C.F.R. § 1502.9(c)(2).

³ See [*Idaho Sporting Cong. v. Alexander*, 222 F.3d 562, 566 n. 2 \(9th Cir.2000\)](#).