Shrimp Review Panel Report

South Atlantic Fishery Management Council

May 2012

South Atlantic Fishery Management Council

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NOAA, National Marine Fisheries Service

This is a publication of the South Atlantic Fishery Management Council pursuant to National Oceanic and Atmospheric Administration Award No. FNA05NMF4410004

South Atlantic Fishery Management Council's
Shrimp Review Panel Report
May 2012
(via webinar)

Background

The Shrimp Review Panel (SRP) met via conference call on May 2, 2012 to further discuss the overfished threshold for pink shrimp and develop recommendations for addressing the issue in Shrimp Amendment 9. The amendment includes a measure to revise the overfished status determination criteria in order to better estimate status of the South Atlantic pink shrimp stock.

Amendment 6 to the Fishery Management Plan for the Shrimp Fishery of the South Atlantic Region (SAFMC 2004) established a proxy for a maximum sustainable yield stock abundance (B_{MSY}) for pink shrimp as .461 individuals/hectare based on SEAMAP South Atlantic survey data. Overfishing for all penaeid species is described as a fishing mortality rate that diminishes the stock below the designated B_{MSY} for two consecutive years and MSST is established with two thresholds: (a) if the stock diminishes to ½ MSY abundance (1/2 B_{MSY}) in one year, or (b) if the stock is diminished below MSY abundance (B_{MSY}) for two consecutive years. Based on the SEAMAP survey data, the pink shrimp stock has been below the B_{MSY} threshold since 2003, triggering overfished status (**Table 1**).

During the last several meetings of the SRP, they have concluded that the pink shrimp stocks in some areas along the southeast coast have diminished due to factors other than fishing such as environmental and climatic factors. The panel also discussed that the overfished criteria for pink shrimp needs to be based on a more appropriate data set than the SEAMAP survey data alone (because pink shrimp occur mostly north of Cape Hatteras and south of Cape Canaveral), and one that is more geographically inclusive of pink shrimp areas of abundance.

Table 1: Pink shrimp densities in numbers per hectare (#/ha) from the Southeast Area Monitoring and Assessment Program (SEAMAP) for 1990 through 2010 (Source: SEAMAP-SA). NOTE: #/ha = mean of number of individuals per tow divided by the mean area swept (ha) by sample trawls One hectare = 2.47 acres.

Year	Pink Shrimp # / ha
1990	0.568
1991	0.873
1992	0.511
1993	0.673
1994	0.594
1995	1.728
1996	0.461
1997	0.948
1998	0.853
1999	0.450
2000	0.211
2001	0.502
2002	0.867
2003	**0.418**
2004	**0.40**
2005	**0.10**
2006	**0.217**
2007	**0.149**
2008	**0.34**
2009	**0.30**
2010	**.09**

Additionally, the SRP discussed the measure to modify the process for a state to request a concurrent closure of penaeid shrimp fisheries in the state's adjacent EEZ during a severe winter weather event. Modifications to the current process are being considered in Shrimp Amendment 9.

The Shrimp FMP allows for a concurrent closure of the EEZ adjacent to those South Atlantic states that have closed their waters to the harvest of penaeid shrimp to protect overwintering stocks when they have been depleted by cold weather. States may request a concurrent closure

upon providing information to the SRP that demonstrates an 80% or greater reduction in the population of overwintering white shrimp. The SRP then makes a formal recommendation to the SAFMC, and after approval, a letter is sent to NOAA Fisheries Regional Administrator requesting that the EEZ adjacent to the state be closed to penaeid shrimp harvest. A notice is then published in the *Federal Register*.

Discussion

- Carolyn Belcher inquired whether white and brown shrimp should also be included in the Shrimp Amendment 9 measure. The SRP discussed that pink shrimp are the only species that have continually fallen below the overfished threshold, and the SEAMAP survey currently captures adequate information about brown and white shrimp but not pink shrimp. Additionally, there may be environmental factors that are causing pink shrimp to fall below the overfished threshold, rather than actual overfishing by the fishery.

- Rick Hart outlined issues for pink shrimp in the Gulf of Mexico and discussed the Stock Synthesis Model now in place for assessing penaeid stocks. In the Gulf, the VPA model previously used could not discriminate between what caused drops in effort, and the model assumed effort reductions were due to reduced stock size. However, harvest rates remained high indicating that reduced effort was not caused by a lack in pink shrimp catch, but by some other factor the model was unable to account for. Therefore, the Gulf of Mexico Fishery Management Council determined this model was not appropriate for assessing the stock status of pink shrimp in the Gulf.

- The Gulf began to use the Stock Synthesis Model for assessing stock status of pink shrimp, which uses fishery dependent and fishery independent data, including SEAMAP data, landings data, and Louisiana state inshore landings data. Based on recent success of the Stock Synthesis Model for better determining stock status of penaeid species in the Gulf, Rick Hart indicated this approach may be applied to South Atlantic populations of pink shrimp in a stock assessment. The SRP discussed that such an assessment may be required to follow SEDAR methodology, and the South Atlantic's SSC should be involved at an early stage if development of a new assessment is considered or approved in the future.

- SRP discussed that the Pamlico Sound Trawl Survey in NC be used in addition to the SEAMAP survey to establish a new B_{MSY} proxy and to more accurately determine pink shrimp population status. The Pamlico Survey is funded by SEAMAP, follows their sampling design, and has been in place since 1987. The SRP noted that data set conflicts may arise, and revisiting the issue may be warranted in the future.

- The consensus of the SRP was that data deficiencies still occur for areas off of FL in estimating stock status for pink shrimp. Currently, no FL state coastal trawl surveys or other FL independent sampling programs are in place for monitoring the pink shrimp stock.

Conclusions

1. The SRP concludes that the Pamlico Sound Trawl Survey, coordinated by NC Division of Marine Fisheries, be factored into consideration as an additional data source in development of the B_{MSY} proxy for South Atlantic pink shrimp. If the issue continues to occur with the pink shrimp stock falling below the overfished threshold, the SRP recommends they revisit discussion of applying a new assesment model for penaeid stocks (and pink shrimp, primarily) in the South Atlantic similar to Stock Synthesis Model used in the Gulf.

2. The SRP is interested in remaining a part of the process for reviewing data that would support a request for a concurrent closure only if the process is expeditious (i.e., no requirement to notice the convening of the SRP to review state data in the *Federal Register*).

Attendees:

Shrimp Review Panel: Larry DeLancey, Patrick Geer, Rick Hart, Carolyn Belcher, Trish Murphey, Kate Michie (for Mike Travis), and Anna Martin