

**Atlantic States Marine Fisheries Commission**  
**Shorebird Advisory Panel Report**

**November 30, 2011**

**Participants**

Dr. Sarah Karpanty (VA Tech), Chair  
Dr. Jean Woods (DE)  
Chris Bennett (DE)  
Dr. David Mizrahi (NJ)  
Tim Dillingham (NJ)  
Danielle Chesky (ASMFC)

The Shorebird Advisory Panel (AP) met via conference call on November 30, 2011, to review the Draft Addendum VII to the Horseshoe Crab Fishery Management Plan. The AP agreed that the best option for management of the horseshoe crab bait fishery was to move forward with implementing the Adaptive Resource Management (ARM) Framework, Option 3. The AP had previously reviewed suboptions 3a-d under Option 3 in May 2011. The AP agreed that no new science had been brought forth that would suggest a difference of opinion from those opinions. The summarized recommendations have been copied below for reference.

*Option 3a, Lambda*

Based on the available science and the reliability of the science behind the three methods, the AP agreed with the DBETC and recommends the lambda values be based on the genetics data.

*Option 3b, Weighting allocation*

The AP recommends basing the allocation weight on the Addendum IV quota levels.

*Option 3c, Harvest cap*

The AP agrees with the DBETC and recommends a harvest cap based on Addendum IV quota allocations to cap the non-Delaware Bay harvest of Maryland and Virginia.

*Option 3d, Delaware Bay Stock Allowance*

The AP recommends that the Board maintain the ARM optimized harvest and its moratorium on Delaware Bay female horseshoe crabs. Given the inability to discriminate in the field between Delaware Bay and other horseshoe crab populations, this moratorium will impose a moratorium on the harvest of female crabs in Maryland and Virginia as well, which harvest crabs from a recognized mixed stock. The AP maintains that this approach will allow for the most efficient and clear measure of the ARM's impacts and the ecosystem's response to its recommended measures.

*Option 3e, Delaware Bay Stock Allowance with additional 2:1 male:female offset*

The AP maintains their recommendation that the Board maintain the ARM optimized harvest and its moratorium on Delaware Bay female horseshoe crabs. By doing so, this approach will allow for the most efficient and clear measure of the ARM's impacts and the ecosystem's response to its recommended measures. The AP also expressed concern about the increases over the current quota levels for Maryland and Virginia that would be allowed if this option were put into practice. There is currently little data on these other stocks and whether or not these stocks could withstand an increase in fishing pressure.

*Option 3f, Plan B for management*

The AP agreed that the Board should consult the APs and the Delaware Bay Ecosystem Technical Committee prior to making any decision. The AP also believes that limiting the choices to previous management measures under Addendum VI or the past year's ARM-recommended measures would be a premature decision. Thus, the AP suggests the following language for Option 3f, which will allow the APs and the TC to consider the most recent data available to make an informed recommendation to the Board for their consideration.

*Replace paragraph 3 under Option 3f with the following:*

The absence of these annually-collected data sets would inhibit the use of the ARM Framework.

If these data were not available for the summer harvest decision, the Delaware Bay Ecosystem Technical Committee, or relevant technical committee, along with the Horseshoe Crab and Shorebird Advisory Panels would review the best available scientific information and provide recommendations to the Board. The Board would review the recommendations and, via Board action, set the next season's harvest.

Conclusion

In summary, the AP again expressed concern about the impacts of deviating from the ARM-recommended harvest. The AP felt that these deviations would complicate assessing the impacts of the ARM Framework on the populations of horseshoe crabs and red knots.

- 1) *Lambda,  $\lambda$*   
**The AP recommends lambda values based on the genetics data (Option 3).**
- 2) *Allocation weights,  $w_i$*   
**The AP recommends basing the allocation weights on the Addendum IV quota levels.**
- 3) *Harvest cap for Maryland and Virginia*  
**The AP recommends basing a harvest cap for Maryland and Virginia on Addendum IV quota levels.**
- 4) *Delaware Bay Stock Allowance (DBSA)*  
**The AP recommends maintaining the ARM optimized harvest recommendation of a female moratorium on Delaware Bay crabs.**
- 5) *Delaware Bay Stock Allowance with 2:1 male:female offset.*  
**The AP recommends maintaining the ARM optimized harvest recommendation of a female moratorium on Delaware Bay crabs and recommends against allowing any increased catch on non-Delaware Bay crabs.**
- 6) *Plan B for management*  
**The AP recommends that should the necessary annual data to run the ARM model not be available, the Board consult the Delaware Bay Ecosystem Technical Committee, Shorebird Advisory Panel, and Horseshoe Crab Advisory Panel to review the available data and recommend a management approach.**