



MAFMC SSC ABC Recommendation

Blueline Tilefish
2017 Fishing Year

BLT Working Group

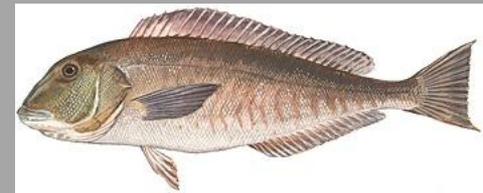
Charge to the Working Group:

- *Review data-poor approaches that can (or cannot) be used for developing an ABC for Blueline Tilefish north of NC. Based on the review, the SSC will then determine what data-poor method is most suitable to use.*



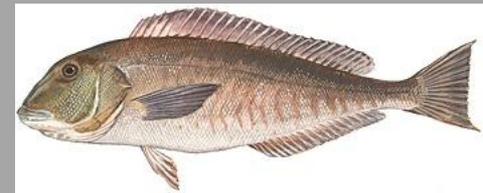
Working Group Report

- Adopted DLMTool as basis for defining ABC
 - DLMTool begins with 47 available methods
 - Many are variations on same theme
 - All have been retrieved from published literature
 - Two-step process:
 - MSE analysis using simulated data to determine which methods meet performance criteria
 - Apply selected method(s) to catch data
- Used life history data from BLT north of NC



DLMTool Performance Criteria

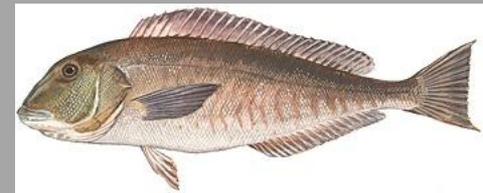
- Probability of Overfishing < 50%
- Probability of Overfished < 50%
- Relative Yield 30-60% -- sufficient yield to support a viable fishery



DLMTool Step 1 (MSE) Outcome

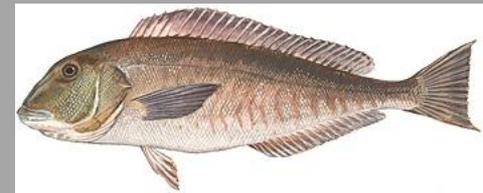
Four methods met performance criteria

1. Average catch
2. Average catch in the last five years
3. Simple catch depletion method
4. Simple catch depletion method that employs the 40/10 harvest rule



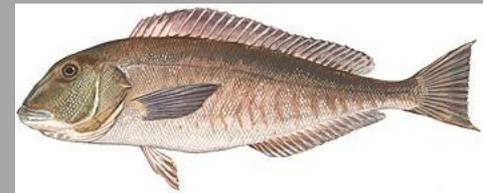
DLMTool Step 2

- Applied four selected methods to BLT catch time series
 - Ran 1,000 simulations using each method
 - Calculated median ABC value for each
- Used an average of the four median values
 - 37,002 kg (Average Catch)
 - 55,112 kg (Average Catch in Last 5 Years)
 - 33,111 kg (Simple Depletion)
 - 32,681 kg (Simple Depletion 40/10)



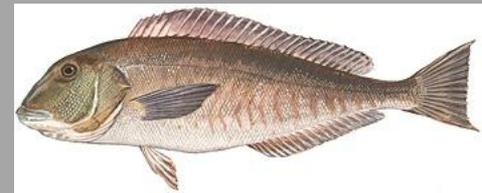
1) The level of uncertainty that the SSC deems most appropriate for the information content of the most recent stock assessment, based on criteria listed in the Omnibus Amendment.

OFL cannot be specified



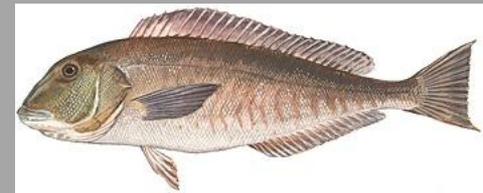
2) If possible, the level of catch (in weight) and the probability of overfishing associated with the overfishing limit (OFL).

Because no OFL was specified, the level of catch associated with the OFL cannot be determined



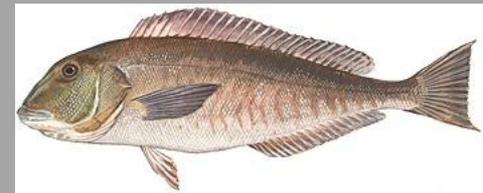
3) The level of catch (in weight) and the probability of overfishing associated with the acceptable biological catch (ABC) for the stock.

- The SSC recommends an ABC for 1 November 2016 – 31 October 2017 of **39,477 kg (87,031 lbs)**.



4) The most significant sources of scientific uncertainty associated with determination of OFL and ABC.

- Little information on exchange between northern and southern sub-units of the stock
- Catch time series developed by using Delphi method
- Highly uncertain stock-recruitment relationship
- Unclear if productivity of northern sub-unit has increased or we are seeing a range expansion
- Different growth patterns in northern and southern sub-units of the stock
- Extent of the depletion of the northern sub-unit is unknown



6) *Research recommendations.*

- More accurate catch time series
- Fishery-independent sampling/survey
- Nature of the stock structure and amount of exchange between northern and southern sub-units
- Stock-recruitment relationship
- Growth differences between the northern and southern sub-units

