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SEDAR 58 Atlantic Cobia Benchmark Assessment: Cobia Stock ID Workshop Overall Recommendations



SEDAR 58 Atlantic Cobia
Stock ID Review Workshop June 5, 2018

Tour du ToRs

Stock ID Review Workshop ToRs

- 1) **Review the recommendations of the SEDAR 58 Stock ID workshop.**
- 2) **Determine whether the stock structure recommended by the SEDAR 58 Stock ID Workshop is reasonable and appropriate to use for the SEDAR 58 assessment unit stock.** In making this determination consider whether available scientific data have been taken into account and analyzed properly by the Stock ID Workshop, and whether conclusions based on those data are reasonable given the current fisheries data. The Review Panel should consider the following in making its conclusions: 1) inclusion of data, 2) data analysis, and 3) appropriateness of conclusions regarding recommended stock unit(s) and associated spatial structure.
- 3) Prepare a report documenting the Review Panel's findings and recommendations regarding the SEDAR 58 assessment unit stock.

Tour du ToRs

Stock ID Workshop ToRs (part 1 of 2)

Workshop Goal: Review cobia stock structure and unit stock definitions and consider whether changes are required.

1. Review information including genetic studies, growth patterns, movement and migration, existing stock definitions, otolith chemistry, oceanographic and habitat characteristics, prior SEDAR stock ID recommendations and any other relevant information on stock structure.
2. **Make recommendations on biological stock structure and the assessment unit stock or stocks to be addressed through SEDAR 58 and document the rationale behind the recommendations.**

Tour du ToRs

Stock ID Workshop ToRs (part 2 of 2)

3. Discuss the strength of evidence in support of stock ID recommendations with particular attention on those that result in a mismatch of biological stock structure, assessment unit stock recommendations, and existing management unit boundaries.
4. If biological stock structure recommendations, assessment stock unit recommendations, and existing management units (state and federal) do not align, provide guidance to address the relative risks (biological and management) and consequences of managing based on existing Council or prior assessment boundaries.
5. Provide recommendations for future research on stock structure.
6. Prepare a report providing complete documentation of workshop recommendations and decisions.

Addressing the Stock ID Workshop ToRs

Workshop Goal: Review cobia stock structure and unit stock definitions and consider whether changes are required.

- Given the SEDAR 28 South Atlantic Cobia Stock Assessment, which assessed Cobia north of the Florida-Georgia border, we focused on resolving whether changes to this boundary were required (i.e. warranted)
 - Is there evidence for stock structure at the regional scale (i.e. separation between the Gulf of Mexico and Atlantic) and if so, is there reason to change the dividing line from the Florida-Georgia border?

Addressing the Stock ID Workshop ToRs

1. Review information including genetic studies, growth patterns, movement and migration, existing stock definitions, otolith chemistry, oceanographic and habitat characteristics, prior SEDAR stock ID recommendations and any other relevant information on stock structure.

- 2018 February 5th (~2 hrs) Data scoping webinar
 - Worked through list of potential data sources drafted by SEDAR staff
 - Made additions/subtractions where needed
 - Participants discussed potential data sources and assigned responsible parties
 - Grouped relevant data into three categories
 1. Genetics
 2. Life History/Biology
 3. Spatial Distribution/Movement
 - Stock ID Workshop participants worked separately to meet approaching deadlines
- 2018 March 2nd Raw Data Deadline
- 2018 March 27th Working Paper Deadline
- 2018 April 10-12th Stock ID Workshop (2.5 days)

Stock ID Workshop

- 2018 April 10-12th Stock ID Workshop (2.5 days long)
 - Reviewed the data we had decided to consider during the data scoping webinar
 - Reviewed working papers and relevant literature
 - Discussed evidence of stock structure at the regional scale and definition of boundary between Gulf of Mexico and Atlantic stocks for each of three data categories
 - Worked to relate patterns in data between data categories and reconcile a single set of regional scale boundaries (consumed the better part of two days of the workshop)
 - Discussed how to react to sub-regional structure in the Atlantic, suggested by genetic and spatial data
 - Generally agreed that while sub-regional structure was worthy of further research, specific definitions of biological stock structure at this scale are still developing and not defined well enough to adequately define assessment stock units

Recommendations on Biological Stock Structure

GENETICS

- Genetics data, suggested two distinct spawning stocks at the regional scale: the Gulf of Mexico (extending up to Fort Pierce, FL) and the Atlantic (VA to Port Royal Sound, SC).
- Genetics data suggested a spawning stock transition zone within the range from Savannah, GA through Brevard County, FL (Brevard/Indian River county line).

LIFE HISTORY

- Life history data were generally insufficient to provide information on stock structure of Cobia.

SPATIAL

- Spatial tagging data also suggested the existence of two distinct biological stocks at the regional scale: the Gulf of Mexico stock (south of Brevard County, FL) and the Atlantic stock (from north of Brunswick, GA).
- Consistent with the conclusions of the Genetics Working Group, spatial tagging data suggested a transition zone between Brevard County, FL and Brunswick, GA

Recommendations on Biological Stock Structure

OVERALL

- The SEDAR 58 Cobia Stock ID Workshop Panel recommended that Cobia be considered two distinct biological stocks at the regional scale: the Gulf of Mexico stock (south of Brevard/Indian River FL county line) and the Atlantic stock (from north of Glynn/Camden county GA line).

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Recommendations on Assessment Unit Stock Structure

OVERALL

- The Panel recommended that Cobia be considered two assessment unit stocks: the Gulf of Mexico stock and the Atlantic stock. Data support a separation within a transition zone between Brevard County, FL to Glynn/Camden County, GA. However the data did not identify a specific boundary within this transition zone separating the two biological stocks. The current management boundary at the FL/GA line lies within the transition zone, thus the Panel recommends the use of the FL/GA line as a boundary between the Gulf of Mexico and the Atlantic assessment unit stocks.

Recommendations on Assessment Unit Stock Structure

[Stock ID] Workshop Goal: Review cobia stock structure and unit stock definitions and consider whether changes are required.

- Based on the data reviewed by the Stock ID Workshop Panel, changes to the definition of the Atlantic Cobia unit stock were not required
- However, the extensive additional information provided and analyses conducted during the SEDAR 58 Stock ID Workshop process have substantially improved our understanding of spatial dynamics of Cobia in US waters, and have identified important areas for further research