

### General Information

- SEDAR website is down; website hosted by SEFSC Miami - they are aware of issue and working to resolve; SEDAR 41 DW working papers will be posted to the website once it is back up and running; as of 9/17/2014 the SEDAR website is back up, DW working papers will be posted in the upcoming days
- Per webinar recommendations (details in summary below) – **the SEDAR 41 assessments will be delayed until the headboat misreporting issue is resolved; length of the delay is currently unknown and will depend on how headboat issue is resolved**
- **All Working Groups – for both species, please submit draft DW sections to Julia with the decisions made to date; please submit data to data compilers with the decisions made to date**

### Commercial

- Kept discards (both species) – minimal fish, included in workshop report and data spreadsheet as separate category from landings and discards
- Red Snapper (RS) – only 15 fish reported as ‘kept as bait or eaten’ through discard logbooks from 2002-2013; calculation of total number as ‘kept as bait or eaten’ not attempted since such a minimal number of fish
- Gray Triggerfish (GTF)
  - Reviewed commercial discard recommendations: calculate discards separately for open and closed seasons; use 2002-2011 (years with no fishery closure) to calculate open season mean discard rate for calculating 1992-2011 discards; use 2012-2013 open season mean discard rate to calculate open season discards; use 2012-2013 closed season mean discard rate to calculate closed season discards
  - **Recommendation: use same recommendations (above) to calculate discards ‘kept as bait or eaten’**
  - No discards were reported as ‘kept as bait or eaten’ for the GTF trap fishery
  - GTF vertical line ‘kept as bait or eaten’ calculated numbers were reviewed
  - Closed season reports were likely obtained under the recreational bag limit; panelist confirmed that commercial fishermen were allowed to keep the recreational bag, allowed 20 fish person per trip
  - Estimates are in number not weight; if add to landings will need to make assumptions about sizes to convert to weight; could potentially use available observer or TIP size data to inform conversion decisions; will discuss further on Pre-AW webinar

### Life History

- Life History (LH) working group had a conference call on September 3, 2014 to prepare for the webinar

## **RED SNAPPER (RS)**

- Revisited discussions on spawning fraction and spawning frequency
- Data for these analyses are from SERFS and FWRI from April – September
- Spawning fraction (proportion active spawners) recommendation stands to provide one fraction for age 1 and one fraction for age >1; will be standardized to 24 hour period; spawning fraction numbers will change from draft DW report due to this standardization
- Will calculate spawning frequency (number of spawning events in year) by age
  - Spawning frequency = spawning fraction by age group \* spawning duration by age
  - Need to complete spawning duration by age class analysis before calculate spawning frequency
  - To be consistent with spawning fraction recommendation, spawning frequency results will be provided for age 1 and all ages > 1 combined
- Total egg production calculation
  - Total egg production = # mature females by age \* sex ratio by age \* batch fecundity \* spawning frequency by age
  - Spawning fraction is used to estimate spawning frequency; thus, it is not appropriate to include spawning fraction as a separate variable (i.e., second use of the variable) in total egg production calculation – could potentially be used as scalar
- Definition of these reproductive terms will be included in DW report
- Characterization of uncertainty in total egg production calculation
  - Can only quantify uncertainty for batch fecundity; cannot quantify for other portions of this calculation
  - Will provide justification in DW report explaining why total egg production is better than using a fecundity proxy
  - Will provide language in DW report to identify where the greatest uncertainty lies in the stepwise total egg production calculation
- Ageing error matrix will be done for the Assessment Workshop; details will be available in an AW working paper

## **GRAY TRIGGERFISH (GTF)**

- Ageing error matrix will be done for the Assessment Workshop; details will be available in an AW working paper
- On first Post DW webinar (8/15/14), the assessment team asked the LH working group to reconsider the decision made in May and during the DW to use increments as an age proxy (rather than annual/fractional age). Following the webinar the LH working group had several conference calls and email exchanges, which resulted in reconsidering three options
  - Option 1: Use increments as proxy for age; consequence - age of part of the population are underestimated
  - Option 2: Use 'calendar age' by considering 'July' as 'birth month' and bump (add 1 to) all increment counts for all fish caught Jan – June, regardless of edge type; method used

in Gulf of Mexico; edge type not used, so consequence is part of the population is overestimated, but probably smaller portion than option 1

- Option 3: Use 'calendar age' by considering limited edge type info (2 coarse categories) to bump (add 1 to) using the criteria below; edge type used, so consequence is age of part of the population is possibly overestimated, but probably smaller than options 1 and 2
  - Fish with increment 0
    - Fish caught Jan – June then calendar age = 1; fish caught July – Sept. and FL  $\geq$  160 then calendar age = 1
    - Fish caught Jan – June then calendar age = 1; fish caught July – Sept. and FL < 160 then calendar age = 0
  - Fish with increment >1
    - If month capture Jan – June and edge type = 4 (presence), then calendar age = increment + 1 (bump)
    - All other fish, calendar age = increment (no bump)
- **Age recommendation: Based on above considerations, recommend OPTION 3; will be important to recognize and outline age determination issues with spines, used assumptions, uncertainty, etc. in DW report**
- Maturity schedule: LH group considered two options (using 'Option 3' for age recommendation)
  - Use recalculated maturity model with A50
  - Use proportion observed maturity by age and assume % maturity at age 0 = 0%
- **Maturity Recommendation – option 2; model had trouble fitting the data and gave unrealistic maturity values; think observed proportion is more realistic and provides a better vector**
  - **DW report – will provide both the model maturity ogive and the recommended observed proportion mature with age 0 = 0% mature**
  - **CV for maturity will be calculated using a binomial variance estimate (K. Kolmos)**
- Consequences of new recommendations
  - New ages were determined/estimated and are now available; will be distributed to R. Cheshire and E. Fitzpatrick for commercial and recreational age comp development
  - New growth parameters (growth model run on fractional age based on new calendar age; parameters were reviewed; information on constant CV or standard deviation will be included in the report), maturity schedule, M estimates available
  - New age comps for Fishery Independent Chevron Traps were recalculated and are available
- Spawning fraction analysis needs to be completed, but LHWG will follow procedures similar to red snapper
- Can potentially review everything via draft DW report; if significant comments can discuss on subsequent webinar

## Indices

**Issue: Reports of inaccuracies in the early years of headboat data**

- A working paper, SEDAR41-DW40, was submitted after the Data Workshop (8/27) and raised two primary issues: 1) accuracy in the early years of headboat data as it pertains to the red snapper headboat index (pre-1992) and 2) changes in regulations in 1992 and 2010 that altered headboat fishery behavior.
- The second issue (regulation's effect on fishery behavior) was discussed during the DW plenary and was the primary reason the panel made the recommendation to split the red snapper headboat index into two time series (1976-1991 and 1992-2009).
- Both red snapper headboat indices were recommended for use in the assessment by the Index Working Group and by the full DW panel. Indices from the headboat data were ranked third among all the indices recommended for use, first among the indices from fishery dependent data.
- The first issue (inaccuracies in early years of headboat data) was not discussed during the DW plenary and was brought to the panel for feedback on the second Post Data Workshop webinar (9/11).
- The Data Workshop panel noted that the issue of misreporting in the headboat logbook program would affect both the headboat indices and landings data for red snapper and gray triggerfish.
- Panelists noted these reports of inaccuracies would potentially impact all species caught by the headboat fishery and could have impacts on all future snapper grouper assessments.
- The nature and prevalence (temporally and spatially) of the headboat misreporting are currently unknown.
- The DW panel agreed that this was a serious issue that warranted further investigation and had a lengthy discussion on how this issue could potentially be addressed for this assessment. The options discussed on the webinar are outlined below followed by the panel's recommendations.

**1) Stop, investigate headboat misreporting issue, delay assessments for both SEDAR 41 species, and potentially all snapper grouper species**

Uncertainty or error associated with headboat misreporting issue is unknown; in order to address this issue need to know nature and prevalence of misreporting; this is the only option that will get to the root of the issue; length of delay unknown and will be dependent on the process used to address issue

**2) Recommend NOT using the 1976-1991 red snapper headboat index in the assessment model**

Option only addresses the headboat index not headboat landings; cannot fully address this issue without addressing all data associated with headboat logbooks

**3) Start red snapper assessment in 1992 (or other year?), look at overfishing not overfished status**

Bulk of historical landings for red snapper occur in 1960-70 for the commercial fishery; if start assessment in 1992 will be missing large amount of removals from the population; could potentially affect assessment passing review; starting in 1992 would not allow assessment to use other credible sources of data available pre-1992

**4) Use plenary recommendations 'as is'**

Does not address the claims (inaccuracies in early headboat data) which have been raised in previous SEDAR assessments and through SEDAR41-DW40; could potentially affect assessment getting through review process

**5) Expand headboat index CV's, run sensitivity removing early time series headboat index (similar to what was done in SEDAR 25 for black seabass)**

Option only addresses headboat index not headboat landings; data not available to quantify how to adjust the CV's; changes in CV would have to be based on expert opinion; change in CV only addresses one type of potential inaccuracy in reporting when there may be biases that an increased CV alone cannot address

**6) Expand CV in headboat index (1976-1992) and headboat landings**

Data not available to quantify how to adjust the CV's for either the index or landings; changes in CV would have to be based on expert opinion; change in CV only addresses one type of potential inaccuracy in reporting when there may be biases that an increased CV alone cannot address; the validity of this approach (expanding CV's) to address the issue will depend on the nature of the misreporting, which at this time, is unknown

**7) Remove headboat logbooks entries identified as inaccurate?**

Difficult to determine how to identify which reports are inaccurate; identification and removal of these records would likely be a lengthy process; not enough information on the extent of misreporting to do this effectively

**8) Use historic landings CV for headboat landings through 1992 (or another year?)**

Headboat landings data were used in calculations of historic landings and CV; if question reliability of headboat data in general, likely need to revisit methods used for this calculation; change in CV only addresses one type of potential inaccuracy in reporting when there may be biases that an increased CV alone cannot address

**9) Use method to calculate historic recreational landings to calculate headboat landings pre 1991**

Method used to calculate historic landings was done for the recreational sector as a whole, not by mode; may not be possible to use this method on a single mode; headboat logbook data used in calculations for historic recreational landings and CV; fishermen noted at the data workshop that regulatory changes in 1992 changed headboat fishery behavior and targeting; using the same method to calculate historical landings would apply a CPUE post 1992 back in time which would likely be inappropriate due to the noted changes in headboat fishery behavior

**10) Push decision until next webinar (Sept. 26), try to gather additional information in interim to inform decision**

Panel discussed what type of information could be provided in the allotted time; suggestion to explore the ratio of commercial to headboat landings to examine recall bias between the voluntary and

mandatory reporting years; panel noted this analysis alone would likely not be able to provide enough information to make decision; likely not able to provide enough new information in the next two weeks to better inform decision; in order to address this issue need to know nature and prevalence of misreporting and two weeks is not enough time to do that

**DW Panel Recommendation:**

**Option 1) Stop, investigate headboat misreporting issue, delay assessments for both species; length of delay is unknown until have more details on how to resolve this issue; could have implications for all snapper grouper assessments in South Atlantic and potentially Gulf of Mexico**

**DW Panel Recommendation:**

**High priority should be given to a workshop (or other means) to address headboat misreporting issue (could be SEDAR Procedural Workshop).**