

Shrimp Trawl Bycatch Methodology for Finfish Workgroup

Meeting Summary

Virtual Meeting

10am-1pm EDT, March 30, 2026

The Shrimp Trawl Bycatch Methodology for Finfish Workgroup convened on March 30, 2026, for a virtual meeting. The Workgroup included members of Council staff, Scientific and Statistical Committee (SSC), Shrimp Advisory Panel, National Marine Fisheries Services, and was chaired by Gregg Bray (Gulf States Marine Fisheries Commission). Attendees and their affiliations are listed at the end of the meeting summary.

Review and Discussion of Charge:

Dr. Froeschke (Council staff) reviewed the objectives of the workgroup from the draft workplan¹ that was developed and approved by the Gulf Council (Council) at its November 2025 meeting. He noted that the Council's SSC had received a presentation on the "Center for Independent Experts Independent Peer Review of the Shrimp Bycatch Estimation Methodology for Finfish Species" in May 2025² and that the SSC had requested an expanded future presentation with more time allotted on a future SSC meeting agenda. The goal of this workgroup is to review the new proposed methodology for estimating bycatch from shrimp trawls for finfish in the Gulf of America and provide recommendations to the SSC regarding the application of this methodology in upcoming finfish stock assessments. He reminded participants that a separate workgroup will be formed to address bycatch of protected resources after this group concludes its work.

Presentation: Overview of Shrimp Finfish Bycatch Analyses and Work Completed To Date:

Dr. Smith (NMFS contractor) presented on "Estimation of Fish Bycatch from Gulf Shrimp Trawls" by first introducing the general approach to estimating bycatch, and he noted that bycatch rates are estimated separately in 36 space-time strata, as a combination of area (4 groupings of statistical zones 1-21 representing east, central, and west [denoted as either Louisiana or Texas] sections of the Gulf, 3 groupings of depth zones, and 3 groupings of 4-month periods).³

¹ This draft workplan was first presented at the November 2025 Council meeting. <https://gulf-council-media.s3.amazonaws.com/uploads/2025/11/D-5-Draft-Workplan-for-Shrimp-Bycatch-Methodology-Working-Groupv4.pdf>

² https://gulf-council-media.s3.amazonaws.com/uploads/2025/04/07ai-RS_bycatch_SSC_presentation.pdf

³ Questions from participants were taken during the presentation and are summarized herein. As some questions were revisited during the meeting, questions and responses are grouped by topic in this summary.

In response to a slide on the cross-check of the ‘legacy code’ for processing observer data and estimating catch-per-unit-effort (CPUE), a participant inquired how total brown shrimp effort was calculated, as the Shrimp Advisory (AP) Panel was under the impression that species-specific effort could not be calculated, only total effort. Dr. Smith responded that they were provided with a landings file and an effort file from the Southeast Fisheries Science Center, and he had not generated either file. Later in the meeting, the Working Group recommended receiving additional information on how brown, white, and pink species-specific effort estimates were created and how they were used in the initial exercise presented today. Mr. Dettloff (NMFS) stated a presentation was given to the Shrimp AP in 2024⁴, and no changes had been made to that approach. He commented that he could give a refresher at a future meeting of this working group.

In response to a slide on the observer characterized species via basket subsampling, a participant inquired why some species appeared in bycatch characterization lists⁵ that are not on the current standard characterized species list that had been presented. Mr. Decossas (NMFS) responded that it is highly variable why some species appear that are outside the standard characterized species list, and Mr. Dettloff noted that write-ins by observers could have occurred. Later in the meeting, another participant inquired if, once a species was added to the standard species characterization list, it remained on the list. Mr. Decossas responded that, in 2025, the species list was updated; at that time, some species such as gray triggerfish were added. He pointed the Working Group to the “Southeast Shrimp Trawl Observer Program Metadata” report.⁶

A participant inquired why a new code for processing trip-ticket data was required, as it was noted to be a Phase 1 Key Finding/Improvement. Dr. Smith responded that, while the new code still included extrapolation, the coding had also been streamlined in its ability to identify not just trips where a species had been caught but also trips where a species had not been caught.

For the effort cross-check, a participant inquired how many trips were represented in the data for each year from 2017 to 2020. Dr. Smith responded that there were a few hundred observer trips that included cELB devices; however, he could not recall if that number of trips was per year or a total.

When discussing predicted catch rates by gear categories, Dr. Smith noted that the catch rate for brown shrimp is higher with the 2-net gear versus 4-net gear, with nighttime tows slightly higher than daytime tows. A participant inquired if the sizes of the nets were considered. Dr. Smith responded that additional characteristics such as mesh size had been examined but not found to be significant. He stated that the goal in examining additional characteristics was to understand if additional stratification variables for CPUE were needed. Another participant noted that vertical spread as well as horizontal spread of nets should be considered. He added that, in Texas, vessels with 2 nets are very uncommon for brown shrimp. Dr. Smith responded that these

⁴ https://gulf-council-media.s3.amazonaws.com/uploads/2025/05/05.-Species-Specific-Effort-Estimation_Dettloff.pdf

⁵ Scott-Denton, E. et al. 2020. Characterization of the U.S. Gulf of Mexico and South Atlantic penaeid and rock shrimp fisheries based on observer data. *Marine Fisheries Review*. 74(4).

⁶ <https://sedarweb.org/documents/sedar-99-wp-02-southeast-shrimp-trawl-observer-program-metadata/>

data for vessels with 2 nets targeting brown shrimp are primarily from Louisiana. A participant noted that this information is ultimately used for determining bycatch, not effort. Another participant commented that there appears to be a consistent drop in catch of both brown and white shrimp when going from 2 nets to 4 nets, which suggests that net size may have some importance after all. He added that location should be examined, as there may be some nuances by area where 2 nets are instead of 4 nets. Following the presentation slide showing that nighttime bycatch of red snapper is higher than daytime, with both 2 nets and 4 nets, a participant asked if there was a citation for red snapper foraging at night, as the difference was more likely a function of habitat, not foraging.

A participant added that there is a period called ‘clocking’ where shrimpers fish for 24-hours because there is a window where shrimp are diurnal. For example, it occurs immediately after hurricanes, and shrimp vessels that are willing and able to get out and tow can take advantage of it. He stated, for pink shrimp, that the moon appears to influence landings whereas for white shrimp, he has caught just as many during the day as at night.

For estimating effort by trawl configuration, Dr. Smith stated that, historically, data from the Vessel Operating Units survey were used, and these data were constructed by port agents who were familiar with vessels in the area that they worked and that they were assigning number of nets by their recollection. Currently, the Annual Landings and Gear survey is mandatory for shrimpers to fill out each year, wherein they provide data on annual landings and gear characteristics; use of these data allowed for assignment of 2-net and 4-net gear types to fleet vessels, whereas a single net scalar had historically been applied to scale up the entire fleet’s effort.

During the discussion of work conducted with SEDAR 98 (Gulf Red Snapper stock assessment), a participant asked for clarification that there was a direct correlation assumed between shrimp effort and red snapper bycatch, and Dr. Smith confirmed this.

A participant stated that she was uncertain how zeros were added for missing data from observer data. Dr. Smith clarified that the participant was referring to missing value imputation. He stated that 11% of data collectively in strata where there were either no or little observer data and noted that the stratified slide in the presentation addresses this.

Discussion of Next Steps and Remaining Challenges:

The Working Group discussed the need for several presentations at its next meeting and compiled the following list to be sent the SEFSC:

- Presentation on species-specific shrimp effort estimates to better inform bycatch
- Presentation on how the history of species characterization in the observer program has changed over time
- Presentation on gear selectivity and efficiency including a comparison of 2 vs 4 nets and day vs. night, along with variables that were examined but excluded from the analyses

presented (e.g., head rope length, net size). Include some information on where the 2 vs 4 net effort is coming from (spatially)

- Presentation demonstrating the protocols to expand bycatch estimates from initial sample to population level
- Review gray triggerfish bycatch methodology that uses lane snapper as a proxy species
 - Request a summary of the new 2025 observer data that now includes gray triggerfish

<u>Shrimp Bycatch for Finfish Workgroup</u>	<u>Attendance</u>
<u>Members:</u>	
Gregg Bray, GSMFC – <i>Chair</i>	X
John Froeschke – Gulf Council Staff	X
Jim Nance – SSC	X
Steve Saul – SSC	X
Don Behringer – Special Shrimp SSC	X
Jason Saucier – Special Shrimp SSC	X
Konner Lockfield – Special Shrimp SSC	X
Gary Decossas – SEFSC	X
Kyle Dettloff – SEFSC	X
Adam Pollack – SEFSC	X
Steve Smith – SEFSC Contractor	X
Cheston Peterson – SEFSC Contractor	X
Nick Farmer – SERO	X
Leann Bosarge – Shrimp AP	X
Gary Graham – Shrimp AP	X
Justin Versaggi – Shrimp AP	Absent
<u>Support Staff:</u>	
Katie Siegfried – SEFSC	Absent
Matt Freeman – Gulf Council Staff	X
Ryan Rindone – Gulf Council Staff	X
Carrie Simmons – Gulf Council Staff	X
<u>Other Attendees:</u>	
Chris Schieble – Gulf Council Member	X
Allie Iberle – South Atlantic Council Staff	X
Adam Brame – SERO	X
Dave Gloeckner – SEFSC	X
Alan Lowther – SEFSC	X
John Walter – SEFSC	X