

July SSC Meeting

Red Snapper Bycatch Estimation in Shrimp Trawls

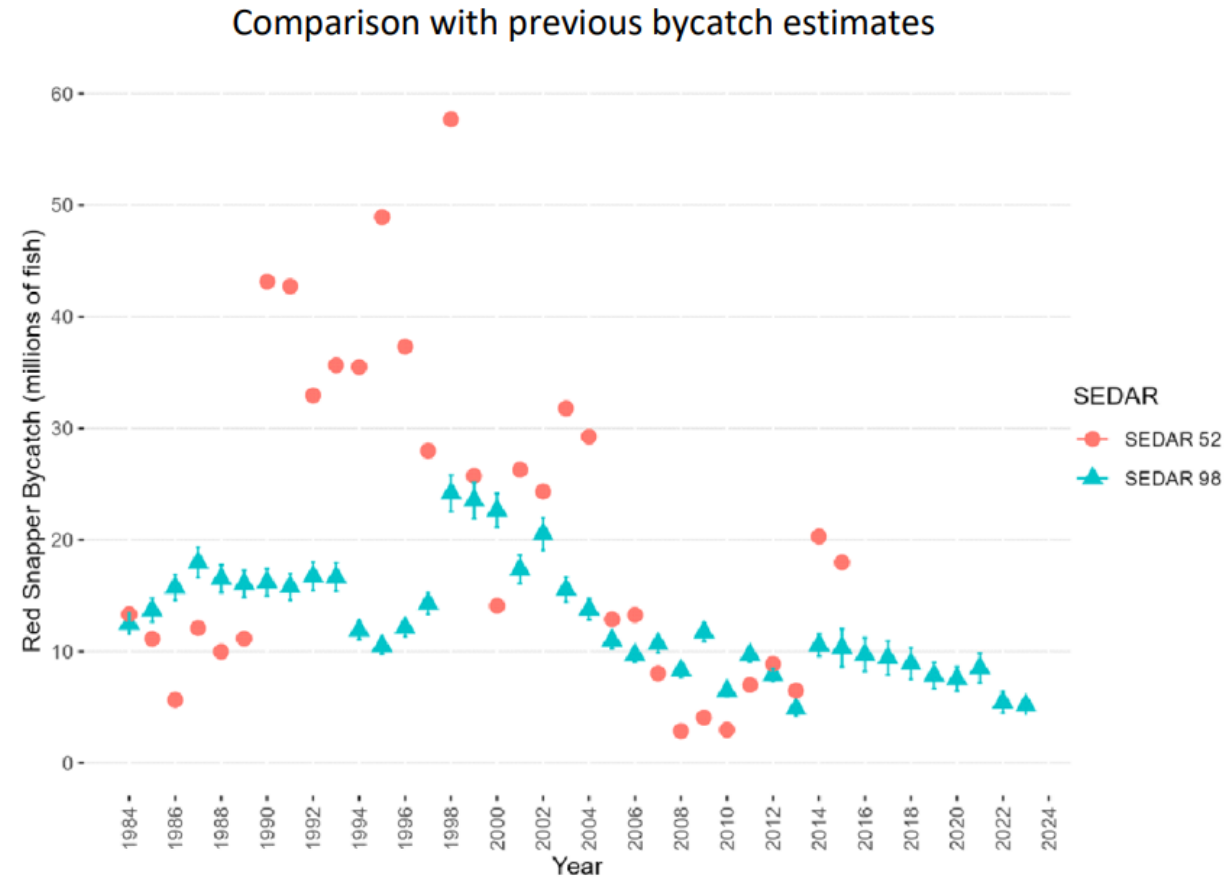
- SEFSC updated the method for estimating how many red snapper are unintentionally caught (bycatch) in shrimp trawl nets
 - Work began in 2021 after SEFSC attempted to validate estimates
 - Old method's predicted catch was only about half of actual landings
 - New method considered as SEDAR 98 input
- Research team rebuilt the process: how observer catch data, GPS-based effort data, and dockside landings data are collected, checked, and combined
- Independent scientific reviewers (CIE) evaluated the rebuilt method in 2023–2025
 - Recommendations applied to the full observer dataset (2007–2023) and to historical years back to 1984

Red Snapper Bycatch (Cont.)

- **Core formula:** $\text{Total Bycatch} = \text{Catch Rate (from observer samples)} \times \text{Total Fishing Effort (from the whole fleet)}$
- **Observers sample a portion of trips:** on a 4-net shrimp boat, observers physically sample 2 of the 4 nets; every red snapper in those nets is counted directly, while other species are estimated from a smaller subsample
- **Fishing effort is estimated, not directly reported:** effort is built from GPS tracking devices on a subset of boats and scaled up using total shrimp landings
- **The key fix in this update:** catch rates differ dramatically by gear type and time of day; therefore, each gear/time combination was categorized within the data, which removes a major source of estimate bias present in the old method

SSC Discussion

- SSC members discussed whether observer presence changes fishermen's behavior (observer bias); unlikely given trip duration and current fishery profit margins
- Concern about estimating bycatch for years predating observers (1984–2006), reinforcing the need for further evaluation



Motions from Red Snapper Bycatch Estimation

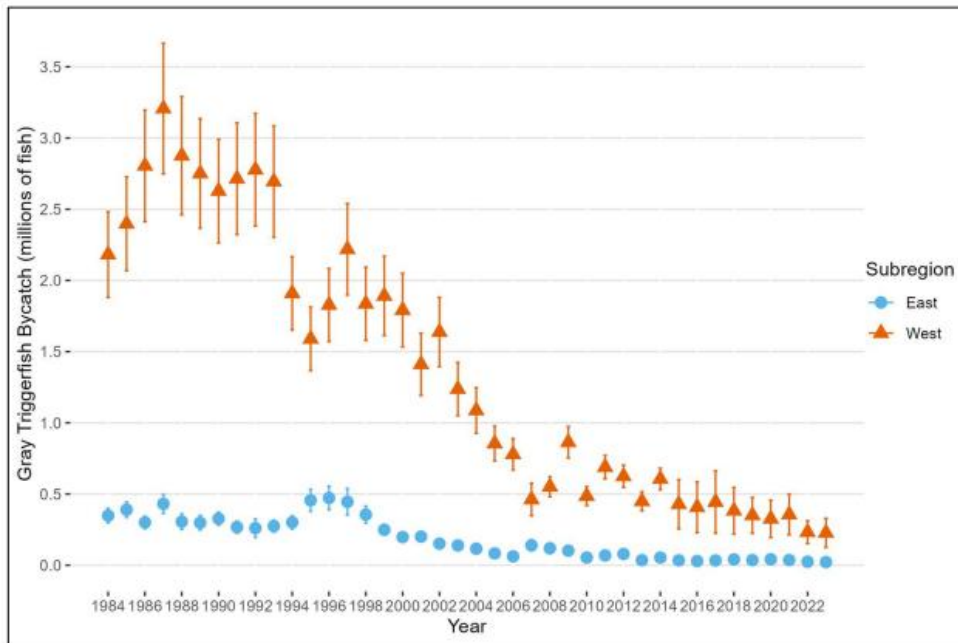
- **The SSC found the methodology using observer data that has been developed by the SEFSC and being used to estimate red snapper bycatch in the Gulf is acceptable for data input into the current red snapper assessment model.**
 - *Motion carried without opposition.*
- **The SSC supports expanding the bycatch methodology to include additional finfish species that are presently in the observer database. The SSC also recommends that the results of these additional efforts be presented to the Shrimp Bycatch Working Group and/or the appropriate SEDAR workshop or topical working group.**
 - *Motion carried without opposition.*

Gray Triggerfish Bycatch Estimation

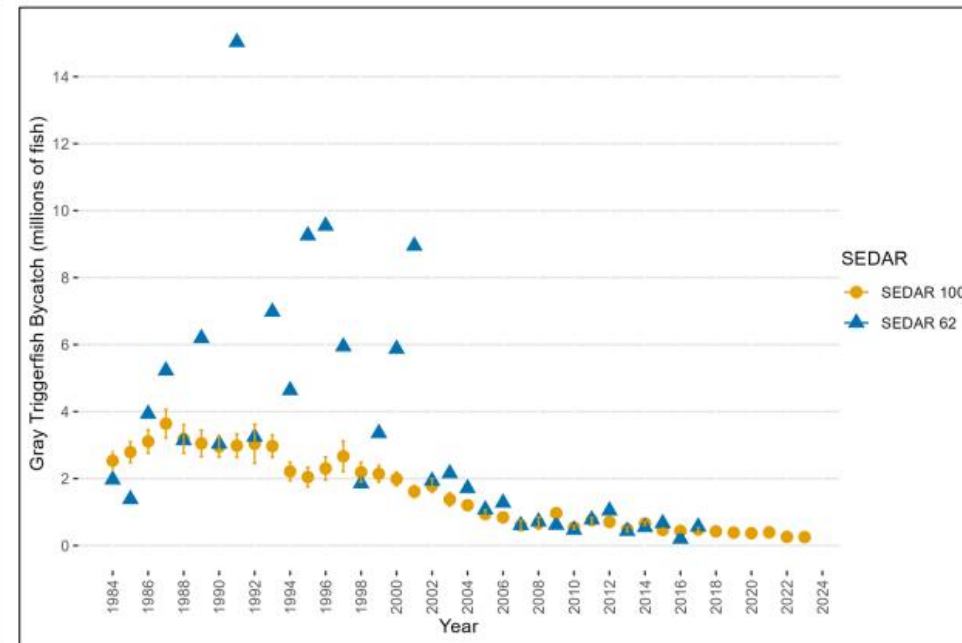
- SEFSC presented a method to estimate Gray Triggerfish bycatch in shrimp trawls for SEDAR 100
- Because observer data on Gray Triggerfish is limited, the method uses a "stand-in" or "proxy" species (Lane Snapper) to estimate bycatch based on the relationship of catch between the two species
- One year of new, more direct observer data (2025) is available but not robust enough to replace the current proxy approach
- A Council working group reviewed the method and found it statistically sound, though there were concerns about reliance on a proxy species instead of direct observations of the focus species

Discussion of Gray Triggerfish

- Lane Snapper and Gray Triggerfish abundances vary regionally, raising concerns on how well one predicts the other; SEFSC agreed further validation is warranted
- Alternative of assigning zero bycatch was ruled out as unrealistic; some direct estimation is necessary for the assessment to proceed



SEDAR 100 Estimates - by subregion



SEDAR 100 compared to SEDAR 62 - total estimates

Motions: Gray Triggerfish Bycatch

- **The SSC found the proxy methodology using SEAMAP and observer data that has been developed by the SEFSC to estimate gray triggerfish bycatch in the Gulf, as acceptable for consideration as a data input for SEDAR 100. The SSC also recommends future investigations into improving the estimation of shrimp trawl bycatch for species not characterized in the observer program.**
 - *Substitute Motion carried 9 – 7, with 1 abstention and 5 absent*

Minimum Threshold for Federal Gulf Shrimp Permits

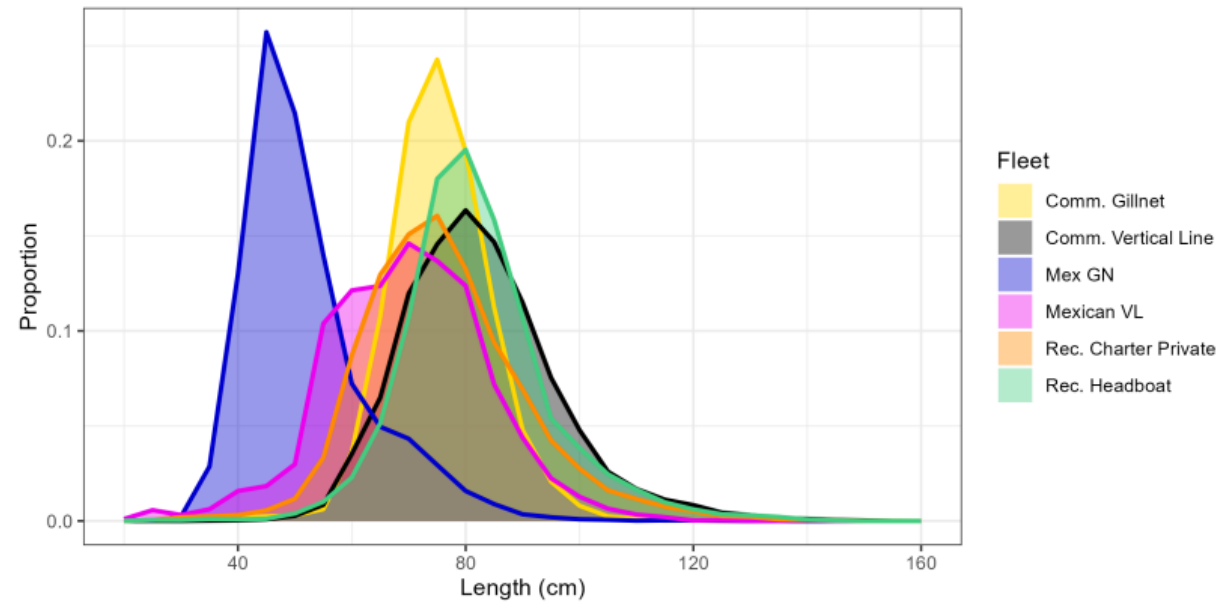
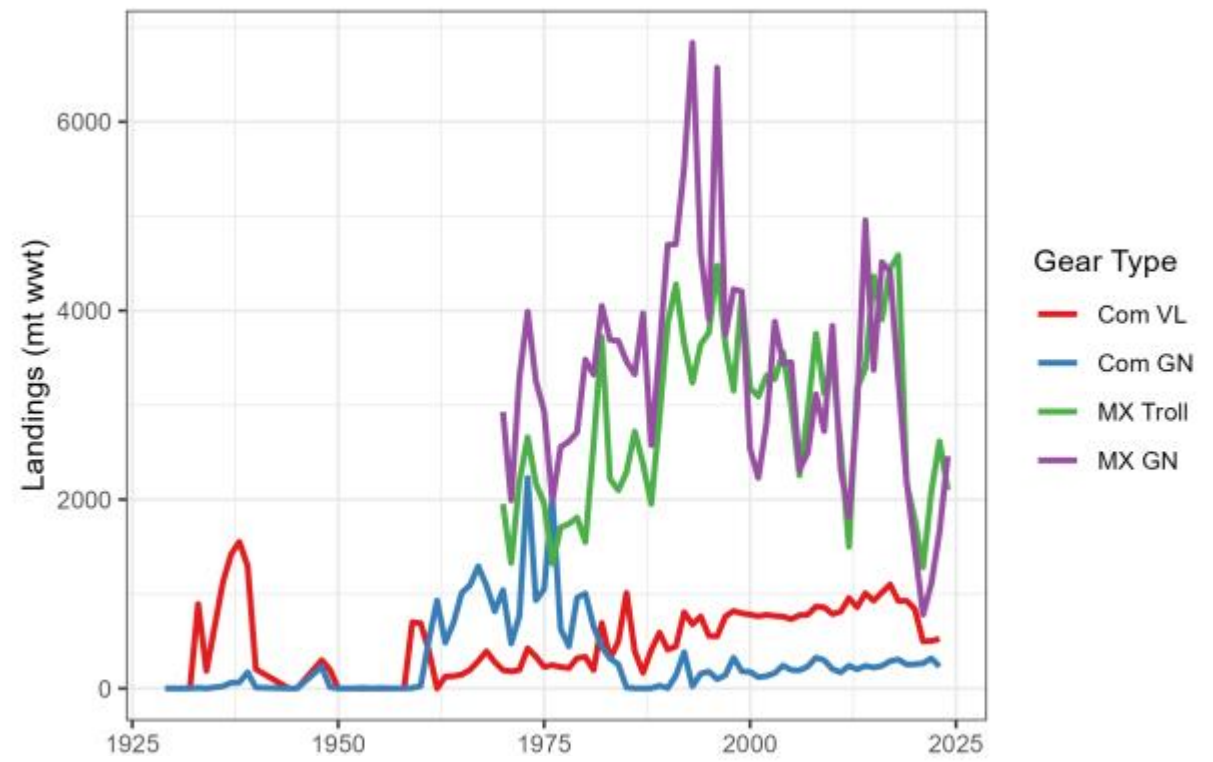
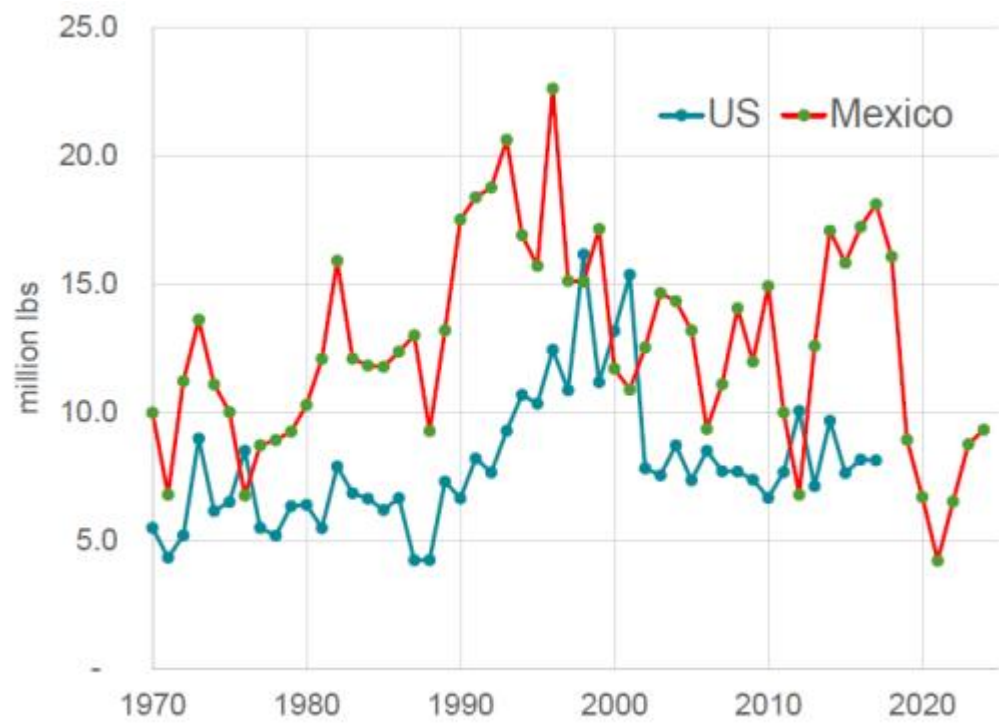
- NMFS briefed the SSC on trends in the number of active federal Gulf shrimp permits, tied to a minimum-threshold requirement set in Shrimp Amendment 17B
- NMFS is developing an updated method for setting that threshold and asked the SSC for input on what data/factors to include
- An SSC member recommended the analysis account for economic factors, and other members noted state-permitted vessels add fishing effort not captured by federal permit numbers

Review of Fisheries Integrated Modeling System (FIMS) Peer-review

- Nationally coordinated framework of models and tools that is consistent, extensible, and transparent
- Peer-review found new methods to be sound, but not yet ready for full implementation
- Peer-review panel prioritized robustness and long-term success over rapid deployment
- FIMS able to examine data-limited situations
- SSC highlighted the importance of side-by-side comparisons with FIMS approaches and legacy models
- State of Florida will also be trained on FIMS

Gulf King Mackerel Landings and Length Composition Data from Mexico

- SEFSC obtained detailed Mexican King Mackerel landings and length data (dating to the 1970s)
 - SEFSC has sought these data for well over a decade
- Mexican commercial landings are substantial, including many juvenile fish, and represents a increased undertaking by analysts
 - Will be considered for the current stock assessment (SEDAR 99)
 - Consideration will extend assessment timeline by several months
- Two workshops (Mexico, September 2026; Miami, November 2026) are planned between U.S. and Mexican scientists to align data and modeling approaches
- Mexico currently has **no management measures or stock status determination** for king mackerel
 - SSC flagged as a future management complication



Gulf Tilefish — Data Review & Assessment Options

- Last full stock assessment for Golden, Goldface, and Blueline Tilefish used data through 2009 (SEDAR 22)
 - Data limitations inhibit the assessment of individual species
- Commercial data (mainly longline fleet, under the IFQ program since 2010) are considered reliable; recreational data remain highly uncertain
- Age data show a healthy mix of older fish in the population, and current catch limits have not been exceeded since 2012 — **no current indication of overfishing risk**
- SSC recommended to keep current catch limits in place and monitor two existing fishery independent indices (NMFS Bottom Longline and G-FISHER) coupled with fishery-based indices annually rather than pursue a full new assessment
 - Represents a low risk, and resource efficient path for management