



## Fisheries Research and Monitoring Division Scientists Convened the First Guam Bottomfish Management Unit Species Data Workshop

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NOAA Fisheries scientists from the Pacific Island Fisheries Science Center (PIFSC) - Fisheries Research and Monitoring Division (FRMD) convened the first Bottomfish Management Unit Species (BMUS) Data Workshop in the island of Guam. The purpose of the workshop was to review all available data for Guam BMUS that may be used for the 2024 benchmark stock assessment. The BMUS Data Workshop is a partnership between PIFSC-FRMD, the Western Pacific Fishery Management Council (WPFMC), and the Division of Aquatic and Wildlife Resources (DAWR) and is part of a larger overall effort to engage with fishing communities in the region to enhance inclusion, transparency, and partnership in the stock assessment process. This series of data workshops kicks off an 18-month process of developing the assessment. On day-one of the workshops, ten DAWR staff offered their insights on creel survey implementation and data management in two breakout groups. Twelve fishers provided their interpretation, perspective, and information on the various bottomfish data sources through three break-out groups on day two. Six fishers from the Guam Fishermen's Cooperative Association provided their insights on the bottomfish fishery, the species trend over time, and data collection through two break-out groups on day three.



*Caption: Opening day of the Guam bottomfish fisherman session of the Bottomfish Management Unit Species Data Workshop bringing together twelve fishermen, PIFSC scientists, staff from Division of Aquatic and Wildlife Resources and the Western Pacific Fishery Management Council.*

Overall, the fishermen's perspective provided the much needed context to the data collected by DAWR. The perspective on the catch trend for each BMUS is species-specific because some fishermen target particular species like onaga and ehu while others conduct more mixed-species particularly those occurring at shallow and mid-depths. The fishery is highly dependent on the weather. Good weather days are relatively rare and overlaying that with the fishery occurring on weekends, there are only a few days in the year where the fishery operates. The fishermen and data collectors provided a substantial amount of information that the stock assessment scientists, Dr. Erin Bohaboy and Dr. Toby Matthews, can use to prepare the available data for the upcoming 2024 BMUS benchmark stock assessment.

Some of the highlights from the data workshop include:

- Fishermen experience agreed with many of the trends that we see in the boat-based survey participation and landings estimates, including: 1) deepwater bottomfishing has increased in recent years, especially since the pandemic, 2) bottomfish catch is highly variable between years, often spiking in 2-7 year cycles, 3) some BMUS are only rarely landed because they are generally undesirable (e.g., *Caranx ignobilis* / mamulan) or not commonly caught (e.g., *Variola louti* and *Pristipomoides sieboldii*).
- Fishermen behavior regarding if, when, where, and how to fish, as well as which species to target, varies depending on many diverse factors such as wave size / swell direction / current / wave period, wind, boat/fisherman size/ability, fishing experience, fuel prices, market fish prices, market fish supply (not always possible to sell all the catch), catch rates (whether fish bite is good enough), work/primary job schedules, requests from family and friends for fish or certain species (including special events), shark interactions at fishing sites, and crowding of other fishermen/people/vehicles/trailers at launch points and fishing grounds.
- *Etelis boweni* are definitely present around Guam and are being caught by fishermen. DAWR staff seem confident in their abilities to differentiate all sizes from *E. carbunculus*, fishermen can tell the difference between large ones (often based on shape of the tail) and show interest in learning more. There was likely confusion between *P. sieboldii* and *P. filamentosus* over the boat-based creel survey time series, but especially since 2014, identification has improved.
- Charter fishing boats, mostly small six-customer crafts, continue to operate trips. Fishing behavior of charters is different from the majority of Guam fishermen (generally lower catch rates, shorter trips) and can vary depending on the customer (e.g. military charters may harvest more fish, tourists may be only interested in big gamefish or fishing fun). There are no fishing headboats left and charters are less common than they were in the 1990s.

The valuable insights from the bottomfish fishermen will not only contribute to the improvements in the available data but the interaction between the fishermen and the scientist helps build the trust and increase the potential for more collaboration. At the end of the day, all parties involved in the workshop worked together towards a common goal of sustaining the bottomfish fishery through collaboration, open communication, and transparency.



*Caption: Dr Erin Bohaboy presenting to the six GFCA participants on all gathered available data that can potentially be used for the 2024 benchmark stock assessment.*