

GOA Shortraker Rockfish

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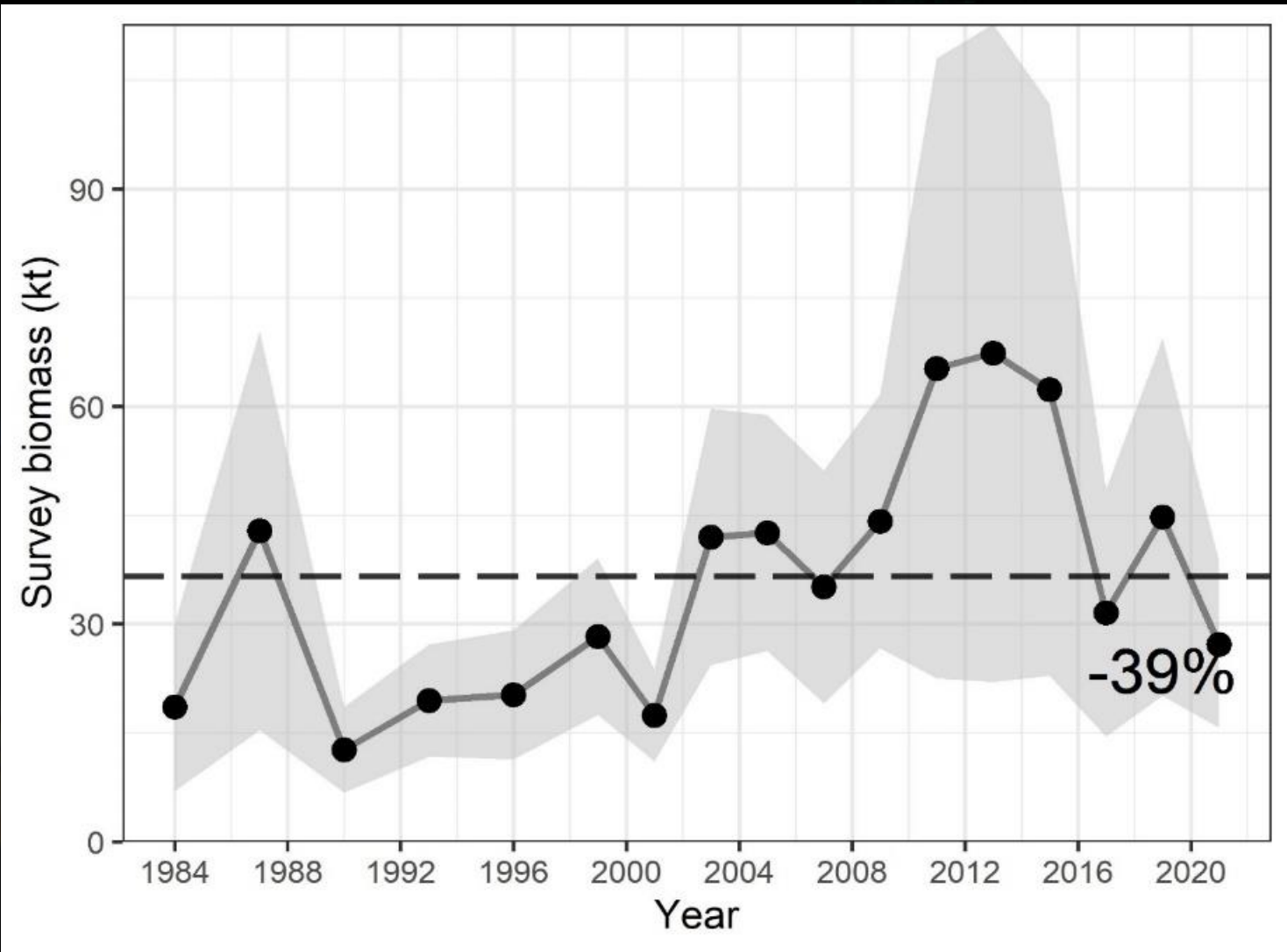


- Tier 5 species
- No model changes
- Outline:
 - Input Data – trawl survey biomass & LL survey RPWs
 - Catch Update
 - Methodology – no changes
 - Recommendations/Appportionment
 - Risk matrix

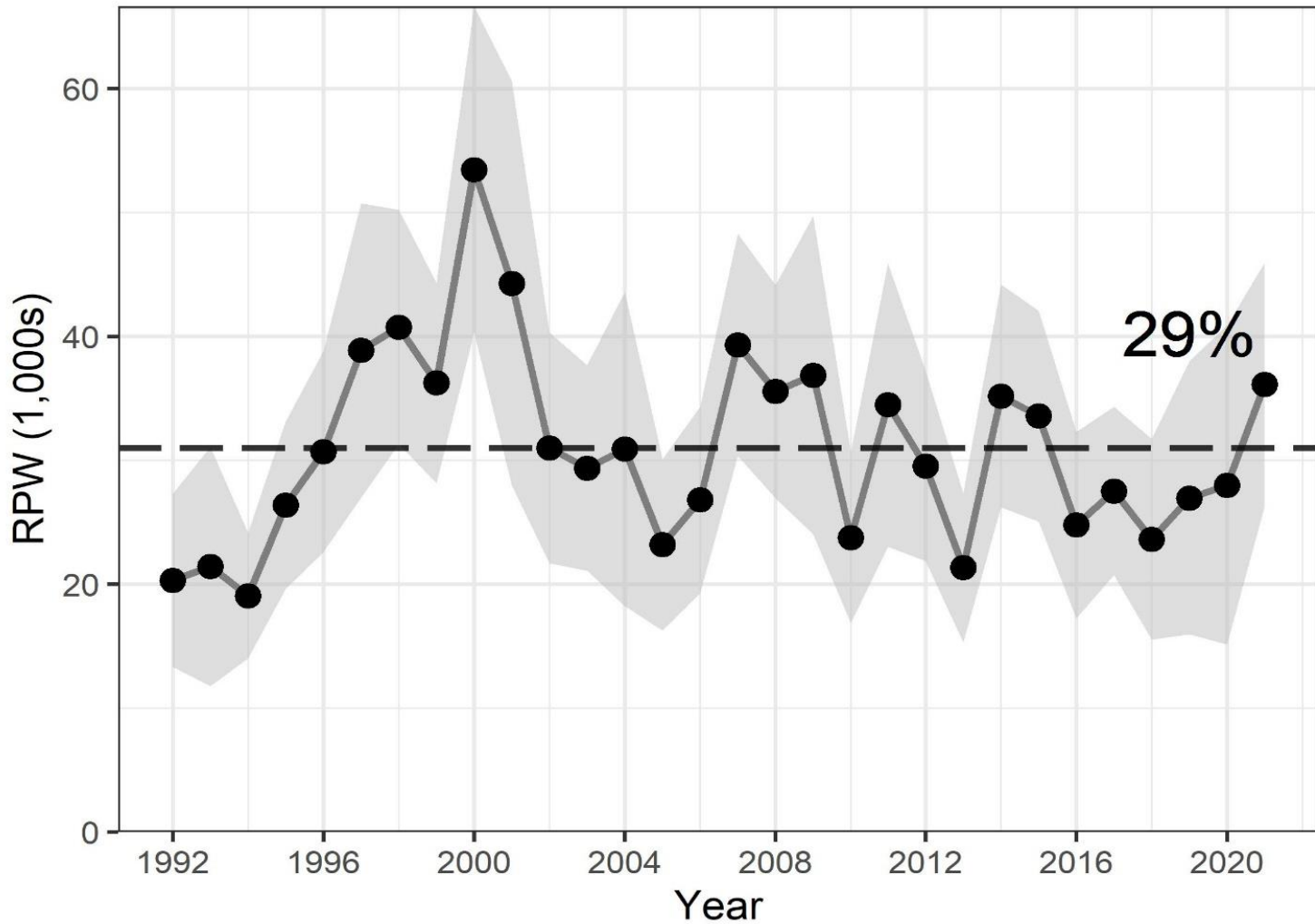
Shortraker – Input Data



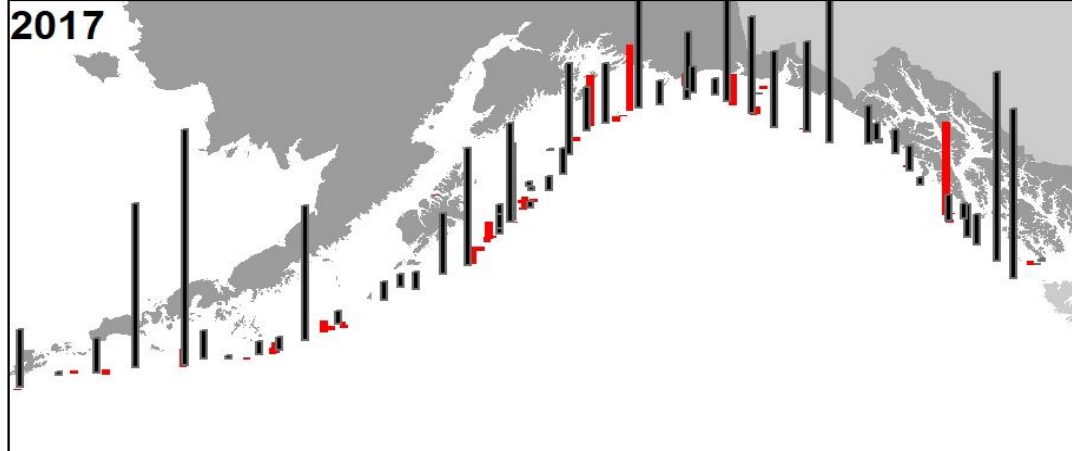
Shortraker: Trawl Survey Biomass



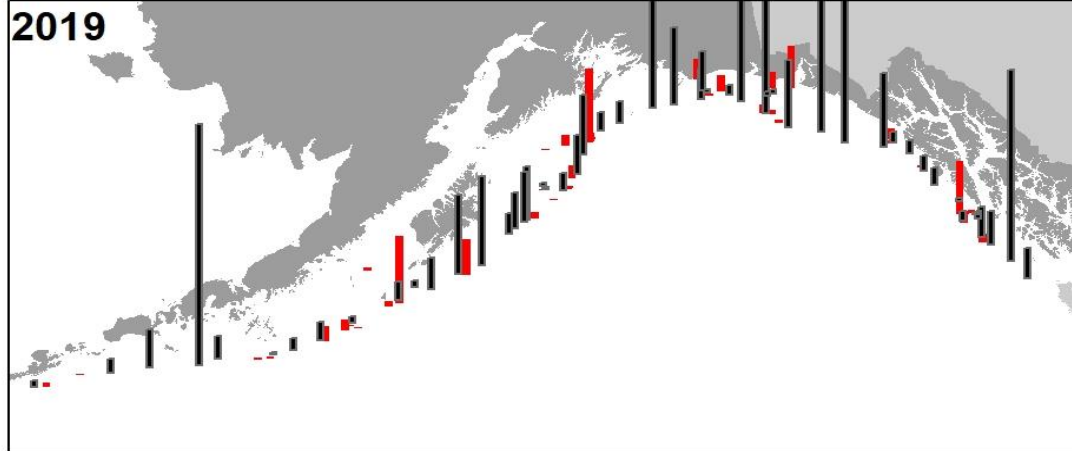
Shortraker: LL Survey RPWs



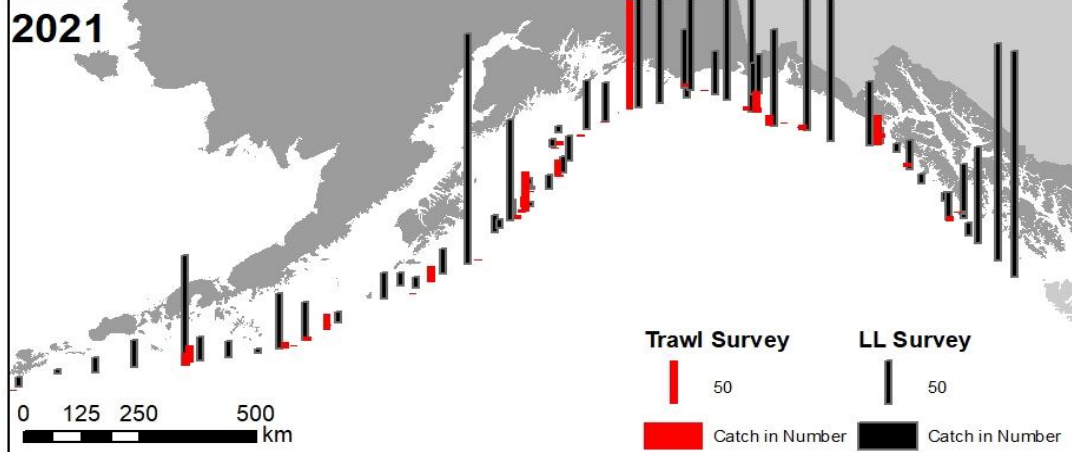
2017



2019



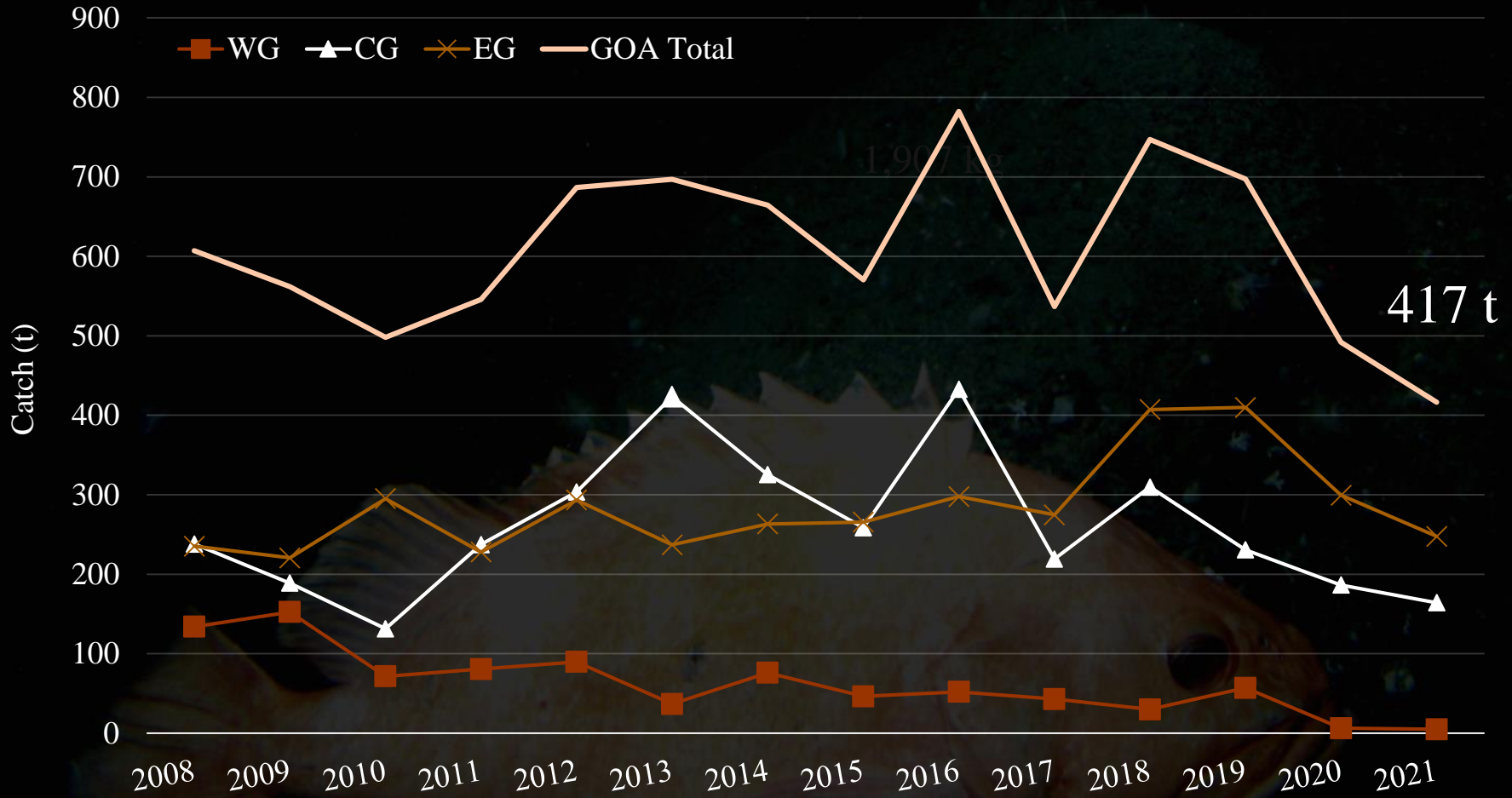
2021



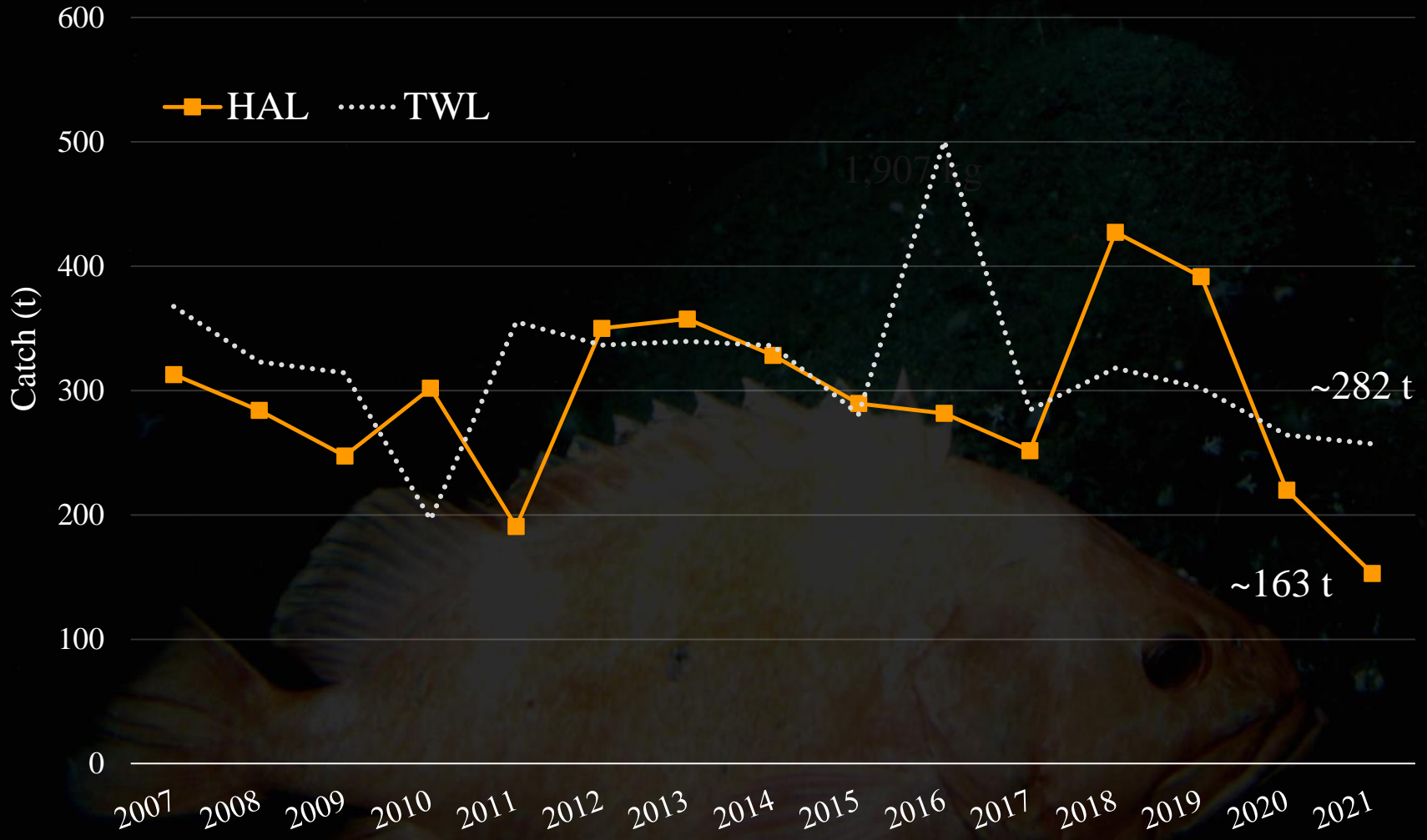
Shortraker – Catch Update



Shorthead: Catch by area

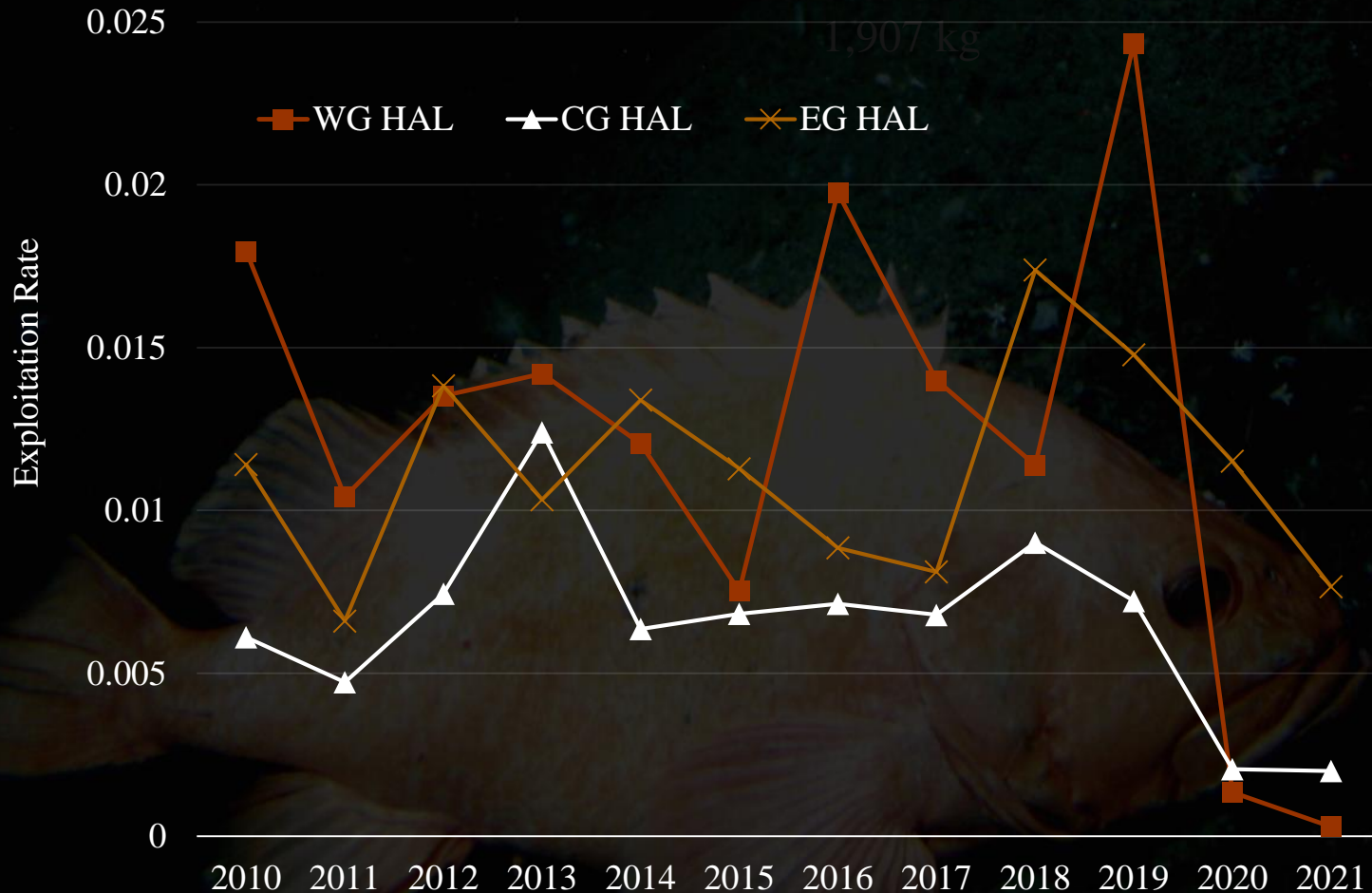


Shortraker: Catch by gear

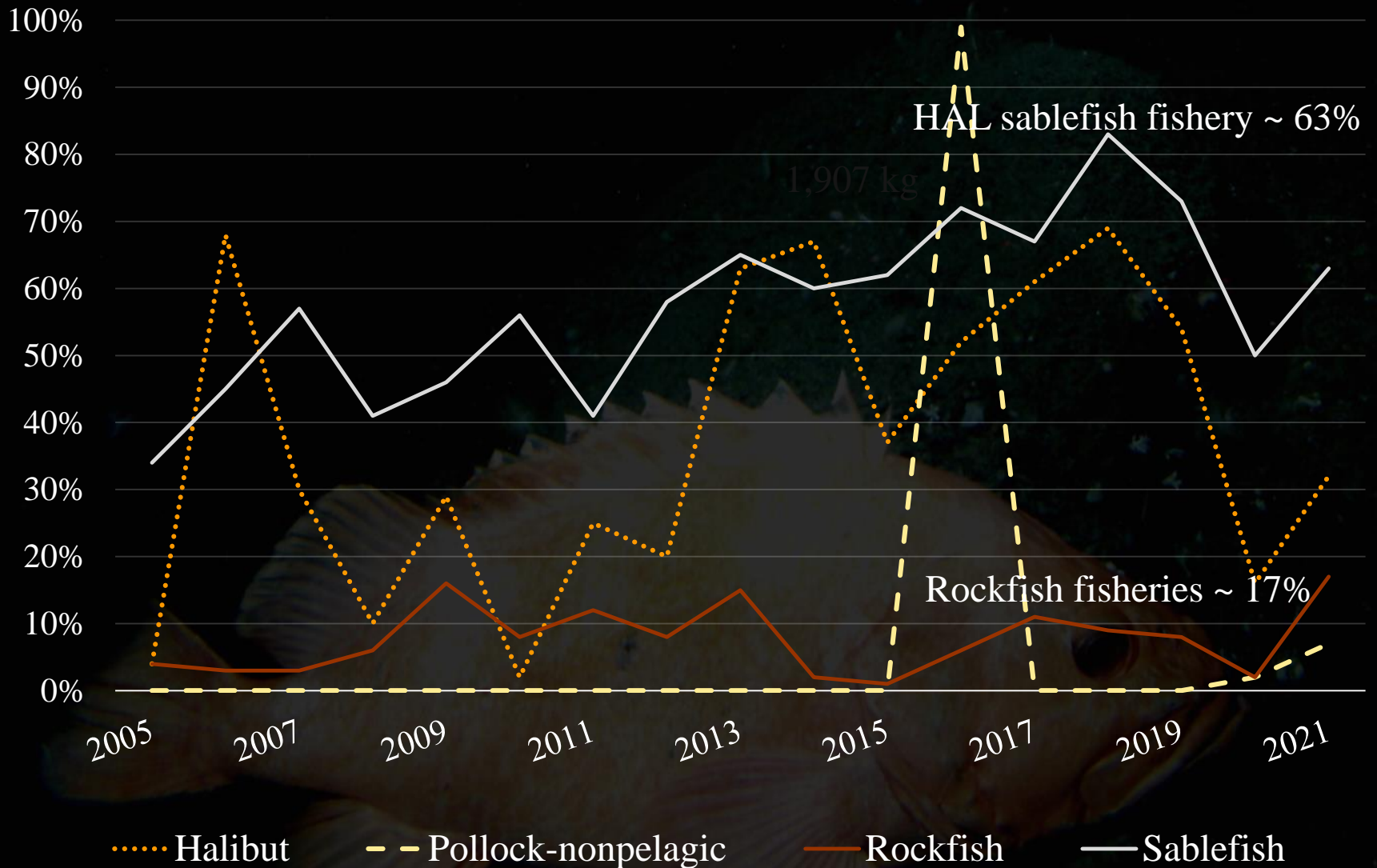


Shortraker Exploitation Rate: PT/SSC Comment

The SSC notes the large increase in the 2019 exploitation rate for the hook and line fleet in the Western GOA...new regulations will require full retention of rockfish for hook and line fisheries in the GOA, and important impacts from this regulatory change should be considered in the next full assessment. (SSC, December 2019)



Shortraker: Discard rate by target fishery



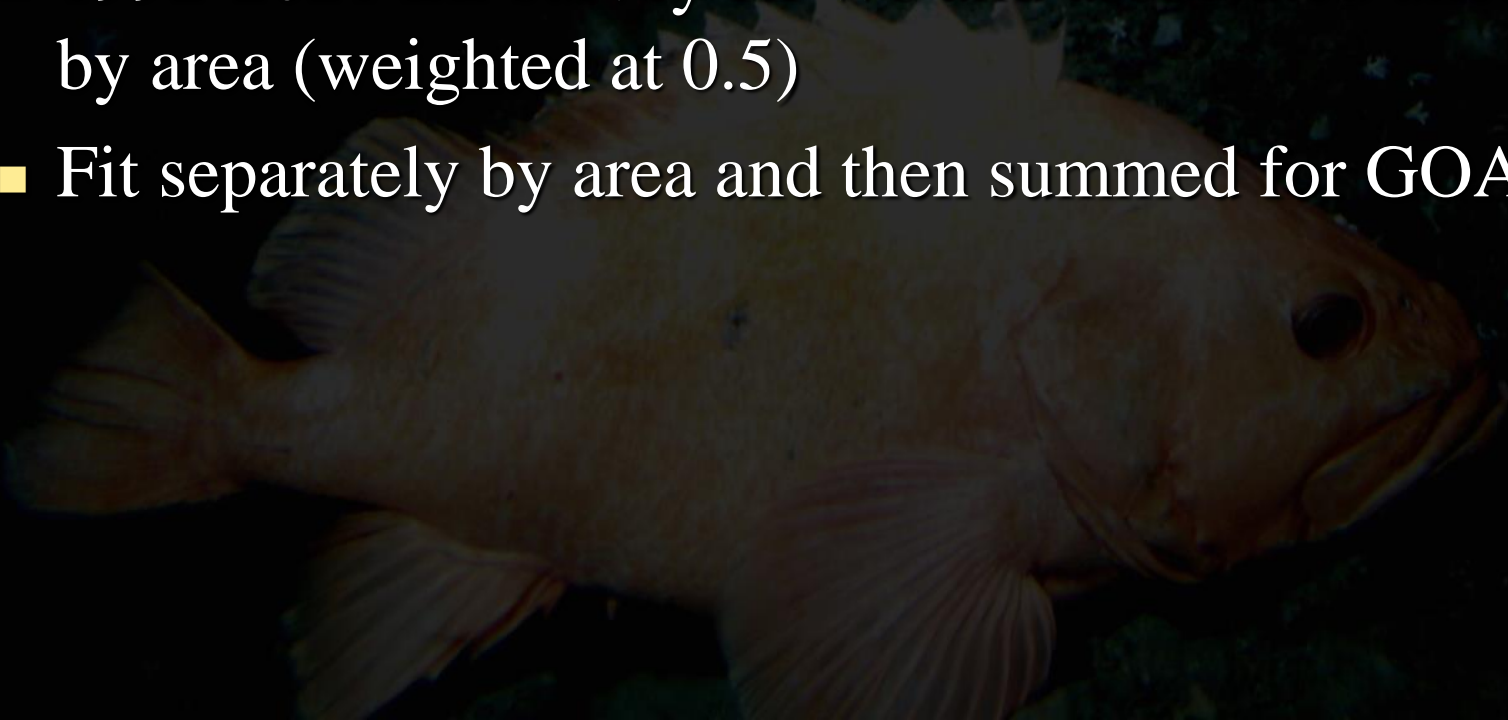
Shortraker – Methods



Model



- Model 19.2a – Random effects model fit to:
 - 1984-2021 trawl survey biomass and associated uncertainty by area
 - 1992-2021 LL survey RPWs and associated uncertainty by area (weighted at 0.5)
 - Fit separately by area and then summed for GOA total

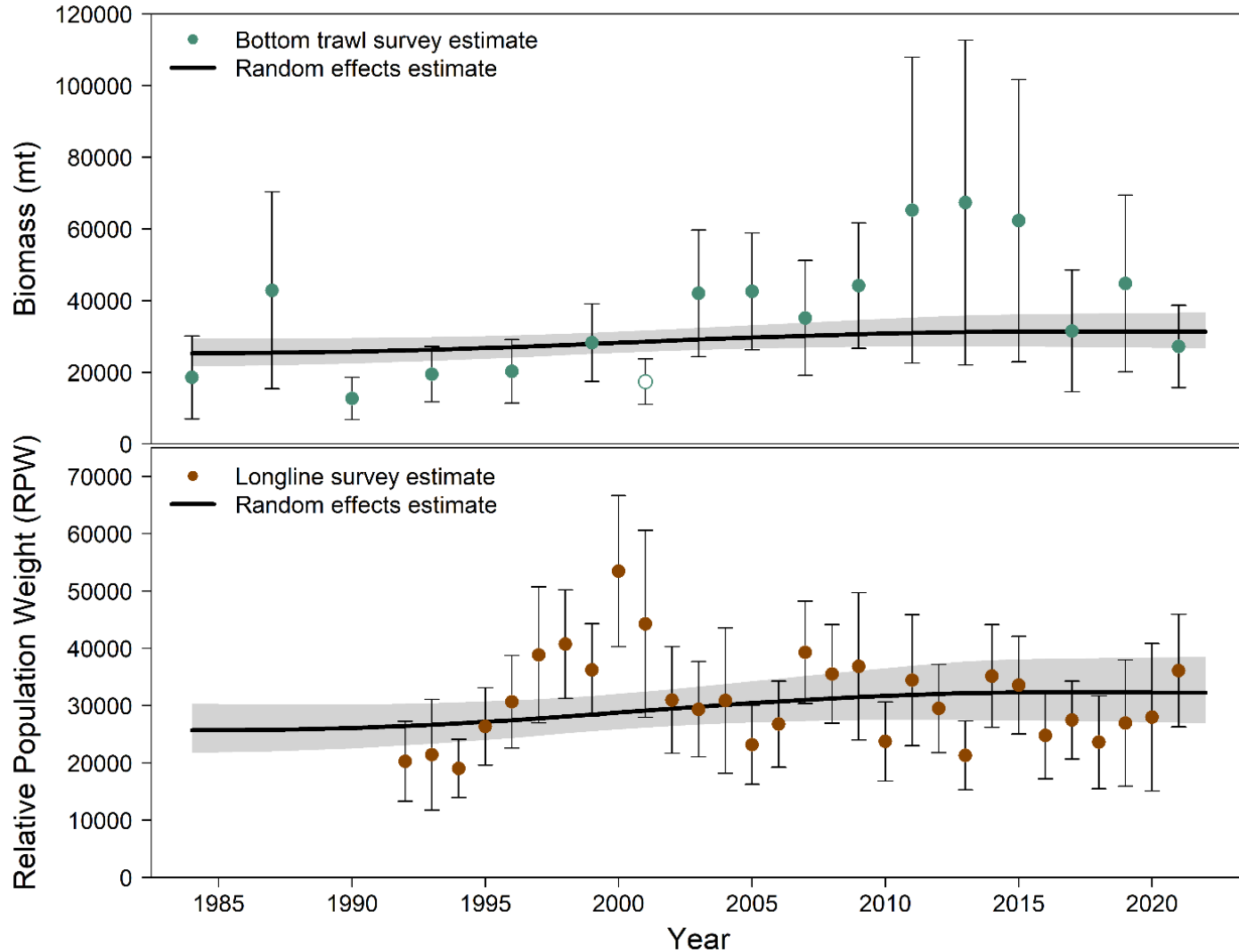


Model: PT/SSC Comments

The SSC requests further clarification on the justification of the weightings used in the assessment...concisely describe differences in the type of information that each survey index provides about regional components of the shortraker population, and whether this is informative to the weighting of indices. (SSC, Dec. 2019)

- ❑ Both surveys suffer from sampling error that makes it difficult to consider one source to be more accurate or reliable than the other.
- ❑ By region, the estimated uncertainty in the longline survey RPW index is consistently smaller than the uncertainty in the bottom trawl survey biomass.
- ❑ By reducing the weight of the longline survey to 0.5, the model is inherently equalizing the relative contribution of these two indices to the model estimates.
- ❑ We will follow the recommendation that a working group be formed to develop standard practices for data weighting. (SSC, Oct. 2021)

Estimated Exploitable Biomass via Random Effects Model



Trawl
survey
biomass
↓ 39 %

LL Survey
RPW
↑ 29 %

Shortraker – Recommendations/Appportionment



GOA Shortraker Summary

■ Recommendations for 2022 (tier 5):

- $F_{OFL} = M = 0.03$
- B (exploitable biom.) = 31,331 t
- **OFL** = 31,331 x 0.03 = **940 t**
- $F_{ABC} = 0.75 * M = 0.0225$
- **ABC** = 31,331 x 0.0225 = **705 t**
 - Similar to 2020 & 2021 ABC of 708 t

Shortraker Apportionment of ABC for 2022

Apportionment is based on random effects estimation of biomass by region, fit to 1984-2021 trawl survey biomass and 1992-2021 longline survey RPWs

- Western: 51 t (↓ 2%)
- Central: 280 t (↓ 1%)
- Eastern: 374 t (↑ <1%)

Shortraker – Risk Matrix



GOA Shortraker Summary

Assessment-related	Population dynamics	Environmental/ecosystem	Fishery Performance	Overall score
Level 1: Normal	Level 1: Normal	Level 1: Normal	Level 1: Normal	Level 1: Normal

- Survey biomass estimates and RPWs have generally shown large changes from year to year (typical of several rockfish species), but CVs have generally remained low.
- The inclusion of two data sources (trawl and LL surveys) in the RE model has allowed for increased stability of biomass estimates and more consistent regional apportionments across time.

GOA Shortraker Summary

Assessment-related	Population dynamics	Environmental/ecosystem	Fishery Performance	Overall score
Level 1: Normal	Level 1: Normal	Level 1: Normal	Level 1: Normal	Level 1: Normal

- Little to no information exists on the population dynamics
- Unable to estimate recruitment
- Survey biomass estimates have shown normal variability for shortraker rockfish

GOA Shortraker Summary

Assessment-related	Population dynamics	Environmental/ecosystem	Fishery Performance	Overall score
Level 1: Normal	Level 1: Normal	Level 1: Normal	Level 1: Normal	Level 1: Normal

- Approximately average physical environmental conditions
- Mixed trends/unknown foraging conditions (mixed trends in shrimp abundance, negative body condition of other rockfish)
- Potential for competition with pink salmon and sablefish but the actual effect is unknown
- Unknown predation pressure

GOA Shortraker Summary

Assessment-related	Population dynamics	Environmental/ecosystem	Fishery Performance	Overall score
Level 1: Normal	Level 1: Normal	Level 1: Normal	Level 1: Normal	Level 1: Normal

- Low stable catch of this non-directed fishery species
- Catch has historically remained below the TAC
- Bycatch of this species may continue to trend downward due to increased use of pot gear
- Discarding remains high, but is expected to decrease due to retention regulations

GOA Shortraker Summary

Assessment-related	Population dynamics	Environmental/ecosystem	Fishery Performance	Overall score
Level 1: Normal	Level 1: Normal	Level 1: Normal	Level 1: Normal	Level 1: Normal

The overall score of level 1 suggests no need to set the ABC below the maximum permissible.

Thanks!

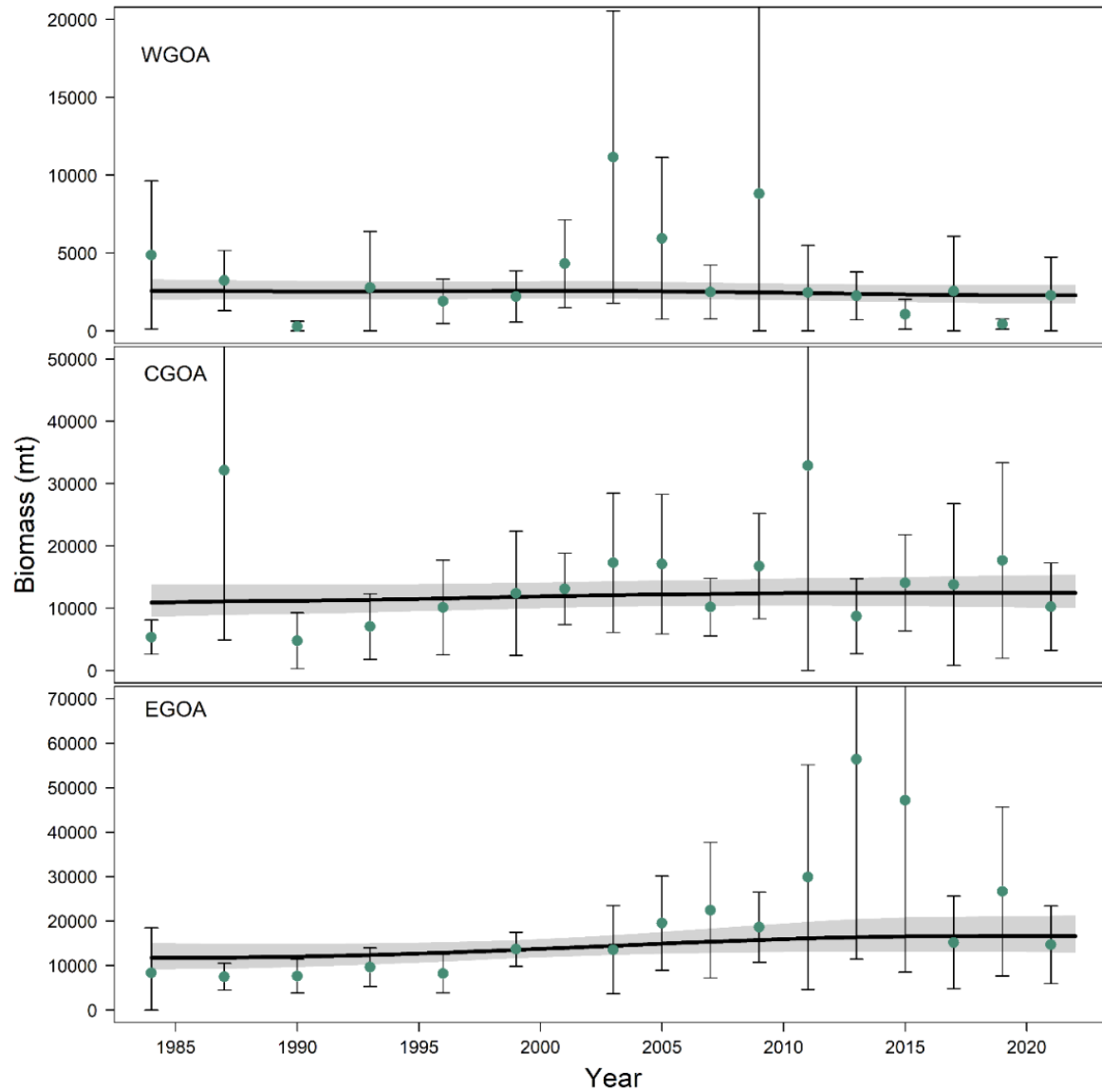




Extra slides



Estimated Exploitable Biomass via Random Effects Model



Estimated Exploitable Biomass via Random Effects Model

