

Assessment and management of the thread herring stock complex (*Opisthonema* spp.) in the southern Gulf of California, 2024.

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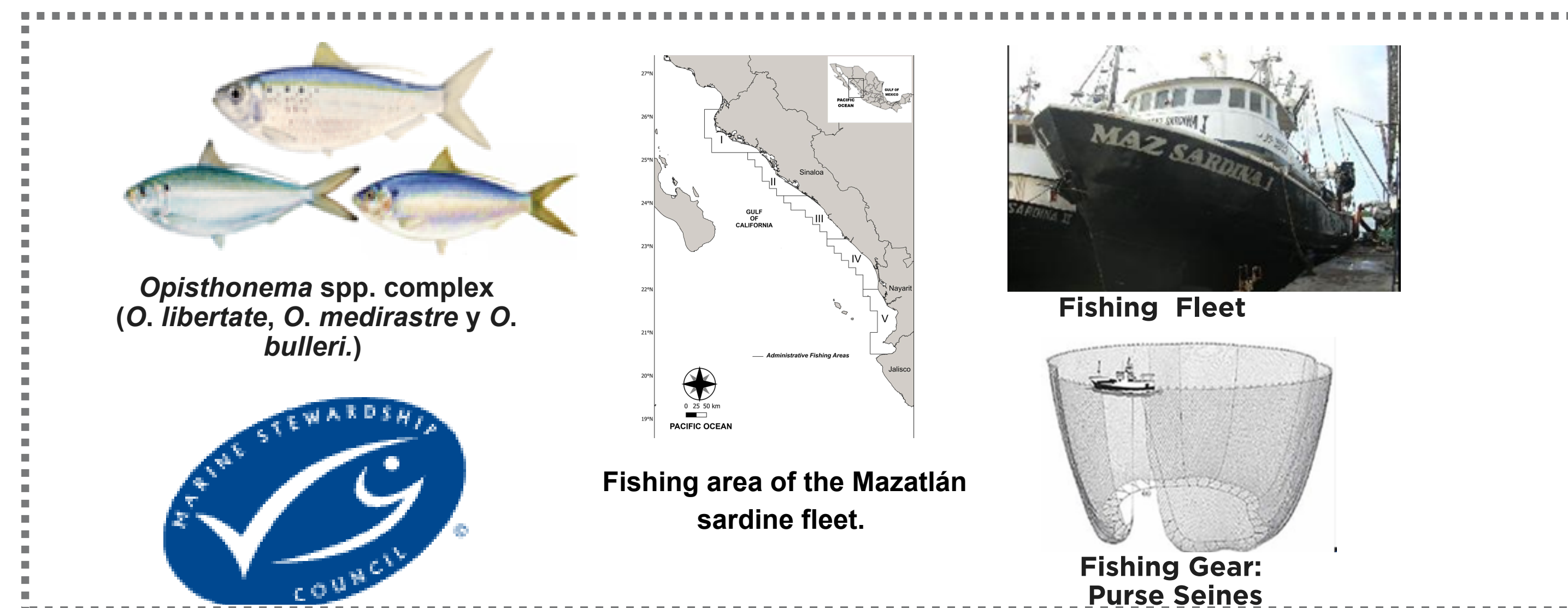
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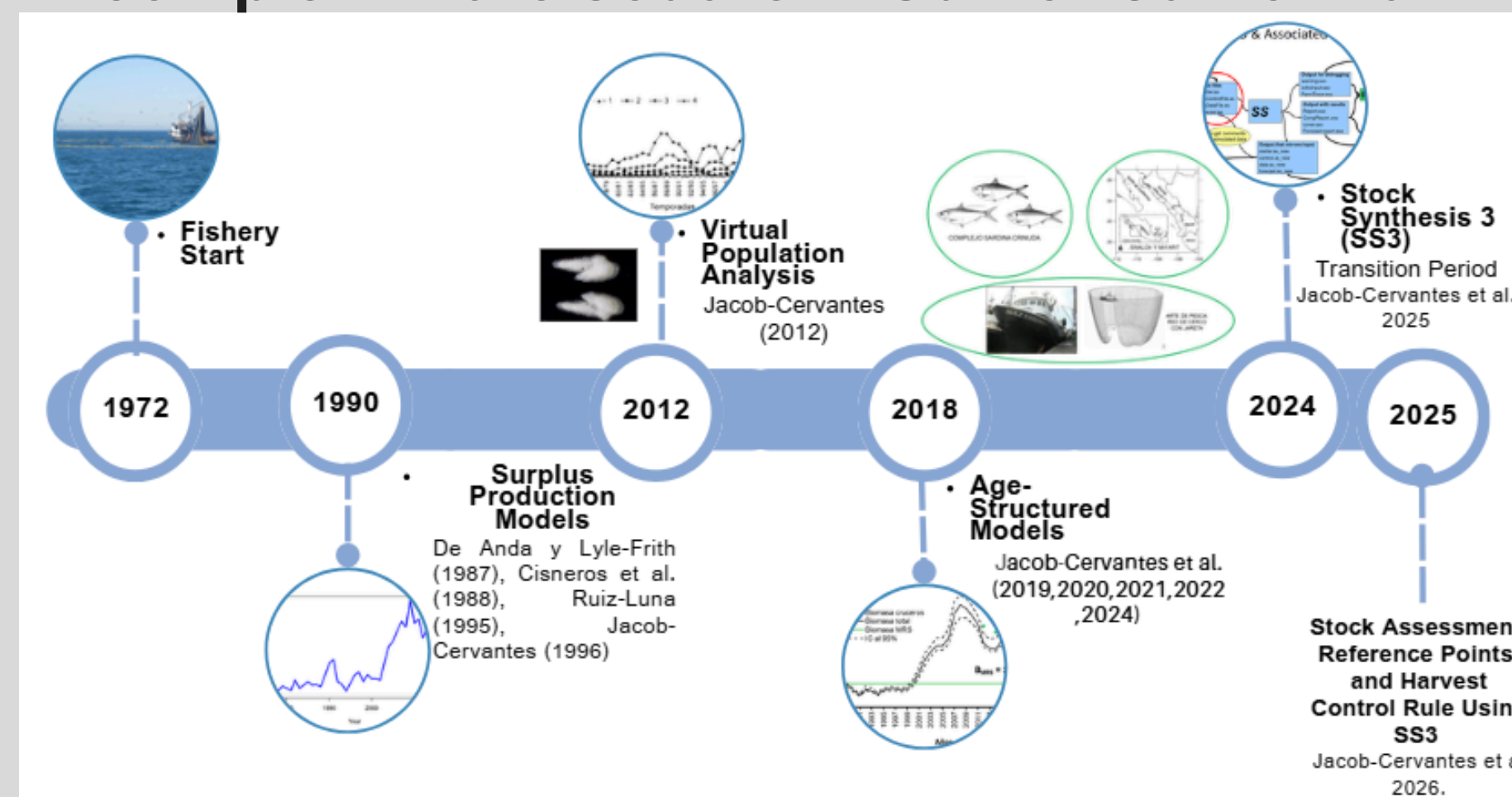


INTRODUCTION

SOUTHERN GULF OF CALIFORNIA FISHERY



Stock assessment models for the *Opisthonema* spp. complex in the southern Gulf of California.

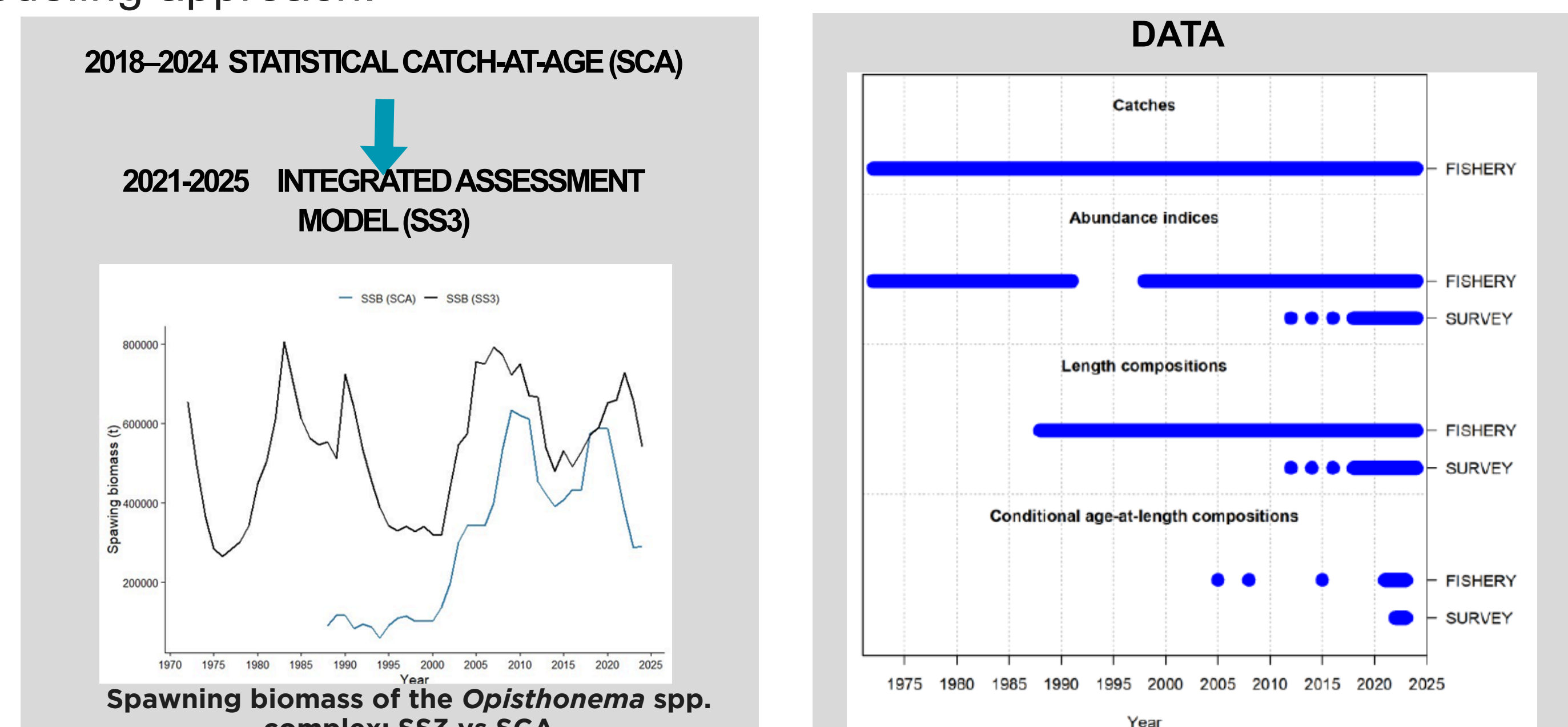


OBJECTIVE

To assess the stock status of the thread herring complex (*Opisthonema* spp.) in the southern Gulf of California in order to recommend management measures based on the biological status of the resource, ensuring its sustainable exploitation.

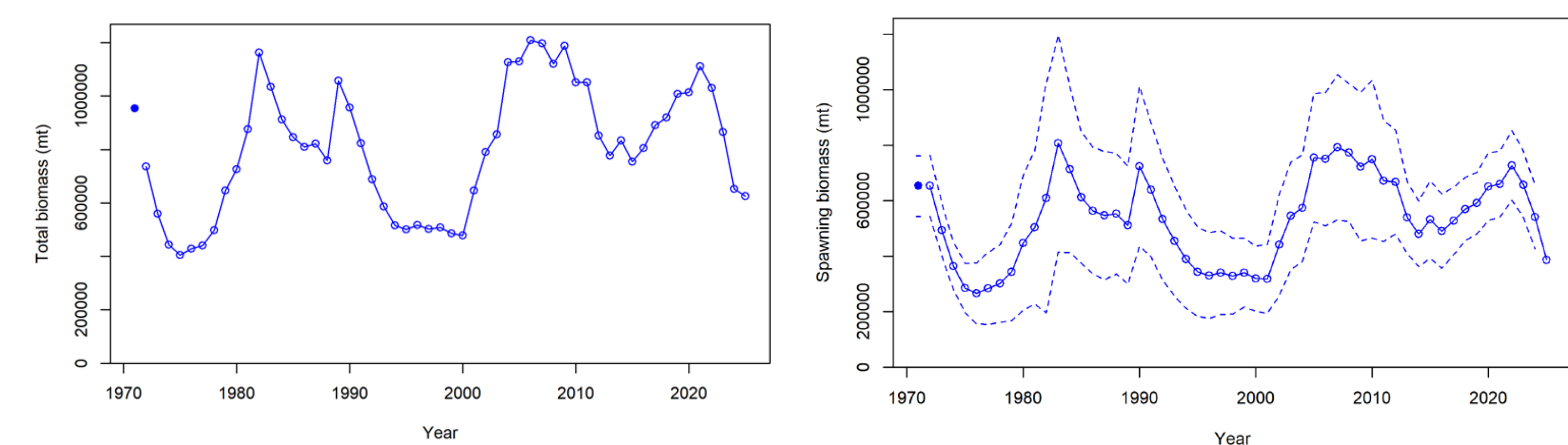
METHODOLOGY

The model used in this assessment were implemented using Stock Synthesis (SS3)¹, available at <https://vlab.noaa.gov/web/stock-synthesis>. This integrated assessment model represents the result of a five-year transition from a statistical catch-at-age (SCA) framework to an integrated modeling approach.

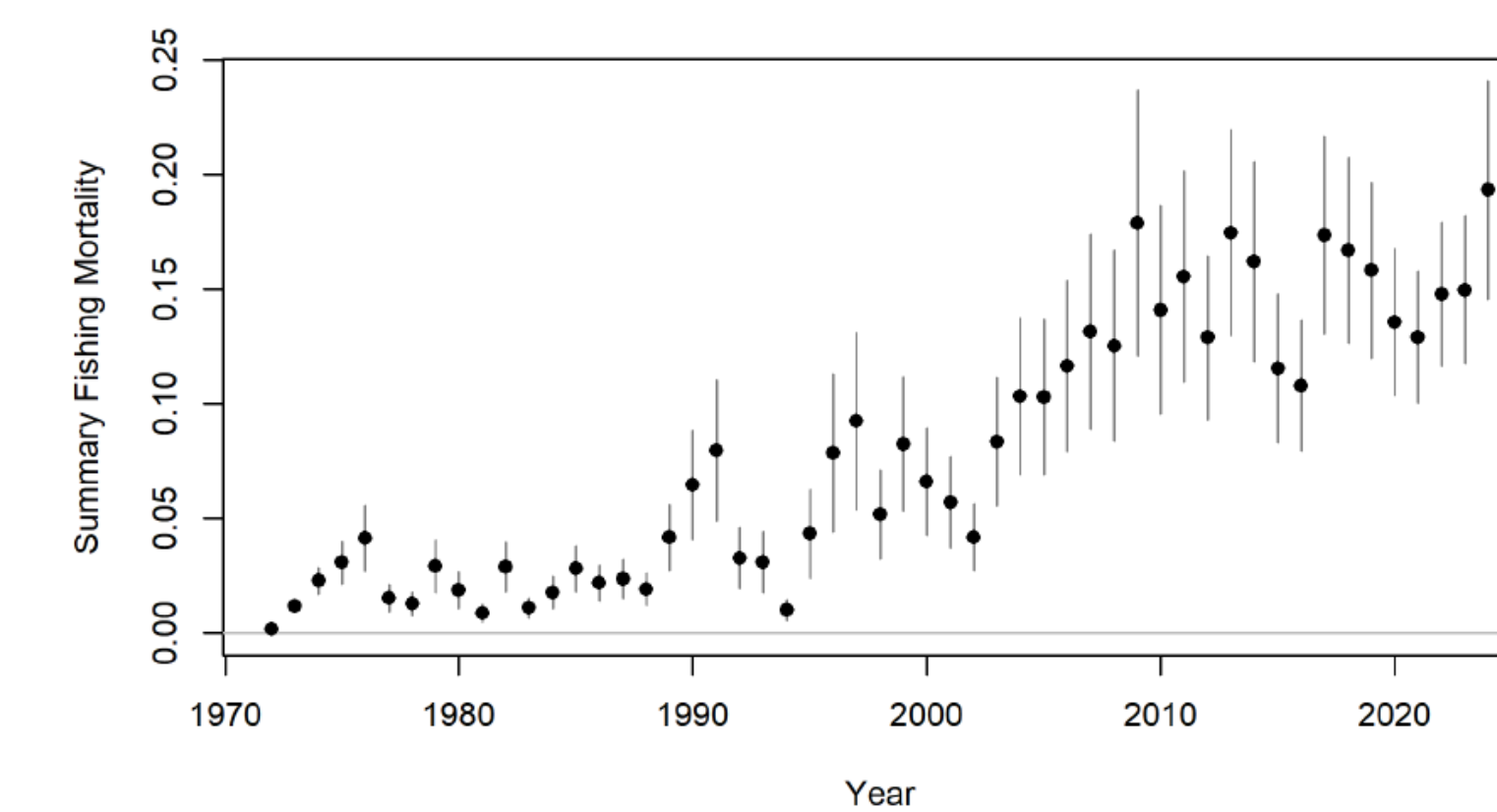


RESULTS

Total Biomass and Spawning Biomass (SSB)

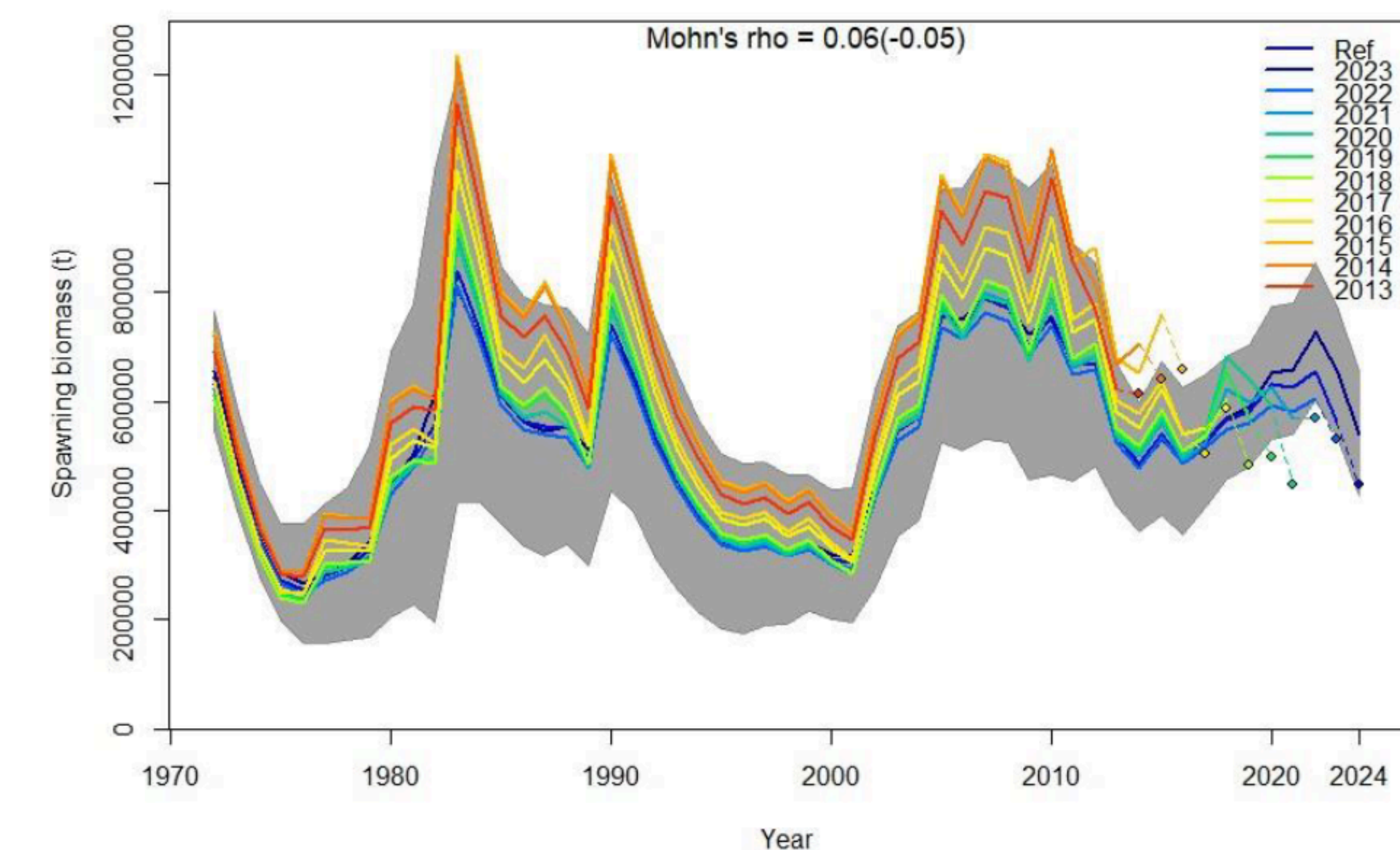


Fishing mortality (F)

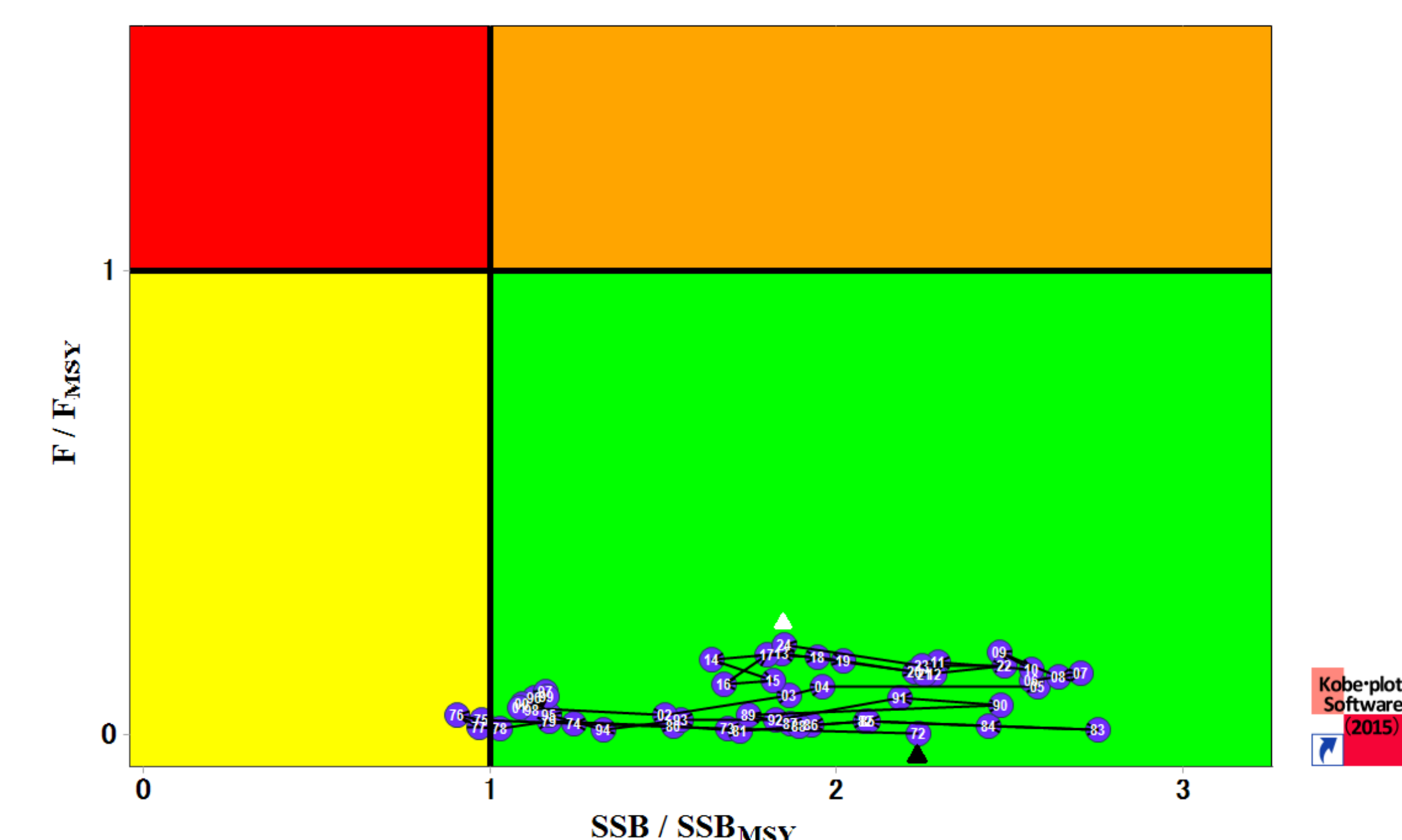


Indicator	2024 Value
Total biomass	652,632 t
SSB	540,796 t
SSBMSY	292,614 t
F	0.193
FMSY	0.415

Retrospective analysis of the model for the *Opisthonema* spp. complex



Fishery development



CONCLUSIONS

- This study presents the first integrated stock assessment (SS3) for the thread herring complex (*Opisthonema* spp.) in the southern Gulf of California.
- The model showed biological and statistical consistency and stability in the retrospective analysis (Mohn's rho = 0.06).
- The Kobe plot indicates that the stock is healthy and sustainably exploited.
- The results of this model provide a robust basis for fisheries management and the implementation of harvest control rules.
- This model provides the scientific information necessary to advance sustainability certification processes under the principles of the Marine Stewardship Council (MSC).

ACKNOWLEDGEMENTS

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References:

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