Preliminary 2024 stock assessment of yellowfin tuna in the Indian Ocean

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1 Executive Summary

Make a short summary of the main results and conclusions of this report. This is an example of a reference (Fu et al. 2021).

2 Introduction

Introduction to the report. Some background of previous assessments.

3 Background

3.1 Stock structure

Genetic, parasite, and other relevant studies for stock structure.

3.2 Biology

Growth, natural mortality, maturity, etc.

3.3 Fisheries

Describe main fisheries and their contribution to the total catch, etc.

4 Data

4.1 Spatial stratification

Describe spatial stratification of the data. Note it do not necessarily need to follow the same stratification in the assessment model.

4.2 Temporal stratification

Time period, seasonal, etc.

4.3 Definition of fisheries

Fisheries that are included in the assessment model.

4.4 Catch

Describe catch per fishery, time series, etc. This is Figure 1.

4.5 Indices

Describe available indices, methodology for standardization, etc.

4.6 Size data

Describe size data, length bins, catch raising, etc.

4.7 Age data

Describe age-length information, etc.

4.8 Tagging

Tagging information

5 Model description

5.1 Population dynamics

Parametrization of recruitment, growth, etc in SS.

5.2 Fishery dynamics

Selectivity principally.

5.3 Tagged fish

Tag reporting, mixing, etc.

5.4 Likelihood components

Weights, error structure, observation error, etc.

5.5 Parameter estimation and uncertainty

Hessian, max gradient, jitter analysis, likelihood profiles, etc.

5.6 Stock status

Related to MSY, depletion trends, Kobe, etc.

6 Model runs

6.1 Update from the last assessment

Describe stepwise model developtment, etc.

6.2 Sensitivity and structural uncertainty

Different steepness, M, etc, and spatial configurations.

7 Results

7.1 Fits

Describe fits to data.

7.2 Parameter estimates

Describe parameter estimates.

7.3 Time series

Recruitment, SSB, etc.

7.4 Sensitivity

Describe sensitivity analyses.

8 Discussion and conclusions

Discuss. Recommendations for future assessments.

9 Acknowledgements

Write your acknowledgements.

10 Tables

Here insert your tables.

11 Figures

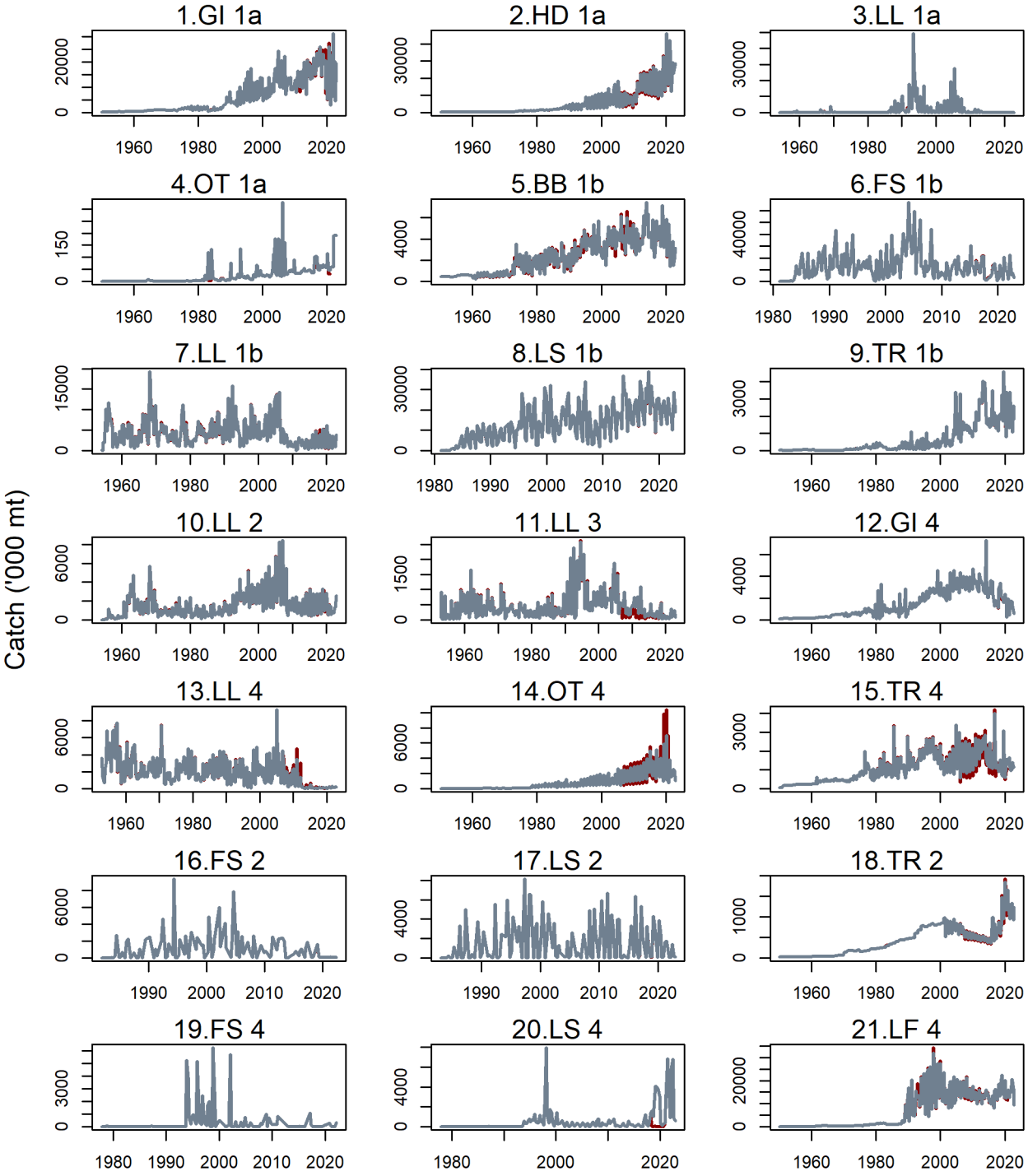

Figure 1: Add your caption here.

12 Appendix

12.1 Acronyms and Abbreviations

Include a table with acronyms (e.g., GLMM, SS, etc.)

12.2 Likelihood profiles

12.3 Retrospective analyses

References

Fu, Dan, Agurtzane Urtizberea Ijurco, Massimiliano Cardinale, Richard D Methot, Simon D. Hoyle, and Gorka Merino. 2021. "Preliminary Indian Yellowfin Tuna Stock Assessment 1950-2020 (Stock Synthesis)." IOTC-2021-WPTT23-12. Indian Ocean Tuna Comission.