WP1_ECOFISH PROJECT

Statistical-catch-at-age vs State-space assessment model: a case of Namibian hake stock

John Kathena

Anders Niels, Uffe Hogsbro Thygesen, Teunis Jansen, Hashali Hamukuaya

6th BCC Annual Science Forum, Swakopmund
Objective of the study

✓ The aim of this study is to benchmark the Statistical catch-at-age model with a state-space stochastic stock assessment model.

✓ Compare the model fits to the data

✓ Compare the model outputs as estimate by the two stock assessment model.

✓ Compare the uncertainties in model output
Commercial selectivity
Survey selectivity

- SAM
- SCAA
Transparent for all users:
- see all details of the implementation
- run the assessment
- experiment with data
- experiment with model assumptions
- everyone is running the same version and uses same data
- makes update assessment very easy
- System keeps track of all changes
Summary

- Both models predict the spawning stock biomass to be lower in the most recent years.
- The models showed different fishing mortality patterns.
- Both models provide a similar pattern/fits to the catch-at-age data, with minimum differences.
- SCAA show some consistent under or overestimation in the predicted and observed proportion catch-at-age.
- Both models presented different selectivity patterns in both commercial and survey selectivity.
- The largest difference in the diagnostics between the methods were found in the selectivity, where clearly different underlying assumptions are deployed.
Thank you!!!!