Workshop on the Development of Quantitative Assessment Methodologies based on Life-history traits for stocks in categories 3-6 (WKLIFE VIII)

Evaluation of ICES *2 over 3* Rule

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Outline

- ICES uses a rule of the form $C_{y+1} = C_{current} rfb$ for category 3 stocks. Decompose this rule into its elements, and then look at their relative importance and interactions.

- This can be done by first by performing some simulations, i.e. use the OM/OEM without feedback to test candidate methods. If a method can not get a reasonable estimate of the stock status why use it in an MP?

- rfb

  Ct: How much to change the TAC by, a lot for a short lived species with a high r and variable recruitment like sprat or only a little bit for Ray?

  r: (average of stock size index in the 2 most recent years)/(average of stock indexin the predeeding three years). Why 2 over 3? does it depend on life history?, why not dI/dt, i.e. slope of Index.

  f: Length bases proxies for f/fmsy. i.e. based on length. LBSPR seems to work, but Gedamke/hoenig is not looking good

  b: This is a the HCR: i.e. with biomass targets and limits. These could be reference points or reference periods.

- Once we have a better understanding of the elements we can then come up with the ones that are worth pursuing and tune some MPs. Comparing across life histories will make this work particularly useful.

- We can also use machine learning to come up with "better" MPs.

1. Introduction

In this study we use Management Strategy Evaluation (MSE) to test advice rules that utilise length-based approaches and advice rules.

ICES uses a rule of the form $C_{y+1} = C_{current} rfb$.

The specific aims of the study are to

- Establish whether performance of the advice rules is correlated with life-history characteristics

- If such correlations exist, develop guidelines for use of the advice rules dependent on life-history characteristics

2. Material and Methods

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3. Results

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4. Discussion and Conclusions

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5. Acknowledgements

6. Figures