



Update on inputs to space-time modelling of survey data for 2019

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PURPOSE

To update SRB members on space-time modelling data inputs for 2019.

BACKGROUND/INTRODUCTION

Since 2016, IPHC Secretariat staff has used a space-time modelling approach to estimate indices of density and biomass for use in stock assessment modelling and estimation of stock distribution. Among other advantages over the previous empirical method, the modelling allows easy integration of data from expansions of the IPHC fishery-independent setline survey (FISS), removing the need for computing ad-hoc adjustment scalars each time new regions are covered by the FISS. In 2019, planned IPHC FISS expansions took place in IPHC Regulatory Areas 3A and 3B. In addition to these expansions, a comparison of fixed and snap gear was conducted using a randomised design at FISS stations in Regulatory Area 2C. At the time of writing, the FISS is currently nearing completion, and results (including modelling output) are still to be determined.

OTHER CHANGES OR UPDATES

- The FISS database has been updated to reflect revised criteria for declaring sets ineffective due to whale depredation. 2019 will be the first year of using data with the new criteria applied to past years.
- The FISS timing adjustment will be updated using 2018 data (this adjustment has a one-year lag).
- Data from the 2019 northern expansion of the NMFS Bering Sea trawl survey is expected to be available along with the annual trawl survey data and Alaska Department of Fish and Game trawl data for Norton Sound. All available data will be included in the space-time modelling in 2019.
- Routine weighing of Pacific halibut on the FISS was introduced in 2019. Where available, direct measurements of weights will be used in computing weight per unit effort (WPUE) indices for space-time modelling input. Previously, weights were estimated using the standard IPHC length-weight curve, but there is evidence that this curve no longer produces unbiased estimates. Missing weight data can be estimated using length-weight curves calculated from the 2019 data.

RECOMMENDATION

That the SRB:

- 1) **NOTE** paper IPHC-2019-SRB015-05 which provides and update on space-time modelling data inputs for 2019, noting a ppt will be presented in session.