



Space-time modelling of survey data

PREPARED BY: IPHC SECRETARIAT (R. A. WEBSTER; 30 OCTOBER 2025)

PURPOSE

To provide results of the space time modelling of Pacific halibut survey data for the period 1993-2025.

INTRODUCTION

Since 2016 space-time modelling has been used by the IPHC to produce estimates of mean O32 WPUE (weight per unit effort), all sizes WPUE and all sizes NPUE (numbers per unit effort) indices of Pacific halibut density and abundance. The modelling depends primarily on data from the IPHC's Fishery-Independent Setline Survey (FISS), but in the Bering Sea also integrates data from the National Oceanic and Atmospheric Administration - Fisheries annual trawl survey and the Alaska Department of Fish and Game's annual Norton Sound trawl survey. Both surveys are fishery-independent data sources.

Since 2019, weighing of Pacific halibut onboard FISS charter vessels has meant that the weight data used to compute WPUE now comes almost entirely from observed weights of fish rather than estimates from a length-net weight relationship. For fish without directly measured weights, weights are predicted from a year- and IPHC Regulatory Area-specific length-net weight relationship estimated from the FISS length and weight data. For U32 fish with round weight recorded, net weights are estimated from a round-net weight relationship estimated from coastwide sample data from the 2019 FISS.

RESULTS OF SPACE-TIME MODELLING IN 2025

Results for O32 WPUE, all-sizes WPUE and all-sizes NPUE will be added to a Rev_1 document when modelling is completed.

Tables of model output (time series, stock distribution estimates) are updated annually on the IPHC website at <https://www.iphc.int/data/time-series-datasets>.

FISS model output may also be explored interactively using the link on this page of the IPHC website: <https://www.iphc.int/data/datatest/fishery-independent-setline-survey-fiss>.

TIMELINE FOR REVISION

The completed document (IPHC-2025-IM101-09 Rev_1) is anticipated to be available no later than **07 November 2025**.

RECOMMENDATION

That the Commission **NOTE** paper IPHC-2025-IM101-09 which provides results of the space-time modelling of Pacific halibut survey data for 1993-2025.