



Summary of the data, stock assessment, and harvest decision table for Pacific halibut (*Hippoglossus stenolepis*) at the end of 2020

NOTE: This document is a placeholder. A Rev_1 will be published prior to IM096.

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PURPOSE

To provide the Commission with a summary of the data, stock assessment, and Harvest Decision Table at the end of 2020.

INTRODUCTION

In 2020 the International Pacific Halibut Commission (IPHC) undertook its annual coastwide stock assessment of Pacific halibut (*Hippoglossus stenolepis*). This assessment represents an update to the 2019 stock assessment, with incremental changes documented through a two-part review by the IPHC's Scientific Review Board (SRB; [IPHC-2020-SRB016-R](#), [IPHC-2020-SRB017-R](#)). Changes and new data for 2020 include:

- 1) Update the version of stock synthesis used for the analysis (3.30.15.09).
- 2) Add sex-specific recreational age composition data from IPHC Regulatory Area 3A (and allow for sex-specific differences in selectivity) where previously only sexes-aggregated age compositions were available.
- 3) Include newly available sex-ratios-at-age for the 2019 commercial fishery (building on the 2017 and 2018 sex-ratios used in the 2019 stock assessment).

At the time this document was produced, the final data updated through 2020 were not yet available. Additional data anticipated for the final 2020 stock assessment include:

- 1) New modelled trend information from the 2020 FISS including predictions covering both sampled and unsampled (but informed by covariates and the temporal correlation parameters) IPHC Regulatory Areas.
- 2) Age, length, individual weight, and average weight-at-age estimates from the 2020 FISS for all sampled IPHC Regulatory Areas.
- 3) 2020 (and a small amount of 2019) Commercial fishery logbook trend information from all IPHC Regulatory Areas.
- 4) 2020 Commercial fishery biological sampling (age, length, individual weight, and average weight-at-age) from all IPHC Regulatory Areas.
- 5) Biological information (lengths and/or ages) from non-directed discards (all IPHC Regulatory Areas) and the recreational fishery (IPHC Regulatory Area 3A only) from 2019.
- 6) Updated mortality estimates from all sources for 2019 (where preliminary values were used) and estimates for all sources in 2020.

This document will provide an overview of the final data sources available for the 2020 Pacific halibut stock assessment including the population trends and distribution among Regulatory Areas based on the modelled IPHC fishery-independent setline survey (FISS), directed commercial fishery data, and results of the stock assessment.

STOCK AND MANAGEMENT

The stock assessment reports the status of the Pacific halibut (*Hippoglossus stenolepis*) resource in the IPHC Convention Area. As in recent stock assessments, the resource is modelled as a single stock extending from northern California to the Aleutian Islands and Bering Sea, including all inside waters of the Strait of Georgia and Puget Sound, but excludes known extremities in the western Bering Sea within the Russian Exclusive Economic Zone (Figure 1).

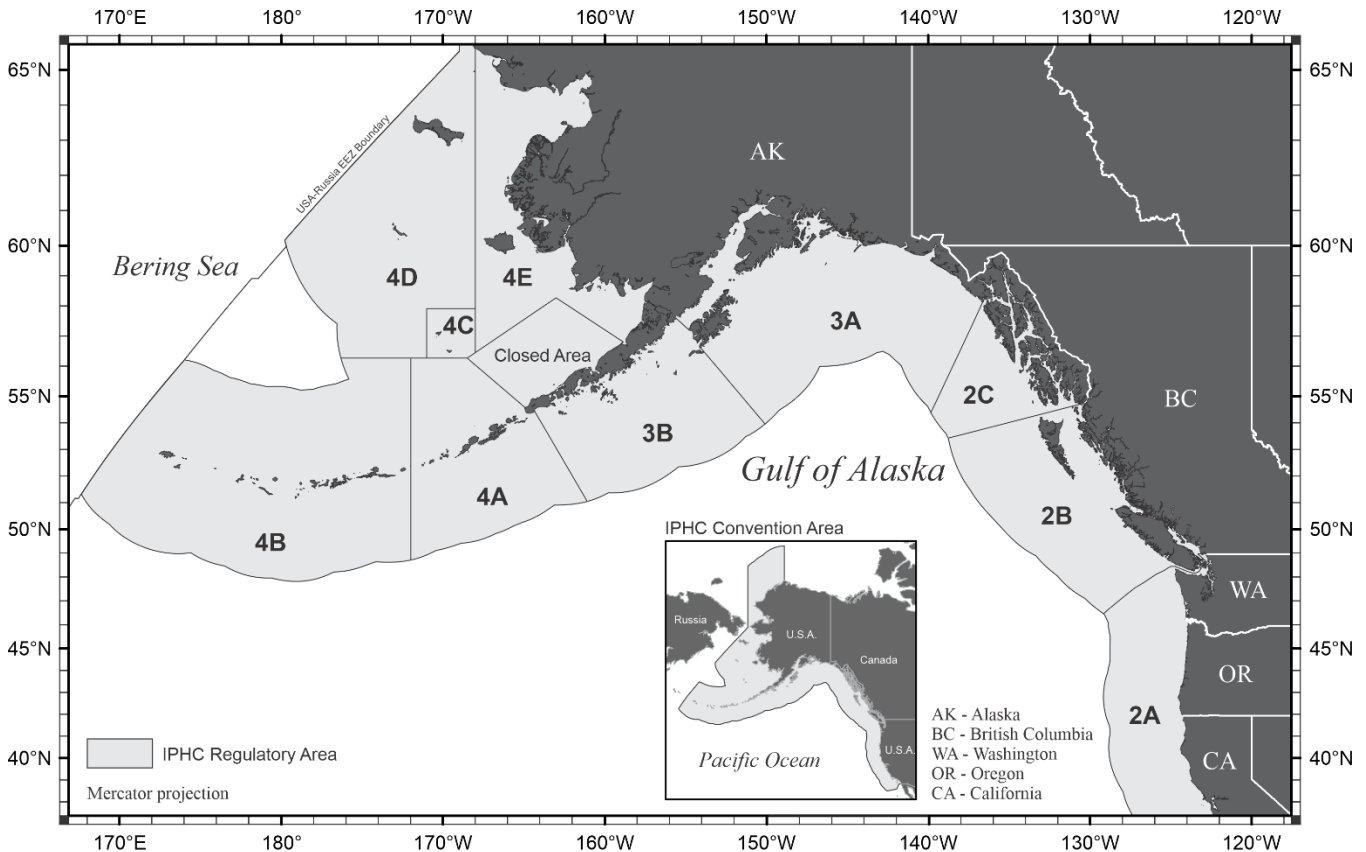


Figure 1. IPHC Convention Area (insert) and IPHC Regulatory Areas.

The Pacific halibut fishery has been managed by the IPHC since 1923. Catch limits for each of eight IPHC Regulatory Areas¹ are set each year by the Commission. The stock assessment provides a summary of recently collected data, and model estimates of stock size and trend. Specific management information is summarized via a decision table reporting the estimated risks associated with alternative management actions and catch tables projecting the level of mortality for fisheries in each Regulatory Area indicated by the IPHC's interim management procedure, as well as other alternatives.

SUMMARY OF PENDING CONTENT

This document will contain a summary of the data contributing to the 2020 stock assessment. These data include:

- Recent and historical mortality,
- The results of the 2020 (and earlier) Fishery-Independent Setline Survey (FISS) analyzed via the IPHC's space-time model:
 - Trends by Biological Region and Regulatory Area

¹ The IPHC recognizes sub-Areas 4C, 4D, 4E and the Closed Area for use in domestic catch agreements but manages the combined Area 4CDE.

- Age-compositions
- Stock distribution estimates by Biological Region

This document will also include a summary of the 2020 stock assessment. Primary results include:

- Coastwide biomass and recruitment trends
- A comparison to 2019 and earlier stock assessment results (biomass scale and trends)
- Reference points
- Major sources of uncertainty

Three-year stock projections (2021-23) under a range of potential mortality levels will be reported in the form of the Harvest Decision Table. This table presents risk metrics relating to stock trend, stock status, fishery trend and fishery status for each level of future harvest.

Scientific advice will be presented categorized into four general categories:

- Sources of mortality
- Fishing intensity
- Stock status
- Stock distribution

TIMELINE FOR REVISION

The complete document (IPHC-2020-IM096-08 Rev_1) is anticipated to be available no later than **16 November 2020**.

Detailed material for AM097 will include any revisions to this document (IPHC-2021-AM097-08). As in 2019, a description of the data sources (IPHC-2021-SA-01), and the stock assessment (IPHC-2021-SA-02) will be published directly to the [stock assessment page](#) on the IPHC's website. An updated mortality projection tool (see [IPHC-2020-IM096-INF03](#)) will also be developed for use in evaluating 2021 mortality limits during AM097, this tool will be finalized in early January 2021 in order to make use of revised end-of-year 2020 bycatch mortality estimates.