

INTERNATIONAL PACIFIC



HALIBUT COMMISSION

# For Decision: IPHC 2021 Fishery- Independent Setline Survey (FISS)

IPHC-2020-SS09-05



# Purpose

To prescribe and seek Commission approval of key decisions that would enable the IPHC Secretariat to operationalise the 2021 FISS.



# Background

## 1) Complete IPHC Fishery-Independent Setline Survey (FISS) grid

The complete FISS grid includes 1,890 stations coastwide ([Fig. 1](#)), of which, the IPHC Secretariat intends on sub-sampling each year moving forward, based on the analysis arising from the 2014-19 expansion station project requested by the Commission.

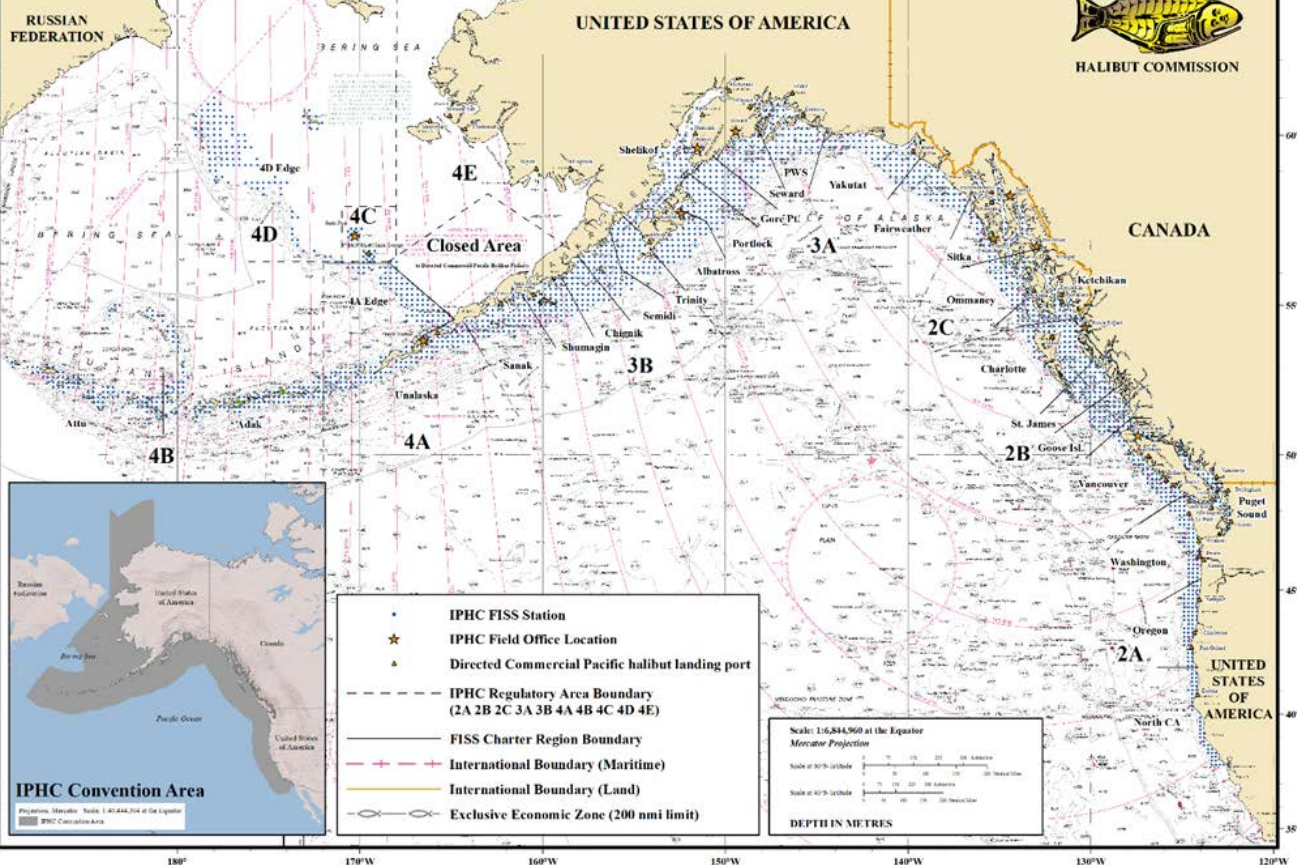


# IPHC Fishery-Independent Setline Survey (FISS) sampling grid

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- IPHC FISS Station
- ★ IPHC Field Office Location
- ▲ Directed Commercial Pacific halibut landing port
- - - IPHC Regulatory Area Boundary (2A 2B 2C 3A 3B 4A 4B 4C 4D 4E)
- FISS Charter Region Boundary
- - - International Boundary (Maritime)
- International Boundary (Land)
- Exclusive Economic Zone (200 nmi limit)

Scale: 1:6,844,960 at the Equator  
Mercator Projection

Scale at 60°N latitude: 1:13,689,920  
Scale at 40°N latitude: 1:27,379,840

DEPTH IN METRES

Figure 1. IPHC Fishery-Independent Setline Survey (FISS) with full sampling grid shown.



# Background

## 2) Prioritisation of FISS objectives and corresponding design layers.

At the 96<sup>th</sup> Session of the Annual Meeting (AM096) in February 2020, the Commission agreed to the following:

(IPHC-2020-AM096-R, para. 26) *“The Commission **AGREED** that the priority of a rationalised FISS sampling design is therefore to maintain or enhance data quality (precision and bias) by establishing minimum sampling requirements in terms of station count, station distribution and skates per station. Potential considerations that could add to or modify the design are logistics and cost (secondary design layer), and FISS removals (impact on the stock), data collection assistance for other agencies, and IPHC policies (tertiary design layer). These priorities are outlined in Table 2.”*



# Background

“Table 2. Prioritisation of FISS objectives and corresponding design layers.”

<b>Priority</b>	<b>Objective</b>	<b>Design Layer</b>
<i>Primary</i>	<i>Sample Pacific halibut for stock assessment and stock distribution estimation.</i>	<i>Minimum sampling requirements in terms of:</i> <ul style="list-style-type: none"><li>• <i>Station distribution;</i></li><li>• <i>Station count;</i></li><li>• <i>Skates per station.</i></li></ul>
<i>Secondary</i>	<i>Long-term revenue neutrality.</i>	<i>Logistics and cost: operational feasibility and cost/revenue neutrality.</i>
<i>Tertiary</i>	<i>Minimize removals, and assist others where feasible on a cost-recovery basis.</i>	<i>Removals: minimize impact on the stock while meeting primary priority;</i> <i>Assist: assist others to collect data on a cost-recovery basis;</i> <i>IPHC policies: ad-hoc decisions of the Commission regarding the FISS design.</i>



# Background

## 3) Scientific Review Board endorsement

In 2020, the IPHC's Scientific Review Board (SRB) reviewed and endorsed the minimum 2021 FISS designed based on the primary objective detailed above, and made the following recommendation to the Commission:

SRB017–Rec.01 ([para. 14](#)) “*The SRB **RECOMMENDED** that the Commission endorse the final 2021 FISS design as proposed by IPHC Secretariat, and provided at [Appendix IVa](#).*”



# Background

## 4) Special Session need

- At IM096, seeking additional information, the Commission made the following recommendation:

(para. 46.) *“The Commission **RECOMMENDED** that the IPHC 2021 FISS design be considered for decision at the 9<sup>th</sup> Special Session of the Commission (SS09), at a date and format to be agreed upon intersessionally. The IPHC Secretariat will develop necessary material to support the decision making process.”*





# Discussion and decision points

Recalling the supporting papers presented to the 9<sup>th</sup> Special Session of the IPHC (SS09), and their associated presentations which are available for download on the meeting page (<https://www.iphc.int/venues/details/9th-special-session-of-the-iphc-ss09>), the IPHC Secretariat is requesting that the Commission step through the following decision points.

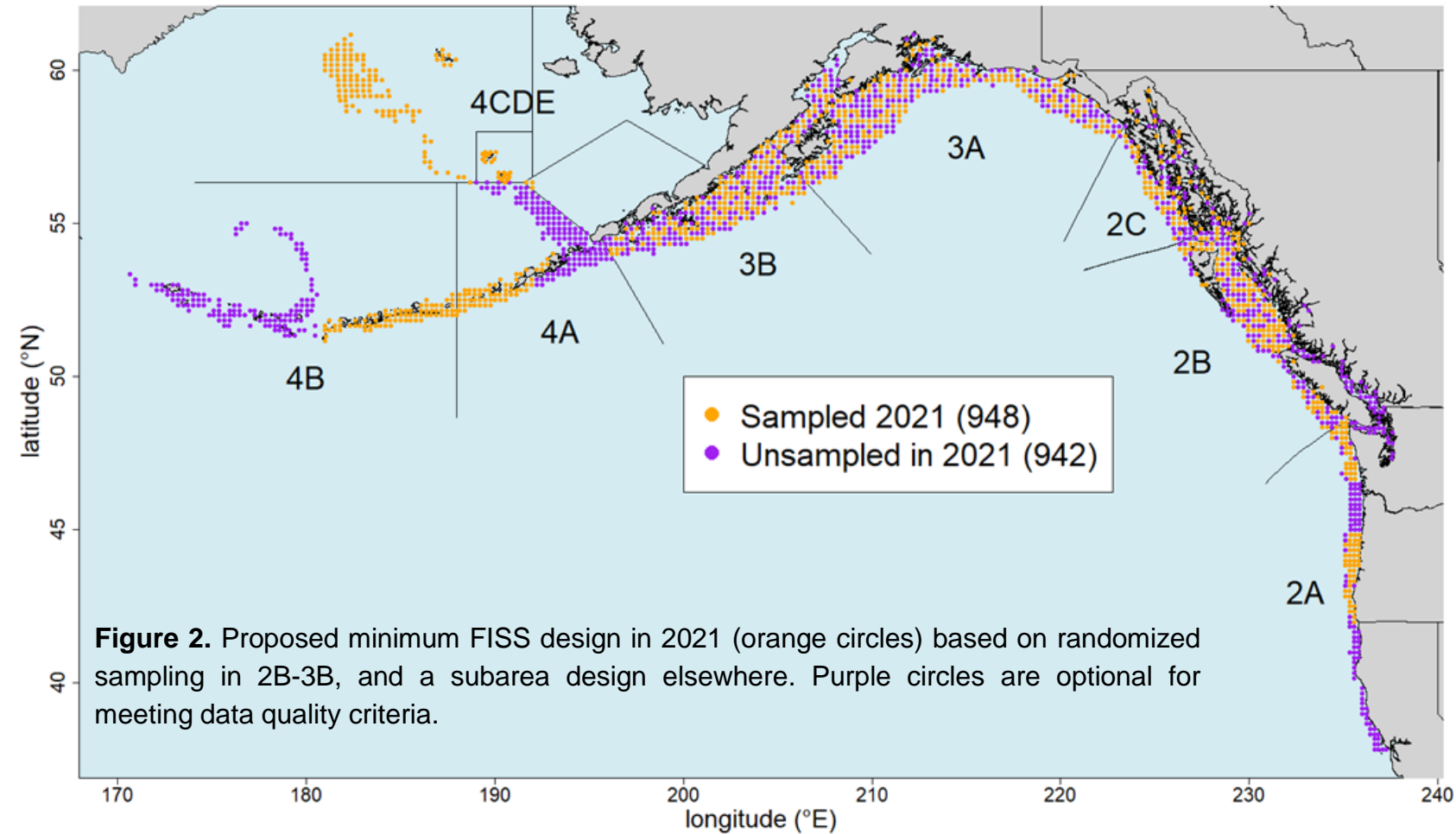


# Discussion and decision points

**Decision Point #1 (Primary FISS Objective):** Seeking Commission **ENDORSEMENT** of the '*minimum 2021 FISS design*'.

The IPHC Secretariat is seeking the Commission's endorsement of the '*minimum 2021 FISS design*' as proposed by the IPHC Secretariat, as recommended by the SRB based on the primary objective of the FISS (see table above) to meet precision and bias estimates, as provided at [Fig. 2](#)).





# RECOMMENDATION FOR DECISION POINT

## Decision Point #1:

**ENDORSE** the '*minimum 2021 FISS design*' as proposed by the IPHC Secretariat, as recommended by the SRB, and as provided at [Fig. 2](#)).



# Discussion and decision points

**Decision Point #2 (Secondary FISS Objective – Part A):** Seeking Commission **ENDORSEMENT** of the continued need to target long-term revenue neutrality for the FISS.

The IPHC Secretariat is seeking the Commission's endorsement of the continued need for the IPHC Secretariat to seek long-term revenue neutrality for the FISS, as previously agreed by the Commission, including most recently at AM096 (see table above – Slide 6).



# RECOMMENDATION FOR DECISION POINT

## Decision Point #2:

**ENDORSE** the continued need for the IPHC Secretariat to seek long-term revenue neutrality for the FISS, as previously agreed by the Commission.



# Discussion and decision points

**Decision Point #3 (Secondary FISS Objective – Part B):**  
Seeking Commission **RECOMMENDATION** on the means to target long-term revenue neutrality for the FISS in 2021.

The IPHC Secretariat is seeking the Commission's recommendation on how it would like the IPHC Secretariat to seek to achieve long-term revenue neutrality through the 2021 FISS. The IPHC Secretariat currently proposes three (3) feasible ways to achieve long-term revenue neutrality, while also ensuring the minimum scientific data needs/requirements are met:



**OPTION 1:** Proceed with the '*minimum 2021 FISS design*', involving sampling 948 stations with 4 skates at each station ([Fig. 2](#)). Estimated revenue/loss = - **US\$1,686,384**. Seek to recover the projected loss in future years. [*Caveat: We will need to reduce the general operating budget for the IPHC significantly in 2021 to accommodate*].





# OPTION 1: '*minimum 2021 FISS design*', involving sampling 948 stations with 4 skates at each station

Primary	
Charter regions to be sample	25
Stations to be sampled	948
Average skates	4.0
Percent of 1890 station full design	50%
Est. Total landings (tonnes)	141
Est. Total landings (pounds)	310,698
Est. Average price per pound (USD)	\$ 4.46
Est. Net revenue	<b>\$ (1,686,384)</b>



**OPTION 2:** Proceed with the '*minimum 2021 FISS design*', involving sampling 948 stations with 4 skates at each station ([Fig. 2](#)), with the estimated loss of **-US\$1,686,384** to be provided directly by the Contracting Party governments.



# OPTION 2: ‘*minimum 2021 FISS design*’ – CP’s to supplement

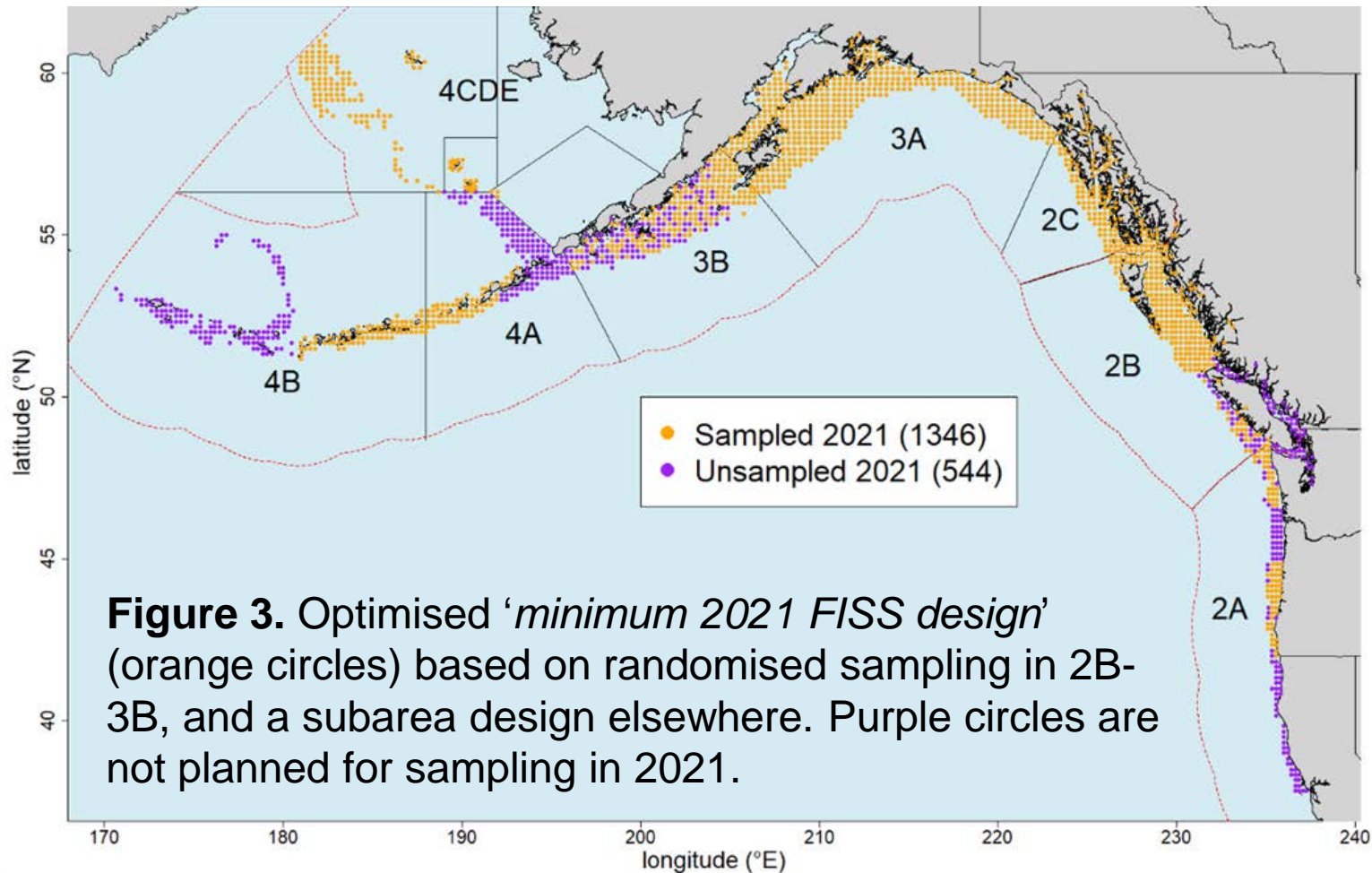
Primary	
Charter regions to be sample	25
Stations to be sampled	948
Average skates	4.0
Percent of 1890 station full design	50%
Est. Total landings (tonnes)	141
Est. Total landings (pounds)	310,698
Est. Average price per pound (USD)	\$ 4.46
Est. 2021 FISS Revenue	<b>\$ (1,686,384)</b>
Contracting Party supplementary \$	<b>\$ 1,686,384</b>
Est. Net revenue	<b>\$0</b>



**OPTION 3:** Proceed with an ‘*optimised*’ version of the ‘*minimum 2021 FISS design*’, involving adding an additional ~398 stations within the areas covered by the ‘*minimum 2021 FISS design*’ and where feasible, adding additional skates on each station ([Fig. 3](#)). Estimated revenue/loss = **-US\$226,651**.

The IPHC Secretariats’ preferred option is Option 3. It should be noted that this is how the Secretariat has sought to reach long-term revenue neutrality since the inception of the FISS. Adoption of Option 1 or 2 would be a deviation from established practice.





**Figure 3.** Optimised '*minimum 2021 FISS design*' (orange circles) based on randomised sampling in 2B-3B, and a subarea design elsewhere. Purple circles are not planned for sampling in 2021.



# FISS Revenue Sensitivity: Option 3

		Projected stock biomass – from 2020 levels		
		0%	-5%	-10%
Price change (from 2020 average)	15% (i.e. 2019 price)	\$ 639,814	\$ 371,454	\$ 105,797
	10%	\$ 428,778	\$ 172,086	\$ (82,021)
	5%	\$ 217,742	\$ (27,282)	\$(269,839)
	-0%	\$ 6,706	\$(226,651)	\$(457,657)
	-5%	\$(204,331)	\$(426,019)	\$(645,475)
	-10%	\$(415,367)	\$(625,387)	\$(833,293)
	-15%	\$(626,403)	\$(824,756)	\$(1,021,111)



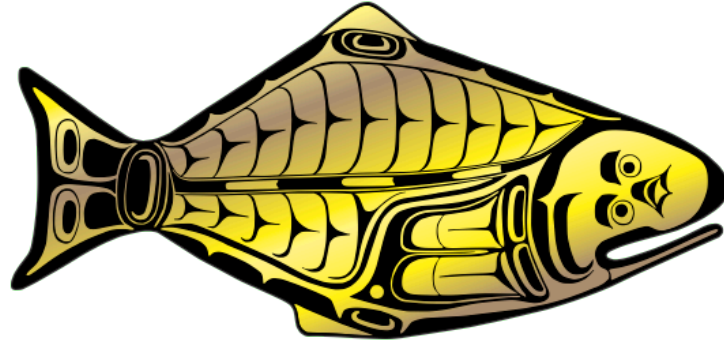
# RECOMMENDATION FOR DECISION POINT

## Decision Point #3:

**RECOMMEND** that the IPHC Secretariat proceed with an ‘*optimised*’ version of the ‘*minimum 2021 FISS design*’, involving adding an additional ~398 stations within the areas covered by the ‘*minimum 2021 FISS design*’ and where feasible, adding additional skates on each station ([Fig. 3](#)).



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