INTERNATIONAL PACIFIC HALIBUT COMMISSION

2027-29 FISS Designs

Agenda item 5.2.2

IPHC-2026-RAB027-08

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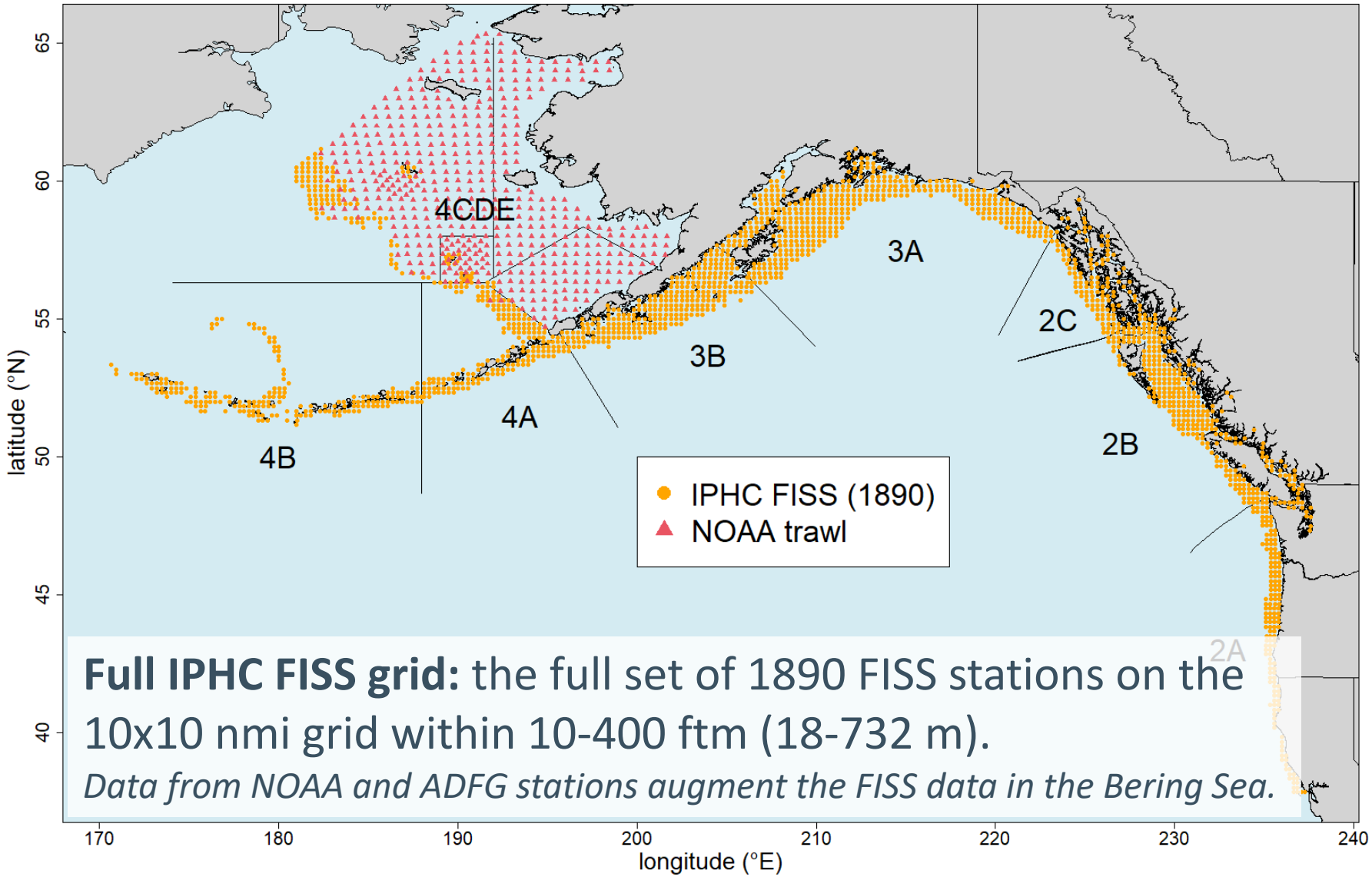
IPHC FISS

- Our most important source of data on Pacific halibut
- Provides data for estimating weight and numbers per unit effort (WPUE and NPUE) indices of density and abundance of Pacific halibut
  - Used to estimate stock trends
  - Used to estimate stock distribution
  - Important input in the IPHC stock assessment
- Provides biological data for use in the stock assessment
- An annual FISS has been undertaken since 1993
  - Design expanded from 1993-2000 to include sampling in all IPHC Regulatory Areas
  - Further expansion into previously unsampled waters during 2011-2019 period

Full FISS grid



Full IPHC FISS grid: the full set of 1890 FISS stations on the 10x10 nmi grid within 10-400 ftm (18-732 m).

Data from NOAA and ADFG stations augment the FISS data in the Bering Sea.

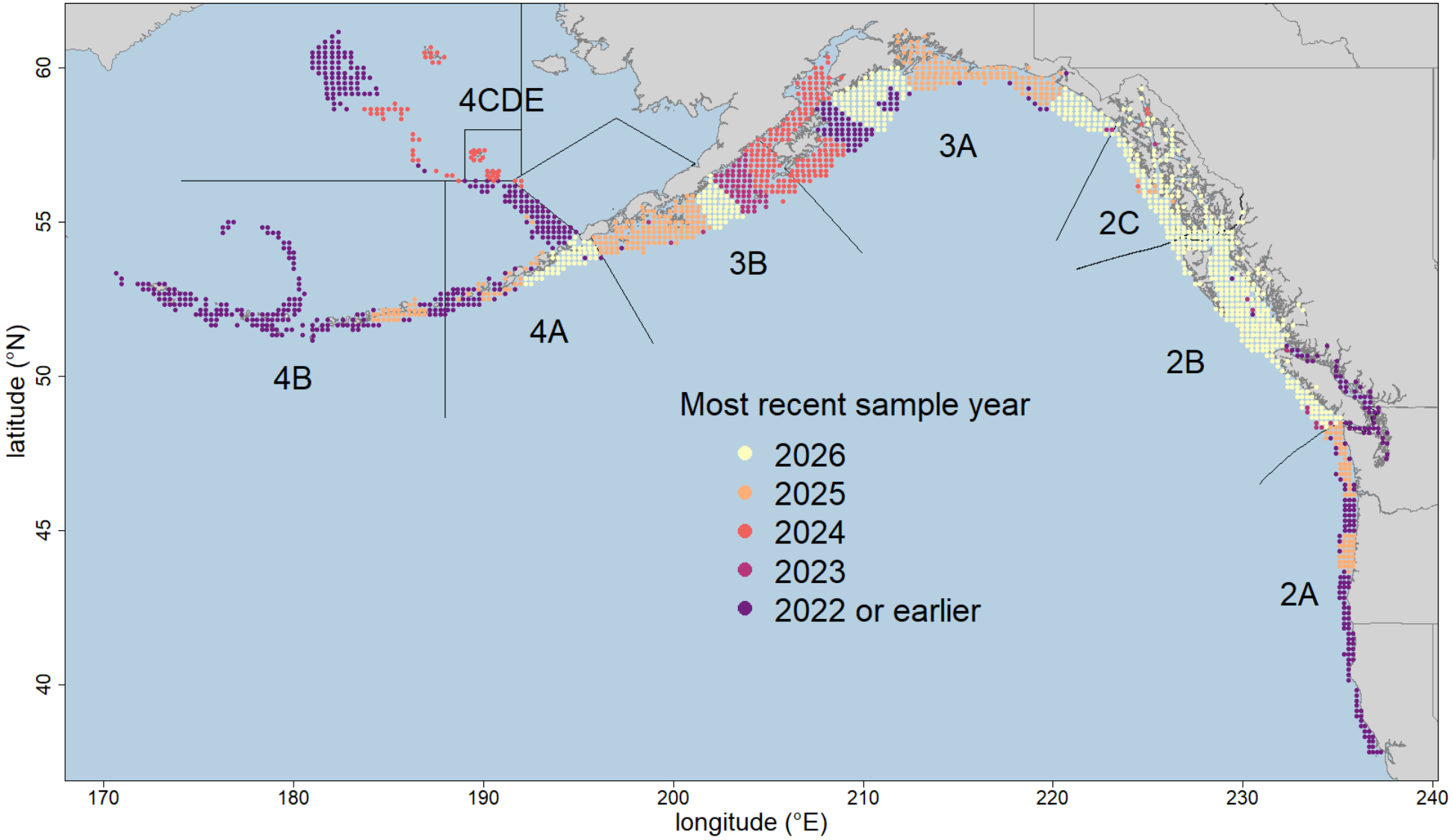
FISS objectives and design layers

Priority	Objective	Design Layer
Primary	Sample Pacific halibut for stock assessment and stock distribution estimation	Minimum sampling requirements in terms of: • Station distribution • Station count • Skates per station
Secondary	Cost effectiveness without compromising the scientific integrity of the FISS design.	Balance operational feasibility/logistics, cost/revenue, and scientific needs. Includes an aspirational target reserve of US$4,000,000.
Tertiary	Minimize removals, assist others where feasible on a cost-recovery basis, address specific Commission informational needs.	Removals: minimize impact on the stock while meeting primary priority Assist: assist others to collect data on a cost-recovery basis IPHC policies: ad-hoc decisions of the Commission regarding the FISS design

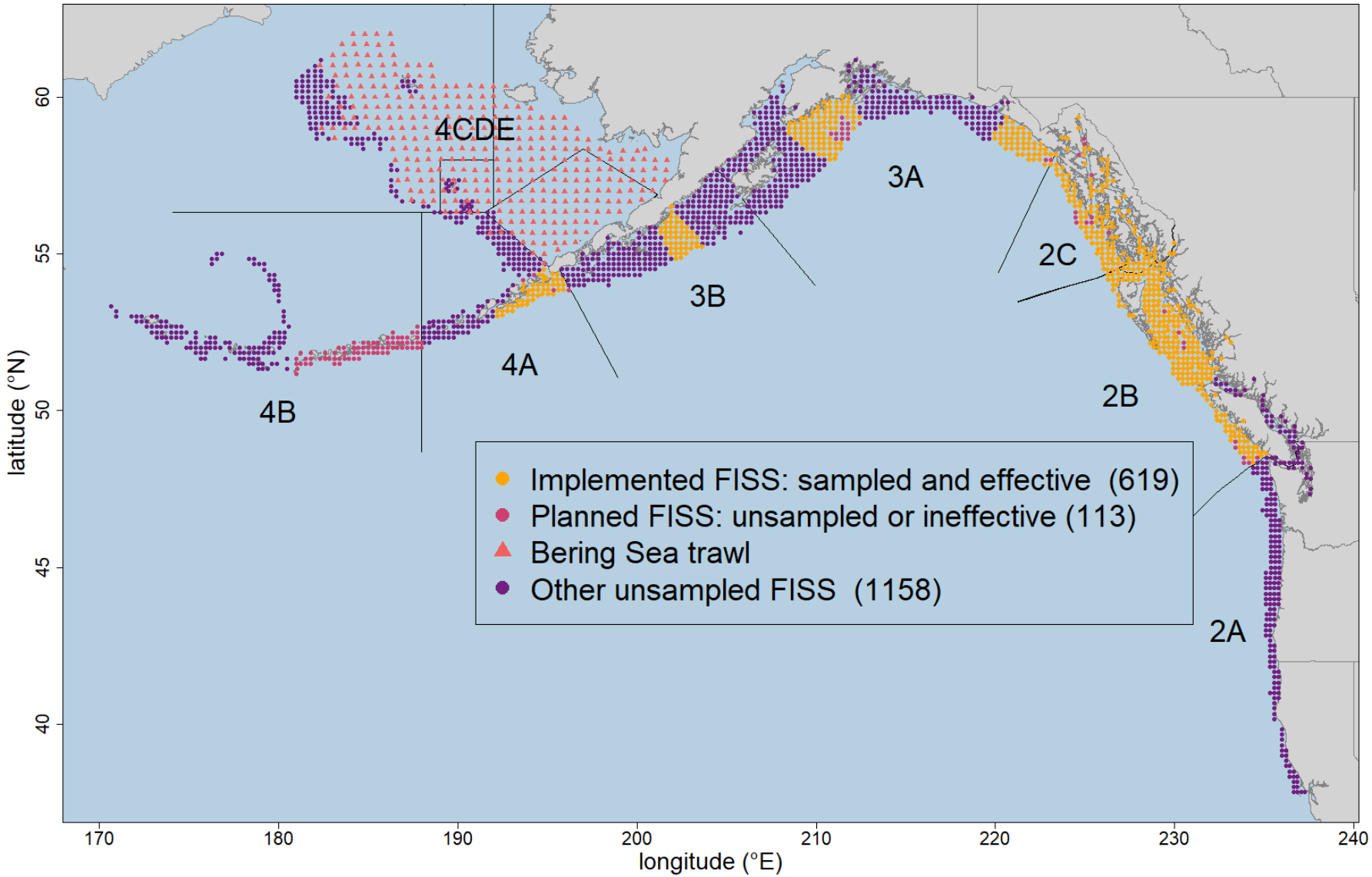
IPHC FISS 2020-26

- 2020: Rationalized FISS design approved
  - Random sampling in core areas (2B, 2C, 3A, 3B), block design elsewhere
  - FISS reduced to core areas only due to COVID19
- 2021-22: Proposed design largely implemented
  - Western 4B not sampled in 2022 due to lack of viable bids
- 2023-25: Reduced designs implemented to lower costs
  - Little sampling outside core areas in 2023, with no FISS sampling in 4A, 4B or 4CDE
  - Further reductions in 3A and 3B in 2024, but some sampling in 4CDE
  - 2025 sampling in 3A and 3B to complement 2023-24 sampling; sampling higher density parts of 2A and 4A/4B for first time since 2022
- 2026: Increase in FISS footprint relative to recent years
  - Design included 10 charter regions not fished in 2025
  - 4A stations in SE Aleutian Islands sampled for first time since 2019
  - No sampling in 4B due to lack of bids

Most recent sampling year by station

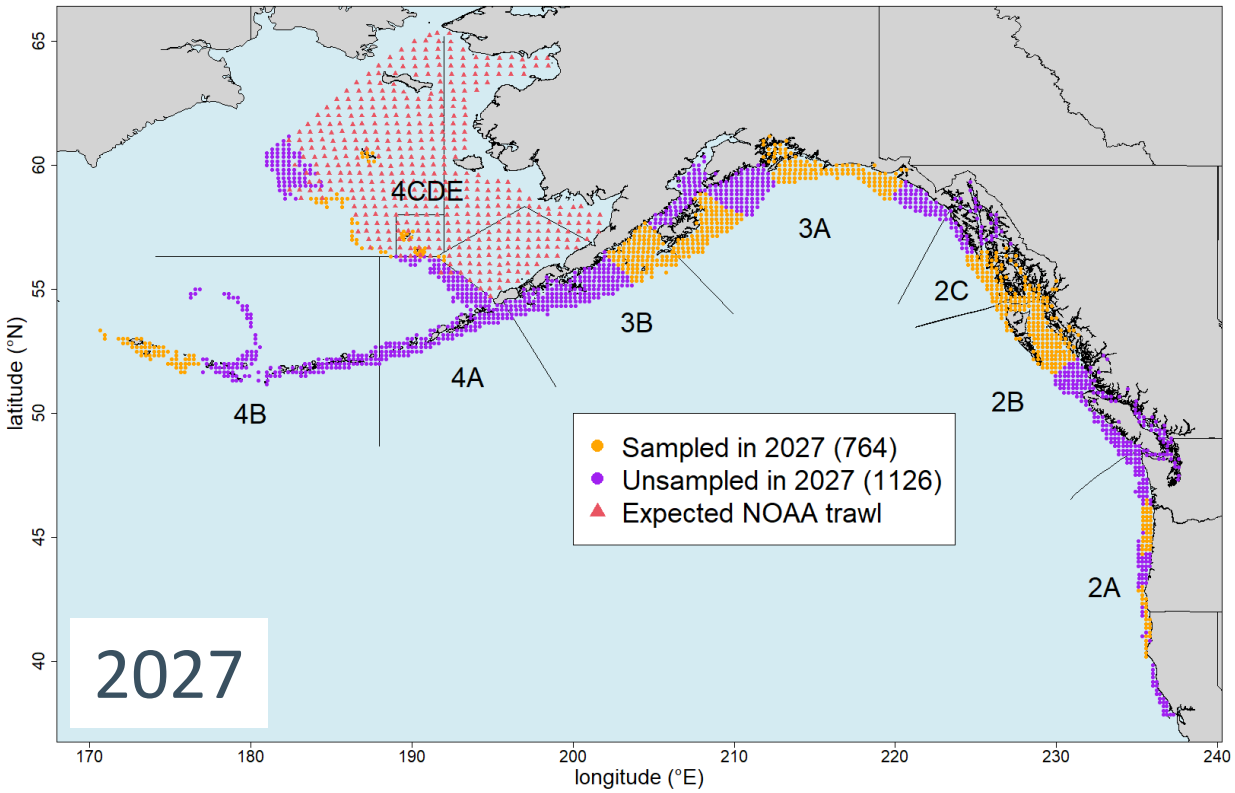


Implemented 2026 design

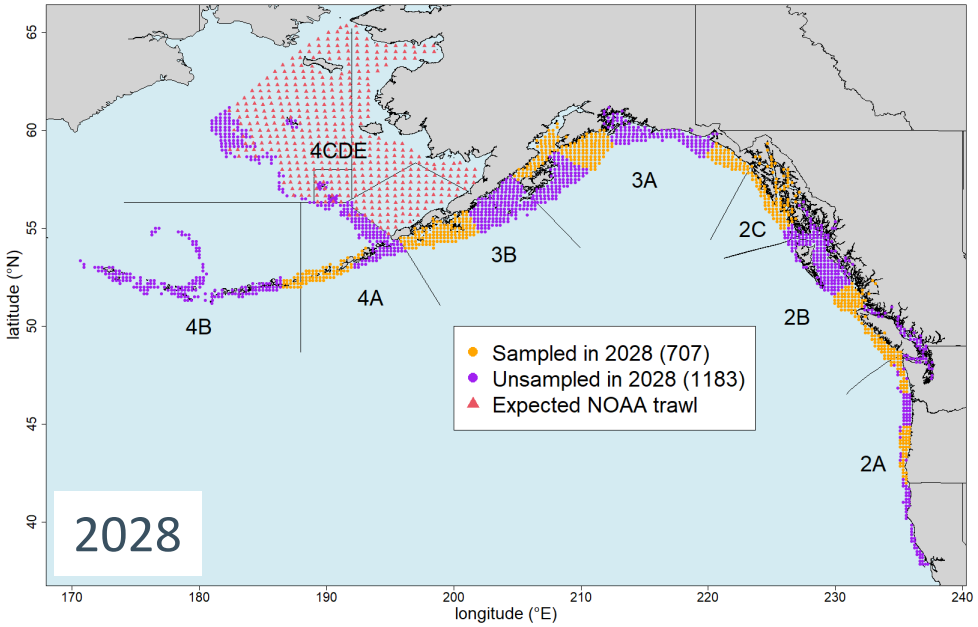


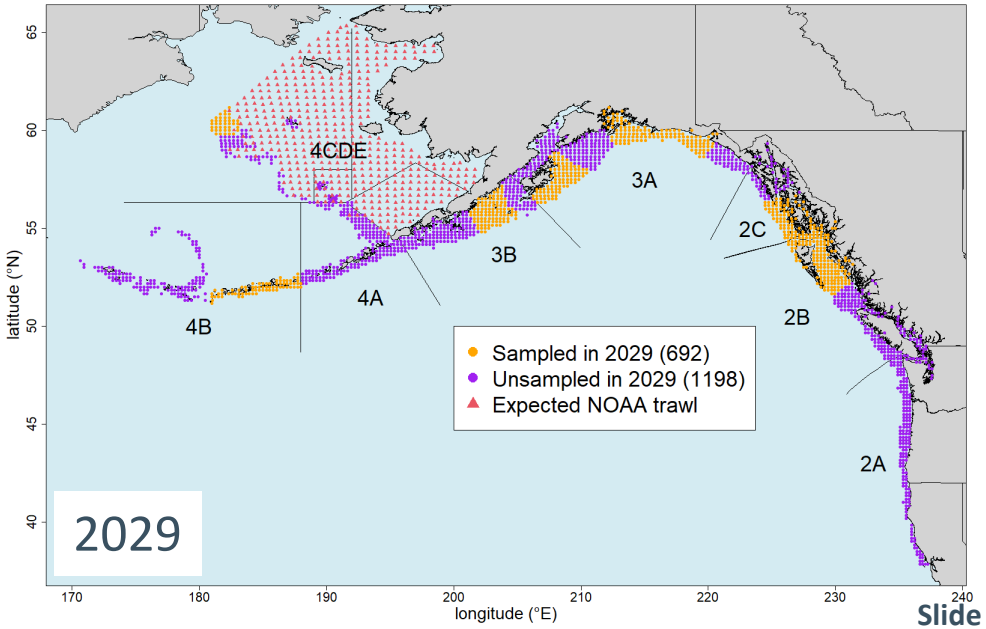
Potential designs for 2027-29

- In 2023-24, a **Base Block design** was evaluated for the Commission's consideration for the subsequent three-year period:
  - Prioritizes some annual sampling in each Biological Region for stock assessment purposes.
  - Ensures all charter regions in the core of the stock (2B, 2C, 3A and 3B) are sampled over a three-year period
  - Coverage in other areas is prioritized to minimize bias potential and maintain relatively precise estimates
- The sampled blocks (charter regions) would be rotated over time.
- The **Base Block design** is considered the optimal long-term FISS design in terms of balancing scientific needs and cost-effectiveness, and will be referred to as **Option 1**.

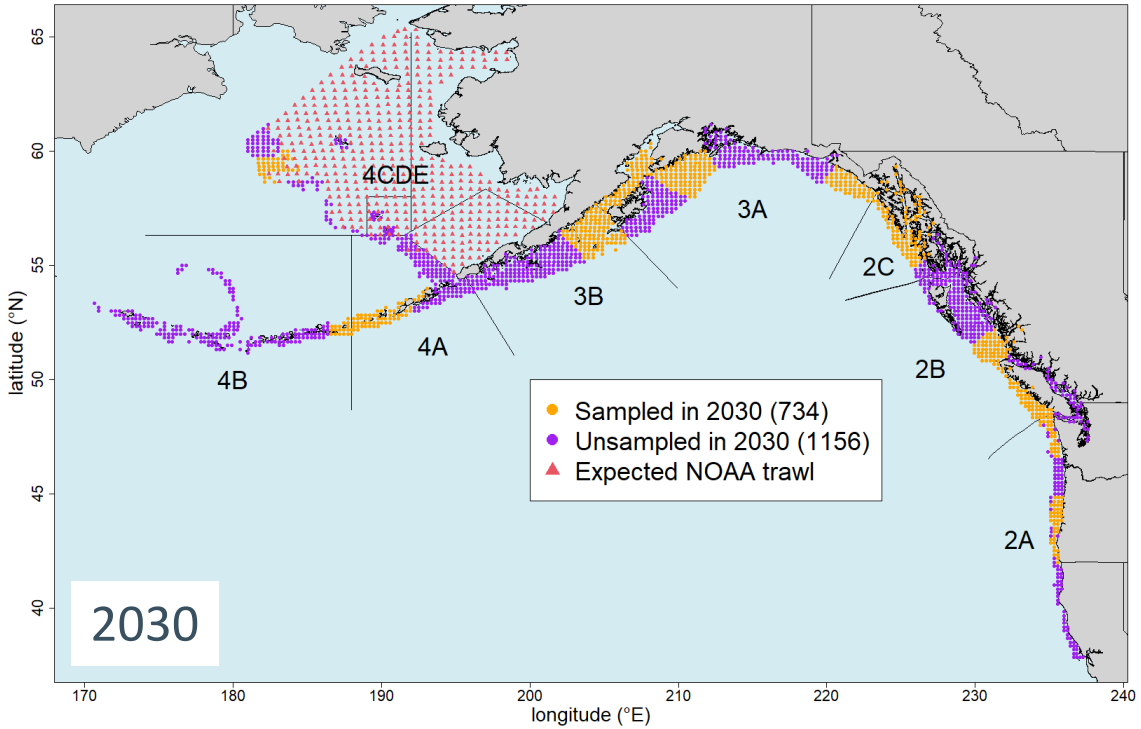


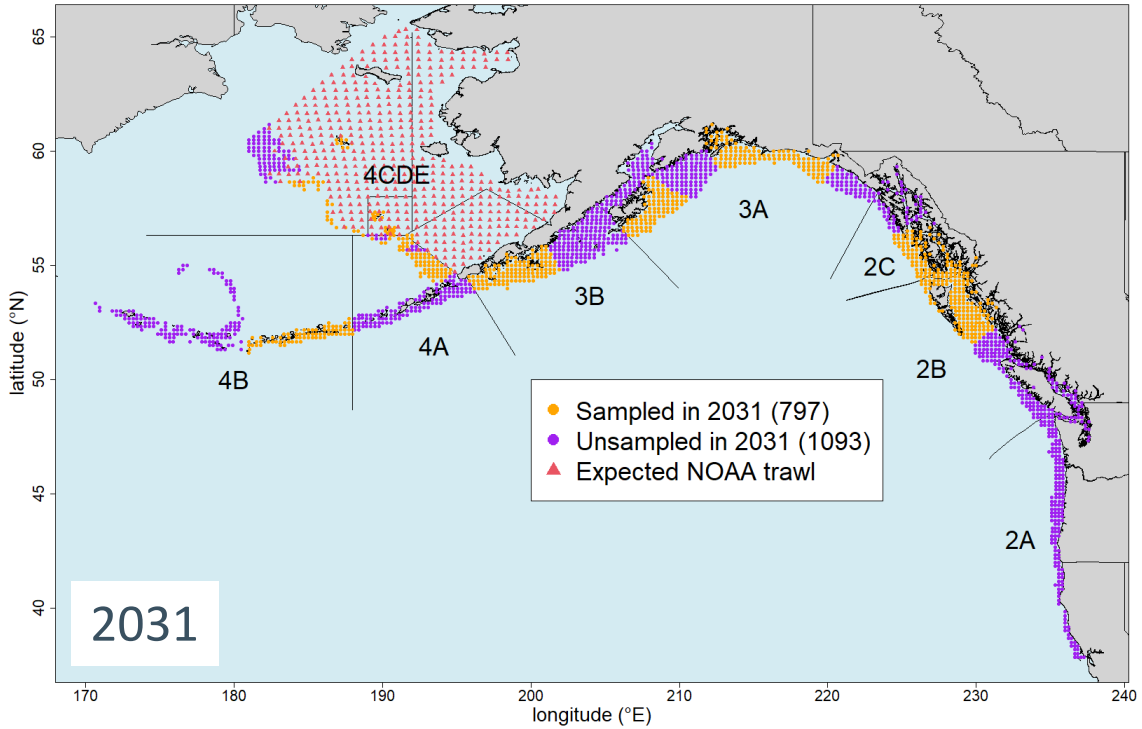
Potential Base Block designs 2027-29





Potential Base Block Designs 2030-31

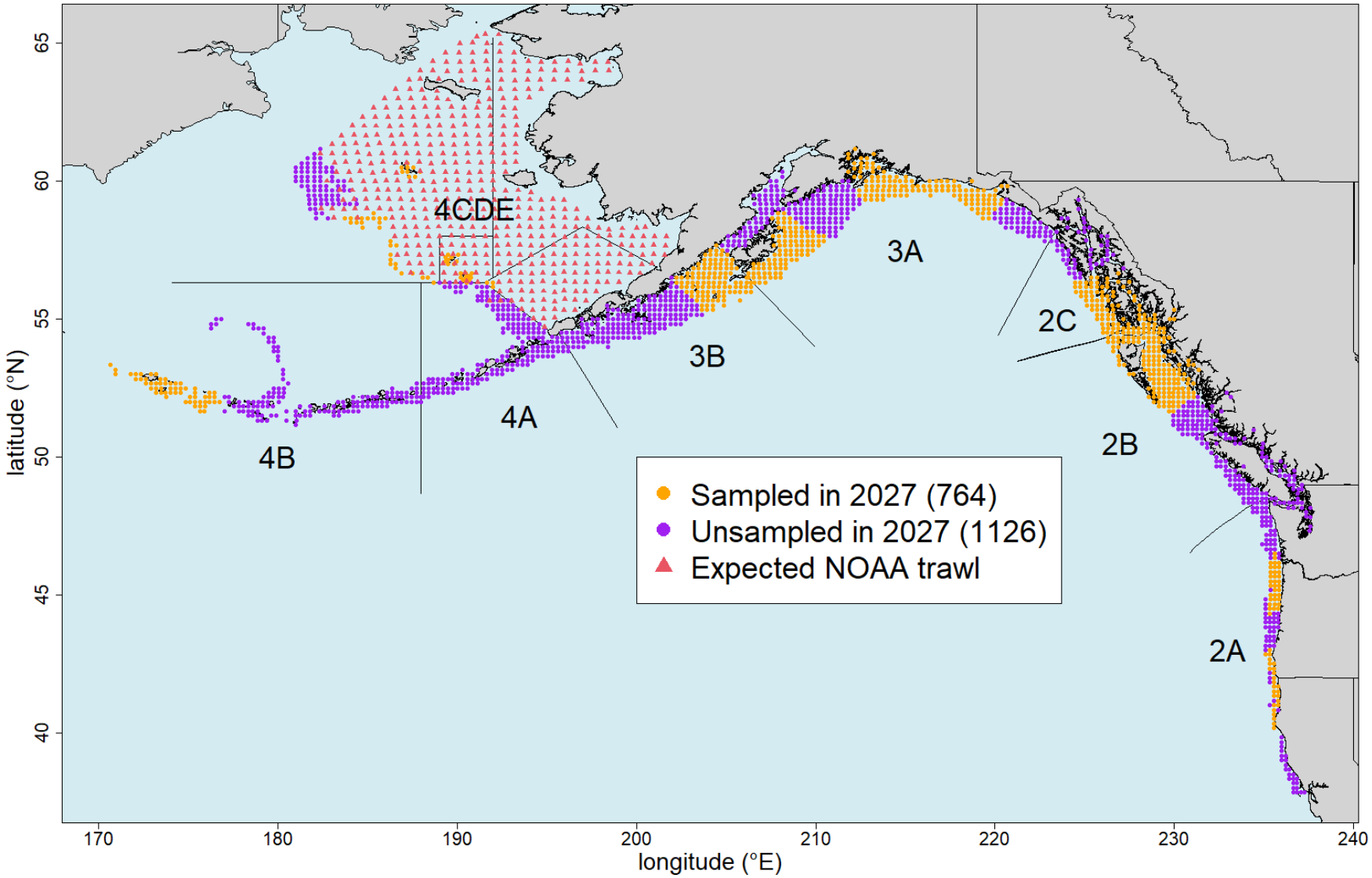




Cost evaluation for 2027

- Projected costs for 2027 design options were estimated assuming:
  - Designs are optimised for numbers of skates, with sets of 4, 6 or 8 100-hook skates used, depending on projected catch rates and bait costs.
  - Projected Pacific halibut average sales price for 2027 in each charter region is unchanged from the 2026 FISS
  - Projected Pacific halibut average landings per station remains unchanged in each charter region from the most recent FISS values (based on the last time the region was sampled).
- Cost projections also used the actual cost of chum salmon baits purchased for 2027 of US$4.09/lb (up from US$2.40/lb for 2026).

Option 1. 2027 Base Block design



Projected net revenue (US$):
($533,000)

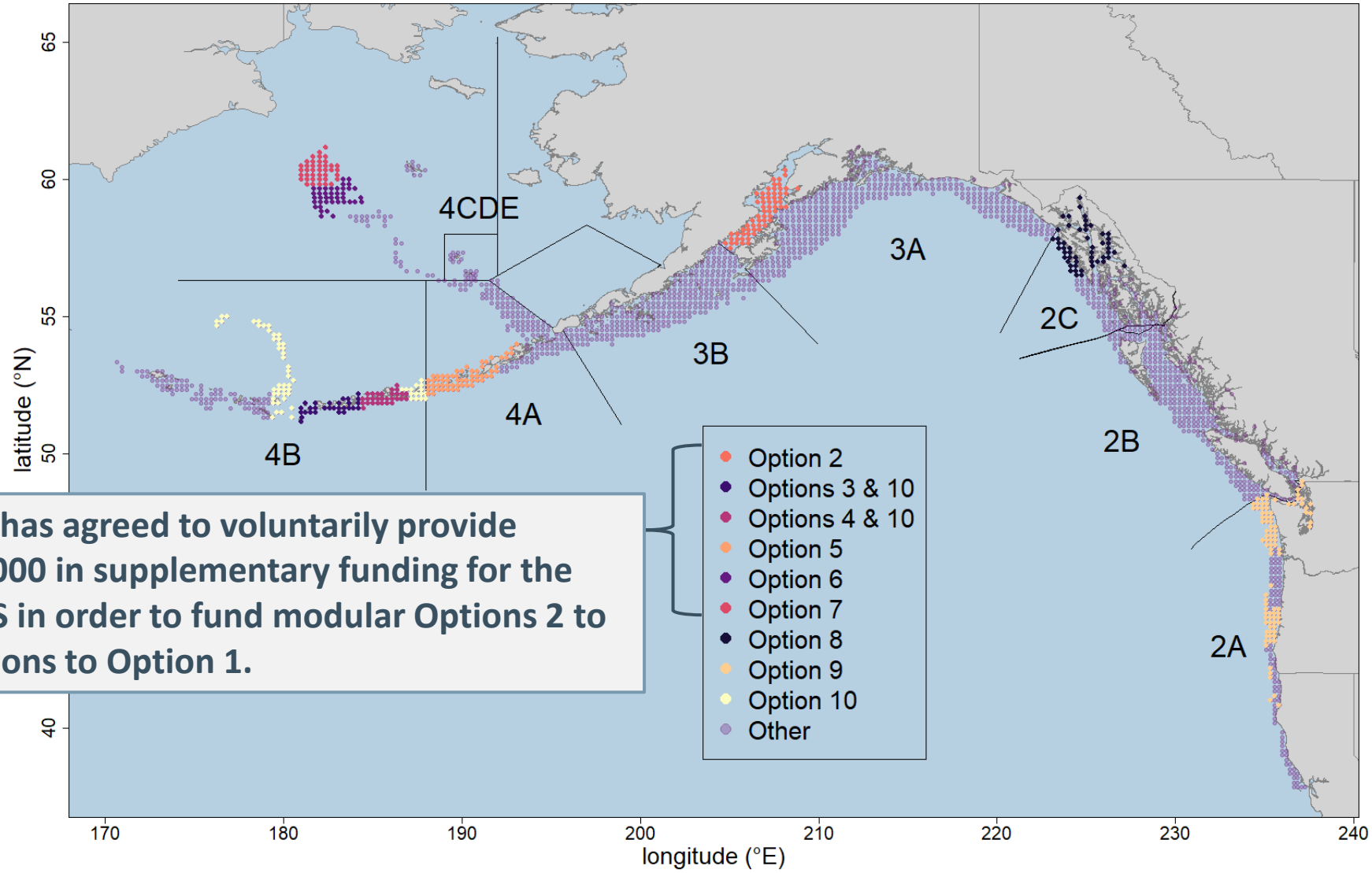
Income: **$3,923,000**
Expenses: **($4,476,000)**

Modular add-ons

The Secretariat prepared nine modular add-ons to the proposed 2027 Base Block design (Option 1) with the following goals:

- Reduce the projected net loss of the FISS in 2027;
- ‘Catch up’ on FISS regions that were part of the 2026 **Base Block design** but were not fished;
- Reduce the heterogeneity in net revenue among future years by sampling in 2027 some of the more costly regions planned in future years;
- Set the FISS station charter rate at a higher value to increase the chance of receiving bids for challenging charter regions (i.e. Adak in IPHC Regulatory Area 4B);
- Fully clear the ‘backlog’ of uncertainty created by the reduced designs implemented in 2023-2026 to provide the most informative data in 2027 for the stock assessment and management decisions.

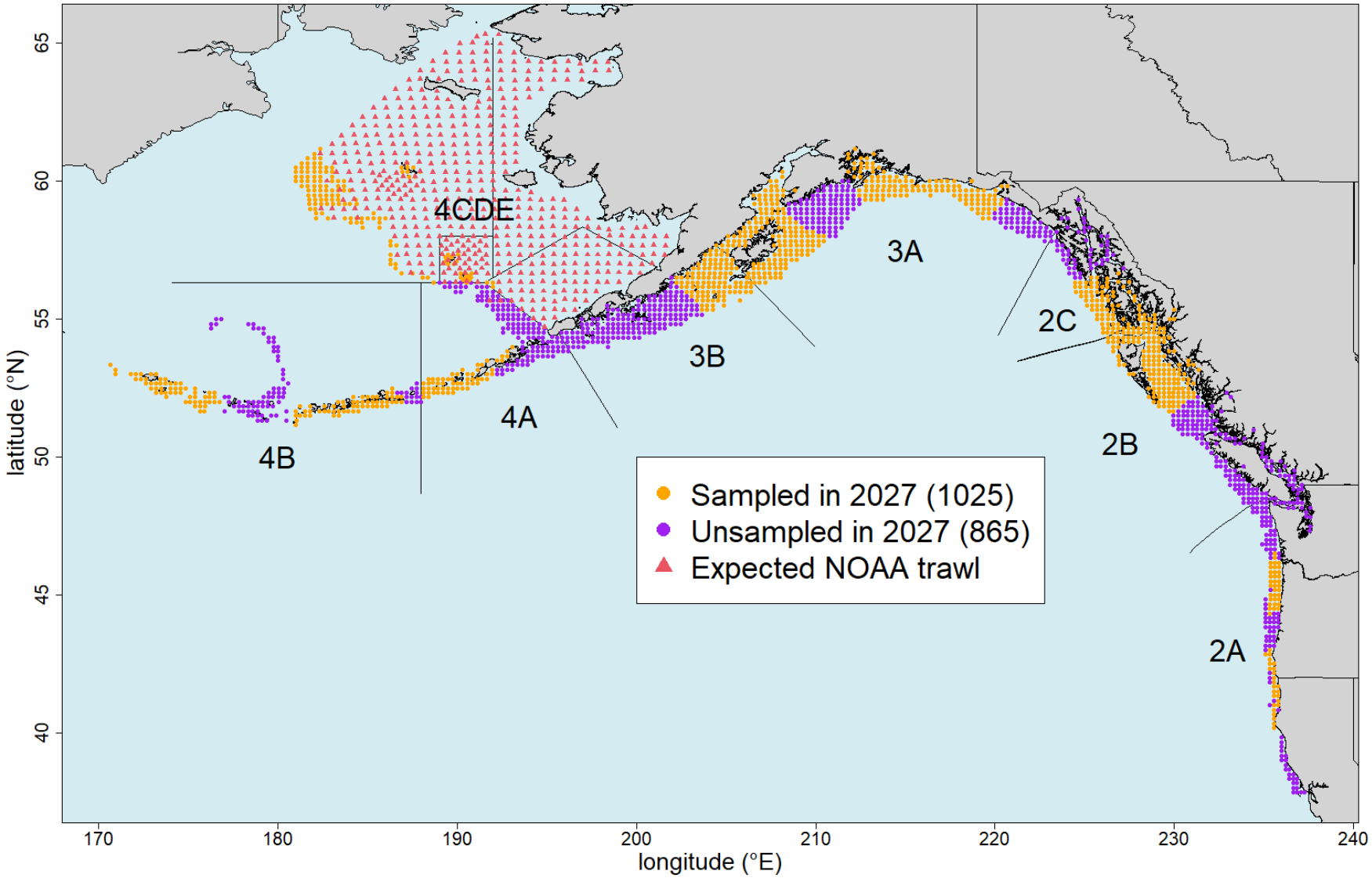
Modular add-ons



The USA has agreed to voluntarily provide US$749,000 in supplementary funding for the 2027 FISS in order to fund modular Options 2 to 7 as add-ons to Option 1.

Supplemented Base Block design for 2027

Options 1-7 combined



Projected adjusted net revenue (US$):
($614,000)

Income: **$4,418,000**
Voluntary US contribution: **$749,000**
Expenses: **($5,781,000)**

Recommendation

That the Research Advisory Board **NOTE** paper IPHC-2026-RAB027-08, presents potential Base Block designs for 2027-29, including a preliminary cost projection for the 2027 design and potential modular add-ons to this design.

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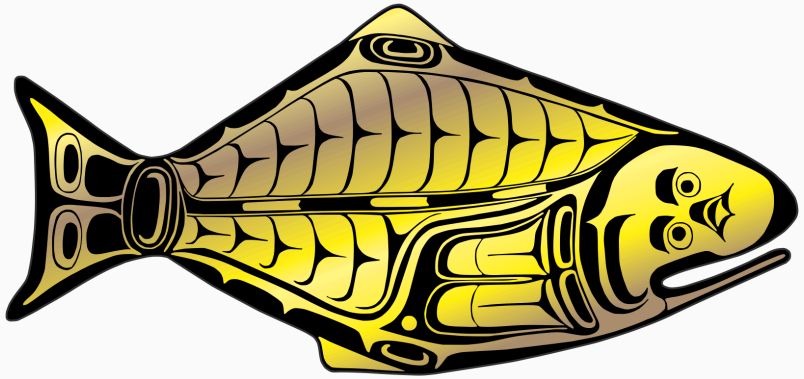

HALIBUT COMMISSION

https://www.iphc.int/

The USA has agreed to fund Options 2 to 7 with supplementary funding of US$749,000

Option	Design	Sampled IPHC Regulatory Areas (with number of FISS charter regions)	Projected expenses (US$)	Projected income (US$)	Projected net revenue	Benefit/rationale
1	Base Block	2A(3), 2B(2), 2C(2), 3A(4), 3B(2), 4B(1), 4CDE(1)	($4,476,000)	$3,923,000	($533,000)	Optimal long-term design
	Design change	**Change in sampling**	**Projected change in expenses ($US)**	**Projected change in income ($US)**	**Projected change in net revenue**	
2	Add Shelikof	3A(+1)	($277,000)	$226,000	($51,000)	3A catch-up. Last sampled 2024.
3	Add Adak West	4B(+1)	($211,000)	$101,000	($110,000)	4B catch-up. Last sampled 2021.
4	Add Adak East	4B(+1)	($211,000)	$101,000	($110,000)	4B catch-up. Last sampled 2025.
5	Add Unalaska	4A(+1)	($389,000)	$66,000	($323,000)	Reduces costs in 2028.
6	Add 4CDE North	4CDE(+1)	($178,000)	$12,000	($166,000)	Reduces costs in 2029. Last sampled 2021.
7	Add 4CDE Central	4CDE(+1)	($184,000)	$44,000	($140,000)	Potential to reduce costs in 2030. Last sampled 2022.
8	Add Sitka	2C(+1)	($253,000)	$385,000	$112,000	Revenue positive: reduces overall net loss.
9	Expand 2A sampling to include all stations north of 40°N	2A(+2)	($273,000)	$89,000	($185,000)	Reduces costs in 2028. Includes deep, shallow, and Salish Sea stations not sampled since 2018.
10	Fixed Contract rate[1] for expanded Adak (alternative to Options 3-4)	4B(+2)	($996,000)	$411,000	($585,000)	Reduces probability of receiving no bids for this region (as occurred in 2023 and 2026)