INTERNATIONAL PACIFIC HALIBUT COMMISSION

IPHC
Harvest Strategy Policy

Agenda item: 6.1
(A. Hicks, I. Stewart, D. Wilson)

IPHC-2026-AM102-11

IPHC-2025-HSP

Rev_2

Harvest Strategy Policy (HSP) adopted at IM101 in 2025

A framework for applying a consistent and transparent science-based approach to setting mortality limits for Pacific halibut while ensuring sustainability of the Pacific halibut population

- Defines conservation, fishery, and economic objectives of the Commission
- Identifies a management procedure and reference points to achieve these objectives
- Describes management inputs and the decision-making process to determine mortality limits
- Outlines when to develop a rebuilding plan is and what it is
- Presents a schedule of annual/triennial processes

Management Strategy Evaluation (MSE) work completed in 2025

- Definition of overfishing
- Descriptions of overfished and depleted
- Effects of productivity regimes
- Investigations of a reference fishing intensity
- The Harvest Strategy Policy table

Overfishing

Overfishing: when the annual fishing intensity is higher than the level required to sustain maximum sustainable yield (MSY). The MSY fishing intensity is currently $F_{SPR=35\%}$ based on current understanding of Pacific halibut population dynamics and fishery characteristics. The MSY fishing intensity may be revised as new information becomes available.

2026 Decision Table

2026 Alternative			*Status quo -10%*	*Status quo -5%*	*Status quo*	*Status quo +5%*	*Status quo +10%*	*$F_{46\%}$*	*3-Year Surplus / $F_{43\%}$*	*MEY proxy*	*Overfishing limit*	Overfishing
Total mortality (M lb)	0.0	21.9	28.6	30.1	31.6	33.1	34.6	37.0	40.8	45.1	53.7	
TCEY (M lb)	0.0	20.0	26.8	28.2	29.7	31.2	32.7	35.1	39.0	43.3	51.9	
2026 fishing intensity	$F_{100\%}$	$F_{62\%}$	$F_{54\%}$	$F_{52\%}$	$F_{51\%}$	$F_{49\%}$	$F_{48\%}$	$F_{46\%}$	$F_{43\%}$	$F_{40\%}$	$F_{35\%}$	
Fishing intensity interval	--	47-77%	39-71%	37-70%	36-69%	34-68%	33-67%	31-65%	28-62%	26-59%	22-54%	

Overfished & Depleted

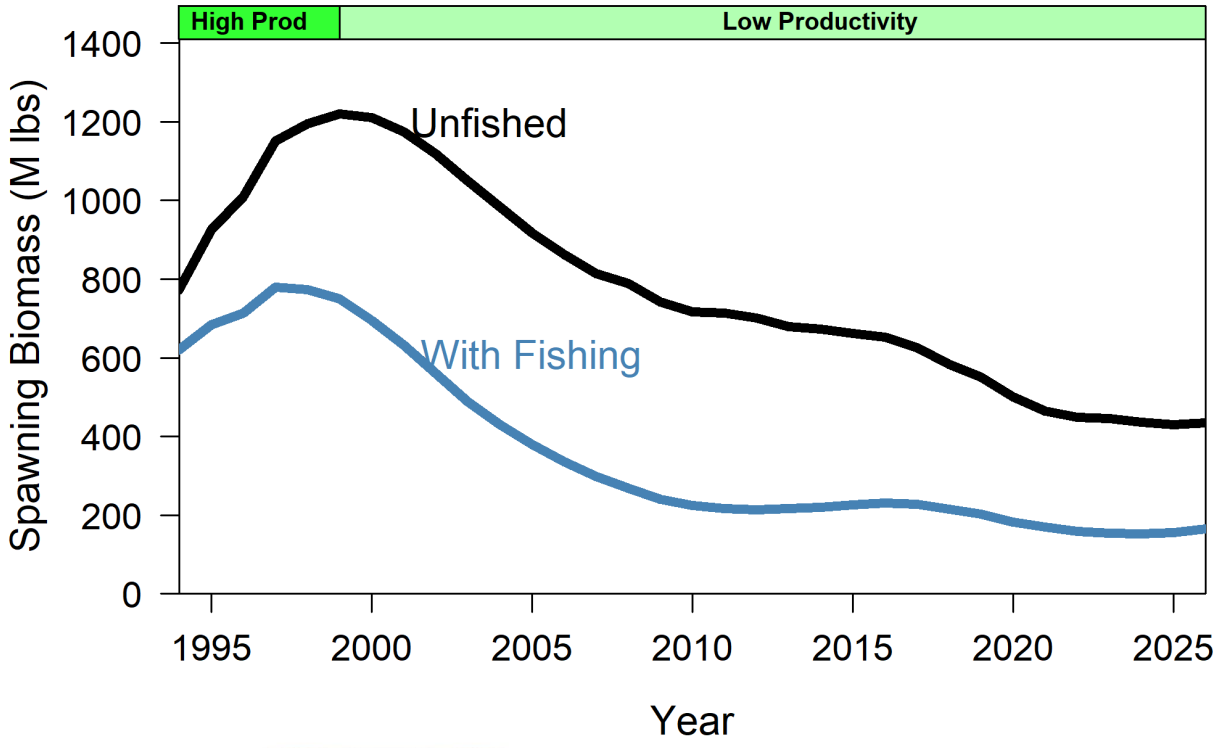
Overfished is a relative limit reference point defining an unacceptably low ratio of spawning biomass to dynamic unfished spawning biomass that results from fishing alone rather than the combined effects of fishing and the environment. […] Therefore, an overfished state may be fully mitigated by management actions.

Depleted is an absolute limit reference point defined by a spawning biomass below which the potential for recovery is uncertain. Natural variability affects stock size resulting in fluctuations of the spawning biomass, which along with fishing, may result in a '*depleted*' stock where reductions in fishing mortality may not lead to recovery without a change in the environmental conditions affecting the stock. Therefore, a depleted state may be only partially mitigated by management actions.[1]

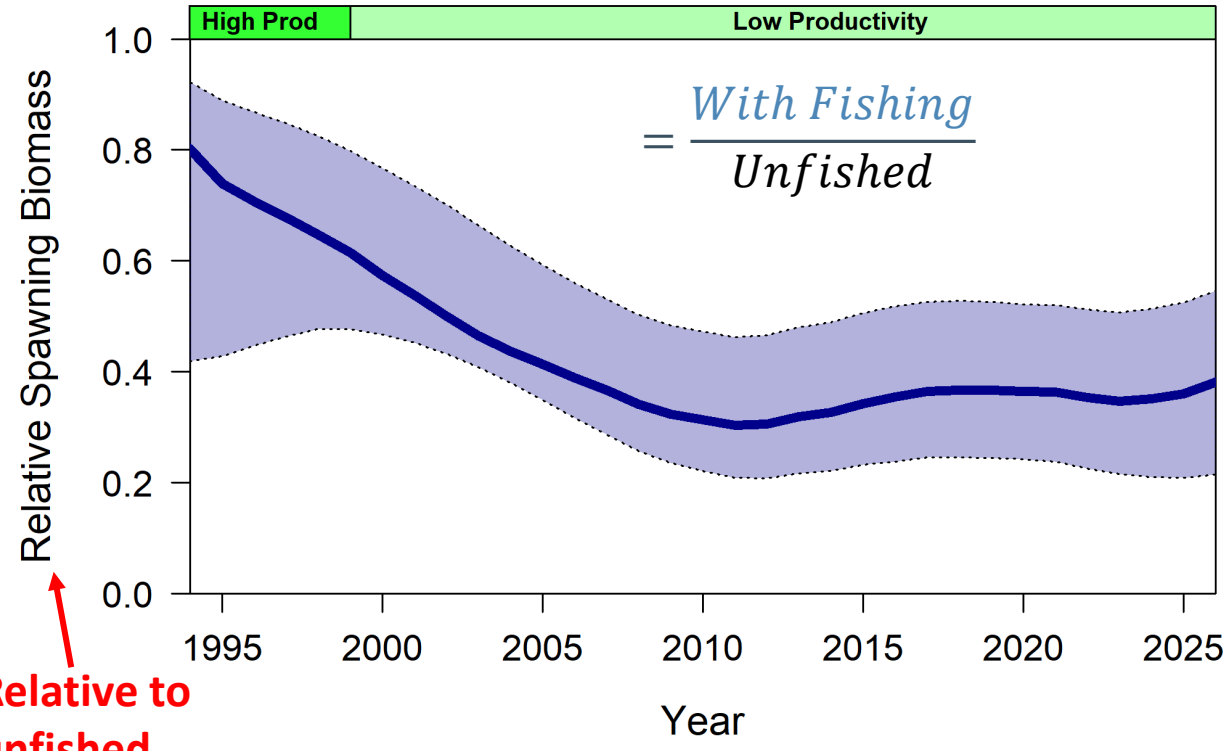
[1]The concept of depleted has been added to the Harvest Strategy Policy to recognize it as important while research continues to identify an appropriate threshold and develop management procedures for when the stock approaches or surpasses a depleted state. This research will be considered when updating the HSP following the schedule in Table 2

Comparing Overfished and Depleted

Absolute Spawning Biomass



Relative Spawning Biomass

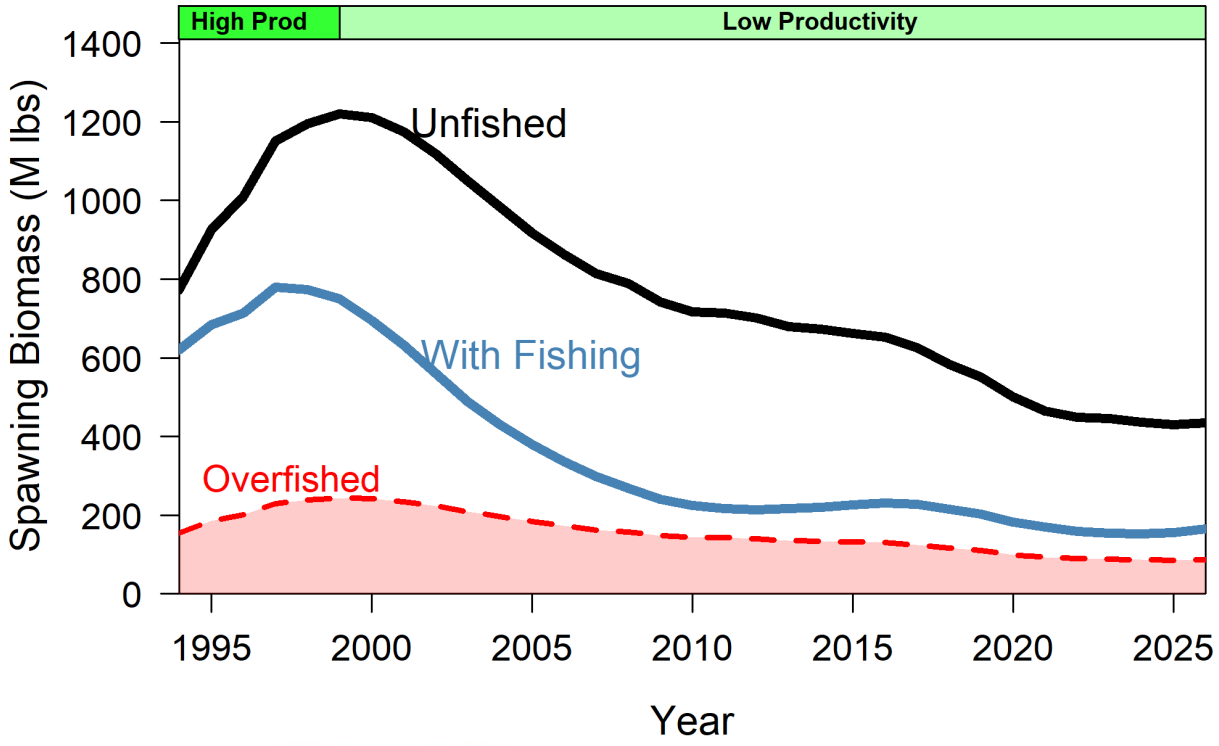


Relative to unfished

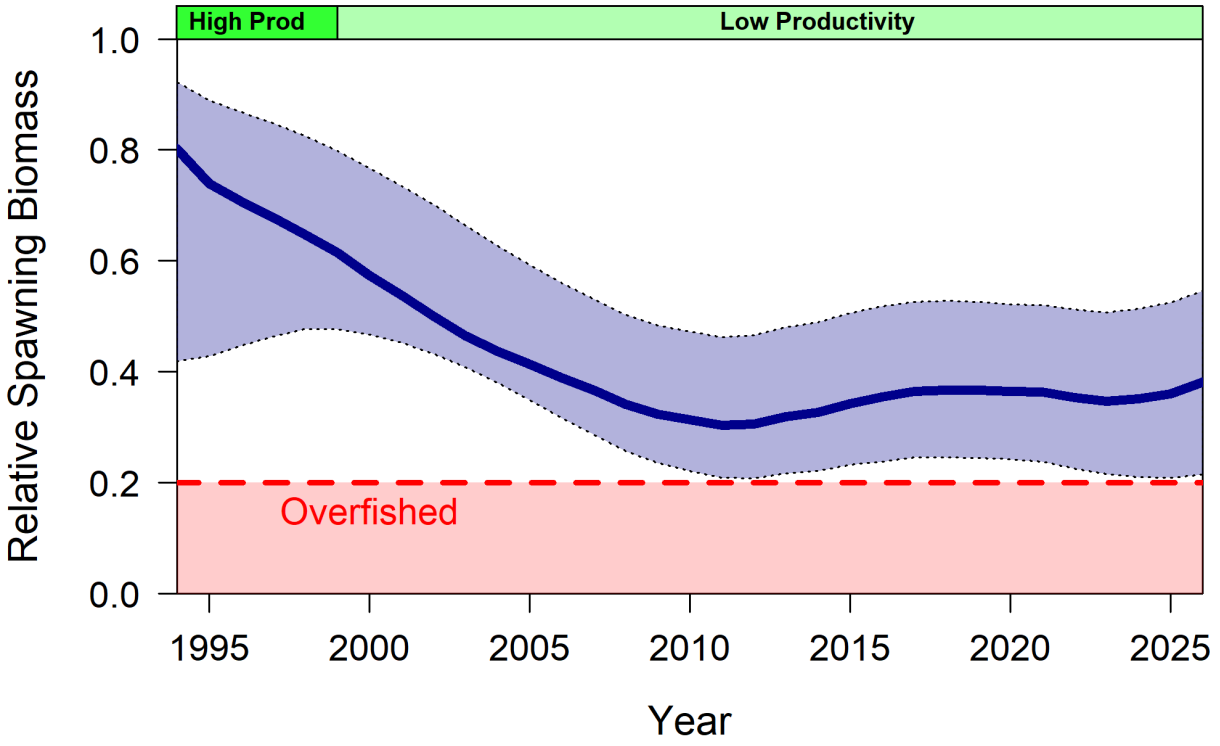
Comparing Overfished and Depleted

- Overfished is a percentage of the dynamic unfished spawning biomass
  - 20% of unfished spawning biomass

Absolute Spawning Biomass



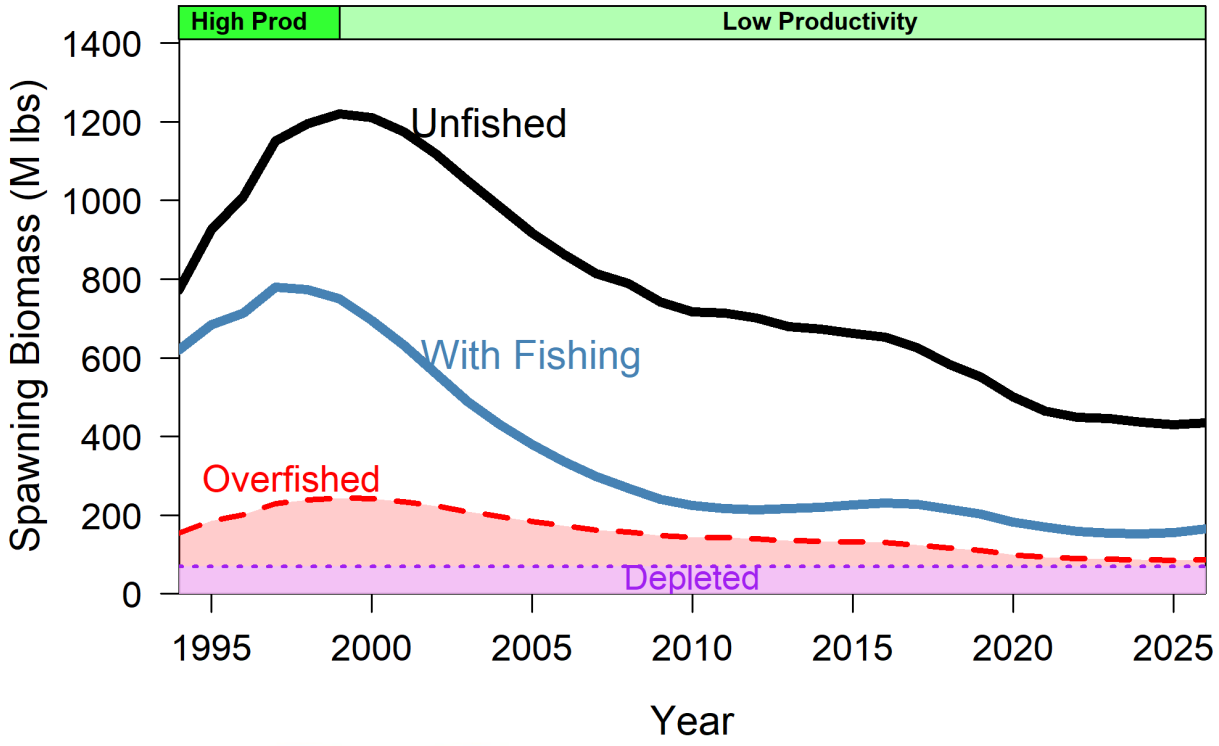
Relative Spawning Biomass



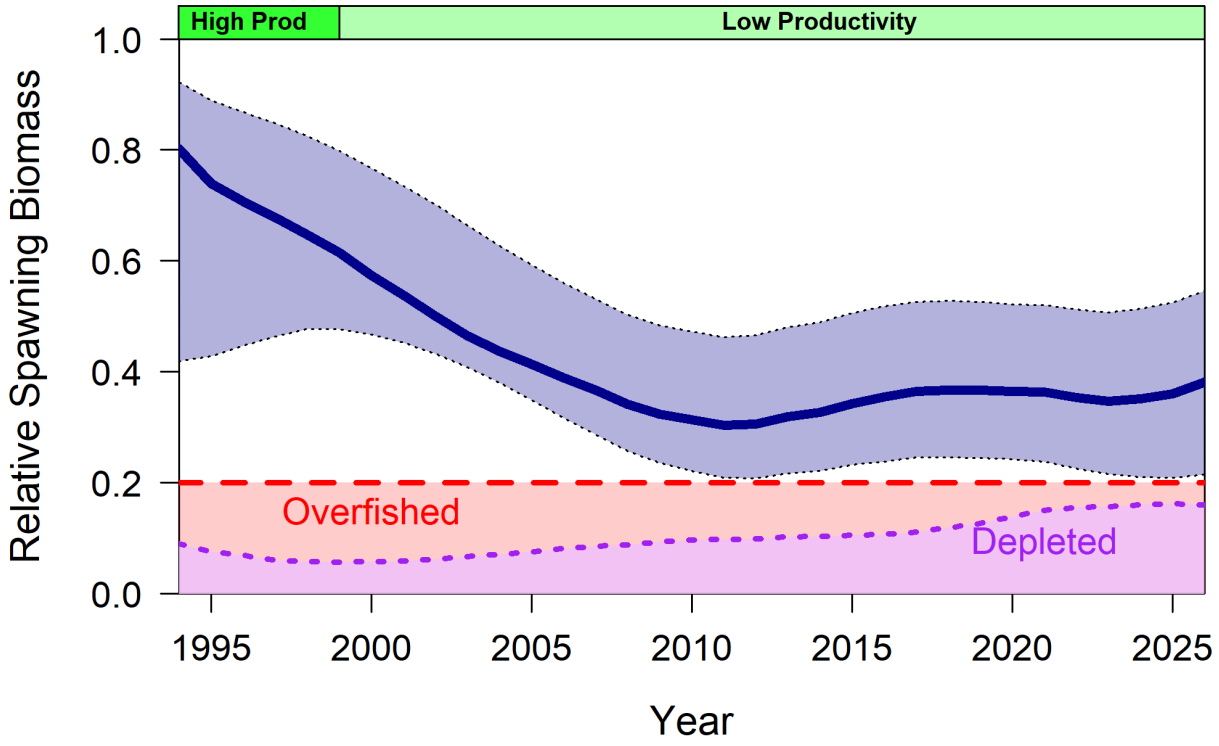
Comparing Overfished and Depleted

- Overfished is a percentage of the dynamic unfished spawning biomass
- Depleted is a constant absolute spawning biomass

Absolute Spawning Biomass



Relative Spawning Biomass

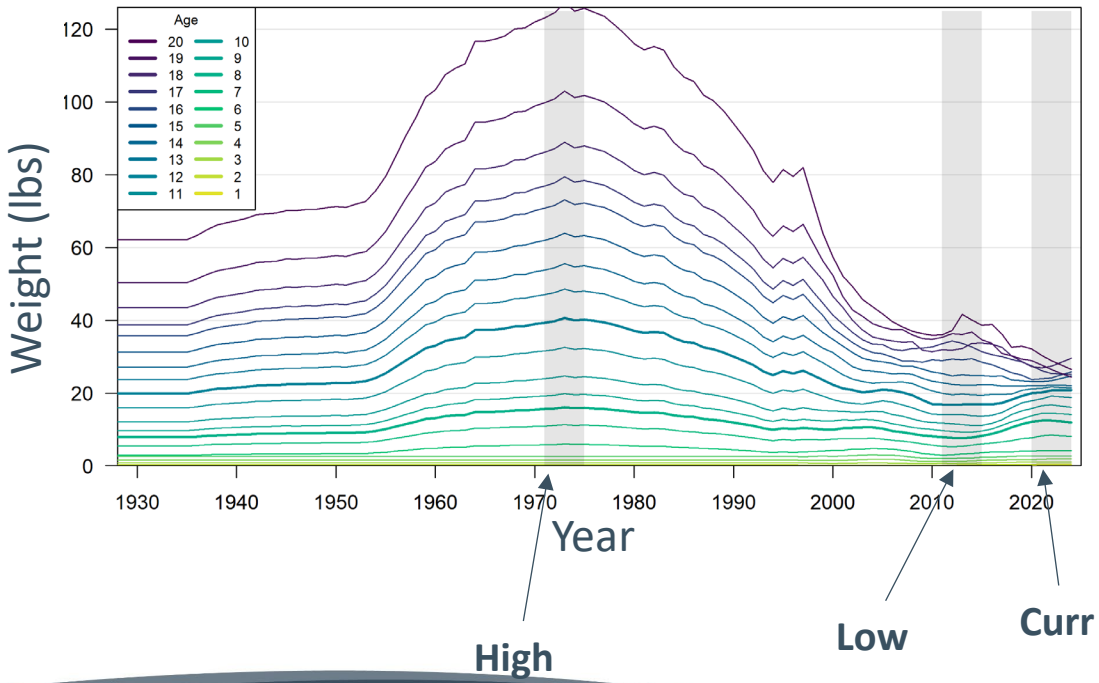


Productivity Regimes

Two major components of productivity

Weight-at age

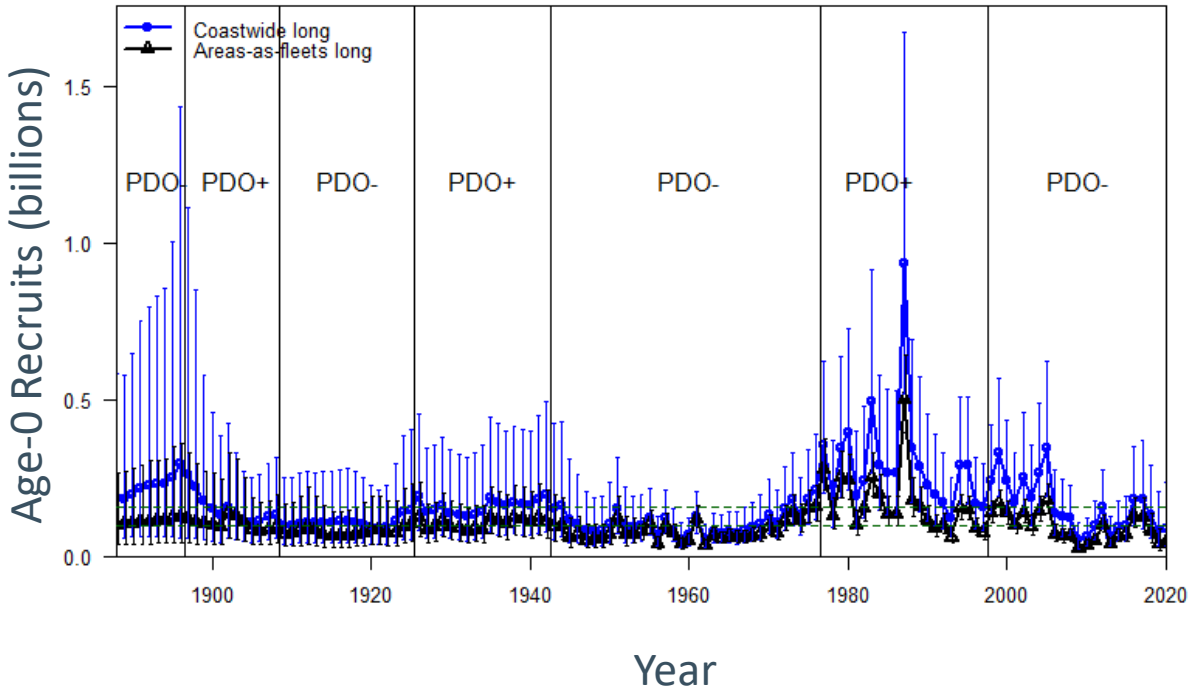
Low, Current, or High



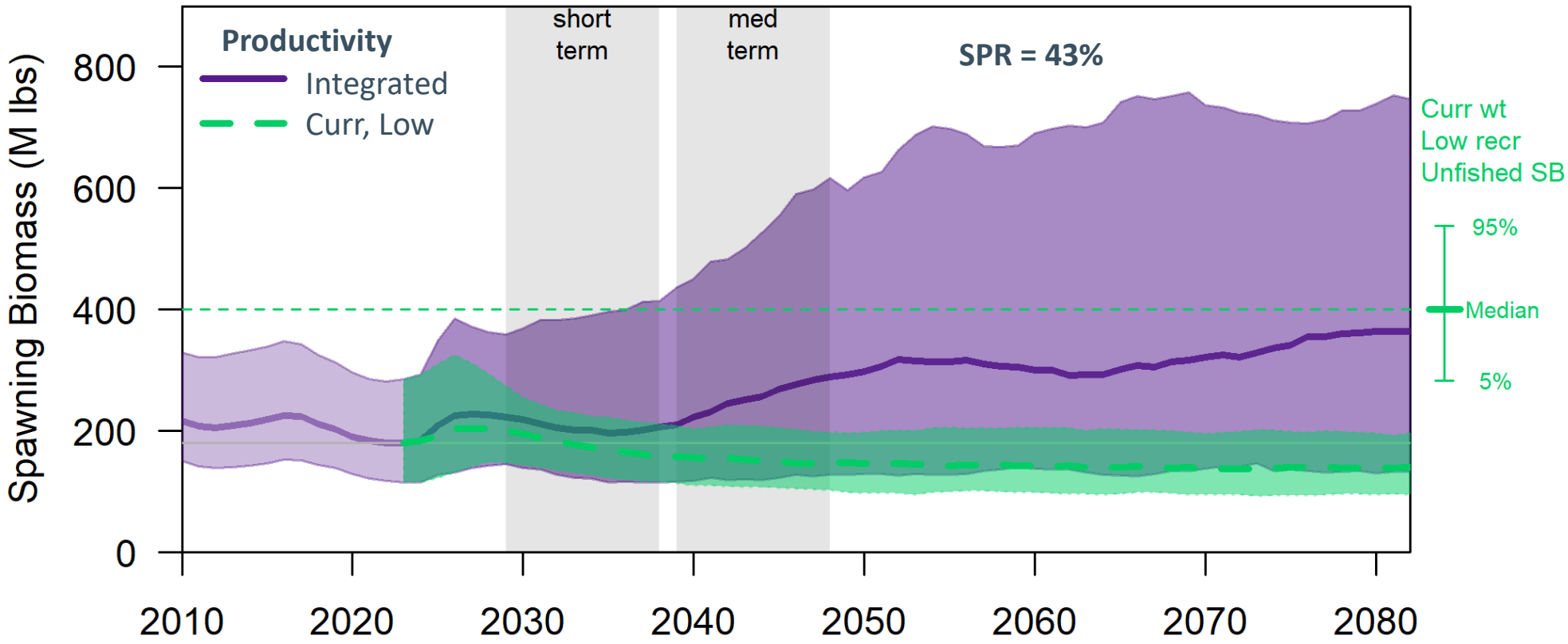
Average Recruitment

Low or high

related to low or high PDO regime



Projection Plots: Spawning Biomass



MSAB Informational Session: trace plots are useful for visualizing short- and long-term spawning biomass projections at given SPR values… The MSAB thinks that these will be useful to the Commission decision-making process…

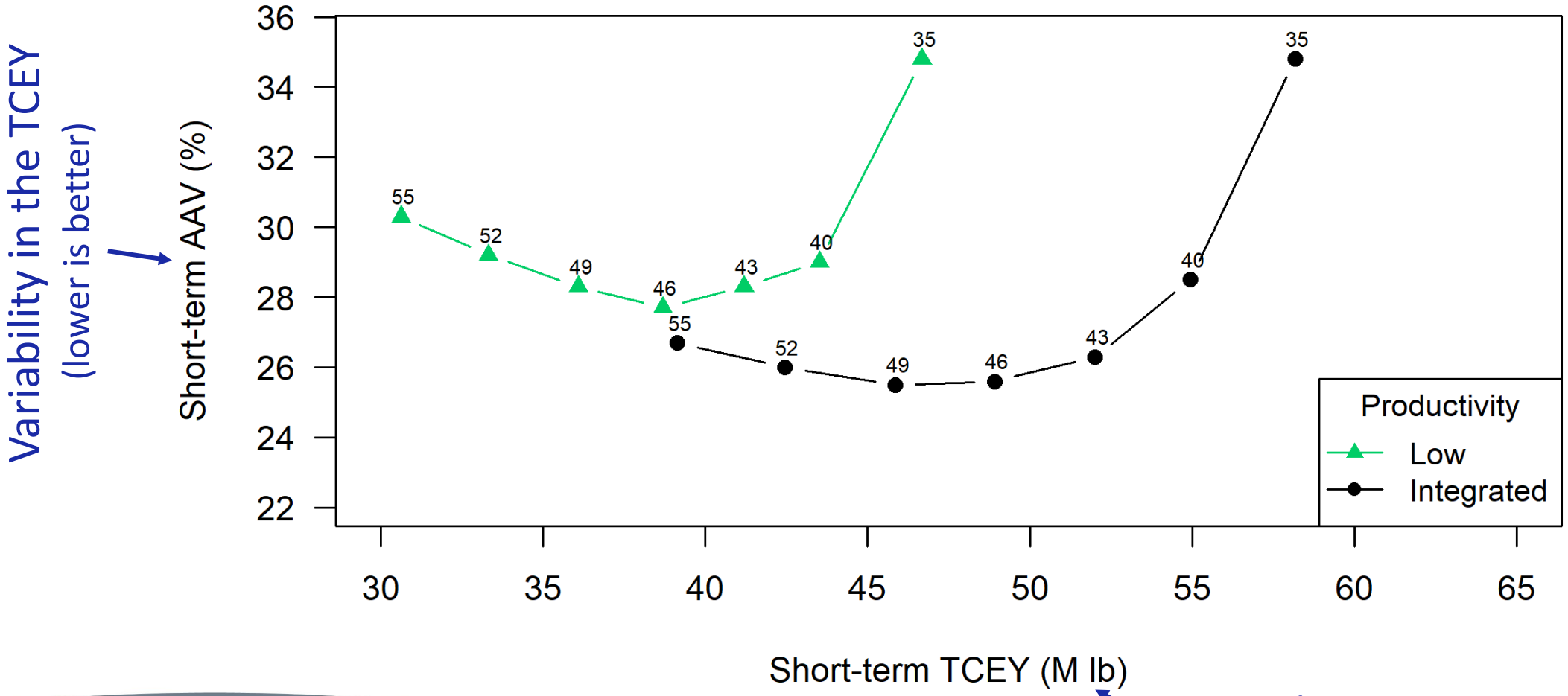
Reference Fishing Intensity

- Harvest Strategy Policy specifies SPR=43%
- MSAB020 recommended SPR=46%
  - “A lower fishing intensity would also reduce the probability that the spawning biomass is less than the 2023 spawning biomass in the short- and long-term, and result in lower interannual variability”
- Recent mortality limits associated with SPRs near 51%.
- Commission expressed interest in learning more about MSE outcomes assuming a “low” productivity scenario

- The reference SPR, and other concepts such as Depleted, can be updated in the Harvest Strategy Policy given new information

Trade-off between variability in TCEY and TCEY

- The productivity regime has little effect on the optimal SPR



MSE Results

- Low Productivity
  - Lower TCEYs
    - 9-12 Mlbs lower
  - Higher variability
  - Greater chance of lower RSB
  - Greater chance of lower absolute SB

Integrated (low & high) Productivity							
SPR (%)	35	40	43	46	49	52	55
P(RSB<20%)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
P(RSB<36%)	0.692	0.372	0.195	0.066	0.014	0.001	<0.001
Median TCEY	58.2	55.0	52.0	48.9	45.9	42.5	39.1
AAV	34.8%	28.5%	26.3%	25.6%	25.5%	26.0%	26.7%
Short-term P(SB < SB_{2023})	0.482	0.401	0.350	0.297	0.254	0.214	0.179

~ 1 in 3 chance

Low Productivity							
SPR (%)	35	40	43	46	49	52	55
P(RSB<20%)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
P(RSB<36%)	0.868	0.677	0.462	0.236	0.081	0.016	<0.001
Median TCEY	46.7	43.5	41.2	38.7	36.1	33.3	30.6
AAV	34.8%	29.0%	28.3%	27.7%	28.3%	29.2%	30.3%
Short-term P(SB < SB_{2023})	0.690	0.609	0.543	0.466	0.390	0.312	0.241

~ 1 in 2 chance

Harvest Strategy Policy Table

2026 Alternative		Status quo -10%	Status quo -5%	Status quo	Status quo +5%	Status quo +10%	$F_{46\%}$	3-year surplus/ $F_{43\%}$	MEY proxy	Overfishing limit
Fixed SPR	100%	54%	52%	51%	49%	48%	46%	43%	40%	35%
Long-term Metrics										
P(RSB < 20%)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
P(RSB < 30%)	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.007	0.032	0.161
P(RSB < 36%)	<0.002	<0.002	<0.002	0.002	0.014	0.023	0.066	0.195	0.372	0.692
P(SB<SB2023)	0.002	0.144	0.168	0.176	0.202	0.220	0.232	0.260	0.288	0.334
Short-term Metrics (2029-2038)										
Median TCEY	0.00	40.2	42.5	43.6	45.9	46.9	48.9	52.0	55.0	58.2
Median AAV	0%	26.5%	26.0%	25.9%	25.5%	25.5%	25.6%	26.3%	28.5%	34.8%
P(SB<SB2023)	0.034	0.354	0.378	0.394	0.416	0.434	0.470	0.534	0.576	0.632
TCEY interval	(0-0)	(20-73)	(21-77)	(21-79)	(21-83)	(22-85)	(23-89)	(24-94)	(25-101)	(27-108)

2026 MSE Workplan

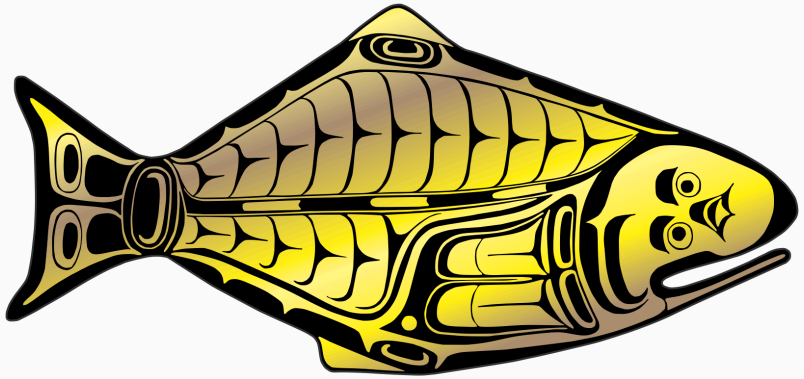
	Topic	Reporting
Winter and Spring	Update and recondition the OM	MSAB022, SRB028
	Improve the estimation model	MSAB022, SRB028
	Re-evaluate recently considered MPs	MSAB022, SRB028
	Further develop the Depleted concept	MSAB022, SRB028, SRB029, AM103
	Investigate productivity regimes	MSAB022, SRB028, SRB029, AM103
Summer and Fall	Evaluate additional MP elements	SRB029, AM103
	Determine reference points	SRB029, AM103
	Develop guidance documents for the HSP	IM102, AM103
	Update HSP	IM102, AM103

Recommendations

That the Commission:

1) **NOTE** paper IPHC-2026-AM102-11 that describes relevant MSE work completed in 2025, an HSP table, and potential topics for a 2026 MSE and HSP Program of Work.
2) **AGREE** to a 2026 MSE and HSP Program of Work.

INTERNATIONAL PACIFIC



HALIBUT COMMISSION

https://www.iphc.int/