



HALIBUT COMMISSION

# Outcomes of the 95<sup>th</sup> Session of the IPHC Annual Meeting (AM095)

PFMC meeting  
Agenda item H1  
10 March 2019

# 95<sup>th</sup> Session of the IPHC Annual Meeting (AM095)

- 28 Jan – 1 Feb 2019 in Victoria, BC, Canada.
- Open to public (**198** participants) and webcast (**142** participants)
- AM095 webpage:

<https://iphc.int/venues/details/95th-session-of-the-iphc-annual-meeting-am095>



## Report of the 95<sup>th</sup> Session of the IPHC Annual Meeting (AM095)

Victoria, British Columbia, Canada, 28 January to 1 February 2019

### Commissioners

Canada	United States of America
Paul Ryall	Chris Oliver
Neil Davis	Robert Alverson
Peter DeGreef	Richard Yamada

### Executive Director

David T. Wilson, Ph.D.

### DISTRIBUTION:

Participants in the Session  
Members of the Commission  
IPHC Secretariat

### BIBLIOGRAPHIC ENTRY

IPHC 2019. Report of the 95<sup>th</sup> Session of the IPHC Annual Meeting (AM095). Victoria, Canada, 28 January to 1 February 2019.  
*IPHC-2019-AM095-R, 46 pp.*

# 2018 data summary

- Fishery and modelled survey trends down coastwide
- Average size and size-at-age relatively stable since 2010

# 2018 assessment summary

- Spawning biomass decreasing slowly since 2016
- Low numbers of recruits from 2006-2010, 2011-2012 slightly higher but uncertain

# Stock and analysis outlook

- Stock productivity remains low
  - Slowly decreasing spawning biomass over the next several years pending improved recruitment
- 2019 data (survey expansion and age information) will be important
- Sex-ratio data from the commercial catch to be included in 2019 stock assessment
- Full assessment review in June 2019

# 2019 decision table

2019 Alternative				No fishing mortality		Status quo			Reference SPR=46%									
Total mortality (M lb)				0.0	11.7	21.8	31.8	37.6	39.0	40.4	41.8	43.1	44.3	45.5	46.8	48.3	49.9	61.8
TCEY (M lb)				0.0	10.0	20.0	30.0	35.8	37.2	38.6	40.0	41.3	42.5	43.7	45.0	46.5	48.1	60.0
2019 Fishing intensity				F <sub>100%</sub>	F <sub>78%</sub>	F <sub>64%</sub>	F <sub>54%</sub>	F <sub>49%</sub>	F <sub>48%</sub>	F <sub>47%</sub>	F <sub>46%</sub>	F <sub>45%</sub>	F <sub>44%</sub>	F <sub>43%</sub>	F <sub>42%</sub>	F <sub>41%</sub>	F <sub>40%</sub>	F <sub>34%</sub>
Fishing intensity interval				-	56-87%	41-76%	31-67%	27-63%	26-62%	25-61%	25-60%	24-59%	23-59%	23-58%	22-57%	22-56%	21-55%	17-49%
Stock Trend (spawning biomass)	in 2020	is less than 2019	1	3	26	60	77	81	84	87	90	92	93	95	96	97	>99	a
		is 5% less than 2019	<1	<1	1	10	26	30	34	37	39	41	43	45	48	50	78	b
	in 2021	is less than 2019	1	7	41	75	90	93	94	96	97	98	98	99	99	99	>99	c
		is 5% less than 2019	<1	1	11	42	57	61	65	69	73	77	80	83	87	90	99	d
	in 2022	is less than 2019	1	12	51	82	93	94	96	97	98	98	99	99	99	>99	>99	e
		is 5% less than 2019	<1	3	28	58	76	79	83	86	88	90	92	93	95	96	>99	f
Stock Status (Spawning biomass)	in 2020	is less than 30%	5	7	11	14	17	17	18	18	19	19	20	20	21	21	25	g
		is less than 20%	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	1	h
	in 2021	is less than 30%	3	7	13	20	24	25	25	26	27	27	27	28	29	29	33	i
		is less than 20%	<1	<1	<1	<1	1	1	1	1	2	2	2	3	3	4	10	j
	in 2022	is less than 30%	2	8	17	25	28	29	29	30	30	31	31	32	33	33	41	k
		is less than 20%	<1	<1	<1	2	4	5	6	7	8	9	10	12	13	15	24	l
Fishery Trend (TCEY)	in 2020	is less than 2019	0	<1	18	26	40	45	51	56	60	63	66	69	73	77	95	m
		is 10% less than 2019	0	<1	12	25	29	33	37	42	47	51	54	58	62	66	95	n
	in 2021	is less than 2019	0	<1	20	28	46	51	56	60	64	67	70	73	77	81	97	o
		is 10% less than 2019	0	<1	16	26	35	39	44	49	53	56	59	63	66	71	97	p
	in 2022	is less than 2019	0	<1	22	32	50	54	58	62	66	69	72	76	79	83	98	q
		is 10% less than 2019	0	<1	19	28	40	45	49	53	56	60	62	66	69	73	98	r
Fishery Status (Fishing intensity)	in 2019	is above F <sub>46%</sub>	0	<1	16	25	35	40	46	50	56	59	62	65	69	72	92	s

# Mortality limits for 2019

IPHC Regulatory Area	Mortality limit (TCEY) (Mlb)	Mortality limit (TCEY) (metric tonne)
2A	1.65	748.42
2B	6.83	3,098.04
2C	6.34	2,875.78
3A	13.50	6,123.50
3B	2.90	1,315.42
4A	1.94	879.97
4B	1.45	657.71
4CDE	4.00	1,814.37
Total (IPHC Convention Area)	38.61	17,513.20

# 2019 mortality limits compared to 2018

IPHC Regulatory Area	2018 Mortality limit (TCEY) (Mlb)	2019 Mortality limit (TCEY) (Mlb)	% change
2A	1.32	1.65	25.00
2B	7.10	6.83	<b>-3.80</b>
2C	6.34	6.34	0.00
3A	12.54	13.50	7.66
3B	3.27	2.90	<b>-11.31</b>
4A	1.74	1.94	11.49
4B	1.28	1.45	13.28
4CDE	3.62	4.00	10.50
<b>Total (IPHC Convention Area)</b>	<b>37.21</b>	<b>38.61</b>	<b>3.76</b>



# Mortality table projected for the 2019 mortality limits by IPHC Regulatory Area

Sector	IPHC Regulatory Area								
	2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Commercial discard mortality	0.02	0.13	NA	NA	0.19	0.09	0.02	0.04	<b>0.50</b>
O26 Bycatch	0.13	0.27	0.03	1.28	0.36	0.18	0.22	1.87	<b>4.33</b>
Non-CSP Recreational (+ discards)	NA	0.08	1.38	1.74	0.00	0.01	0.00	0.00	<b>3.21</b>
Subsistence	NA	0.41	0.44	0.22	0.01	0.01	0.00	0.06	<b>1.14</b>
Total Non-FCEY	0.15	0.88	1.85	3.24	0.57	0.29	0.24	1.96	<b>9.18</b>
Commercial discard mortality	NA	NA	0.06	0.31	NA	NA	NA	NA	<b>0.37</b>
CSP Recreational (+ discards)	0.60	0.84	0.82	1.89	NA	NA	NA	NA	<b>4.16</b>
Subsistence	0.03	NA	NA	NA	NA	NA	NA	NA	<b>0.03</b>
Commercial Landings	0.86	5.10	3.61	8.06	2.33	1.65	1.21	2.04	<b>24.88</b>
<b>Total FCEY</b>	<b>1.50</b>	<b>5.95</b>	<b>4.49</b>	<b>10.26</b>	<b>2.33</b>	<b>1.65</b>	<b>1.21</b>	<b>2.04</b>	<b>29.43</b>
<b>TCEY</b>	<b>1.65</b>	<b>6.83</b>	<b>6.34</b>	<b>13.50</b>	<b>2.90</b>	<b>1.94</b>	<b>1.45</b>	<b>4.00</b>	<b>38.61</b>
U26 Bycatch	0.00	0.02	0.00	0.37	0.11	0.10	0.01	1.12	<b>1.73</b>
<b>Total Mortality</b>	<b>1.65</b>	<b>6.85</b>	<b>6.34</b>	<b>13.87</b>	<b>3.01</b>	<b>2.04</b>	<b>1.46</b>	<b>5.12</b>	<b>40.34</b>

# 95<sup>th</sup> Session of the IPHC Annual Meeting (AM095)

- Other decisions:
  - Fishing periods
  - Research plans

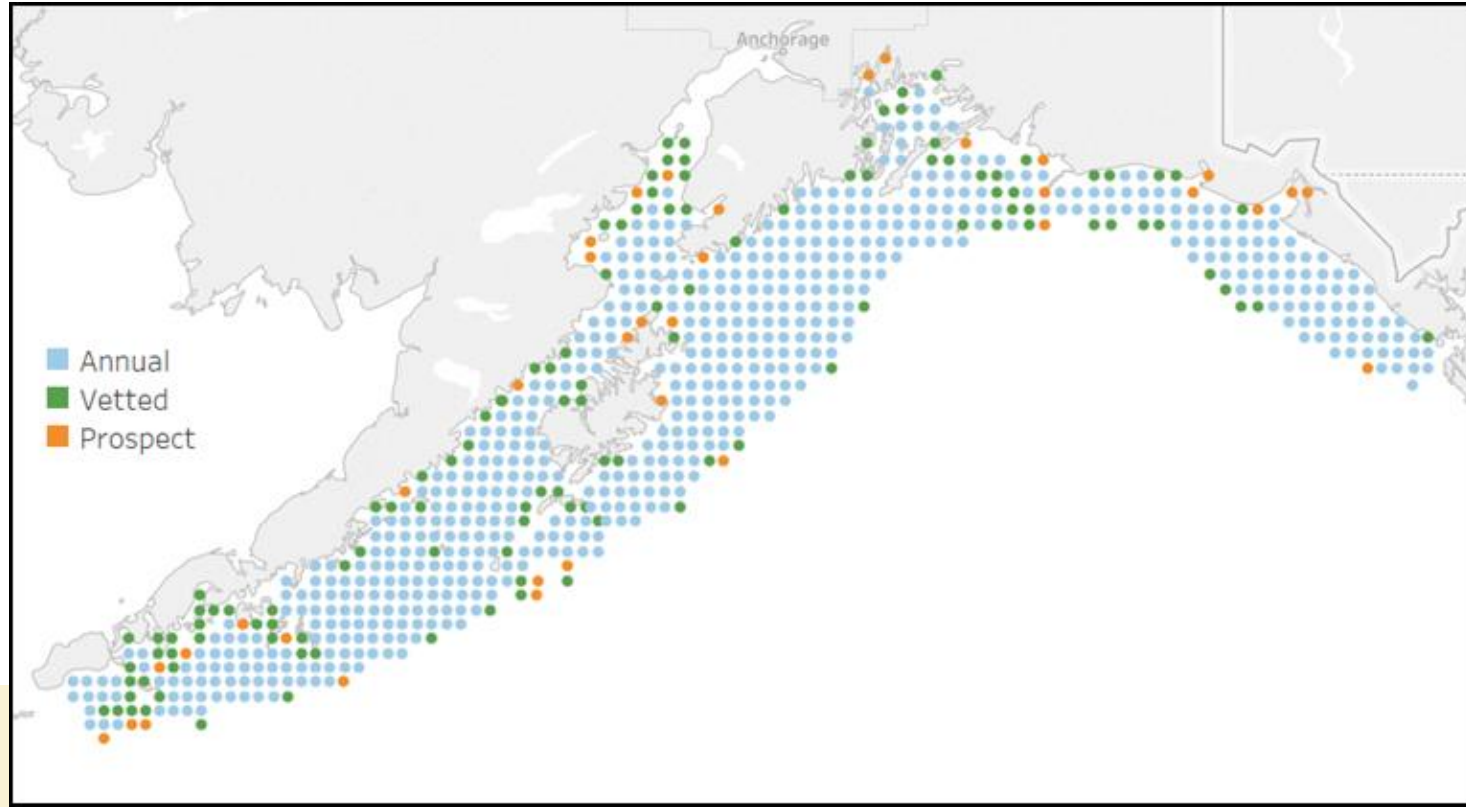


# Fishing Periods

- The Commission adopted these fishing periods for 2019:
  - All commercial fishing for Pacific halibut in all IPHC Regulatory Areas may begin no earlier than **15 March** and must cease on **14 November**.
  - IPHC Regulatory Area 2A Non-Tribal Directed Commercial: 10-hour fishing periods on **26 June, 27 June, 10 July, 24 July, 7 August, 21 August, 4 September, 18 September**.

# Research plans

IPHC Fishery-independent setline survey (FISS) expansion in IPHC Regulatory Areas 3A and 3B in 2019

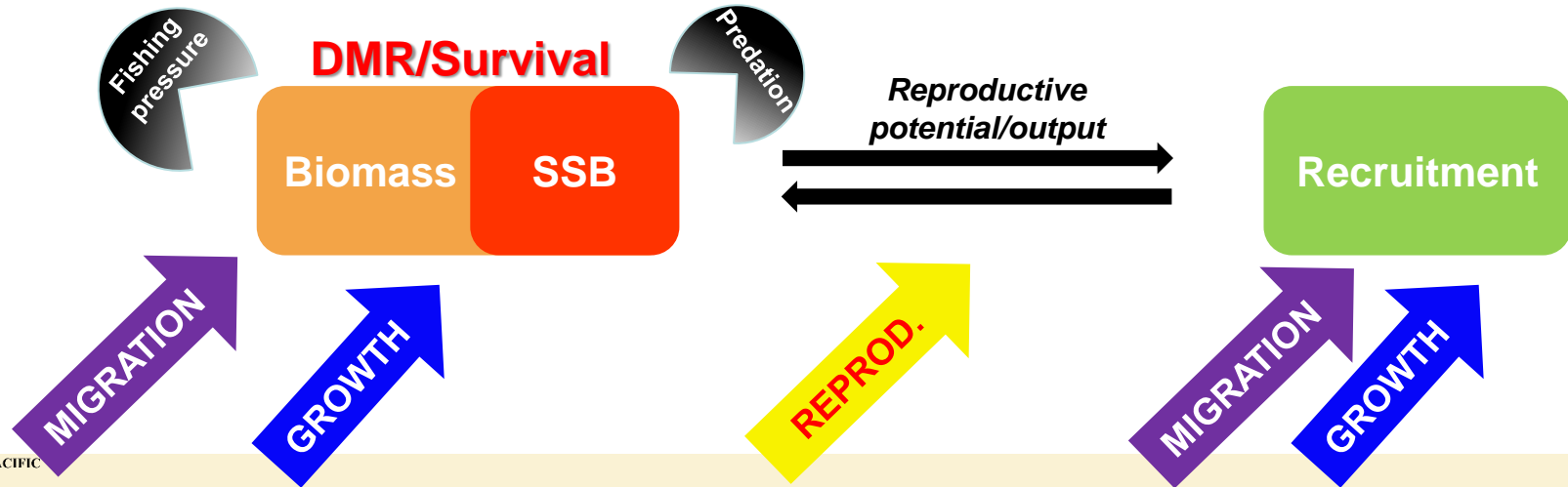


# Five-year research program



## Primary objectives

- Identify and address *critical knowledge gaps* in the biology of Pacific halibut
- Understand the influence of *environmental conditions* on Pacific halibut biology
- Apply resulting knowledge to reduce *uncertainty* in current stock assessment models



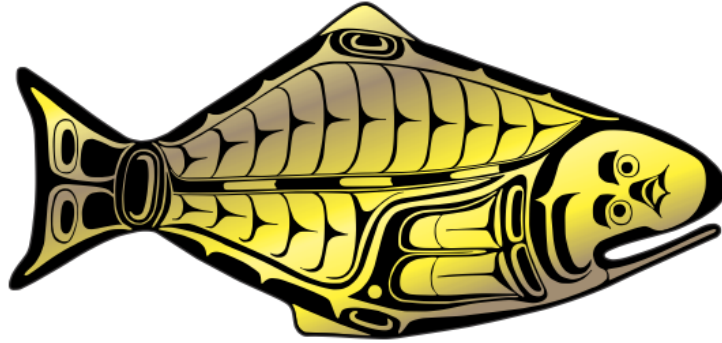
# Looking ahead

- Management Strategy Advisory Board 6-9 May (Sitka, AK)
- Interim Meeting (IM095) 25-26 Nov in Seattle, WA
- Annual Meeting (AM096) [27-31 Jan] 2020 in Anchorage, AK.

# Annual Meeting information on the web

- Annual Meeting (AM095) materials available at <https://iphc.int/venues/details/95th-session-of-the-iphc-annual-meeting-am095>
- Annual Meeting (AM095) Report
  - Posted: <https://iphc.int/uploads/pdf/am/2019am/iphc-2019-am095-r.pdf>

**INTERNATIONAL PACIFIC**



**HALIBUT COMMISSION**

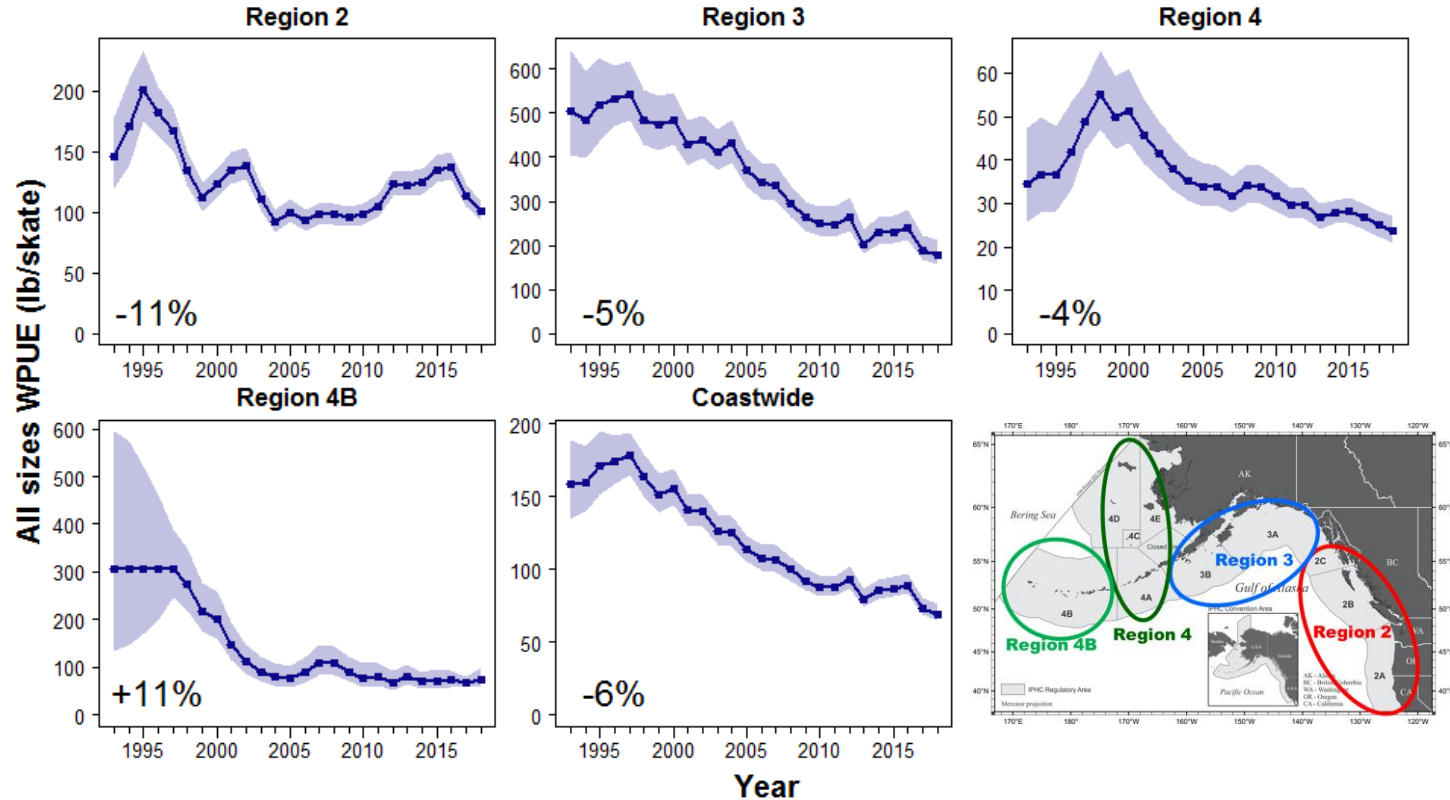


# Adopted 2019 mortality limit (38.61 M lb)

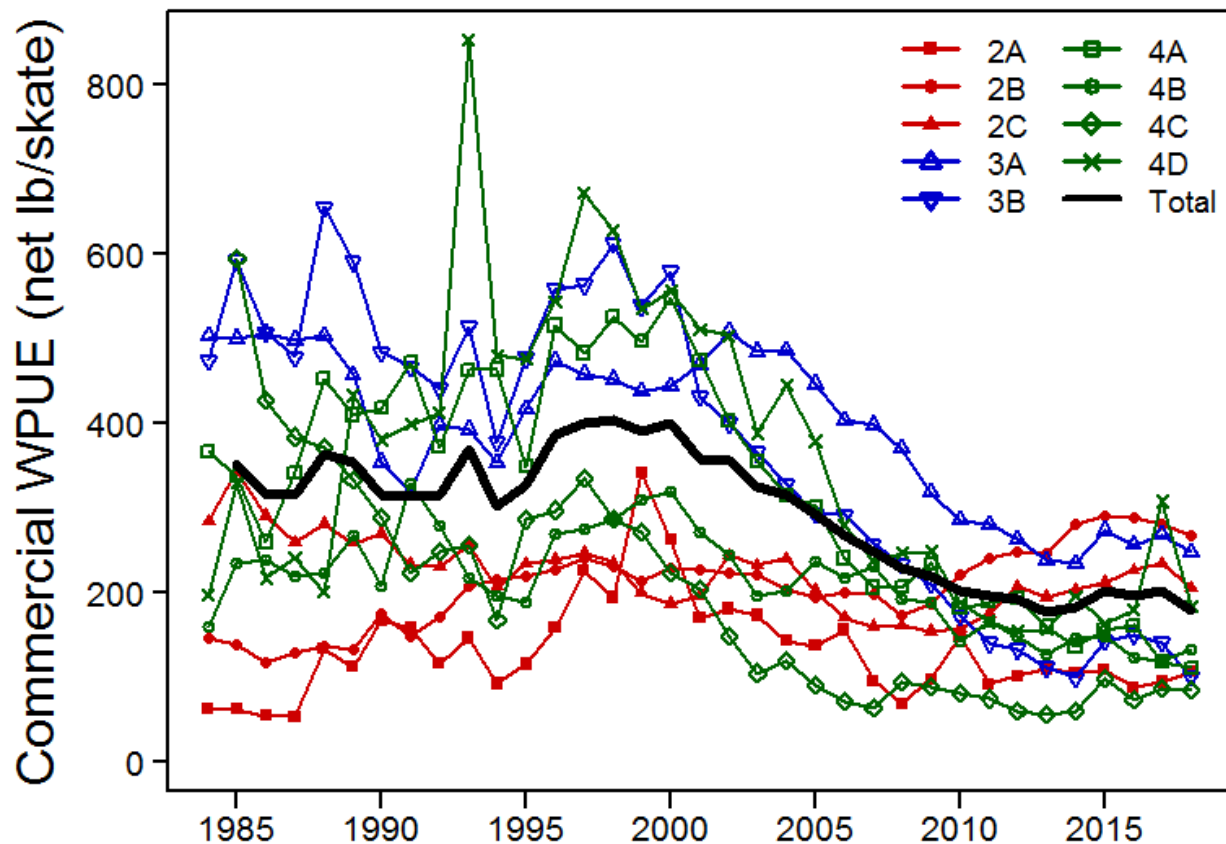
- Between the *status quo* (37.21 M lb) and the Interim Management Procedure (40 M lb)
  - Represents a 4% increase from 2017
- Corresponds to projections of:
  - $F_{47\%}$  in 2019
  - 84% probability of decrease in SB in 2020
  - 18% probability of dropping below  $SB_{30\%}$  management trigger in 2020
  - 51% probability of fishery limit decrease to maintain  $F_{46\%}$  in 2020

2019 Alternative			No fishing mortality						Status quo	Adopted	Reference SPR=46%										
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2019 Fishing Intensity			F <sub>100%</sub>	F <sub>78%</sub>	F <sub>64%</sub>	F <sub>54%</sub>	F <sub>49%</sub>	F <sub>48%</sub>	F <sub>47%</sub>	F <sub>46%</sub>	F <sub>45%</sub>	F <sub>44%</sub>	F <sub>43%</sub>	F <sub>42%</sub>	F <sub>41%</sub>	F <sub>40%</sub>	F <sub>34%</sub>				
Fishing Intensity Interval			--	56-87%	41-76%	31-67%	27-63%	26-62%	25-61%	25-60%	24-59%	23-59%	23-58%	22-57%	22-56%	21-55%	17-49%				
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		Is less than 20%	<1	<1	<1	<1	1	1	1	1	2	2	2	3	3	4	10				
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		Is less than 20%	<1	<1	<1	2	4	5	6	7	8	9	10	12	13	15	24				
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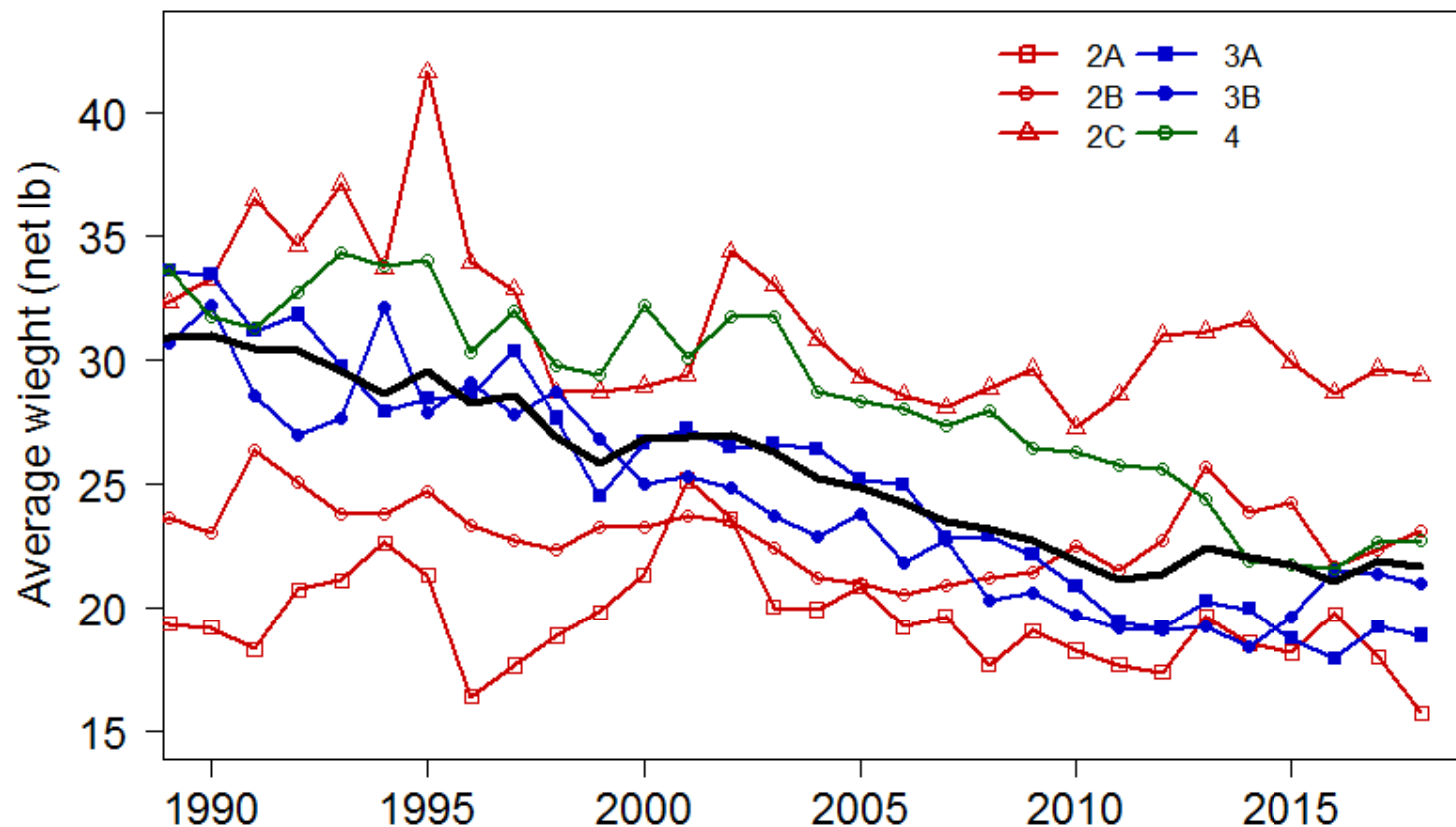
# Modelled survey trend (all WPUE)



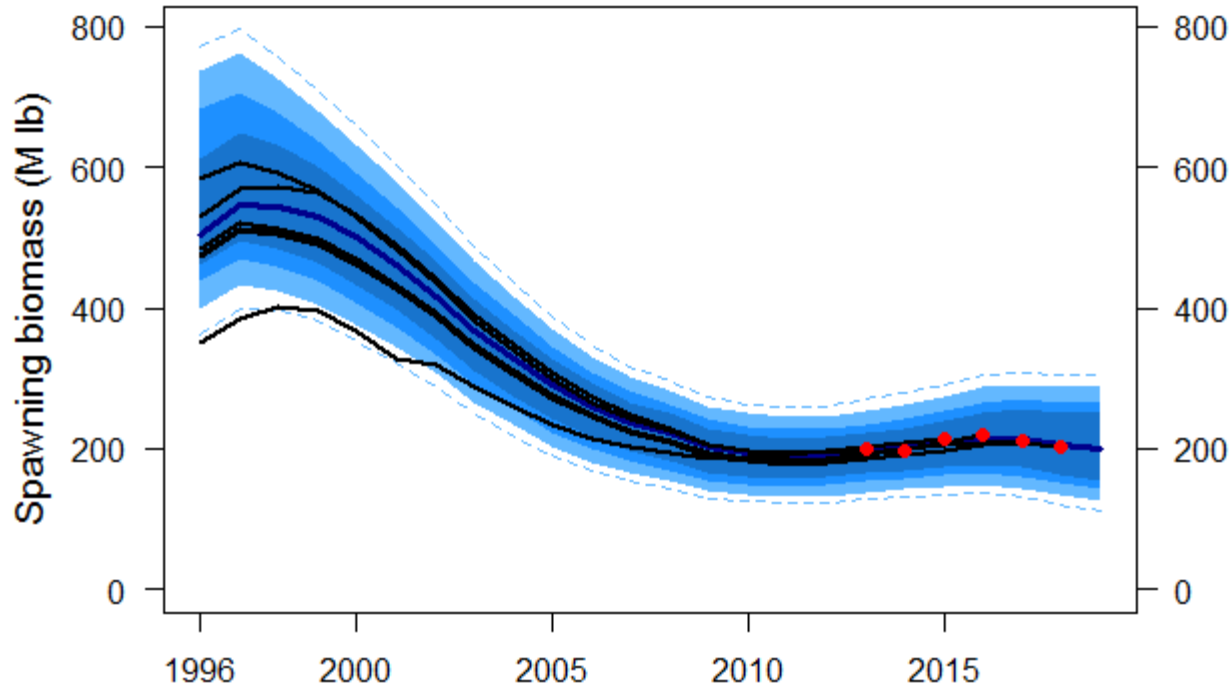
# Commercial catch-rates



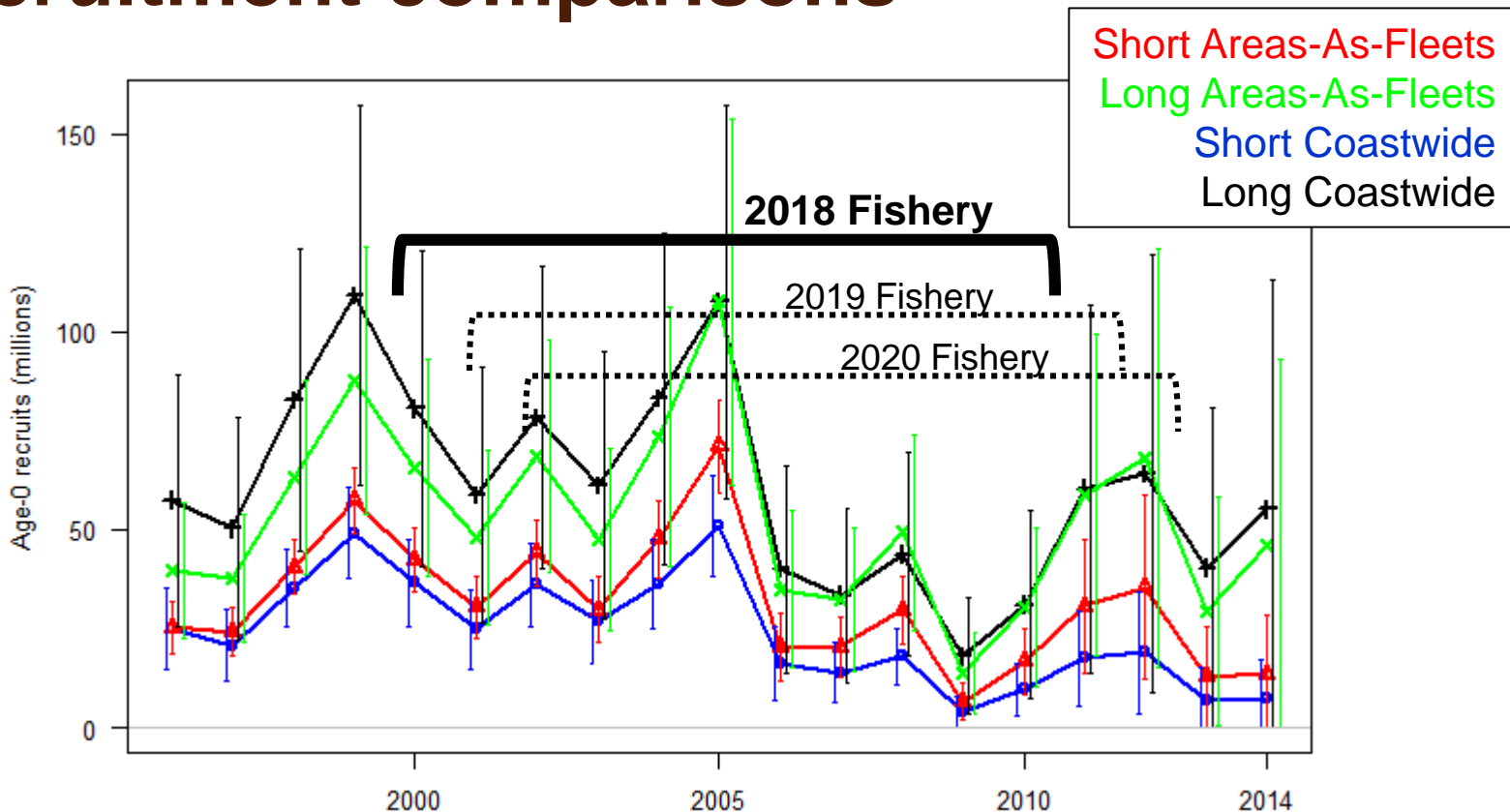
# Fishery average fish weight



# Comparison to previous assessments



# Recruitment comparisons



# Assessment summary table

Indicators	Values	Trends	Status
<b>Total mortality 2018:</b> <b>Retained catch 2018:</b> <b>Average removals 2014–18:</b>	<b>38.74 MLBS, 17,572 T</b> <b>31.81 MLBS, 14,427 T</b> <b>41.39 MLBS, 18,772 T</b>	<b>MORTALITY DECREASED FROM 2017 TO 2018</b>	<b>2018 MORTALITY NEAR 100-YEAR LOW</b>
<b>SPR<sub>2018</sub>:</b> <b>P(SPR&lt;46%):</b> <b>P(SPR&lt;limit):</b>	<b>49% (28-62%)</b> <b>34%</b> <b>LIMIT NOT SPECIFIED</b>	<b>FISHING INTENSITY DECREASED FROM 2017 TO 2018</b>	<b>FISHING INTENSITY BELOW REFERENCE LEVEL</b>
<b>SB<sub>2019</sub> (Mlb):</b> <b>SB<sub>2019</sub>/SB<sub>0</sub>:</b> <b>P(SB<sub>2019</sub>&lt;SB<sub>30</sub>):</b> <b>P(SB<sub>2019</sub>&lt;SB<sub>20</sub>):</b>	<b>199 MLBS (125–287)</b> <b>43% (27-63%)</b> <b>11%</b> <b>&lt;1%</b>	<b>SB DECREASED FROM 2017 TO 2018</b>	<b>NOT OVERFISHED</b>
<b>Biological stock distribution:</b>	<b>SEE TABLES AND FIGURES</b>	<b>DISTRIBUTION STABLE 2014-18</b>	<b>REGION 2 ABOVE, REGION 3 BELOW HISTORICAL VALUES</b>



# Adopted mortality limit projection

