

International Pacific Halibut Commission



Annual Meeting

**Seattle, WA
January 13 – 17, 2014**

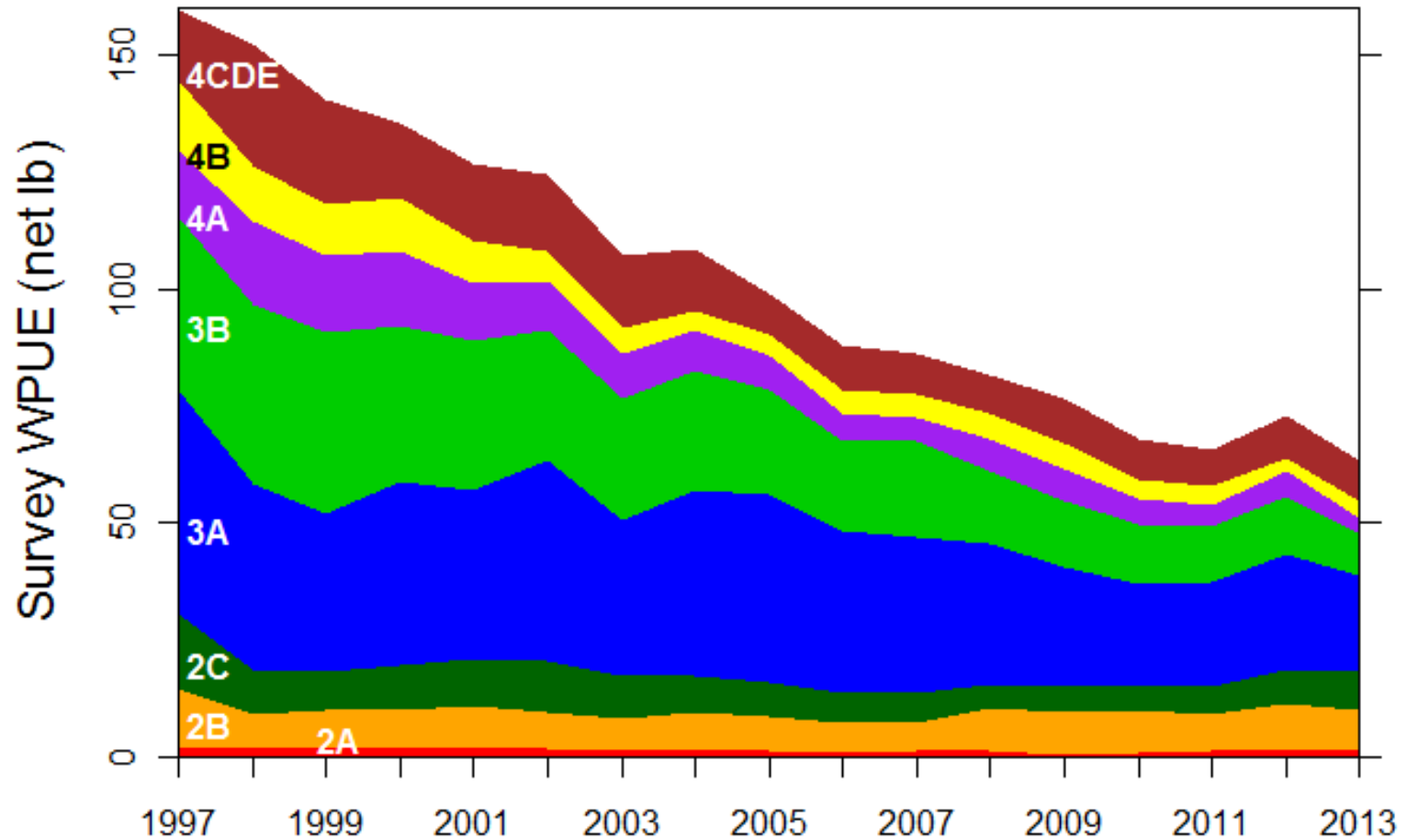
**Summary for the NPFMC Meeting
5 February, 2014**

2013 Stock assessment summary

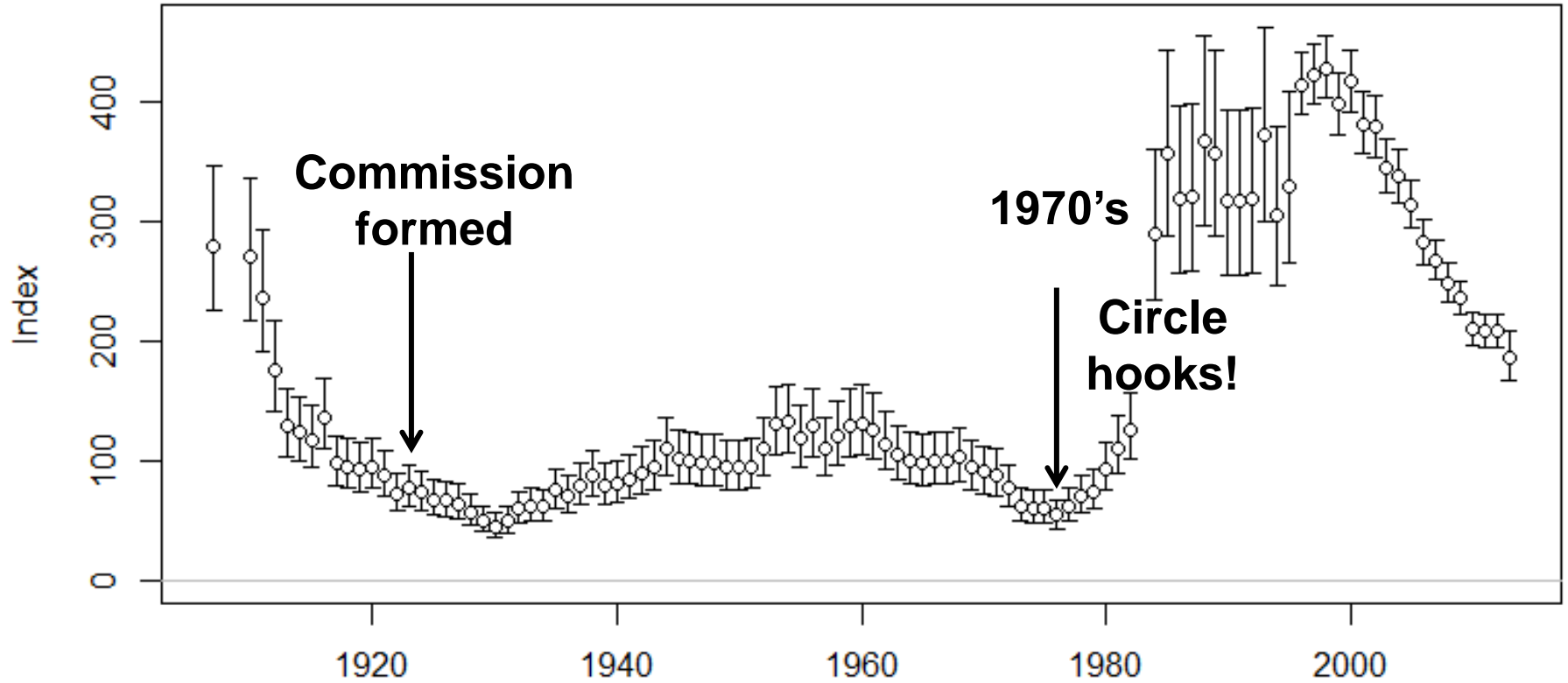
- Survey and fishery trends down in 2013
 - Major data reconstruction completed:
 - Historical observations
 - Updated series through 2013
 - Introduced 'Ensemble' assessment
- 2013 results consistent with 2012 projections



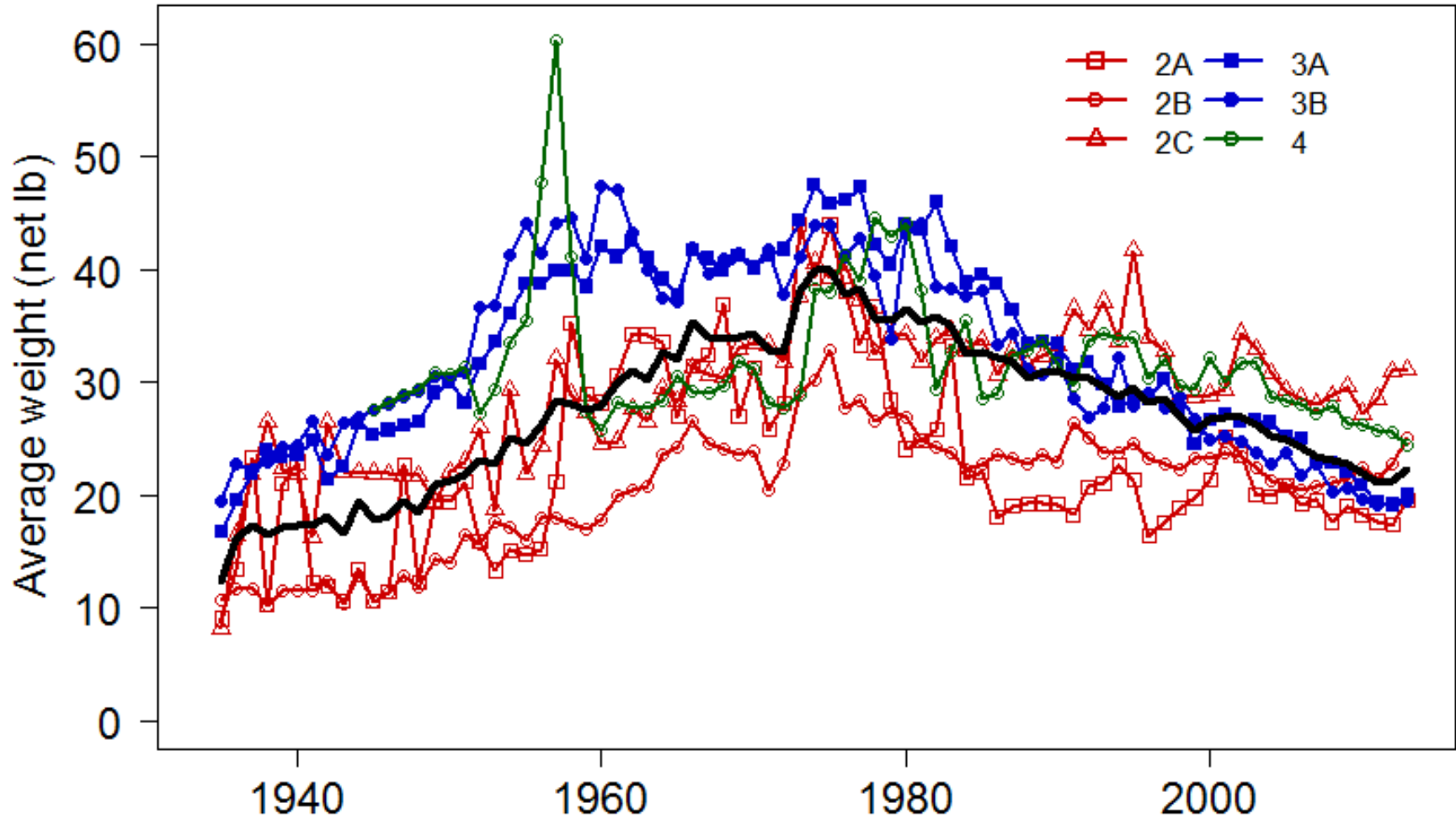
Survey trends – Total WPUE



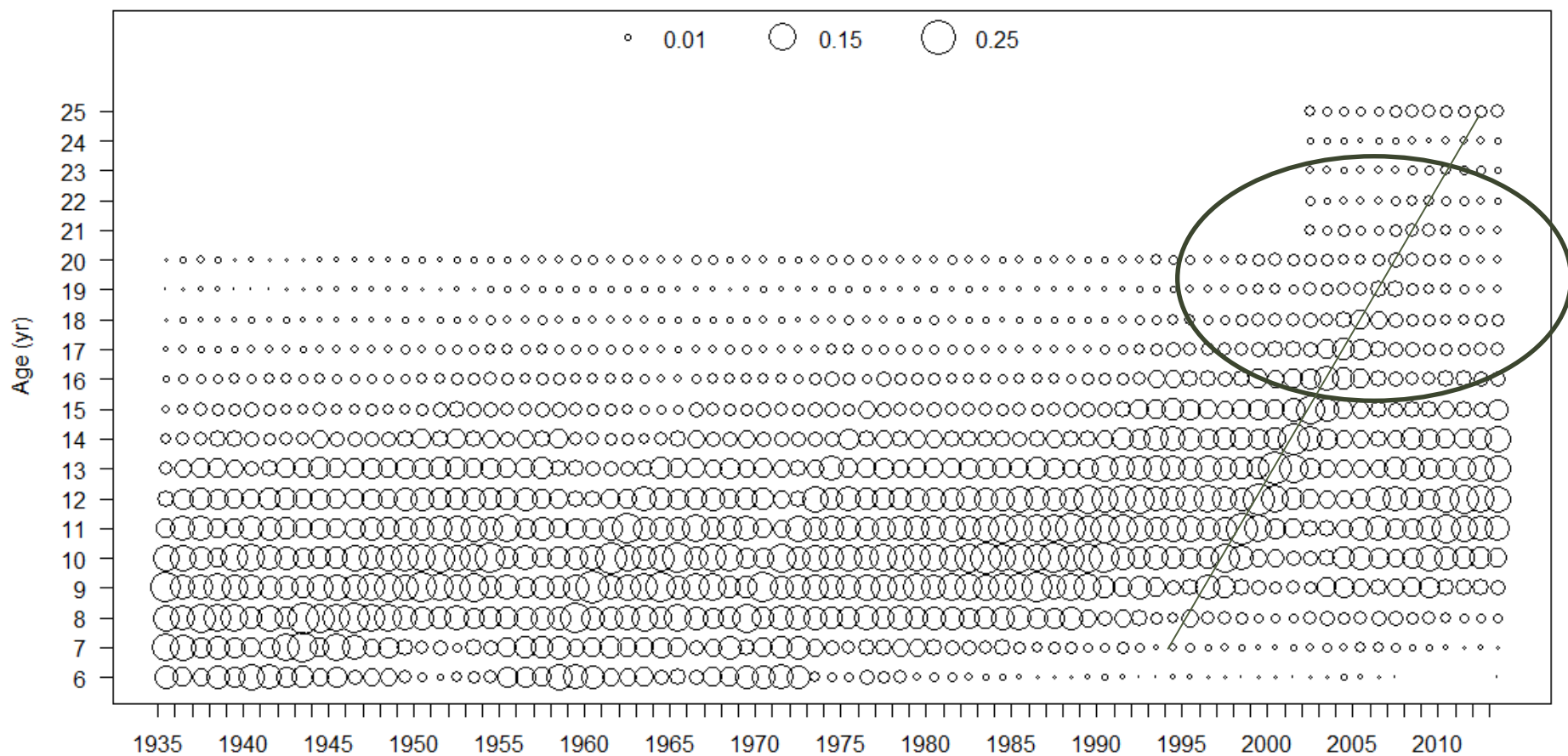
Fishery trends



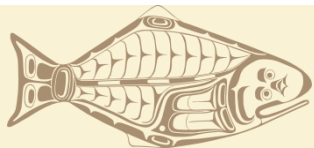
Fishery weight



Fishery ages



→ 1987 year class: ~220 million lbs, 20-25% of period landings

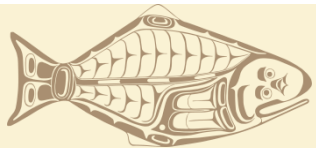
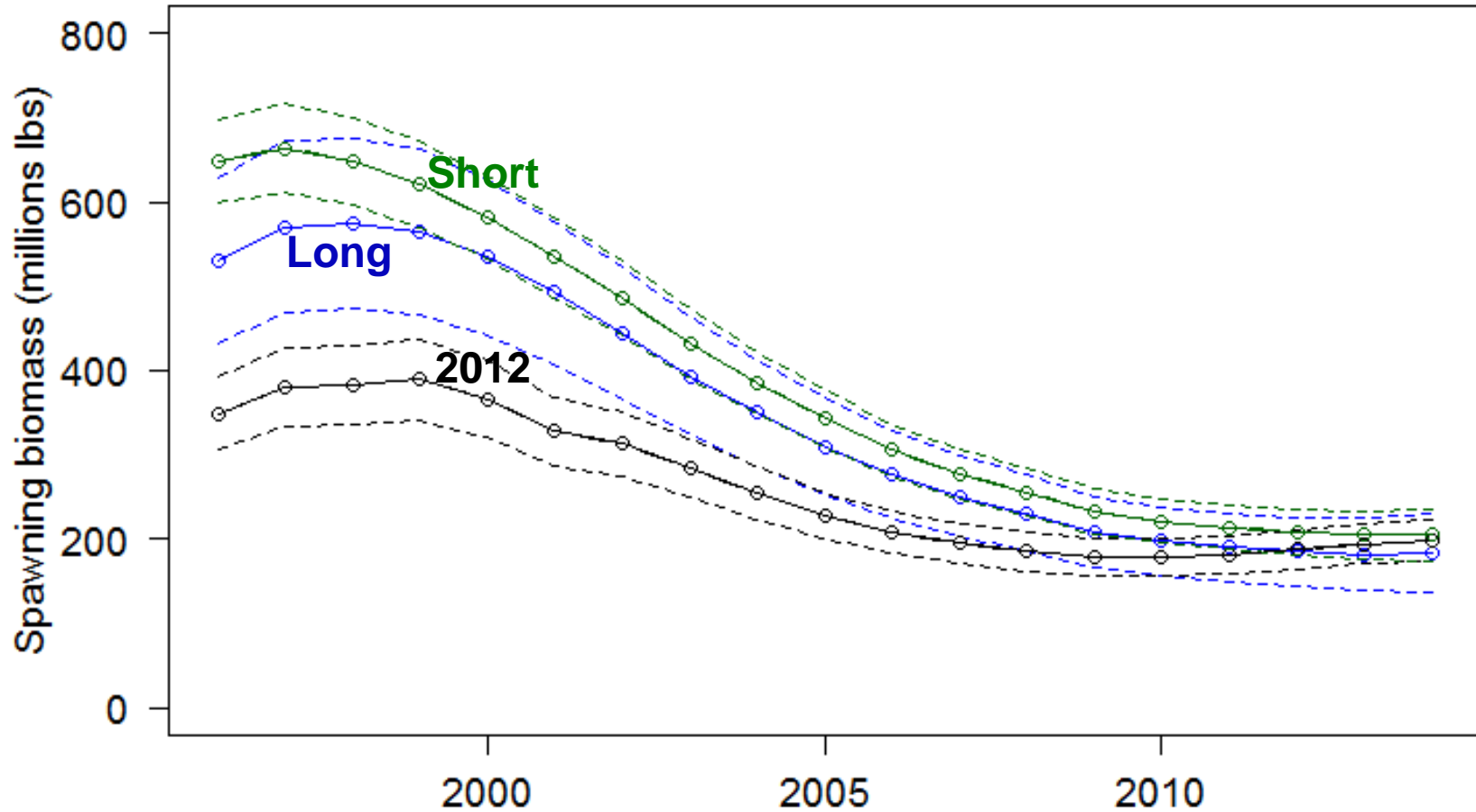


Modelling during 2013

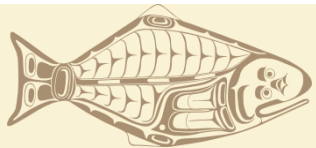
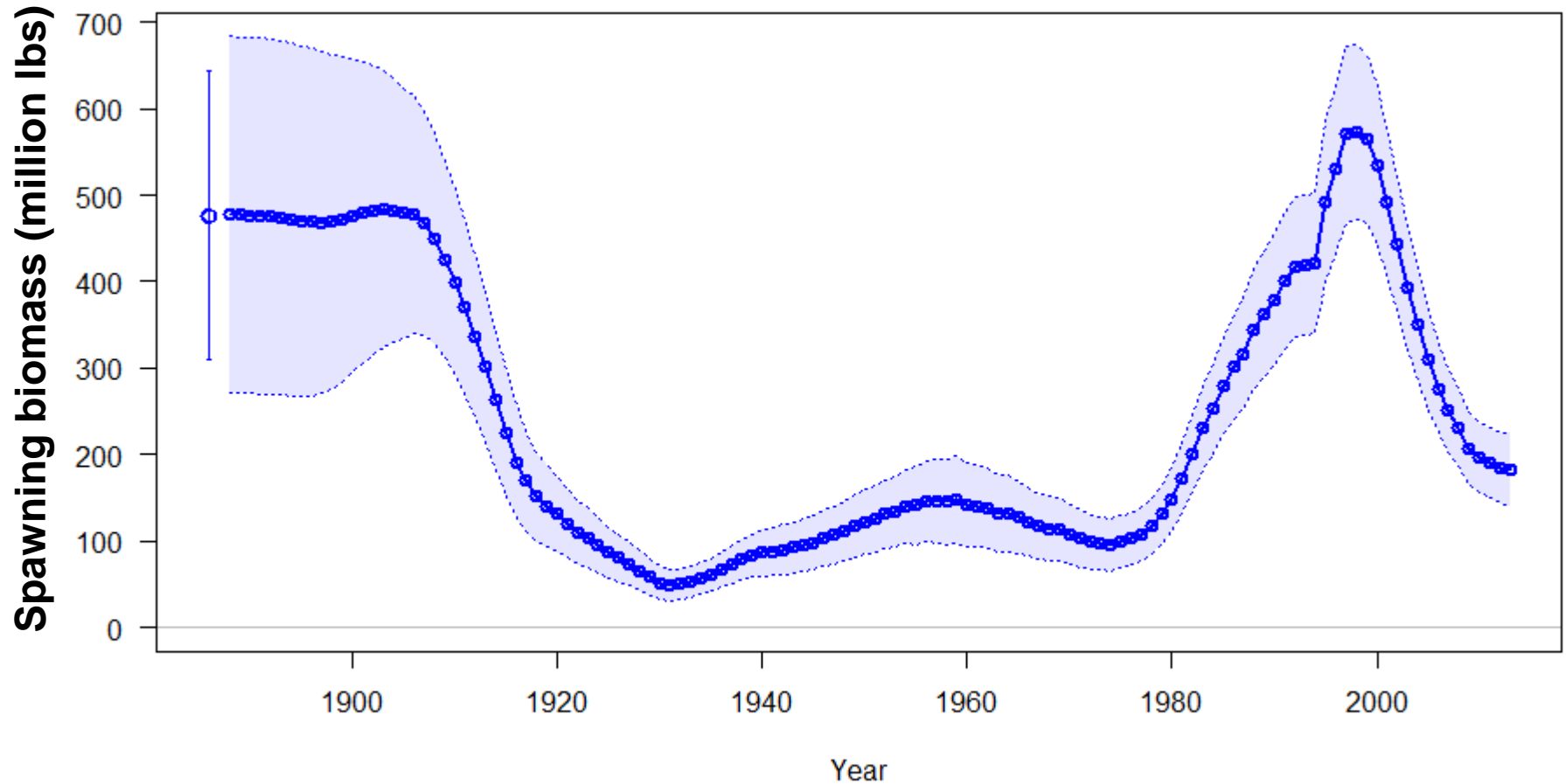
- 2012 model
 - Extended with 2013 data
 - Consistent with previous results
- Short time-series (direct comparison model)
 - Independent software
 - ‘Streamlined’ data
 - Similar, but simplified assumptions and structure
- Long time-series model
 - Uses all the data available
 - Allows perspective on history, reference points, recent trends



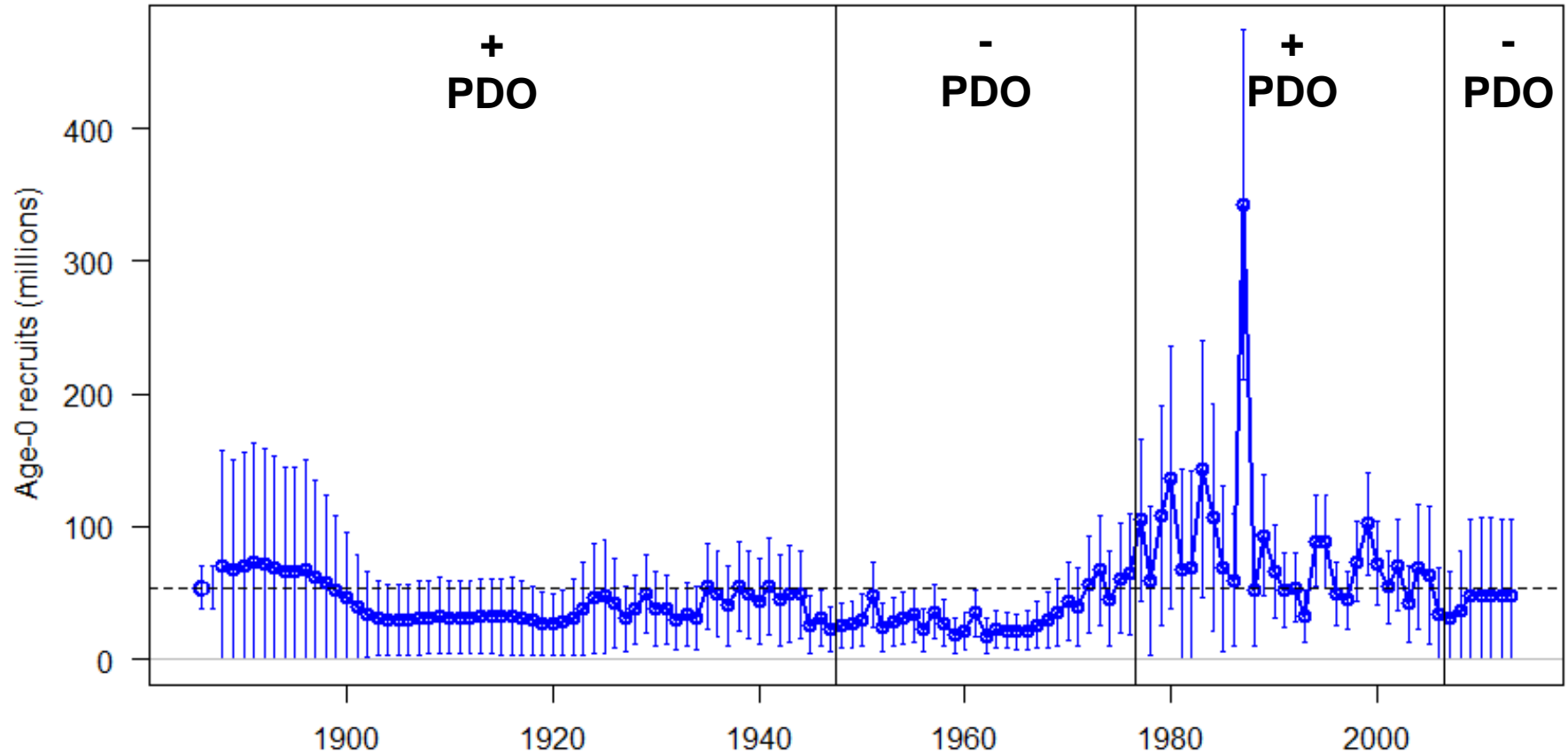
Model comparison



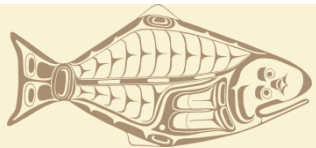
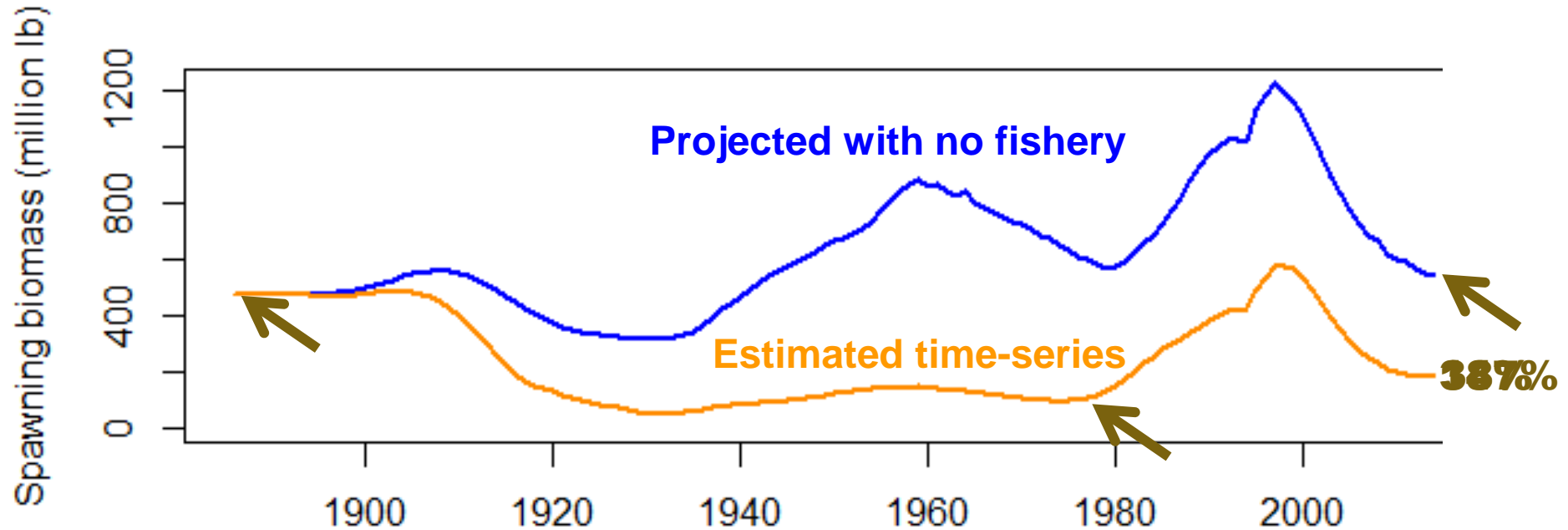
Long time-series perspective



Recruitment trends



Alternative reference points

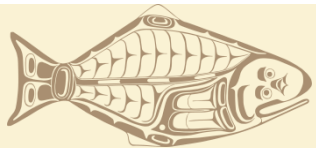


Stock assessment

Assessment model changes over 30+ years:

→ variable stock estimates, catch advice,
and confidence levels

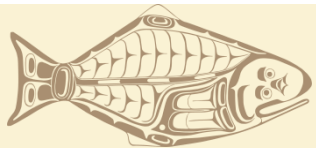
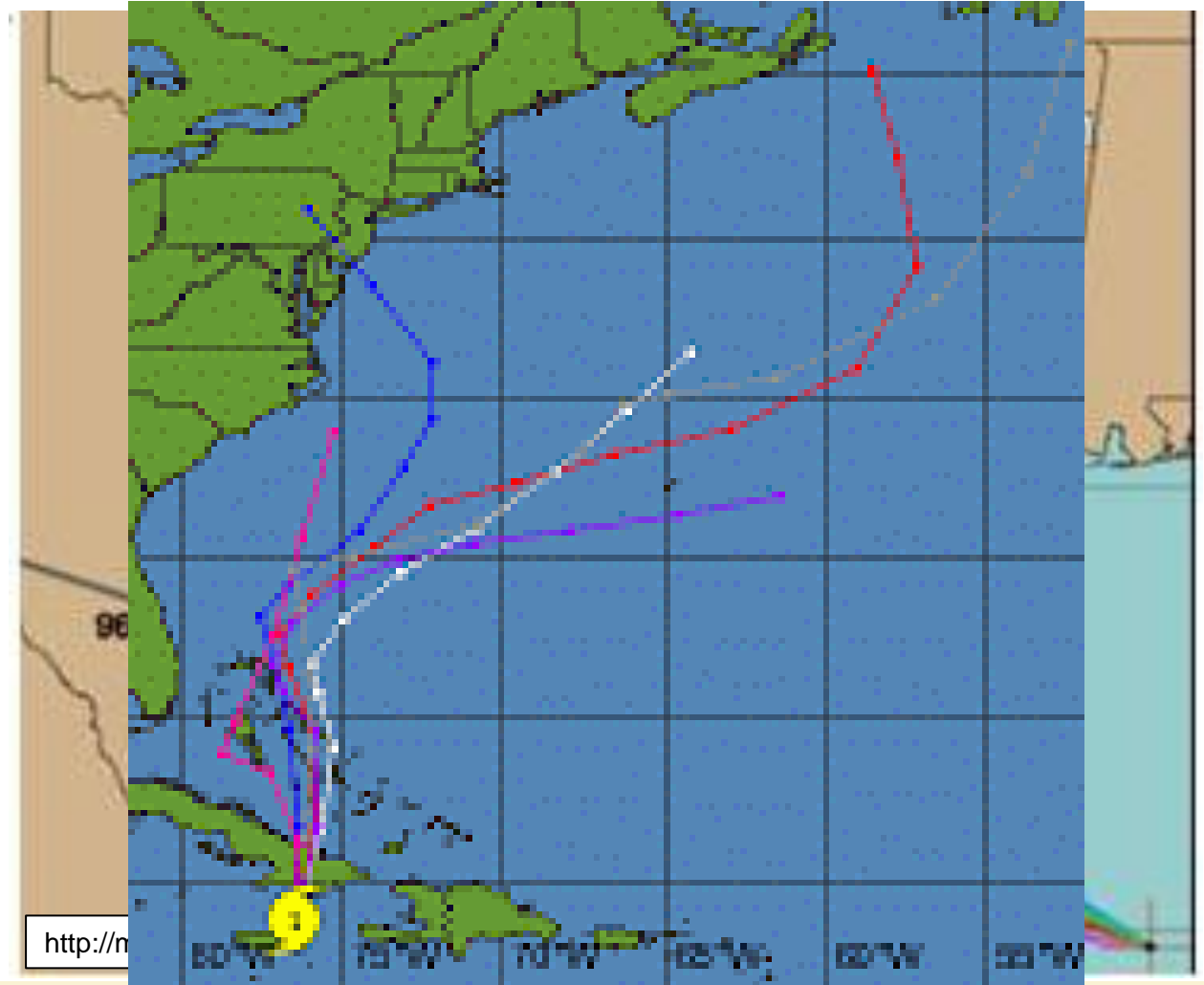
→ **Goal:** Understanding the stock, not endlessly
searching for a single 'perfect' assessment model!



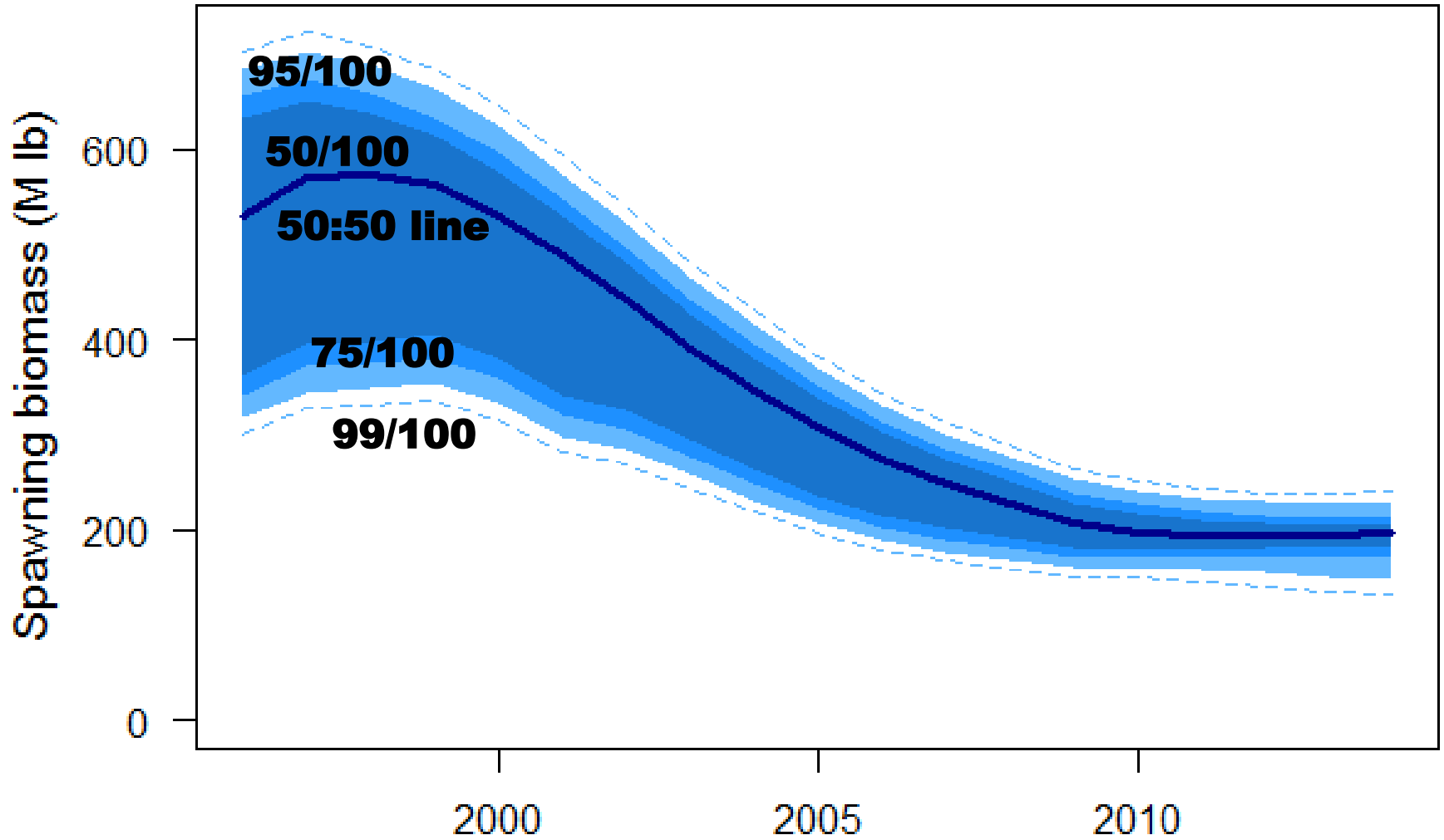
Ensemble modelling

- Standard practice for hurricane forecasting

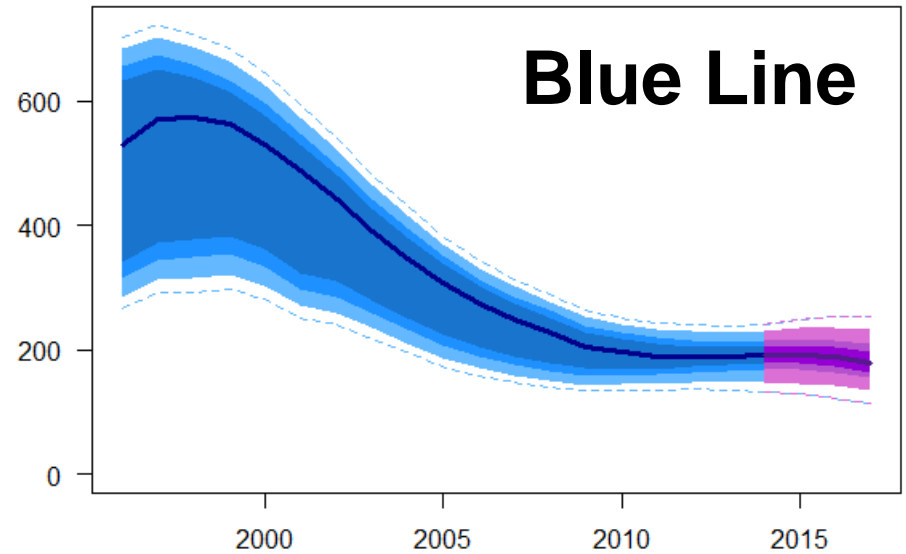
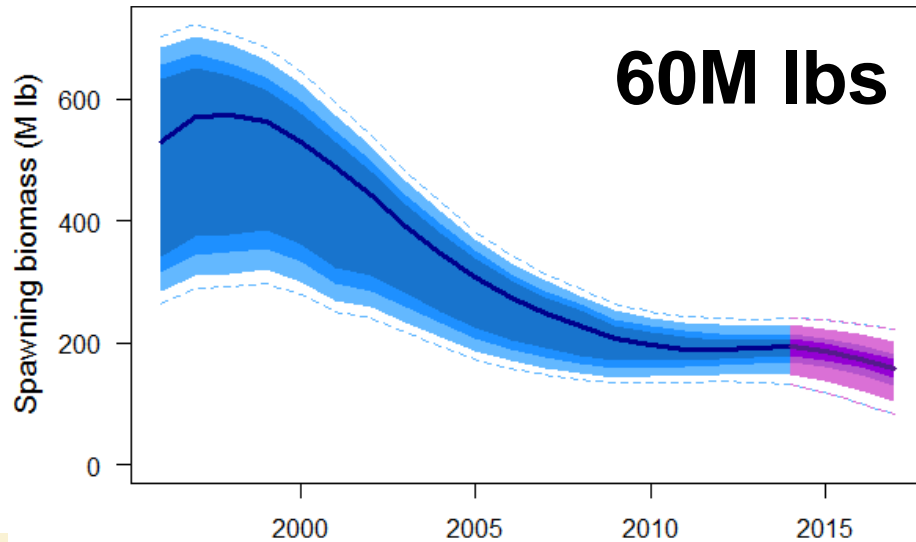
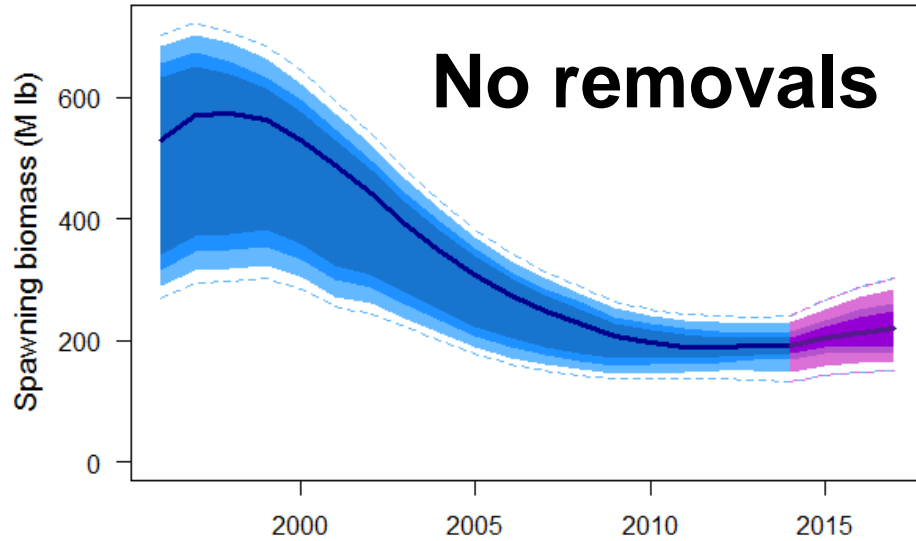
One model
isn't enough!



Spawning biomass



Three-year projections



Basic decision table results

		Stock Trend			
		Spawning biomass			
		in 2015		in 2017	
		is less than 2014	is 5% less than 2014	is less than 2014	is 5% less than 2014
Total removals (M lb)					
No removals	0.0	5/100	<1/100	23/100	4/100
FCEY=0	11.4	31/100	<1/100	32/100	18/100
	20.0	33/100	<1/100	37/100	24/100
	30.0	39/100	<1/100	66/100	41/100
	36.4	56/100	1/100	82/100	63/100
	40.0	68/100	1/100	87/100	73/100
	45.0	82/100	4/100	93/100	83/100
	48.5	88/100	8/100	95/100	87/100
	55.0	95/100	23/100	98/100	94/100
	60.0	98/100	38/100	99/100	97/100
		a	b	c	d



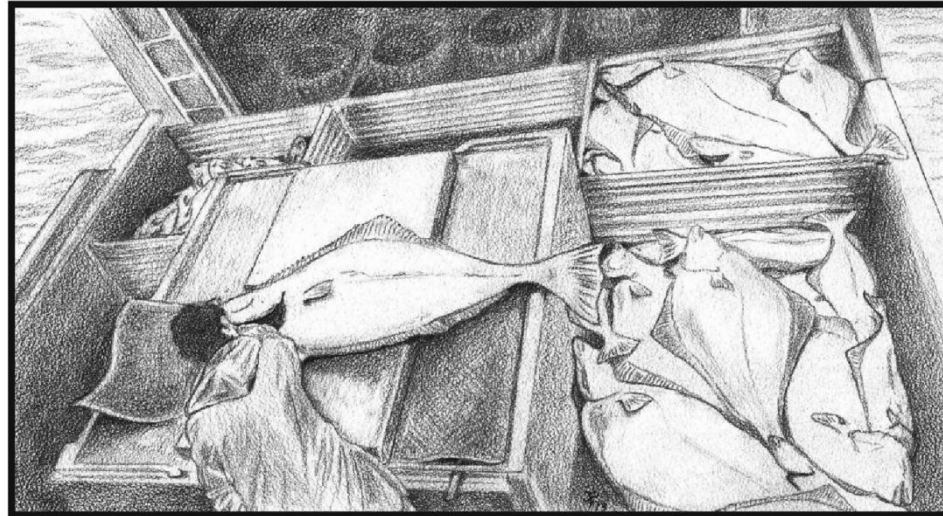
Decision table results – harvest policy

				Stock Status			
				Spawning biomass			
				in 2015		in 2017	
2014 Alternative	Total removals (M lb)	Fishery CEY (M lb)	Harvest rate	is less than 30%	is less than 20%	is less than 30%	is less than 20%
No removals	0.0	0.0	0.0%	3/100	<1/100	1/100	<1/100
FCEY = 0	11.4	0.0	5.0%	3/100	<1/100	2/100	<1/100
	20.0	8.5	10.1%	4/100	<1/100	3/100	<1/100
	30.0	18.2	15.9%	4/100	<1/100	5/100	<1/100
Blue Line	36.4	24.5	19.7%	5/100	<1/100	6/100	1/100
	40.0	28.0	21.8%	5/100	<1/100	8/100	1/100
	45.0	32.8	24.7%	6/100	1/100	10/100	1/100
status quo	48.5	36.1	26.7%	6/100	1/100	13/100	1/100
	55.0	42.6	30.5%	6/100	1/100	19/100	2/100
	60.0	47.5	33.5%	7/100	1/100	26/100	2/100
				e	f	g	h



Assessment conclusions

- Historical perspective on recent declines
- Incoming recruitments likely to be low
- Size-at-age changes slowly and is currently low
- As in 2012, the stock trend is projected to be relatively flat or declining in the near-term
- As the stock stabilizes at lower biomass levels, stock response to management actions may increase



IPHC Annual Meeting Decisions



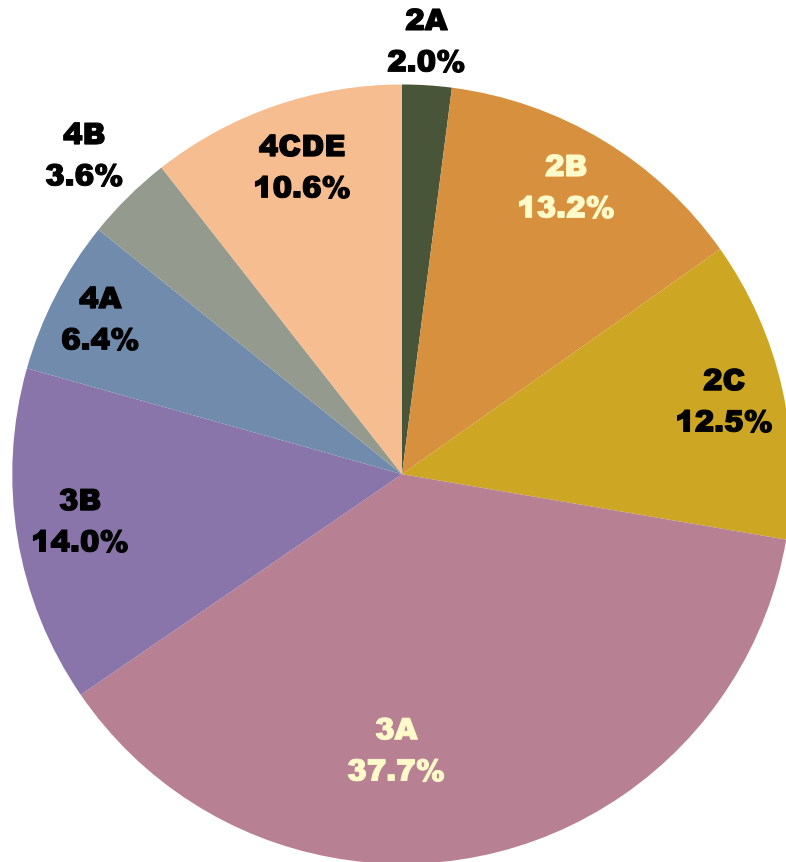
Biomass Apportionment and Harvest Advice

- Standardized survey data used to apportion coastwide biomass into regulatory area biomass
- Decision table based on ensemble model results and projections over the next three years
- Decision table presents probabilities of various consequences to stock or fishery trends, based on harvest level choices

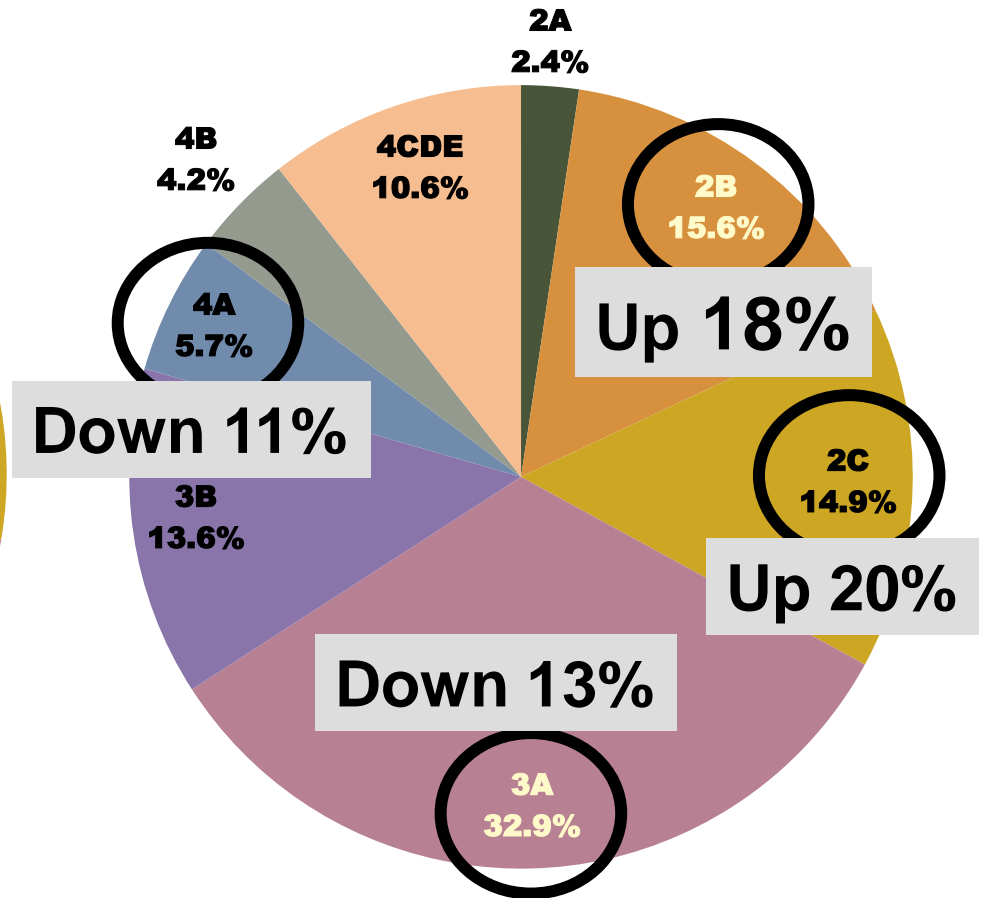


Biomass apportionment 2013-2014

2013



2014



Harvest Decision Elements

- Blue Line based on existing harvest policy
- Catch Sharing Plan (2C & 3A)
 - Guided recreational, commercial (+ wastage) included in FCEY – not directly comparable to previous values
- Bycatch, unguided recreational, personal use all remain constant at 2013 levels
- Commercial wastage scales with area-specific projected landings



Harvest Decision Elements

- Blue Line
- Catch Sharing Plan (2C&3A)
 - Guided recreational, commercial (+ wastage) in FCEY

	2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Exploitable bio.	4.03	26.64	25.44	56.07	23.14	9.69	7.23	18.06	170.29
Percent of total	2.4%	15.6%	14.9%	32.9%	13.6%	5.7%	4.2%	10.6%	100.0%
Harvest rate	21.5%	21.5%	21.5%	21.5%	16.1%	16.1%	16.1%	16.1%	19.7%
TCEY	0.87	5.73	5.47	12.05	3.73	1.56	1.17	2.91	33.49
Other O26	0.14	0.74	1.31	2.63	0.90	0.71	0.34	2.27	9.04
FCEY	0.72	4.98	4.16*	9.43*	2.84	0.85	0.82	0.64	24.45

2C FCEY → 3.32 directed fishery + 0.08 wastage + 0.76 guided rec.
 3A FCEY → 7.32 directed fishery + 0.33 wastage + 1.78 guided rec.



Harvest Decision Elements

- Blue Line for 2014

	2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Exploitable bio.	4.03	26.64	25.44	56.07	23.14	9.69	7.23	18.06	170.29
Percent of total	2.4%	15.6%	14.9%	32.9%	13.6%	5.7%	4.2%	10.6%	100.0%
Harvest rate	21.5%	21.5%	21.5%	21.5%	16.1%	16.1%	16.1%	16.1%	19.7%
TCEY	0.87	5.73	5.47	12.05	3.73	1.56	1.17	2.91	33.49
Other O26	0.14	0.74	1.31	2.63	0.90	0.71	0.34	2.27	9.04
FCEY	0.72	4.98	4.16*	9.43*	2.84	0.85	0.82	0.64	24.45

2C FCEY → 3.32 directed fishery + 0.08 wastage + 0.76 guided rec.
 3A FCEY → 7.32 directed fishery + 0.33 wastage + 1.78 guided rec.

- Blue Line for 2013 (last year's table)

	2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Exploitable bio.	3.81	24.54	23.28	70.38	26.02	11.97	6.75	19.74	186.49
Percent of total	2.0%	13.2%	12.5%	37.7%	14.0%	6.4%	3.6%	10.6%	100.0%
Harvest rate	21.5%	21.5%	21.5%	21.5%	16.1%	16.1%	16.1%	16.1%	19.6%
TCEY	0.82	5.28	5.00	15.13	4.20	1.93	1.09	3.18	36.63
Other O26	0.11	0.69	2.03	5.89	1.46	1.08	0.47	2.33	14.08
FCEY	0.71	4.58	2.97	9.24	2.73	0.85	0.62	0.85	22.55



Harvest Decision Elements

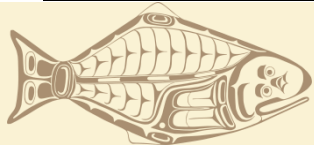
- Blue Line for 2014

	2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Exploitable bio.	4.03	26.64	25.44	56.07	23.14	9.69	7.23	18.06	170.29
Percent of total	2.4%	15.6%	14.9%	32.9%	13.6%	5.7%	4.2%	10.6%	100.0%
Harvest rate	21.5%	21.5%	21.5%	21.5%	16.1%	16.1%	16.1%	16.1%	19.7%
TCEY	0.87	5.73	5.47	12.05	3.73	1.56	1.17	2.91	33.49
Other O26	0.14	0.74	1.31	2.63	0.90	0.71	0.34	2.27	9.04
FCEY	0.72	4.98	4.16*	9.43*	2.84	0.85	0.82	0.64	24.45

2C FCEY → 3.32 directed fishery + 0.08 wastage + 0.76 guided rec.
 3A FCEY → 7.32 directed fishery + 0.33 wastage + 1.78 guided rec.

- Adopted for 2013 (last year's final decision)

	2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Exploitable bio.	3.81	24.54	23.28	70.38	26.02	11.97	6.75	19.74	186.49
Percent of total	2.0	13.2	12.5	37.7	14.0	6.4	3.6	10.6	100.0
Harvest rate	29.0%	31.7%	21.6%	24.2%	22.6%	20.3%	28.6%	21.7%	24.4%
TCEY	1.11	7.78	5.02	17.07	5.87	2.43	1.93	4.28	45.48
Other O26	0.11	0.73	2.05	6.04	1.58	1.10	0.48	2.35	14.45
FCEY	0.99	7.04	2.97	11.03	4.29	1.33	1.45	1.93	31.03



2014 Catch limits

Regulatory Area	2013 Catch Limit	Blue Line	CB	PAG	IPHC Approved
2A ¹	0.990	0.72	0.99	0.99	0.960
2B ¹	7.038	4.98	7.04	6.54	6.850
2C ²	2.970	4.16	4.75	5.32	4.160
3A ²	11.030	9.43	10.73	9.43	9.430
3B	4.290	2.84	3.025	2.84	2.840
4A	1.330	0.85	1.01	0.85	0.850
4B	1.450	0.82	1.13	1.135	1.140
4CDE ³	1.930	0.64	1.93	1.285	1.285
4C ⁴	0.859	0.297	0.859	0.597	0.597
4D ⁴	0.859	0.297	0.859	0.597	0.597
4E ⁴	0.212	0.046	0.212	0.092	0.092
Total	31.028	24.45	30.605	28.390	27.515

¹ Combined sport and commercial allocation (2A includes tribal)

² Includes commercial and guided recreational allocations under NPFMC Catch Sharing Plan

³ Allocation for combined Areas 4C, 4D, 4E

⁴ NPFMC Catch Sharing Plan: 4C , 4D: 46.43% 4CDE limit, 4E: 7.14% of 4CDE limit



Decision table results

2014 Alternative	Total removals (M lb)	Fishery CEY (M lb)	Harvest rate	Stock Trend				Stock Status				Fishery Trend				Fishery Status		
				Spawning biomass				Spawning biomass				Fishery CEY from the harvest policy				Harvest rate		
				in 2015		in 2017		in 2015		in 2017		in 2015		in 2017		in 2014		in 2014
				is less than 2014	is 5% less than 2014	is less than 2014	is 5% less than 2014	is less than 30%	is less than 20%	is less than 30%	is less than 20%	is less than 2014	is 10% less than 2014	is less than 2014	is 10% less than 2014	is above target		
No removals	0.0	0.0	0.0%	5/100	<1/100	23/100	4/100	3/100	<1/100	1/100	<1/100	0/100	0/100	0/100	0/100	0/100		
FCEY = 0	11.4	0.0	5.0%	31/100	<1/100	32/100	18/100	3/100	<1/100	2/100	<1/100	0/100	0/100	0/100	0/100	<1/100		
	20.0	8.5	10.1%	33/100	<1/100	37/100	24/100	4/100	<1/100	3/100	<1/100	<1/100	<1/100	<1/100	<1/100	<1/100		
	30.0	18.2	15.9%	39/100	<1/100	66/100	41/100	4/100	<1/100	5/100	<1/100	5/100	2/100	8/100	4/100	7/100		
Blue Line	36.4	24.5	19.7%	56/100	1/100	82/100	63/100	5/100	<1/100	6/100	1/100	43/100	20/100	74/100	47/100	50/100		
Final adopted	39.6	27.5	21.5%	67/100	1/100	87/100	72/100	5/100	<1/100	8/100	1/100	80/100	46/100	95/100	81/100	89/100		
	40.0	28.0	21.8%	68/100	1/100	87/100	73/100	5/100	<1/100	8/100	1/100	85/100	52/100	96/100	84/100	92/100		
status quo	45.0	32.8	24.7%	82/100	4/100	93/100	83/100	6/100	1/100	10/100	1/100	>99/100	95/100	>99/100	99/100	>99/100		
	48.5	36.1	26.7%	88/100	8/100	95/100	87/100	6/100	1/100	13/100	1/100	>99/100	>99/100	>99/100	>99/100	>99/100		
	55.0	42.6	30.5%	95/100	23/100	98/100	94/100	6/100	1/100	19/100	2/100	>99/100	>99/100	>99/100	>99/100	>99/100		
	60.0	47.5	33.5%	98/100	38/100	99/100	97/100	7/100	1/100	26/100	2/100	>99/100	>99/100	>99/100	>99/100	>99/100		
				a	b	c	d	e	f	g	h	i	j	k	l	m		



Approved harvest choices - 2014

	2A	2B	2C	3A	3B	4A	4B	4CDE	Total
Exploitable biomass	4.03	26.64	25.44	56.07	23.14	9.69	7.23	18.06	170.29
Percent of total	2.4%	15.6%	14.9%	32.9%	13.6%	5.7%	4.2%	10.6%	100.0%
Harvest rate (%)	27.5%	28.7%	21.5%	21.5%	16.1%	16.1%	20.7%	19.8%	21.5%
Total CEY	1.11	7.64	5.47	12.05	3.73	1.56	1.49	3.58	36.65
Other removals (O26)	0.15	0.79	1.31	2.63	0.90	0.71	0.35	2.29	9.13
Fishery CEY	0.96	6.85	4.16	9.43	2.84	0.85	1.14	1.29	27.52

*For comparison with other analyses, the breakdown of the FCEY is as follows: 2C = 3.32 directed fishery landings + 0.08 commercial wastage + 0.76 guided recreational; 3A = 7.32 directed fishery landings + 0.33 commercial wastage + 1.78 guided recreational.



Management Recommendations

Fishing periods and catch sharing

- Commission adopted **March 8 - November 7** for quota share fisheries
- Area 2A commercial and treaty Indian fisheries should fall within adopted season
- In 2A, a series of 10-h periods for the directed fishery starting June 25, at two-week intervals
- Adopted Management Councils' catch sharing plans for Areas 2A, 2C, 3A, and 4CDE
- Endorsed DFO commercial:sport allocation plan for Area 2B



Management Recommendations II

Area 2A Licensing

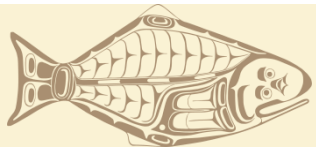
- Retention of halibut caught incidentally during the sablefish fishery in Area 2A will be allowed beginning April 1
- Retention of halibut caught incidentally in the salmon troll fishery will be allowed beginning April 1
- **Separate licences** will be required for directed halibut fishing and each of the two incidental retention fisheries. Licence application deadlines are **March 17th for incidental retention fisheries** and **April 30th for the directed fishery**



Management Recommendations III

Areas 2C and 3A Charter Management Measures

- **For Area 2C:** Based on Council advice, one-fish daily limit of size ≤ 44 in. or ≥ 76 in., head-on.
- **For Area 3A:** Based on Council advice, two-fish daily limit with one fish ≤ 29 in.; each vessel restricted to one trip per calendar day.
- **For Areas 2C and 3A charter halibut fishing:** if the fish is filleted on board the vessel, the carcass must be retained on board until all the fillets are offloaded.



Management Recommendations IV

Retention of halibut caught in pots for portions of Area 4A

- Commission supported the concept in principle and directed that IPHC staff assist with the Council's continued development of accompanying Federal regulations provided that the Council analyzes methods to:
 - limit the directed fishing for halibut using pot gear;
 - consider appropriate methods for the timing of pot removal; and
 - the marking of buoys (radar reflectors).



Halibut Bycatch Work Group

- Commission – received an update from the Project Team summarizing the public comment of the report released in December 2013
 - <http://www.iphc.int/meetings/2014am/bycatchpresentation2014amv4.pdf>
- Presentations were made to Conference Board and Processor's Advisory Group
- Met jointly with advisory bodies to obtain additional input
- Discussed and adopted both short and long term 'next steps'
- Note: HBWG is interested in meeting with the Council to discuss bycatch matters of mutual interest



Halibut Bycatch Work Group

- The project is led by a Project Team including all US and Canadian Commissioners, with support from Science advisors and IPHC staff
- Bycatch Project team members as of December 2013 (*new commissioners will be added moving forward*):

Sylvie Bérubé, co-chair
Michael Pearson, Commissioner
David Boyes, Commissioner
Paul Ryall, Commissioner
Robyn Forrest (ex-officio)

David Witherell, co-chair
Jim Balsiger, Commissioner
Chris Oliver, Interim Commissioner
Ralph Hoard, Commissioner
Loh-Lee Low (ex-officio)

Gregg Williams (IPHC staff support)



Public feedback – who did we hear from?

- Comment period: Nov. 11 – 27, then extended to Dec. 5 – 18
- Comment demographics
 - 68 total comments
 - 56 from US, 11 from Canada, 1 unknown
 - 15 comments from organizations, including several advisory bodies; 53 from individuals
 - Majority of comments from commercial halibut fishers
 - 10 submissions from the sport sector
 - 3 submissions from First Nations and tribal organisations
 - A single (group) comment from the Alaskan trawl industry, representing five organizations



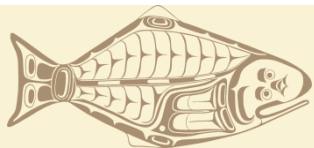
Public feedback – common and notable recommendations

1. Enhance real time communication on bycatch within fleets to encourage bycatch avoidance
2. Focus on employing proven methods for reducing bycatch and providing the incentives/tools for harvesters to minimise bycatch (individual accountability with bycatch quotas and accompanying 100% monitoring requirements most often noted, incenting gear conversion from trawl to pot for P Cod also noted)
3. Have halibut Prohibited Species Caps float with halibut abundance
4. Examine other sources of halibut mortality such as sublegal releases in the directed commercial fishery and recreational fishery releases
5. Domestic agencies play the lead role in managing bycatch fisheries and must be engaged in discussions on bycatch reduction
6. Explore changes to on-deck sorting procedures for halibut bycatch to minimise mortality rates by releasing before delivery below deck
7. More information required on migration dynamics and implications of changes to the minimum size limit



Public feedback – perspectives on options

- **Option 1 (updated bycatch reduction targets):** widespread support, want timelines for reductions
- **Option 2 (authorize prohibited gear):** universal opposition from directed halibut fishers, though some support for donating retained catch; numerous comments about need for further detail
- **Option 3 (minimum monitoring standards/levels):** widespread support, need reliable bycatch estimates, include consideration of dockside monitoring requirements, not just at sea
- **Option 4 (individual vessel accountability for bycatch):** widespread support, citing demonstrated success elsewhere when combined with high monitoring and no permitted sale of bycatch
- **Option 5 (closures):** fewer comments, generally supported, one suggestion for expansion of use of in season bycatch hotspot closures
- **Option 6 (catch limit adjustments):** few comments, mixed support
- **Option 7 (Alaska proposal):** ideas generally not supported, comments on the need for more detail and the importance of supporting assertions with facts and analysis
- *The full list of comments and a more detailed summary of comments from the Interim Meeting is available at the IPHC website: <http://www.iphc.int>*



Project Team perspectives

- In considering recommendations on the longer term options, the Project Team noted that:
 - Some of the longer term options represent specific management actions or tools while others are broader commitments or principles
 - e.g., updated bycatch targets are a broader commitment, whereas individual vessel accountability, closures, etc are tools that can be used to help achieve targets
 - Some of the management decisions implicated by the longer term options are under the authority of domestic agencies while others are within the IPHC's authority.
 - Domestic agencies can: implement bycatch reduction targets (option 1), define and implement monitoring standards/levels (option 3), require individual vessel accountability (option 4), close areas to halibut bycatch fisheries (option 5)
 - IPHC can: define authorized gear (option 2), define but not implement minimum monitoring standards/levels (option 3), close areas to directed halibut fishing (option 5), and make adjustments to catch limits (option 6)
 - IPHC has also made bycatch recommendations on other topics like reduction targets and monitoring programs to national governments in the past (e.g., 1991)



Proposed Next Steps

In the immediate term (i.e., coming months):

1. Complete revisions to the bycatch report in response to Project Team and public feedback
2. Organize an initial meeting between IPHC Commissioners and the North Pacific Fishery Management Council to facilitate discussion and collaboration on potential bycatch reduction targets, management measures, and monitoring programs that fall under the Council's authority.
3. Appointed Commissioners Alverson and Boyes to guide the effort on behalf of the Commission



Proposed Next steps

Over the next year:

1. Discuss the development of a broader strategy or set of principles for addressing bycatch, including exploration of concepts such as:
 - a. National accountability (e.g., for all removals, for the uncertainty in bycatch estimates)
 - b. Advancing utilization of proven bycatch reduction methods
 - c. Potential incentives to harvesters to minimize bycatch
 - d. The role of monitoring standards for directed and non directed fisheries
 - e. Options for mitigation of actions in one area that result in negative impacts to the stock and/or available harvest in another regulatory area
 - f. Ongoing collaboration and communication between the IPHC and domestic management processes to support bycatch reduction
 - g. How to prioritize bycatch reduction efforts

2. Discuss a plan for examining the magnitude and impacts of other sources of halibut mortality such as fishery wastage (discards)



Questions?

