C-4 Documents

C4	GF 17-054	Groundfish Harvest Specifications - Proposed Specs
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		C4-2 BSAI Gfish_specs_table.pdf
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Report of the September 2017 Joint Groundfish Plan Team meeting

NOAA FISHERIES

Alaska Fisheries Science Center

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Grant Thompson	AFSC REFM (co-chair)	Jon Heifetz	AFSC ABL (co-chair)
Diana Stram	NPFMC (coordinator)	Jim Armstrong	NPFMC (coordinator)

October 2, 2017

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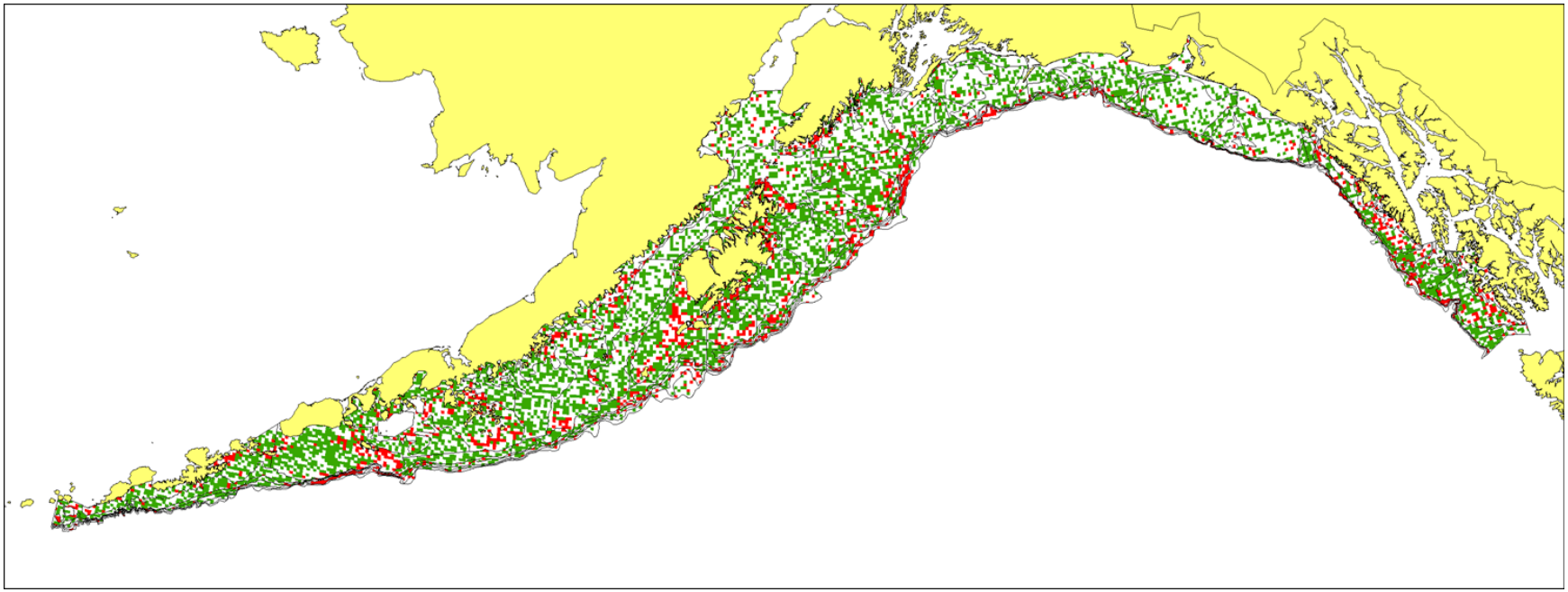

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  - Does VAST produce estimates with greater precision?
  - How does the number of knots influence trend and scale?
  - How does the specification of intercept and autocorrelation influence the estimates?
  - How does VAST compare to apportionment estimates produced from the Tier 5 random effects model?

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- Results for the GOA survey: point estimates of biomass
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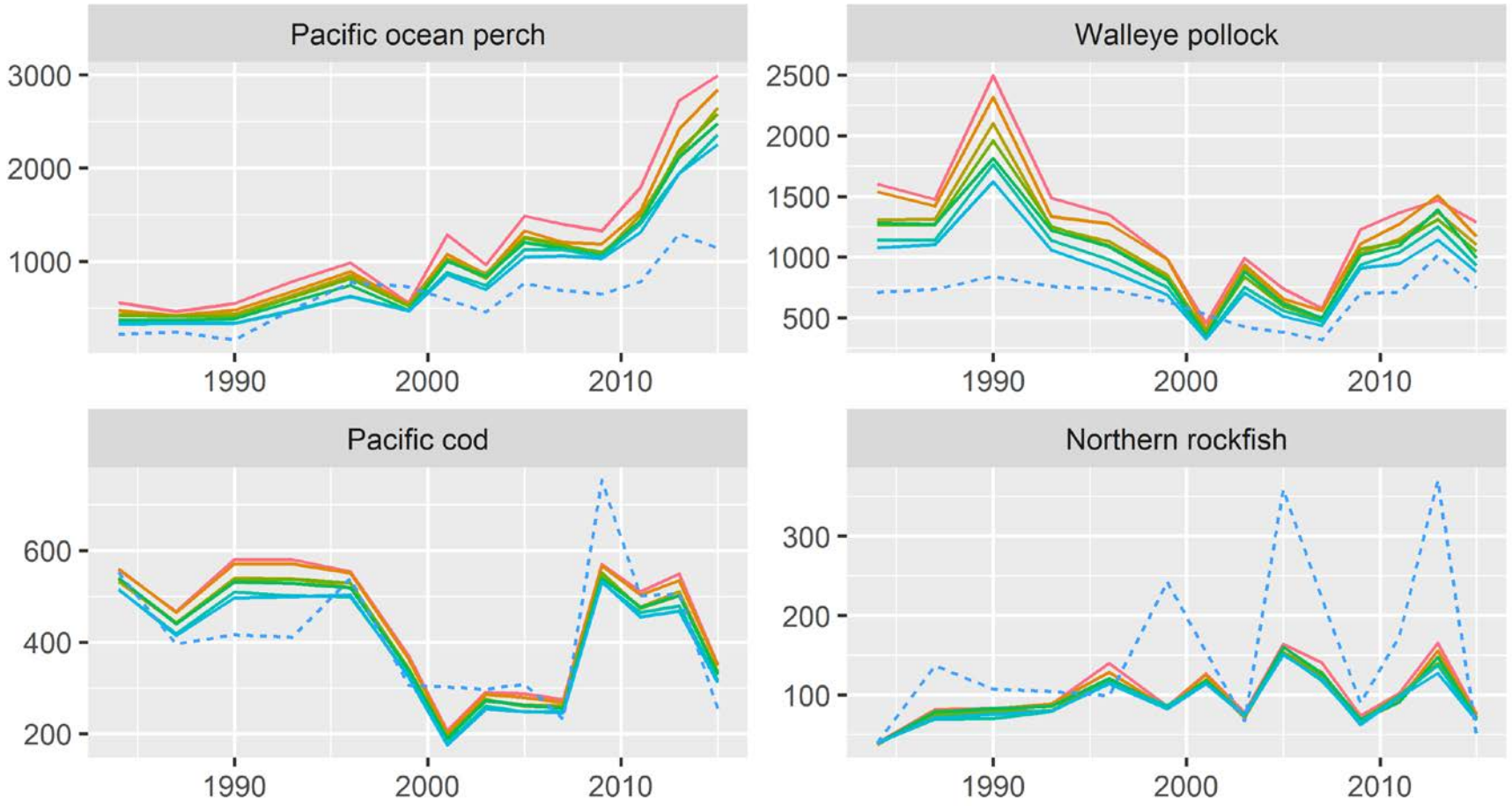
  - Pacific cod and big skate showed little difference
  - For Dover sole, POP, pollock, and ATF, the estimates for the VAST model were larger, but decreased with an increase in the number of knots
    - However, trend was independent of number of knots
  - Are larger estimates from VAST due to extrapolation over the entire grid, while the design-based estimates are computed over the surveyed area only?

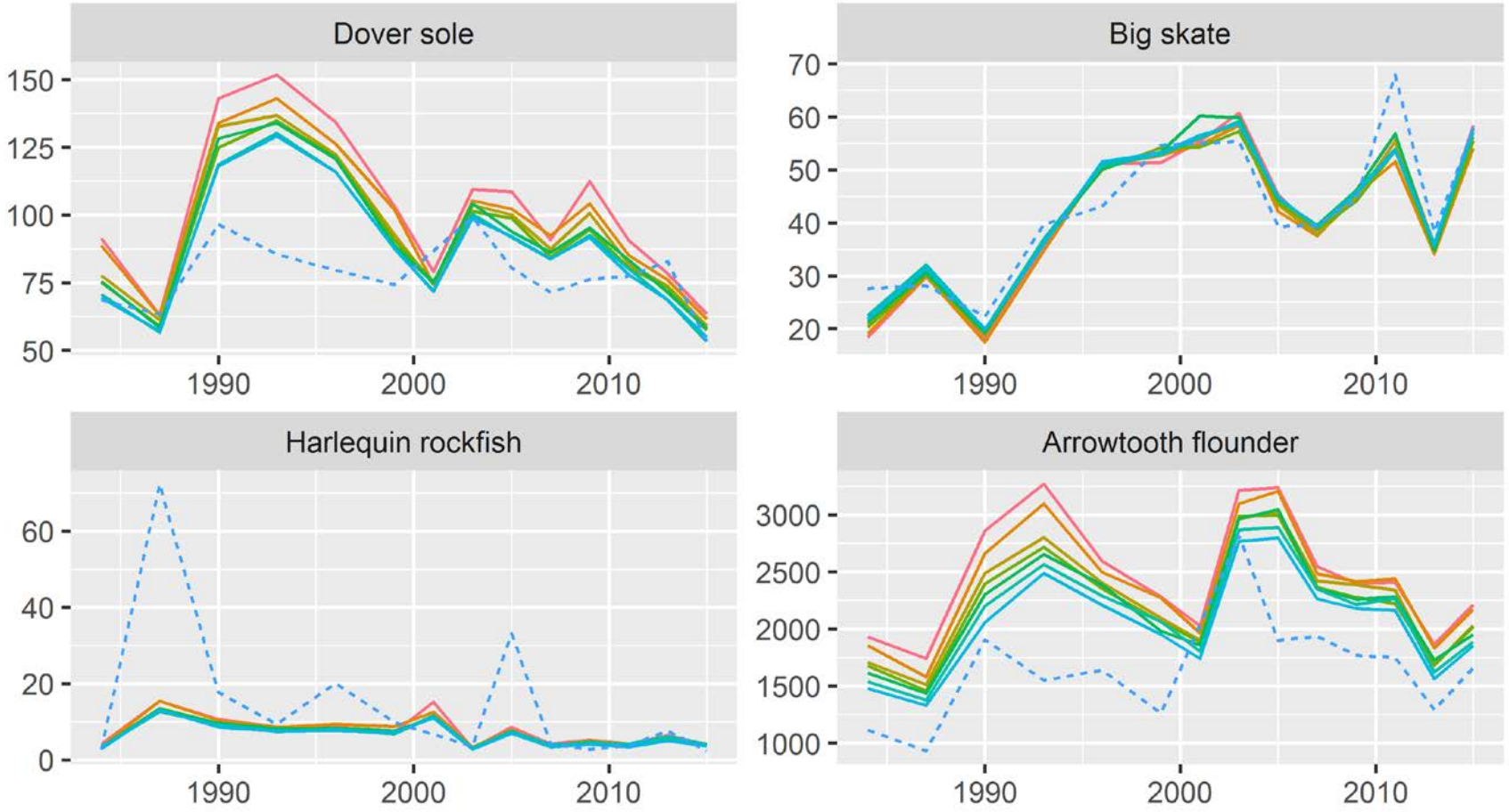
VAST model of survey biomass

- Example GOA results (dash = design-based)



VAST model of survey biomass

- Example GOA results, continued



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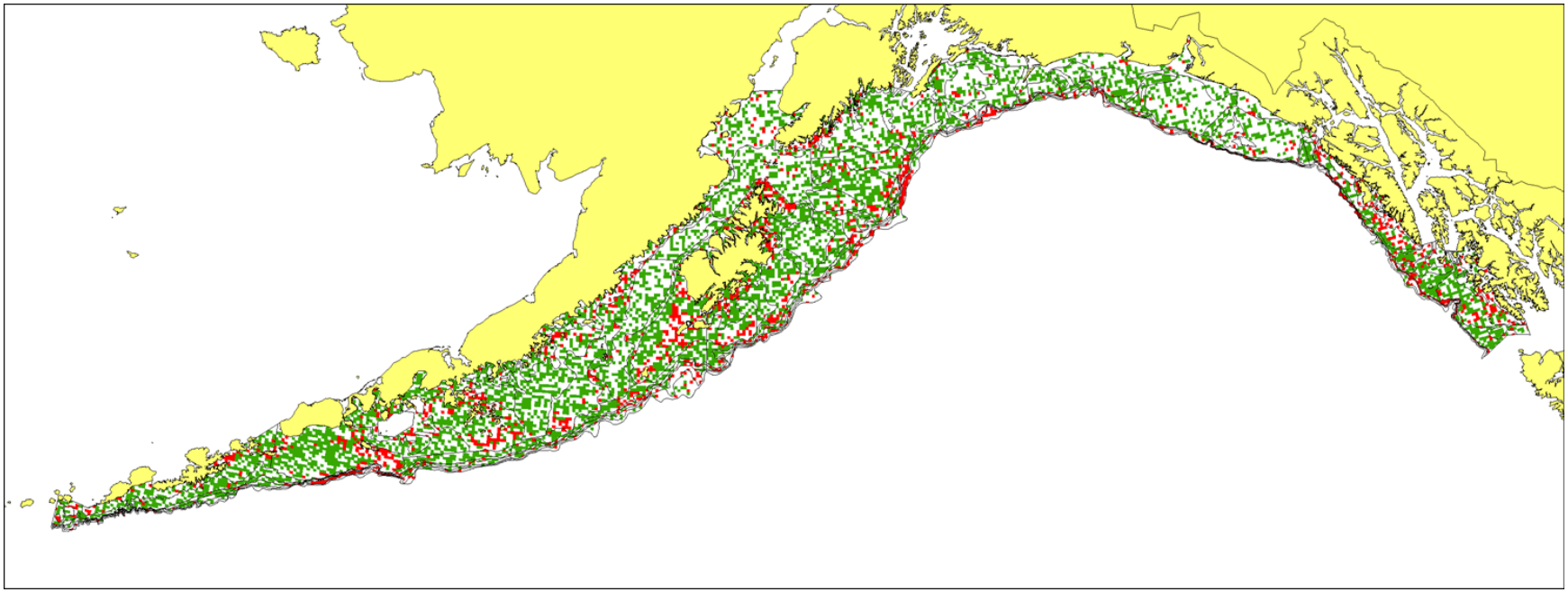

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Halibut DMRs

Notable changes:

- BSAI NPT CVs — increase 52% to 60%
- GOA HAL CVs — increase 12% to 17%
- GOA Rockfish Program (RPP) CVs — decrease 67% to 62%

Combined groupings due to low sample size:

- BSAI HAL CVs - 2 vessels observed in 2014-2016. — *Combined with GOA*
- GOA NPT CPs - 10 vessels observed in 2014-2016. — *Combined with BSAI*

Results

			DMRs									
Sector	Region	Gear	2009	2010	2011	2012	2013	2014	2015	2016	ave 13-15	ave 14-16
CP	BSAI	PELAGIC	90.0%	90.0%	89.9%	89.9%	90.0%	90.0%	90.0%	90.0%	100%	100%
		NON PELAGIC	87.8%	85.9%	83.3%	80.8%	86.8%	86.7%	81.2%	82.7%	85%	84%
		HOOK AND LINE	9.7%	8.4%	9.5%	8.8%	9.0%	8.5%	7.9%	7.1%	8%	8%
		POT OR TRAP*	8.8%	23.9%	15.7%	12.7%	7.2%	8.4%	6.0%	12.9%	7%	9%
	GOA	PELAGIC	20.0%	NA	NA	NA	NA	NA	NA	NA	100%	100%
		NON PELAGIC	82.3%	85.3%	74.7%	84.7%	82.5%	87.4%	90.0%	88.6%	85%	84%
		HOOK AND LINE	10.0%	8.9%	9.1%	12.3%	12.2%	9.5%	10.7%	9.8%	11%	10%
		POT OR TRAP*	0.0%	7.5%	4.3%	15.6%	16.9%	10.3%	1.6%	9.1%	10%	7%
CV	BSAI	PELAGIC	90.0%	85.8%	87.0%	89.9%	88.0%	81.4%	81.2%	79.0%	100%	100%
		NON PELAGIC	42.1%	67.4%	62.3%	68.3%	43.8%	51.7%	59.6%	68.8%	52%	60%
		HOOK AND LINE	NA	NA	NA	NA	NA	23.7%	3.5%	NA	14%	17%
	GOA	PELAGIC	NA	20.0%	NA	NA	20.0%	NA	NA	NA	100%	100%
		NON PELAGIC	53.0%	62.4%	52.1%	58.7%	66.1%	65.9%	64.3%	70.5%	65%	67%
		RPP	NA	62.1%	58.3%	51.4%	63.9%	64.1%	73.3%	48.2%	67%	62%
		HOOK AND LINE	6.9%	9.5%	5.3%	39.0%	13.4%	8.6%	13.9%	27.8%	12%	17%

2017

Operational Group						
Sector	Region	Gear	Target	Sample Size (Mean Annual $N_{Viabilities}$)	Estimate DMR?	DMR
CP	BSAI	PTR	all	4,151	N	100%
		NPT	all	1,753	Y	85%
		HAL	all	11,676	Y	8%
		POT	all	571	Y	6%
	GOA	PTR	all	0	N	100%
		NPT	all	196	N	85%
		HAL	all	1,247	Y	11%
		POT	all	479	Y	10%
CV	BSAI	PTR	all	224	N	100%
		NPT	all	2,282	Y	52%
		HAL	all	44	Y	14%
		POT	all	571	Y	6%
	GOA	PTR	all	1	N	100%
		NPT	RPP[e]	547	Y	67%
			non-RPP		Y	65%
		HAL	all	729	Y	12%
		POT	all	479	Y	10%

2018

Operational Group						
Sector	Region	Gear	Target	Sample Size (Mean Annual $N_{Viabilities}$)	Estimate DMR?	DMR
CP	BSAI	PTR	all	3,097	N	100%
		NPT	all	2,025	Y	84%
		HAL	all	8,838	Y	8%
		POT	all	548	Y	9%
	GOA	PTR	all	0	N	100%
		NPT	all	132	N	84%
		HAL	all	1,493	Y	10%
		POT	all	602	Y	7%
CV	BSAI	PTR	all	151	N	100%
		NPT	all	2,456	Y	60%
		HAL	all	36	Y	17%
		POT	all	548	Y	9%
	GOA	PTR	all	0	N	100%
		NPT	RPP	937	Y	62%
			non-RPP		Y	67%
		HAL	all	1	Y	17%
		POT	all	602	Y	7%

Gulf of Alaska SAFE report

Report of the
Gulf of Alaska Groundfish
Plan Team meeting
Sept12th-15th, 2017

GOA Plan Team Members

James Ianelli (chair)	AFSC/REFM
Jon Heifetz (co-chair	AFSC/ABL
James Armstrong	NPFMC
Ben Williams	ADFG
Nat Nichols	**ADFG**
Jan Rumble	ADFG
Dan Lew	**AFSC/REFM**
Chris Lunsford	AFSC/ABL
Sandra Lowe	AFSC/REFM
Paul Spencer	AFSC/REFM
Craig Faunce	AFSC/FMA
Obren Davis	AKRO

Stock Structure Template

- The Team recommended:
  - 2018 - Octopus and flathead sole
  - 2019 - N. rockfish and Pacific cod
  - 2020 - Sculpins and thornyhead rockfish

Other rockfish

- Multi-year examination of the potential to split DSR complex out of ORX complex GOA-wide
  - Issues
    - Differences in life history
    - Availability or lack thereof to the trawl survey
- The Team Recommended
  - Author-preferred Alternative 3a to split DSR species out of the ORX complex.
  - Need clear justification for how the Tier 6 method was selected before the November meeting.
  - Red-banded rockfish remain in the ORX complex
  - Clarification on whether the Council Stock Structure and Spatial Management Policy applies to the proposed changes to the ORX complex

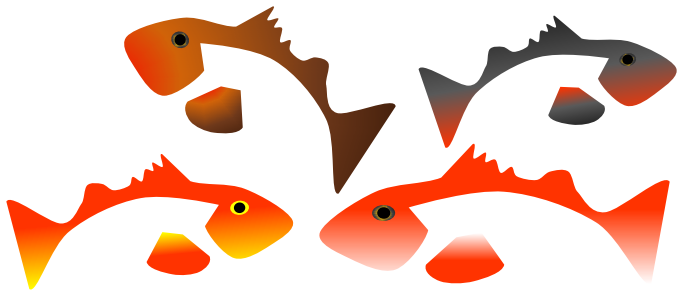
Skates

- Thomas Farrugia (PhD student) presented age-structured assessments longnose and big skates
- Tier 5 will continue for 2018 fishing year
- Possible use for 2019 specifications

Pacific ocean perch

Four areas of research presented:

1. Length composition data
2. Input sample sizes used for age and length composition data
3. Fishery selectivity
4. GLMM alternative to the design based estimates currently used for the bottom trawl survey index



DSR/yelloweye rockfish

- Density estimates for yelloweye rockfish increased in 2016 and 2017 so biomass has increased by ~50 t.

- Age-structured assessment has been delayed due to staffing changes and will be presented in 2018.

Pacific cod

Topics covered:

1. How to deal with length composition proportioning
2. Exploration of the VAST model for survey indices
3. Examination of temperature based catchability.

Pcod recommendations

- Pot fishery monitoring low
  - Work with State on linking state port sampling data with fish tickets for length compositions
- Continue with the design-based estimates
  - More work needed for VAST model
  - Incorporating temperature-based catchability seems interesting and “experimental”
  - More examination during a pending CIE review.

GOA flatfish

- Rex sole
  - Evaluated splitting and combine length data
    - New data dramatically reduced F40% values from previous assessments
- Rock soles
  - Alternative data weighting methods
- Arrowtooth flounder
  - The Team agrees with the planned proposed work on data weighting, estimating the conversion matrix, and modeling natural mortality as a function of weight.

Walleye pollock

Summary of the CIE review that was conducted in May 2017

- An appendix expected in Nov describing responses
- Conflicting survey data
  - Acoustic trawl surveys are up
  - Bottom trawl surveys down

GOA climate science regional action plan

For GOA

- Based on EBFM roadmap (HQ).
- Led by Martin Dorn

Climate Science Strategy has 4 areas of activity:

- Long-term monitoring
- Process studies
- Risk assessment
- Modeling climate impacts and management scenarios

AFSC research contributes to these 4 areas.

- OY range for GOA
- Biological reference points for status determination
- Community level social and economic impacts of climate change.

GOA Harvest specifications for 2018/2019

- The Team recommended rolling over the 2018 GOA final harvest specifications for OFLs and ABCs (as published in the Federal Register in February 2017) for the proposed 2018 and 2019 OFLs and ABCs.

Other issues

- General concern about drop in survey coverage (530 stations instead of 850)

Team vacancies

- **WDFW**
- **Marine Mammal expert**
- **USFW (Seabird expert)**
- **IPHC and**
- **NMFS Headquarters**

NOAA FISHERIES

Alaska Fisheries Science Center

Report of the September 2017 BSAI Groundfish Plan Team meeting

Dana Hanselman	*AFSC ABL (co-chair)*
Grant Thompson	*AFSC REFM (co-chair)*
Diana Stram	*NPFMC (coordinator)*
Kirstin Holsman	*AFSC REFM*
Cindy Tribuzio	*AFSC ABL*
Chris Siddon	*ADF&G*
Alan Haynie	*AFSC REFM*
Allan Hicks	*IPHC*
Brenda Norcross	*UAF*
Mary Furuness	*NMFS AKRO*
vacant	*ADF&G*
vacant	*AFSC*
vacant	*AFSC NMML*
vacant	*USFWS*

Meeting overview

- Date: September 14
- Place: AFSC Seattle
- Leaders: Dana Hanselman (BSAI co-chair), Grant Thompson (BSAI co-chair), Diana Stram (BSAI coordinator)
- Participation: 10 Team members present, plus numerous AFSC staff and members of the public
- File containing minutes includes Joint, BSAI, GOA

Agenda (action items in red)

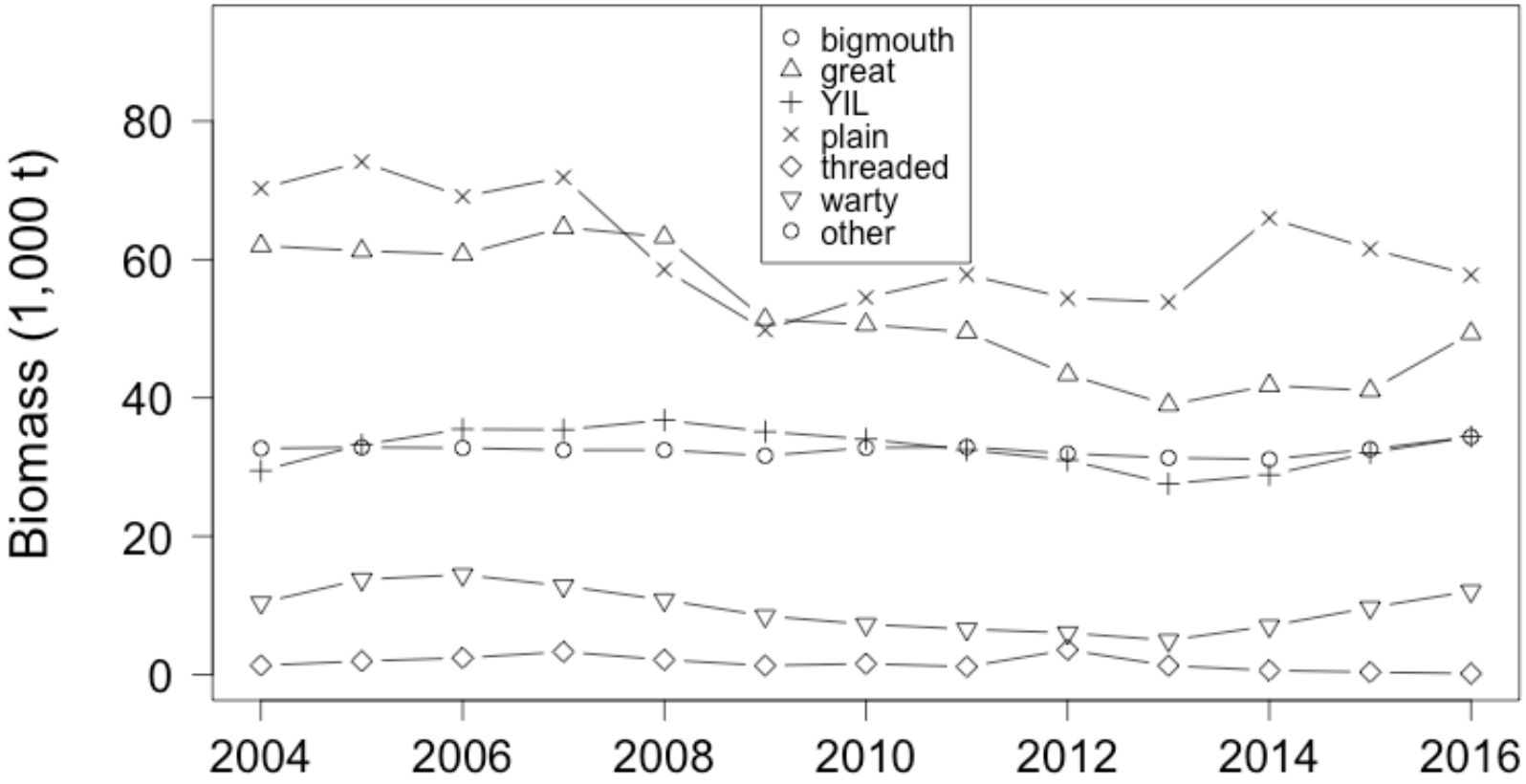
- Administrative
- EBS pollock update
- Bering Sea Pacific cod preliminary assessment
- BS/RE rockfish stock structure/spatial management
- BSAI sculpin stock structure
- Stock structure template
- Harvest specifications for 2018/2019

BS Pacific cod preliminary assessment

- 2018 meeting of the Pcod Models Subcommittee TBD November
- Recommend models 16.6 and 17.6 for the final Pacific cod assessment
  - Note SSC added 17.1, 17.2 and 17.3 as well

BSAI sculpin stock structure

Biomass trends of the six most abundant sculpins have been mostly stable, although some decline is apparent in great, plain, and butterfly sculpin



BSAI sculpin stock structure

- Aggregated catch of sculpin species in the EBS and the AI has also been stable since 2004
- Differences in growth were observed among yellow Irish lord between the EBS and the AI
- Growth and length differences have not been examined for other sculpin species in the BSAI, but differences have been observed for great sculpin in Kamchatka

BSAI sculpin stock structure: conclusions

- Recommend that a rating of “little or no concern” be conferred upon the BSAI sculpin complex
- The Team recommends that future assessments consider the following two requests:
  1. Determine if there was a change in the quality of species identification around 1998
     - large change in biomass for a number of the species
  2. Aleutian Islands survey data prior to 1991 may not be comparable to survey data after 1986, and should be noted as separate time series or omitted entirely

Stock structure template

- For September 2018:
  - Bogoslof pollock
  - Greenland turbot
  - Northern rock sole

Harvest specifications for 2018/2019

- Recommends adoption of the proposed 2018/2019 BSAI OFLs and ABCs for the purpose of notifying the public of potential final harvest specifications

Harvest specifications for EBS Pacific cod

- Post-meeting analysis—preliminary 2018/2019 OFL and ABC for EBS Pacific cod based on a Tier 5 approach using the 2017 EBS shelf bottom trawl survey point estimate:
    - Biomass=598,260 t (down 37% from 2016)
    - OFL=215,374 t, ABC=161,530 t