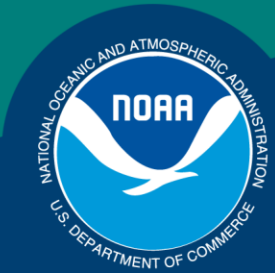# Bering Sea and Aleutian Islands Shortraker Rockfish

Ingrid Spies

November 16, 2018

NOAA FISHERIES SERVICE

Changes in the input data

- Catch data have been revised and updated through October 17, 2018.

- Biomass and variance estimates from the 2016 and 2018 Aleutian Islands (AI) trawl survey and the 2016 Eastern Bering Sea slope survey were added to the model input data.

Changes in the assessment methodology

- None since 2014.

Current assessment methodology

Natural mortality estimate (M) for SST = 0.03

Natural mortality estimate (M) for non-SST=0.09

Biomass estimates for Other Rockfish were obtained using the random effects model.

Overfishing limit (OFL) = M*Biomass.

Acceptable Biological Catch (ABC) = 0.75*OFL.

Current assessment methodology
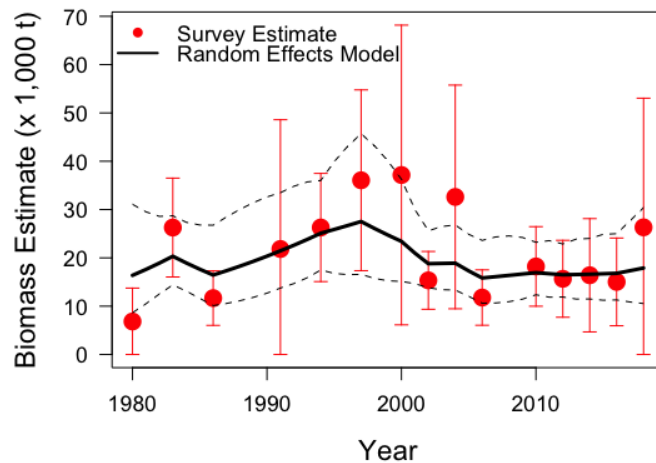
Natural mortality estimate (M) = 0.03

Biomass estimates were obtained using the random effects model.

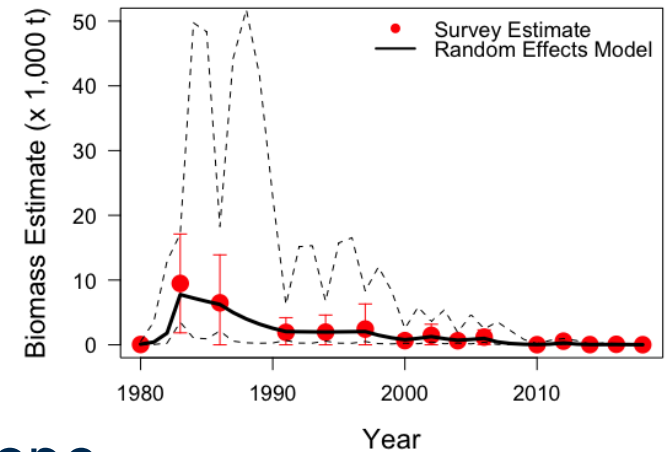Overfishing limit (OFL) = M*Biomass.

Acceptable Biological Catch (ABC) = 0.75*OFL.
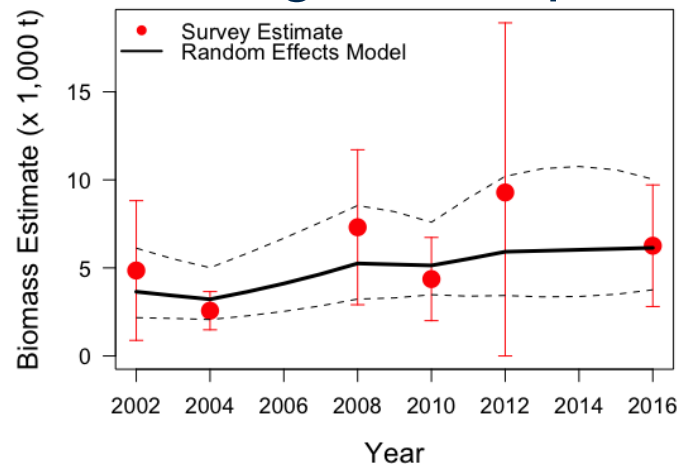
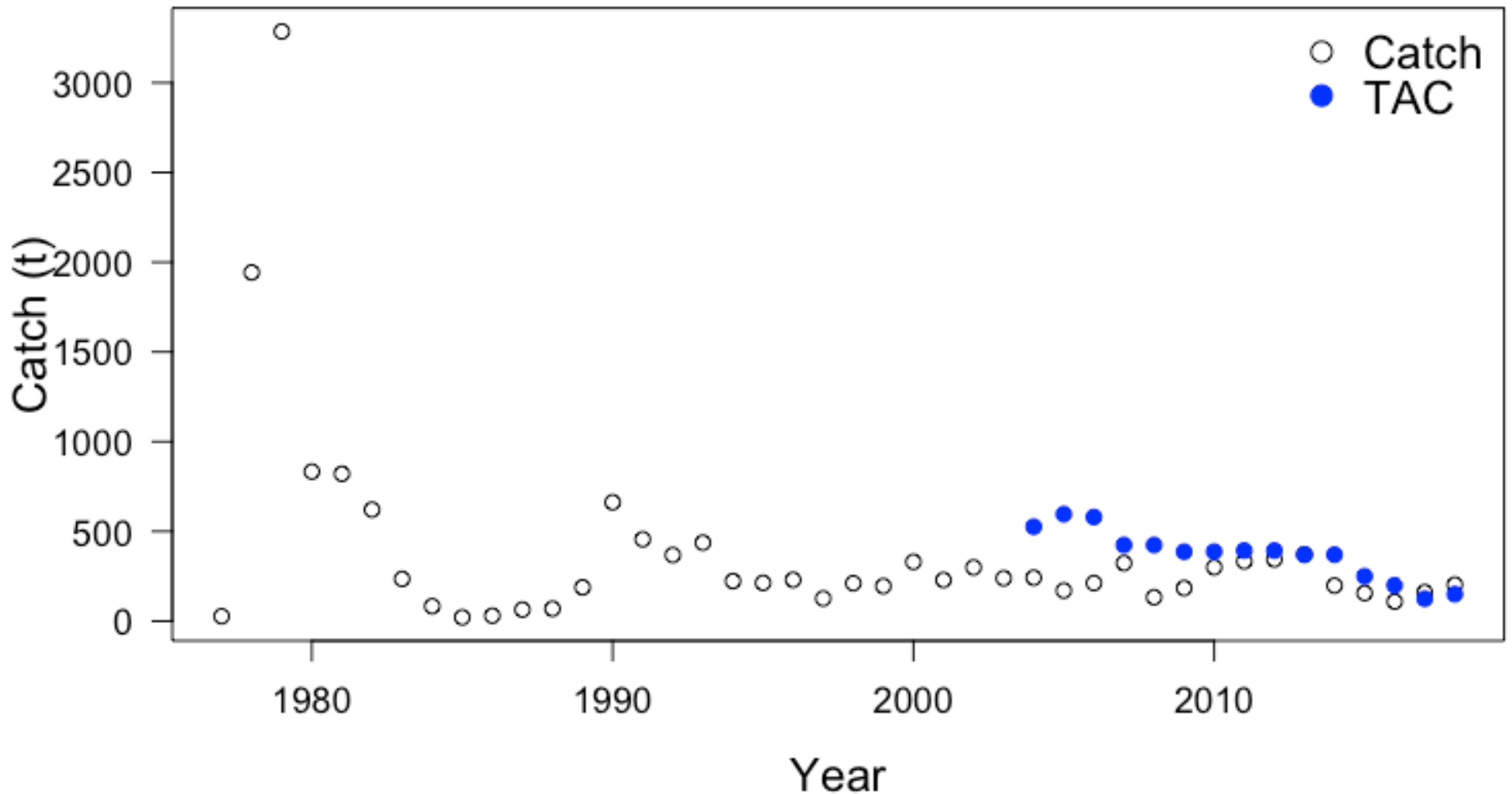# Biomass estimates based on random effects model

Aleutian Islands

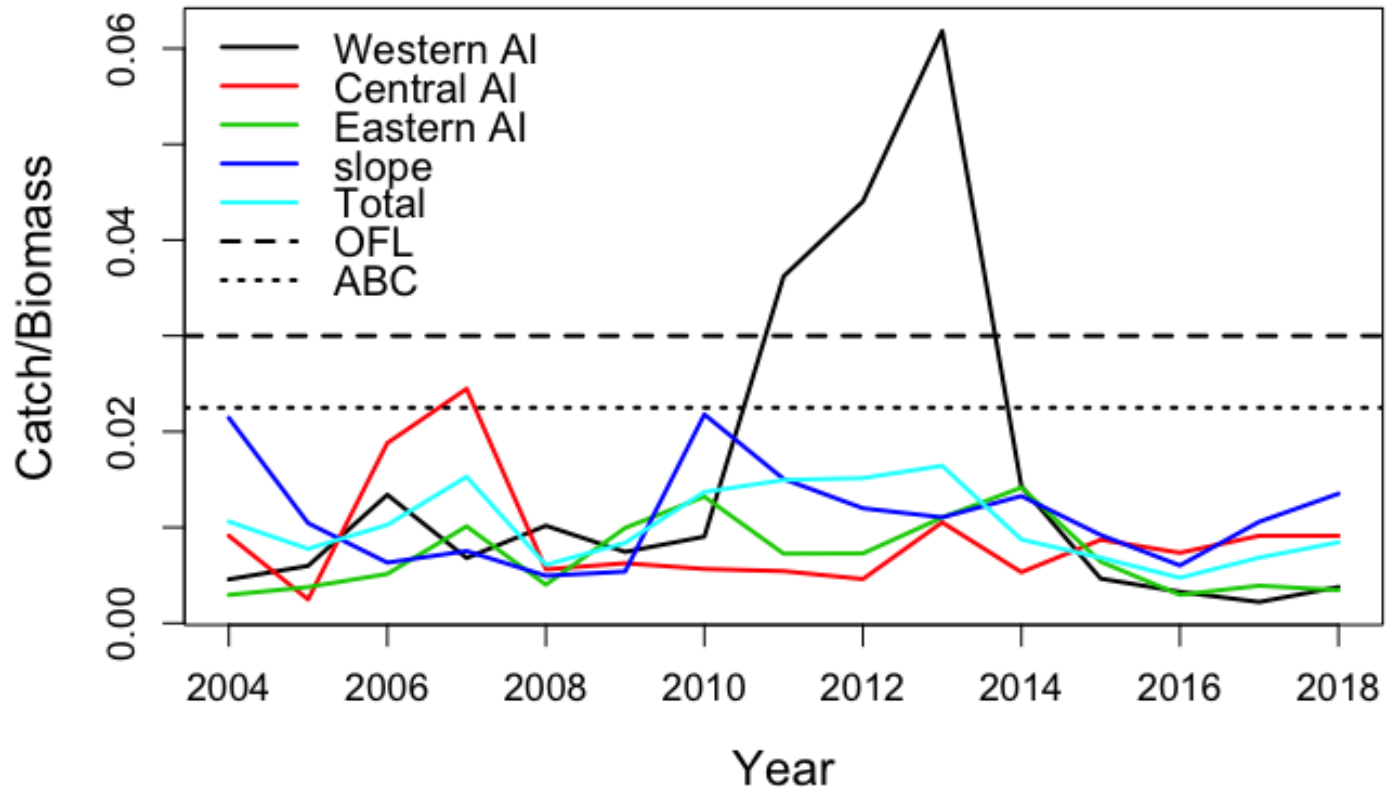## Southern Bering Sea

Bering Sea slope

BSAI shortraker rockfish catch estimates 1977-2018

OFL, ABC, Catch

| Year	OFL	ABC	TAC	Catch
2004	701	526	526	242
2005	794	596	596	170
2006	774	580	580	213
2007	564	424	424	323
2008	564	424	424	133
2009	516	387	387	184
2010	516	387	387	303
2011	524	393	393	334
2012	524	393	393	344
2013	493	370	370	372
2014	493	370	370	198
2015	690	518	250	156
2016	690	518	200	109
2017	666	499	125	161
2018*	666	499	150	203*

# Area-specific exploitation rates for BSAI shortraker rockfish from 2003-2018, and for the entire BSAI.

Western Aleutian Islands (WAI), Central Aleutian Islands (CAI), Eastern Aleutian Islands (EAI), Southern Bering Sea (SBS), Eastern Bering Sea (EBS), and Bering Sea (BS).

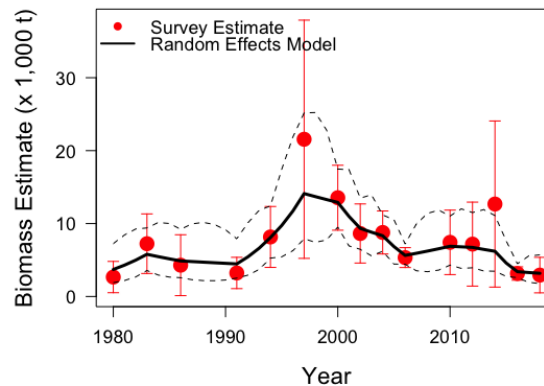# Random effects model estimates of Aleutian Islands shortraker rockfish

Western Aleutian Islands
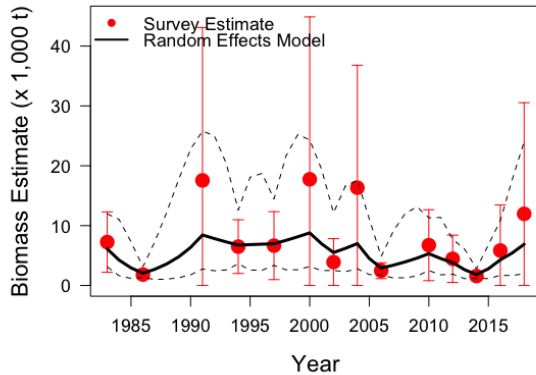
## Eastern Aleutian Islands
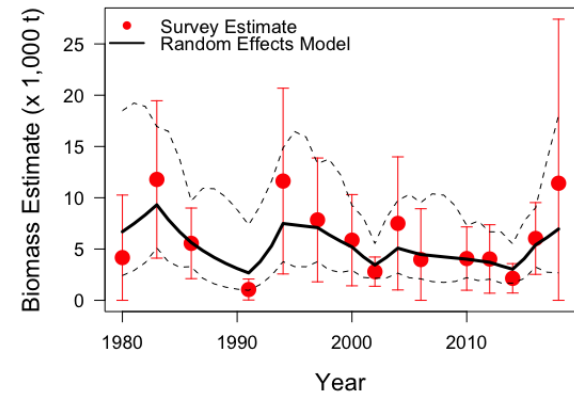
Central Aleutian Islands

Observed survey biomass are shown (red data points with 95% confidence interval), and predicted survey biomass estimates using the random effects model (black lines with 95% confidence intervals are shown as dotted lines).

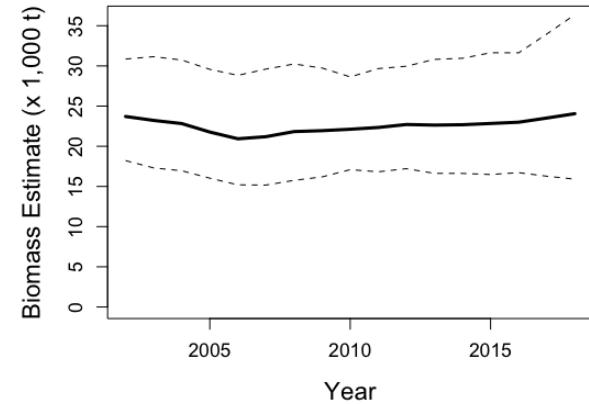# Bering Sea and Aleutian Islands estimate of shortraker rockfish biomass is fairly stable
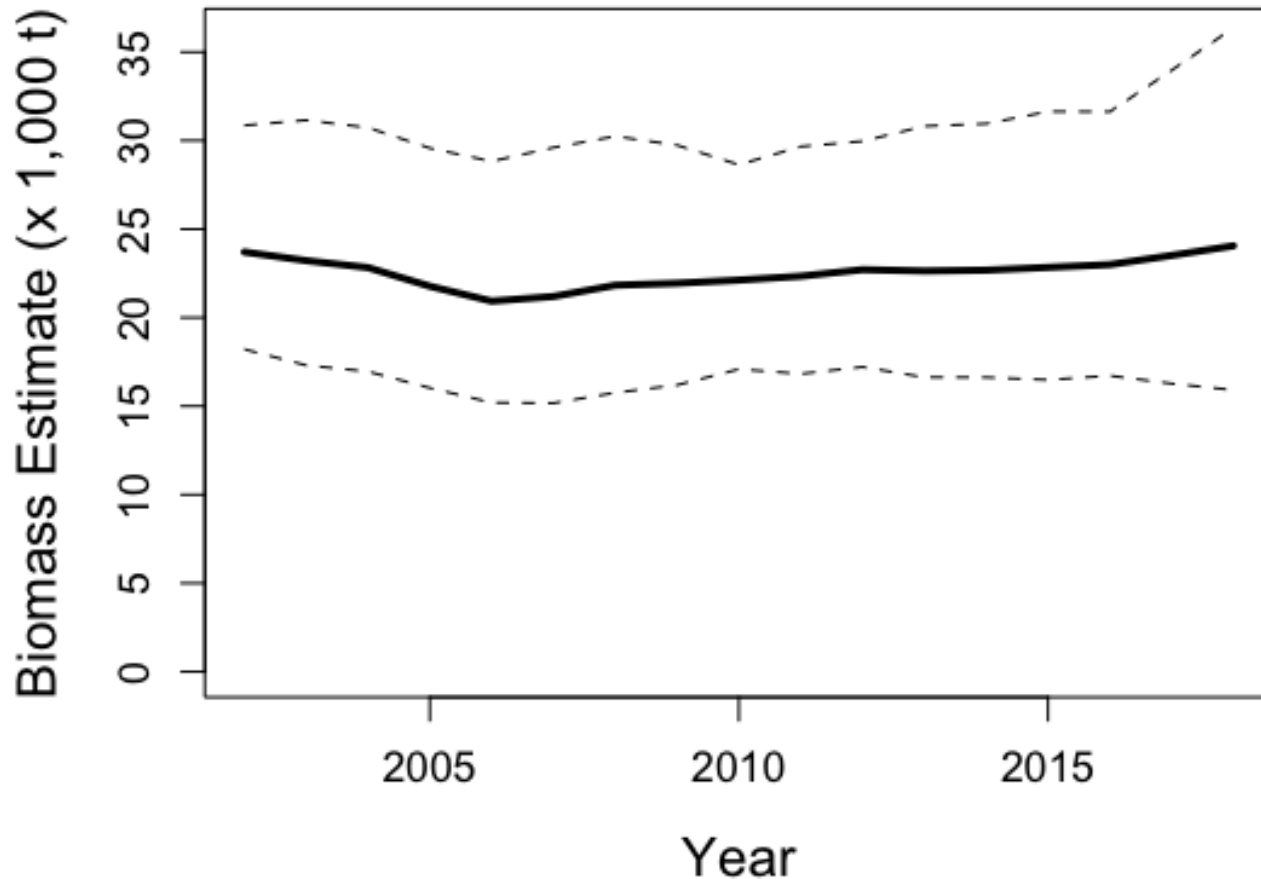
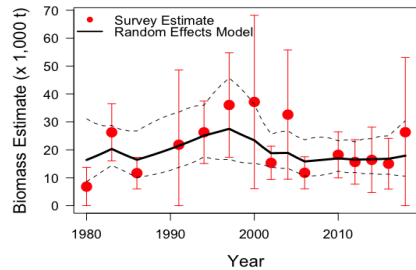# Shortraker survey length frequencies 1980-2018
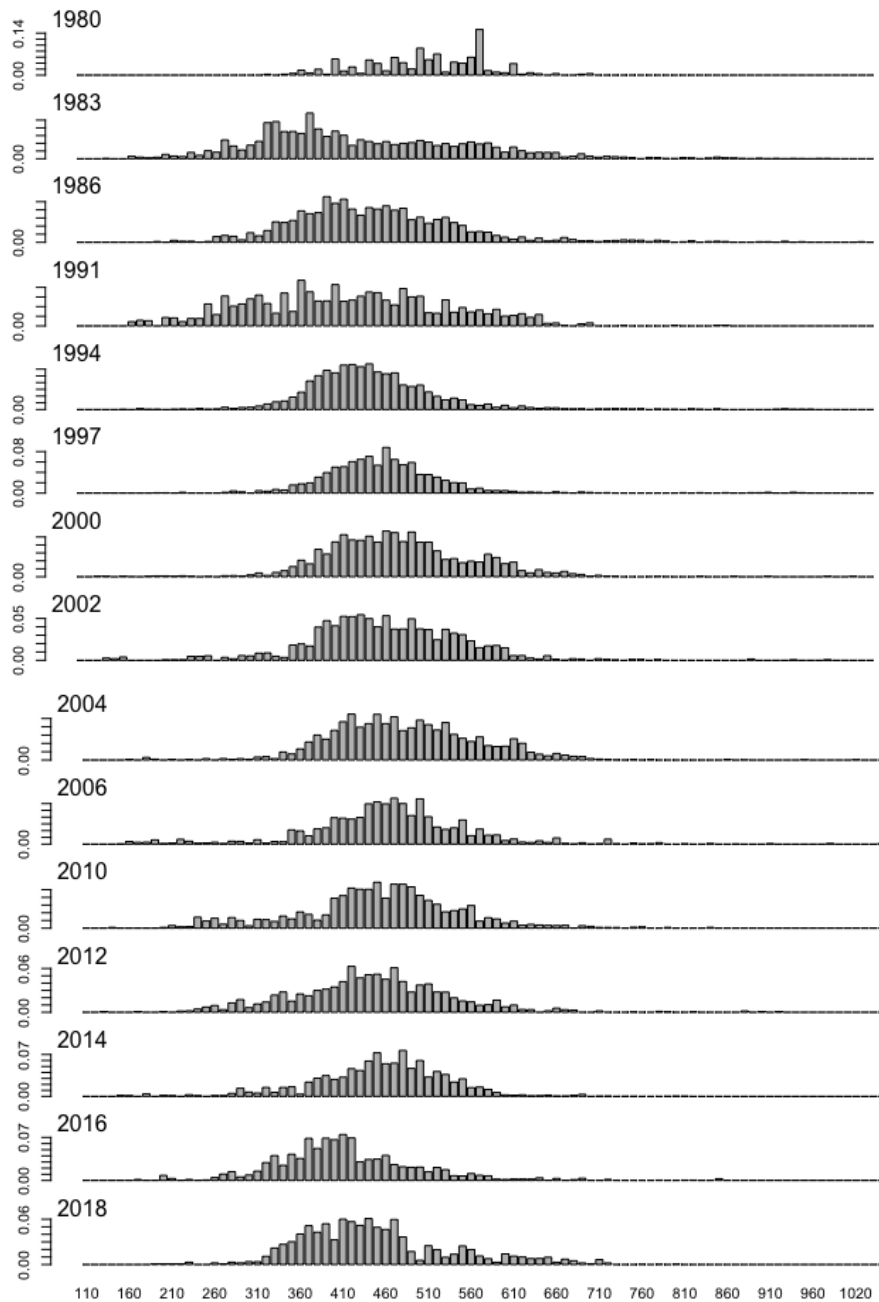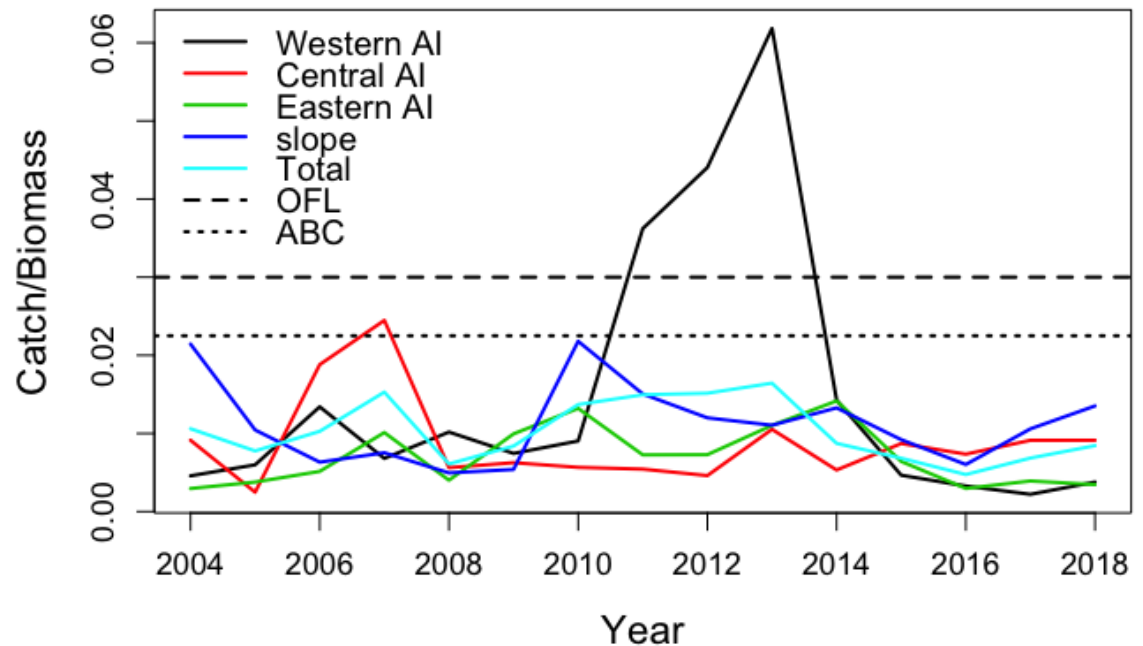
BSAI shortraker rockfish Overview

Quantity	As estimated or *specified last* year for:		As estimated or *recommended this* year for:	
	2018	2019	2019	2020
M (natural mortality rate)	0.03	0.03	0.03	0.03
Tier	5	5	5	5
Biomass (t)	22,191	22,191	24,055	24,055
F_{OFL}	0.03	0.03	0.03	0.03
$maxF_{ABC}$	0.0225	0.0225	0.0225	0.0225
F_{ABC}	0.0225	0.0225	0.0225	0.0225
OFL (t)	666	666	722	722
maxABC (t)	499	499	541	541
ABC (t)	499	499	541	541
	As determined *last* year for:		As determined *this* year for:	
Status	2016	2017	2017	2018
Overfishing		n/a		n/a

Aleutian Islands

Bering Sea slope
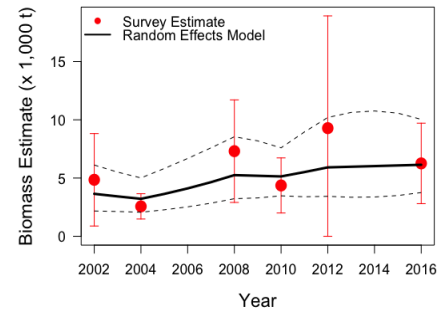
Bering Sea Aleutian Islands Shortraker Summary Table

Quantity	As estimated or *specified last* year for:		As estimated or *recommended this* year for:	
	2018	2019	2019	2020
M (natural mortality rate)	0.03	0.03	0.03	0.03
Tier	5	5	5	5
Biomass (t)	22,191	22,191	24,055	24,055
F_{OFL}	0.03	0.03	0.03	0.03
$maxF_{ABC}$	0.0225	0.0225	0.0225	0.0225
F_{ABC}	0.0225	0.0225	0.0225	0.0225
OFL (t)	666	666	722	722
maxABC (t)	499	499	541	541
ABC (t)	499	499	541	541
Status	As determined *last* year for:		As determined *this* year for:	
	2016	2017	2017	2018
Overfishing		n/a		n/a