

Assessment of the shortraker rockfish stock in the Bering Sea and Aleutian Islands

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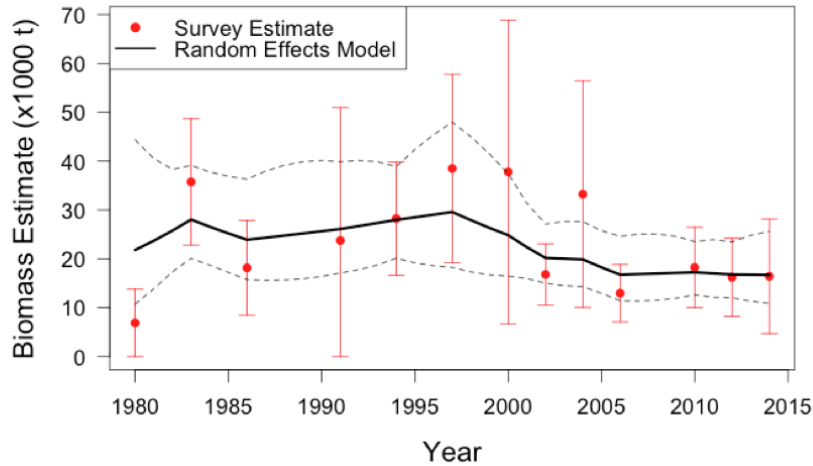
Shortraker rockfish

- Grow to 1 meter.
- Up to 157 years.
- 50 lbs.

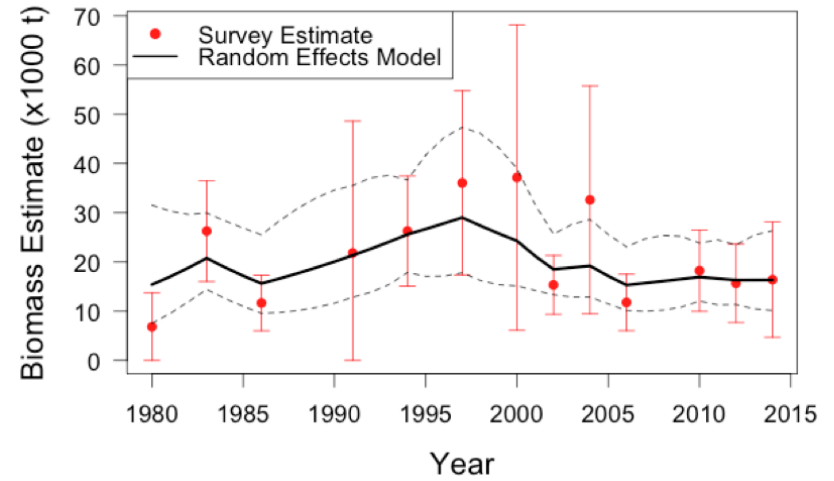


Random effects model estimates

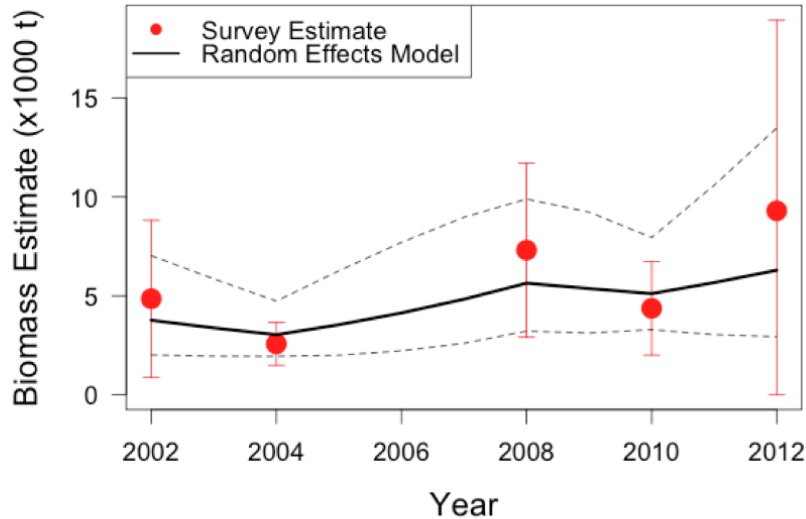
a. Aleutian Islands shorttraker (including SBS)



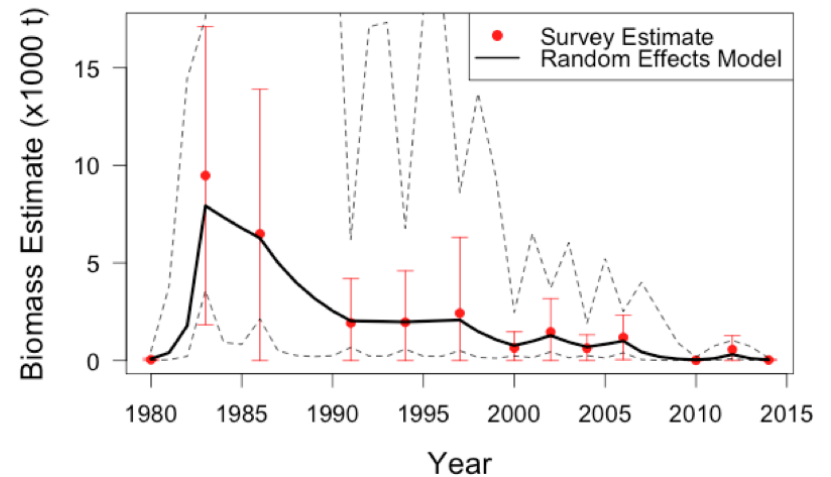
b. Aleutian Islands (excluding SBS)



c. Bering Sea slope



d. Southern Bering Sea



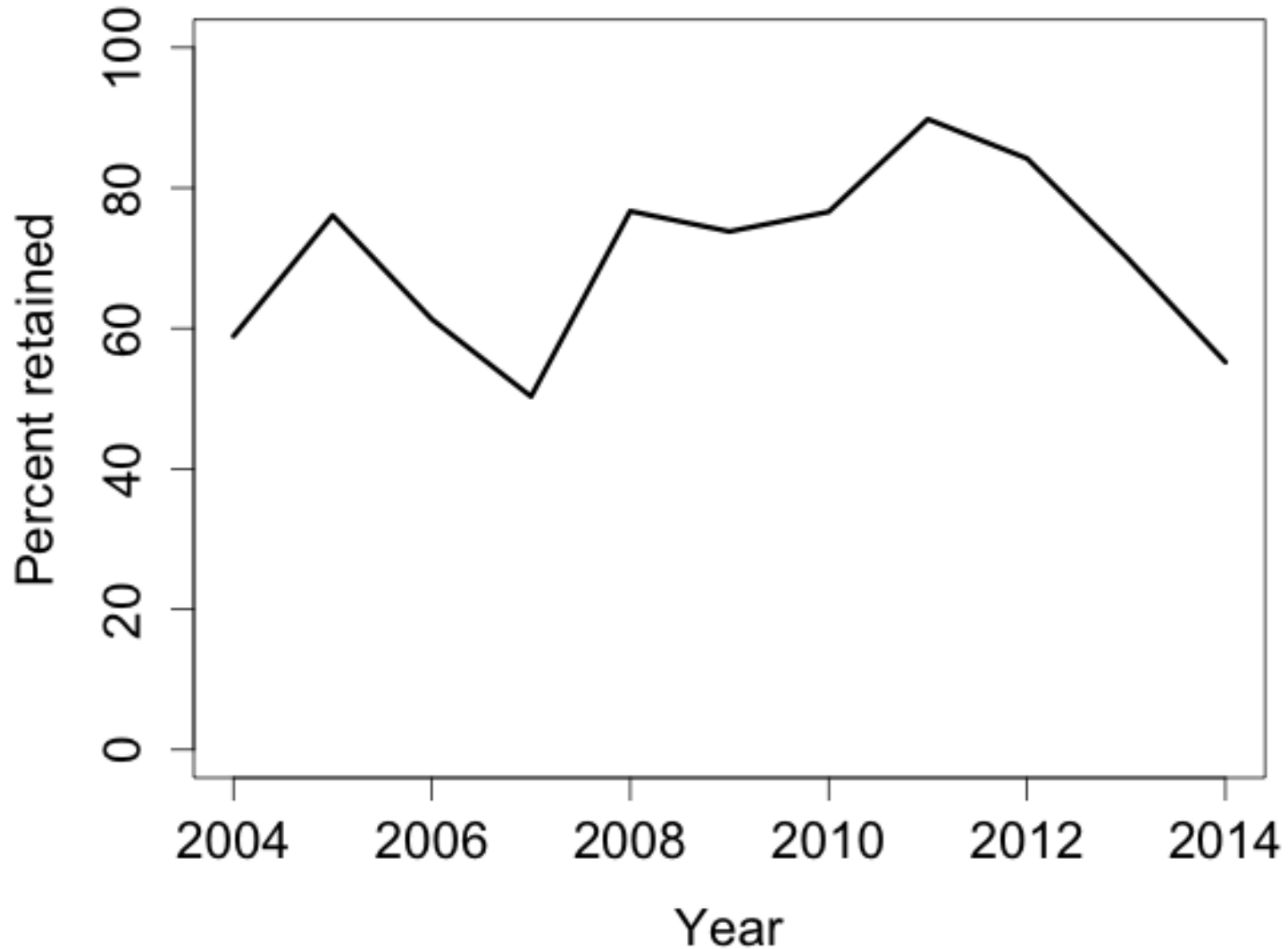
Summary of Results

Quantity	As estimated or <i>specified last year for:</i>		As estimated or <i>recommended this year for:</i>	
	2014	2015	2015	2016
M (natural mortality rate)	0.03	0.03	0.03	0.03
Tier	5	5	5	5
Biomass (t)	16,447	16,447	23,009	23,009
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)	493	493	690	690
maxABC (t)	370	370	518	518
ABC (t)	370	370	518	518
Status	As determined <i>last year for:</i>		As determined <i>this year for:</i>	
	2012	2013	2013	2014
Overfishing		n/a		n/a

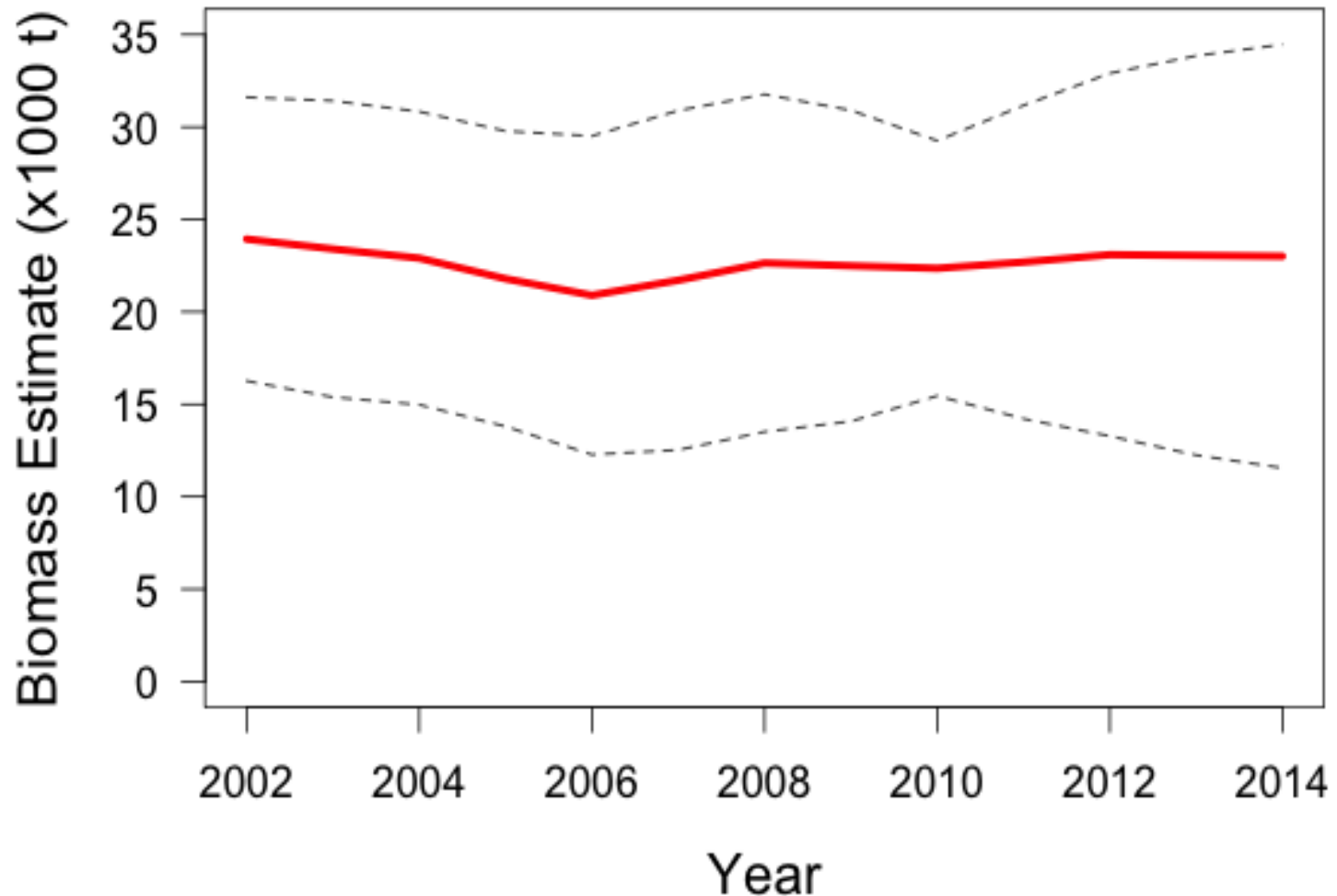
Catch by fishery, region

- BS
 - Caught primarily in the ATF, midwater pollock, rockfish trawl surveys (15%, 22%, 19%) and the P.cod longline fisheries (20%).
- AI
 - Caught primarily in rockfish bottom trawl fishery (58%).

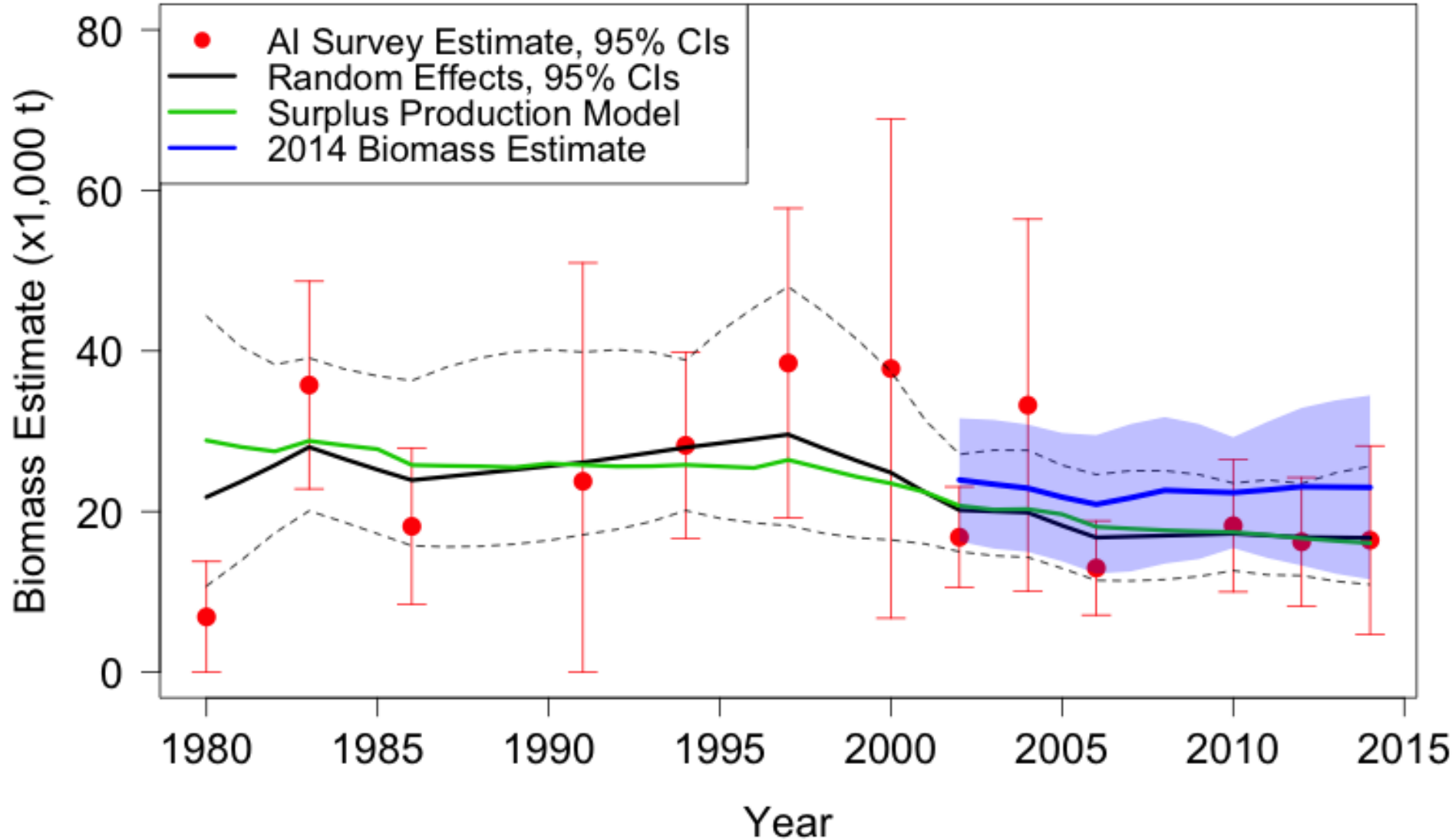
Shortraker rockfish percent retained



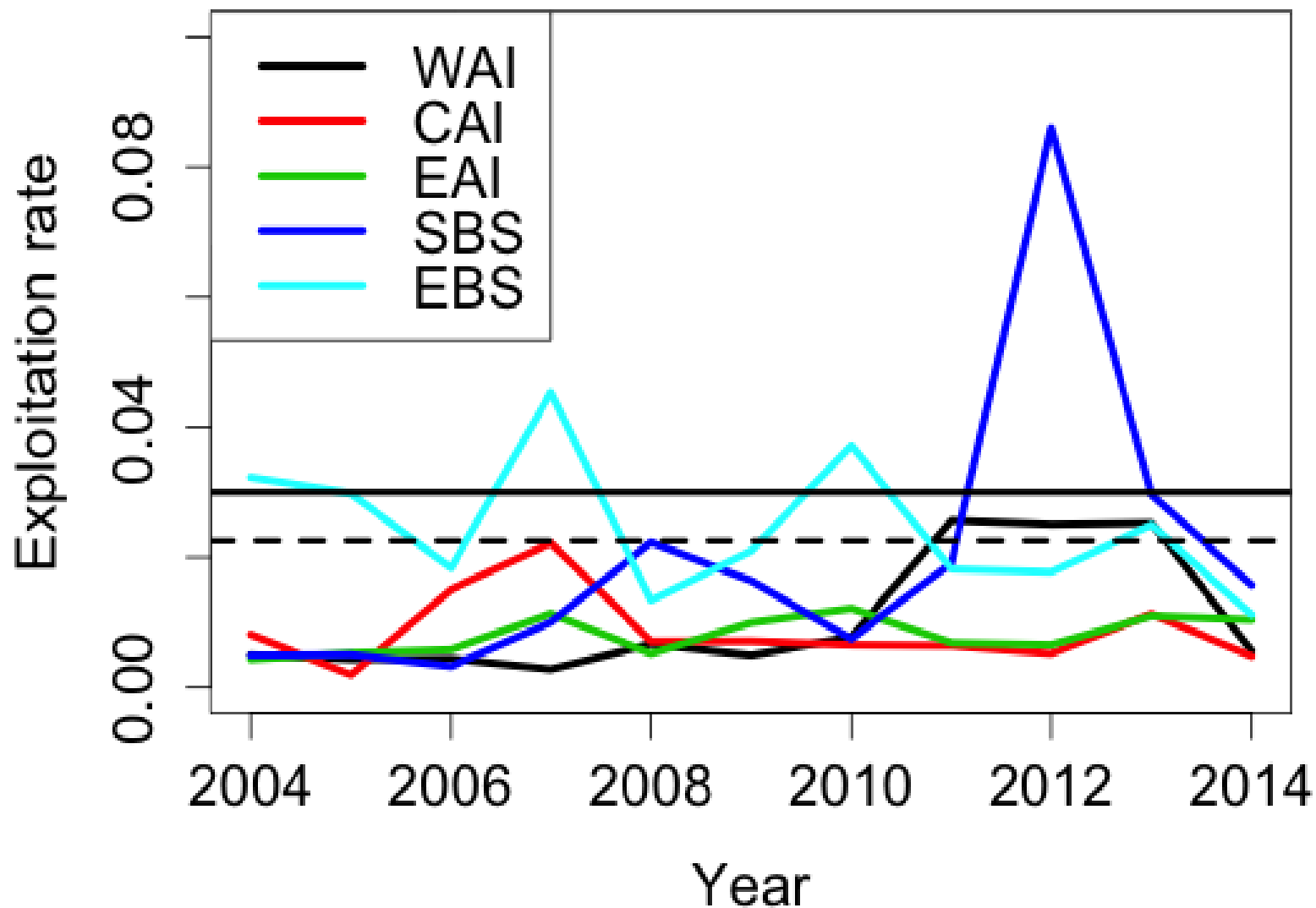
Estimated Bering Sea/Aleutian Islands (BSAI) Shortraker biomass (t) time series, from 2002-2014



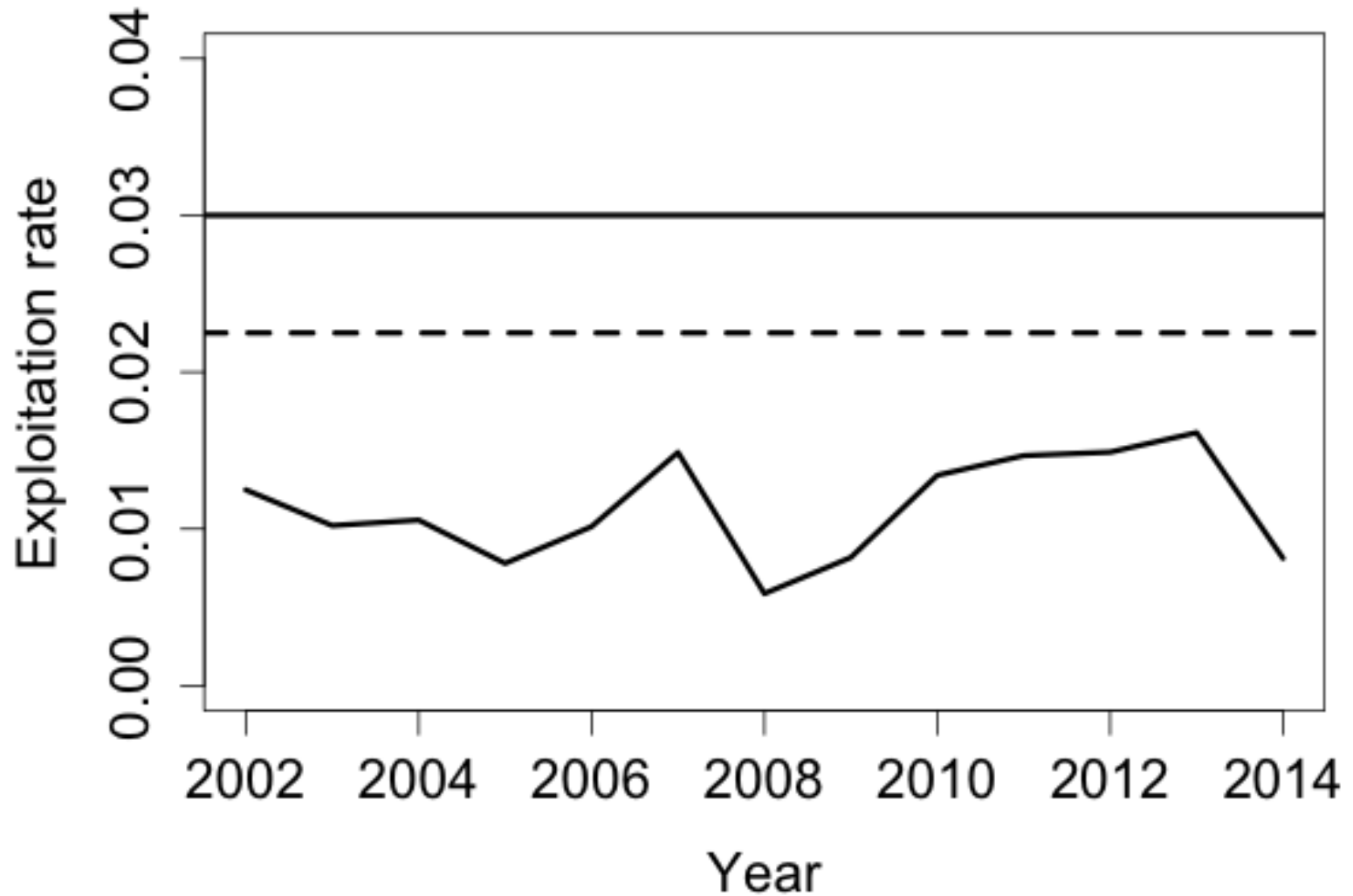
Shortraker Biomass Estimates



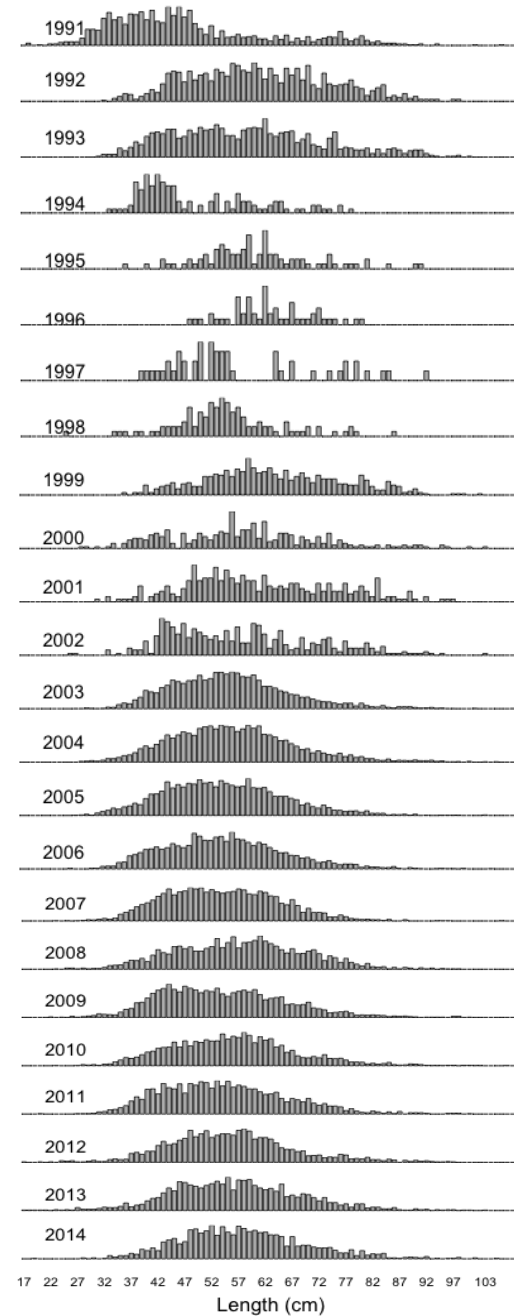
Exploitation rate by region



Exploitation rate for the entire BSAI



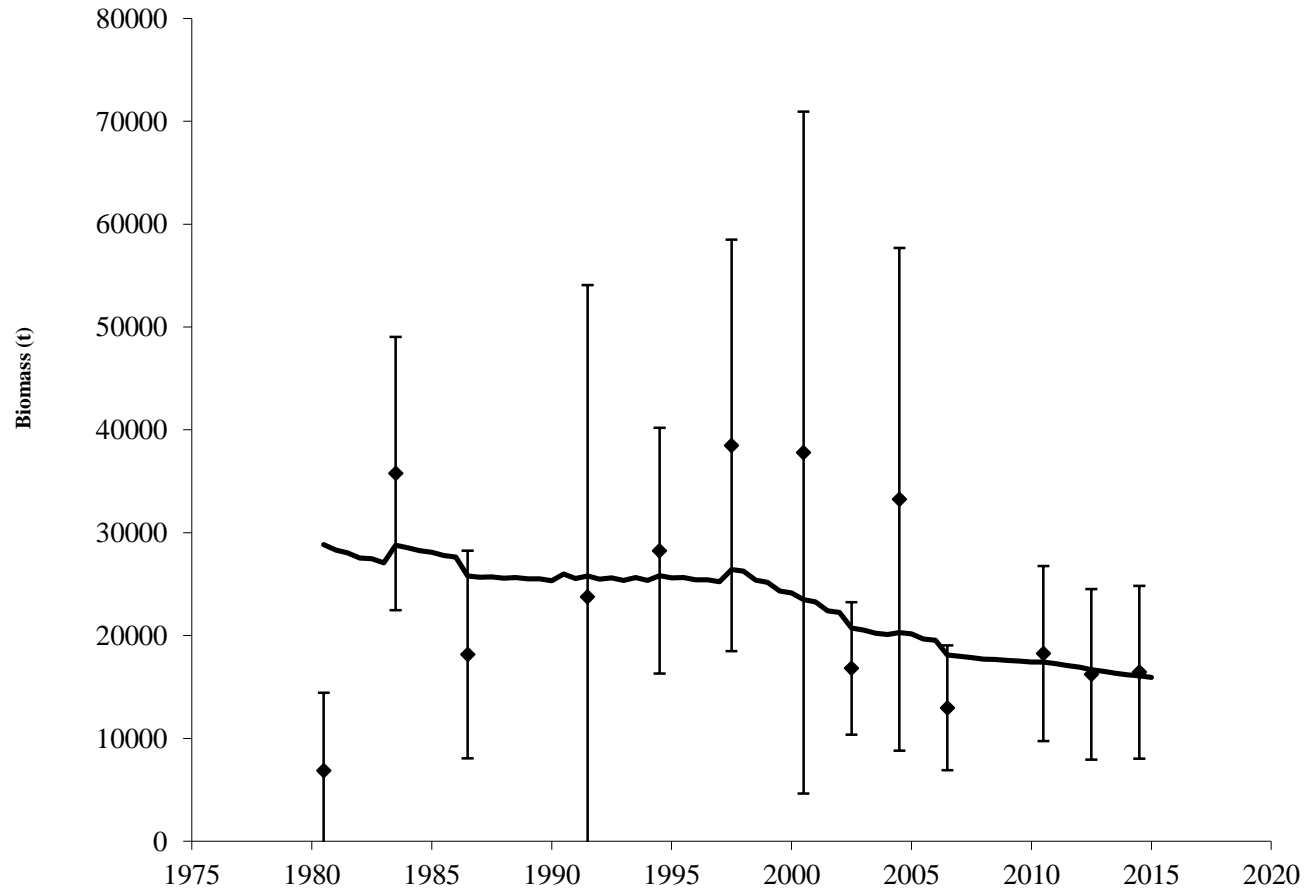
BSAI Shortraker length frequency data



Biomass estimates

- Random effects model 23,009 t
(11,554,34,464)
- Surplus production model estimate 16,073 t.

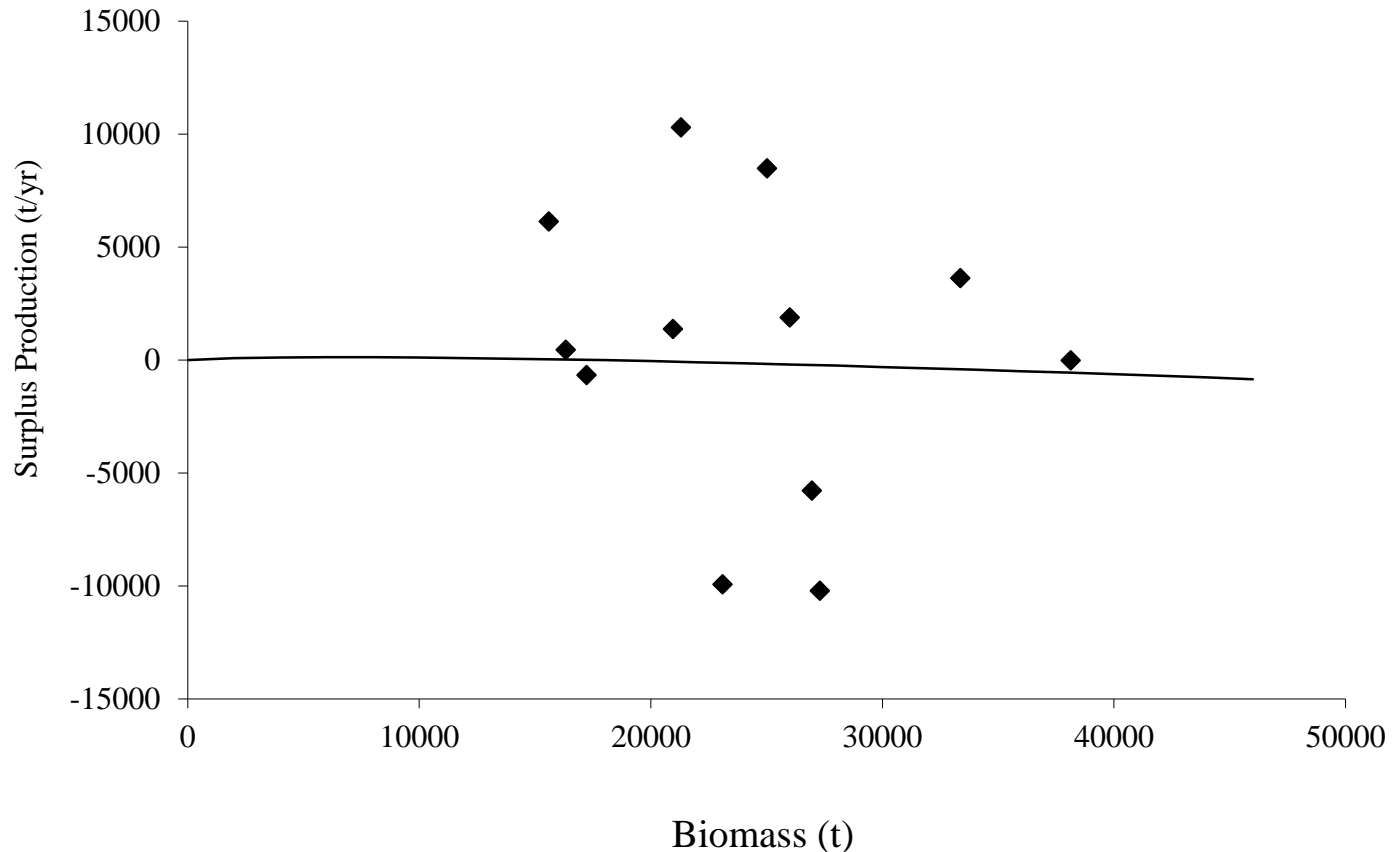
Observed AI survey biomass and predicted survey biomass estimates from the Kalman filter model.



Estimated fishing mortality rate of BSAI shortraker rockfish, 1980-2014.



Estimated annual surplus production (points, estimated as the harvest plus the change in biomass over a time interval), and production model fit.



Summary

- Preferred model – random effects model with Aleutian Island and BS slope data.