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Assessment of Pacific cod in the Aleutian Islands

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Team and SSC comments



Comments on assessments in general

- Four comments on assessments in general were addressed in the preliminary assessment (Appendix 2A.1)
- Responses to the three SSC comments (on assessments in general) made since completion of the preliminary assessment are the same as for the EBS assessment

Comments specific to this assessment (1 of 4)

- Three comments specific to this assessment, one of which contained several parts, were addressed in the preliminary assessment (Appendix 2A.1)
- One other comment from the 12/15 SSC meeting was deferred until this year's final assessment:
- SSC5 (12/15 minutes): "One additional recommendation from the SSC is to examine weights-at-age of Pacific cod by area." Weights at age are presented by area in the "Data" section

Comments specific to this assessment (2 of 4)

- BPT1 (9/16 minutes): “The Team recommends staying with the status quo model (Model 13.4), allow the SSC to comment on this draft document, and to focus more on developing and improving models for the Bering Sea stock. However, Model 16.1 is the Team’s preferred age-structured model, and the Team appreciates the progress made. However, the Team sees a benefit of spending more time on developing age-structured models and methods using the EBS stock.” Other than the models from the preliminary assessment described in Appendix 2A.1, Model 13.4 is the only model presented here

Comments specific to this assessment (3 of 4)

- BPT2 (9/16 minutes): “The Plan Team has concerns regarding the form of the selectivity and the new data sources. We feel that these issues cannot be fully examined by November, but the Team recommends that they be addressed in the next cycle (2017).” This comment will be forwarded to the JTS for consideration at next year’s meeting
- SSC11 (10/16 minutes): “While the SSC strongly encourages further development of the model, we endorse the Plan Team recommendation to focus on the EBS models for this assessment cycle and not bring forward an age-structured model for AI Pacific Cod stock at this time.” Other than those in Appendix 2A.1, Model 13.4 is the only model presented here

Comments specific to this assessment (4 of 4)

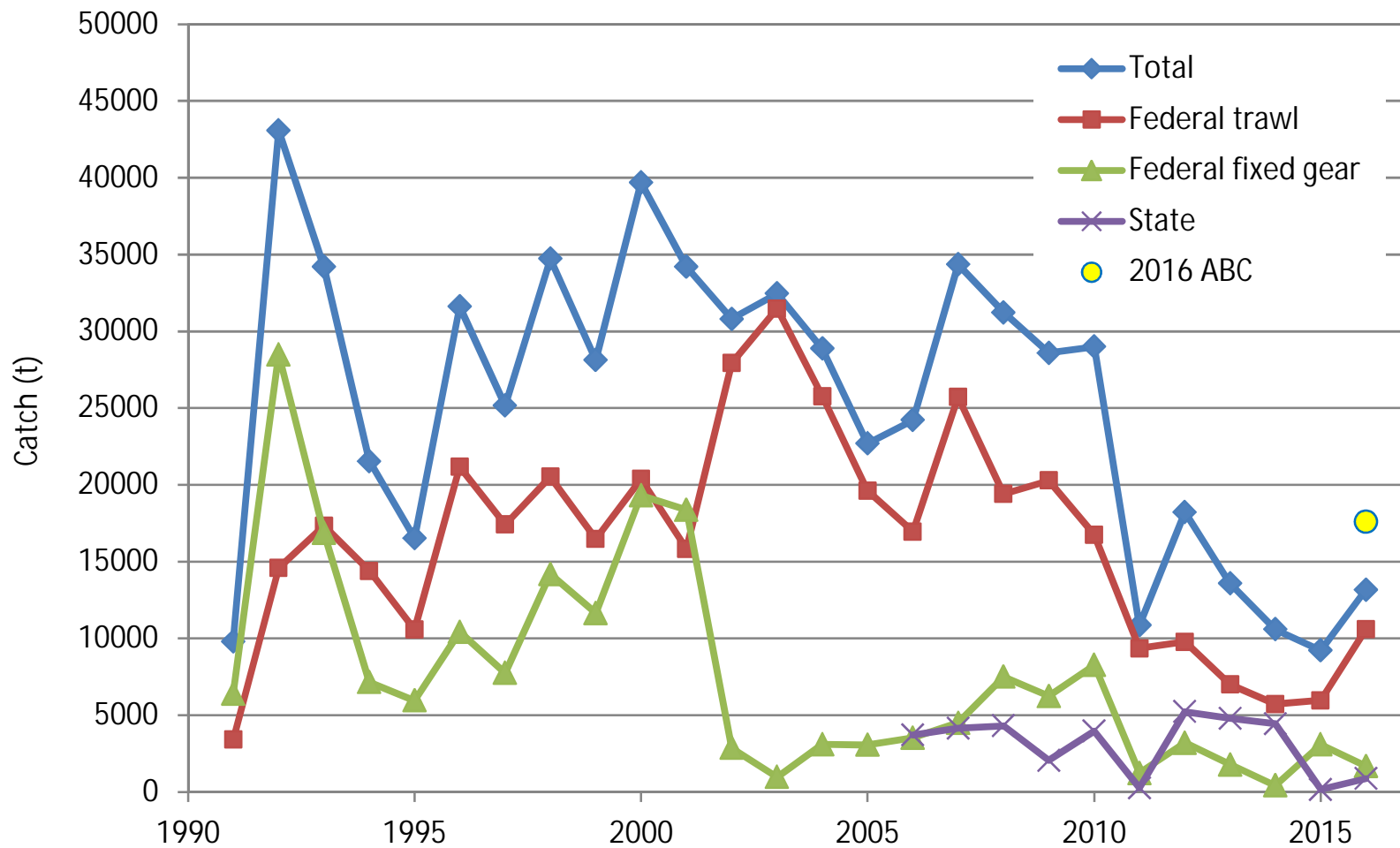
- The remaining new comments specific to Pacific cod (all from the SSC) are either not germane to the AI assessment or the responses are the same as for the EBS assessment



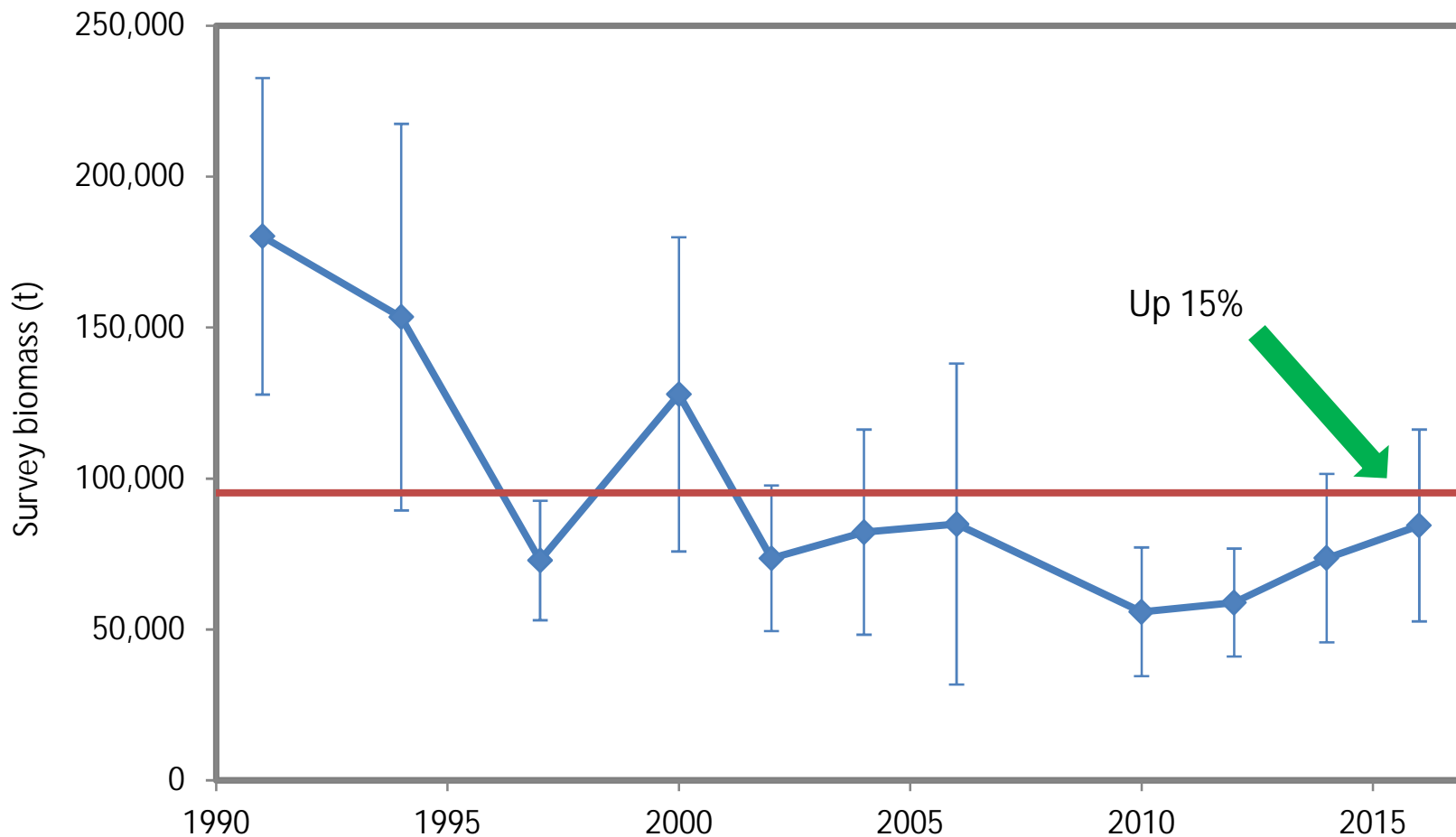
Data highlights



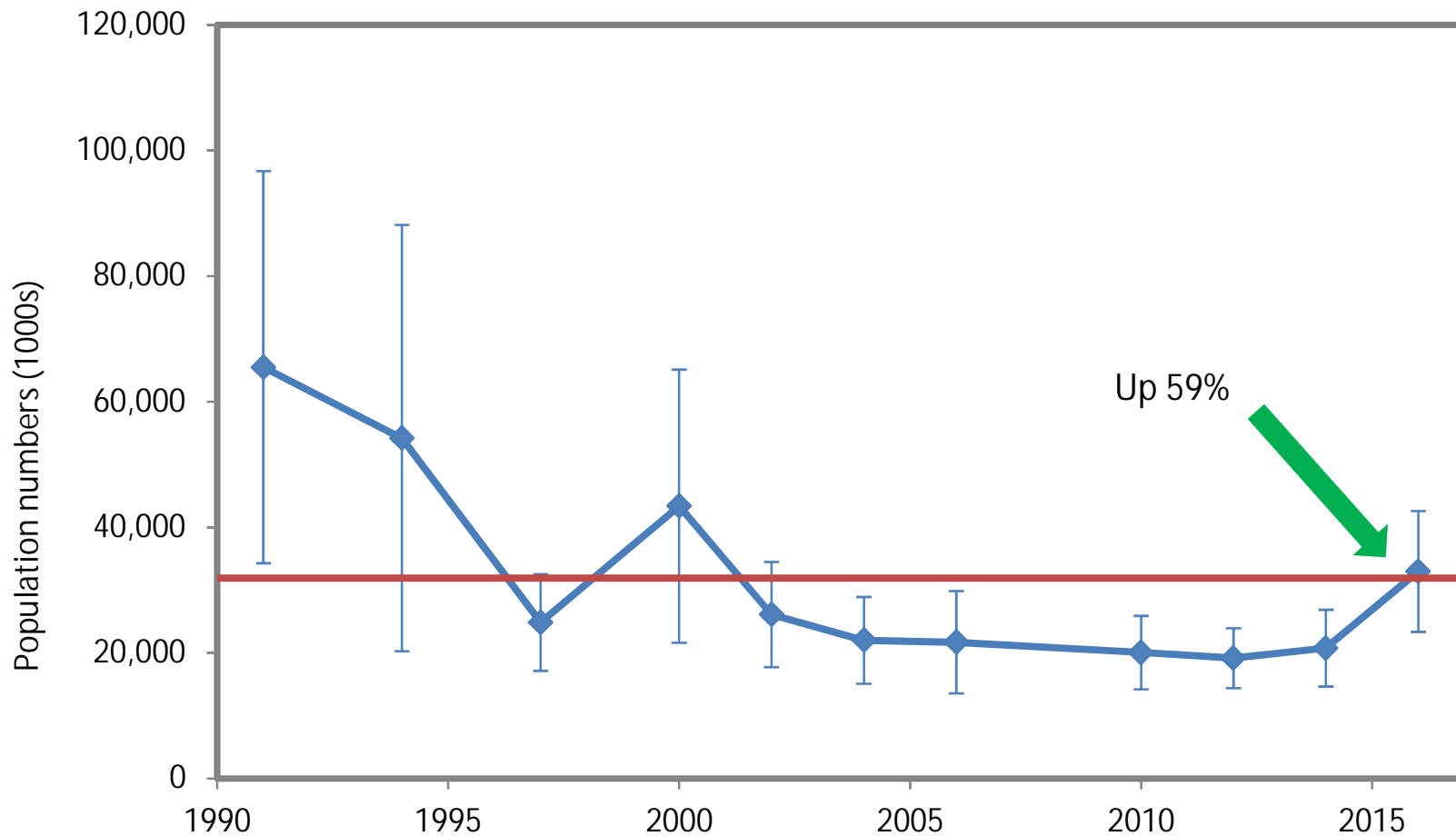
Catch history (2016 data are incomplete)



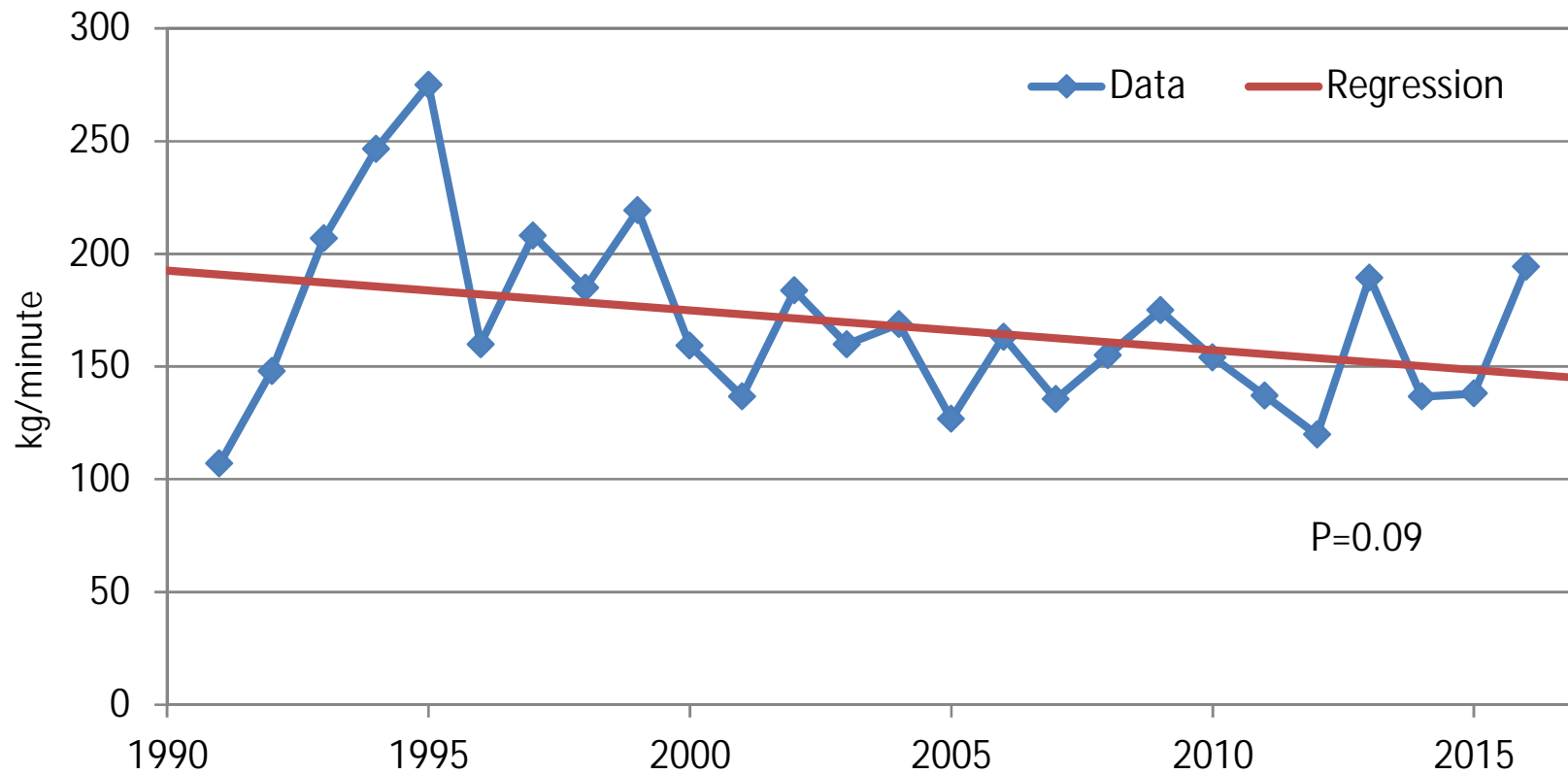
Survey biomass history



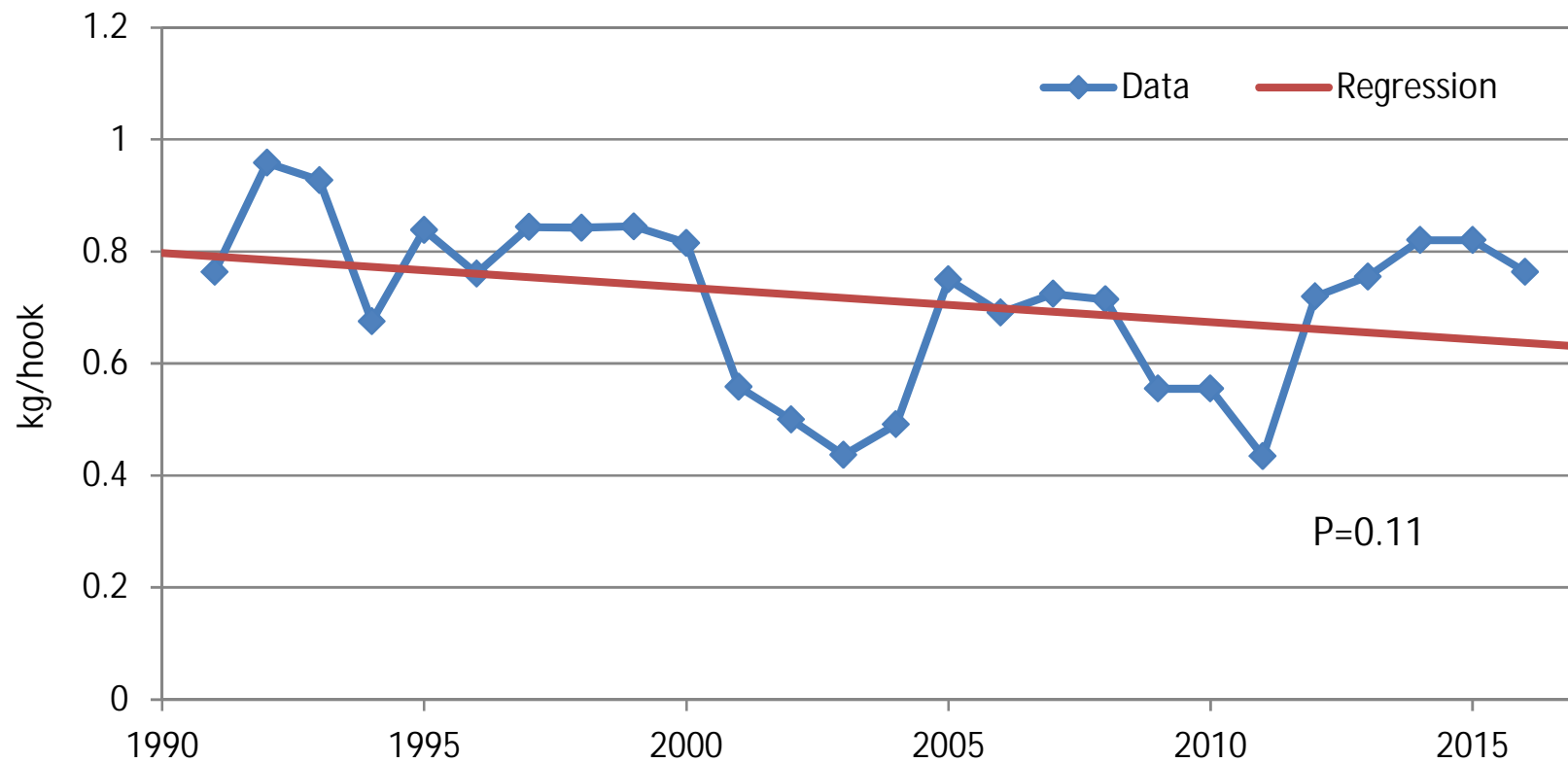
Survey numbers history (not used in model)



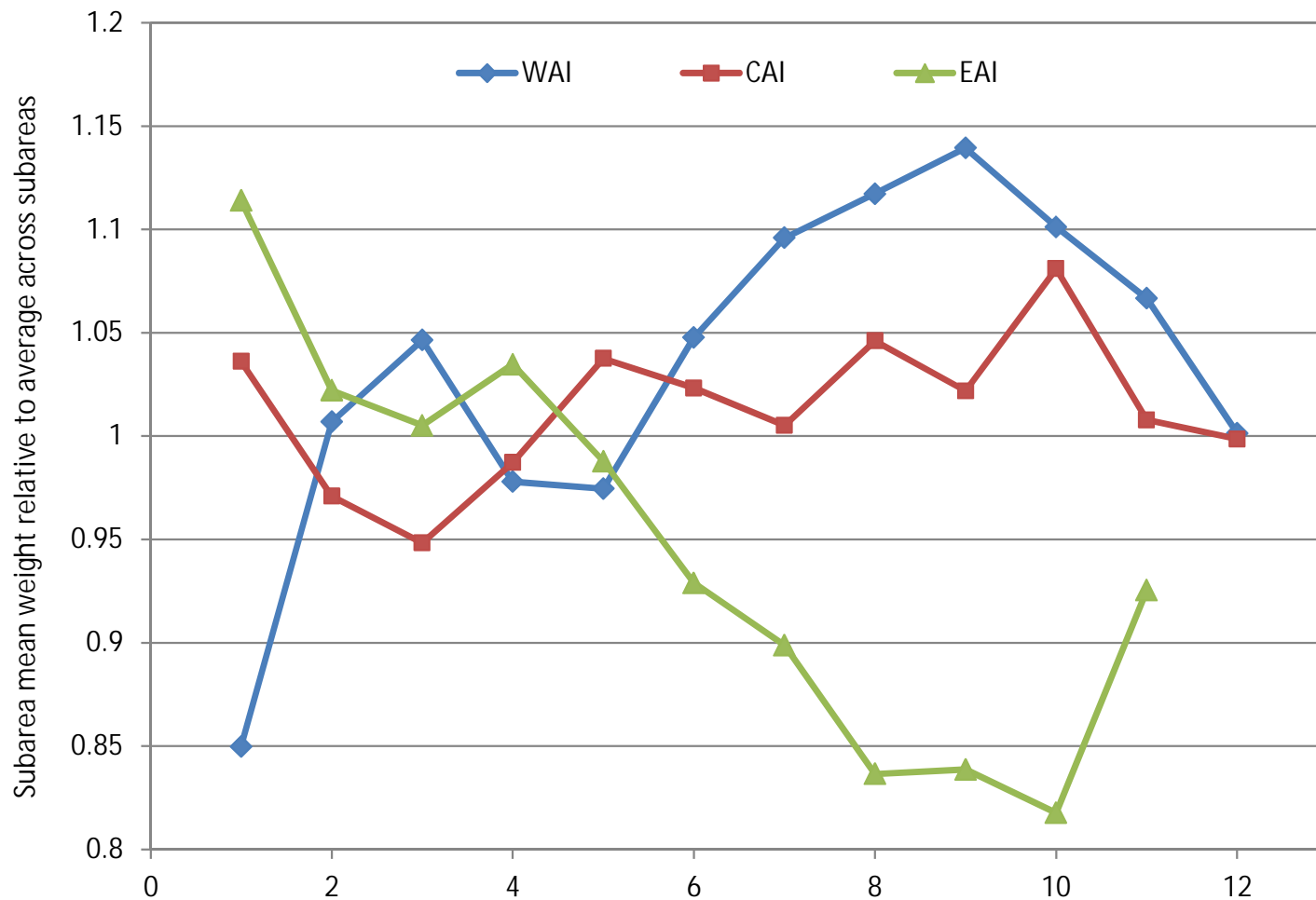
Trawl fishery CPUE (not used in model)



Longline fishery CPUE (not used in model)



Weight at age by area (comment SSC5)

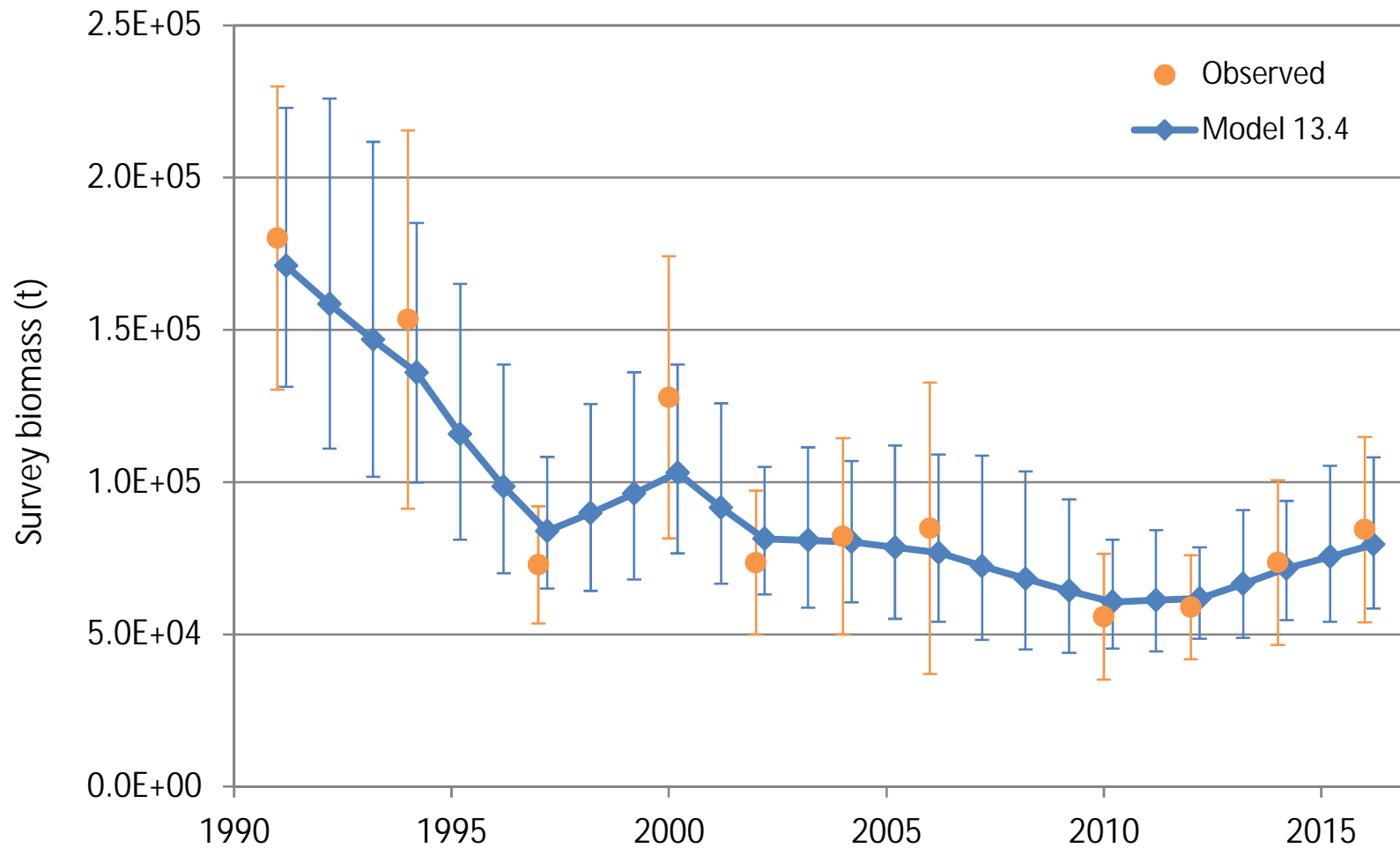


Results



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Fit to survey biomass: figure



Fit to survey biomass: statistics

- Log-scale process error standard deviation: 0.17
 - With a CV of 0.37
- Root-mean-squared error: 0.103
 - Compare to average log-scale standard error (data): 0.182
- Mean normalized residual: 0.056
- Standard deviation of normalized residuals: 0.625
- Correlation (data:model): 0.975

Summary table

Quantity	As estimated or <i>specified last year for:</i>		As estimated or <i>recommended this year for:</i>	
	2016	2017	2017	2018
M (natural mortality rate)	0.34	0.34	0.36	0.36
Tier	5	5	5	5
Biomass (t)	68,900	68,900	79,600	79,600
F_{OFL}	0.34	0.34	0.36	0.36
$maxF_{ABC}$	0.26	0.26	0.27	0.27
F_{ABC}	0.26	0.26	0.27	0.27
OFL (t)	23,400	23,400	28,700	28,700
maxABC (t)	17,600	17,600	21,500	21,500
ABC (t)	17,600	17,600	21,500	21,500

- If $M = 0.34$: 2017 maxABC = 20,300 t, 2017 OFL = 27,100 t