

Considering the short-term implications of directed sardine catches during 2018

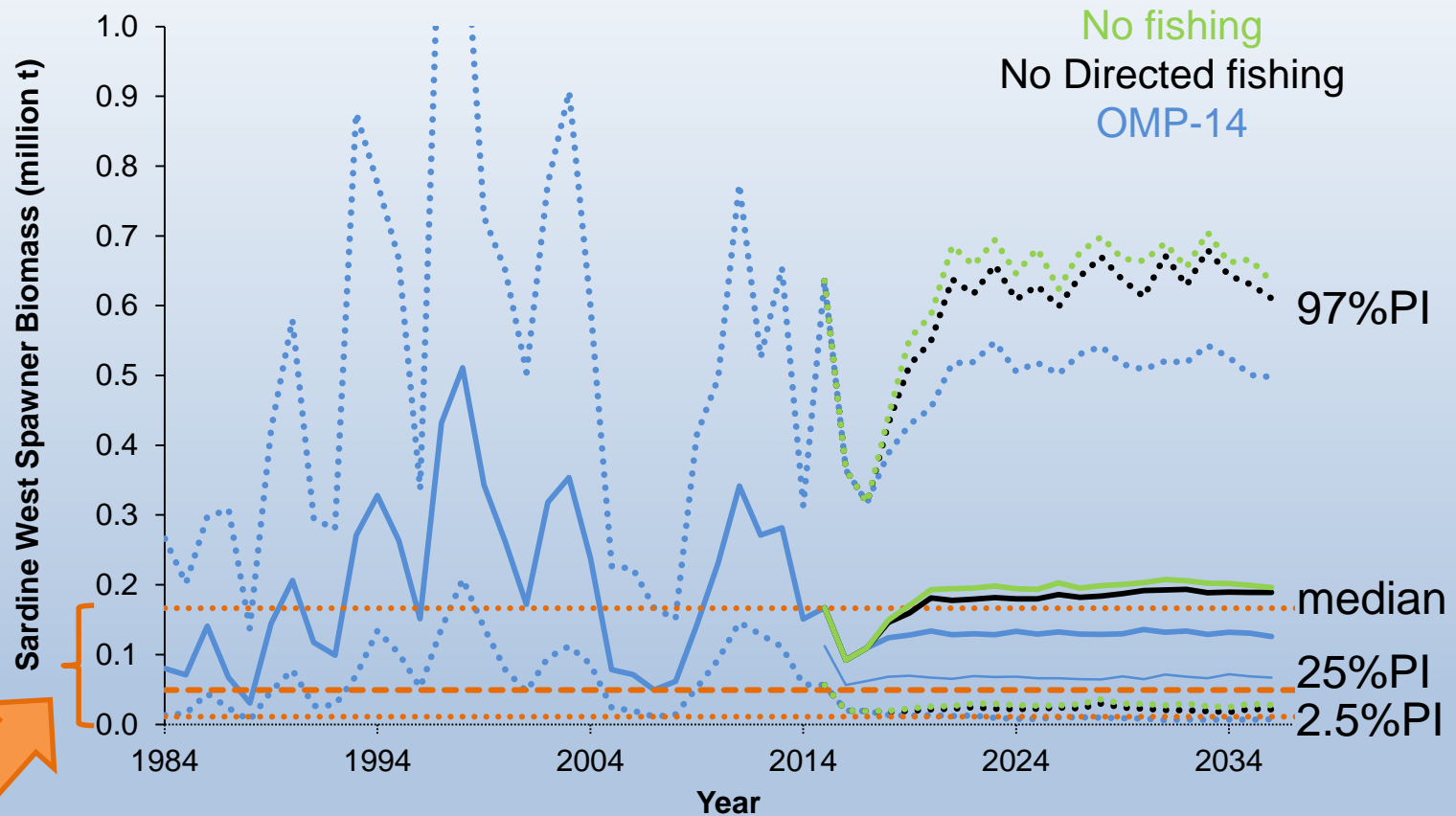
Small Pelagics Scientific Working Group
7th December 2017

Carryn de Moor



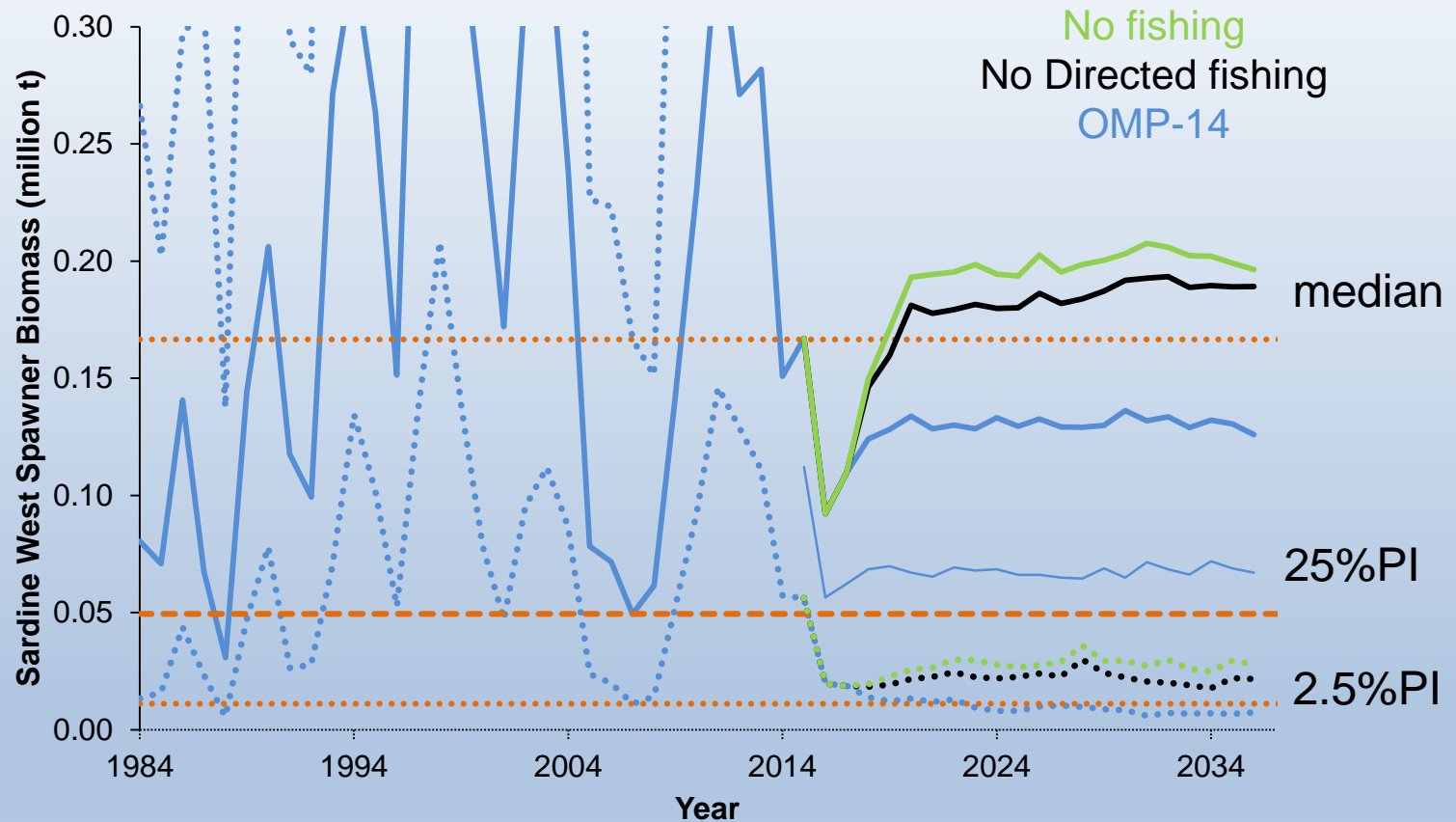
Marine Resource Assessment and Management Group (MARAM)
Department of Mathematics and Applied Mathematics
University of Cape Town

West Component Spawner Biomass

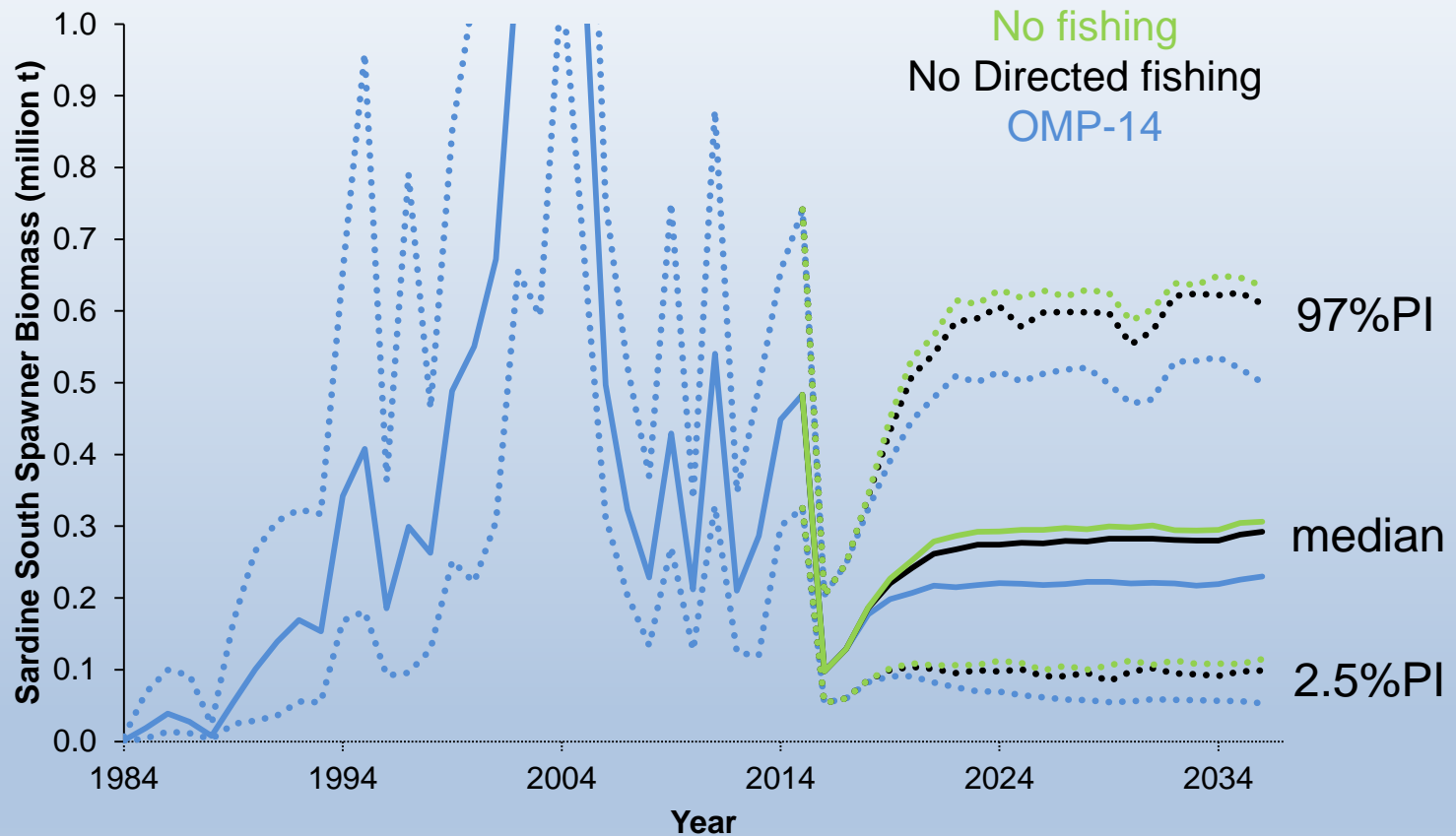


2007 Spawner biomass threshold

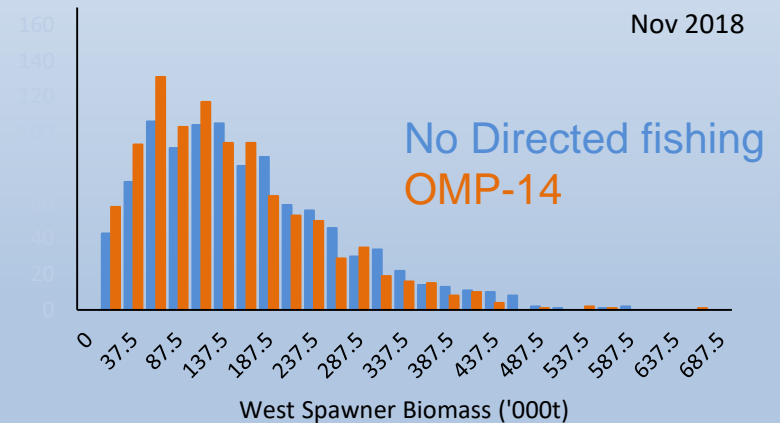
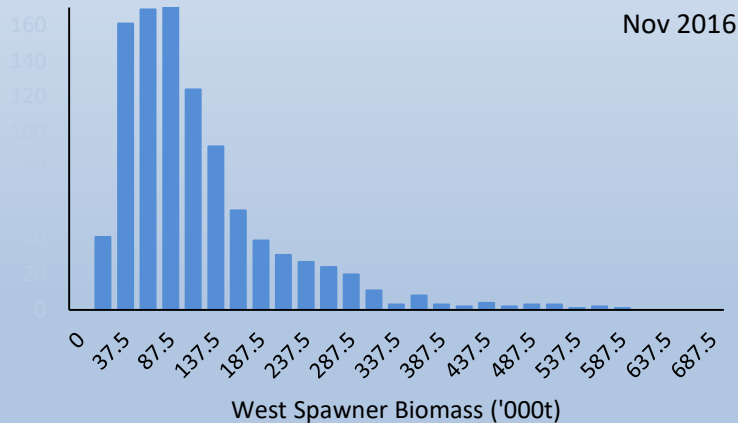
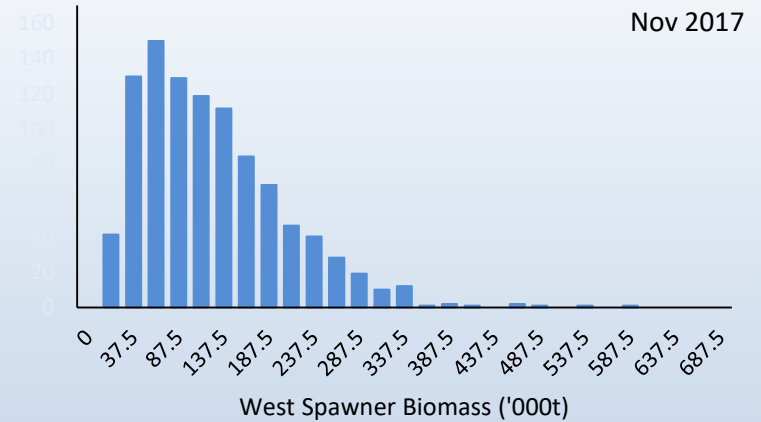
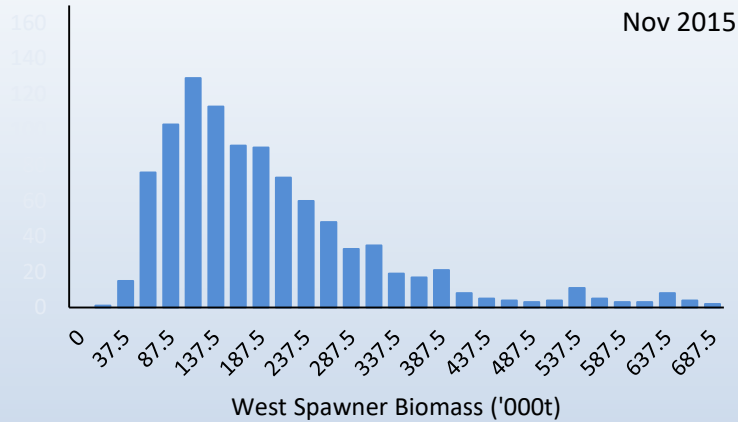
West Component Spawner Biomass



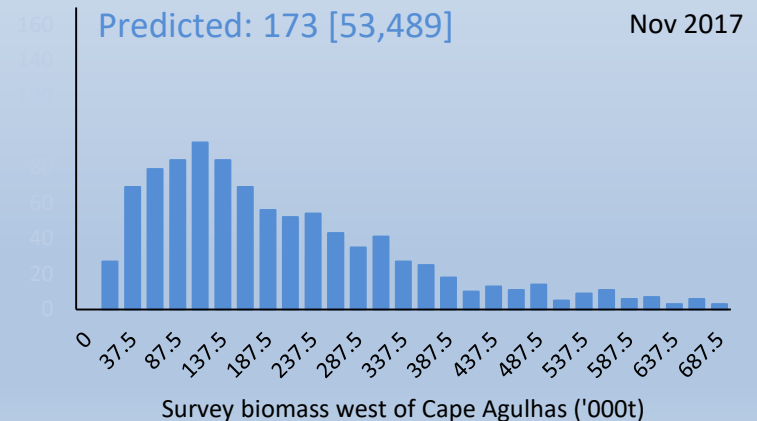
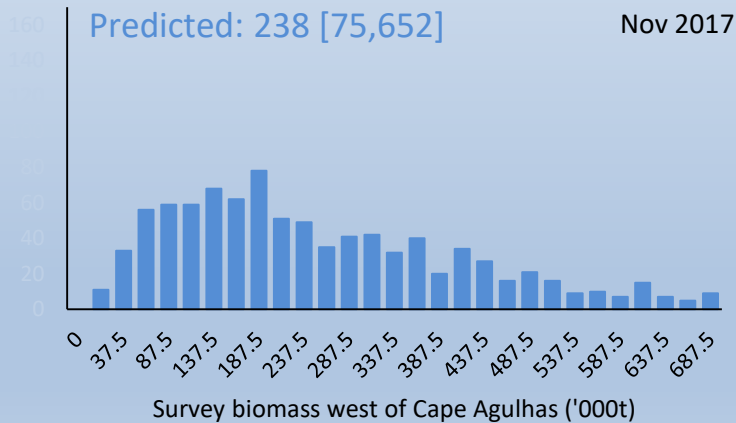
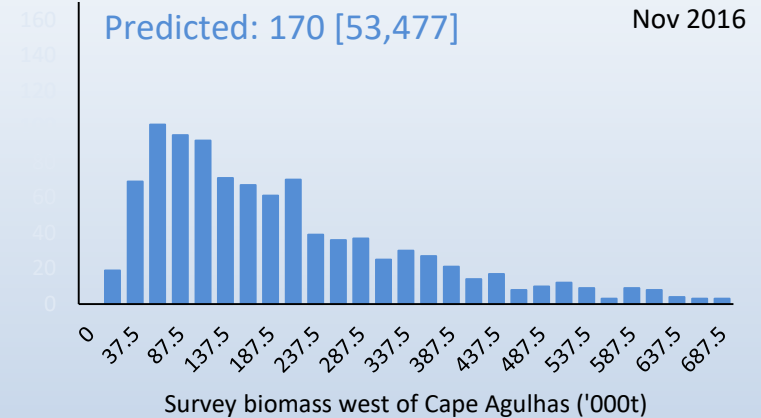
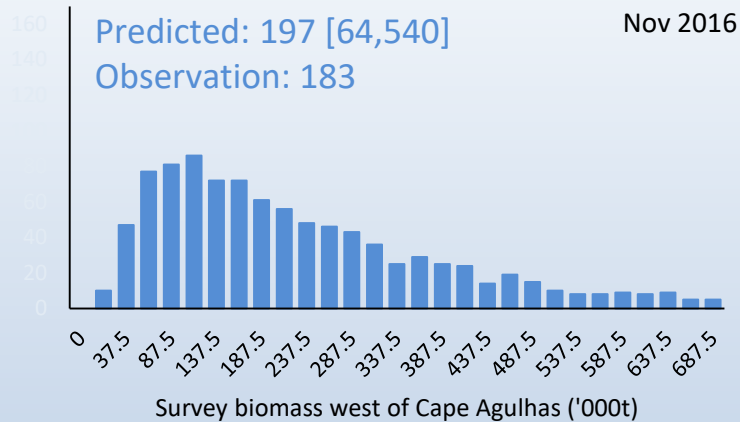
South Component Spawner Biomass



West Component Spawner Biomass

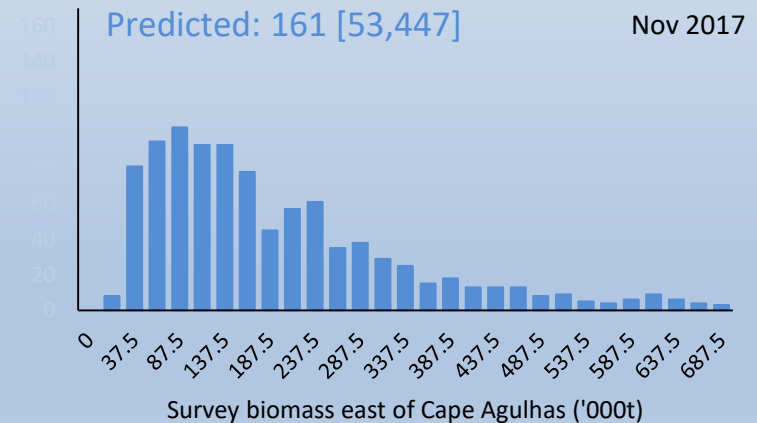
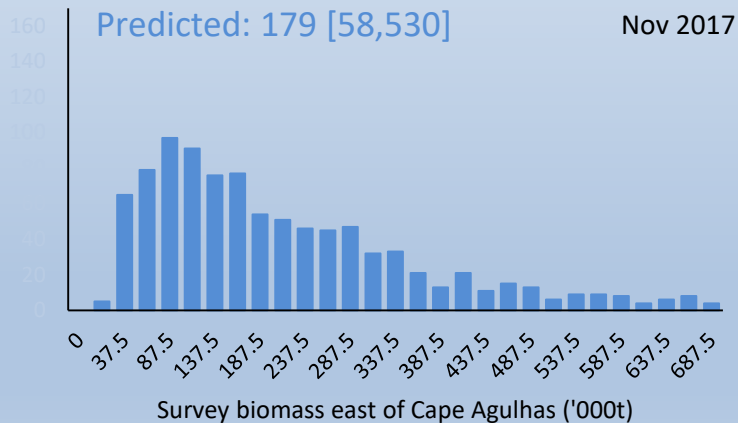
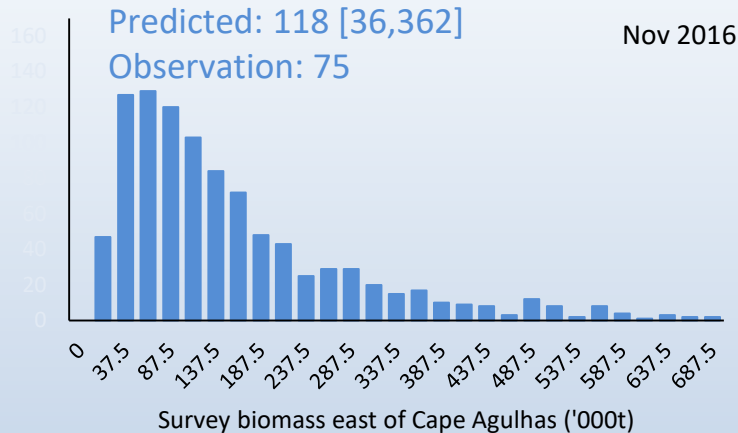


Survey Biomass West of Cape Agulhas



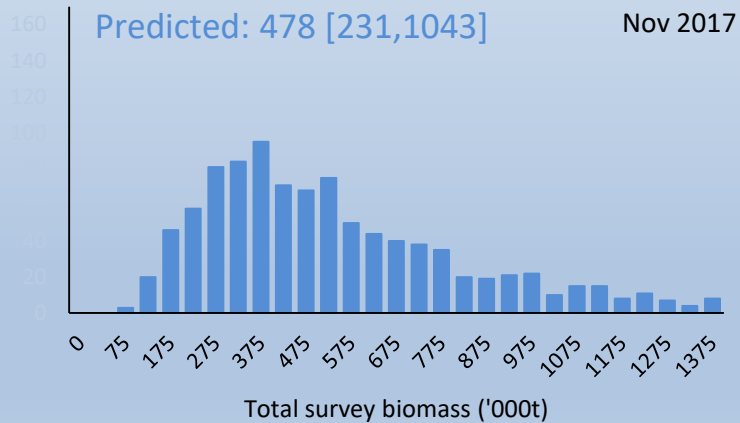
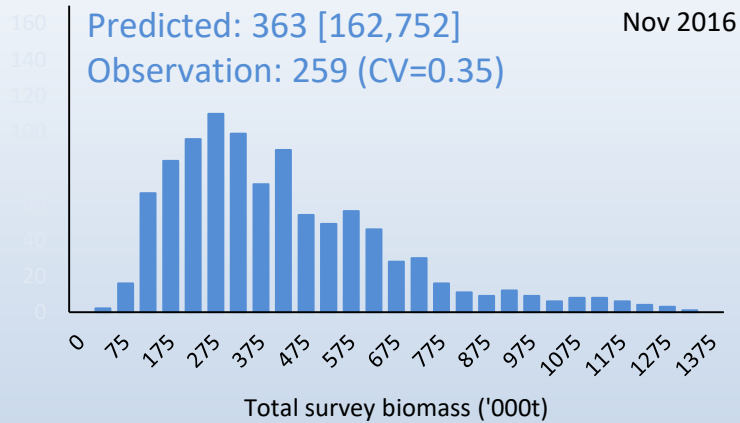
May 2017 survey estimate : 1.156 billion

Survey Biomass East of Cape Agulhas



May 2017 survey estimate : 1.156 billion

Total Survey Biomass



Simulated short term impact of directed sardine catches during 2018

$B_{\text{west}}^{\text{sp}}(y)/B_{\text{west}}^{\text{sp}}(2036, F=0)$						
	2015	2016	2017	2018 (F=0)	2018 (OMP-14)	OMP-14 : F=0
10%ile	0.31	0.16	0.18	0.20	0.17	0.85
20%ile	0.49	0.25	0.27	0.35	0.29	0.83
30%ile	0.60	0.33	0.37	0.49	0.42	0.86
40%ile	0.78	0.42	0.47	0.63	0.54	0.86
median	0.96	0.54	0.60	0.80	0.69	0.87

Probability ($B_{\text{west}}^{\text{sp}}(y) < B_{\text{west}}^{\text{sp}}(2007)$)	
2016	0.25
2017	0.22
2018 (F=0)	0.14
2018 (OMP-14)	0.19

2018 Total Directed Sardine Catches

