

TABs in OMP-17

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Introduction

This document considers the available historical data to inform on any changes to the sardine and anchovy TABs that will form part of OMP-17. The more substantial ≤ 14 cm sardine bycatch with anchovy directed fishing is considered in detail in de Moor (2017).

Small sardine bycatch in the round herring fishery

This historical ≤ 14 cm sardine bycatch with round herring is listed in Table 1. The historical maximum was 653t in 2011, and thus the TAB will remain at 1000t for OMP-17, as it was for OMP-14. Simulations will assume this 1000t is taken in all future years.

Big sardine bycatch in the round herring and anchovy fishery

This historical > 14 cm sardine bycatch with round herring and anchovy is listed in Table 1. The historical maximum was 7700t in 1997, with the maximum over the past 10 years being 5011t in 2016. The TAB will remain at 7000t for OMP-17, as it was for OMP-14. During simulation testing, this full TAB is not always assumed caught. The > 14 cm sardine bycatch with round herring and anchovy will drawn randomly from the historical bycatches (Figure 1).

Small sardine bycatch in the directed sardine fishery

The ≤ 14 cm sardine TAB with directed > 14 cm sardine TAC is set as a proportion of the directed sardine TAC and thus varies between years. Table 2 lists the historical ratio of ≤ 14 cm : > 14 cm sardine in the directed sardine fishery. The control parameter to set this TAB as a proportion of the TAC will remain at 7% (as per OMP-14) for a single-area TAC. For a two-area TAC the control parameter will be 7% for west of Cape Agulhas and 1% for south of Cape Agulhas. During simulation testing, this full TAB is not always assumed caught. The ≤ 14 cm sardine bycatch with directed > 14 cm sardine will be simulated to be a proportion of the TAC, where the proportion is drawn randomly from the historical ratios (Figure 2).

Anchovy bycatch by sardine only right holders

The historical anchovy bycatch by sardine only right holders is listed in Table 3. The TAB will remain at 500t for OMP-17. Simulations will assume this 500t is taken in all future years.

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References

de Moor CL. 2017. Draft simulation testing framework to be used during the development of OMP-17. DAFF: Fisheries Branch document FISHERIES/2017/FEB/SWG-PEL/04.

Table 1. Sardine bycatch with round herring, in tons. The grey cells are data provided from a different source (J. van der Westhuizen) and are thus not used for resampling (see Figure 1).

Year	≤14cm sardine bycatch (vdW data)	>14cm sardine bycatch with round herring only (vdW and deG data)	>14cm sardine bycatch with anchovy only (deG data)	>14cm sardine bycatch with round herring and anchovy (deG data)
1987	4.01	1783		
1988	1.07	1498		
1989	106.33	1663		
1990	61.69	786		
1991	37.12	1910		
1992	18.51	1392		
1993	0.57	2961		
1994	756.36	3352		
1995	3.96	5417		
1996	293.76	4387		
1997	313.48	7719		
1998	93.54	4860		
1999	469.76	3920		
2000	0.00	2095		
2001	0.00	1814	170	1984
2002	0.01	755	0	755
2003	562.97	2602	688	3290
2004	31.54	1142	182	1324
2005	142.43	366	176	366
2006	59.00	648	289	937
2007	25.50	429	360	788
2008	0.00	714	171	885
2009	43.18	1836	543	2380
2010	15.25	4013	279	4291
2011	653.93	3802	807	4609
2012	0.22	2861	831	3692
2013	96.37	287	292	579
2014	55.97	656	1598	2254
2015	74.86	308	1676	1984
2016	286.47	1698	3313	5011
Avg (all years)	140.26	1498.7	710.9	2195.6
Avg (06-16)	119.16	1660.4	987.0	2647.3

Table 2. The proportion of ≤ 14 cm sardine bycatch to >14 cm sardine in the directed sardine fishery, based on data from J. van der Westhuizen.

Year	Full coast	West of Cape Agulhas	South of Cape Agulhas
1987	0.009	0.008	
1988	0.016	0.016	
1989	0.016	0.017	0.002
1990	0.005	0.004	0.000
1991	0.010	0.010	0.001
1992	0.102	0.106	0.000
1993	0.066	0.068	0.000
1994	0.037	0.038	0.000
1995	0.124	0.127	0.000
1996	0.017	0.018	0.000
1997	0.018	0.018	0.000
1998	0.011	0.011	0.000
1999	0.001	0.001	0.000
2000	0.005	0.005	0.000
2001	0.007	0.008	0.000
2002	0.016	0.018	0.000
2003	0.008	0.010	0.000
2004	0.002	0.002	0.001
2005	0.000	0.001	0.000
2006	0.003	0.007	0.000
2007	0.000	0.001	0.000
2008	0.000	0.000	0.000
2009	0.001	0.002	0.000
2010	0.032	0.038	0.010
2011	0.060	0.084	0.000
2012	0.000	0.000	0.000
2013	0.000	0.000	0.000
2014	0.000	0.000	0.000
2015	0.000	0.000	0.000

Table 3. Anchovy bycatch by sardine only right holders, in tons, based on data from J. De Goede.

Year	Anchovy bycatch
2006	180
2007	239
2008	30
2009	17
2010	23
2011	19
2012	15
2013	39
2014	35
2015	75

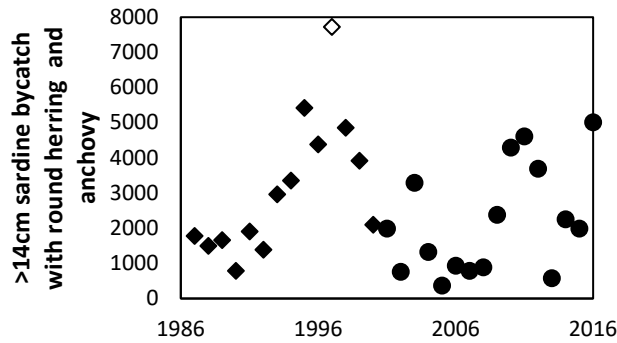


Figure 1. The historical >14cm sardine bycatch with round herring and anchovy. The open diamond indicates a historical bycatch above the TAB; this is set at the maximum value (of 7000t) in the distribution from which future samples are made. The circles are data from Johan de Goede and the diamonds are data from Jan van der Westhuizen.

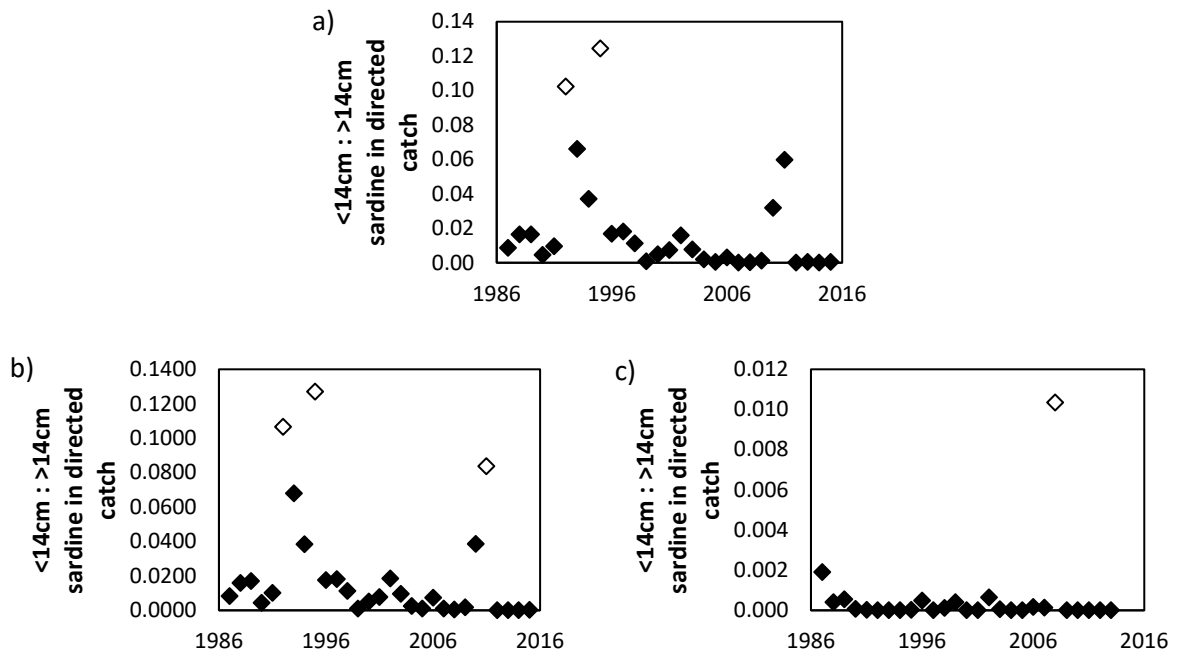


Figure 2. The historical ratio of ≤ 14 cm sardine to > 14 cm sardine in the directed sardine fishery for a) all catch, b) catch west of Cape Agulhas and c) catch south of Cape Agulhas. The open diamonds indicate historical ratios above the ratio used to set the ≤ 14 cm sardine TAB with directed > 14 cm sardine TAC; these are set at the maximum values (of 7% for a single-area directed sardine TAC and the west-area TAC and 1% for the south-area TAC) in the distribution from which future samples are made.