

Considering the historical sardine bycatch with anchovy directed fishing

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Historical sardine bycatch ratios are considered to see if they could inform the final 2020 sardine TAB with directed anchovy fishing.

Small sardine bycatch with anchovy directed fishing has ranged from 1-16% of the annual anchovy catch between 2000 and 2019, with 50% of years ranging between 2 and 6% (Figure 1 from data provided by J de Goede).

Figure 2 considers if there is a close relationship between the annual bycatch ratio and either the sardine recruitment (de Moor 2020a) or the ratio of sardine:anchovy recruitment (de Moor 2020a,b) at the beginning of the year (Nov of the previous year), while Figure 3 considers if there is a close relationship between the annual bycatch ratio and either the sardine recruitment or the ratio of sardine:anchovy recruitment at the time of the survey. None of these comparisons suggest the ability to reliably predict the annual sardine bycatch ratio based on sardine recruitment or sardine:anchovy recruitment in November or at the time of the survey.

References

- de Moor CL. 2020a. Baseline assessment of the South African sardine resource using data from 1984-2019. DFFE: Branch Fisheries Document FISHERIES/2020/APR/SWG-PEL/30.
- de Moor CL. 2020b. The South African anchovy assessment with annual maturity ogives. DFFE: Branch Fisheries Document FISHERIES/2020/JUL/SWG-PEL/51.

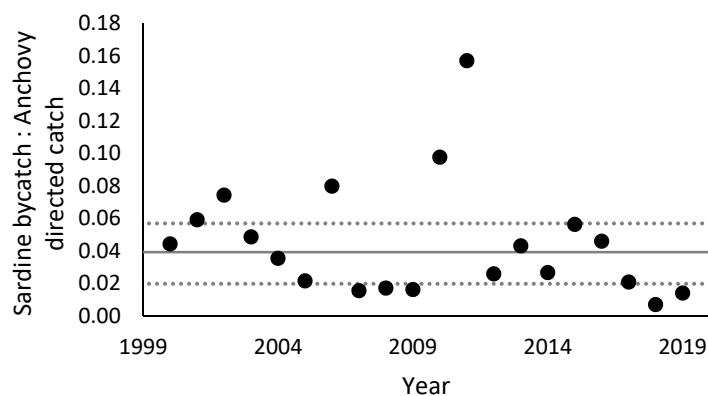


Figure 1. The historical ratio (in biomass) of sardine bycatch to directed anchovy catches.

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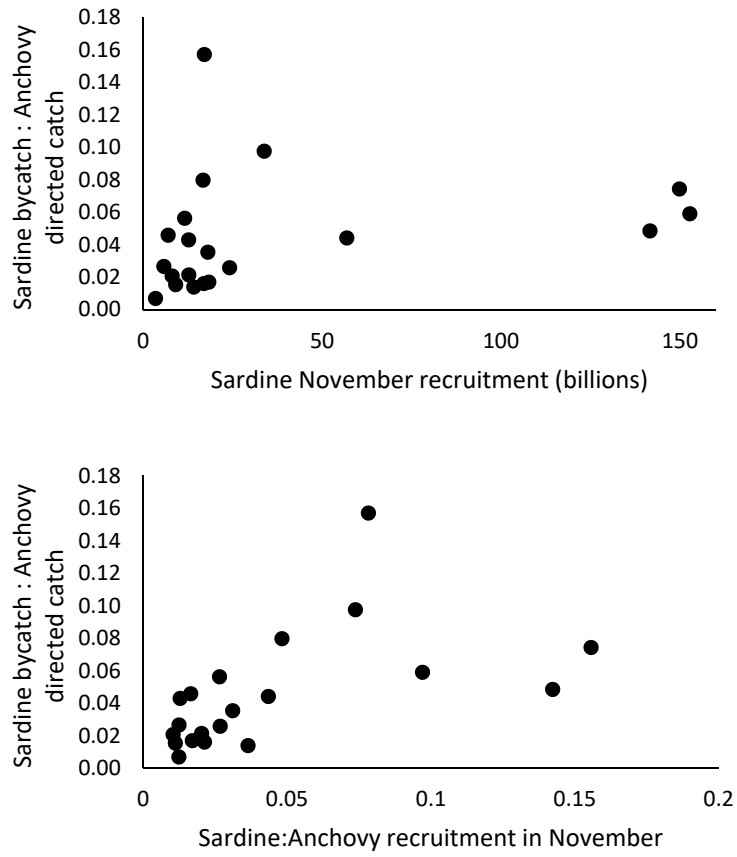


Figure 2. The historical ratio (in biomass) of sardine bycatch to directed anchovy catches plotted against the sardine recruitment in the previous November and the ratio (in numbers) of sardine:anchovy recruitment in the previous November.

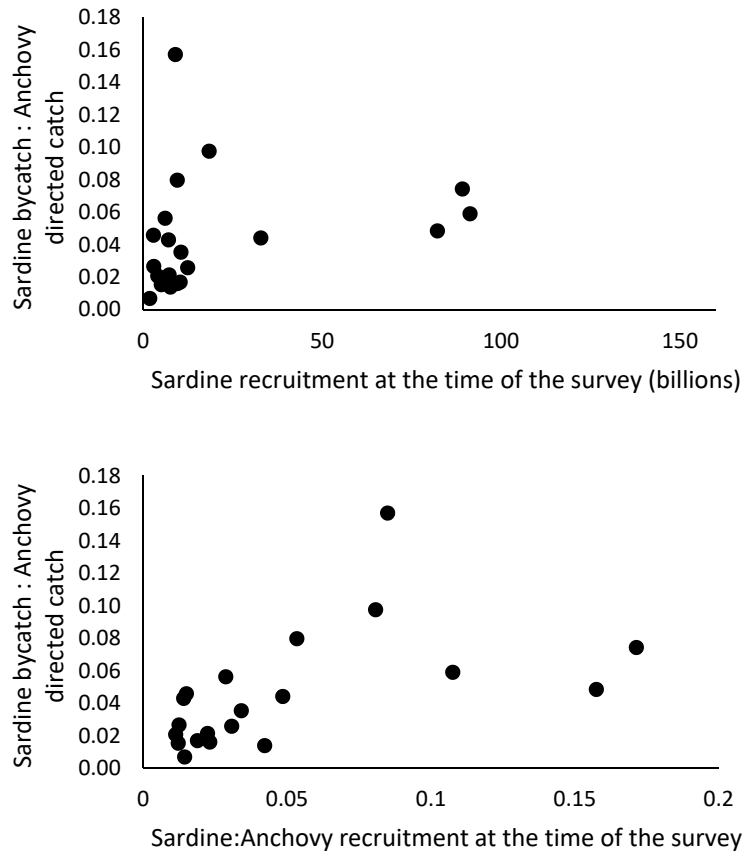


Figure 3. The historical ratio (in biomass) of sardine bycatch to directed anchovy catches plotted against the sardine recruitment at the time of the survey and the ratio (in numbers) of sardine:anchovy recruitment at the time of the survey.