Penguin/pelagic catch trade-off

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This document is a brief summary comparison of trade-offs between penguin abundance in 2018 and projected pelagic catches over the next 20 years relative to OMP-08 in anchovy and sardine catches (median values) under the two alternative penguin-related Exceptional Circumstances rules (see documents MCM-2008-SWG-PEL-28, MCM-2008-SWG-PEL-29 and MCM-2008-SWG-PEL-30 for background).

Fig.1 shows the predicted change in total penguin numbers for each island under each catch scenario relative to a no-catch scenario. The highest average catches correspond to the current OMP-08 projections, with Alternative 1 (70% rule) and Alternative 2 (20%) corresponding to successively lower catches. The Figures suggest that appreciable benefits to penguins are only achieved for very sizeable changes in pelagic catch.

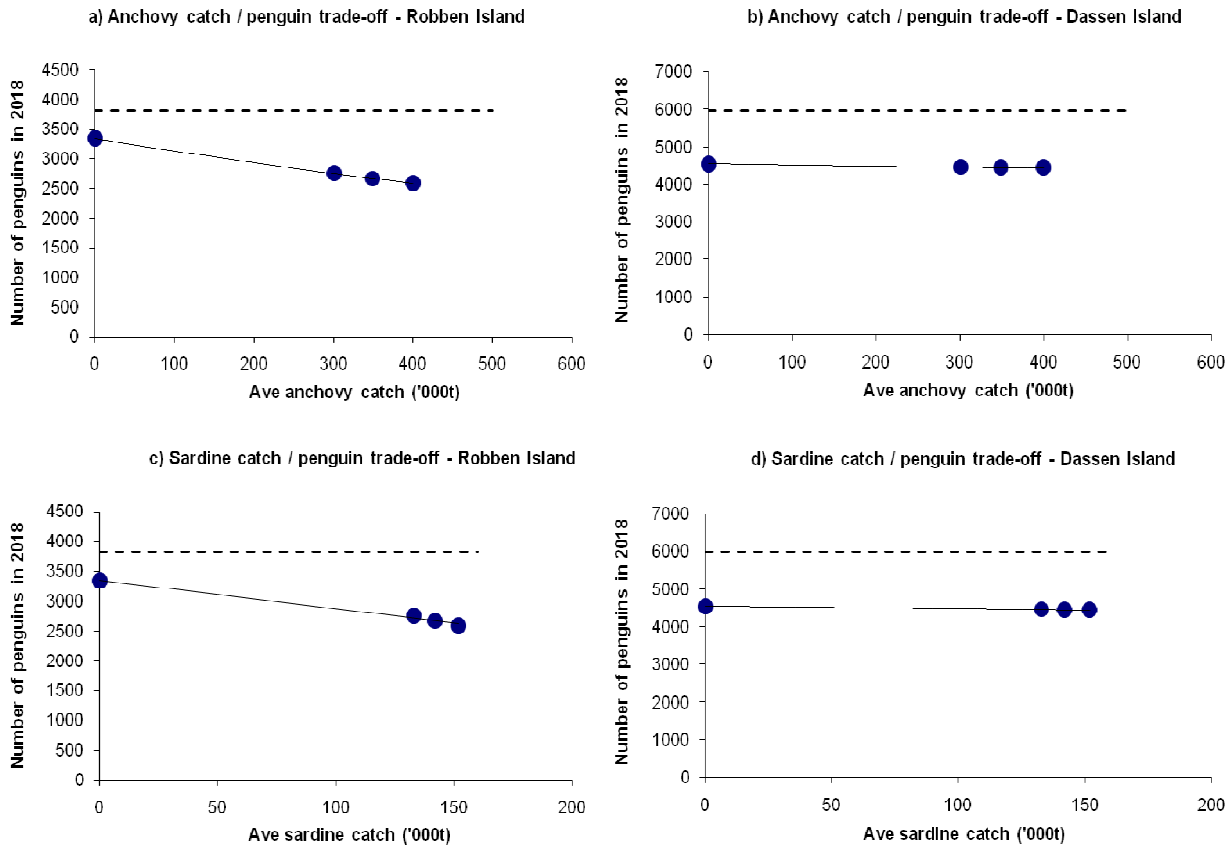

Fig. 1: Plots of the base-case model-predicted median penguin numbers in 2018 plotted as a function of a range of anchovy (a-b) and sardine (c-d) catches (median values) averaged over 2008-2027. The dashed lines indicate the 2008 penguin population sizes for Robben Island (a,c) and Dassen (b,d) Islands, as calculated by the model. This example is based on using the 2002-2006 sample of biomass proportions to compute future anchovy and sardine abundance in the Cape Point to Cape Columbine area, which includes Robben and Dassen Islands.