

Proposed rules to determine inputs to the OMP should there be no hydro-acoustic survey result in November 2010 or May 2011

de Moor, C.L. ^{*} Butterworth, D.S. [#] and Coetzee J.C.

Correspondence email: carryn.demoor@uct.ac.za

Estimates of sardine and anchovy resource abundance from hydro-acoustic surveys carried out in November and May each year form the key inputs into the OMP-08 formulae (de Moor and Butterworth 2008). OMP-08 is used to calculate the recommended annual directed sardine and anchovy TACs and sardine TAB. The Pelagic Scientific Working Group has recognised the need to agree on a “back-up plan” to implement in the unfortunate event that either the survey does not take place, or the survey does not achieve sufficient coverage to allow for a reliable estimate to be computed (DEAT 2009). Following discussions at the Pelagic Scientific Working Group on 11th August 2010, the following rules are proposed for adoption by the Pelagic Scientific Working Group to be implemented in the event of no hydro-acoustic survey result being available for November 2010 or May 2011.

November 2010

In the event of no survey taking place, sufficient time would be available before the TAC recommendations are required to enable updates of the latest sardine and anchovy assessments (results at the posterior mode only). Retrospective runs would be carried out for the past $\pm 6-8$ years to compare the difference between the model predicted November 1+ biomass (including estimated bias) and the survey observation in each final year. The model predicted November 2010 1+ biomass (with estimated bias) will then be reduced by either the maximum difference between these historic model predictions and survey estimates, or one standard error of the projection estimate, whichever is greater. This reduced estimate of 1+ biomass will be used to input into the OMP-08 formulae to calculate the directed sardine and initial anchovy TACs and initial sardine TAB for 2011.

May 2011

The normal season anchovy TAC and sardine TAB will remain unchanged from that recommended at the start of the year. By default there will be no additional season. However, if there is a survey in November 2010, updates to the assessment models, along the lines of those mentioned above, will be attempted. Projections under OMP-08 with the allowance for some additional season TAC/B will be

* MARAM (Marine Resource Assessment and Management Group), Department of Mathematics and Applied Mathematics, University of Cape Town, Rondebosch, 7701, South Africa.

Department of Agriculture, Forestry and Fisheries – Branch Fisheries, Private Bag X2, Rogge Bay, 8012, South Africa.

simulated. [Note that preliminary projections under the assumption of half the maximum additional TAC is taken every year increased the risk to the sardine and anchovy resources substantially.]

OMP-12

Rules on how to determine the inputs to the OMP should there be no hydro-acoustic survey result will be incorporated into the development and testing of OMP-12. The rule for no November survey result will likely be similar to that proposed for November 2010. A separate rule will be developed for May surveys, likely also dependent on updated assessment model results with retrospective comparisons between model predicted and survey estimated May recruitment. A 'penalty' will be needed for either of these cases in the event of two or more consecutive survey results not being available. Further comments on possible rules to incorporate into OMP-12 are welcomed.

References

- DEAT 2009. Research projects to support the sustainable management of small pelagic resources. Unpublished MCM Document MCM/2009/SWG-PEL/08. April 2009. 26pp.
- de Moor CL and Butterworth DS 2008. OMP-08. Unpublished MCM Document MCM/2008/SWG-PEL/23. 15pp