Documents for the MARAM/DAFF International Fisheries Stock Assessment Review Workshop, 2013

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Hake

Background

MARAM IWS/DEC13/Hake/BG1: Rademeyer, R. Excerpt from PhD thesis, Chapters 8-10. 179pp.

MARAM IWS/DEC13/Hake/BG2: Glazer, J. The application of the species splitting algorithm derived from the observer data to the offshore hake catch and effort data. Document FISHERIES/2013/NOV/SWG-DEM/55. 6pp.

MARAM IWS/DEC13/Hake/BG3: OLRAC. 2012. A further update of the hake species splitting model. Paper FISHERIES/2013/FEB/SWG-DEM12. 16pp.

MARAM IWS/DEC13/Hake/BG3add: OLRAC. Addendum – Updated parameter estimates for the hake species split model. Paper FISHERIES/2013/FEB/SWG-DEM12add. 1pp.

MARAM IWS/DEC13/Hake/BG4: OLRAC. 2013. Alternative estimates of the hake species splitting model biased towards observer data. Paper FISHERIES/2013/SEP/SWG-DEM47. 11pp.

MARAM IWS/DEC13/Hake/BG5: Rademeyer, R. The effect of no future surveys on projections under the current OMP for the South African hake resource. Document FISHERIES/2013/SEP/SWG-DEM46. 2pp.

Primary

MARAM IWS/DEC13/Hake/P1: Rademeyer, R.A. and Butterworth, D.S. An update of the catchability calibration factor between the *Africana* with the old and the new gear, with an attempt to estimate its length-dependence. Paper FISHERIES/2013/NOV/SWG-DEM66. 10pp.

MARAM IWS/DEC13/Hake/P2: Rademeyer, R.A. and Butterworth, D.S. 2013 update of the South African Hake reference case assessment. Paper FISHERIES/2013/NOV/SWG-DEM67. 56pp.

MARAM IWS/DEC13/Hake/P3: OLRAC. Use of commercial vessels for hake surveys, calibration versus gear replication for achieving short term continuity. Paper FISHERIES/2013/NOV/SWG-DEM68. 15pp.

MARAM IWS/DEC13/Hake/P4: Butterworth, D.S., Robinson, W.M.L and Ross-Gillespie, A. Evaluating the accuracy of hake abundance index predictions using different smoothing techniques. Document *FISHERIES/2013/NOV/SWG-DEM/69.* 8pp.

MARAM IWS/DEC13/Hake/P5: Rademeyer, R.A. Summary of 2013 hake assessment to provide Operating Models for testing OMP-2015, and of the existing OMP-2011. 2pp.

MARAM IWS/DEC13/Hake/P6: Rademeyer, R.A. and Butterworth, D.S. List of suggested robustness tests for the revised hake OMP. 9pp.

MARAM IWS/DEC13/Hake/P7: Rademeyer, R.A. and Butterworth, D.S. 2013 update of the reference set of the Operating Models used in testing candidate OMPs for the South African hake resource. 7pp.

MARAM IWS/DEC13/Hake/P8: Leslie, R. The standard trawl gear deployed by the FRS *Africana* for demersal swept-area surveys. 3pp.

MARAM IWS/DEC13/Hake/P9: Rademeyer, R.A. An initial attempt at a spatially structured stock assessment for the South African hake resource, including explicit movement. 40pp.

MARAM IWS/DEC13/Hake/P10: SA Hake – Key Issues.

Working Papers

MARAM IWS/DEC13/Hake/WP1: Rademeyer, R.A. Working paper: further work on hake. 17pp.

MARAM IWS/DEC13/Hake/WP2: Rademeyer, R.A. Working paper 2. 5pp.

MARAM IWS/DEC13/Hake/WP3: Somhlaba, S. Proportions of females and catch at length distributions of the hake long line landings in the west coast. 8pp.

MARAM IWS/DEC13/Hake/WP4: Smith, M. Review of the discard information from observer data.

MARAM IWS/DEC13/Hake/WP5: Rademeyer, R.A. Change in the length at which longline paradoxus selectivity starts decreasing (RC=0.85).

Toothfish

Primary

MARAM IWS/DEC13/Toothfish/P1: Brandão, A. and Butterworth, D.S. Obtaining standardised CPUE series for toothfish (*Dissostichus eleginoides*) in the Prince Edward Islands EEZ calibrated to incorporate both longline and trotline data over the period 1997-2013. Paper FISHERIES/2013/OCT/SWG-DEM/57. 15pp.

MARAM IWS/DEC13/Toothfish/P2: Brandão, A. and Butterworth, D.S. Assessment of the toothfish (*Dissostichus eleginoides*) resource in the Prince Edward Islands vicinity to include data from 1997 to 2013. Paper FISHERIES/2013/OCT/SWG-DEM/59. 31pp.

Linefish CPUE standardisation

Primary

MARAM IWS/DEC13/Linefish CPUE/P1: Winker, H., Kerwath, S.E. and Attwood, C.G. Proof of concept for a novel procedure to standardize multispecies catch and effort data. 40pp.

MARAM IWS/DEC13/Linefish CPUE/P2: Winker, H. Revised performance measures for the simulation testing of the DPC standardization. 4pp.

Ecofish

Background

MARAM IWS/DEC13/Ecofish/BG1: Ecofish Work Package 1: Stock Assessment. Report of the Phase 1 Workshop: Compilation of Hake Data for Transboundary Analyses. 11pp.

MARAM IWS/DEC13/Ecofish/BG2: Kristensen, K., Thygesen, U. H., Andersen, K. H and Beyer, J. E. 2013. Estimating spatial-temporal dynamics of size-structured populations. *Can. J. Fish. Aquat. Sci. 99: 1-34.* 34pp

MARAM IWS/DEC13/Ecofish/BG3: Guan, W., Cao, J., Chen, Y. and Cieri, M. 2013. Impacts of population and fishery spatial structures on fishery stock assessments. *Ca. J. Fish. Aquat. Sci.* 70: 1178-1189. 12pp.

MARAM IWS/DEC13/Ecofish/BG4: Ecofish application form Part A: Concept Note. 7pp.

MARAM IWS/DEC13/Ecofish/BG5: Ecofish application form Part B: Full Application Form. 33pp.

MARAM IWS/DEC13/Ecofish/BG6: Agreed report of the joint hake research planning workshop (Namibia and South Africa). May 2006. 23pp.

MARAM IWS/DEC13/Ecofish/BG7: Wilhelm, M.R., Roux, J.P. Moloney, C.L. and Jarre, A. 2013. Data from fur seal scats reveal when Namibian *Merluccius capensis* are hatched and how fast they grow. *ICES Journal of Marine Science.* 10pp.

MARAM IWS/DEC13/Ecofish/BG8: Lipinski, M.R., Stromme, T., von der Heyden, S., Stenevik, E., Grote, B and Kainge, P. Transboundary or not? Hake-related findings of R/V Dr Fridtjof Nansen based research, 2002-2011. A summary.

Primary

MARAM IWS/DEC13/Ecofish/P1: Nielsen, A. and Berg, C.W. In press. Estimation of time-varying selectivity in stock assessments using state-space models. *Fisheries Research.* 11pp.

MARAM IWS/DEC13/Ecofish/P2: Kirchner, C., Kainge, P. and Kathena, J. 2012. Evaluation of the status of the Namibian Hake Resource (*Merluccius spp.*) using statistical catch-at-age analysis. 56pp.

MARAM IWS/DEC13/Ecofish/P3rev: Wieland, K., Durholtz, D. and Fairweather, T. Environmental effects on hake catchability in the South African West Coast survey. 29pp.

MARAM IWS/DEC13/Ecofish/P4: Slides. Köster, F., Hamukuaya, H., Klingelhoeffer, E., Jansen T. and Beyer, J.E. Ecofish progress and future.

MARAM IWS/DEC13/Ecofish/P5: Ecofish WP1 delivarables. 2pp.

MARAM IWS/DEC13/Ecofish/P6: Jansen, T., Kristensen, K., Thygesen, U.H. and Beyer, J.E. Distribution and migration of shallow-water hake (*Merluccius capensis*) in the Benguela Current Large Marine Ecosystem examined with a geostatistical population model – a preview. 27 pp.

MARAM IWS/DEC13/Ecofish/P7: Jansen, T., Kristensen, K., Thygesen, U.H. and Beyer, J.E. Distribution and migration of deep-water hake (*Merluccius paradoxus*) in the Benguela Current Large Marine Ecosystem examined with a geostatistical population model – a preview. 25pp.

MARAM IWS/DEC13/Ecofish/P8: Wilhelm, M., Paulus, S., Erasmus, V., Kashava, S. and Tutjavi, V. Length-frequency analysis and age validation analyses on monthly commercial and annual research survey samples of *M. capensis* in Namibia confirm fast growth rates and biannual/multiannual otolith zone formation. 16pp.

MARAM IWS/DEC13/Ecofish/P9: Matthee, C., Henriques, R., du Toit, N., von der Heyden, S. Report on hake genetics. 10pp.

MARAM IWS/DEC13/Ecofish/P10: Ross-Gillespie, A. and Butterworth, D.S. Incorporating cannibalism and inter-species predation effects into the hake assessment model: Methods and some preliminary results.

MARAM IWS/DEC13/Ecofish/P11 slide: Gear Intercalibration à la GeoPOP. 1pp.

MARAM IWS/DEC13/Ecofish/P12: Covering first part of EcoFish Hake Stock Assessment Phase II Workshop. 2pp.

Sardine

Background

MARAM IWS/DEC13/Sardine/BG1: de Moor, C.L. and Butterworth, D.S. Assessment of the South African Sardine resource using data from 1984-2011, with some results for a single stock hypothesis. Paper FISHERIES/2012/SEP/SWG-PEL/48. 36pp.

MARAM IWS/DEC13/Sardine/BG2: de Moor, C.L. and Butterworth, D.S. The simulation testing framework used during the development of OMP-13. Paper FISHERIES/2013/OCT/SWG-PEL/26. 27pp.

MARAM IWS/DEC13/Sardine/ BG3: de Moor, C.L., Butterworth, D.S. and J.C. Coetzee. Proposals to split sardine catch west and east of Cape Agulhas. Paper FISHERIES/2013/SEP/SWG-PEL/24. 8pp.

MARAM IWS/DEC13/Sardine/ BG4: de Moor, C.L. and Butterworth, D.S. Interim OMP-13 v2. Paper FISHERIES/2013/JUL/SWG-PEL/15. 18pp.

MARAM IWS/DEC13/Sardine/ BG5: de Moor, C.L. and Butterworth, D.S. OMP-13: Initial results assuming a two sardine stock hypothesis. Paper FISHERIES/2013/OCT/SWG-PEL/27. 8pp.

MARAM IWS/DEC13/Sardine/ BG6: van der Lingen, C.D. The biological basis for hypothesizing multiple stocks in South African sardine *Sardinops sagax*. Document MARAM IWS/DEC11/P/OMP/P7. 10pp.

MARAM IWS/DEC13/Sardine/ BG7: Shackleton, L.Y. A comparative study of fossil fish scales from three upwelling regions. *South African Journal of Marine Science. 5(1): 79-84.*

Primary

MARAM IWS/DEC13/Sardine/P1: de Moor, C.L. and Butterworth, D.S. Assessment of the South African sardine resource using data from 1984-2011: results for a two stock hypothesis at the posterior mode. Paper FISHERIES/2013/AUG/SWG-PEL/20. 46pp.

MARAM IWS/DEC13/Sardine/P2: de Moor, C.L. and Butterworth, D.S. An alternative relationship to determine future movement of sardine recruits between the "west" and "south" stocks. Paper FISHERIES/2013/OCT/SWG-PEL/29. 7pp.

MARAM IWS/DEC13/Sardine/P3: de Moor, C.L. and Butterworth, D.S. Draft two-area harvest control rules for OMP=13. Paper FISHERIES/2013/OCT/SWG-PEL/30. 16pp.

MARAM IWS/DEC13/Sardine/P4: de Moor, C.L., Butterworth, D.S. and Robinson, W.M.L. Further results from future projections of a single or two sardine stock operating model, with initial results using a two-area directed sardine TAC. Paper FISHERIES/2013/OCT/SWG-PEL/31. 26pp.

MARAM IWS/DEC13/Sardine/P5: de Moor, C.L. Summary of sardine documents provided for the MARAM International Stock Assessment Workshop. 2pp.

MARAM IWS/DEC13/Sardine/P6: van der Lingen, C.D., Weston, H., Winker, H., Hendricks, M. and Reed, C.C. Spatial patterns in parasite infection support the multi-stock hypothesis for South African sardine *Sardinops sagax*. 7pp.

MARAM IWS/DEC13/Sardine/P7: Butterworth, D.S. On the two-stock sardine model. 7pp.

MARAM IWS/DEC13/Sardine/P8: Sardine Two-Stock Model – Key Issues

MARAM IWS/DEC13/Sardine/P9: de Moor, C.L., Butterworth, D.S., and Coetzee, J.C. Report back on previous recommendations by the International Review Panel. 11pp

Working Papers

MARAM IWS/DEC13/Sardine/WP1: de Moor, C.L. Further projections using the environmental movement scenario. 2pp.

MARAM IWS/DEC13/Sardine/WP2rev: de Moor, C.L. Sardine two-stock assessment excluding survey estimates of recruitment east of Cape Agulhas. 4pp.

MARAM IWS/DEC13/Sardine/WP3: de Moor, C.L. Sardine two stock assessment excluding prior on "south" stock recruitment residuals. 6pp.

MARAM IWS/DEC13/Sardine/WP4: de Moor, C.L. Further projections using the environmental movement scenario and a random movement scenario.

Slide shows

MARAM IWS/DEC13/Sardine/P1. Slide show. de Moor, C.L. and Butterworth, D.S. Sardine two-stick hypothesis: Results at the posterior mode. Slide show for paper FISHERIES/2013/AUG/SWG-PEL/20.

MARAM IWS/DEC13/Sardine/P2. Slide show. de Moor, C.L. and Butterworth, D.S. An alternative sardine recruit movement model. Slide show for paper FISHERIES/2013/OCT/SWG-PEL/29.

MARAM IWS/DEC13/Sardine/P3. Slide show. de Moor, C.L. and Butterworth, D.S. Draft two-area harvest control rules for OMP=13. Slide show for paper FISHERIES/2013/OCT/SWG-PEL/30.

MARAM IWS/DEC13/Sardine/P4. Slide show. de Moor, C.L., Butterworth, D.S. and Robinson, W.M.L. Initial results using a two-area directed sardine TAC. Slide show for paper FISHERIES/2013/OCT/SWG-PEL/31.

Miscellaneous

Background

Primary

MARAM IWS/DEC13/Misc/P1: Kristensen, K., Nielsen, A. and Berg, C.W. 2013. A comparison between ADMB and TMB. Powerpoint presentation. 11 slides.

MARAM IWS/DEC13/Misc/P2: Winker, H., Durholtz, D. and Rademeyer, R.A. Report on progress on recommendations by the international review panel report for the 2012 International Fisheries Stock Assessment Workshop. 7pp.

MARAM IWS/DEC13/Misc/P3: MARAM group. Points for consideration in discussion of convergence problems encountered in the use of ADMB. 1pp.