

HAKE OMP ANALYSES: A SUGGESTED WAY FORWARD

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INTRODUCTION

At this stage the Demersal Working Group has before it (see D:H:42(rev)) results of OMP options which involve a fixed catch reduction for a short period of time, followed by application of an “empirical” decision rule based on trends in indices of abundance from CPUE and surveys. The baseline OMP involves a fixed reduction of 8000 tons per year for two years, before the decision rule is brought into play, and an inter-annual TAC variation constraint of 5% constitutes part of that rule. Results are presented for three variants of the OMP, reflecting trade-offs from greater catches to lesser depletion risk to the *M. paradoxus* resource, which are labeled i), ii) and iii), with ii) corresponding to the baseline. These are henceforth termed “trade-off options i) - iii)”. Results are also provided for other variants of ii), which change either the extent of the initial fixed reduction or of the subsequent constraint on inter-annual TAC variation. These candidate OMPs have been tested against reference set scenarios C1-C3, for all of which the recent commercial catch split between *M. capensis* and *M. paradoxus* is assumed to be unbiased. Results of a number of robustness tests for the baseline OMP (“OMP1ii”) have also been separately tabled.

SUGGESTED WAY FORWARD

What follows is a suggested process for consideration of these results in an orderly way, to lead eventually to a recommendation. This suggestion assumes:

1. a DWG meeting on Friday 4 November;
2. a wider industry consultation meeting on Wednesday 9 November;
3. a subsequent DWG meeting to finalise a recommendation to MCM management before 15 November.

I) *Catch vs Risk Trade-off*

The 4 Nov DWG meeting should select one of the i) – iii) trade-off options to take forward. Option ii) is proposed.

II) Initial Reduction Quantum and Subsequent TAC Change Constraint

The 4 Nov DWG meeting should choose its preferred option based on the alternatives reported, and also specify whether results for further alternatives should be computed.

Further computations would be for the variant selected for the trade-off under I), and would all be tuned to give the same lower 5%-ile for *M. paradoxus* depletion after 20 years.

Results of these computations (together with baseline-only results for the trade-off options not chosen under I)) should be presented to the wider industry consultation on 9 Nov, which would be requested to indicate a preference amongst the options tabled.

III) 2006 TAC Recommendation

At the subsequent DWG meeting before 15 Nov, taking cognizance of the views expressed at the 9 Nov consultation meeting, a TAC for 2006 would be agreed for recommendation to MCM management.

IV) OMP Finalisation

By the end of February 2006, based on existing Operating Models and their conditioning, and in the light of further analyses and their consideration, the following aspects of the OMP would be finalized:

- The decision rule, which might be a variant of the empirical rule currently tabled, or a model (e.g. Fox)-based approach if this can be shown to exhibit better performance than the empirical-rule based approach, to apply from 2008 after the (likely) two years of fixed reduction.
- OMP2* (see D:H:42(rev), Fig. 1b), which will be the variant to OMP1 as finalized which will replace OMP1 from 2009 either if the industry fails to collect adequate direct samples from the commercial catch by offshore trawlers to estimate its species-split reliably, or this estimated split turns out to differ non-trivially from the assumption for recent years in reference set scenarios C1-C3. OMP2* will include a control parameter related to this estimated split proportion, and will be tuned to result in the same lower 5%ile for *M. paradoxus* depletion as OMP1.
- An OMP review and possible revision process to replace OMP1/OMP2* (as applicable), likely required in time for application to provide the 2010 hake TAC recommendation.
- Procedures for under which this review might be brought forward (see draft in WG/10/05/D:H:41).

V) Further Work towards Possible Early OMP Review

Over and above addressing the pertinent matters specified in D:H:41 (as finalized in due course), particular attention will be given to the following:

- Updating Operating Models given the results from the direct sampling of the species-split of the offshore trawl catch by the industry.
- Seeking alternative models which might reflect a lower current depletion of the *M. capensis* resource than do the present Operating Models (this could include, for example, consideration of models taking explicit account of hake cannibalism and intra-species predation, and/or of possible sharing of stocks with Namibia).
- Investigation of OMP options which envisage management action to impact the species-split of the offshore trawler catch by imposing some depth-related restrictions on fishing (cf: OMPa vs OMPb of D:H:37); this might include direct experiments with industry vessels to ascertain the extent to which possible limitations of this nature might be able to achieve their desired effect.

REFERENCES

- Butterworth, D.S. 2005. Draft Proposed Procedures for Deviating from the Hake OMP Output for the Recommendation of a TAC, and for Initiating an OMP Review. Marine and Coastal Management document WG/10/05/D:H:41. 7 pp.
- Rademeyer, R.A., Plagányi, É.E., and D.S. Butterworth. 2005. Further Evaluations of Candidate OMPs for the South African Hake Resource, Including Consideration of Other Management Options. Marine and Coastal Management document WG/10/05/D:H:37. 15 pp.
- Rademeyer, R.A., Plagányi, É.E., and D.S. Butterworth. 2005. Yet Further Evaluations of Candidate OMPs for the South African Hake Resource, Including Consideration of Other Management Options. Marine and Coastal Management document WG/10/05/D:H:42(Rev). 21 pp.