

SC/M17/ForInfo06 Rev1

2008 SC report extract

IWC



INTERNATIONAL
WHALING COMMISSION

control program. The intersessional Working Group had not yet reviewed the question of whether additional trials might be required to consider environmental degradation in conjunction with revisions of the *CLA*. The Committee **agrees** that this work need not be conducted until the review of *MSYR* has been completed; the matter will be added to the agenda of the intersessional group established under Item 5.2 (R7).

6. RMP – PREPARATIONS FOR IMPLEMENTATION

6.1 Western North Pacific Bryde's whales

6.1.1 Complete Implementation of western North Pacific Bryde's whales

6.1.1.1 REVIEW OF INTERSESSIONAL WORKSHOP REPORT (SC/59/REP2)

The primary objective for the Workshop was to review the results of the final trials and develop recommendations for consideration by the full Committee on: *Management Areas*; RMP variants (e.g. catch-cascading, catch-capping); associated operational constraints (e.g. temporal restrictions); suggestions for future research (either within or outside whaling operations) to narrow the range of plausible hypotheses/eliminate some hypotheses; and 'less conservative' variants(s) with their associated required research programmes and associated duration. The four RMP variants considered during the Workshop (and their associated *Management Area* specifications) were:

- (1) variant 1: Sub-areas 1W, 1E and 2 are *Small Areas*;
- (2) variant 2: Sub-area 2 is taken to be a *Small Area* and the complete sub-area 1 is treated as a *Small Area*;
- (3) variant 3: Sub-area 2 is taken as a *Small Area* and sub-area 1 is a *Combination Area*. Sub-areas 1W and 1E are *Small Areas*, with catch-cascading applied; and
- (4) variant 4: Sub-areas 1 and 2 (combined) are a *Combination Area*, and sub-areas 1W, 1E and 2 are *Small Areas*, with catch-cascading applied.

The workshop Chair, Donovan, noted that despite the considerable amount of work undertaken intersessionally to develop and check code, complete the conditioning work and then run the trials specified at the 2006 Annual Meeting, much work remained to be completed in Yokohama. He paid tribute to the work of Punt and Allison in enabling the Workshop to complete its agenda successfully.

The 'Requirements and Guidelines for *Implementations*' (IWC, 2005c) provide advice on the appropriate procedure to review the results of *ISTs* apart from agreed threshold levels for 'acceptable', 'borderline' and 'unacceptable' performance. Pending the Committee's final decision on threshold levels, the Workshop had agreed to follow the draft values developed last year, with an extra degree of care (see Item 5.1).

The Workshop had also considered possible changes to the trial specifications. A full discussion of these issues is included in item 4.1 of its report (SC/59/Rep2). The agreed final list of trials is given as Table 1. The final trial specifications are provided in Annex D, Appendix 4. The Workshop had received a fully revised set of conditioning results and agreed that the diagnostic plots showed the conditioning to be satisfactory.

The Workshop noted that in accordance with the guidelines, variants which performed 'acceptably' for most of the trials but 'borderline' for a small number of 'medium' weighted trials, may be classified as 'acceptable without research' depending on the results of a detailed examination of the results for the trials concerned (and the balance of factors/hypotheses within trials). Following such an examination, variants 1, 3 and 4 were classified as 'acceptable without research' by the Workshop. Variant 2 was considered a potential candidate for 'acceptable with research' and trials to investigate this were established.

The Committee **endorses** the recommendations of the Workshop and therefore **agrees** that variants 1, 3 and 4 all performed acceptably from a conservation perspective and **recommends** that these variants could be implemented without a research programme. The Committee also **endorses** the Workshop conclusion that variant 2 was not acceptable but was a possible candidate for the 'with research' option.

The Committee recognised the considerable work that had taken place since the 2006 Annual Meeting and was pleased that the *Implementation* for the western North Pacific Bryde's whale was completed successfully within the two-year timeframe as envisaged in the 'Requirements and Guidelines for *Implementations*' (IWC, 2005c). It thanked Donovan for guiding this *Implementation*, noting that this is the first time that an attempt has been made to apply the 'Requirements and Guidelines' procedure developed in response to the difficulties encountered during the *Implementation* for western North Pacific minke whales. It also thanked Allison and Punt for their substantial work during the process, without which it would not have been possible to complete the *Implementation* on time.

6.1.1.2 CONSIDERATION OF ADDITIONAL TRIALS RELEVANT TO THE VARIANT WITH RESEARCH OPTION

The Committee has previously agreed that a variant can be considered to be 'acceptable with research' if:

- (1) the conservation performance of the use of the variant for ten years, followed, after a five-year phase-in period, by one of the other variants, is 'acceptable without research'; and
- (2) a research programme can be developed which, within a ten-year period, could feasibly address the uncertainties for which the variant performed unacceptably.

The Government of Japan had advised Donovan that it would like to pursue the possibility of classifying variant 2 as 'acceptable with research'. Items 6.1.1.2 and 6.1.1.3 address points (1) and (2) above for variant 2.

SC/59/RMP1 presented the results of trials BR13, BR15 and BR17 for the four variants considered during the second intersessional workshop, along with three additional variants constructed by using variant 2 for the first ten years of the 100-year projection period, after which management reverts, via a five-year phase-in period, to one of variants 1, 3 or 4. The Committee **agrees** that the performance of these additional variants was adequate because their performance for trials BR13, BR15 and BR17 was very similar to those for variants 1, 3 and 4, which had been agreed to be 'acceptable without research'.

Table 2
The *Implementation Simulation Trials* for the western North Pacific Bryde's whales.

Trial No.	Stocks	Sub-stocks	$MSYR_{(mat)}$	Mixing matrix	Process error	Stochastic mixing in 1W/1E	Catch series	Age-dependent mixing?	1W/1E boundary	Comment	Trial weight
BR01	1	No	1	A	Baseline	No	Best	No	165°E	Stock structure hypothesis 1	M
BR02	1	No	4	A	Baseline	No	Best	No	165°E	Stock structure hypothesis 1	H
BR03	2	No	1	B	Baseline	No	Best	No	165°E	Stock structure hypothesis 2	M
BR04	2	No	4	B	Baseline	No	Best	No	165°E	Stock structure hypothesis 2	H
BR05	2	No	1	C	Baseline	No	Best	No	165°E	Stock structure hypothesis 3*	M
BR06	2	No	4	C	Baseline	No	Best	No	165°E	Stock structure hypothesis 3*	H
BR07	2	Yes	1	D	Baseline	No	Best	No	155°E	Stock structure hypothesis 4	M
BR08	2	Yes	4	D	Baseline	No	Best	No	155°E	Stock structure hypothesis 4	M
BR09	2	No	1	B	Baseline	No	Best	Yes	165°E	B + Age-dependent mixing	M
BR10	2	No	4	B	Baseline	No	Best	Yes	165°E	B + Age-dependent mixing	H
BR11	2	Yes	1	D	$\sigma_p = 0.9$	No	Best	No	155°E	D + Additional process error	M
BR12	2	Yes	4	D	$\sigma_p = 0.9$	No	Best	No	155°E	D + Additional process error	M
BR13	2	Yes	1	D	Baseline	Yes	Best	No	155°E	D + Stochastic mixing*	M
BR14	2	Yes	4	D	Baseline	Yes	Best	No	155°E	D + Stochastic mixing*	M
BR15	2	Yes	1	D	Baseline	No	Best	No	160°E	D + Alternative Boundary 1	M
BR16	2	Yes	4	D	Baseline	No	Best	No	160°E	D + Alternative Boundary 1	M
BR17	2	Yes	1	D	Baseline	No	Best	No	165°E	D + Alternative Boundary 2	M
BR18	2	Yes	4	D	Baseline	No	Best	No	165°E	D + Alternative Boundary 2	M
BR19	2	Yes	1	D	Baseline	No	Low	No	155°E	D + Low catch series	M
BR20	2	Yes	4	D	Baseline	No	Low	No	155°E	D + Low catch series	M
BR21	2	Yes	1	D	Baseline	No	High	No	155°E	D + High catch series	M
BR22	2	Yes	4	D	Baseline	No	High	No	155°E	D + High catch series	M
BR23	2	No	1	B	Baseline	No	High	No	165°E	B + High catch series	M
BR24	2	No	4	B	Baseline	No	High	No	165°E	B + High catch series	H
BR25	2	No	1	B	$\sigma_p = 0.9$	No	Best	No	165°E	B + Additional process error	M
BR26	2	No	4	B	$\sigma_p = 0.9$	No	Best	No	165°E	B + Additional process error	H
BR27	2	No	1	B	Baseline	No	High	Yes	165°E	B + Age-dep.mixing+high catch	M
BR28	2	No	4	B	Baseline	No	High	Yes	165°E	B + Age-dep.mixing+high catch	H

*With stochastic mixing.

6.1.1.3 CONSIDERATION OF POTENTIAL RESEARCH PROGRAMME TO ACCOMPANY VARIANT WITH RESEARCH

The Committee noted that a research programme associated with an RMP variant that is 'acceptable with research' needs to:

- (1) be feasible;
- (2) be agreed by the Committee;
- (3) address the uncertainties captured in the trials for which the variant performed unacceptably; and
- (4) include measures to allow progress to be evaluated (IWC, 2005c, pp.84-92).

It also noted that it will undertake an annual review of progress and may recommend that catch limits be based on the more conservative variant immediately if: (a) it deems insufficient progress to have been made against the targets; (b) the results show that it will not be possible to meet the original objectives within the timeframe; or (c) the results show that the 'medium' ranking assigned to the trials on which the variant performed 'unacceptably' should remain 'medium' or be a 'high'. A more extensive review will occur at the first *Implementation Review*.

The *Implementation* process envisages consideration being given to appropriate research programmes at an early stage (at the end of the *pre-Implementation* process), but even so, there will be many instances where it is not possible to develop a potentially acceptable proposal at the 'Second Annual Meeting', as is the case for the western North Pacific Bryde's whale. In such circumstances, the Committee will recommend the 'acceptable' variants (if there are any) to the Commission and notify the Commission that the proposers have indicated they will be submitting a research proposal. Until a programme is developed and accepted, catches will be set using the more

conservative variant. It is possible that such catches may be zero, for example if there is no acceptable variant. If a research programme is accepted at a future Annual Meeting, the catch limits will be recalculated using the 'variant with research' at that meeting.

The Committee noted that although the trials on which the performance of variant 2 was 'unacceptable' include several hypotheses, the underlying uncertainty to which variant 2 is not robust is the presence of two sub-stocks in sub-area 1. Any research programme should therefore be focused on this issue. SC/59/PF12 presented the concepts for such a research program related to variant 2.

In discussion of SC/59/PF12, the Committee re-iterated the importance of using a suite of techniques to examine hypotheses related to stock identity, noting that the research programme also needs to be practical. Additional aspects that could be considered for inclusion into this research programme are identified in Annex D, item 3.1.3.

The Committee **agrees** that the ability to review a research programme associated with the adoption of a variant that is 'acceptable with research' will be easier if a standard *pro forma* for the presentation of such proposals is available. Such a *pro forma* was developed (see Annex D, Appendix 5) and the Committee **recommends** that it be attached as an adjunct to the 'Requirements and Guidelines for *Implementations*'. It also **agrees** that the Committee may, at the request of the proposer, establish an advisory group to provide technical assistance during the development of a proposed programme. Individuals on the group may provide advice on whether the proposal fits within the guidelines.

Pastene introduced a revised version of a conceptual outline for a research programme which could be

implemented in conjunction with variant 2, reformatted to follow the *pro forma*. Discussion of this outline was in the context of the extent to which the information provided needed to be expanded for it to be ready for review at the 2008 Annual Meeting. A number of suggestions were raised in discussion; they are detailed in Annex D, item 3.1.3.

6.1.1.4 ABSOLUTE ABUNDANCE ESTIMATES AND CATCHES FOR USE IN THE *CLA*

The Committee noted that the report of the intersessional Workshop included a 'best' and two alternative catch series. It **recommends** that applications of the *CLA* be based on the 'best' catch series.

The Committee noted that estimates of abundance that are to be used in the *CLA* need to be obtained using methods that provide estimates of abundance with 'acceptable bias and precision' (IWC, 1999, p.252) and guidelines regarding both bias and precision are to be found in the annotations to the RMP (IWC, 1999, p.256). It also noted that in order for an abundance estimate to be adopted for use in the *CLA*, it is necessary: (a) for the data to be lodged with the Secretariat no later than six months before the meeting at which they are to be used; (b) for the data analysis and results to be provided to the Secretariat and circulated to the Committee no later than three months before the meeting at which they are to be considered; and (c) for the verification of the data to be audited by the Secretariat (IWC, 2005d, p.94). Allison noted that the data were provided to the Secretariat in 2003, but the audit of the verification has not yet been conducted. Given this, and that the data analysis was not provided to the Secretariat by February 2007, the Committee **agrees** that it is not possible for it to make a recommendation regarding the use of the abundance estimates in SC/59/PFI3 at this year's meeting. It **recommends** that the Secretariat conduct an audit of the verification of the data no later than three months before the next meeting.

The Committee noted that there had been some changes to the procedures specified in the original survey plans (see Annex D, item 3.1.4). It **agrees** that these differences do not preclude use of these data for estimation purposes. The matter did, however, highlight the need for more detailed documentation of survey plans (as well as for data collection and analysis) and for more rigorous review by the Committee of survey implementation to avoid misunderstandings which could give rise to difficulties in considering whether abundance estimates from surveys can be used for input to the *CLA*.

The Committee **stresses** that the survey proposal needs to provide a detailed, and explicit and unambiguous description of the intended protocol and the document on which a decision regarding whether abundance estimates can be used in the *CLA* is to be based should provide an adequate description of the surveys, the data collected and the methods used for data analyses and their results.

The Committee developed a list of the minimum information that it would normally expect to receive when reviewing abundance estimates for use in the *CLA* (see Annex D, Appendix 7), noting that the amount of documentation would be greater for abundance estimates for which $g(0)$ is estimated and which calculate effective search width and mean school using data pooled over survey blocks and/or years. The Committee **recommends** that the 'Requirements and Guidelines for Conducting

Surveys and Analysing data within the Revised Management Scheme' be updated to reflect the material in Annex D, Appendix 7.

The Committee also identified that the documentation in SC/59/PFI3 was lacking in some aspects and that several alternative analyses were needed for it to be able to judge whether the abundance estimates in SC/59/PFI3 were suitable for use in the *CLA*. Specific suggestions in this regard are given in Annex D, Appendix 8.

6.1.2 Recommended action

The Committee **agrees** that if the RMP is implemented variants 1, 3 and 4 can be implemented without an associated research programme. The recommended *Management Areas* for each variant are given in Annex D, table 3. It further **agrees** that variant 2 cannot be implemented except in conjunction with a research programme that the Committee agrees could feasibly show that the trials on which variant 2 performs 'unacceptably' should have been assigned 'low' plausibility. The Committee anticipates being provided with such a proposed research programme and reviewing it at the 2008 Annual Meeting.

6.2 North Atlantic fin whales

6.2.1 New information

SC/59/PFI1 described fin whale photo-identification (photo-ID) data in the North Atlantic Ocean and the Mediterranean Sea that might be useful when evaluating stock structure hypotheses. The Committee **recommends** that an attempt should be made to match the small holdings in the eastern North Atlantic to catalogues in the northwest Atlantic and the Mediterranean, and the results be made available to the Steering Group (see Item 6.2.3) at least two months before the first intersessional Workshop.

6.2.2 Completion of the pre-Implementation assessment

Last year, the Committee concluded that the only outstanding item to be completed before proceeding towards the *Implementation* was development of a list of catches with ancillary information to allow the development of a best and alternative catch series for use in simulation trials. It also recommended that genetic and other analyses be refined and extended to discriminate among existing stock structure hypotheses and to estimate mixing and dispersal rates before the implementation process starts.

Allison reported that she had yet to compile the catches, but that this would be completed within a few months. Vikingsson stated that additional analyses of genetics data for fin whales are being undertaken. The Committee **recommends** that the catch series and the results of the genetic analyses be made available to the Steering Group at least two months before the first intersessional Workshop.

6.2.3 Recommended action

Last year, the Committee recommended that the initiation of the *Implementation* for the North Atlantic fin whales be delayed until 2007 due to the Committee's priorities and workload, in particular the need to complete the North Pacific Bryde's whale *Implementation*. Given that the Bryde's whale *Implementation* is now complete, and the *pre-Implementation assessment* for the North Atlantic fin whales is completed to the extent necessary to be able to specify *ISTs* at the first intersessional Workshop, the Committee **recommends** that the *Implementation* be