Annex Q

Matters related to Item 17: Special Permits

ANNEX Q1

REPORT OF THE SMALL GROUP ESTABLISHED TO REVIEW SC/66A/SP08

Members: Punt (Chair), Butterworth, Cooke, de la Mare, Kitakado, Matsuoka and Palka

SC/66a/SP08 provides additional analyses and information related to:

(a) analytical aspects related to NEWREP-A; and
(b) the research plan for the dedicated sighting survey planned for the 2015/16 austral summer season.

SC/66a/SP08 relates to 11 of the recommendations of the Expert Panel:

(1) Evaluate the level of improvement that might be expected either in the SCAA or in RMP performance by improved precision in biological parameters using simulation studies including updated *Implementation Simulation Trials* (Recommendation 1; Item 2.1.2 of SC/66a/Rep06)[1].

(10) Evaluate the effect on SCAA of assuming 'resting' females are immature females (Recommendation 10; Item 3.4.3.1 of SC/66a/Rep06).

(11) Update SCAA with respect to density-dependence following Punt *et al.* (2014)[2], and stock mixing based on existing data (Recommendation 11; Item 3.4.3.2 of SC/66a/Rep06).

(12) Identify more fully the data to be used to inform the time-varying natural mortality in the SCAA and analyse existing data to determine the feasibility and accuracy of obtaining such estimates (Recommendation 12; Item 3.4.3.2 of SC/66a/Rep06).

(13) Develop metrics to evaluate the benefits of including time varying ASM data in the SCAA (Recommendation 13; Item 3.4.3.2 of SC/66a/Rep06).

(26) Provide a thorough power analysis of sample sizes required to detect change in ASM and follow the other recommendations in this Item (Recommendation 26; Item 4.3.2 of SC/66a/Rep06).

(4) Conduct a comprehensive biopsy sampling feasibility study (Recommendation 4; Item 3.1.5 of SC/66a/Rep06).

(5) Comprehensive telemetry feasibility study (Recommendation 5; Item 3.1.5 of SC/66a/Rep06).

(6) Estimate $g(0)$ for all species (Recommendation 6; Item 3.2.2 of SC/66a/Rep06).

(7) Review survey design and methods taking into account:

(a) analysis of IWC IDCR/SOWER cruises;
(b) spatial modelling developments;
(c) experience of previous multi-disciplinary surveys;
(d) JARPA II review recommendations;
(e) the possibility of focussed surveys on specific issues in some years;
(f) whales within the ice;
(g) updated power analyses of the effects of survey interval and estimation of trend;
(h) work closely with the IWC Scientific Committee before finalising survey approaches; and
(i) ensure that future survey plans submitted to the Scientific Committee follow fully the guidelines for such survey plans, including incorporating proposed track lines (Recommendation 7; Item 3.2.2 of SC/66a/Rep06).

(15) Trial the ship and echosounder system(s) in Japan the well before going to the Antarctic to determine the likely effective acoustic sampling range and potential for detecting krill for multiple frequencies over the required survey depth. Conduct for both annual and broad-scale survey vessels (Recommendation 15; Item 3.6.3 of SC/66a/Rep06).

Table 1 provides a short summary of the progress relative to each of these recommendations addressed in SC/66a/SP08. The Appendix outlines additional technical comments and suggestions relative to the information in SC/66a/SP08 for some of the recommendations. The group evaluated progress against the recommendations of the Panel. It did not evaluate the appropriateness of the recommendations, nor whether the detailed methods proposed in the Panel report to implement those recommendations were appropriate. SC/66a/SP01 and SC/66a/SP02 provide responses by the proponents to the Panel conclusions and recommendations.

[1]The small group took account of the text in the report of the Panel associated with each recommendation. In particular, in relation to recommendation no.1, the Panel report includes:

'The Panel **recommends** that this be done by the proponents using simulation studies. Step one might involve the proponents developing *ISTs* based on existing information (including that developed under JARPA and JARPAII), while step two might be to examine how performance might improve with expected reduction of uncertainty in particular parameters. Such work will also enable improved estimation of sample size'.

[2]Punt, A., Hakamada, T., Bando, T. and Kitakado, T. 2014. Assessment of Antarctic minke whales using statistical catch-at-age analysis (SCAA). *J. Cetacean Res. Manage.* 14: 93-116.

Table 1

Brief summary of the progress relative to each recommendation by the Proponents and the summary view of the group on progress. The recommended timeframes suggested by the Panel were with the proviso of adequate resources being available.

Recom'd*	Progress advised by the Proponents	Summary view
Analytical updates		
1 (within 6 months)	Initial simulation studies have focused on demonstrating the relationship between age-data and recruitment estimation and have shown that reasonably precise ageing data (e.g. earplug) are required in the SCAA. Intention is to use the SCAA models to provide operating models to test alternative management procedures like RMP.	The work follows the intent of the Panel recommendation. It addresses the ability to estimate recruitments by the SCAA, though does not yet evaluate the extent to which the precision of estimates of other parameters such as M and MSYR might be improved given further data. From a management perspective there remains the need for quantification of the extent to which the precision achievable for recruitment estimation will improve management performance. Specifically, it remains to be determined whether a reduction in uncertainty in year-class strength has any appreciable effect on performance statistics for *Implementation Simulation Trials.* The current SCAA does not of itself constitute a full specification of the various operating models/*Implementation Simulation Trials* needed for management procedure testing. In any case, the current SCAA is not suitable as an operating model as currently formulated. In particular, SC/66a/SP08 includes no specifications for how the modelled population is to be used to project and the uncertainties that are to be represented in trials, both historically and in projections. Furthermore, the Committee had concluded that the SCAA estimates of MSYR are not robust.
10 (within 6 months)	The proponents will pursue on completion of work under 1 before the programme starts as soon as the works in 1 completed. This work is regarded as lower priority in comparison with other ones.	No methods nor results presented
11 (within 3 months)	The recommended density dependence was used in the analysis and therefore covered. Stock mixing was partly covered	The SCAA has been updated using the density-dependence function suggested by the Panel – task complete. Results are shown for a different fixed boundary. However, extensions to address the potential utility of genetic data in particular to inform time-dependent mixing and hence improve estimation performance have yet to be addressed.
12 (within 6 months)	The proponents will pursue on completion of work under 1 before the programme starts as soon as the works in 1 completed because this work is regarded as lower priority in comparison with other ones.	No results nor methods presented.
13 (within 3 months)	Analysis of existing data has shown that changes in ASM over time impact on estimates of recruitment rate and mature component of population.	The simulation results suggest (as expected given the formulation of the model) that allowing for time-varying age-at-50%-sexual maturityASM50 has little impact on the majority of the results from the SCAA. The calculated values of mature population and recruitment rate are rescaled by changing the definition of the proportion mature over time. In principle, integrating time-varying ASM50 into the Implementation Simulation Trials might suggest that this is an important factor to understand, but this has yet to be demonstrated.
26 (within 3 months)	Comprehensive simulation was conducted to evaluate statistical power to detect the changes in an ecological indicator, ASM, by postulating a realistic age-structured population dynamic model conditioned on the existing data, mimicking actual sampling design, supposing age-reading errors, and estimating/testing parameters. The simulation has shown that accounting the age-reading error variance and random sampling from a whole population slightly reduced the statistical power but the testing still guarantees a reasonable level statistical power.	The simulations conducted generally follow the approach suggested by the Panel. However, future recruitment was not stochastic, no allowance was made for cohort-specific deviations in ASM, and overdispersion associated with the annual proportion mature by age was not modelled. As expected, more additional variation leads to lower power as does lower effect size. Consequently, sample sizes are likely to be too small. Ideally, there should be a management-related (or biologically-based) justification for the effect sizes.
Research plan for 2015/16		
4 (within 1-2 field seasons)	Feasibility of biopsy sampling on Antarctic minke whales will start in 2015/16 season. Study design provided. Consultations with other National groups were made. Literature review has also been initiated.	The work follows the intent of the Panel's recommendations, though more details are needed. For example, will there be people on board that have expertise in successful minke whale biopsying? The biopsy sampling design that will be used in the future to achieve representative coverage of the entire study area (not first field year which is just a feasibility study) needs to be specified, perhaps by the 2016 SC meeting.
5 (within 2-3 field seasons)	Telemetry feasibility study on Antarctic minke whales will start in 2015/16 season. Study design provided. Consultations with other National groups were made. Literature review has also been initiated.	The work follows the intent of the Panel's recommendation, though more details are needed. For example, with which research groups/individuals will there be collaboration to determine which attachment system will be used and which experts will be on board? The future sampling design of when and where telemetry tags will be applied to address the various questions, assuming it is feasible to attach telemetry tags, will need to be specified, perhaps by the 2016 meeting.
6 (Through-out)	Survey design and protocol with both the IO and closing modes were developed to allow possibility of estimating $g(0)$ for large whales	The work follows the intent of the Panel's recommendation, and the survey design allows for pertinent data to be collected.
7 (within 6 months then throughout)	(1) (a) Review of survey design: done. (b) Yes, covariates of SDM modelling will be taken, covered. (c) Yes, covered. (d) Yes, covered. (e) Not yet covered but to be addressed in future surveys. (f) and (g) Not yet covered. (2) Yes. (3) Yes.	(1) (a) It is not clear if any considerations have been made to modify the data collection methods or track line placement to make future analyses easier. (b) It is not clear which covariates will be considered in the SDM and hence need to be collected during the survey. (c) It is not clear how the CTD and net tows will be used. This type of information would make it possible to evaluate whether the proposed sampling while on the ship is appropriate. See Annex for more detailed comments on this. (d) This item been addressed. (e)-(g) These aspects are not addressed in SC/66a/SP08, but should be addressed within the next year or so. (2) and (3): The work follows the intent of the Panel's recommendation. Papers describing the future survey are being reviewed under IA.
15 (within 1 year)	A detailed plan will be developed.	No plan is presented, but a plan needs to be developed before the survey is conducted. There needs to be documentation on how the EK60 will be calibrated and that someone trained to conduct on such calibration will participate in the surveys.

*Recommendation (and recommended timeframe).

Appendix to Annex Q1: Detailed comments and general advice

Recommendation 1

(a) [If small areas are based on extreme alternatives of possible stock boundaries then sufficient information for this purpose has already been collected in JARPA/JARPA II; possibly drop].
(b) The number of simulations need to be increased.
(c) It was not clear from the information provided how the overdispersion evident in the data (Punt *et al.*, 2014) was handled. In addition, the parameters that were held fixed need to be estimated so that the effects of this additional uncertainty is included in the sample size calculations. Additionally, allowance needs to be made for future time-varying growth, carrying capacity, and distribution. Also, no account was taken of variation in recruitment strength into the future.

Recommendation 26

The Expert Panel suggested that three sources of variation needed to be accounted for: (a) ageing error; (b) variation in age-at-50%-sexual maturity (ASM50) about the trend in the age-at-50%-sexual maturity; and (c) additional variation in the number of mature animals for a given age in a given year above that expected from a binomial maturation process. This third source of uncertainty could be addressed by modelling over-dispersion in binomial generalised linear models (GLMs). The Panel had recommended that a complex and realistic model be developed first, which can then be simplified after fitting to the data. The realistic model should take account of what is known from previous studies about differential migration timing of reproductive classes of Antarctic minke whales. The extent of annual variability in relative migration timing between mature and immature animals, and the predicted effects on sample composition, can be assessed from analyses of JARPA and JARPAII data. The results can be used to estimate the magnitude and structure of the overdispersion.

Recommendation 7c

In regards to the multi-disciplinary aspects there is a trade-off of which type of data will be collected at what time. Hence if, for example CTD data are being used to ground truth ocean models which will be used to export habitat data that will be used in the spatial abundance models and/or ecosystem models, then ocean model experts should be consulted to ascertain what types and amounts of information would be most useful to collect during the surveys. It can then be determined if that will be possible to do during these multi-disciplinary surveys. The same considerations apply for the net samples, i.e. the EK60 analysers need to be consulted to determine what type and amount of net tows will be the most useful to collect.

REFERENCE

Punt, A., Hakamada, T., Bando, T. and Kitakado, T. 2014. Assessment of Antarctic minke whales using statistical catch-at-age analysis (SCAA). *J. Cetacean Res. Manage.* 14: 93-116.

ANNEX Q2

FURTHER COMPARISON OF THE TRAJECTORIES OF SCAA-ESTIMATED CV FOR RECRUITMENT RATES AND RECRUITMENT ESTIMATES

Toshihide Kitakado

The aims of this Annex are to:
(1) provide further information of trajectories of CV for the SCAA recruitment-related estimates based on the various scenarios for the availability of ageing data and its precision; and
(2) provide additional results of 'simulation' reported in SC/66a/SP08 for assessing the extent of improvement in the estimation of recruitment-related quantities provided by SCAA.

Ageing data availability and precision

Results are provided for six scenarios.

(a) Results using data up to 2012 [both abundance and CAA data].
(b) Results using data up to 2012 [both abundance and CAA data, *M*, selectivity, growth parameters are fixed].
(c) Results using data up to 2027 [both abundance without noise and CAA data, M, selectivity, growth parameters are fixed, future sample size equals to 333].
(d) Results using data up to 2027 [only abundance without noise, M, selectivity, growth parameters are fixed, future sample size equals to 0].
(e) (c) with age-reading SD of 4.6.
(f) (c) with twice age-reading SD.

The assumption of extent of the age-reading error SD in (e) comes from the scatter plot (reproduced below as Fig. 1) in Polanowski *et al.* (2014), where ageing was conducted by a DNA methylation method. In Polanowski *et al.* (2014), the estimated age-reading error SD is reported as 2.99 (shown in Fig.1 below), but this seems incorrect because the standard deviation of difference between estimated and true ages for values read off the data plotted in this Fig. is 4.6. Therefore, this number has been used for the calculations for scenario (e). The standard errors assumed for ear plug based age readings – scenarios (c) and (f) – and for methylation based ageing – scenario (e) – are contrasted in Fig. 2.

Figs 3 and 4 compare the CVs estimated for recruitment for these six scenarios. The key comparison is that between scenarios (c) and (e), i.e. between ear-plug and methylation

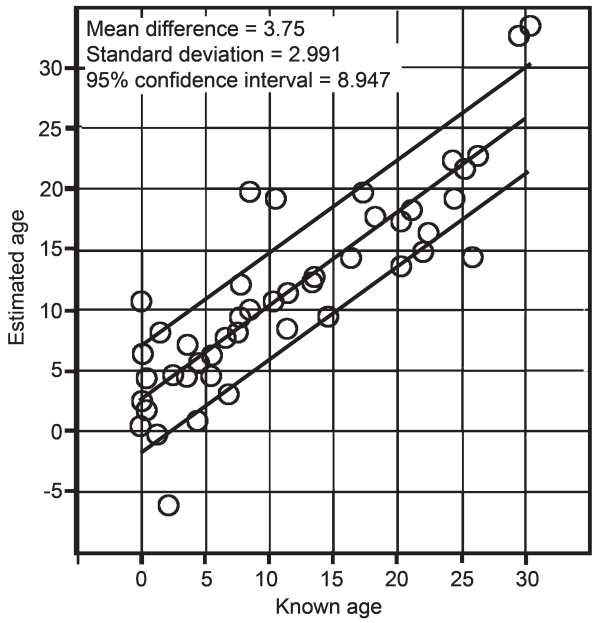

Fig. 1. Estimated ageing performance by DNA methylation (reproduced from Polanowski *et al.*, 2014).

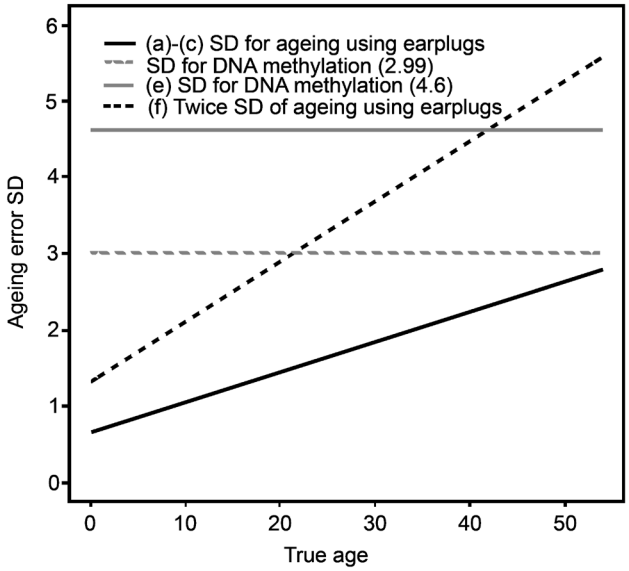

Fig. 2. Comparison of ageing error SD for 'Japanese NEWREP-A reader, estimated by Kitakado *et al.* (2014)' and the 'DNA methylation method' as reported in Polanowski *et al.* (2014) (2.99) and as calculated from the points plotted in their Fig. 1 above (4.6).

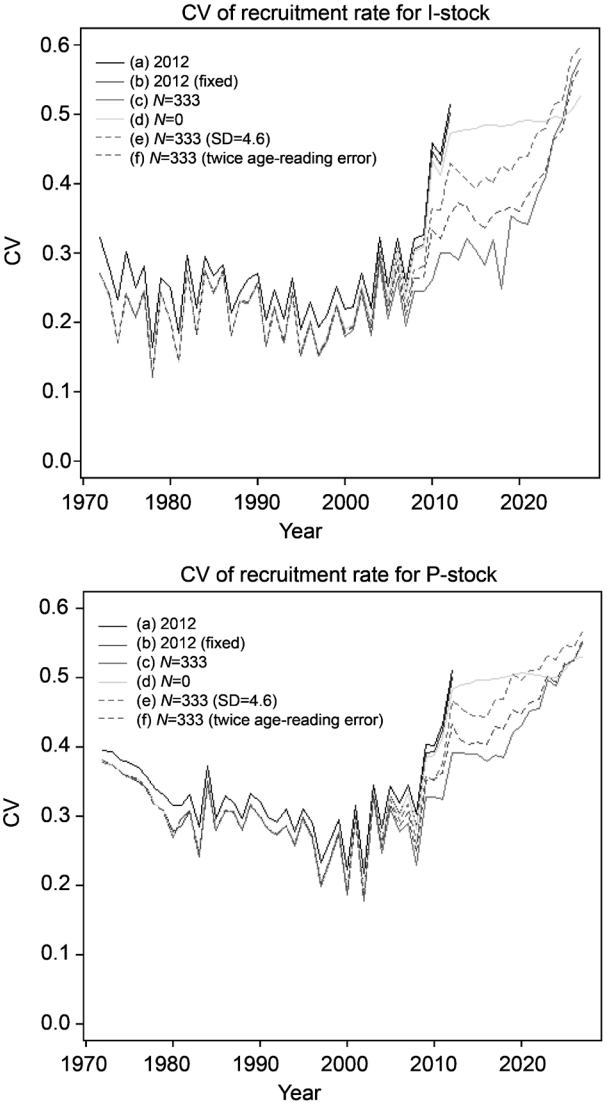

Fig. 3. Comparison of the trajectories of estimated CV for recruitment rates.

based estimates of age. It is very clear that that there is an appreciable difference between the two: the precision of methylation-based recruitments is much worse than that for ear-plug based readings, with the methylation-based results hardly better than those in the absence of any age information at all.

Further simulations

Results reported in SC/66a/SP08 were for a single simulated 15-year forward projection. In Fig. 5 the results for four further simulated projections are added. All five projections show similar trends and values for CVs for estimates of future recruitment, indicating that the results presented in SC/66a/SP08 for recruitment CVs are reasonably robust. Overall these results show that the SCAA has the potential to provide estimates of future minke whale recruitment with reasonably CVs, **provided** that age-reading error is not too large.

REFERENCES

Kitakado, T., Lockyer, C. and Punt, A.E. 2014. A statistical model for quantifying age-reading errors and its application to the Antarctic minke whales. *J. Cetacean Res. Manag.* 13(3): 181-90.

Polanowski, A.M., Robbins, J., Chandler, D. and Jarman, S.N. 2014. Epigenetic estimation of age in humpback whales. *Mol. Ecol. Resour.* 14(5): 976-87.

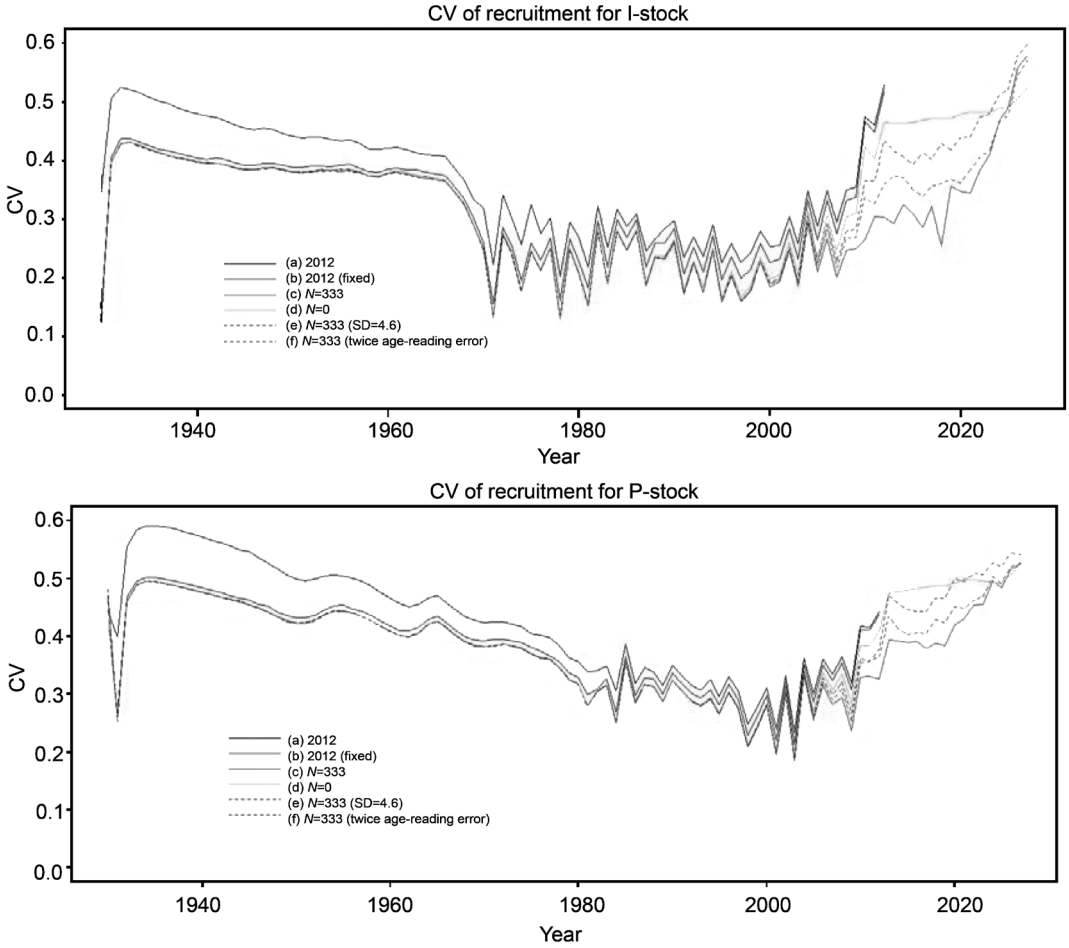

Fig. 4. Comparison of the trajectories of estimated CV for recruitment.

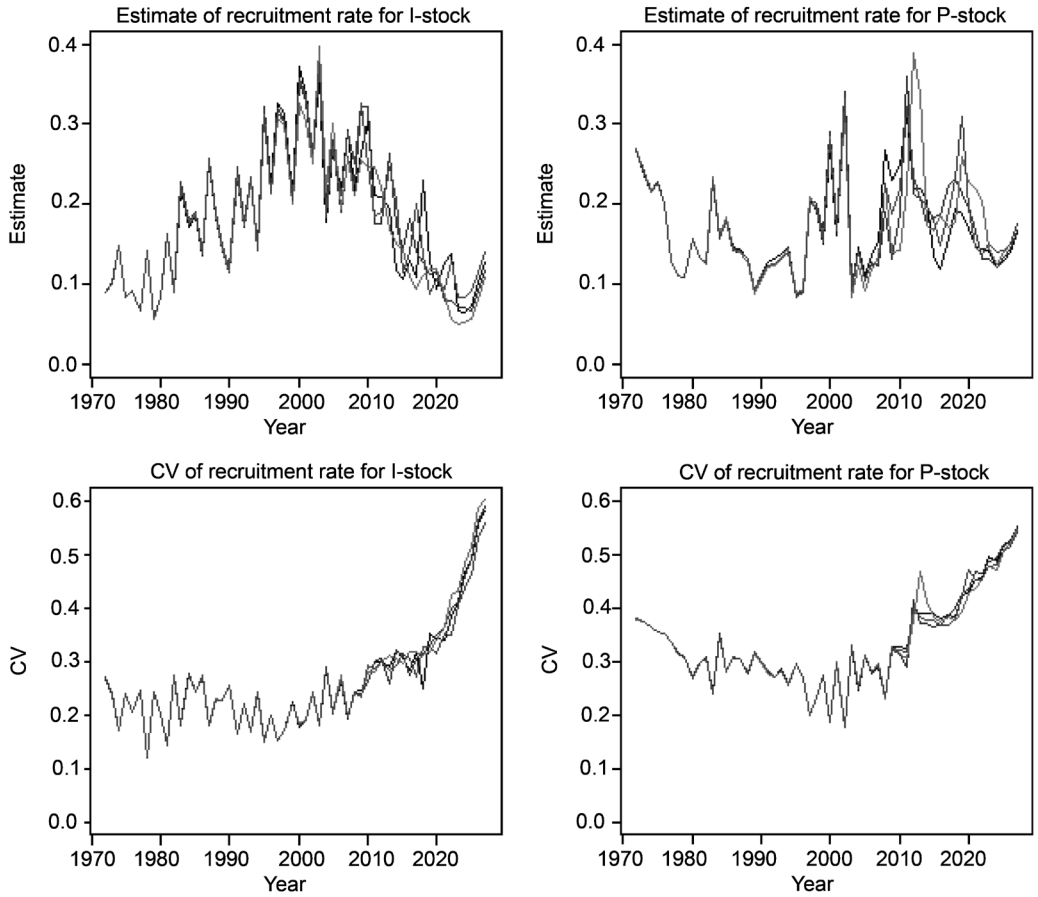

Fig. 5. Five replicated trajectories for estimates and CVs for the recruitment rate.

ANNEX Q3

ESTIMATION OF OVERDISPERSION IN CATCH-AT-AGE DATA FOR ANTARCTIC MINKE WHALES

Toshihide Kitakado

SC/66a/SP08 assumed a value of overdispersion at ϕ=0.01 as a plausible value and also used another value ϕ=0.1 just as a trial purpose. Here, the extent of overdispersion is estimated using actual catch-at-age data of female animals taken in Area IV from 1987/88,1989/90,...,2009/10 seasons.

The following Dirichlet-Multinomial distribution is assumed for the catch-at-age (CAA) in each year:

$$n_y = (n_{y1}, n_{y2}, ..., n_{yA+}) \sim DM(N_y; \theta\beta_1, \theta\beta_2, ..., \theta\beta_{A+}),$$

where n_y is a vector of (CAA) in year y, and θ and β_1, β_2,..., β_{A+}) are an overdispersion parameters and an age-frequency vector (assumed to be common across years), respectively. The variance of each element is given by:

$$V[n_{ya}] = \left\{1 + (N_y - 1)\phi\right\} N_y \beta_a (1 - \beta_a), \quad \text{where } \phi = \frac{1}{1+\theta}.$$

The overdispersion parameter, ϕ, is here estimated by the maximum likelihood method. Given that the common age-frequency is assumed across years, the estimated overdispersion includes variance attributed to the sampling heterogeneity as well as variation in the actual age-frequency over years.

The likelihood profile and estimates are given in Fig. 1. The estimated overdispersion value is at greatest 0.01 even when the estimation uncertainty is taken into account. Considering that this estimate includes the inflation of variance other than the sampling heterogeneity, the actual extent of overdispersion when generating the age data should be clearly less than 0.01. Therefore, the power analysis conducted in SC/66a/SP08 is justifiable.

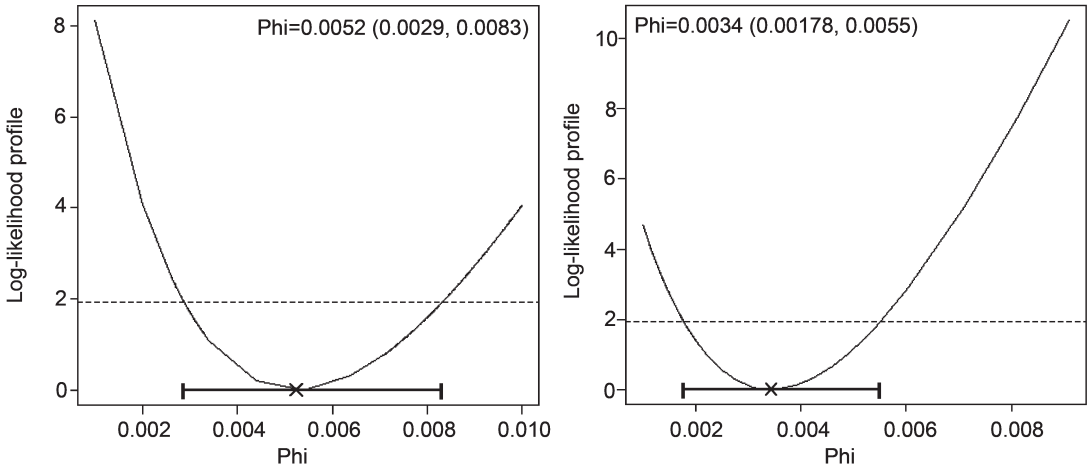

Fig. 1. Likelihood profiles and estimates for the overdispersion parameter ϕ, in cases of A+=20 (left) and 30 (right).

ANNEX Q4

CONSIDERATION OF EXTRA SOURCES OF VARIATION IN STATISTICAL POWER SIMULATION TO DETECT CHANGES IN THE AGE-AT-SEXUAL MATURITY

Toshihide Kitakado

In discussion under a small technical group to review SC/66a/SP08 (see Annex Q1), three sources of variations to be accounted for in the statistical power simulation were identified: (a) ageing error; (b) variation in age-at-50%-sexual maturity (ASM50) about the trend in the age-at-50%-sexual maturity; and (c) additional variation in the number of mature animals for a given age in a given year above that expected from a binomial maturation process. In SC/66a/SP08, item (a) was fully considered both in the generation of data and estimation/test of ASM. On the other hand, item (b) was not taken into account in our simulation because the random variation in cohort specific ASM was assessed as negligible (see de la Mare and McKinlay, 2015). Regarding item (c), the extent of overdispersion in the counts of mature females was estimated using a quasi-likelihood method, and again it was estimated as negligible.

Given the reasons above, the simulation conducted in SC/66a/SP08 did not account for two sources of variations, but the author agrees that 're-conditioning' of the simulation with respect to the three sources of variations is worthwhile.

In addition to the above-mentioned three sources of variation, the author also has considered the impact of further sources of variations; (d) overdispersion with respect to spatial representativeness in samples, (e) recruitment variations. Item (d) was considered in paper SC/66a/SP08, and the extent of variation is influential to the statistical power, but as shown in Annex Q3, the overdispersion is quite small as assumed in SC/66a/SP08. Regarding item (e), the recruitment variation was not considered in the simulation, but as shown in Fig. 1 below, it is little influential to the power assessment.

REFERENCE

De la Mare, W.K. and McKinlay, J. 2015. Random-effects invalidate NEWREP-A statistical power analyses. Paper SC/F15/SP02 presented to the Newrep-A Special Permit Expert Panel Review Workshop, February 7-10 2015, Tokyo, Japan (unpublished). 5pp. [Paper available from the Office of this Journal].

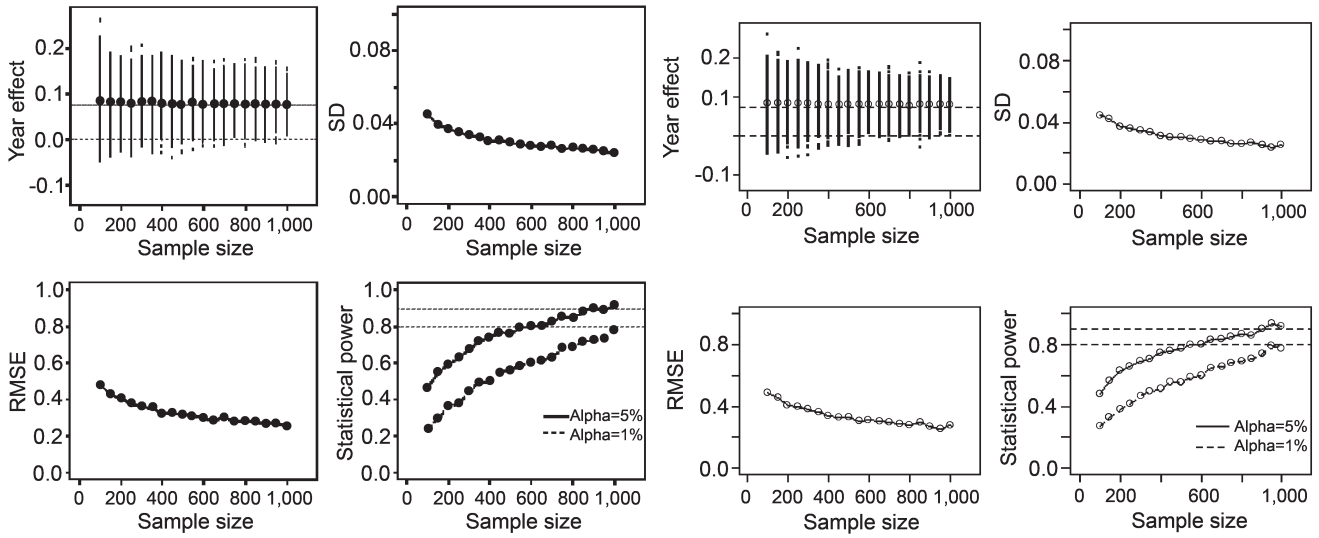

Fig. 1. Simulation results for an effect size of 0.075 (/year) *with unbiased age-reading errors*. The first cohort for which the ASM changes is the 1999/2000 cohort. Left side: recruitment variation CV=0. Right side, recruitment variation CV=0.2.

ANNEX Q5

STATEMENT CONCERNING REVIEW OF THE NEWREP-A PROPOSAL

J.P. Paniego and M. Iñíguez (Argentina), W. de la Mare, E. Bell, M. Double and J. McKinlay (Australia), M. Stachowitsch (Austria), F. Ritter (Belgium), R. Almeida, F. Luna and M. Marcondes (Brazil), L. Chasqui (Colombia), J. Rodrígues (Costa Rica), C. Castro Ayala (Ecuador), V. Ridoux and J. Charassin (France), H. Feindt-Herr and J. Cooke (Germany), G. Lauriano and S. Panigada (Italy), P. Gallego (Luxembourg), A. Jaramillo-Legorreta (Mexico), S. Ketele (Netherlands), M. Scheidat (Netherlands), D. Lundquist (New Zealand), R. Currey (New Zealand), B. Santos (Spain), B. Roel (UK), A. Brierley (UK), A. Hall (UK), R. Leaper (UK), S. Reeves (UK), J. Rendell (UK), M. Simmonds (UK), C.S. Baker (USA), R L. Brownell, Jr. (USA), P. Clapham (USA), Y. Ivashchenko (USA), A. Lang (USA), H. Rosenbaum (USA), P. Wade (USA), D. Weller (USA)

The Expert Panel's unusually unambiguous conclusion lays out a clear path forward with regard to NEWREP-A, and in the Committee's initial discussion of the report there was broad agreement that the Panel's recommendations were helpful and scientifically sound.

A working group which reported as Annex Q1 concluded that substantial progress has been made on several of the recommendations, but that the various tasks were either incomplete or had yet to be undertaken. The proponents had identified these as 'an essential part of an assessment for the need of lethal method and reasonableness of the sample size under the proposed NEWREP-A' (SC/66a/SP01). Consequently, it is clear that there is still insufficient information available to the Committee to reassess whether the lethal sampling proposed in NEWREP-A is justified. Under Item 17.1.4.1 we agree with the conclusion that since there was still no valid determination of the sample size required to detect a trend in age of sexual maturity (ASM), it had not been demonstrated that lethal sampling could achieve the objective. More generally, it is unclear that the increased precision in management related parameters may be improved given further data.

With respect to the ecosystem objectives, it is already well established that Antarctic minke whales feed almost exclusively on krill. To estimate the total consumption of krill by minke whales, the Panel recommended the use of a bioenergetics model that estimates basic energy requirements, using standard allometric relationships and previously collected data. Consequently the collection of further lethal data for these objectives is unnecessary.

Therefore we consider that the Committee is in the same position as the Panel: the need for lethal sampling has not been demonstrated. We also concur with the Panel's assessment that a short break in data collection to prepare a new proposal addressing its recommendations will not substantially compromise the utility of any time series of data or their analysis. Consequently, we do not consider that there is any scientific justification for collecting lethal samples until it is demonstrated that the information collected is necessary and reasonable in accordance with the guidelines in Resolution 2014-5 adopted by the Commission.

The situation should be reviewed at the next Committee meeting, taking account of any new information available at that time.

However, if the NEWREP-A programme commences in the 2015/16 season, there is currently insufficient scientific basis for it to include a lethal component.

ANNEX Q6

STATEMENT FROM ARGENTINA REGARDING RESOLUTION 2014-5

Iñíguez, on behalf of Argentina, stated that last year the Commission adopted in its 65th IWC meeting the Resolution 2014-5 in which operative paragraph 1 instructs the Scientific Committee to consider a number of issues arising from the ICJ case in respect to new and existing special permit research programmes.

Argentina understands that the expert panel did try to take this instruction into consideration during the review of NEWREP-A in February. However without a revised Annex P, and final approval by the Commission, this revision was clearly a difficult task.

As for operative paragraph 2, the Commission seems to have been explicit about instructing the Scientific Committee to consider and revise how it should review special permit(s):

'*....for the consideration by the Commission'.*

Thus, the Scientific Committee is instructed to have considered how it will revise its current procedures. Then the Commission will consider these recommendations, effectively reserving its right to ask for further clarification after their initial consideration.

Operative paragraph 3, requests Parties not to issue any further special permits until the specified work has been completed and adopted by the Commission:

'the Scientific Committee has reviewed the research programme to enable it to provide advice to the Commission in accordance with the instructions above; and the Commission has considered the report of the Scientific Committee and assessed whether the proponent of the special permit programme has acted in accordance with the review process described above; and the Commission has, in accordance with Article VI, made such recommendations on the merits or otherwise of the special permit programme as it sees fit.'

Thus, Argentina emphasised that the Commission has effectively set up a time-dependent process which the Scientific Committee should not accidently compromise.

(1) At this meeting the Scientific Committee, should seek to deliver recommendations to fulfil the requirements of operative paragraph 2 in light of the guidance in paragraphs 1 and 3 and the spirit of the overall resolution.
(2) At the next meeting of the Commission, the full Commission should either endorse these recommendations or give further instruction on how the Scientific Committee should proceed.
(3) Then the Scientific Committee will either act to fulfil the instructions of the Commission, or proceed to consider any new proposals for permit whaling.
(4) The deliberations of the Scientific Committee should then be considered by the full Commission in light of operative paragraph 3 which will guide the sponsoring Party.