

Request for access to samples/data from the Institute of Cetacean Research (ICR), Tokyo, Japan under Procedure B (JCRM 6 (suppl.)) and to the National Research Institute of Far Seas Fisheries, Japan

This proposal was agreed by the full Scientific Committee of the IWC at the Berlin Annual Meeting in 2003. It is submitted on behalf of that Committee by the Data Availability Group (DeMaster; Bjørge and Donovan)

(a) *Title* of the proposal, giving the broad subject of the proposed analyses.

RESEARCH PROPOSAL FOR ANALYSIS OF CATCH AT AGE ANALYSES FOR SOUTHERN HEMISPHERE MINKE WHALES

(b) *Investigators*: the full name and affiliation of the principal investigator(s) and co-investigator(s) should be provided.

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- (5) University of Washington, Seattle, Washington, USA.*
- (6) Northeast Fisheries Science Center, 166 Water St, Woods Hole, Massachusetts 02543, USA.*

(c) *Objectives and rationale of the study* as specified by the by the Scientific Committee along with the appropriate reference to the report(s) of the Scientific Committee. This will include the reasons why the proposed analyses are important and how they fit into previous work.

To undertake further catch-at-age analyses for Southern Hemisphere minke whales in support of the issues defined at the 2003 Scientific Committee meeting (*JCRM 5 (suppl.): 261-2; JCRM 6(suppl.): Annex G, Appendix 11*) as part of the review of minke whale abundance estimates and trends. These references detail why the proposed analyses are important and how they fit in with past work. In particular to ensure that the following issues can be addressed:

- (1) Examine the sensitivity to the assumptions of fixing certain parameters to allow others to be estimated.
- (2) Examine the implications of uncertainties in stock structure on the results of catch-at-age analyses and their conclusions.
- (3) Investigate the levels of uncertainty in the catch-at-age data and their effect on results of a catch-at-age analysis.
- (4) Examine selectivity constraints and possible lack of fit to the age distribution in the plus group.
- (5) Explore possible links between environmental (e.g. climate) changes and estimated trends in minke whale abundance from a catch-at-age analysis.
- (6) Check the consistency between the catch-at-age results and data on blubber thickness, pregnancy rates, length and age at first ovulation.
- (7) Explore the possible effect of the geographical and ecological segregation of the mature and immature components of the stock which may be exploiting different resources and thus interact differently with prey

species and competitors.

(d) *Data to be used* will include a general description of all data to be used as well as data held by ICR. For the ICR-held data, the precise requirements will be given, including the level of disaggregation.

JARPA catches from 1987/88 through 2000/01 within Areas IV and V. Specifically, a file consisting of the following information for each whale caught is needed: Serial (id) no.; Date; Position; Length; Sex; Age (where known); and Pregnancy status for females.

See explanatory note¹ for comment on JARPA data within Areas III and VI. Next year the request for data from Areas III and VI should be reviewed in light of progress made by this Working Group and the data owners.

(e) *Description of the methods* likely to be used. The level of detail must be in accordance with the level of novelty of the proposed methods and the particular research questions they will address. References to similar analyses should be included where available.

The primary methods of analyses will be statistical integrated catch-at-age modelling. In addition, the integrated catch at age estimates of stock-size and population parameters will be related to other available information using statistical regression and related methods. The analyses will address at least the following issues:

- (1) effects of assumptions fixing certain parameters to allow others to be estimated (in particular natural mortality);
- (2) initial analyses of implications of uncertainties in stock structure on the CAA results and conclusions drawn from them;
- (3) initial analyses of levels of uncertainty in the catch-at-age data and their effect on the CAA results;
- (4) selectivity constraints and possible lack of fit to age distribution in the plus group.

(f) *Schedule of the work*: this should include estimated times for the various analyses to be carried out and an indication of which investigators will collaborate on individual components. If the project is a long-term project, annual progress reports will be required by ICR and the Scientific Committee.

A report on progress will be presented to the 2004 Scientific Committee meeting, but the analyses are not anticipated to be complete before the 2005 meeting. ICR scientists will have the opportunity to collaborate on or co-author any of the working papers.

(g) *Output of the research*: this will follow the rules for publication agreed at the Scientific Committee meeting and given below. ICR may consider requests for less stringent conditions (e.g. presentations at non-IWC scientific

¹ JARPA data within Areas III and VI, although of some use in the catch-at-age analyses, are not as high priority as JARPA data within Areas IV and V. The reason for this is the catch-at-age analyses incorporating Areas III and VI ideally require total catch, abundance estimates and catch-at-age data from each Area. However, practically such analyses would need to be accompanied by a number of additional assumptions, particularly since the JARPA programmes in these regions have taken place at different times of year so that lack of comparability of abundance estimates with the normal JARPA surveys in Areas IV and V will raise problems. Surveys in Areas III and VI take place before and after the primary survey in IV and V, consequently, the position of the ice-edge is very different and so affects the interpretation of the data. Furthermore, the samples sizes from Areas III and VI are small compared to those from IV and V and the temporal comparability question will again arise, particularly if migration patterns are age-dependent. Viewed overall, lack of an immediate request for catch-at-age and abundance estimates from the JARPA sampling in Areas III and VI will not compromise attainment of the primary objectives of this proposal.

It is also noted that JARPA data from Areas III and VI have not yet been analysed and published or presented to the IWC Scientific Committee, but will be during the JARPA review when all data will be available.

meetings, publications, etc.). Such requests should be detailed here.

There is no request for less stringent conditions

On behalf of the investigators, the Data Availability Group undertakes to ensure that the agreed conditions for use (repeated below) are met:

Agreed Scientific Committee conditions for data recipients

Applications deemed suitable under Procedure A or Procedure B below are granted under the following conditions:

- (1) Data shall not be transmitted to third parties.
- (2) Papers may only be submitted to a Committee meeting in accordance with the time restrictions given below. Such papers must not include the raw data or the data in a form in more detail than is necessary to understand the analysis.
- (3) Papers must carry a restriction on citation except in the context of IWC meetings.
- (4) Data owners are offered co-authorship.
- (5) Publication rights remain strictly with the data owner.
- (6) Data shall be returned, to the Secretariat or the data owner as appropriate, immediately after the meeting at which the paper is submitted and any copies destroyed, unless an extension is granted.
- (7) Data requesters sign a form agreeing to the above conditions. Such forms will be held by the data owner and the Secretariat. In the case of Procedure B, the Data Availability Group will sign the agreement on the Committee's behalf and ensure that the conditions of any agreement are met by any individual scientists involved in the analysis.
- (8) In the event of a breach of the conditions in (6), serious sanctions [to be determined] will apply.

NOTE: SUBSEQUENT TO THE PROPOSAL BEING SUBMITTED IT WAS REALISED THAT THE ABUNDANCE ESTIMATES FROM THE JARPA CRUISES WERE ALSO REQUIRED BUT HAD NOT BEEN EXPLICITLY INCLUDED IN THE ORIGINAL PROPOSAL. ICR GENEROUSLY AGREED TO PROVIDE THESE DATA AS WELL