

## Annex Q

# Towards a More Consistent Consideration of Estimates of Abundance in the Scientific Committee

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### PERCEIVED PROBLEMS

Abundance estimates are a key component of the work of the Scientific Committee in terms of determining the status of stocks and providing advice on conservation and management. While recognising that the required 'quality' of an abundance estimate depends on the use to which it is being put, at times there appear to be rather variable levels of scrutiny across, and even within, sub-groups. For example, some estimates are subject to lengthy and detailed scrutiny and often several iterations (and in some cases years) of analyses are required before an estimate is 'accepted' (or rejected), whereas in other cases, estimates appear to be accepted with minimal discussion, sometimes reflecting pressure of time towards the end of business.

### CATEGORISATION

Some sub-groups have 'natural' categories for abundance estimates with respect to acceptability. In the case of the RMP and to some extent the AWMP, there are already three associated ranks:

- (1) acceptable for use in conditioning *Implementation Simulation Trials* (or *Evaluation and Robustness Trials*);
- (2) Acceptable for use in projecting future catches under RMP variants in running *Implementation Simulation Trials*; and
- (3) Acceptable for use in the *CLA* (or *SLA*) to provide catch limit recommendations.

Associated with this are a set of Requirements and Guidelines for Surveys that provide guidance on what is potentially acceptable for use in the RMP. This makes it relatively easy to assign estimates to categories. Within that there are a number of precedents for making such evaluations (for example see the general principles outlined in the recent intersessional Workshop on Western North Pacific Common Minke Whale Trials). In addition to that the *CLA/SLA* development process has investigated the level of robustness to uncertainty in abundance estimates. In fact for situations where advice is being provided on a basis that has not been tested for robustness to uncertainty in estimates, one might argue that standards should be higher than for the RMP.

However, outside the structure of the RMP/AWMP situations, the situation is less clear.

Some potential issues/uncertainties surrounding the use/acceptability of estimates are given below.

- (1) 'In-depth assessments' – there are no generally agreed criteria for acceptance or otherwise, and the level of scrutiny is variable and may even depend in some cases on who happens to be present for a particular session.
- (2) Correction factors – should different 'statuses' be assigned to different variants of an estimate, e.g. an estimate assuming  $g(0)=1$  to be 'accepted though

negatively biased', while the corresponding estimate incorporating a  $g(0)$  correction factor that is not agreed by consensus may be deemed 'not acceptable, although useable for sensitivity tests to a base-case in-depth assessment result'?

- (3) Estimates for the public – in general these are simply to give an idea of the abundance of whales in broad areas (e.g. ocean basins) not to focus on detailed estimates for the provision of management advice. Estimates accepted by consensus are relatively straightforward, but for example, should the only estimates be those from the most recent best survey with a date stamp (more complex if adding several surveys together for an ocean basin), or if an assessment has been carried out integrating all available information, should the resultant 1+ population trajectory value for the most recent year be quoted?
- (4) Estimates included in Annexes as part of paper summaries with no comment – what is their status?
- (5) Estimates published in peer-reviewed journals – are these always given the same critical review as Scientific Committee papers?

Overall this variability and lack of clarity is undesirable and we believe it would be valuable for the Scientific Committee to consider ways to ensure more consistency in the way that abundance estimates are treated.

### Towards a solution

There is no obvious panacea to this problem. Whatever mechanism may ultimately be chosen, care is needed not to create a procedural monster that would create more issues than it might solve. For example, if there is a large backlog of estimates to be considered, then prioritisation may be needed to avoid holdups to work within each annual Scientific Committee meeting.

The implications of any potential arrangement require careful consideration, and initiation should not be rushed. To better frame the problem, we suggest the following be considered.

- (1) An intersessional group is appointed to review the matter carefully and to provide a written report that includes a review of the types of problems encountered along with possible ways forward including information that should be presented in papers that submit abundance estimates.
- (2) Staff resources permitting, the Secretariat compiles a list of abundance estimates starting with the most recent, together with the statuses accorded to those estimates (including 'unknown').
- (3) Time is allocated during the sub-group period next year to review the results of (1) and (2) and develop a proposed way forward.