(A) WORKSHOPS

1. PROPOSED TITLE OF WORKSHOP

Testing proposed new guidelines for evaluating spatial model-based and design-based abundance estimates

2. RELEVANT SUB-GROUP OR SUB-GROUPS

RMP; AWMP; SH; IA; SM; BRG; EM; …

3. OBJECTIVE/TERMS OF REFERENCE FOR THE WORKSHOP

The workshop is the point of delivery for intersessional work (see sub-committee item 2.6) which comprises proposing updated guidelines for evaluating design- and (spatial-)model-based abundance estimates, and developing software for a diagnostic check on design-based estimates that have applied when the underlying criteria are not strictly met.
(i) To test the proposed new guidelines against several test cases of model-based abundance estimates made specifically for and during the workshop;
(ii) To demonstrate and discuss the proposed diagnostic software with a wider Committee audience involved in basic line-transect abundance estimation.

4. SCIENTIFIC RATIONALE FOR THE WORKSHOP, EXPLAINING *INTER ALIA* WHY IT IS NECESSARY FOR THE WORK OF THE SCIENTIFIC COMMITTEE AND HOW IT RESPONDS TO IDENTIFIED RECOMMENDATIONS

Spatial modelling is a powerful tool for abundance estimation which, in principle, can: be used in many cases where design-based estimates are inappropriate; overcome some bias associated with uneven survey coverage; and deliver more stable CVs than a standard design-based analysis even when the latter is appropriate. However, spatial modelling can also go wrong; it requires expertise both to use and to assess. Hence it is important to have clear guidelines (which already exist for conventional design-based estimates, but are somewhat out of date) both for assessing new abundance estimates made specifically with spatial models, and for the situation commonly seen by the Committee where a simple design-based estimate has been applied without its assumptions being met; this latter case may or may not lead to substantial bias, depending on the realized coverage of the survey and the distribution of the animals, so some diagnostic tool for checking is desirable.

The need for new guidelines (last updated for RMP in 2004) was originally brought up in RMP 2012, leading to a contract in 2013 to propose updates (see SC/65b/RMP11). Based on consideration of the proposals this year, it was apparent that a diagnostic tool would also be required, and that the guidelines would need to be tested in a workshop with input from several experienced analysts. See Annex D, item 2.6 and Appendix 6.

5. ANY PREREQUISITE DATA REQUIREMENTS AND ANALYSES (IF BUDGET REQUESTS THESE SHOULD BE ON A SEPARATE RESEARCH PROPOSAL FORM)

Software development of the diagnostic tool, proposed guidelines updates, and some test analyses relevant to those guidelines, will be undertaken by Hedley and Bravington under a contract (see separate proposal). Participants at the workshop will be expected to each have at least one dataset ready for analysis on the day(s).

6. LIKELY SCIENTIFIC OUTCOME

Improved ability to assess the trustworthiness of abundance estimates;
more efficient use of expensive survey data;
reduction in the incidence of untrustworthy estimates.

PART 2: Logistical aspects

7. SUGGESTED STEERING GROUP (INCLUDING POSSIBLE CONVENOR)

Hedley (convenor), Bravington, Butterworth, Leaper, Kitakado

8. TIMETABLE AND FORMAT OF WORKSHOP, E.G. 2-DAY WORKSHOP BY INVITATION ONLY

2 days pre-mtg for SC 66a by invitation only for objective (i) and start of objective (ii); 0.5 day on first day of SC 66a for delivery of objective (ii) open to more general SC audience

9. EXPECTED NUMBER OF PARTICIPANTS, INCLUDING SUGGESTED INVITED PARTICIPANTS (GIVE NAMES AND AREAS OF EXPERTISE)

6 people for part (i): Bravington, Hedley plus some from e.g. Butterworth, Kelly, Kitakado, Leaper, Skaug: advanced statistical expertise and line-transect abundance estimation.

Part (ii)--- which has no cost and probably is not count as a workshop--- might expect 10-20 participants.

10. (PROVISIONAL DATE) AND PROPOSED VENUE

Immediately prior to SC 66a wherever that may be

11. PROPOSED BUDGET (INCLUDING BREAKDOWN)

£ 1,000 for travel for one IP not attending SC 66a; most travel will be free because most participants will attend SC.

Accommodation and subsistence for 4 IPs for 2 days @ £ 150 pppd: £ 1,200.

Zero venue cost (presumably) because the pre-SC66a group will require very little space, and the venue for a larger meeting on Day 1 of SC will be free anyhow.

Total £ 2,200