Proposal on an update to the defaults on stock structure in section 3 of Appendix 15 of Annex D (RMP Sub-Committee Report)

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Based on the results of hypothesis testing on genetic data and those derived from other non-genetic studies, we propose two baseline scenarios for the O and W stocks:

a) No W stock (based on the argument that non-homogeneities in sub-area 9 in some years are a sampling artifact) - thus one O stock throughout 7+8+9 (except for some J's in sub-area 7).

b) As in a), except that on an irregular basis some W Stock animals are found in sub-area 9.

Proposed defaults on stock structure:

i) 100% O Stock in sub-areas 7, 8 and 9.

ii) W Stock in sub-area 9 each year with 60% probability (occurrence of a W stock in sub-area 9W has been found in three years out of five years of surveys in sub-area 9W). In these years 50% of animals in sub-area 9 are W stock and 30% of non-J Stock animals in sub-area 12 are W Stock.

Sensitivity to ii): In years when W stock is in sub-area 9, some of them are also in sub-area 8. A 25% of animals in sub-area 8 are W stock whales. In this case 35% of non-J Stock animals in sub-area 12 are W whales.

- The proportions of O/W in sub-area 12 are based on abundance information for sub-areas 7, 8 and 9, from which whales migrate into sub-area 12, as follows:

	Sub-area 7	Sub-area 8	Sub-area 9
Abundance (approx)	2,000	1000	5,000
	2	1	5
O/W (0.5W in sa9)	2/0	1/0	2.5/2.5
O/W (Sensitivity)	2/0	0.75/0.25	2.5/2.5

Proportion of W in sub-area 12= 2.5/8= about 30%
Proportion of W Stock in sub-area 12 (sensitivity)= 2.75/8= about 35%

Note:

I) Figures on abundance are rough average obtained from Table 6a of Appendix 10 of IWC (2001).

II) The W stock has been detected only in sub-area 9W, and the proportion of whales there that are W's in the years when they have been detected is unclear; furthermore W whales have not been detected on the three occasions when sub-area 9E has been surveyed. Thus assuming as many as 50% of the animals in sub-area 9 in these years are from the W stock is erring on the high side. In fact, we consider that this percentage is much larger than is likely to be the case in reality. Accordingly we consider that scenario i) is closer to reality than scenario ii), and thus that scenario i) should be given more weight than scenario ii).

III) Whether W whales are in sub-area 9 (and 12) each year is to be determined by random choice with probability 0.6 of their presence, except that the simulations will ensure that they are always present in these sub-areas in years 1995, 2000 and 2001, and always absent in years 1994 and 1997, as indicated by the genetic analyses.

IV) The motivation for the sensitivity test to ii) is that some W stock presence in sub-area 8 may not have been detected as a consequence of a combination of only a small proportion present and a small genetic sample size.

V) In the present trial specifications, indicated ratios of O:W whales in sub-area 9 and sub-area 12 are specified to apply to 1995. Since as per III) above, for scenario ii) there will always be W whales in those sub-areas in that year, this specification need not be altered. It applies also to sub-area 8 in the sensitivity test.

VI) W distribution by age and sex remains unchanged from that already specified.

VII) The proportions of W in sub-area 12 have been specified in a manner to that for the existing trials. An alternative approach would be to fix the O:W ratio in sub-area 12 in 1995 to be the same as that in sub-areas 7, 8 and 9 combined in 1995

Reference:

International Whaling Commission. 2001. Report of the Sub-Committee on the Revised Management Procedure. *J. Cetacean Res. Manage.* 3 (Suppl.): 90-125.