

# SC/67B/AWMP/21

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## Report of the Intersessional Correspondence Group on Drafting an Aboriginal Whaling Scheme

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INTERNATIONAL  
WHALING COMMISSION

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In 2017, the Scientific Committee appointed an intersessional working group (members above) to develop draft text regarding the scientific aspects of an Aboriginal Whaling Scheme. The starting place was a previous version agreed by the Scientific Committee (IWC, 2003). Two key components of a new draft AWS must be the interim allowance and carryover provisions, which would replace what was drafted in 2003.

Below we present our draft. Section 1.1 was not finished: the carryover section is mostly blank. There were further discussions about this draft, particularly carryover, during and after the March 2018 intersessional Workshop in Copenhagen. However, the draft given below is what was agreed by the correspondence group before the Workshop.

## SCIENTIFIC ASPECTS OF AN ABORIGINAL WHALING SCHEME

The Scientific Committee's Aboriginal Whaling Management Procedure (AWMP) applies stock-specific Strike Limit Algorithms (SLAs) using available data to confirm safe hunting limits. Some SLAs have already been endorsed by the Commission, but when it adopts the AWMP overall, an associated set of scientific and non-scientific provisions called the Aboriginal Whaling Scheme (AWS) should also be adopted. These provisions address the requirements, practical application and oversight of resource management using AWMP SLAs. The recommended scientific aspects of an AWS are presented below.

### 1.1 Carryover

#### *1.1.1 Introduction*

In setting harvest limits for subsistence hunts, the Commission, for many years, has employed the convention of "carryover" to allow a certain number of previously allocated, but unused, strikes to be added to the current approved strike limit. Reliance on this convention is an acknowledgement of the variability of outcomes in subsistence harvests and provides flexibility to adjust hunting accordingly.

In particular, the Committee recognizes that the use of carryover enables the Commission to better tailor its management practices to the reality of subsistence whale harvests by addressing the fact that harsh environmental conditions can lead to failed or reduced harvest levels. In the years following a reduced harvest, communities seek to regain lost food supply through increased hunting effort. In addition, from a local management perspective, carryover reduces competitive pressure on subsistence harvests as the number of strikes taken approaches the quota. This reduction in pressure may promote increased care and efficiency in the harvest.

46 For these reasons, the Committee agrees that the concept of carryover is a beneficial management  
47 tool. However, it is also important to note that the carryover of strikes, as applied by the  
48 Commission and in actual harvests, is not intended as a means of increasing the baseline annual  
49 quota on a consistent basis, only as a means of flexibly accommodating variation around the  
50 baseline quota. If only a multi-year block quota is established by the Commission, then for the  
51 purpose of discussing carryover provisions, the Committee considers the baseline annual quota to  
52 mean the block quota divided by the number of years in the block (i.e. 'annualized').  
53

54 Strike Limit Algorithms calculate safe limits on strikes, not landings. Therefore the Committee  
55 recommends that the Commission standardize its Schedule language to establish (only) strike  
56 limits for all subsistence whaling stocks. Failing this, the Commission should recognize that the  
57 carryover of unused permitted landings should be allowed, since carryover relates to food security  
58 and landings provide that food. The same approach discussed here for carryover of strikes could  
59 also be used for landings.  
60

### 61 *1.1.2 Role and Process*

62 The Committee's role in determining carryover provisions is limited. Subsistence whaling  
63 countries can submit specific proposed provisions to the Commission, which may adopt them as  
64 part of the Schedule. The Committee's expertise pertains to evaluating the extent to which  
65 carryover provisions maintain total harvest at a level meeting stock conservation objectives. The  
66 Committee can provide specific advice on this matter in response to a Commission request. The  
67 Committee also welcomes requests from subsistence whaling countries to evaluate carryover  
68 provisions a country is considering proposing to the Commission. No Committee review is  
69 required prior to the Commission setting a quota or carryover provisions.  
70

71 When considering carryover provisions, the Committee will refer to the principles given in Section  
72 1.1.3. Those principles also serve as useful guidelines for countries developing carryover  
73 proposals. The Committee may consider additional relevant factors depending on the nature of the  
74 proposal and the status of the whale stock.  
75

### 76 *1.1.3 Principles*

77 **Not finished.**  
78

### 79 *X.X.X Carryover strike usage*

80 Regardless of how many unused strikes have been accumulated, there should be an upper limit on  
81 the number of these that may be used in a single year. For SLA development purposes, the  
82 Commission agreed that carryover usage resulting interannual variation of 50% from the baseline  
83 quota was acceptable (IWC, 2001, p. 20). The Committee further agrees that 50% inter-annual  
84 variation in strike limits due to carryover will not significantly reduce the conservation  
85 performance of an agreed SLA, and that carryover rules of this magnitude do not require further  
86 testing. The 'baseline quota' is defined as the annual quota if the Commission specifies one, and  
87 as the block quota divided by the number of years in the block (i.e., the annualized quota) if the  
88 Commission specifies only a block quota.  
89

90 For example, with sufficient carryover strikes previously accrued, an annual quota of 100 strikes  
91 might be exceeded by 50 in one or several years. This exceedance would reduce the remaining

92 carryover. If the Schedule specifies only a multi-year block strike limit, then the baseline annual  
93 quota (i.e., annualizing the block limit) should serve as the reference point for determining 50%  
94 interannual variation.

96 *X.X.X Other carryover provisions...*

97 **Not finished.**

## 98 **1.2 Survey intervals and related issues**

### 99 *6.2.1 Background*

100 A variety of factors beyond the control of the hunters may prevent the completion of a successful  
101 whale population abundance estimate. These include bad weather, unsafe ice conditions, lack of  
102 funding, and unresolved political or legal issues. While recognizing such difficulties, the  
103 Committee notes that uncurtailed aboriginal whaling quotas cannot be continued indefinitely in  
104 the long-term absence of data. Successful management requires a feedback mechanism where  
105 quota calculations are based on periodic new data. Therefore, the AWS must address what should  
106 be done in the unlikely event that efforts to obtain an agreed abundance estimate are unsuccessful  
107 after some time limit. For the purposes of applying AWMP Strike Limit Algorithms, the  
108 Committee has agreed that this limit is 10 years (IWC 2003; IWC, 2016a).

109  
110 A third quota block begun after the 10-year limit has expired is termed a ‘grace period’ and the  
111 Committee has endorsed the use of an ‘interim allowance’, namely a grace period strike limit equal  
112 to the limit produced by the applicable Strike Limit Algorithm, without reduction, for a single  
113 block. This approach has been simulation tested to confirm that it meets the conservation and need  
114 satisfaction goals of the Commission (IWC, 2016a, pp.190-193; 2016b, pp. 473-483; IWC, 2017,  
115 p. 498; [IWC 2018 ?? For non-bowheads]) and the results are summarized in IWC (2017a,b; **add**  
116 **non-bowhead refs here**).

117  
118 The 10-year survey interval requirement is complicated by the fact that there will usually be a  
119 delay between when the survey is conducted and when the resulting abundance estimate is agreed  
120 by the Committee, and because surveys, estimates and quota blocks need not be synchronised, as  
121 recognised in IWC (2003). For the sake of counting years, a survey is not considered to have  
122 occurred until the resulting abundance estimate is agreed. At that point, the 10-year time window  
123 is deemed to have begun in the year during which the survey was conducted. Then, ideally, the  
124 next survey would be conducted and the estimate approved within 10 years of the previous survey.  
125 However, other scenarios might occur. For example, the next survey might have occurred eight  
126 years after the previous one, but the corresponding abundance estimate not agreed until 13 years  
127 after the previous survey was conducted (‘the 13th year’). In this case, a survey would be  
128 considered overdue during the 11th and 12th years. If the start of a new block occurred during that  
129 time, the grace period would be triggered and an interim allowance provided. Otherwise, when the  
130 abundance estimate is agreed in the 13th year after the last survey was conducted, the fact that the  
131 survey actually took place eight years after the last agreed estimate would reset the clock so that  
132 the next deadline would be the 18th year, and a grace period would have been averted.

133  
134 In 2003 and in IWC (2006b), the Committee envisioned that, during the grace period, a new strike  
135 limit would be established immediately when a new abundance estimate was agreed, rather than  
136 waiting until the end of the grace period block. The Committee continues to recommend this

137 approach. However, if the Commission refrains from updating the strike limit until the grace  
138 period expires, this would not pose a conservation risk. If the strike limit is updated in the midst  
139 of a grace period block, the number of strikes taken to that point of the grace period should be  
140 subtracted from the updated quota, with the remainder being the strike limit for the rest of the grace  
141 period. Carryover is not affected.

142  
143 Tables 1 and 2 illustrate several scenarios about how strike limits might evolve with varying survey  
144 intervals and grace periods. In these tables, it is assumed for simplicity that the *Strike Limit*  
145 *Algorithm* would output a six-year block strike limit (SL) each time. For the sake of simplicity,  
146 carryover is ignored in these tables.

147  
148 Five different scenarios (A-E) are shown in Tables 1 and 2. These tables cover more than four  
149 quota blocks (boxes), with surveys (Surv), abundance estimates (Est) and the establishment of  
150 block strike limits (SL) scheduled by year (Yr), The 'Clock' counts the number of years remaining  
151 before a survey will thereafter be overdue. Thus, when the clock set by the most recent estimate is  
152 negative, a survey is overdue and when a grace period quota is required an interim allowance strike  
153 limit (IASL) is set.

154  
155 Scenario A in Table 1 illustrates a situation with regular 8-year survey intervals and estimates two  
156 years later. Each strike limit is set using a timely survey; no surveys are overdue and no grace  
157 periods are required. Note that in year 13, a block strike limit is set using the survey from year 4.  
158 Although the more recent survey (year 12) has occurred, the corresponding abundance estimate  
159 has not yet been computed. Scenario B represents an unproblematic case with 10-year survey  
160 intervals.

161  
162 Scenarios C and D illustrate cases where the grace period is invoked in year 13. In Scenario C,  
163 immediate revision of the interim allowance strike limit (IASL) is assumed and an updated strike  
164 limit (USL) is computed. Scenario D presents the same schedule of surveys and estimates, but  
165 when the grace period is invoked, the IASL is retained for the entire block, with the year 12 survey  
166 first being used in year 19.

167  
168 Scenario E illustrates that it is possible that surveys could be more than 10 years apart (in this case,  
169 13 years) without triggering the grace period.

170  
171 The Committee agrees that however unlikely, it is important to consider the remote possibility that  
172 no acceptable abundance estimate is obtained by the end of the grace period. SLAs are not designed  
173 or intended to be applied if new abundance data are not forthcoming after such a long period.  
174 Given good faith efforts to obtain an abundance estimate, such a situation would probably have  
175 arisen from profound and unexpected environmental change (e.g. related to climate or a disaster  
176 such as a massive oil spill). Under such circumstances, an immediate *Implementation Review*  
177 would probably have been initiated, irrespective of the timing of (un)successful surveys and quota  
178 blocks (see Section 1.3). The Committee stresses that as soon as it becomes apparent that there is  
179 a likelihood that an abundance estimate may not be obtained in time, researchers should  
180 immediately begin to develop alternative approaches to obtaining abundance estimates (or at least  
181 indices of abundance) that do not depend on the problematic circumstances. Nevertheless, if no  
182 abundance estimate is available the year before the end of the grace period, the Committee should

183 immediately initiate an *Implementation Review*. The default approach of the Committee in the  
184 absence of positive alternative evidence would be that the Committee could not provide advice on  
185 the quota using the SLA and the Commission should exercise great caution when agreeing any  
186 further strike limits. The level of caution will depend on the specifics of the situation.

187  
188 The Committee emphasises that the interim allowance approach is intended to be applied only in  
189 the unlikely event that exceptional unforeseen circumstances had delayed obtaining an agreed  
190 abundance estimate beyond the end of the second quota block. It should not be interpreted as a  
191 routine approach for extending quotas for a third block without a concerted effort to obtain a  
192 successful survey prior to that time. Furthermore, the Committee would not recommend two  
193 consecutive interim allowances.

194  
195  
196  
197  
198

199 Tables 1 and 2: Example schedules of surveys, block strike limits and so forth. See the text for a detailed  
 200 explanation.

201

Yr	A	Clock	B	Clock
1	SL		SL	
2				
3				
4	Surv	10		
5		9		
6	Est	8	Surv	10
7	SL	7	Est/SL	9
8		6		8
9		5		7
10		4		6
11		3		5
12	Surv	2	10	4
13	SL	1	9	3
14	Est	0	8	2
15			7	1
16			6	0
17			5	-1
18			4	
19	SL		3	
20	Surv	10	2	
21		9	1	
22	Est	8	0	
23		7		
24		6		
25	SL	5	1	
26		4	Surv	10

202

Yr	C	Clock	D	Clock	E	Clock
1	SL		SL		SL	
2	Surv	10	Surv	10		
3		9		9		
4		8		8	Surv	10
5	Est	7	Est	7		9
6		6		6	Est	8
7	SL	5	SL	5	SL	7
8		4		4		6
9		3		3		5
10		2		2		4
11		1		1		3
12	Surv	0	10	0	10	2
13	IASL	-1	9	IASL	-1	9
14		-2	8		-2	8
15	Est/USL	-3	7	Est	-3	7
16			6			6
17			5			5
18			4			4
19	SL		3	SL		3
20	Surv	10	2	Surv	10	2
21		9	1		9	1
22	Est	8	0	Est	8	0
23		7			7	
24		6			6	
25	SL	5	1	SL	5	1
26		4	Surv	10		1

203

204 **1.3 Implementation Reviews**

205 The concept of an *Implementation Review* is central to the functioning of the AWMP. Under  
206 normal circumstances, an *Implementation Review* will be carried out every five years.

207

208 **1.3.1 Regular Implementation Reviews**

209 *Implementation Reviews* will normally contain at least the following elements: (1) a review of  
210 information required for the *SLA* (i.e. catch data, abundance estimates); and (2) a review of  
211 information (e.g. biological and genetic data) to ascertain if the present situation is as expected and  
212 within tested parameter space. The review may result in the need to examine new trials, although  
213 this would not ordinarily be expected. It is not anticipated that every *Implementation Review* will  
214 entail a large amount of work. This will of course depend on a number of factors, largely dependent  
215 on the level of information available.

216

217 **1.3.2 Unscheduled Implementation Reviews**

218 The Committee views early *Implementation Reviews* as a safety feature if new information arrives  
219 that causes concern. It is recognised that calling such a review does not necessarily mean revising  
220 the Committee's advice to the Commission, although it may do so. The Committee does not  
221 believe it appropriate to try to compile a comprehensive list of what factors might 'trigger' such  
222 an early review (by its very concept it implies unexpected/unpredictable factors). The following  
223 list is provided to give examples of some possible factors:

- 224 (1) Major mortality events (e.g., suggested by large numbers of stranded animals).  
225 (2) Major rapid changes in whale habitat (e.g., the occurrence of natural or anthropogenic  
226 disasters or changes, such as an oil spill or dramatic change in sea-ice).  
227 (3) Major rapid ecological changes resulting in major long-term changes biological  
228 parameters.  
229 (4) A dramatically lower abundance estimate (although the *SLA* has been tested, the  
230 Committee would review the potential causes of unexpected very low estimates).  
231 (5) Information from the harvest and hunters (this might include very poor harvest results,  
232 reports of low abundance despite good conditions, reports of large numbers of unhealthy  
233 animals).  
234 (6) Changes in biological parameters that may result in changes to management advice (e.g.  
235 reproduction, survivorship).  
236 (7) If there are periods when need is not being satisfied, significant positive information that  
237 might narrow the plausibility range and allow an increase in block limits.

238

239 **1.4 Guidelines for surveys**

240 The Committee reaffirms the principles for surveys developed in 2001 (IWC, 2002, p. 26)  
241 regarding: survey/census methodology and design; Committee oversight; and data analysis. --is  
242 there anything more recent to say about survey guidelines??—Provisions about data sharing are  
243 articulated in the Committee's Data Availability Agreement (IWC, 2004; see [www.iwc.int](http://www.iwc.int) for  
244 current provisions). In 2017, the Committee formed the Abundance, Status and International  
245 Cruises (ASI) Sub-committee to review and approve survey results and abundance estimates prior  
246 to use in *SLAs*. Survey guidelines established by this sub-committee would apply.

247

248 **1.4.1 Survey/census methodology and design**



249 Plans for undertaking a survey/census should be submitted to the Scientific Committee in advance  
250 of their being carried out, although prior approval by the Committee is not required. This should  
251 normally be at the Annual Meeting before the survey/census is carried out. Sufficient detail should  
252 be provided to allow the Committee to review the field and estimation methodology. Considerably  
253 more detail would be expected if novel methods are planned.

#### 254 255 *1.4.2 Committee oversight*

256 Should it desire, the Scientific Committee may nominate one of its members to observe the  
257 survey/census to assess the scientific integrity of the process.

#### 258 259 *1.4.3 Data analysis and availability*

260 The Committee believes that it is appropriate that all data to be used in the estimation of abundance  
261 be made available to the Scientific Committee suitably in advance of the Annual Meeting at which  
262 an estimate is to be presented. Specifically, the Committee refers to its Data Availability  
263 Agreement (IWC, 2004), noting that data used in the AWMP are governed by Procedure A. If new  
264 estimation methods are used in the data analysis, the Committee may require that computer  
265 programs (including documentation to allow such programs to be validated) be provided to the  
266 Secretariat for eventual validation.

#### 267 268 *1.4.4 Estimates to use in the SLA*

269 The most recent estimate(s) accepted by the Committee for any year(s) should be incorporated in  
270 the *SLA* calculations. If there is more than one accepted estimate for a given year and the  
271 Committee agrees that the estimates are based on sufficiently independent data, then both estimates  
272 should be incorporated in the *SLA* calculations. If a revised estimate is obtained for a particular  
273 year, then the old one should be replaced before the *SLA* is next used.

### 274 275 **1.5 Guidelines for data/sample collection**

276 The Committee supports the Schedule policy that data from each harvested animal should be  
277 collected and made available to the IWC. The following information should normally be provided  
278 for each harvest or individual whale as appropriate: species; number of animals; sex; season;  
279 position of catch (at least to the nearest village); length of catch (to 0.1m). The Committee further  
280 requests that information on reproductive status and samples for genetic studies be collected where  
281 possible. It also notes the value of additional studies for the *Implementation Review* process, such  
282 as the use of photo-identification data for estimating survival rates, estimation of calf production,  
283 and assessment of anthropogenic injuries, and urges that such research occurs where possible. The  
284 value of traditional knowledge is also noted, and the Committee agrees that any such information  
285 will be valuable when conducting *Implementation Reviews*.

### 286 287 **1.6 Revisions to the AWS**

288 Revisions or additions to this AWS may be recommended by the Committee at any time, including  
289 during *Unscheduled Implementation Reviews*.

### 290 291 **1.7 Non-scientific aspects of the AWS**

292 The Committee notes that the AWS may include additional, non-scientific provisions. For  
293 example, provisions might address reporting, infractions, non-scientific observers, matters related  
294 to subsistence need and sharing of food and products, apportionment of costs for abundance

295 surveys, and animal welfare considerations. Such matters are within the purview of the  
296 Commission.

297

298 References:

299

300 IWC (2001). Chairman's Report of the 52nd Annual Meeting. *Ann. Rep. Int. Whaling Comm.* 2000:11-63.

301 IWC (2002) Report of the Scientific Committee. *J. Cetacean Research and Management* 4 (Suppl.), p. 1-75.

302 IWC (2003). Report of the Scientific Committee, Annex E. *JCRM (Suppl.)* 5: 154-225.

303 IWC (2004) Report of the Scientific Committee, Annex E. *J. Cetacean Research and Management* 6 (Suppl.), p.  
304 406-408.

305 IWC (2013) Report of the Scientific Committee. *J. Cetacean Research and Management*, 14 (Suppl) p. 1-86.

306 IWC 2016a. Report of the Scientific Committee, Annex E. *JCRM (Suppl.)* 17: 185-203.

307 IWC 2016b. Report of the Scientific Committee, Report of the AWMP Workshop on Developing Strike Limit  
308 Algorithms (SLAs) for the Greenland Hunts. *JCRM (Suppl.)* 17: 473-483.

309 IWC 2017a. Report of the Scientific Committee, Annex E. *JCRM (Suppl.)* 18: 174-184.

310 IWC 2017b. Report of the Scientific Committee, Report of the AWMP Intersessional Workshop on Developing SLAs  
311 for the Greenland hunts and the AWS. *JCRM (Suppl.)* 18: 489-516.

312

313