

# Chairs' Report of the meetings of the RMS Small Drafting Group

## 1. INTRODUCTORY ITEMS

This report pulls together into a single report, the outcome of the meetings of the RMS Small Drafting Group held in Borgholm, Sweden, 1-3 December 2004 and in Copenhagen, Denmark, 2-3 April 2005.

### 1.1 Terms of Reference

Resolution 2004-6 on Completion of the Revised Management Scheme (RMS) adopted by consensus at the 56<sup>th</sup> Annual Meeting of the Commission in Sorrento in July 2004 revived formally the RMS Working Group (it last met at IWC/54 in Shimonoseki in 2002) with the following Terms of Reference:

- (1) to complete work on the RMS package, with the goal of having a finalised RMS text ready for consideration, including for possible adoption, at IWC 57, and/or to identify any outstanding policy and technical issues;
- (2) to take account of delegates' comments at IWC 56, as well as written submissions from delegates;
- (3) to provide guidance to, and to review the work of, the Small Drafting Group.

The Small Drafting Group (SDG), established under the auspices of the RMS Working Group, was given the following terms of reference:

- (1) to prepare a consolidated draft text for the replacement of parts of Chapters V and VI of the current Schedule;
- (2) to prepare consolidated draft text on other related issues in the RMS package;
- (3) to utilise the Chair's proposal (IWC/56/26) and his statement (IWC/56/28), as a framework for this work;
- (4) to rearrange, revise and renumber paragraphs in the draft text for Chapters V and VI as appropriate but not to attempt to merge them with other parts of the Schedule.

### 1.2 Composition and meetings

Resolution 2004-6 required the Chair of the Commission to seek expressions of interest in participation on the SDG to ensure regional and policy diversity in the groups. The SDG was to include governments with adequate regional coverage, and adequate coverage of those for/against/neutral on the key issues.

The following governments expressed interest in participating in the SDG and were subsequently invited by the Chair to join the group: Argentina, Denmark, Dominica, Republic of Guinea, Iceland, Japan, Netherlands, New Zealand, South Africa, Sweden, UK and the USA. South Africa subsequently withdrew from the group and was replaced by Germany.

Resolution 2004-6 anticipated two meetings of the SDG intersessionally between IWC/56 and IWC/57. The first meeting took place in Borgholm, Sweden from 1-3 December 2004, immediately following the first meeting of the RMS Working Group. It was chaired by Mike Tillman (USA). The second meeting took place in Copenhagen, Denmark from 2-3 April 2005, again following a meeting of the RMS Working Group. In the absence of Mike Tillman, the second SDG meeting was chaired by Maggie Hayes (USA).

The participants at both meetings are given in Annex 1.

### 1.3 Agenda, documents and rapporteurs

The agenda and list of documents for both meetings are given in Annexes 2 and 3 respectively.

Nicky Grandy and Greg Donovan of the Secretariat were appointed as rapporteurs for both meetings. At its first meeting, the SDG agreed that the outcome would be reported via a Chair's Report developed after the meeting. It was agreed that a similar approach should be adopted for the SDG's second meeting and that the final report should consolidate the outcome from both meetings.

## 2. DEVELOPMENT OF DRAFT SCHEDULE AND OTHER TEXT

### 2.1 Mechanism for developing the detail necessary for the practical implementation of an RMS

During discussions over the last few years, it has been recognised that a way needs to be found to address the provision of certain practical/technical details required to implement an RMS without overburdening the Schedule with detail. The RMS Expert Drafting Group (EDG) that met between the 2001 and 2002 Annual Meetings proposed the approach given below (IWC/54/RMS 1).

- (1) The Commission keeps all of the practical details in a single document, not the Schedule itself.
- (2) The Schedule paragraph refers to a **dated** version of these. If the Commission adopts any modifications then it is only the date in the Schedule that needs to be modified. If the changes are non-controversial then it should take only a few minutes or less to agree to change the date in the Schedule. If the changes are controversial then unless there is a three-quarters majority, the Schedule will still refer to the earlier version. Similarly, if a Contracting Government objects to a change in the date, it will still be bound by the earlier version.
- (3) The words in the Schedule could be something along the lines of:  
*'The practical details required to implement the supervision and control scheme are given in the version of the document 'Details of the Supervision and Control Scheme of the RMS' dated 17 March 200X.'*

This has been the approach followed by the SDG. When an overall RMS is agreed, the editorial decision on how to handle the practical details will need to be taken.

### 2.2 Development of draft text

The SDG based its work on instructions from the RMS Working Group developed at the Borgholm and Copenhagen meetings (see documents IWC/N04/RMSWG 15rev and IWC/M05/RMSWG 11rev). Instructions from the RMS Working Group in Copenhagen were informed by reports from a number of technical specialist groups established by the Working Group in Borgholm, i.e. on VMS – vessel monitoring systems (IWC/M05/RMS WG6), DNA registers/market sampling (IWC/M05/RMS WG5) and animal welfare (IWC/M05/RMS WG8).

The SDG developed draft Schedule and other text (e.g. technical annexes/accompanying documents) for the following:

Possible Elements of an RMS 'package'	see Annex:	page
Statement of principle for the supervision and control scheme	4	8
Incorporating the RMP into the Schedule, including a geographical phase-in of commercial whaling and reference to sanctuaries	5	10
National inspection and International Observer Scheme, including a consideration of VMS requirements	6	18
Additional catch verification		
• DNA registers/market sampling system	7	24
• Measures to deter illegal, unreported and unregulated whaling	8	31
• Catch document systems	8	31
Compliance	9	34
Apportioning RMS costs among Contracting Governments	10	35
Relationship between adoption of the RMS and lifting paragraph 10(e)	11	37
Animal welfare concerns	12	39

In each of the Annexes, the relevant instructions from the RMS Working Group are repeated. These are followed by proposals for draft Schedule and other text, including options and/or a call for further policy guidance or work as appropriate.

While the SDG had no problem in developing draft Schedule text for the various elements and options within them, it did not have time to complete the drafting of the accompanying details that are necessary to implement

certain elements of a possible future RMS. This is particularly the case for VMS, DNA registers/market sampling, catch documentation systems and animal welfare for which further work is needed as described in the relevant Annexes.

Recognising that ‘nothing is agreed until everything is agreed’, in the draft Schedule text proposed, text not in square brackets represents text for which a certain level of ‘agreement’ has been reached. Text within square brackets represents areas where issues clearly remain to be resolved.

In drafting Schedule text, the SDG drew heavily on text previously developed by the RMS Expert Drafting Group (e.g. IWC/54/RMS 1) and earlier meetings of the RMS Working Group, and in particular on a draft Schedule prepared by the Secretariat that collated the status of draft RMS text up to IWC/56 (i.e. IWC/D04/RMS SDG 4).

### **3. OTHER ISSUES**

From its first meeting, the SDG recognised the limitations placed on it by its Terms of Reference regarding those parts of the Schedule for which it is authorised to develop Schedule text (i.e. Chapters V and VI of the current Schedule). Nevertheless, the SDG considered that not only would it be sensible to reorganise the current Schedule to remove the redundancies that have crept in over the years, but it would also be valuable when developing revised RMS Schedule text to do so in the context of a revised and reorganised Schedule. The SDG considered that IWC/D04/RMS SDG 4 provided a useful basis to do this. Thus for illustrative purposes (and to see how SDG proposals might fit into the Schedule as a whole), the paragraph numbering of draft Schedule text in the various Annexes to this report corresponds to the numbering in IWC/D04/RMS SDG 4<sup>1</sup>.

The SDG also agreed at its first meeting that consideration should be given to the merits of a single individual or a very small group reviewing any re-organised and revised Schedule once such a text is available, to check for inconsistencies and any potential legal issues. The SDG drew these considerations to the attention of the meeting of the RMS Working Group in Copenhagen. In commenting on the report from the first SDG meeting (IWC/D04/RMS SDG 5), Japan was the only government to address this issue. It agreed that any group that is to review any re-organised and revised Schedule should be small, and indicated that it would like to participate.

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<sup>1</sup> With the exception of the reference to Para 10(e), which has become part of public parlance, in Annex 11.

**ANNEX 1**  
**Participants in the SDG meetings**

**First meeting of the SDG, Borgholm, Sweden, 1-3 December 2004**

<b>Argentina</b> Eduardo Iglesias Miguel Iniguez	<b>Netherlands</b> Annemarie van der Heijden	<b>UK</b> Richard Cowan Geoff Jasinski
<b>Denmark</b> Kate Sanderson	<b>New Zealand</b> Geoffrey Palmer Jim McLay Rosemary Paterson.	<b>USA</b> Michael Tillman (Chair) Jean-Pierre Ple Roger Eckert
<b>Dominica</b> Lloyd Pascal	<b>South Africa</b> Herman Oosthuizen Chris Badenhorst	<b>Secretariat</b> Nicky Grandy Greg Donovan
<b>Iceland</b> Stefan Asmundsson Asta Einarsdottir	<b>Sweden</b> Stellan Hamrin Thomas Lyrholm	
<b>Japan</b> Joji Morishita Dan Goodman Yasuo Iino		

Note that the Republic of Guinea was unable to attend

**Second meeting of the SDG, Copenhagen, Denmark, 2-3 April 2005**

<b>Argentina</b> Eduardo Iglesias Miguel Iniguez	<b>Japan</b> Joji Morishita Dan Goodman Yasuo Iino	<b>USA</b> Maggie Hayes (Chair) Roger Eckert
<b>Dominica</b> Lloyd Pascal	<b>Netherlands</b> Henk Eggink	<b>Chair of the Commission</b> Henrik Fischer
<b>Germany</b> (replaced S. Africa) Marlies Reimann	<b>New Zealand</b> Jim McLay Rosemary Paterson Al Gillespie	<b>Secretariat</b> Nicky Grandy Greg Donovan
<b>Guinea, Rep of</b> Sidiki Diané	<b>UK</b> Trevor Perfect Rob Bowman Sue Fisher	
<b>Iceland</b> Stefan Asmundsson Asta Einarsdottir		

Note that Denmark and Sweden were unable to attend.

**ANNEX 2**  
**Agenda for the RMS Small Drafting Group (SDG) meetings**

**Agenda for the first meeting of the SDG, Borgholm, Sweden, 1-3 December 2004**

1. INTRODUCTORY REMARKS
2. REPORTING ARRANGEMENTS AND APPOINTMENT OF RAPPORTEURS
3. REVIEW OF DOCUMENTS
4. INSTRUCTIONS FROM THE RMS WORKING GROUP
  - 4.1 Review of instructions and proposal on how to tackle them
  - 4.2 Discussion
5. DRAFTING TEXT AS INSTRUCTED
6. OTHER ISSUES (the relationship between the SDG and the technical specialist groups established by the RMS Working Group)
7. NEXT MEETING
8. REVIEW OF RMS TEXT DEVELOPED AND CONFIRMATION OF REPORTING MECHANISM

**Agenda for the second meeting of the SDG, Copenhagen, Denmark, 2-3 April 2005**

1. ELECTION OF CHAIR
2. REPORTING ARRANGEMENTS AND APPOINTMENT OF RAPPORTEURS
3. REVIEW OF DOCUMENTS
4. ADOPTION OF AGENDA
5. INSTRUCTIONS FROM THE RMS WORKING GROUP
  - 5.1 Statement of principle
  - 5.2 RMP
  - 5.3 Phased-in approach
  - 5.4 National inspection and international observation scheme
    - 5.4.1 National inspection and international observation
    - 5.4.2 VMS
  - 5.5 Additional catch verification
    - 5.5.1 DNA registers/market sampling
    - 5.5.2 Discouraging IUU whaling
    - 5.5.3 Catch documentation system
  - 5.6 Compliance
  - 5.7 Costs
  - 5.8 Measures for lifting paragraph 10(e)
  - 5.9 Scientific permits
  - 5.10 Animal welfare considerations
  - 5.11 Sanctuaries
6. OTHER ISSUES
7. ADOPTION OF REPORT

**ANNEX 3**  
**Lists of Documents**

**List of documents for the first meeting of the SDG, Borgholm, Sweden, 1-3 December 2004**

IWC/D04/RMS SDG	1 Draft Agenda
	2 Draft List of Documents
	3 Schedule of the International Convention for the Regulation of Whaling (October 2004 version)
	4 Status on revision of the Schedule based on discussions to date
IWC/N04/RMSWG	13 Elements of an RMS 'Package (submitted by Australia)
	14 Statement of principles (submitted by St. Kitts and Nevis, Republic of Guinea, Gabon, Nicaragua, Dominica, Antigua and Barbuda)
	15rev Summary of outcome of discussions on elements for an RMS package, including instructions from the RMS Working Group to the SDG
Resolution 2004-6	Resolution on Completion of the Revised Management Scheme
IWC/56/	26 Chair's Proposals for a Way Forward on the RMS
	28 Statement from Henrik Fischer, Chair of the Commission, to the Private Meeting of Commissioners/Alternate Commissioners on the 16 <sup>th</sup> July 2004
IWC/54/RMS	1 Report of the Revised Management Scheme Expert Drafting Group
IWC/54/	7 Report of the Revised Management Scheme Working Group
	35 Proposed Schedule amendment for adoption of the RMS
<b>Background documents</b>	
IWC/53/	9 Report of the Revised Management Scheme Working Group: Appendix 4 Revised Schedule text from Document IWC/53/RMS 4 annotated with comments received during the meeting
IWC/53/RMS	4 Proposed revisions to and re-organisation of the Schedule to the International Convention for the Regulation of Whaling
IWC/55/COMMS	2 Commissioners' meeting on the RMS (October 2002) – Chair's Confidential Aide Memoire
	3 Report of the RMS Working Group on Catch Verification
	4 Report of the RMS Working Group on Costs
IWC/55/COMMS	9 Second Commissioners' meeting on the RMS (at IWC/55 in Berlin) – Chair's Confidential Aide Memoire

**List of documents for the second meeting of the SDG, Copenhagen, Denmark, 2-3 April 2005**

IWC/A05/RMS SDG	1	Draft Annotated Agenda
	2	List of participants
	3	Draft list of documents
IWC/M05/RMS WG	11rev	Summary of the outcome of discussions on elements for an RMS package, including instructions from the RMS Working Group to the SDG
	4	Written comments received on the Chair's report of the RMS Small Drafting Group, Borgholm, 1-3 Dec 2004
	5	Report of the Specialist Group on the DNA Register/Market Sampling Scheme Approach (SGDNA)
	6	Report from the VMS Specialist Group Specialist Technical Group
	7	Possible pro-forma for catch documentation as proposed by the Chair in IWC/56/26 (prepared by the Secretariat)
	8	Report from the Animal Welfare Specialist Technical Group – including Draft Resolution
	9	Proposals from New Zealand and Sweden regarding an IWC-operated catch documentation scheme - Outline of the CDS and Barcoding / Labelling Scheme
IWC/D04/RMS SDG	4	Status on revision of the Schedule based on discussions to date
	5	Chair's report of the meeting of the Small Drafting Group
<b>Background documents</b> – as for the first SDG meeting, plus:		
IWC/N04/RMS WG	16	Chair's Report of the RMS Working Group Meeting, Borgholm, 29 November to 1 December 2004
IWC/D04/RMS SDG	3	Schedule of the International Convention for the Regulation of Whaling (October 2004 version)

## ANNEX 4

**Incorporation into the Schedule of the various versions of text for a Statement of Principle for the Revised Management Scheme**

The RMS Working Group requested that the SDG develop draft Schedule text for the following options:

*Option 1*

Inclusion of a statement to describe the scope, mandate and purpose of any RMS. Three alternatives were identified:

- (A) short version of paragraph 1(a) as in Report of the RMS Working Group from IWC/54 in Shimonoseki (IWC/54/7) – with and without reference to aboriginal subsistence whaling;
- (B) longer version of paragraph 1(a) as proposed by New Zealand and Australia (note this replaces Option 2: Proposals A and C from IWC/D04/RMS SDG5);
- (C) longer version of paragraph 1(a) as proposed by St Kitts and Nevis, Republic of Guinea, Gabon, Nicaragua, Dominica and Antigua and Barbuda at the RMS Working Group meeting in Borgholm (note this is the same option as Option 2: Proposal B from IWC/D04/RMS SDG5).

*Option 2*

Inclusion of a statement specifically indicating that nothing in Chapter V is intended to restrict any legitimate trade in any whale product by including paragraph 1(b) as in Report of the RMS Working Group from IWC/54 in Shimonoseki (IWC/54/7).

*Option 3*

No statement of principle.

**Outcome of SDG discussions:**

The following proposed text addresses the RMS Working Group request. Given the lack of consensus in the RMS Working Group, all options can be considered to be in square brackets. Note that this whole section is in square brackets, representing Option 3, i.e. no text on principles in the Schedule.

<b>V. SUPERVISION AND CONTROL</b>	
	<b>[Statement of principle</b>
	<i>Option 1(A)</i>
17.	[(a). The purpose of this Chapter is to set out the basic requirements for a robust supervision and control scheme for all whaling activity undertaken in accordance with this Schedule [(other than aboriginal subsistence whaling)] to ensure compliance with the provisions of the Convention.]
	<i>Option 1(B)</i>
	[(a) The provisions of this Chapter V shall apply to all whaling activity undertaken in accordance with this Schedule (other than aboriginal subsistence whaling) and which is undertaken by vessels authorised by Contracting Governments.
	(b) The requirements of this Chapter V are based on current best international practice; and on: <ul style="list-style-type: none"> <li>(i) The need to ensure that the only perishable whale products deemed to have been legitimately taken are derived from whales taken in accordance with the provisions of the Revised Management Scheme;</li> <li>(ii) Provisions for an effective Inspection and International Observer Scheme for effective monitoring, control and surveillance that fully addresses, <i>inter alia</i>, issues of under-reporting and mis-reporting of catches;</li> <li>(iii) The need to provide appropriate oversight and review to ensure the compliance of all whaling operations with agreed conservation measures and with the provisions of the Schedule and with the provisions of the Revised Management Scheme;</li> </ul>

	<p>(iv) Ensure a comprehensive and integrated approach by flag, coastal and port states in taking measures, including information sharing, to prevent, deter and eliminate IUU whaling activity; and</p> <p>(v) Ensure that measures to prevent, deter and eliminate IUU whaling activity are transparent and are applied in a non-discriminatory manner consistent with relevant international law.]</p>
	<p><i>Option 1(C)</i></p> <p>[(a) The provisions of this Chapter V shall apply to all whaling activity undertaken in accordance with this Schedule (other than aboriginal subsistence whaling) and which is undertaken by vessels authorised by Contracting Governments.</p> <p>(b) The requirements of this Chapter V are based on:</p> <ul style="list-style-type: none"> <li>(i) the importance of continuous scientific research to determine species interaction and the impact of whale population on other marine species;</li> <li>(ii) the requirements and importance of global food security especially in developing countries and rural and coastal areas of developing countries;</li> <li>(iii) the need to provide food from the natural marine environment to reduce the negative impact on human health possible from manufactured food;</li> <li>(iv) a recognition that the nutritional needs of coastal states may in part be met by the use of marine living resources within their jurisdiction in accordance with Agenda 21;</li> <li>(v) the sovereign rights of coastal states to determine policies and mechanisms for the sustainable use of marine living resources within their exclusive economic zone in accordance with the United Nations Convention on the Law of the Sea;</li> <li>(vi) the co-ordinating role of international organisations such as the IWC taking into consideration coastal states' rights to the sustainable use of highly migratory species;</li> <li>(vii) the special rights of developing countries to the sustainable use of cetacean resources for domestic consumption and international trade;</li> <li>(viii) special consideration of developing countries for a cost effective Revised Management Scheme.] </li></ul>
	<p><i>Option 2</i></p> <p>[(b)/(c). No provision of this Chapter is intended to, nor shall it be deemed or interpreted to be, a restriction on any legitimate trade in any whale product.] ]</p>

## ANNEX 5

**Incorporation of the Revised Management Procedure into the Schedule, including a geographical phase-in of commercial whaling and reference to sanctuaries**

The RMS Working Group noted that the following options exist and requested the SDG to develop draft Schedule text as appropriate:

**A. RMP**

- (1) the RMP as currently adopted by the Commission;
- (2) as (1) but with square brackets around the lower percentile of the marginal posterior distribution of  $L_T$  – representing the tuning level of 0.72 (see Appendix 2, section 4.4);
- (3) a proposal from Norway concerning periodic review of the RMP. It should be noted that this is not an alternative option, but rather an addition to (1) and (2).

The SDG was also requested to review existing draft Schedule text for incorporating the RMP into the Schedule and to develop draft Schedule text that refers to a dated version of the RMP annotations and requirements and guidelines.

**B. Phased-in approach**

- (1) No phase-in of commercial whaling;
- (2) No commercial whaling on the high seas (i.e. commercial whaling would be restricted to waters under national jurisdiction);
- (3) Phasing-in of commercial whaling as proposed by the Chair (i.e. commercial whaling would be restricted to waters under national jurisdiction only for a limited period after the lifting of the moratorium).
- (4) A compensation mechanism should option (2) or (3) be adopted;

These options can be seen in paragraph 3 below.

**C. Sanctuaries**

- (1) Existing provisions for sanctuaries are clear and do not need to be included as part of the RMS ‘package’ (i.e. the Chair’s proposal);
- (2) Inclusion of draft Schedule text as proposed by New Zealand.

**Outcome of SDG discussions:**

The following proposed text addresses the RMS Working Group request. Text related to (1) incorporation of the RMP and setting catch limits under the RMP; (2) a phased-in approach; and (3) sanctuaries is highlighted.

<b>II. AREAS</b>	
<b>Management Areas for Commercial Whaling</b>	
3.	<p>Commercial whaling catch limits shall be set by Small Area (or combinations thereof) as defined in the Revised Management Procedure (RMP) specified in Appendix<sup>2</sup> {RMP}.</p> <p>[The Scientific Committee shall periodically review the RMP to ensure that the best available scientific knowledge is used in line with internationally recognized principles for management of living marine resources, not precluding a stock specific approach, and if necessary recommend any revisions to the Commission.]</p> <p>[Notwithstanding the catch limits by Small Area shown in Table 1<sup>3</sup>, whaling will be restricted to waters under the national jurisdiction of the relevant Contracting Governments] [until <i>day/month/year</i>. After that date, this restriction will no longer be in effect.’ ]</p> <p>[In keeping with principles of equity, and in special consideration of developing countries<sup>4</sup>, compensation shall be provided for the duration of any such restriction in accordance with Appendix {compensation} – dated <i>day/month/year</i>.]<sup>5</sup></p> <p>[Nothing in this Schedule shall authorise the taking of whales in any sanctuary designated in accordance with this Convention or under the authority of any other competent international body; nor shall it authorise the taking of whales in a sanctuary declared by any State in respect of any area under its national jurisdiction; nor shall it authorise any whaling activity that is contrary to any marine mammal conservation measure adopted in accordance with international law.<sup>6</sup>]</p>
<b>III. CATCH LIMITS</b>	
<b>Commercial Catch Limits for Baleen Whales</b>	
5.	<p>(a) Commercial whaling shall only be permitted for populations, areas and seasons for which catch limits are in force and shown in Table 1. These catch limits shall have been calculated by the Scientific Committee on the instruction of the Commission in accordance with the RMP specified in Appendix {RMP}. They shall be adjusted downwards to account for [human-induced mortalities as specified in paragraph 5 (b)] [mortalities (whether human-induced or otherwise) as specified in paragraph 5 (b) and 5 (c)]. Commercial catch limits for all populations in all areas and seasons not listed in Table 1 are zero.</p> <p>(b) [The adjustment to catch limits to account for human-induced mortalities shall be based on an estimate provided by the Scientific Committee of the size of adjustment required to ensure that total removals over time from each population and area do not exceed the limits set by the RMP. Total removals include commercial catches and other human-induced mortalities caused by aboriginal subsistence whaling, scientific whaling, whaling outside the IWC, bycatches and ship strikes, to the extent that these are known or can be reasonably estimated.]</p>

<sup>2</sup> If a final RMS is adopted, the Appendices will be numbered accordingly. For the present we have adopted the convention of Appendix {topic}.

<sup>3</sup> The Table 1 referred to here is the table of catches in the Revised Draft Schedule given in IWC/D04/RMS SDG4 and not Table 1 of the existing Schedule.

<sup>4</sup> For the purposes of this mechanism, the definition of developing countries means capacity-to-pay groups 1 and 2 of the Commission’s financial contribution scheme.

<sup>5</sup> This sentence was drafted by the SDG to try to capture the spirit of the statement made by St. Kitts and Nevis during the meeting of the RMS Working Group in Copenhagen (see IWC/57/RMS 3). The SDG agreed that it was not in a position to develop any details, including which countries would receive compensation. There was also discussion on whether the sentence should say ‘compensation shall be provided’ or ‘compensation may be provided’. The SDG recognised that this would depend on the content of the Appendix to which the sentence refers.

<sup>6</sup> The Chairs note that the second clause in this sentence could be interpreted as forbidding all types of whaling in an area designated as a ‘sanctuary’ by a coastal State. The text should be revised to make clear that the terms under which the coastal State established the sanctuary would determine whether certain types of whaling are permitted.

	(c) [In the event of a massive die-off (biological and/or human-induced) larger than 1% of a stock or 500 animals – whichever is smaller – the Commission shall order a temporary cessation of catch limits on that stock. A catch limit integrating this event shall immediately be recalculated by the Scientific Committee: it shall remain in effect for the remainder of the catch limit period. Given the magnitude of a die-off, the Commission may determine, by simple majority vote, that catches are prohibited until further notice.] <sup>7</sup>
	(d) [Notwithstanding the other provisions of paragraph 5 there shall be a moratorium on the taking, killing or treating of whales, except minke whales, by factory ships or whale catchers attached to factory ships. This moratorium applies to sperm whales, killer whales and baleen whales, except minke whales.] ( <i>note: this is current Schedule paragraph 10(d)</i> )
	(e) [Notwithstanding the other provisions of paragraph 5, catch limits for the killing for commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero. This provision will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of this decision on whale stocks and consider modification of this provision and the establishment of other catch limits.] ( <i>note: this is current Schedule paragraph 10(e)</i> )
<b>Sperm whale catch limits</b>	
12.	Catch limits for sperm whales are zero.
<b>VI. INFORMATION REQUIRED</b>	
33.	The following samples and/or information shall be provided:
	(a) The length of all animals caught shall be obtained, measured in a straight line parallel to the whale from the tip of the upper jaw to the notch of the flukes. These data shall be reported to the Secretariat at the end of each season and included in the IWC database.
	(b) Where possible, both ovaries shall be collected from each female caught. Corpora counts shall be reported to the Secretariat within one year of the close of the season and included in the IWC database.
	(c) If sufficiently trained personnel are present, the presence, length and sex of foetuses shall be recorded. If it is not possible for such personnel to be present, these data should still be recorded where possible, and the lack of trained personnel noted. These data shall be forwarded to the Secretariat at the end of the season and included in the IWC database.
	(d) Lactation shall be recorded and reported to the Secretariat at the close of the season and included in the IWC database.
	(e) At least 5cm <sup>2</sup> of skin shall be collected from each whale caught <sup>8</sup> and, where possible, a sample of tissue from the foetus should be collected. Long term archiving of all samples with appropriate identifying information is the responsibility of the harvesting nation. A list of archived samples shall be forwarded to the Secretariat at the end of each season.
	Further details are provided in the document ' <i>Guidelines for Data Collection and Analysis under the Revised Management Scheme (RMS) Other than those Required as Direct Input for the Catch Limit Algorithm (CLA)</i> ' dated {day/month/year} and held by the IWC Secretariat.

<sup>7</sup> As previously, Japan wishes to register its objection to the inclusion of this paragraph. In particular it noted it includes a provision for the Schedule to be effectively changed by a simple majority, which is not possible.

<sup>8</sup> Secretariat note: this may need to be modified if a DNA register system is adopted.

## Appendix {RMS}

**The Revised Management Procedure (RMP) for Baleen Whales<sup>9</sup>****1. DEFINITIONS**

*Regions* are non-overlapping major ocean areas. For species found in or migrating to higher latitudes, these will normally be the Arctic and adjacent waters, the North Atlantic and adjacent waters, the North Pacific and adjacent waters, and the Southern Hemisphere. For species confined to lower latitudes, the *Regions* will normally be the Atlantic, Pacific and Indian Oceans. *Regions* can be combined for species where the interchange is not negligible.

*Small Areas* are disjoint areas small enough to contain whales from only one biological stock, or be such that if whales from different biological stocks are present in the *Small Area*, catching operations would not be able to harvest them in proportions substantially different to their proportions in the *Small Area*.

*Medium Areas* correspond to known or suspected ranges of distinct biological stocks.

*Large Areas* coincide with *Regions*, unless evidence exists to support the selection of one or more areas smaller than a *Region* which fully covers the range of some biological stocks of a species and definitely excludes whales from all other biological stocks of that species in the *Region*.

*Residual Areas* are all geographical areas in a *Region* which are outside any *Small Areas*. *Medium Areas* comprise unions of *Small* and, where identified, *Residual Areas*. *Large Areas* comprise unions of *Medium* and, where identified, *Residual Areas*.

*Combination Areas* are disjoint unions of *Small Areas* to which the *Catch Limit Algorithm* is applied when *Catch-cascading* is used.

*Management Area* is a generic term denoting a *Small*, *Medium*, *Large*, *Residual* or *Combination Area*.

*Catch Limit Algorithm* is the process (described in Section 4) that is used to calculate a catch limit for a *Management Area*.

*Years* are consecutive periods of 12 months used for the compilation of time series of catches and abundance data for application of the *Catch Limit Algorithm*. Neither this definition, nor any statement following, should be construed as precluding the possibility of a regulation that a catch limit calculated in such an application may be taken only during a certain part of the *Year*.

*Catch-cascading* is the process by which a catch limit calculated for a *Combination Area* is distributed among the *Small Areas* that make up the *Combination Area* in proportion to the calculated relative abundances in those *Small Areas*. When *Catch-cascading* occurs, the relative abundances for *Small Areas* within the *Combination Area* shall normally be calculated from the same estimates of absolute abundance as were used for the application of the *Catch Limit Algorithm* to the *Combination Area*. The calculated relative abundance in a *Small Area* shall be an appropriate form of weighted average of the available abundance indices for that *Small Area*, with the statistically appropriate weighting, except that each estimate shall also be further weighted by the factor  $0.9^n$ , where  $n$  is the number of years that have elapsed between the *Year* to which the estimate refers and the *Year* of the *Catch Limit Calculation*.

*Catch-capping* is the process by which *Catch Limits* calculated for *Small Areas* are adjusted by reference to those calculated for either *Medium* or *Large Areas* containing those *Small Areas*. It consists of the following rules. If the sum of the catch limits calculated for those *Small Areas* that make up a *Medium* (or *Large*) *Area* exceeds the catch limit calculated for the *Medium* (or *Large*) *Area*, then both the *Small* and *Medium* (or *Large*) *Area* catch limits shall apply in such a way that the maximum catch allowed in each *Small Area* is the appropriate *Small Area* catch limit and the maximum catch allowed in the *Medium* (or *Large*) *Area* is the *Medium* (or *Large*) *Area* catch limit. This definition does not preclude the possibility of applying *Catch-capping* to overlapping *Medium Areas*.

An *Implementation* involves the designation of the *Management Areas* and their boundaries and the selection of *Catch-cascading* and/or *Catch-capping* options for a particular species and *Region*. These designations and/or selections may be changed in a subsequent *Implementation Review*.

A *Catch Limit Calculation* is the process by which catch limits for a species in a *Region* are calculated for all *Small* (and where appropriate *Medium* or *Large*) *Areas* within that *Region*, as specified in Sections 3.3, 3.4 and

<sup>9</sup> Annotations detailing the practical application of the RMP by the Scientific Committee are included in the document '*Annotations to the Revised Management Procedure (RMP) for Baleen Whales*' dated day/month/year and held by the IWC Secretariat

3.5, by application of the *Catch Limit Algorithm* as described in Section 4. This algorithm uses historic catch data and estimates of absolute abundance for each *Management Area* that meet the requirements of Section 3.2.

## 2. IMPLEMENTATIONS AND IMPLEMENTATION REVIEWS<sup>10</sup>

*Implementations* and *Implementation Reviews* are conducted by the Scientific Committee on a *Regional* basis. They involve the delineation of *Small Areas* and, where appropriate, *Medium* and *Large Areas*. A selection between possible options for *Catch-cascading* and/or *Catch-capping* is made during an *Implementation (Review)*, which includes the designation of *Combination Areas* as may be appropriate. This process is described as an *Implementation* on the first occasion it takes place for a species in a *Region*; subsequent revisions are termed *Implementation Reviews*. An *Implementation (Review)* shall take account of the available biological and operational data, including in particular those data pertaining to stock-identity. An *Implementation (Review)* is conducted by species or other suitable taxonomic unit below the species level. Such taxonomic units should be treated separately for the purpose of *Catch Limit Calculations* (see Section 3) where the extent of geographical separation is sufficient to make this feasible. In the following text, 'species' should be taken to refer to taxonomic units below the species level where appropriate.

## 3. CATCH LIMIT CALCULATIONS

### 3.1 Scope and period of validity

*Catch limits* pertain to the first *Year* commencing after their calculation by the Scientific Committee, and for each of the following four *Years*. A catch limit is calculated for each *Small Area* in a *Region* for each of these five *Years*. The five catch limits calculated for each *Management Area* shall be equal, except where adjustments are made under the phaseout rule specified in section 3.4. A *Catch Limit Calculation* involves the (re)calculation of catch limits for all *Small Areas* and, where appropriate, *Medium* or *Large Areas* in the *Region*. At the request of the Commission, the first of these catch limits calculated may alternatively refer to the *Year* in which the calculation takes place, and for each of the following four *Years*.

Where appropriate, a carry-over provision may be attached to the set of five catch limits calculated for a *Small Area*, and shall operate as follows. Where a catch limit for a *Small Area* is not reached in any one *Year*, the shortfall may be added to the catch limit for the same *Small Area* in any of the remaining years of validity of the *Catch Limit Calculation*. Any unused carry-over remaining at the end of the fifth *Year* of validity of the *Catch Limit Calculation*, or at the beginning of the first *Year* of validity of a new *Catch Limit Calculation*, whichever is the sooner, lapses.

### 3.2 Data requirements

#### 3.2.1 Catch history

Time series of catches by sex shall be compiled for each of the *Management Areas* specified within the region, using the best available information. These catch histories shall cover a period beginning not later than the *Year* of the first recorded or estimated catch and ending with the *Year* preceding the first *Year* for which catch limits are to be calculated.

If there are catches known to have occurred in the *Region*, but the *Small Area* in which they were taken is not known, they shall be assigned to the *Small Area* in which they are considered most likely to have been taken. *Pro rata* allocations are allowed. Where the sex ratio of catches is not accurately known, the best available estimate of the sex ratio shall be used to divide the catches; in the absence of any information, a 50:50 sex ratio shall be assumed. Unspecified catches of whales shall be allocated to species using the best available information on the species composition of the catch. Known or estimated numbers of whales struck and lost shall be added to the catches. If the timing of catches is uncertain, they shall be assigned to *Years* according to the best available information. No catches known to have occurred in the *Region* shall be omitted from the *Catch Limit Calculation* on grounds of uncertainty over their location, timing, sex ratio or other details. All known removals from a *Region* shall be included in the catch series.

#### 3.2.2 Absolute abundance estimates

Absolute abundance data to be used in the calculation of catch limits shall have been obtained by direct methods, such as sightings surveys, and collected and analysed using methods approved by the Scientific Committee. *Management Areas* to which the *Catch Limit Algorithm* is applied should normally be surveyed at intervals not exceeding six years. The methods shall be such as to provide estimates of whale abundance that have acceptable levels of bias and precision. They shall also permit estimation of the variance of each estimate and of their variance-covariance matrix, or alternative variance-related statistics where appropriate.

Data for any sightings survey to be used to calculate abundance estimates for the purposes of conducting a *Catch Limit Calculation* shall be documented and provided to the Secretariat in computer readable data files before a

<sup>10</sup> The practical application of *Implementations* and *Implementation Reviews* by the Scientific Committee is detailed in the document 'Requirements And Guidelines For *Implementations*' dated day/month/year and held by the IWC Secretariat

specified time in advance of the Scientific Committee meeting during which the data are to be used. All such data should be archived by the Secretariat in an appropriate database such that abundance estimates can be calculated for any specified *Small Area*. Data should be in a fully disaggregated form so that estimates can be recalculated appropriately if the boundaries of *Management Areas* are altered. Once lodged with the Secretariat, these data shall be available to accredited scientists as defined in the Scientific Committee's Rules of Procedure.

Estimates of absolute abundance are required for each *Management Area* to which the *Catch Limit Algorithm* is to be applied under the procedures described in Section 3.3. For each such *Management Area*, a time series of absolute abundance estimates shall be calculated, along with an estimate of their variance-covariance matrix, or alternative variance-related statistics where appropriate. The approximate distributional properties of the abundance estimates shall also be determined. Care should be taken to avoid substantially underestimating the variance (or alternative variance-related statistic) of each abundance estimate used for input into the *Catch Limit Algorithm*.

The absolute abundance estimate for a given *Year* should ideally be calculated from data collected in that *Year*. Data collected in different *Years* may be used, for example to account for parts of the area that were not covered in that *Year*, to pool results from surveys conducted over consecutive or nearly consecutive *Years* in order to reduce variance, or to provide estimates of calibration factors, provided that appropriate statistical methods are used.

Data from surveys conducted in different *Years* or at different times of year may only contribute to a single abundance estimate if adequate precautions are taken to avoid substantial double counting of whales due to migration or other factors. In the calculation of an absolute abundance estimate for a *Management Area* in a given *Year*, parts of the Area for which there are no absolute abundance estimates available at any time meeting the above specifications shall be treated as having an absolute abundance of zero.

The absolute abundance estimates should pertain to the total number of whales aged one year and above in the *Management Area*, regardless of any size limits that may be in force or the selectivity or otherwise of any past or present exploitation. Animals aged less than one year shall be excluded where possible.

The only estimates of abundance acceptable for use in the *Catch Limit Algorithm* are those obtained in accordance with the '*Requirements and Guidelines for Conducting Surveys and Analysing Data Within the Revised Management Scheme*' dated {day/month/year} and held by the IWC Secretariat.

### 3.3 Options for determination of catch limits

Catch limits shall always be set at the *Small Area* level and they shall be set for each *Small Area* in a *Region*. In addition, where *Catch-capping* is invoked at the *Medium* or *Large Area* level, corresponding catch limits will be set for those *Medium* or *Large Areas*. Catch limits for all *Residual Areas* within a *Region* shall be set at zero.

Catch limits for the total number of whales that may be taken in a season in each *Small Area* will be calculated by:

- (a) application of the *Catch Limit Algorithm* to the *Small Areas* or, where appropriate, to *Combination Areas*, in which case *Catch-cascading* occurs; and
- (b) where appropriate, by adjustment of the *Small Area* catch limits calculated, with or without *Catch-cascading*, under (a) by either
  - (1) application of the *Catch Limit Algorithm* to one or more of the *Medium Areas*, followed by *Catch-capping* of the *Small Area* catch limits; or
  - (2) application of the *Catch Limit Algorithm* to one or more of the *Large Areas*, followed by *Catch-capping* of the *Small Area* catch limits.

Catch limits for the total number of whales that may be taken in a *Year* in *Medium* or *Large Areas*, as required when *Catch-capping* is invoked, will be calculated by application of the *Catch Limit Algorithm* to those *Medium* or *Large Areas*.

The decision for any particular species or *Region* on whether or not *Catch-capping* is to be applied, and if so whether it should be applied at the *Medium* or *Large Area* level, and whether or not *Small Areas* are to be combined for the purposes of *Catch-cascading*, will be made on the basis of biological evidence available to the Scientific Committee, and, where necessary, the results of computer simulation trials conducted by the Scientific Committee. Where computer simulation trials are carried out, they shall, as far as possible, encompass the full range of plausible hypotheses (regarding, for example, stock identity) consistent with existing biological data.

### 3.4 Phase-out rule

The catch limits for a *Small Area* calculated under Section 3.3 shall be adjusted downwards when the time series of absolute abundance estimates used for the application of the *Catch Limit Algorithm* to the *Small Area* (or, if *Catch-cascading* has been applied, to the *Combination Area* containing it) does not include an absolute abundance estimate pertaining to a *Year* not more than eight years prior to the *Year* to which the catch limit pertains. Under these circumstances, the catch limit for the *Small Area* shall be reduced by 20% of the unadjusted catch limit for that *Small Area* and *Year* for each year in excess of eight years that has or will have elapsed since the *Year* of the most recent such abundance estimate. This rule shall also be invoked in a *Small Area* included in a *Combination Area* for *Catch-cascading* if the data used for the derivation of absolute abundance estimates for input to the *Catch Limit Algorithm* do not contain any survey effort in that *Small Area* within this eight year period.

### 3.5 Adjustments for recent sex ratios in the catch

If the proportion,  $P_f$ , of female whales in the total catch taken from a *Small Area* in the most recent five *Years* prior to the *Catch Limit Calculation* for which the catch data are available exceeds 50%, the catch limits for the *Small Area* calculated according to the procedure described in sections 3.3 and 3.4 shall be adjusted downwards by the ratio  $0.5/P_f$ . However, should the Scientific Committee decide it to be more appropriate, this adjustment ratio shall be determined from the proportion of females in the total catch taken from a union of *Small Areas*, and applied to the catch limit for each *Small Area* in the union. Further, the sex ratio adjustment shall be waived if the Scientific Committee agrees that the catches taken in the most recent five *Years* for which the catch data are available are too few to provide a useful indication of the expected future sex ratio of the catch.

## 4. CATCH LIMIT ALGORITHM

The nominal catch limit for a *Management Area* shall be calculated using the algorithm defined below if at least one estimate of absolute abundance as defined in Section 3.2 is available for the *Area* in question. Otherwise, the nominal catch limit for the *Management Area* shall be zero.

### 4.1 Input data

The input data for application of the *Catch Limit Algorithm* for any *Management Area* shall include the time series of annual catches as detailed in Section 3.2.1 and the time series of absolute abundance estimates, along with their variance-covariance matrix or other appropriate variance-related statistics and a specification of the distributional form of the absolute abundance estimates, as specified in Section 3.2.2.

### 4.2 Population model

The following population dynamics model<sup>27</sup> shall be used:

$$P_0 = P_T / D_T$$

$$P_{t+1} = P_t - C_t + 1.4184\mu P_t (1 - (P_t / P_0)^2) (0 \leq t < T)$$

where:

$P_t$  is the population size in numbers at the beginning of *Year t*;

$C_t$  is the catch in numbers in *Year t*;

$D_T$  is the ratio of the population size at the beginning of *Year T* to the population size at the beginning of *Year zero*, known as the stock depletion;

*Year zero* is the first *Year* of the catch series used in the *Catch Limit Calculation* (as specified in Section 3.2.1);

*Year T* is the first year for which a catch limit is to be calculated in the current *Catch Limit Calculation*;

$\mu$  is the productivity parameter.

Provided there have been at least some catches, the population dynamics model is fully determined when the catch series and the values of  $D_T$  and  $\mu$  are specified. If there have been no catches, a nominal catch of one whale in *Year zero* is assumed.

### 4.3 Fitting of the model

The annual absolute abundance estimate (if there is one) for each *Year t*, is assumed to have expectation  $bP_t$  where  $b$  is the bias parameter. The joint likelihood function of the parameters  $b$ ,  $D_T$  and  $\mu$  is determined using the absolute abundance estimates, the variance-covariance matrix of the absolute abundance estimates (or alternative variance-related statistics where appropriate) and information on their distributional form.

Unless there are specific indications to the contrary, the absolute abundance estimates shall be assumed to be lognormally distributed with a variance-covariance matrix of the log estimates to be estimated from the data using methods judged appropriate by the Scientific Committee. In this case, the formula for the likelihood is:

$$\text{Likelihood } (D_T, \mu, b) \propto \exp[-\frac{1}{2}(\mathbf{a} - \mathbf{p} - \beta\mathbf{1})' H (\mathbf{a} - \mathbf{p} - \beta\mathbf{1})]$$

where:

$\mathbf{a}$  is the vector of logarithms of estimates of absolute abundance by season;

$\mathbf{p}$  is the vector of logarithms of the modelled annual population sizes:  $p_t = \log(P_t)$ ;

$\beta$  is the logarithm of the bias parameter:  $\beta = \log(b)$ ;

$\mathbf{1}$  is a vector of ones;

$H$  is the information matrix of the  $\mathbf{a}$  vector. If  $H$  is non-singular,  $H = V^{-1}$  where  $V$  is the variance-covariance matrix of the components of  $\mathbf{a}$ .

The stock depletion parameter  $D_T$  is assigned a prior probability distribution that is uniform from zero to one, and zero outside this range.

The productivity parameter  $\mu$  is assigned a prior probability distribution that is uniform from zero to 0.05, and zero outside this range.

The bias parameter  $b$  is assigned a prior probability distribution that is uniform from zero to 5/3, and zero outside this range.

The above three prior distributions are treated as independent and combined accordingly to determine the joint prior distribution of the parameters  $D_T$ ,  $\mu$  and  $b$ .

The joint 'posterior' distribution of the parameters  $D_T$ ,  $\mu$  and  $b$  is defined as follows:

$$\text{Posterior } (D_T, \mu, b) \propto \text{Prior } (D_T, \mu, b) \cdot \text{Likelihood } (D_T, \mu, b)^s$$

where  $s$ , the scale parameter, is set equal to 1/16. The presence of the scale parameter represents an intended deviation from a strictly Bayesian approach.

#### 4.4 The catch control law

The internal catch limit,  $L_T$ , is the following function of  $D_T$ ,  $\mu$  and  $P_T$ :

$$L_T = \begin{cases} 3\mu(D_T - 0.54)P_T & \text{if } D_T > 0.54 \\ 0 & \text{if } D_T \leq 0.54 \end{cases}$$

The marginal posterior distribution of  $L_T$  is obtained by integration of the joint posterior distribution of  $(D_T, \mu, b)$ . This requires that, for each value of  $L_T$ , the joint posterior distribution of  $(D_T, \mu, b)$  is to be integrated over the subset of parameter space that corresponds to that value of  $L_T$ . The nominal catch limit is equal to the lower [41.02]<sup>11</sup> percentile of the marginal posterior distribution of  $L_T$ .

#### 4.5 Computation

All steps in the above algorithm for the calculation of the nominal catch limit shall be performed using a computer program validated by the IWC Secretariat and with sufficient numerical accuracy that the calculated nominal catch limit is numerically accurate to within one whale.

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<sup>11</sup> SDG Note: The square brackets around 41.02 are to reflect that some countries did not agree with the tuning level of 0.72 adopted by Commission Resolution in 1991 (the value 41.02 is the direct consequence of that choice of tuning level). If another tuning level is proposed, then the Scientific Committee would have to calculate the resultant lower percentile. Removing 41.02 without inserting an alternative value would leave a meaningless sentence and effectively prevent the Scientific Committee from calculating the nominal catch limit.

## ANNEX 6

**Incorporation into the Schedule of provisions for national inspection and international observation**

The RMS Working Group requested that the SDG develop draft Schedule text for the following options:

*National inspectors and international observers*

- (1) the Chair's proposals for national inspection and international observation, as described in document IWC/N04/RMSWG 8 (note this is essentially the same as proposed by the RMS Expert Drafting Group in IWC/54/RMS 1);
- (2) the requirement for all whaling vessels to have an international observer on board (i.e. 100% coverage);
- (3) the nature of national inspection not being specified (i.e. being left to a Contracting Government to specify) as proposed by Norway.

The text addressing Option (2) can be found in paragraph 1 of Appendix {IOS}. One member of the SDG commented that he felt that the proposed International Observer Scheme may be seen to discriminate against scientists/observers from developing countries. The SDG believed that no changes were needed to existing draft text in paragraph 24 to incorporate option (3) as the existing text does not specify how national inspection is to be accomplished. It was noted that during the RMS Working Group meeting in Copenhagen (30 March to 1 April 2005), Norway had indicated that it would provide details on its 'blue box' technology to the RMS Working Group Meeting at IWC/57 in Ulsan.

*VMS*

- (1) the Chair's proposal as described in document IWC/N04/RMSWG 8;
- (2) the establishment of a combined national and centralised VMS system, with VMS being required on all boats, using the report of the VMS specialist group as a basis (IWC/M05/RMSWG 6).

The RMS Working Group also requested the SDG to begin the development of technical specifications for a combined national and centralised VMS system based on the report from the VMS technical specialist group (IWC/M05/RMSWG 6).

**Outcome of SDG discussions:**

The following proposed draft Schedule text addresses the RMS Working Group request.

A starting point for the development of technical specifications for a combined national and centralised VMS system is provided at the end of this section. The SDG noted that further development of the technical specifications should be based on the existing VMS systems of other fisheries management bodies, particularly that of NEAFC (North East Atlantic Fisheries Commission) and draws the need for further work to the attention of the RMS Working Group.

<b>V. SUPERVISION AND CONTROL</b>	
<b>Practical details for implementing the supervision and control scheme</b>	
18.	The practical details required to implement the supervision and control scheme are given in the document <i>'Details of the Supervision and Control Scheme of the Revised Management Scheme'</i> dated <i>day/month/year</i> . <sup>12</sup>
<b>General requirements</b>	
19.	Whales may only be taken by vessels authorised by Contracting Governments. Primary processing may only be undertaken on vessels or at points of landing authorised by Contracting Governments. [Secondary processing may only take place at processing plants authorised by Contracting Governments.]

<sup>12</sup> This document (or documents) will provide the necessary details for implementing, for example, DNA registers/market monitoring, VMS on vessels. When the overall RMS is agreed the editorial decision as to how to incorporate this will need to be taken.

20.	<p>At least 3 months before the start of the season, Contracting Governments shall inform the Secretariat of the following information necessary for implementation of the International Observation Scheme described in Appendix {IOS}:</p> <ul style="list-style-type: none"> <li>(a) the location of each point of landing/primary processing site and the authorised dates of operation;</li> <li>(b) the name or identifying code of each vessel, [and its vessel category (as recognised in the International Observer Scheme),] its home port and authorised dates of operation;</li> <li>(c) [the names of authorised secondary processing plants.]</li> </ul> <p>Such information: shall remain confidential; is to be made available to Contracting Governments on request; and is to be used only in conjunction with the International Observer Scheme.</p>
<p><b>Vessel Monitoring Systems<sup>13</sup></b></p>	
21.	<p><u>Possible text to put the Chair's proposal for VMS into effect</u></p> <p><i>Alternative 1</i> [[Commercial] whaling vessels that only operate trips of less than 24 hours, carry out no flensing onboard (apart from slitting the belly at sea) and for which the legal limit of persons onboard does not exceed the number of crew, shall be equipped with a monitoring device for [continuous] reporting of position in real time to the international observer at the identified point of landing using IWC-approved equipment as specified in the 'Details of the Supervision and Control Scheme of the Revised Management Scheme' dated day/month/year<sup>15</sup>. Vessel position on all other vessels [engaged in commercial whaling operations] will be monitored by the international observer equipped with an independent portable Global Positioning System that meets the specifications given in the 'Details of the Supervision and Control Scheme of the Revised Management Scheme' dated day/month/year<sup>16</sup>.]</p> <p><i>Alternative 2</i> [Position data from certain commercial whaling vessels shall be transmitted in real time to the appropriate international observer, as detailed in Appendix 3, and meeting the specifications given in the xxxxxx 'Details of the Supervision and Control Scheme of the Revised Management Scheme' dated day/month/year.<sup>17</sup>]</p> <p><u>Possible text to put the proposal for a combined national system and centralized VMS system</u></p> <p>[All whaling vessels engaged in [commercial] whaling operations shall be equipped with a monitoring device able to automatically transmit position [and other] data to a land-based fisheries monitoring centre thus allowing the [continuous] tracking of vessels in real time. Contracting Governments shall ensure that the Secretariat receives the position of each vessel [in real time][,or as close to real time as the system installed on the relevant vessel allows][at another frequency to be determined]. The specifications for such a monitoring system shall be in accordance with the details provided in the 'Details of the Supervision and Control Scheme of the Revised Management Scheme' dated day/month/year.<sup>18</sup>]</p>

<sup>13</sup> Secretariat note: it may be better to insert this paragraph after the paragraphs on National Inspection and the International Observer Scheme.

<sup>15</sup> This document (or documents) will provide the necessary details for implementing, for example, DNA registers/market monitoring, VMS on vessels. When the overall RMS is agreed the editorial decision as to how to incorporate this will need to be taken.

<sup>16</sup> see footnote 15

<sup>17</sup> see footnote 15

<sup>18</sup> see footnote 15

<b>National Inspection Schemes</b>	
23.	Each Contracting Government under whose jurisdiction whaling operations for commercial purposes are carried out, shall have in place appropriate enforcement legislation and effective administrative frameworks to ensure that the requirements of the Revised Management Scheme are fully met. Copies of the relevant laws and regulations shall be transmitted to the Commission.
24.	National inspection schemes shall at least include: <ul style="list-style-type: none"> <li>(a) provisions ensuring appropriate inspection during the season on each whaling vessel and at each point of landing/primary processing site;</li> <li>(b) provisions authorising national inspectors to check and ensure compliance with the provisions of the Convention and national regulatory measures.</li> </ul>
25.	National inspectors shall be appointed and paid by the Contracting Government having jurisdiction over the commercial whaling operations to be inspected and shall receive their instructions from their national authorities.
<b>International Observer Scheme</b>	
26.	For the purpose of monitoring compliance with the provisions of the Convention pertaining to commercial whaling operations, the Commission shall appoint observers to whaling operations in accordance with the International Observer Scheme detailed in Appendix {IOS}.
27.	[If, through no fault of the Contracting Government or relevant whaling operation, an observer is not available, the Secretariat <i>[shall/may]</i> , on behalf of the Commission, waive the requirement for an observer to be present.]  [Notwithstanding the requirements of paragraph 26, vessel departure, hunting or landing of whales shall neither be delayed nor prevented if, through no fault of the Contracting Government or relevant whaling operation, an observer is not available.]
28.	The Secretariat shall write an annual report for review by the Commission about the functioning of the International Observer Scheme. The Secretariat shall also provide a list of all alleged infractions. They shall be considered by the Compliance Review Committee.

## Appendix {IOS}

# The International Observer Scheme

## 1. PLACEMENT OF OBSERVERS

One observer appointed by the Commission [shall/may] be present on all vessels undertaking whaling operations and at each point of landing except that [the following applies:

- (a) for vessels that only operate trips of less than 24 hours, carry out no flensing onboard\* and for which the legal limit of persons onboard does not exceed the number of crew, VMS data shall be transmitted in real time to the observer at the identified point of landing, using IWC approved equipment as given in '*Details of the Supervision and Control Scheme of the Revised Management Scheme*' dated day/month/year.<sup>19</sup>;
- (b) for which vessels that are <24m, operate only within waters under the jurisdiction of the Flag State and that can only accommodate one additional person in addition to the crew, the Commission shall appoint an observer who may also be appointed as a National Inspector by a Contracting Government;<sup>20</sup>
- [(c)] the Commission shall appoint two observers to each factory ship.

## 2. SELECTION OF OBSERVERS

### 2.1 Selection process

Observers shall be selected in accordance with the following procedure. [Observers chosen for the combined role with a national inspector (1.1(b) above) must fulfil the qualifications for both positions.]

- (1) The Secretariat will put out a call for candidates to apply (including via Contracting Governments, the Scientific Committee and the IWC website). It will develop a standard application form that will include information on the scientific and technical criteria that will be used in the selection process. It will also request information on *inter alia*: language(s) spoken; available dates; previous experience (including time at sea); any known problems with admission to certain countries; references. The Secretariat will draw up list of suitable candidates.
- (2) The list will be circulated to all Contracting Governments with summary of information on each candidate (individual applications may be given to any Commissioner on request).
- (3) Any Contracting Government may veto any candidate.
- (4) Following predetermined guidelines, and after consultation with relevant Contracting Governments over practical arrangements, the Secretariat will decide the placement of observers and will inform the appropriate Contracting Governments at least 30 days prior to the start of whaling operations.

In particular, (a) an individual shall not be appointed to observe in the territory or on a vessel flying the flag of the State of which he/she is a national or permanent resident, except if this results in a serious problem with (b) the fact that an observer must be able to communicate effectively with the senior personnel of that component of the whaling operation they have been selected to observe.

### 2.2 Review of performance

After a review process determined by the Commission, the Secretariat may remove someone from the approved List of Observers if they are found to have failed to perform their duties adequately.

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\* apart from slitting of the belly at sea

<sup>19</sup> This document (or documents) will provide the necessary details for implementing, for example, DNA registers/market monitoring, VMS on vessels. When the overall RMS is agreed the editorial decision as to how to incorporate this will need to be taken.

<sup>20</sup> Japan notes that this provision would cause a serious legal problem for Japan (although currently Japan does not have any boats in this category). This is because, under Japanese law, national inspectors have enforcement powers and therefore, such persons cannot be foreign nationals. It suggested that this problem could be avoided if national inspectors could be appointed as international observers. Japan believed that other governments may have similar problems. However, in the RMS Working Group meeting in Copenhagen, 30 March to 1 April 2005, Norway indicated that they would not face the same legal problems as Japan – but they also noted that they are no longer requiring a national inspector to be on board every whaling vessel in view of their new 'blue box' technology.

### 3. RESPONSIBILITIES OF OBSERVERS

#### 3.1 Duties

Observers shall carry out the duties conferred on them by the Commission. Nothing in the duties confers on the observers' authority to enforce the provisions of the Convention. Observers cannot intervene in whaling operations or activities connected with these operations.

Observers are responsible to the Commission for the conduct of their duties and may neither seek nor receive instructions from any other person, organisation or authority regarding the duties stated below.

Observers shall carry out their duties subject to domestic legislation and other applicable rules and customs, including the authorised mandate of the captain of the whaling vessel and the manager of the point of landing, of the State under whose jurisdiction the observation activities are carried out.

Observers' duties shall include:

- (1) monitoring that whaling operations are carried out in accordance with the provisions of the Convention;
- (2) monitoring that information required under the Schedule is collected, sampled, maintained or processed;
- (3) checking licenses, logbooks and other relevant documents;
- (4) checking equipment used to catch and flense whales;
- (5) checking whaling operation areas on vessels, points of landing/primary processing sites<sup>21</sup>, [and processing plants];
- (6) checking relevant equipment (e.g. VMS transmitters).

#### 3.2 Reporting

Observers shall report to the Commission and the Secretariat in English.

Observers on whaling vessels shall report [daily] to the Secretariat on any whales [hunted] struck and/or killed. Reports on other relevant observations shall be made at the end of each whaling voyage, and on a monthly basis by land-based observers. However, if an observer suspects that an infraction of the provisions of the Convention has taken place, he/she shall immediately inform the captain of the vessel, the national inspector and/or the manager of the point of landing, as well as the competent national authority and the Secretariat.

The Secretariat shall have the observers' reports translated into the language of the Contracting Government having jurisdiction over the commercial whaling operations observed and send copies to that Government. On receipt of the report the Secretariat will transmit promptly a copy of the report to the senior personnel of the component of the whaling operation that had been observed. If a report indicates a possible breach of provisions of the Convention, the Secretariat shall ask the Contracting Government to seek comments from the vessel captain, its national inspector and/or the manager of the point of landing as appropriate. Such comments shall be passed to the Secretariat and be attached as an addendum to the observer's report.

Observers shall ensure confidentiality with respect to the conduct of their duties and their reports.

### 4. TRAINING OF OBSERVERS

The Commission shall ensure that each observer shall be adequately informed of the provisions of the Convention and have the biological and other relevant knowledge necessary to carry out his/her duties. The Secretariat will develop a suitable training programme.

### 5. RESPONSIBILITIES OF THOSE RECEIVING OBSERVERS

#### 5.1 Visas and immigration

The Contracting Government under whose jurisdiction the observer is to carry out his/her activities shall take all necessary measures to assist the observer in obtaining the required visas and immigration documents.

#### 5.2 Co-operation

Contracting Governments, national inspectors and all those involved in activities subject to the international observation scheme shall take appropriate measures to ensure the safety, freedom and dignity of the observer at all times and shall cooperate fully with the observer so that he/she can fulfil his/her duties properly and efficiently.

Contracting Governments shall ensure that observers appointed by the Commission must receive sufficient notification of whaling operations to enable them to carry out their duties.

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<sup>21</sup> Secretariat note: Is it necessary to stipulate 'primary processing site' given the text in paragraph 2 of the EDG proposal for Chapter V?

**Initial thoughts on the content of the technical specifications for  
a combined national and centralised VMS system for inclusion in 'Details of the Supervision and Control  
Scheme of the Revised Management Scheme' dated day/month/year.<sup>22</sup>**

*General requirements (perhaps to be defined in an Annex to the Schedule)*

The system must be:

- capable of sending automatic position reports including vessel name, date, time, speed, course and heading of the vessel;
- [capable of sending a predefined report and/or the position as a specific event occurs];
- tamper-proof;
- fully operational for the whole duration of the whaling trip.

*Harmonized technical standards (to be decided on in the Commission)*

- collect the required data and transmit reports in the North Atlantic Format (NAF) (for exchange of information with other systems) in real time or as close to real time as the system installed on the relevant vessel allows,
- [user interface for input of data regarding the vessels being tracked as well as access to communication parameters,]
- Graphical User Interface where vessels positions can be displayed in a map,
- database where all information can be stored in a constructive manner, making it easy to extract information based on various criteria,<sup>23</sup>
- system shall be able to automatically distribute data according to predefined parameters,
- system shall be able to automatically generate and transmit relevant reports if a vessel enters a predefined area,
- automatic warnings if a vessel is not reporting according to schedule and if a vessel's activity does not conform to pre-set conditions,
- polling function for the communication systems where the system installed on the relevant vessel allows,
- selection of printing selected data, display it on screen and store it in a file,
- high security standards, based on already recognized standards for data security,
- system registers and transmits information concerning tampering.

*Further issues (to be decided on in the Commission)*

- intervals of reporting,
- procedure for a situation when the system does not function properly (e. g. reports by other technical means than VMS).

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<sup>22</sup> This document (or documents) will provide the necessary details for implementing, for example, DNA registers/market monitoring, VMS on vessels. When the overall RMS is agreed the editorial decision as to how to incorporate this will need to be taken.

<sup>23</sup> Further information sought on the purpose and location of the database.

## ANNEX 7

**Additional catch verification:  
Incorporation of DNA registers/market sampling requirements into the Schedule**

The RMS Working Group noted that the following options exist:

- (1) centralised system;
- (2) national systems with international oversight;
- (3) premature to decide on which option would be most appropriate.

The SDG was requested to use the report from the specialist group on DNA registers/market sampling schemes – SGDNA - (IWC/M05/RMS WG 5) as a basis for developing text for each of the options, noting that the RMS Working Group was not in a position to recommend any single option at this time. The SDG was also asked to begin to develop technical specifications based on the specialist group report, given that many of these are not dependent on the specific options chosen.

**Outcome of SDG discussions**

Proposed draft Schedule text is provided below and is followed by draft specifications and requirements for diagnostic DNA registers and market sampling schemes. The contents of this Annex have been circulated to the SGDNA for comment. A revised draft based on comments received will be available at the next RMS Working Group meeting that will be held at IWC/57 in Ulsan. In the SDG, Japan indicated that it believed that the approach described in paragraph 22(c) may place an overly large burden on whaling countries.

<b>[Diagnostic DNA registers and market sampling</b>	
22(a)	<p><u>Option national with audit</u> [Contracting Governments under whose jurisdiction whaling operations occur [other than aboriginal subsistence whaling] shall maintain diagnostic DNA registers and tissue banks in accordance with the procedures given in Appendix {DNA} dated <i>day/month/year</i>. External audit (under the auspices of [the IWC][insert name of other international body])shall follow the procedures also documented in that Appendix. Contracting Governments shall provide the information/samples specified in that Appendix in the designated format to the Secretariat at least at the end of each whaling season and more often if requested by the Secretariat.]</p> <p><u>Option IWC central</u> [Contracting Governments under whose jurisdiction whaling operations occur [other than aboriginal subsistence whaling] shall provide tissue samples from any whale for which products might enter the market to the Commission's diagnostic DNA register and tissue bank in accordance with the procedures given in Appendix {DNA} dated <i>day/month/year</i>. This IWC register and tissue bank shall be maintained in accordance with procedures specified in that Appendix. External audit shall follow the procedures also documented in that Appendix.]</p>
22(b)	<p><u>Option national with audit</u> [Contracting Governments under whose jurisdiction whale products [other than derived from aboriginal subsistence whaling] are available shall carry out market sampling schemes in accordance with the procedures given in Appendix {DNA} dated <i>day/month/year</i>. External audit (under the auspices of [the IWC][insert name of other international body])shall follow the procedures also documented in that Appendix. Contracting Governments shall report the results of such schemes annually to the IWC in the format specified in that Appendix.]</p> <p><u>Option IWC central</u> [Contracting Governments under whose jurisdiction whale products [other than derived from aboriginal subsistence whaling] are available shall co-operate fully with the Commission in the execution of market sampling schemes. Such schemes shall be designed in accordance with the procedures given in Appendix {DNA} dated <i>day/month/year</i>. Reports of the results of such schemes will be published annually by the IWC in the format specified in that Appendix. External audit shall follow the procedures also documented in that Appendix.]</p>
22(c)	<p><u>Either option</u> [Under the conditions specified in Appendix {DNA} <i>day/month/year</i>, Contracting Governments or appropriate intergovernmental organisations may request the Commission to arrange for genetic analysis of tissue samples from whale products for comparison with the diagnostic register(s) described under Paragraph 22(a). The costs of this exercise shall be met by the party submitting the request. The results of the analysis and comparison shall be made public by the Commission within one week of them being made known.]</p>

**Appendix {DNA}****DRAFT: Specifications and requirements for diagnostic<sup>24</sup> DNA Registers and Market Sampling Schemes**

DATED: DD/MM/YYYY

*NOTE THAT THIS DRAFT IS PROVIDED TO GIVE AN IDEA OF HOW THE FINAL ANNEX WILL LOOK. IT IS NOT YET COMPLETE AND WILL BE WORKED UPON BY THE SGDNA BEFORE THE ULSAN MEETING*

A combination of diagnostic DNA registers and market sampling can *inter alia* help ensure that the provisions of the Convention are applied (and in particular that catch limits are not exceeded by IUU whaling). This document is only concerned with this matter, NOT with any related issues of trade which are not of relevance to the IWC.

**1. SPECIFICATIONS FOR THE ESTABLISHMENT/MAINTENANCE OF A DIAGNOSTIC DNA REGISTER/TISSUE ARCHIVE****1.1 Laboratories****1.1.1 Minimum laboratory requirements**

(1) The laboratory should adhere to high quality standards (such as those defined by forensic organisations). It may under certain circumstances be appropriate for laboratories to be formally accredited for DNA work or for them to work towards such accreditation. Experience with marine mammal genetic work may be advantageous but should not be considered a requirement.

(2) Quality control and quality assurance features must assure that:

- (a) analysts have acceptable education, training and experience for the task;
- (b) reagents and equipment are properly maintained and monitored;
- (c) procedures used are generally accepted in the field and have been approved by the IWC Scientific Committee (see Items 1.2 - 1.5);
- (d) appropriate controls are used.

(3) Thorough laboratory records (protocols, notes, worksheets, etc.) must be maintained and archived for possible inspection (see Item 1.7).

(4) Changes in equipment and approved methods must be recorded and reported annually to the IWC to allow ongoing standardisation among registers (see Item 1.7).

(5) A suitable inventory management system must be in place so that the whereabouts and use of each sample/aliquot over time during storage and analysis can be traced.

(6) Portions of the tissue samples and DNA extracts should be retained and stored in an appropriate manner (see Item 1.2.3).

(7) The probability of errors occurring should be estimated and minimised, using standard procedures. DNA data quality/acceptability should be decided in accordance with generally accepted rules and reported annually where possible (e.g. PHRED scores for sequences, SDs of fragment length measurements for microsatellite alleles, means and SDs of peak heights for microsatellites, some evaluation of stutter for each microsatellite locus). This information should be reported annually to the IWC (see Items 1.5 and 1.7).

(8) A reference set of samples should be designated for allelic standards and an equimolar allelic ladder should be constructed by cloning and sequencing a range of alleles for each microsatellite locus.

(9) The laboratory must participate in calibration exercises with other laboratories if requested to do so by the IWC (see Item 1.1.2).

(10) The laboratory should be available for external evaluation and participate regularly in proficiency tests such as double-blind comparisons (e.g. see Item 1.7).

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<sup>24</sup> A diagnostic DNA register is one that contains DNA profiles of any animals from which products *might* legally appear on the market (e.g. from legal direct catches, bycatches, ship strikes etc.). On this basis, any products found on the market that were from whales not included in the register will be from illegal whales.

### 1.1.2 Calibration of laboratories if more than one is used<sup>25</sup>

Where more than one laboratory is used to generate a single register or a group of registers, or for the comparison of samples (e.g. under Item 1.8 or Item 2), appropriate calibration of microsatellite genotype scoring (e.g., absolute size or binning) must be undertaken and the results reported to the IWC. The details of the calibration exercise shall be determined by the international expert group (see Item 1.7). The calibration exercise will primarily comprise a double blind experiment with known individuals. Cloned alleles should be used to construct an allelic ladder for calibration purposes. The results of calibration exercises must be reported to the IWC. In designing calibration exercises and reviewing the results, it must be remembered that the primary function of diagnostic DNA registers is to determine whether illegal activity is taking place and that the default position is no match = illegal activity. In this regard it is important to estimate the likelihood of:

- erroneously failing to match products to an animal in the register when it is actually there – i.e. falsely implying an infraction;
- erroneously matching products to an individual in the register when it is not actually there – i.e. missing an infraction when one has occurred.

## 1.2 Sample collection

Whales should be DNA-registered before products from them can enter the market.

### 1.2.1 Personnel

Where possible, samples should be collected by trained personnel. On whaling vessels this should be by persons nominated by the [Contracting Government]/[IWC] e.g. national inspectors, biologists, international observers.

For circumstances where this may not be possible (e.g. for stranded/bycaught/ship-struck animals) instructions on how to do this should be made widely available by national authorities<sup>26</sup>.

### 1.2.2 Size of samples

At least two samples of skin/muscle of at least 5x5x5mm must be collected from each animal for each register/archive. In addition, where possible, at least four muscle samples of 20x20x20mm should be taken and frozen as quickly as possible for each register/archive. Samples must also be obtained from any fetuses present.

### 1.2.3 Preservation

Samples should initially be preserved in 95% ethanol (in at least five times the volume of the sample, due to potential problems of dilution and evaporation) and if practical refrigerated or frozen immediately. If not able to be frozen immediately, the samples should be shipped as soon as possible (preferably within 7 days) to the analysing laboratory. This temporary storage and shipping should be in temperatures <25°C to minimise the possibility of degradation of the sample.

Long-term storage of skin/muscle samples should be in 95% ethanol at at least -20°C. The additional muscle samples should be frozen in liquid nitrogen; transport should be with dry ice. Long-term storage of frozen tissue samples should be at at least -80°C.

### 1.2.4 Labelling

Reliable labelling of the sample is essential. The container should be labelled on both the inside and the outside with a unique identifying code that can be related directly to the biological and other information collected for the individual (see Item 1.2.5). The label on the inside must be indelible and insoluble in alcohol to ensure that the number remains legible after storage in ethanol. The label on the outside must also be robust and remain legible if exposed to ethanol or water.

### 1.2.5 Information to be collected

In addition to the information noted in Paragraphs 32 and 33 of the Schedule<sup>27</sup> to be collected for each whale (including date, locality, species, sex, and body length), the unique identifier (see Item 1.2.4) and the name<sup>28</sup> of sampling person must be recorded.

## 1.3 Tissue analysis

### 1.3.1 Extraction of DNA

Extraction of DNA should be carried out using standard methods which have been reviewed and approved by the IWC Scientific Committee (*insert references*). Extracted DNA aliquots should be stored in freezers at at least –80°C.

<sup>25</sup> This section is intended to be applicable for any of the options chosen – hence the introductory sentence

<sup>26</sup> e.g. see [www.icrwhale.org/pdf/higekujira.pdf](http://www.icrwhale.org/pdf/higekujira.pdf).

<sup>27</sup> Using the version of the Schedule given in IWC/D04/RMS SDG 4

<sup>28</sup> plus address if non-nominated person, e.g. in the case of bycatches

#### 1.4 Markers and methods of analysis

Analysis of samples should be undertaken without knowledge of the biological and other information available for the whale from which the sample was taken.

Samples should be analysed for (at least):

- (1) mitochondrial DNA - primarily for identification to species and population but also contributes to profiling;
- (2) microsatellites (or Short Tandem Repeats, STRs) – for DNA profiling;
- (3) Y chromosomes - sex identification which also contributes to profiling.

##### 1.4.1 Mitochondrial DNA

Analytical methods must be approved by the international expert group (see Item 1.7). (*insert references?*). Species identification should be accomplished with an approximately 500bp fragment of the 5'-end of the control region and sequencing should occur in both directions.

##### 1.4.2 Microsatellites

Analytical methods must be approved by the international expert group (see Item 1.7). (*insert references?*). Fluorescent techniques that allow electronic records to be kept should be used.

The number and degree of variability of loci used in DNA registers should be sufficient to allow for an acceptable level of average probability of correctly identifying an individual. This number will vary by species. The microsatellite loci shown in Table 1<sup>29</sup> are the default loci for those species/populations. Error rates must be estimated in a manner agreed by the Scientific Committee and reported for each locus in an annual report to the Committee.

[INSERT TABLE 1]

##### 1.4.3 Sex identification

Analytical methods must be approved by the international expert group (see Item 1.7). (*insert references?*). Sex is an additional genotype that may prove useful to identify market samples and may also serve as a check on field data. Error rates (obtained by comparison with reliable field identification of sex) should be estimated and reported to the international expert group (see Item 1.7).

#### 1.5 Format of individual records

Records must contain:

- (a) A microsatellites and sex profile, in which each whale profile is given one row, with one column for each allele (two columns for each microsatellite marker and the sex locus). Each whale is given a unique identifier that can be cross-referenced back to the biological and associated data for that animal.
- (b) A mtDNA sequence file, in which each profile has one row, and one column for each site where the sequence deviates from the reference sequence. Each whale is given a unique identifier that can be cross-referenced back to the biological and associated data for that animal.

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<sup>29</sup> This shows the loci used by the Japanese and Norwegian registers at present (April 2005). The Table should be updated if new loci are required for other species and populations. New loci should be incorporated into all registers as they are validated and added.

In addition, the following must be archived:

*General information for each sample*

- genotyping system
- software system

*'Raw' data*

- electropherograms
- quality scores
- raw allele sizes
- peak heights
- gel image (depending on platform used)
- number of times the genotype replicated

*Summary data on each locus*

- error rate and how determined
- allele frequencies in a given population
- deviations from Hardy-Weinberg equilibrium
- evidence of null-alleles, short-allele dominance (or short-allele bias due to preferential amplification) or other artefacts

Although such data can be stored in Excel files, a relational database system (such as Microsoft Access) is both more flexible and more efficient.

[[This information [records (a) and (b)] but not the associated biological and other data regarding the individual animals) shall be transmitted to the IWC Secretariat at least at the end of each whaling season and more often, if requested.] – TO BE DECIDED

[A sample of skin/muscle of at least 5x5x5mm for [each animal]/[a subset of animals chosen by the international expert group][for any animal requested by the international expert group] in the national registers shall be shipped to the IWC tissue archive in accordance with Item 1.2.3]

### **1.6 Matching**

A variety of software packages are available and can be used (e.g. see Walløe and Grønvik, 1998). Whatever method is used, performance (both in terms of erroneous matches and erroneous failures to match given chosen 'tolerance' levels) must be assessed using control samples and reported to the international expert group (see Item 1.7).

### **1.7 External audit of DNA registers<sup>30</sup>**

An international expert group<sup>31</sup> under the auspices of [the IWC]/[international body e.g. CITES] shall:

- review and approving the initial technical specifications for the register(s) and any changes to those protocols;
- where necessary, decide on appropriate laboratories;
- where necessary, design calibration exercises for laboratories and review the results of those exercises;
- review annually specific information and statistics formally reported by the register(s) under Items 1.4 - 1.6;
- design and undertake periodic [PERIOD TO BE DECIDED] technical audits including the provision for trials using 'blind' control samples;
- design and arrange for periodic [PERIOD TO BE DECIDED] site visits to examine whether the agreed protocols (under Items 1.2-1.5) are being followed.

The international expert group shall submit an annual report to the IWC and its Contracting Governments for consideration<sup>32</sup> two months before each Annual Meeting of the IWC.

<sup>30</sup> Note: such an audit should occur whether the option of national registers with international oversight or a centralised IWC register is chosen

<sup>31</sup> E.g. the Scientific Committee of the International Whaling Commission – TO BE DECIDED

<sup>32</sup> This does not specify how the IWC will review the report – for example, it could be reviewed by the Scientific Committee before being submitted to the Compliance Committee – the Secretariat is not sure whether this needs to be included in this Appendix or not.

### **1.8 Submission procedure for samples for comparison with registers**

Submission of tissue samples to the IWC for comparison with registers must:

- (1) be made by Contracting Governments (or appropriate [TO BE DECIDED] intergovernmental organisations);
- (2) be accompanied by officially-attested documentation of chain of custody from time of collection to submission that contains the following information:
  - name and address of ‘collector’;
  - location obtained;
  - type of vendor;
  - date and time of collection;
  - label, if present (or verbal description of nature and origin of product offered by vendor);
  - where possible, photographs.

Analysis of the samples shall be carried out following the procedures documented in Items 1.3 – 1.4 by an IWC-approved laboratory, in accordance with any necessary calibration procedures. Officially-attested documentation of chain of custody must be established for the period between submission to a Contracting Government (or appropriate intergovernmental body) and provision of analytical results.

The comparison of the resultant profile shall be made using agreed software (see Item 1.6) against the appropriate register(s) [WHETHER THIS IS ALL NATIONAL REGISTERS OR THE IWC PROFILE REGISTER OR THE IWC COMPLETELY CENTRALISED REGISTER NEEDS TO BE DECIDED]

When the matching has been completed, the IWC Secretariat shall make public the results within one week.

## **2. SPECIFICATIONS FOR THE ESTABLISHMENT/MAINTENANCE OF MARKET SAMPLING SCHEMES**

The purpose of market sampling is twofold: to act as a deterrent to illegal activity and to detect whether such activity is occurring. Market sampling in its initial stage is not intended to determine the precise number of animals that may be involved. Rather, if illegal products are discovered, a targeted method of detecting the origin of the products and the extent of the illegal operation specific to the case should be developed.

### **2.1 Design principles**

- (1) Market sampling schemes shall be case-specific. Their design shall be based on the best available information on the temporal and geographical nature of the particular market(s) and product pathways. Power to detect/deter will increase with the geographical and temporal scope of the surveys.
- (2) The design of market sampling schemes will be iterative and schemes should be reviewed periodically. Experimental testing of their potential to detect illegal products should be undertaken and reported. This should include estimation of the possibility of falsely suggesting illegal activity and missing illegal activity when it occurs.
- (3) Appropriate (e.g. not highly processed products from which it is difficult to obtain reliable microsatellite profiles) products should be chosen.
- (4) A balance between deterrence (sampling carried out openly and with publicity) and detection (undercover sampling) shall be maintained and reported.
- (5) The full range of cetacean products shall be sampled in case mislabelling occurs.
- (6) An officially-attested documentation of chain of custody from time of collection to results of matching must be collected and archived, including the information given in Item 2.3.
- (7) Analysis and matching must be carried out in an IWC-approved laboratory (with appropriate calibration if necessary) following the procedures given in Item 1 above.

## **2.2 Development of appropriate market sampling schemes including audit**

An international expert group<sup>33</sup> under the auspices of [the IWC]/[international body e.g. CITES] shall:

- (1) co-operate in the design of and approve any market sampling scheme before it is implemented and review the associated results;
- (2) co-operate in the design of and approve experimental work and review results referring to Item 2.1 (2) above.
- (3) design and arrange for periodic site visits to ensure that the approved scheme is being implemented.

## **2.3 Data to be collected**

- Product or sample of product of sufficient size to obtain DNA sample (see Item 1.2.2)
- Location obtained;
- Date and time;
- Label (or verbal description of nature and origin of product offered by vendor);
- Source (e.g. wholesale market, shop, dockside etc.);
- photograph of product before sub-sampling;
- name and contact information of person collecting.

This information should be archived in an appropriate electronic manner [and made available to the IWC Secretariat annually].

## **2.4 Reporting**

The authorities responsible for undertaking the market sampling schemes in accordance with Paragraph 22(b) of the Schedule shall submit an annual report of their market sampling activities to the international expert group via the IWC Secretariat at least [two] months before each Annual Meeting of the IWC. That report shall include: details of the methods used; a summary of the number and nature of the products sampled, and the geographical and temporal spread of sampling; the results of the matching exercise.

The international expert group shall submit an annual report to the IWC and its Contracting Governments for consideration<sup>34</sup> [one] month before each Annual Meeting of the IWC.

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<sup>33</sup> E.g. the Scientific Committee of the International Whaling Commission – TO BE DECIDED. NB THIS MAY OR MAY NOT BE THE SAME GROUP AS THAT REFERRED TO UNDER ITEM 1.7.

<sup>34</sup> This does not specify how the IWC will review the report – for example, it could be reviewed by the Scientific Committee before being submitted to the Compliance Committee – the Secretariat is not sure whether this needs to be included in this Appendix or not.

## ANNEX 8

**Additional catch verification measures:  
(1) measures to deter IUU whaling and (2) catch documentation systems**

The RMS Working Group noted that the following options exist and requested the SDG to develop draft text as appropriate:

1. Resolution on measures to deter illegal, unreported and unregulated whaling
  - (1) A draft Resolution as proposed in IWC/D04/RMS SDG 5.
  - (2) Incorporation of the operative paragraphs of the Resolution into the Schedule.
  
2. Catch documentation
 

Develop draft Schedule text for the following options:

  - (1) Chair's proposal for national schemes;
  - (2) An IWC-operated scheme.

Both options should have options for the documents/system to extend to: (a) point of entry/landing; (b) wholesaler level; and (c) retail level.

**Outcome of the SDG discussions:**

**1. Revised draft Resolution on measures to deter illegal, unreported and unregulated whaling**

*Introduction*

At its first meeting, the RMS Working Group agreed that the draft Resolution as proposed in IWC/N04/RMSWG 10 be kept in hand. However, at the first SDG meeting, during the process of developing draft text to incorporate the operative paragraphs of the draft Resolution into the Schedule, the SDG recognised that the text in the second operative paragraph needed to be revised. This paragraph initially read as follows: 'Contracting Governments shall take all appropriate measures, including such amendments to their national laws and regulations as may be required, to prohibit the import of whales and whale products from non-Contracting Governments as well as from Contracting Governments that are not engaged in whaling'. Revision is necessary since: (1) it is not Contracting or Non-Contracting Governments that engage in whaling, but rather operations under their jurisdiction and (2) it needed to be made explicit that this provision did not apply to aboriginal subsistence whaling operations. The SDG brought the attention of the RMS Working Group to the revised draft Resolution in its first report (IWC/D04/RMS SDG 5).

At the second RMS Working Group Meeting, the text of the second operative paragraph was further revised to avoid problems with WTO rules. Both versions of the second operative paragraph are given below, although only the later version has been used as proposed Schedule text.

Note that the square brackets around the first, third and fourth operative paragraphs are as a result of comments from Japan on the first SDG report (IWC/D04/RMS SDG 5). See footnotes for further explanation.

**Revised draft Resolution on  
measures to deter illegal, unreported and unregulated whaling**

[WHEREAS it is the purpose of the International Whaling Commission to provide for the effective world-wide conservation and management of whale stocks;]<sup>35</sup>

WHEREAS the International Whaling Commission has adopted a Revised Management Scheme to carry out that purpose;

[WHEREAS, the verification of catches to deal with the issues of illegal, unregulated and unreported whaling and unreported bycatches is an essential element of the Revised Management Scheme;]<sup>36</sup>

[WHEREAS, the importing of whales or products thereof from any State not a party to the International Convention for the Regulation of Whaling together with illegal activities of Parties will seriously detract from the effectiveness of the management scheme adopted by the International Whaling Commission;]<sup>37</sup>

RECALLING previous Resolutions passed at its 28<sup>th</sup>, 29<sup>th</sup> and 31<sup>st</sup> Annual Meetings [RIWC 21: 33, RIWC 28: 31, RIWC 30:38] and at its Special Meeting in December 1978 [RIWC 30:8] prohibiting the import of whales and whale products from non-member nations and/or proscribing the transfer of whaling vessels and equipment and the dissemination of assistance to non-member nations;

NOW THEREFORE THE COMMISSION:

REAFFIRMS the commitments undertaken by the adoption of Resolutions at its 28th, 29th and 31st Annual Meetings and at its Special Meeting in December 1978;

[DECIDES that, if they have not already done so, Contracting Governments shall take all necessary measures to prohibit the import of whales and whale products obtained illegally, from operations not under the jurisdiction of Contracting Governments or for which local consumption is specified under paragraph 13.(b) of the Schedule dated October 2004, including such amendments to their national laws and regulations as may be required;]

[DECIDES that Contracting Governments shall, to the extent consistent with their obligations under international law, take all necessary measures, including such amendments to their national laws and regulations as are required, to ensure that any whale or whale products that are imported were harvested and exported in a manner consistent with the Convention.]<sup>38</sup>

RESOLVES that all Contracting Governments shall report to each Annual Meeting of the Commission on their efforts to implement this Resolution.

**2. Measures to deter illegal, unreported and unregulated whaling through the incorporation of Schedule text and provisions for catch documentation**

The proposed text on the next page addresses the RMS Working Group instructions regarding development of draft Schedule text. Paragraph 30 below is the suggested text to reflect the operative paragraphs of the draft Resolution concerning measures to deter IUU whaling (see Draft Resolution). Note that the SDG did not consider it necessary to include text in the Schedule for the first operative paragraph of the draft Resolution. It also did not consider it necessary to include text to cover the third operative paragraph since paragraph 31 of the current Schedule dated October 2004 requires Contracting Governments to 'submit to the Commission copies of all its official laws and regulations relating to whales and whaling and changes in such laws and regulations' (or Paragraph 39 of IWC/D04/RMS SDG4). Also note that the SDG thought it appropriate only to include the second version of the second operative paragraph (i.e. the version avoiding problems with WTO rules).

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<sup>35</sup> Japan comments that there should not be any attempt to interpret the purpose of the Convention, rather it should simply repeat the pertinent part of the last preambular paragraph of the Convention, that is, '*to provide for the proper conservation of whale stocks and thus make possible the orderly development of the whaling industry*'.

<sup>36</sup> Japan does not believe that there is any evidence that IUU whaling is currently a problem or that it would become so with the resumption of commercial whaling (although it would consider accepting a new Resolution agreeing that Contracting governments will institute national legislation restricting the importation of whale products to those derived from legally caught whales by IWC countries, depending on the balance of RMS elements). It therefore believed that the third and fourth preambular paragraphs should be deleted.

<sup>37</sup> See previous footnote.

<sup>38</sup> This is the option for the operative paragraph that would avoid problems with WTO rules.

Paragraphs 30A and 30B reflect text to cover the options for catch documentation, i.e. 30A reflects the Chair's proposal, while 30B reflects the proposal for an IWC-operated catch document scheme. With respect to an IWC-operated scheme, the SDG encouraged New Zealand, Sweden and other interested countries to develop further details prior to IWC/57 in Ulsan.

<b>[Verification of catch data]</b>	
30.	[Contracting Governments shall, to the extent consistent with their obligations under international law, take all necessary measures, including such amendments to their national laws and regulations as are required, to ensure that any whale or whale products that are imported were harvested and exported in a manner consistent with the Convention.]
30A <sup>39</sup> .	[As part of the measures to be taken under Paragraph 30, Contracting Governments under whose jurisdiction whales are harvested (except under Paragraph {asw <sup>40</sup> }) and/or that allow utilisation of bycaught or stranded whales, shall implement catch document schemes that monitor progress of whales and whale products from point of capture to point of [entry/landing into the territory of the Contracting Government] [wholesale marketing] [retail sale]. Such schemes shall include the information given in the IWC <i>pro formas</i> dated <i>day/month/year</i> and available from the Secretariat.]
	<b><u>OR</u></b>
30B.	[The Commission shall operate a standardized catch documentation system [in accordance with [best] international practice] in order to certify the authenticity of products from whales caught or obtained under the authority of Contracting Governments in accordance with provisions of this [Schedule][Convention]. This system shall monitor the progress of such products from the point of harvest to the point of [entry/landing into the territory of the Contracting Government][wholesale marketing][retail sale]. The details of this system are set out in xxxx dated <i>day/month/year</i> <sup>41</sup> . The requirements of this Paragraph shall not apply to whales taken pursuant to Paragraph {asw}.]

<sup>39</sup> Some members of the SDG believed that the following, more specific text, better reflected the Chair's proposal:

[Contracting Governments shall, through national legislation, establish a catch documentation scheme in respect of: (1) all whales marketed within their jurisdiction (including bycaught or stranded whales and whales taken under special permit); and (2) all whales taken by vessels authorised to conduct commercial whaling whether their own vessels or those of another Contracting Government). A document shall accompany each whale [and/or any products derived from it] from the point of capture to the point of [landing] [wholesale marketing] [retail sale]. This document shall record at least the following information:

- (i) Date and location of catch, bycatch or stranding;
- (ii) Species;
- (iii) National issuing authority of authorisations for catch or utilisation;
- (iv) License number for that authorisation

And, in the case of catches:

- (v) Place and date of landing
- (vi) Vessel identification]

<sup>40</sup> This refers to the Schedule paragraph number dealing with aboriginal subsistence whaling. This is paragraph 13 in the current Schedule (October 2004).

<sup>41</sup> This document will provide all the necessary details for the catch documentation system.

## ANNEX 9

**Incorporation into the Schedule of text regarding compliance monitoring**

The RMS Working Group requested the SDG to develop draft Schedule text for the Chair's proposal regarding compliance (see IWC/D04/RMS SDG 4). Recognizing the proposal for DNA registers/market sampling as additional catch verification measures, the RMS WG requested that the SDG include in the duties of the Compliance Review Committee, the need to review the operation of such systems. The SDG was also requested to take account of the proposal that one of the tasks that the Compliance Review Committee should do once established is to develop a list of serious infractions and subsequent measures which could, in the case of an infraction, be taken by the Commission.

**Outcome of SDG discussions:**

The proposed Schedule text to address the RMS Working Group request is shown below. Note that:

- Paragraphs 31(b)(i) and (c) address the matter of development of a list of serious infractions and subsequent measures to be taken.
- Paragraphs 31(b)(viii) and (ix) address the need to review the operation of any DNA registers and market sampling – if established. Note that this text will need to take account of the outcome of deliberations of the specialist technical group on DNA registers and market sampling established under the RMS Working Group.
- Paragraph 31(b)(x) addresses the need for the Compliance Review Committee to review the operation of an IWC catch document scheme – if established.

The SDG noted that it had not received policy guidance from the RMS Working Group regarding participation in the Compliance Review Committee, and wishes to draw this to the attention of the Working Group. In drawing this to the Working Group's attention, the SDG would also remind them that: (1) the RMS Expert Drafting Group agreed that the CRC should be open to all Contracting Governments, noting that this could be reviewed in the light of experience (see IWC/54/RMS 1); and (2) that at the private meeting of Commissioners in Cambridge, the USA in a spirit of compromise, withdrew its request that NGOs should have speaking rights in recognition that all accredited NGOs would have observer status (see IWC/55/COMM 1). The SDG undertook no further work on this topic.

	<b>Oversight</b> <sup>42</sup>
31.	<p>(a) The Commission shall establish a Compliance Review Committee to review and report on the compliance of all whaling operations with the provisions of the Schedule and penalties for infractions thereof.</p> <p>(b) The Compliance Review Committee shall:</p> <ul style="list-style-type: none"> <li>(i) [develop and maintain a list of matters that will constitute serious infractions]<sup>43</sup>;</li> <li>(ii) review: (a) infraction reports from Contracting Governments; and (b) the annual report of the functioning of the International Observer Scheme, including any alleged infractions, for the most recent completed whaling season;</li> <li>(iii) review other reports submitted by Contracting Governments on matters relevant to the Committee, including alleged infractions;</li> <li>(iv) compare the information in (ii) and (iii) above and identify any disagreement in the details of an alleged infraction;</li> <li>(v) report its view as to whether an alleged infraction is a violation(s) of the provisions of the Schedule;</li> <li>(vi) review action(s) taken by a Contracting Government in response to violation(s) of the provisions of the Schedule identified above;</li> <li>(vii) review the actions taken, including progress made, by Contracting Governments in response to previous violations considered by the Commission;</li> <li>(viii) [review the operation of the DNA register and tissue archives established pursuant to paragraph X, and make appropriate recommendations;]</li> <li>(ix) [review the results of market surveys conducted pursuant to paragraph Y, paying particular attention to cases where products from individual whales are found that are not included on the DNA register established pursuant to paragraph X.]</li> <li>(x) [review the operation of the catch document system established pursuant to paragraph Z and make appropriate recommendations;]</li> <li>(xi) recommend to the Commission actions to be taken to improve compliance with the provisions of the Schedule;</li> <li>(xii) submit a report to the Commission on its deliberations and recommendations.</li> </ul> <p>(c) The Compliance Review Committee shall report on infringements and the seriousness of these infringements to the Commission and advise the Commission what actions, if any, should be taken<sup>44</sup>.</p>

<sup>42</sup> In commenting on the report from the first SDG meeting (IWC/D04/RMS SDG5), Japan indicated that it believes there is an inconsistency in the use of the word 'infractions' in parts (a) and (b) of paragraph 31 and the use of the work infringements in part (c). Japan also noted some redundancy in items (b) (xii) and (c) and suggested that consideration be given to combining these.

<sup>43</sup> This sub-paragraph is within square brackets as there is a difference of opinion of what the Commission can/should do about serious infractions.

<sup>44</sup> At its meeting at IWC/55 in 2003, the Compliance Working Group proposed that earlier wording (i.e. 'In the event of an infraction the relevant catch limit will automatically revert to zero unless and until otherwise determined by the Commission on the advice of the Compliance Review Committee') be replaced by that shown (note minor editorial amendments have been proposed by the SDG). During discussions at the following private meeting of Commissioners, the UK indicated that it would enter a reservation to the effect that any RMS text not providing for the automatic operation of penalties fails to meet the objectives set by IWC, i.e. that the rules are obeyed and seen to be obeyed. During discussions of the SDG, the UK requested that its earlier comments be foot-noted.

## ANNEX 10

**Incorporation into the Schedule of text apportioning RMS costs among Contracting Governments**

The RMS Working Group requested the SDG to develop draft text for the following options:

- (1) The Chair's proposal as outlined in IWC/56/26;
- (2) Three further proposals introduced at the RMS Working Group meeting in London as reported in IWC/53/9. The SDG was asked to take into account any recommendations from the Working Group on Costs that met in Antigua in May 2003 (see IWC/55/COMMS 4).

**Outcome of SDG discussions:**

At its first meeting, and before discussing draft Schedule text, the SDG first drew attention to the somewhat *ad hoc* way in which the Commission deals with rules and regulations relating to its finances. It noted that some aspects are addressed in the Commission's Financial Regulations, while others – such as the description of the financial contribution scheme itself, is simply described in the Chair's Report of an Annual Meeting. There was some discussion as to whether the text relating to apportioning RMS costs should be included in the Schedule or in the Financial Regulations as the Chair's proposal had not been clear on this matter. Some members were strongly of the opinion that this text should be part of the Schedule. As some draft Schedule text had previously developed regarding apportioning RMS costs, it was agreed to use this and to augment as necessary to address the RMS Working Group's instructions. The proposed text, reflecting different options is shown on the next page. It should be noted that:

- on reviewing the report of the Working Group on Costs, it was apparent that while the Working Group put forward options on how costs could be dealt with, it did not make any recommendations;
- additional draft text may be needed depending on the outcome of the discussions and recommendations of the technical specialist group on DNA;
- it was suggested that the Secretariat should ask its auditors to review text for the last option in paragraph 29 introduced at IWC/53 in London referring to Generally Accepted Accountancy Practice (GAAP) and to comment on whether it is appropriate in this context. This was done. The auditor advised that the Commission's accounts specifically state that they do not necessarily comply with GAAP in all areas and particularly so in relation to depreciation/amortisation. As a consequence, this option has been revised by the SDG at its second meeting.

Although the RMS Working Group's attention was drawn to the need for further policy guidance regarding placement of text referring to apportioning RMS costs (i.e. whether it should be in the Schedule or in the Financial Regulations) when the Working Group met in Copenhagen from 30 March to 1 April 2005, no further guidance was given.

At its meeting in Copenhagen, the RMS Working Group had agreed that detailed discussion of this item should be postponed until more details of the final RMS elements were available.

Proposed text:

<b>National Inspection Schemes</b>	
25.	National inspectors shall be appointed and paid by the Contracting Government having jurisdiction over the commercial whaling operations to be inspected and shall receive their instructions from their national authorities.
<b>International Observer Scheme</b>	
29.	<p>[All costs of the International Observer Scheme shall [initially] be paid by the Commission.]</p> <p><u>Chair's proposal:</u></p> <p>[The Commission shall recover these costs resulting from the International Observer Scheme through the membership contributions assessed from Contracting Governments under the financial contributions scheme.</p> <p>Costs and other expenditure resulting from the Vessel Monitoring System shall be borne by the Contracting Governments having jurisdiction over the [commercial whaling operations] [vessels] that require a Vessel Monitoring System in accordance with paragraph A.</p> <p>Costs and other expenditure resulting from DNA registers/market sampling schemes as required in accordance with paragraph B shall be borne in the following manner –</p> <ul style="list-style-type: none"> <li>(a) the establishment and operation of these schemes shall be borne by the Contracting Governments that are required to operate them in accordance with paragraph B;</li> <li>(b) costs and expenditure resulting from the review of national DNA registers/market sampling schemes in accordance with paragraph C shall be borne by the Commission, and the Commission shall recover these costs and expenditure through the membership contributions assessed from Contracting Governments under the financial contributions scheme.</li> <li>(c) costs of checking samples against the DNA registers in accordance with paragraph D shall be borne by the Contracting Government requesting the checking.]</li> </ul> <p><b>or – the following alternatives from earlier discussions:</b></p> <p>[These costs shall be recovered exclusively from the Contracting Government under whose jurisdiction whaling operations are carried out. Such costs shall be considered part of their annual IWC membership contribution.]</p> <p><b>or</b></p> <p>[The Commission shall recover these costs resulting from the supervision and control scheme through a factor in the membership contributions assessed from Contracting Governments [under whose jurisdiction whaling operations are carried out].</p> <p><b>or</b></p> <p>[These costs and expenditure resulting from this supervision and control scheme shall be recovered in the following manner –</p> <ul style="list-style-type: none"> <li>(a) core administrative expenditure (including, but not limited to, core Secretariat salaries and expenses) associated with this supervision and control scheme shall be paid by the Commission;</li> <li>(b) operating expenditure for this supervision and control scheme (including, but not limited to, recruitment costs, observers' salaries and expenses, other travel and accommodation expenses, third party contract costs and an appropriate annual share of capital expenditure as set out in subparagraph (c) of this paragraph) shall be recovered exclusively from the Contracting Governments under whose jurisdiction whaling operations are carried out. Such costs shall be considered part of their annual IWC membership contribution; and</li> <li>(c) capital expenditure (including but not limited to expenditure on computer equipment, software costs and vessel monitoring systems) shall be recovered over time in accordance with the Commission's accepted accounting practice, as part of operating expenditure, as set out in subparagraph (b) of this paragraph.]</li> </ul>

## ANNEX 11

**Incorporation into the Schedule of text linking adoption of the RMS with the lifting of Schedule paragraph 10(e)<sup>45</sup>**

The RMS Working Group noted that the following options exist:

- (1) a footnote to Table of catches, giving effect to the Chair's proposal to link adoption of an RMS with the lifting of paragraph 10(e);
- (2) a two-stage approach – adopting an RMS followed by lifting of paragraph 10(e);
- (3) retention of 10(e) but with gradual exemptions introduced based on SC advice;
- (4) no link.

It was agreed that the SDG should develop draft text based on these options.

**Outcome of SDG discussions:**Option 1

IWC/N04/RMSWG 12, prepared for the RMS Working Group meeting in Borgholm, examined a variety of previously considered and new options in line with the philosophy of the Chair's proposal. A number of problems were identified, particularly with respect to the objection procedure and the need to avoid setting catch limits by nation/operation. The authors considered that the option with the most promise, given a desire to find a solution, was an option that paragraph 10(e) was lifted simultaneously with the adoption of an RMS and that a note was included to the Table of catches that stated that:

*'Catches may be taken only by operations under the jurisdiction of Contracting Governments that do not have objections or reservations to the provisions collectively known as the RMS.'*

The advantage of this approach is that it addresses the concern expressed by some (see IWC/N04/RMSWG 4) over the possibility of Contracting Governments leaving the Commission and rejoining with a reservation to the RMS or a new government joining with a reservation to the RMS. However, as with almost any 'solution', it is vulnerable to Contracting Governments lodging an objection to the footnote itself within the 90-day period following adoption of the RMS.

***Note that the Secretariat has not yet developed a Table 1. This can be done later.***

Option 2

In an exploration of alternatives, the USA suggested consideration of the following two-stage (and thus non-simultaneous) approach:

- First adopt the RMS, keeping paragraph 10(e) in place;
- Then after the 90-day period has elapsed with no objections to the RMS, vote to replace paragraph 10(e) with the following text:

*'Notwithstanding the other provisions of paragraph 10, catch limits greater than zero shall only be established in cases where the proposed whaling will be conducted in accordance with all of the provisions collectively known as the Revised Management Scheme.'*

It is recognised that this approach suffers from at least two potential problems: (1) that even if there are no objections to the RMS paragraphs, there is no guarantee that a sufficient majority will then vote in favour of the revised paragraph 10(e); (2) it fails to address the problems associated with who may object to the RMS paragraphs before invalidating the second step (as discussed in IWC/N04/RMSWG 12).

Option 3

In responses to the questionnaire on the Chair's proposal, several Contracting Governments suggested that there is no need to remove paragraph 10(e) in a single step and that a phased-out approach of the moratorium would be more appropriate, helping to build public confidence. In this approach, exemptions from the moratorium could

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<sup>45</sup> Note that in this Annex, the numbering in the current Schedule (October 2004) is retained rather than using paragraph numbering as in IWC/D04/RMS SDG 4.

be gradually introduced for certain stocks under certain conditions. As noted in IWC/N04/RMSWG 12 and elsewhere, the system for the Scientific Committee to be able to produce advice on catch limits includes a *de facto* 'phase-in' approach; however there is a similar degree of symbolism for a number of countries in retaining words similar to present Para 10(e) as there is to others in removing it – even if the 'effect' is the same.

Given this, in the SDG, the Netherlands proposed that the following text could be included in the Schedule to implement this approach:

*'10(f) Notwithstanding the provisions of 10(e), commercial whaling shall be permitted for [species/stock/area] in accordance with catch limits established pursuant to paragraph 10(a) and 10(b).'*

#### Option 4

Under this option, paragraph 10(e) would remain in the Schedule.

<b>III. CATCH LIMITS</b>	
<b>Commercial Catch Limits for Baleen Whales</b>	
10.	<u>Option 1:</u> <i>Delete paragraph 10(e) and add a note to the Table of catches: 'Catches may be taken only by operations under the jurisdiction of Contracting Governments that do not have objections or reservations to the provisions collectively known as the RMS'.</i>
	<p><u>Option 2:</u> <i>Once an RMS has been adopted with no objections there would be a vote to replace the moratorium paragraph with the following text:</i></p> <p>[(e) Notwithstanding the other provisions of paragraph 10, catch limits greater than zero shall only be established in cases where the proposed whaling will be conducted in accordance with all of the provisions collectively known as the Revised Management Scheme.]</p>
	<p><u>Option 3:</u> <i>Paragraph 10(e) would be retained with exemptions being gradually introduced for certain stocks under certain conditions as shown in sub-paragraph (f) below:</i></p> <p>[(f) Notwithstanding the provisions of 10(e), commercial whaling shall be permitted for [species/stock/area] in accordance with catch limits established pursuant to paragraph 10(a) and 10(b).]</p>
	<p><u>Option 4:</u> <i>Retain Paragraph 10(e).</i></p> <p>[(e) commercial purposes of whales from all stocks for the 1986 coastal and the 1985/86 pelagic seasons and thereafter shall be zero. This provision will be kept under review, based upon the best scientific advice, and by 1990 at the latest the Commission will undertake a comprehensive assessment of the effects of this decision on whale stocks and consider modification of this provision and the establishment of other catch limits.]</p>

## ANNEX 12

**Incorporation into the Schedule of text addressing animal welfare concerns**

The RMS Working Group noted that the following options exist:

- (1) Chair's proposal to include the following text into the Schedule: *the hunting of whales shall be undertaken so that the hunted whale does not experience unnecessary suffering and so that people and property are not exposed to danger.* In addition initiative (perhaps by Resolution) to focus discussions on improving techniques by (a) voluntary reporting of data discussed at Berlin Workshop; (b) voluntary provision of information from existing research programmes (and/or the development of a co-operative research programme) at regular specialist workshops (e.g. triennial).
- (2) The Chair's proposal augmented by Swedish proposal for Schedule provision for data collection (IWC/N04/RMSWG4 and IWC/54/35);
- (3) The UK proposal (IWC/54/RMS 1) with additional items (see IWC/N04/RMSWG4);
- (4) No reference to animal welfare data.

It was agreed that the SDG should draft text for each of these options taking into account the documents referenced above, but also the Report of the Specialist Technical Group on Animal Welfare (IWC/M05/RMSWG 8).

With respect to a draft Resolution to implement the Chair's proposal, the RMS Working Group had reviewed a draft Resolution proposed by (a) the Specialist Technical Group on Animal Welfare. During the discussions, the Secretariat, supported by a number of countries commented that the draft Resolution did not truly reflect the Chair's proposal and it was agreed that the Secretariat would develop an alternative for review by the SDG.

**Outcome of SDG discussions****1. Draft Schedule text**

The draft Schedule text addressing the various options is provided below in paragraphs 13 and 34. An outline of proposed minimum conditions under which whales could be killed is included after the Schedule text. The SDG noted that these needed further work and requested that this be done by the Specialist Technical Group on Animal Welfare prior to the RMS Working Group meeting at IWC/57 in Ulsan.

<b>IV. OPERATIONAL MATTERS</b>	
13.	<p><u>Option (1) and (2)</u></p> <p>[The hunting of whales shall be undertaken so that the hunted whale does not experience unnecessary suffering and so that people and property are not exposed to danger.]</p> <p><u>Option (3)</u></p> <p>[Minimum conditions under which whales can be killed are set out in xxxx dated day/month/year.] See outline below.</p>
14.	[It is forbidden to strike, take or kill suckling calves or female whales accompanied by calves in any commercial whaling operation.]
15.	The use of the cold grenade harpoon is forbidden in commercial whaling operations. <sup>Σ</sup>
16.	Contracting Governments shall ensure that all whales [taken in any commercial whaling and aboriginal subsistence whaling] are fully utilised to the extent possible. [The meat and products of whales are to be used exclusively for local consumption.] [Meat and whale products derived from scientific permit whaling should not be sold or offered for sale.] <sup>46</sup>

<sup>Σ</sup> Japan and the Russian Federation have lodged objections to this paragraph with respect to minke whales.

<sup>46</sup> Secretariat: Suggestions for new text have been added. Japan: is opposed to both suggested additions. The second suggested addition is contrary to Article VIII.2 of the Convention

<b>VI. INFORMATION REQUIRED</b>	
<b>[Animal Welfare Information]</b>	
34.	<p><u>Option (2)</u></p> <p>In order to verify that the best methods are used and to provide for continuous improvement of methods, for each whale hunted in [commercial] whaling operations, the international observer shall record the information on whale killing methods and associated welfare issues specified in Annex xxx]. [This information shall be included in the observer's report to be provided to the IWC Secretariat at the end of each hunt or voyage or season as determined by the Commission. If no observer is present, the data shall be recorded by the national inspector or the captain of the vessel, and submitted to the IWC Secretariat via the Contracting Government. All data shall be recorded on standardised data sheets to be provided by and returned to the IWC Secretariat. Where national translations of these have been used, they shall also be submitted.]</p> <p><u>Option (3)</u></p> <p>[For each whale hunted in whaling operations, the international observer [and/or national inspector] shall record, as a minimum, the following information on whale killing methods and associated welfare issues<sup>47</sup>.][This information shall be included in the observer's [inspector's] report to be provided to the IWC Secretariat at the end of each hunt or voyage or season as determined by the Commission. The data will be publicly available.]<sup>48</sup></p>
	<p><u>[Preliminary]</u></p> <ul style="list-style-type: none"> <li>• Specifications of catcher vessel (e.g. name, overall length and displacement, engine power, etc)</li> <li>• Position, date and time of sighting of the target whale/group containing target whale and cue (e.g. shipboard sighting, aircraft assisted, etc)</li> <li>• Radial distance from vessel when first sighted</li> <li>• Estimate of group size – presence/absence of calves in group</li> <li>• Behaviour of the whale and group pre-chase (i.e. slow travel, fast travel, resting, feeding, milling, social/sexual)</li> <li>• Time of start of chase</li> <li>• Time chase finished if whale not struck</li> <li>• Speed and duration of chase for each whale</li> <li>• Behaviour recorded at five minute intervals during chase, or whenever any abrupt changes occur in behaviour, including any changes in group composition during chase</li> </ul>
	<p><u>Weather conditions</u></p> <ul style="list-style-type: none"> <li>• Weather conditions and location at time when whales are first sighted and then at fifteen minute intervals until whale is struck, and is either brought aboard, or is declared dead and is fastened alongside for towing to a land station. Data to be collected could include: <ul style="list-style-type: none"> <li>- Sea state</li> <li>- Visibility</li> <li>- Cloud cover</li> <li>- Sea surface temperature</li> <li>- Air temperature</li> <li>- Precipitation (drizzle/rain/hail/snow)</li> <li>- Fog</li> <li>- Wind speed and direction</li> <li>- Air pressure</li> <li>- Sea state</li> <li>- Wave height</li> <li>- Dominant wave period</li> <li>- Wave direction (relative to the vessel)</li> <li>- Ice conditions</li> <li>- Motions of the vessel (including sway, heave and surge – e.g. heavy, moderate or stable)</li> </ul> </li> </ul>

<sup>47</sup> Note that the list of data requirements could be included either as Schedule text, as illustrated here, or in a dated technical appendix.

<sup>48</sup> The second and third sentences in this paragraph are from the UK's earlier proposals (see IWC/54/RMS 1 – the EDG report).

	<p><u>Primary Killing Method</u></p> <ul style="list-style-type: none"> <li>• Make and size of cannon</li> <li>• Time first harpoon is fired</li> <li>• Type of harpoon (e.g. penthrite grenade head), including specifications of forerunner and harpoon diameter</li> <li>• Harpoon weight and propulsive force</li> <li>• Specifications of the explosive charge of each harpoon</li> <li>• Specification of any cold harpoons used for securing whales during Aboriginal Subsistence hunts , including details of the number of floats attached</li> <li>• Weight of harpoon and propulsive force</li> <li>• Height of gunner platform above sea level</li> <li>• Distance of vessel to whale when first harpoon fired</li> <li>• Position of whale relative to vessel (i.e. ahead, abeam or other)</li> <li>• Behaviour of whale upon being struck, e.g. a) whale “runs at surface”; b) dives and disappears; c) blowing pattern; d) evidence of severe internal bleeding e.g. blood in exhalation e) other behaviour e.g. thrashing or lolling. All behaviours to be timed.</li> <li>• Location of harpoon on detonation (indicated on diagram)</li> <li>• Performance of harpoon (notes on unusual harpoon performance, if any)</li> <li>• Physical area of entry wound of harpoon, and exit wound (if appropriate).</li> </ul>
	<p><u>Secondary Killing Method</u></p> <ul style="list-style-type: none"> <li>• Method used</li> <li>• Criteria used to determine when secondary killing method should be applied</li> </ul> <p><u>Additional harpoon(s):</u></p> <ul style="list-style-type: none"> <li>○ Time and type of second/subsequent harpoon(s) if needed; is penthrite grenade used?</li> <li>○ Distance of vessel to whale when additional harpoon fired</li> <li>○ Position of whale relative to vessel i.e. ahead, abeam or other</li> <li>○ Behaviour of whale upon being struck, e.g. a) whale “runs at surface”; b) dives and disappears; c) blowing pattern; d) evidence of severe internal bleeding e.g. blood in exhalation; e) other behaviour e.g. thrashing or lolling. All behaviours to be timed</li> <li>○ Details on performance of harpoon (notes on unusual harpoon performance, if any)</li> <li>○ Location of harpoon on detonation (indicated on diagram at Annex B)</li> <li>○ Physical area of entry wound of harpoon, and exit wound (if appropriate)</li> <li>○ Estimate of the extent of wounding caused by each harpoon</li> </ul> <p><u>Rifle:</u></p> <ul style="list-style-type: none"> <li>○ Time of use of rifle</li> <li>○ For each bullet fired: <ul style="list-style-type: none"> <li>▪ Distance of vessel to whale when rifle fired</li> <li>▪ Position of whale relative to vessel i.e. ahead, abeam or other</li> <li>▪ Behaviour of whale upon being struck by the bullet, e.g. a) whale “runs at surface”; b) dives and disappears; c) blowing pattern; d) evidence of severe internal bleeding e.g. blood in exhalation; e) other behaviour e.g. thrashing or lolling. All behaviours to be timed</li> <li>▪ Location of bullet entry and, if appropriate, exit wound, (indicated on diagram at Annex B)</li> </ul> </li> <li>○ Details of performance of gun used - calibre, number of shots, target area of whale, number of guns used.</li> </ul>
	<p><u>Information on Target Whale</u></p> <ul style="list-style-type: none"> <li>• Time when whale assessed as dead</li> <li>• Criteria used to assess that whale is dead (according to accepted veterinary criteria – list any other criteria used).</li> <li>• Time to death (from time of first harpoon or first wounding to assessment as dead)</li> <li>• Time when whale hauled alongside vessel</li> <li>• Time whale secured or taken on board</li> <li>• Whale escapes: Time when whale escapes; reasons for this (e.g. failure of equipment, release of line for safety reasons); description of extent of wounding (e.g. severely wounded, whale has harpoon in it; whale dived but lost).</li> <li>• Efforts to recover struck and lost whale(s)</li> </ul>

	N.B. Data on struck and lost whales should be collected with a view to counting struck but lost whales against the total catch quota.
	<p><u>Additional desirable information to be collected by trained observers</u></p> <p>The following information should, wherever possible, be recorded by observers with appropriate background or training (e.g. in veterinary pathology):</p> <ul style="list-style-type: none"> <li>• Exact position of entry and exit point of harpoon</li> <li>• Photograph of entry and exit point</li> <li>• Assessment of effectiveness of grenade, based on examination of internal injuries. Organs and tissues to be examined should, depending on location of harpoon, include lungs, heart (thoracic cavity), skull, brain, blood supply and spinal cord. Photographs should be taken where appropriate.</li> <li>• Assessment of effectiveness of any secondary killing method used, based on examination of internal injuries, as above.</li> <li>• Data to assess the impacts of exertional myopathy for harpooned whales (e.g muscle damage).</li> </ul>
	<p><u>Standardisation of data collection</u></p> <p>All data shall be recorded on standardised data sheets to be provided by and returned to the IWC Secretariat at the end of each hunt or voyage or season as determined by the Commission.</p>
	<p><u>Additional information</u></p> <p>Information should be provided annually to the Commission on:</p> <ul style="list-style-type: none"> <li>• initial and ongoing crew training and examination of marksmanship;</li> <li>• all weapons used to kill whales and details of the training of all individuals directly involved in the deployment of any weapons used to kill whales.</li> <li>• any changes in national legislation or regulations relating to cetaceans, whaling or animal welfare.]</li> </ul>

**Option (3): Outline of an Annex to the Schedule or associated document concerning minimum conditions under which whales could be killed**

No whale may be killed (with the exception of ASW) unless the following conditions are met:

**Generic principles:**

- Method effectively achieves instantaneous insensibility and death
- Method appropriate for species targeted (on advice of the Working Group on Whaling Killing Methods and Animal Welfare Issues)

**Specific criteria or conditions**

- Penthrite (or other explosive) grenades (including appropriate explosive charge, size of cannon and forerunner rope)
- No cold harpoons
- Ban on the use of electricity
- Minimum calibres for rifles and maximum number of bullets
- Qualifications and training of gunners
- Presence of international observer
- Suitability of platform to provide accurate shot (including weather conditions)
- Limiting pursuit time
- Closed seasons and areas
- Minimum weather conditions (including sea state and visibility)
- No take of lactating females or calves
- Length limits and restrictions on sex of whales taken
- Strike limit (not landed limit)
- Prescribed body target area

- the type of gear used – including not only the type and size of harpoon used and its associated explosive charge, but also the calibre of rifle bullets and the number of shots (either of the harpoon gun or rifles) which can be made – with reference to the species being hunted;
- The state of sea and weather in which it is legitimate to hunt whales, given the need for clear visibility and stability of the hunting platform;

Nothing in these conditions shall prevent a Contracting government from requiring its nationals or vessels to apply more stringent conditions with respect to the killing of whales.

## 2. Draft Resolution to implement the Chair's proposal

The SDG agreed to put forward the following three draft Resolutions to implement the Chair's proposal for an initiative to focus discussions on improving techniques by (a) voluntary reporting of data discussed at Berlin Workshop; (b) voluntary provision of information from existing research programmes (and/or the development of a co-operative research programme) at regular specialist workshops (e.g. triennial):

- (1) Proposal from the Specialist Technical Group on animal welfare;
- (2) Proposal from the Secretariat;
- (3) Proposal from a small group within the SDG that looked at animal welfare issues.

The three proposals are given below.

- (1) Proposed draft Resolution from the Specialist Technical Group on animal welfare to give effect to the Chair's proposal

WHEREAS Article VI of the International Convention for the Regulation of Whaling provides for the Commission to make recommendations on any matters which may relate to whales and whaling and to the objectives and purposes of the Convention;

WHEREAS members of the IWC recognize the need to minimize the suffering of whales taken under the provisions of the Schedule and the importance of providing comprehensive data on animal welfare;

WHEREAS the Commission has adopted a number of Resolutions related to the welfare aspects of whaling;

NOW THEREFORE THE COMMISSION:

REQUIRES observers appointed by the Commission to report information and data (as set out in the Schedule *see proposed draft Schedule text above*) on welfare of all whales killed within the Revised Management Scheme, in a format and at a frequency approved by the Commission;

REQUESTS Contracting Governments engaged in whaling operations to co-operate fully with observers in the collection of such data, including by requiring their nationals to provide all appropriate and necessary assistance to such observers;

RESOLVES to continue discussions within the Commission on improving techniques for killing whales, and associated issues, through regular meetings of the Working Group on Whale Killing Methods and Associated Welfare Issues, and such workshops as the Working Group may decide to hold from time to time.

- (2) Proposed draft Resolution from the Secretariat to capture the intent of the Chair's proposal

WHEREAS the Commission has agreed that the hunting of whales shall be undertaken so that the hunted whale does not experience unnecessary suffering and so that people and property are not exposed to danger;

RECOGNISING that the Commission has made considerable progress in this regard *inter alia* through a series of specialist workshops and the provision of data and expertise by Contracting Governments;

NOW THEREFORE the Commission, in order to further focus discussions on improving techniques to kill whales:

AGREES to hold regular triennial specialist workshops focussing on the development of improved techniques for the killing of whales;

REQUESTS Contracting Governments to provide to the Commission, annual reports of data collected in response to discussions at the Berlin Workshop (*Ann. Rep. Int. Whaling Comm. 2003: 85-101*) and analyses of such data to the specialist workshops;

REQUESTS Contracting Governments to provide reports of ongoing research programmes into improved whale killing techniques to its specialist workshops;

REQUESTS Contracting Governments to consider developing a co-operative research programme into improved techniques for killing whales at the next specialist workshop.

(3) Proposed draft Resolution from a small group within the SDG to address the Chair's proposal

WHEREAS Article VI of the ICRW provides for the Commission to make recommendations on any matters which may relate to whales and whaling and to the objectives and purposes of the Convention;

WHEREAS members of the IWC recognise the need to minimise the suffering of whales taken under the provision of the Schedule and the importance of providing comprehensive data on animal welfare;

WHEREAS the Commission has adopted a number of Resolutions relating to the welfare aspects of whaling;

WHEREAS the Commission has agreed that the hunting of whales shall be undertaken so that the hunted whale does not experience suffering and so that people and property are not exposed to danger;

RECOGNISING that the Commission has held a series of specialist workshops and Working Groups on Whale Killing Methods and Associated Welfare Issues to discuss data and other information provided by Contracting Governments;

NOW THEREFORE the Commission, in order to further focus discussions on improving hunting methods and techniques to kill whales:

AGREES to hold regular Working Groups on Whale Killing Methods and Associated Welfare Issues and triennial specialist workshops focussing on the development of improved techniques for the killing of whales;

REQUESTS Contracting Governments to provide to the Commission data, and analyses thereof, collected in response to discussions at the Berlin Workshop (*Ann. Rep Int. Whaling Comm. 2003: 85-101*) for the Working Group on Whale Killing Methods and Associated Welfare Issues and specialist workshops to discuss the results and make recommendations to the Commission on improved techniques for killing whales;

REQUESTS Contracting Governments engaged in whaling operations to cooperate fully with international observers in the collection of such data including by requiring their nationals to provide all appropriate and necessary assistance to such observers;

REQUESTS Contracting governments to consider developing a co-operative research programme into improved techniques for killing whales at the next specialist workshop in [date].