

**Report of the Small Working Group (SWG)
on the Future of the International Whaling Commission
18 May 2009**

BACKGROUND

At its 60th meeting in June 2008 in Santiago, Chile, the International Whaling Commission created the Small Working Group on the Future of the International Whaling Commission (SWG), charged with assisting the Commission to arrive at a consensus solution to the main issues it faces and thus to enable it to best fulfill its role with respect to the conservation of whale stocks and the management of whaling. The primary task of the SWG –chaired by Mr Alvaro de Soto– was to make every effort to develop a package or packages for consensus solutions regarding the future of the IWC for review by the Commission.

The SWG has held three meetings, at St Petersburg, Florida, USA, in September, 2008, at Cambridge, United Kingdom, in December, 2008, and at Rome, Italy in March 2009. The SWG Chairman has submitted progress reports on all three meetings. This is the report of the SWG to the Commission due by 18 May 2009.

The SWG had before it 33 elements or issues identified as being of importance by members of the IWC. At its first meeting the SWG adopted a method of work on the understanding that *‘nothing is agreed until everything is agreed.’* A distinction was made between:

- (a) controversial issues that need to be addressed in the short term, i.e. those that if not addressed in the short term may fail to alter the status quo or even result in an irreparable break in the system via the withdrawal of governments from the Convention; and
- (b) issues which are non controversial or less controversial and which, if left unresolved, would not prevent a package being agreed concerning category (a) *provided* that a mechanism exist or can be established to address them. The latter are primarily but not exclusively scientific and administrative issues.

The lists of issues and how they are broken down into the two categories are set out in Annexes 6 and 7 of IWC/M09/4¹. The division into these categories should be understood primarily as a methodological step without which the SWG’s work might have proved unwieldy (see Progress report on the September 2008 meeting, i.e., IWC/S08/Rep 1).

Category (b) issues were further divided into: (1) items referred to the Scientific Committee; and (2) items of a mainly administrative or financial nature.

As regards (1), the Chairman of the Scientific Committee and the Head of Science were asked to elaborate on these items and a paper was produced for the Rome intersessional meeting (see document IWC/M09/6, included here for completeness as Annex D). This paper demonstrated that these items are already included in the Scientific Committee’s work programme. Items in category (2) were discussed by the SWG in Rome (see Annex F of the Progress report of the Rome SWG, i.e. IWC/M09/Rep 1).

CHAIRS’ SUGGESTIONS

Having thus organised its work, the SWG was able to concentrate efforts on a core package of issues on the future of the IWC and how they might be combined. Following extensive discussion and consultation, an attempt was made to reflect the outlines of a package for consideration by the Commission as a whole. This took the form of a paper titled “Chairs’ Suggestions on the Future of the IWC” (Appendix 1 of IWC/M09/4). The Chairs’ Suggestions contain a two-stage approach to defining the future course of the IWC. The Chairs of the IWC and the SWG, who took responsibility for the “Suggestions” paper, expressed the view that it pointed in the direction of what might be an overall solution to the core issues.

The Chairs singled out three issues out of the 13 assigned to category (a) for which it has proven particularly important and difficult to identify a single way forward, namely:

- (1) Japanese small-type coastal whaling;
- (2) special permit whaling; and
- (3) sanctuaries.

¹ See Annex B for list of documents relevant to meetings of the SWG

They are inter-related in that it will not be possible to reach agreement on (1) without agreement on (2) and *vice-versa*. The question of *where* regulations would apply –i.e. sanctuaries- cuts across both.

The membership of the SWG is by and large in agreement with the Chairs' view that these three category (a) issues are the key issues. Further exploration and discussion will be required to determine the appropriate way forward in the context of a package or packages. The Chairs' view is that the best way to tackle them is in two stages. The *first stage* would consist of short-term solutions which would be put in place for a 5-year period, to be known as the 'interim period.' It would be understood that the solutions to these issues would be *ad hoc* and short term in nature and that these solutions would not be construed as signifying agreement by any party with each of its details. The impact of the conservation and management measures proposed by the Chairs for the interim period, in addition to reducing the number of whales killed, would have the overarching purpose of strengthening the conservation and management mandates of the IWC.

During the interim period, long-term solutions relating to the governance and future functioning of the IWC would be developed so that they can be put in place at the end of the five years. The *second stage* would begin with the expiry of the short-term solutions and the entry into force of the long-term solutions.

ACHIEVEMENTS THUS FAR

The categorization and narrowing down of issues are significant achievements in the work of the SWG, as is the agreement that has emerged on the possible value of a two-stage approach. However, given the complexity and the sensitivity of the issues involved, it should not come as a surprise that it has thus far not been possible to secure agreement on key specifics of the "Chairs' suggestions." The inter-relatedness of the three issues singled out cannot be overemphasized; hence the importance of the principle that nothing is agreed until everything is agreed.

While agreement on specifics of the core package is still pending², considerable work has also been done in other aspects of the SWG's mandate, as reflected in the Progress report presented by the SWG Chairman following the Rome meeting (see IWC/M09/Rep 1). It is on this basis that Commission members will find attached to this report agreements on three issues: (i) a *work plan* for consideration and action on the issues that would be before the IWC during the interim period (Annex E); (ii) *guidance on category (b)* issues including elaboration of how these issues will be advanced beyond IWC/61 (Annex F); and (iii) a *request for the Scientific Committee to provide a draft, non-binding work plan and timeline to fully assess the Japanese small-type coastal whaling proposal* (Annex G with background information in Annex D).

Advice on (iii) is provided following the authority delegated by the IWC at its intersessional meeting. Annex G was prepared by a small group to assist the Scientific Committee in providing advice on a workplan and timeline to assess Japan's proposal. However, as stated in Annex G, it does not represent any agreement by the Small Working Group or the Commission on the appropriate conservation and user objectives that might apply should the Commission decide to approve a quota at some point in the future. In addition, Annex G requests the Scientific Committee to provide advice on the timeline and work plan for the completion of a full RMP implementation review for western North Pacific common minke whales.

Any advice that may be provided by the Scientific Committee will of course not be binding; as has been stated throughout the process, nothing is agreed until everything is agreed. Japanese small-type coastal whaling is one element in a potential package(s) of measures to resolve IWC's problems that is currently under discussion. Consequently, the requesting of advice from the Scientific Committee is **only** to obtain further background information on one aspect of one potential element of a package or packages to assist in Commission discussions. Accordingly, the Commission can expect a proposed Scientific Committee work plan for the period prior to IWC/62 for consideration by the Commission in Madeira in the context of the Commission's broader consideration of a potential package and the possible user and conservation objectives for Japan's proposal.

² Two SWG members, while appreciative of the work undertaken to develop a package solution for the future of the IWC, expressed concern that too much focus has been given in the short-term to addressing specific whaling activities (Japanese coastal whaling) rather than: the commercial whaling moratorium and general rules on the management of whaling; provisions for objections and reservations; and the purpose of the Convention.

Whalewatching was considered as an important element that will be included in the package in an appropriate way.

The Intersessional Correspondence Group on Scientific Committee issues was established at IWC/60. It reported to the Rome intersessional Commission meeting (IWC/M09/5). The Scientific and Finance and Administration Committees were separately requested to review the issues at Madeira on the occasion of IWC/61 and to forward their recommendations to the Commission with a view to establishing a small group in Madeira to continue the work (see pp. 9 and 10 of IWC/61/7rev).

THE WAY AHEAD

The SWG has fallen short of the stated goal of agreeing on a package or packages on the future of the IWC for the Commission's review within the time allotted to it. However, significant concrete results have emerged as outlined above and in the annexes to this report in connection with the SWG's work and the sense of urgency that has been developed. The general agreement on the approach to be taken in order to bridge the remaining gaps on the central issues which must form the core of a package is also an important milestone that should not be underestimated. The practical progress achieved must be coupled with the greatly improved atmosphere and the spirit of respectful dialogue which now prevails. This diplomatic method of doing the Commission's business must be retained. It is against this background and to keep up the momentum that has been gained, that the SWG recommends to the IWC that, when it meets at Madeira, it should direct that the efforts underway should be continued for a further year and decisions taken at IWC/62.

Annex A

List of countries who have attended one or more meetings of the SWG

Antigua and Barbuda
Argentina
Australia
Benin
Brazil
Cambodia
Cameroon
Chile
China
Costa Rica
Côte d'Ivoire
Czech Republic
Denmark
Germany
Guinea, Republic of
France
Iceland

Italy
Japan
Korea, Republic of
Mexico
Netherlands
New Zealand
Norway
Palau, Republic of
Panama
Peru
St Kitts and Nevis
St Lucia
South Africa
Sweden
USA
UK

Annex B

List of documents relevant to meetings of the SWG

SWG Meeting, Florida, September 2008

- IWC/S08/SWG
- 1 Draft agenda
 - 2 List of documents
 - 3 An overview of the elements/issues identified as being of importance to one or more Contracting Governments in relation to the future of the IWC (prepared by the Secretariat)
 - 4rev Input from Contracting Governments on the 33 elements/issues identified as being of importance to one or more Contracting Governments in relation to the future of the IWC (prepared by the Secretariat)
 - 5 Progress report on the work of the Intersessional Correspondence Group on Scientific Committee Issues
 - 5 Addendum: input from Denmark

SWG Meeting, Cambridge, UK, December 2008

- IWC/S08/Rep 1 Progress Report on the September 2008 meeting of the Small Working Group (SWG) on the Future of the International Whaling Commission, presented by Alvaro de Soto, SWG Chairman, St. Petersburg, Florida, USA

- IWC/D08/SWG
- 1 Draft agenda
 - 2 List of participants
 - 3 List of documents
 - 4 Draft Report of the Intersessional Correspondence Group on Scientific Committee Issues

SWG Meeting, Rome, March 2009

- IWC/M09/
- 4 Report on the Small Working Group (SWG) on the Future of the International Whaling Commission, Presented by Alvaro de Soto, SWG Chairman (includes Chairs' Suggestions on the Future of IWC)
 - 5 Report of the Intersessional Correspondence Group on Scientific Committee Issues
 - 6 Further elaboration on the work of the Scientific Committee with respect to Category (b) items
 - 7rev Directions for further work of the SWG

Other documents

IWC/M09/Rep 1: Progress report on the Small Working Group (SWG) on the Future of the International Whaling Commission, *Presented by Alvaro de Soto, SWG Chairman, after the SWG meeting in Rome, 11-13 March 2009*

IWC/61/7rev: Chair's Report of the Intersessional Meeting of the Commission on the Future of IWC, FAO Headquarters, Rome, 9-11 March 2009

Annex C

(Document IWC/M09/6)

FURTHER ELABORATION ON THE WORK OF THE SCIENTIFIC COMMITTEE WITH RESPECT TO CATEGORY (B) ITEMS

Greg Donovan and Arne Bjørge

INTRODUCTION

We received a request from the Chair of the Commission on 5 February with the following key paragraphs:

As a result of the discussions of the Small Working Group on the Future of the IWC established at last year's Annual Meeting, the Commission requests that the Head of Science and the Chair of the Scientific Committee provide a report at the upcoming Intersessional Meeting in March 2009 on progress made to date and any future plans to address the issues assigned to the Scientific Committee from the 33 items developed by the Commission as part of the "Future of the IWC" process (see Tables 1 and 2 attached).

We realize that many of these items are already being addressed in the annual Work Plan of the Scientific Committee, which the Commission has endorsed. We further realize that it is very difficult for the Scientific Committee to predict when a given issue will be completed.

Finally, we recognize that this request is neither trivial nor simple, and will require considerable time between now and the intersessional meeting to complete. Nonetheless, some of the Contracting Governments to the IWC believe that one or more of these 19 issues are sufficiently important that the current priorities of the Scientific Committee may need to be changed. To provide for such a discussion, a summary of whether a given issue has been included in the most recent Work Plan of the Scientific Committee, and, if so, the expected time period for completion, would be very helpful.

This document is our response to this request. The short period of time between receiving this request and the present meeting (during which there have been four scientific workshops that one or both of us have had to attend), means that the comments in this document represent our best attempt to answer this request on behalf of the Scientific Committee – we have not been able to consult with the full Committee as we would have preferred.

DISCUSSION

Appendix 1 provides the summary of the information by element related to the work of the Scientific Committee – it is largely based on the text developed for the Small Working Group, with, as appropriate our comments about 'timelines'. It will be recalled that when the list of elements was developed it was recognised that there would be overlap amongst them; that is particularly true for the scientific elements. Therefore this document, whilst retaining all of the elements in the Appendix, focuses on some of the broader overlapping issues in the text here that will affect our ability to estimate 'completion dates' for a number of the elements, many of which refer to broad issues rather than specific tasks.

The work of the Scientific Committee is primarily carried out by sub-committees and working groups (either topic or species/area-based) that meet in parallel sessions during the first 8-9 days of the Annual Scientific Committee meeting or at specialised intersessional workshops. All of these activities are in response to priority work requested by the Commission and are included in the draft workplan presented to the Commission for approval at each annual meeting. It should be noted that removing or giving lower priority to a particular group or groups may not result in a 'speeding' up of the other groups – whether it does or not will depend on the personnel involved and the nature of the particular topics being considered and, in some cases (particularly with respect to ecosystem-related topics), work carried out by other organisations and research groups.

Table 1 summarises the sub-groups of the Scientific Committee that the Commission agreed should work in Madeira and our attempt to identify those which will deal with at least some aspects of the various elements. It is clear from this Table that almost all of the groups are already considering, to a greater or lesser extent, the majority of the elements and that all of the elements are covered by at least one and usually several groups. Newer elements such as conservation management plans and co-operative non-lethal research programmes are or could be relevant to all groups to a greater or lesser extent. Some groups (e.g. stock definition and increasingly environmental concerns) are fundamental to the working of all of the other sub-groups (and thus are also relevant to all elements).

In the sections below we elaborate on some of the issues that overlap several elements. You are also referred to the earlier Secretariat paper that provided background to all 33 elements (IWC/S08/SWG3).

Conservation Plans

Co-incidentally, the Scientific Committee received two documents on this topic at last year's Scientific Committee meeting. One was the document produced by the Government of Australia that has already been considered by the Commission (IWC/60/15) and the other was a longer document presented to the Scientific Committee that dealt with the process for developing effective conservation plans (Donovan et al., 2008)³; a summary of the process required and

³ Donovan, G., Cañadas, A. and Hammond, P. 2008. Towards the development of effective conservation plans for cetaceans. 15pp. Paper SC/60/O17 presented to the IWC Scientific Committee, June 2008, Santiago, Chile. 15pp.

the links between them is given in Fig. 1. The Committee received the document and agreed that all of the Scientific Committee's groups would take this process into account in their work, either in working towards full conservation plans for particular species/areas where there is an urgent conservation need (e.g. western North Pacific gray whales) or in using the framework as a guide when making research or management recommendations such that they are in a form that can ultimately contribute to a conservation management plan.

It can be seen from the figure that fully developed conservation plans integrate the work of all sub-committees. They should include consideration and prioritisation of all potential anthropogenic threats, both direct (e.g. hunting, bycatches and ship strikes) and indirect (e.g. habitat degradation including chemical and noise pollution, environmental change etc) and associated mitigation measures. The last will often include matters that are not related to whaling. These will require collaborative approaches amongst the relevant national and international authorities e.g. related to fisheries, marine protected areas, pollution etc) and monitoring not only of cetaceans themselves but of anthropogenic and environmental factors.

The evaluation of potential threats may require modelling exercises similar to those used for the RMP/AWMP as well as information from in-depth assessments. Work on conservation plans is envisioned to be an ongoing process and thus it is not possible to set a single time limit for completion. A conservation plan itself should be seen as a living document. However, as Donovan et al. point out, incorporation of timelines, priorities, responsible players and the legal framework is fundamental to individual conservation plans and incorporated 'actions'. Actions can relate to research, management and legislative, compliance, monitoring, capacity building/public awareness and co-ordination.

Finally, they stress that effective conservation plans require the participation of all stakeholders (including relevant authorities) – they must have a sound scientific basis but are not the province of scientists alone. How to achieve this broad involvement is something that the Commission will need to consider; the authors had noted that one possibility is that the Scientific and Conservation Committees might work together on determining appropriate broader mechanisms.

Ecosystem related issues including ecosystem approach to management, environmental and climate change

The Scientific Committee has been and continues to address these issues in a variety of ways including the establishment of an ecosystem modelling working group. The importance attached to this work is witnessed by the fact that since Santiago the Committee has held a joint workshop with CCAMLR on ecosystem modelling and a specialist workshop on climate change and cetaceans.

However, as these and previous meetings of both the IWC Scientific Committee and other relevant bodies (e.g. FAO, CCAMLR) have emphasised, predictive ecosystem modelling is an extremely complex and difficult issue from the perspectives of the available data and analysis and modelling. It is clear that obtaining results sufficiently reliable to directly inform management advice should not be expected within at least the next few years and could require considerable time, even for what some term 'simple' systems such as the Southern Ocean. It also requires considerable collaboration with other bodies – in many cases the data on cetaceans are considerably stronger than those for other components of the ecosystem (e.g. lower trophic levels such as krill, fish and squid species) which may be intrinsically more difficult to measure/model as well as oceanography. In addition, even the IPCC models related to climate change are extremely variable and not always at the appropriate temporal and geographical scale to allow inferences about cetaceans. Given this, it is extremely difficult to produce a 'timeline' for the completion of such work. The Committee is working to ensure more direct collaboration with other groups and in particular to ensure that cetaceans are seen as an important component of ecosystem models.

However, in addition to direct ecosystem modelling the Scientific Committee also incorporates the concept of environmental change into its work on both the RMP and the AWMP. Inter alia, the scenarios considered include time varying trends in carrying capacity, natural mortality and productivity, and the occurrence of 'catastrophes' which were intended to reflect in an integrative manner environmental impacts including climate change; the results of preliminary ecosystem modelling can in some circumstances inform the choice of scenarios to consider even when the results are not sufficiently robust to be used directly in management. In addition, both the RMP and AWMP incorporate regular (5 year) Implementation reviews during which new information on cetaceans and their environment is evaluated to ensure that the parameter space tested by the simulation trials is adequate; if it not new trials are determined. The Scientific Committee is at present reviewing the need to consider additional trial scenarios with respect to environmental change as detailed in last year's report; it is expected that that work will be completed by the 2010 annual meeting.

Co-operative non-lethal research programmes

This issue was raised as an important initiative by Australia in document IWC/60/16. It is clear that the results of such initiatives are intended to be reviewed by the Scientific Committee and can make an important contribution to its work, particularly as the intention is to take into account Scientific Committee needs and recommendations. The importance of international collaboration is clear for migratory species that are found in the waters of more than one nation and in the high seas. In many ways this expands on previous collaborative research work undertaken in co-operation with or by

the Scientific Committee including the IDCR/SOWER cruises, the NASS cruises, POLLUTION 2000+ and the SOWER/CCAMLR 2000 cruises. Such programmes have been shown to be of major benefit to the work of the Scientific Committee. Again, it is difficult to apply a general timeline – it is expected that individual programmes will have their own timelines and that such programmes in general will contribute in the long-term to the work of the Scientific Committee. The results of a workshop on southern ocean partnerships will be available for consideration at the Madeira meeting.

Collaboration with other groups

It is clear from the text above that the broad issues of cetacean conservation and management requires collaboration with other bodies at a number of levels, not merely scientific. At the scientific level close co-operation already occurs with a number of bodies; members of the Scientific Committee (including the Secretariat) participate fully in the work of, for example, CCAMLR, SO-GLOBEC, IUCN (especially the western gray whale panel), CMS cetacean agreements, FAO (with respect to bycatch) and it is looking to strengthen and broaden this collaboration.

CONCLUSION

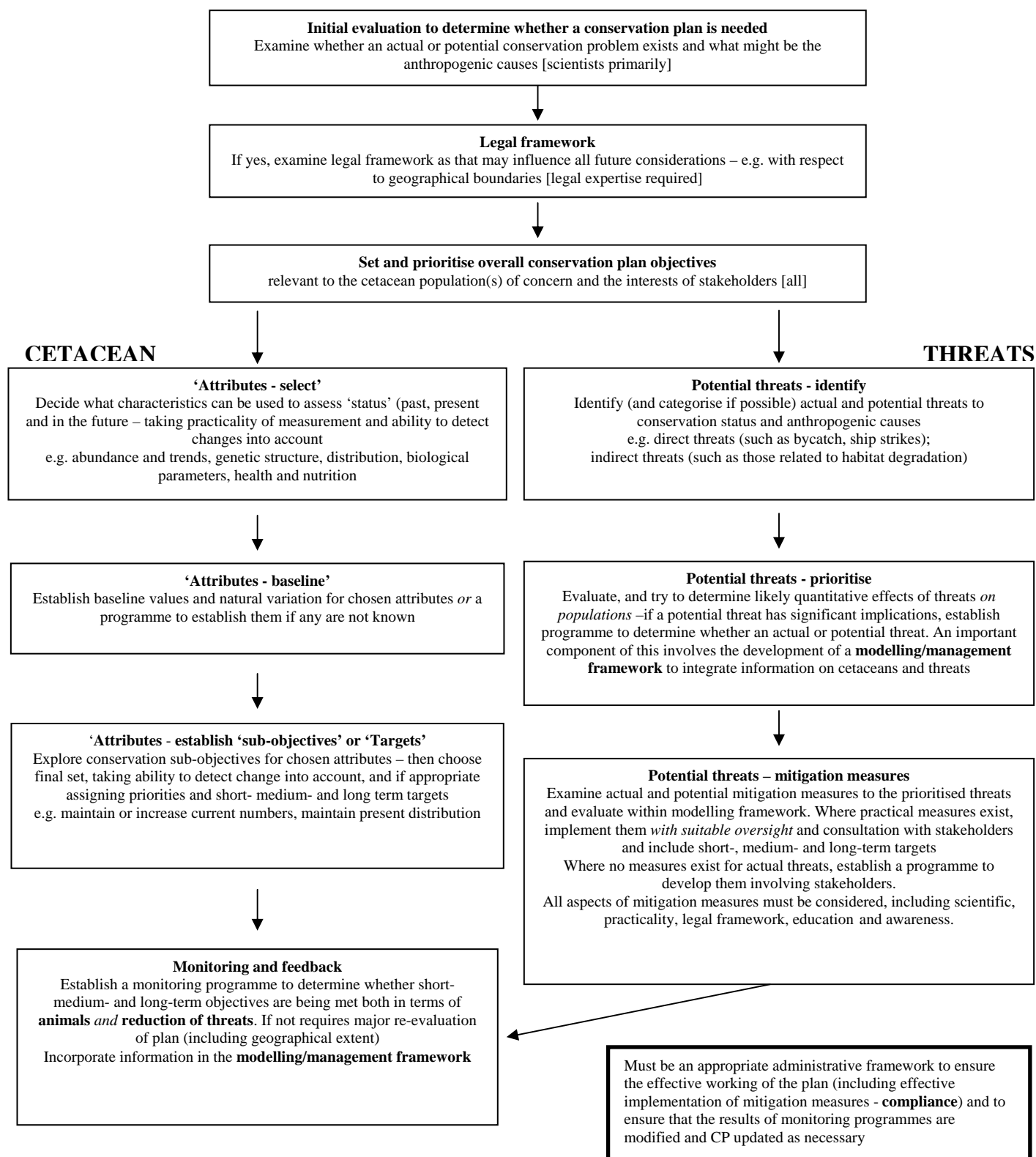
This document, although completed in a rather short time and without the opportunity to consult with our colleagues, does, we believe, show that the scientific category (b) issues are included into the workplan of the Scientific Committee and, for example in the case of the conservation plan concept, become an increasingly important mechanism to integrate the work of the sub-committees and working groups into effective conservation and management advice. The complexity of many of the topics (especially those with an ecosystem component) makes it difficult for us to provide precise timelines – indeed the changing nature of the environment and anthropogenic activities mean that many topics will require the continued attention of the Committee. However, specific individual actions (be they research or mitigation and management) will be assigned timelines. As an aside, the development of detailed guidelines for the Implementation process for the RMP with an associated timeline has proved very effective. A proposal for similar guidelines (with a timetable) for in-depth assessments (an important component of and basis for conservation plans) is expected to be forthcoming at the Madeira meeting.

Table 1

Scientific Committee sub-committees, working groups and standing working groups scheduled for the 2009 Annual Meeting and elements that are relevant to those groups.

Title	Elements addressed by the group
Revised Management Procedure	Bycatches, Climate change, Conservation Management Plans, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management, Environmental threats to cetaceans
Aboriginal Subsistence Management Procedure	Bycatches, Climate change, Conservation Management Plans, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management, Environmental threats to cetaceans
Bowhead, Right and Gray Whales	Bycatches, Climate change, Conservation Management Plans, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management, Environmental threats to cetaceans, Marine protected areas
In-depth Assessment	Climate change, Conservation Management Plans, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management, Environmental threats to cetaceans,
Working group on North Pacific common minke whales	Bycatches, Conservation Management Plans, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management, Environmental threats to cetaceans
Southern Hemisphere whale stocks other than minke and right whales	Bycatches, Conservation Management Plans, Co-operative non-lethal research programmes, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management, Environmental threats to cetaceans, Marine protected areas
Stock Definition	Conservation Management Plans, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management,
Estimation of bycatch and other human-induced mortality	Bycatches, Conservation Management Plans, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management, Environmental threats to cetaceans, Marine protected areas
Environmental Concerns	Climate change, Conservation Management Plans, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management, Environmental threats to cetaceans, Marine protected areas
Ecosystem Modelling	Climate change, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management, Environmental threats to cetaceans,
Small Cetaceans	Bycatches, Climate change, Conservation Management Plans, Co-operative non-lethal research programmes, Data provision, Environmental threats to cetaceans, Marine protected areas
Whalewatching	Conservation Management Plans, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management
DNA	Bycatches, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management
Special Permits	Climate change, Co-operative non-lethal research programmes, Data provision, Ecosystem-based approach to management, Environmental threats to cetaceans,

Fig. 1. Steps towards effective conservation plans (from Donovan *et al.* 2008)



Appendix 1

Outline of issues and mechanisms for progressing work on Category (b)⁴ elements/issues with a scientific component

Some issues that have been raised ⁵	How issues are either already being addressed or how they could be addressed
ELEMENT 3: BYCATCH AND INFRACTIONS (SWG 3: P. 8; SWG 4REV: PP. 65-66)	
Continued work on bycatch issues despite disagreements in some areas (e.g. with respect to small cetaceans).	<p>The Scientific Committee continues to examine scientific aspects of bycatch of large whales and small cetaceans in terms of assessing effects at the population level, reviewing mitigation measures and incorporating it into work on the RMP and AWMP and presenting this work to the Commission. It will be assisted in this process by work associated within the conservation management plan framework (see Element 10 below). Several aspects of this work are undertaken in co-operation with other international bodies including, ASCOBANS, ACCOBAMS and FAO.</p> <p><i>This is ongoing work. The problem of incidental catches in fishing gear is worldwide and applicable to a wide variety of fishery types, species of cetaceans and geographical areas. Mitigation measures will be similarly varied and will need to be developed in conjunction with the relevant national and international authorities. Consideration of bycatches is an important component of conservation plans. In particular cases it is important that timelines are set.</i></p>
ELEMENT 4: CLIMATE CHANGE (SWG 3: P. 3; SWG 4REV: PP. 67-68)	
(a) Further efforts to estimate effects on cetaceans at the scientific level	<p>The Scientific Committee has this item on its agenda and is examining this issue from a number of perspectives – in particular it has recently held a joint workshop with CCAMLR with respect to the Southern Ocean and it will be holding a 2nd full workshop on the topic in Spring 2009 (the first was in 1996). The Scientific Committee has recognised that this is a complex issue from both a data and modelling perspective that will require medium- to long-term efforts. Its work with respect to incorporating such effects under whaling management procedures is considered under (b) below.</p> <p><i>This is ongoing complex work. The Scientific Committee is continuing to give this matter priority as witnessed by its recent intersessional workshops and the establishment of an ecosystem modelling working group and report to the Commission on its findings. Given the need for collaboration with other bodies and the focus on non-cetacean as well as cetacean datasets, it is not possible to set a ‘completion’ date but realistically it will not be for several years for any of the current systems under consideration. The recommendations of the two workshops will be presented to the Scientific Committee in Madeira and the Committee will report to the Commission on the findings.</i></p>
(b) Allowance for effects: management of whaling	Both the RMP and the AWMP are tested with scenarios that use proxies (e.g. changing carrying capacity, catastrophes and changes in reproductive/survivorship) for environmental changes including climate change. The

⁴ These are issues which are non-controversial or less controversial and which, if left unresolved, would not prevent a package being agreed concerning category (a), *provided* that a mechanism exists or can be established to address them. These are primarily but not exclusively scientific and administrative issues. (There may be issues which, while controversial, may not need to be tackled immediately as part of the package in (a) above.

⁵ For each element, the issues are listed in no particular order and may overlap.

Some issues that have been raised ⁵	How issues are either already being addressed or how they could be addressed
	<p>Committee regularly reviews these scenarios and is doing so at present for RMP trials. In addition, both the RMP and AWMP have mandatory reviews every 5 years to ensure that the tested scenarios are adequate in the light of new knowledge.</p> <p><i>The Scientific Committee has identified that this should be accorded priority and work is underway to evaluate the need for additional trials. It is expected that from the perspective of the generic RMP evaluation, this will be completed within two years; as noted above for individual AWMP and RMP Implementations, the process involves re-evaluation at least every five years in the light of new information.</i></p>
(c) Allowing for effects: species not subject to whaling (especially heavily depleted populations)	<p>The Scientific Committee has stressed that the effects of environmental change may affect all species/populations including those for which catches would not be allowed if the RMP was implemented – indeed highly depleted populations are probably the most vulnerable to such changes. The Committee continues to investigate this and will be assisted in this process by work associated within the conservation management plan framework (see element 10 below).</p> <p><i>The generic difficulties have been highlighted already but the Scientific Committee will need to incorporate this in the context of the modelling required in the context of conservation plans. Recommendations made by the Climate Change workshop will be presented to the Scientific Committee in Madeira, incorporated into its workplan and the Committee will report to the Commission.</i></p>
(d) General small cetacean issue	<p>The question as to the level to which this issue should be examined for small cetaceans falls under the category (a) element 30. At present the Scientific Committee is examining the issue for all cetaceans.</p> <p><i>Recommendations made by the Climate Change workshop will be presented to the Scientific Committee in Madeira, incorporated into its workplan and the Committee will report to the Commission.</i></p>
(e) Mitigation actions	<p>At its previous workshop, the Scientific Committee noted that mitigation measures related to the general issue of climate change are well known and it asked the Commission to urge member countries to take such action. These relate to matters outside the regulation of whaling. Mitigation measures related to ‘tertiary effects’ of climate change (e.g. possible increased shipping) will be considered by the Scientific Committee in terms of the way it reviews such anthropogenic threats now. It is relevant in terms of the development of conservation plans as discussed above.</p> <p><i>It is primarily Commission (and in many cases it would need to be in conjunction with other intergovernmental bodies) responsibility to incorporate advice from the Scientific Committee in terms of mitigation measures. As before this is ongoing work.</i></p>
(f) Need for co-operation with other bodies	<p>The Scientific Committee is already working in collaboration with other scientific bodies e.g. those within CCAMLR, CMS as well as Southern GLOBEC. The need for further collaboration (e.g. with respect to possible mitigation measures) will need to be identified as work progresses.</p> <p><i>The need for collaboration with other bodies is recognised. Co-operation with some bodies (e.g. the CMS cetacean agreements, CCAMLR, SO-GLOBEC are well developed. Co-operation with other relevant bodies needs to be developed when identified.</i></p>

Some issues that have been raised ⁵	How issues are either already being addressed or how they could be addressed
(g) Level of priority to be given to this work	<p>The Scientific Committee is addressing this as one of its priority issues both in a general context and in the context of the RMP/AWMP; it is necessarily an iterative ongoing subject and future work will <i>inter alia</i> depend on the recommendations from the forthcoming workshop and the level of priority allocated by the other scientific bodies.</p> <p><i>The Scientific Committee is giving, and should continue to give this matter priority and report to the Commission on its findings.</i></p>
ELEMENT 10: CONSERVATION MANAGEMENT PLANS (SWG 3: P. 21; SWG 4REV: PP. 85-86)	
(a) The value of conservation management plans as a framework for conservation actions related to recovering species/populations with respect to non-whaling related threats. The development of conservation management plans is a complex and iterative process that even with the appropriate framework will normally take several years.	<p>The Scientific Committee has agreed the value of such a framework and will be taking this into account in its agenda for the forthcoming meeting (and beyond). This is discussed much more thoroughly in the main text of this document.</p> <p><i>The Scientific Committee has decided to incorporate this concept within all of its work and to give this matter priority. It is of its essence ongoing work but timelines will be incorporated into individual plans and actions.</i></p>
(b) The appropriate way to link the work of the Commission and its subsidiary bodies on the scientific and mitigation measure/management actions (including involvement of stakeholders – see (c) below).	<p>This is a matter for the Commission to decide – one suggestion has been that the Conservation Committee (and see Element 9) may be an appropriate technical body to work with the Scientific Committee towards translating scientific advice into appropriate mitigation measures for consideration by the Commission. This would need to be undertaken in conjunction with stakeholders including relevant national and intergovernmental bodies. This is discussed much more thoroughly in the main text of this document and in Donovan <i>et al.</i>, 2008.</p> <p><i>Determining the appropriate forum and strategy could be placed on the Commission's Agenda.</i></p>
(c) The need to involve/co-operate with other appropriate national and intergovernmental regulatory bodies that are responsible for non-whaling-related threats.	See the comments under (b) above.
ELEMENT 12: COOPERATIVE NON-LETHAL RESEARCH PROGRAMMES (SWG 3: P. 24; SWG 4REV: PP. 90-91)	
(a) Organised regionally outside IWC to develop priorities and research needs	<p>It is intended that the resultant programmes will be submitted to the Scientific Committee for review. This is discussed much more thoroughly in the main text of this document.</p> <p><i>This will contribute to the ongoing work of the Scientific Committee.</i></p>
(b) General issues with respect to non-lethal and lethal research	This is covered under element 23 (Research under special permit) and in particular in the new process to review scientific permit work.
ELEMENT 13: DATA PROVISION (SWG 3: P. 25; SWG 4REV: P. 92)	
(a) Ensure that scientific and operational data essential for management are available for review and analysis	<p>The Scientific Committee has developed an approach to this issue (including the Data Availability Agreement and the Requirements and Guidelines related to the RMP) that it believes is working well.</p> <p><i>The Commission has already endorsed this approach.</i></p>
ELEMENT 14: DEVELOPMENTS IN OCEAN GOVERNANCE (SWG 3: P. 26; SWG 4REV: PP. 93-94)	
The need to move away from a sector-based single species	The Scientific Committee has already begun to address aspects of this issue and co-operates with CCAMLR in

Some issues that have been raised ⁵	How issues are either already being addressed or how they could be addressed
approach to the conservation and management of marine living resources to an ecosystem-based approach, co-operating with and taking account of the work and outcome of other relevant treaties (e.g. UNCLOS, CBD).	particular (see Element 15). The general issue is discussed much more thoroughly in the main text of this document. <i>This is an important yet complex issue that will require several years more work.</i>
ELEMENT 15: ECOSYSTEM-BASED APPROACH TO MANAGEMENT (SWG 3: P. 27; SWG 4REV: PP. 95-96)	
(a) No specific definition agreed.	The Scientific Committee is working on this issue on two fronts: (1) using ecosystem information to inform single-species management (e.g. under the scenarios used to test the RMP and AWMP); (2) working towards developing ecosystem models (see (b) below) that may ultimately be used in a predictive manner. This is discussed much more thoroughly in the main text of this document. <i>The Scientific Committee is giving this matter priority but recognises that it is a complex issue that will require several years more work.</i>
(b) Level of priority to be given to this work.	The Scientific Committee is addressing this as one of its priority issues both in a general context and in the context of the RMP/AWMP; it is necessarily an iterative ongoing subject and future work will <i>inter alia</i> depend on the recommendations from relevant workshops and the level of priority allocated by the other scientific bodies. <i>The Scientific Committee is giving this matter priority but recognises that it is a complex issue that will require several years more work. In terms of the RMP/AWMP scenarios it is anticipated that this will be completed within two years in the generic sense as well as at least every five years for specific Implementations.</i>
(c) As with Element 4 (Climate change), complex scientific issue from data and modelling perspective, need for co-operation with other bodies.	As noted under Element 4, the Scientific Committee is embarking upon the long-term work needed to begin to develop ecosystem models that may eventually lead to some predictive modelling that can be used to inform management; this work can only be effectively undertaken in collaboration with CCAMLR, SO-GLOBEC and others – and the Scientific Committee is pursuing this. <i>This is ongoing complex work. The Scientific Committee is continuing to give this matter priority as witnessed by its recent intersessional workshops and the establishment of an ecosystem modelling working group and report to the Commission on its findings. Given the need for collaboration with other bodies and the focus on non-cetacean as well as cetacean datasets, it is not possible to set a 'completion' date but realistically it will not be for several years for any of the current systems under consideration.</i>
ELEMENT 16: ENVIRONMENTAL THREATS TO CETACEANS (SWG 3: P. 28; SWG 4REV: PP. 97-98)	
(a) Level of priority to be given to this work and incorporation into the conservation and management of cetaceans.	The Scientific Committee has recognised the importance of addressing threats other than whaling and has established a standing working group on this subject as well as holding specialists workshops and important research programmes (POLLUTION 2000+ and SOWER 2000). It is working towards greater incorporation of the work of this group with the other sub-committees, noting the value of a conservation management plan framework in this context. The RMP and AWMP at present address these issues in their simulation testing frameworks that are regularly reviewed (and see Element 4: Climate Change and 15: Ecosystem-based approach to management). <i>The Scientific Committee is giving these matters increasing priority – again this is ongoing work and it is not</i>

Some issues that have been raised ⁵	How issues are either already being addressed or how they could be addressed
	<i>possible to set generic completion dates – individual situations will be given specific timelines.</i>
(b) Need for co-operation with other bodies that have some regulatory capacity on factors outside whaling.	The co-operation with other bodies at a scientific level is underway. <i>Where mitigation measures may be proposed on matters other than whaling, there is a need to consider a broader co-ordination with other bodies at a Commission level.</i>
ELEMENT 20: MARINE PROTECTED AREAS (SWG 3: P. 40; SWG 4REV: PP. 103-104)	
(a) This issue is integrally related to the discussion of Element 27 (Sanctuaries) part of which is being considered as category (a)	See the discussion under Element 27.
(b) No general definition of MPAs.	The flexibility in the definition of MPAs is valuable and the Scientific Committee may consider a variety of possible targeted MPAs as potential mitigation tools within the context of conservation management plans (see Element 10). <i>The Scientific Committee has agreed to integrate the concept of conservation management plans into its work and where appropriate this will include MPAs. Again this is ongoing work it is not possible to set generic completion dates – individual situations will be given specific timelines.</i>
(c) Incorporation of Marine Protected Area concepts into IWC Sanctuaries;	The Scientific Committee is attempting to incorporate such concepts (e.g. measurable goals) in its review of existing and proposed Sanctuaries – this will need to be done in co-operation with the Commission who has the responsibility to set such goals at least in a qualitative manner. <i>The Scientific Committee will give this matter priority when it is reviewing specific proposals or undergoing periodic reviews of existing Sanctuaries.</i>
(d) Need for co-operation with other bodies with respect to addressing threats other than whaling.	The co-operation with other bodies at a scientific level is underway. <i>Where mitigation measures may be proposed on matters other than whaling, there is a need to consider a broader co-ordination with other bodies at a Commission level.</i>
ELEMENT 28: SCIENCE – ROLE OF SCIENCE AND FUNCTIONING OF THE SCIENTIFIC COMMITTEE (SWG 3: P. 62; SWG 4REV: PP. 116-117)	
<i>The report of the intersessional correspondence group established by the Commission (IWC/M09/5) deals with this matter.</i>	

Annex D

Report of the working group to examine issues related to the provision of scientific advice with respect to possible packages

Members: Doug DeMaster (USA), Mike Donoghue (New Zealand), Greg Donovan (Secretariat), Nick Gales (Australia), Joji Morishita (Japan), Lorenzo Rojas-Bracho (Mexico).

1. INTRODUCTION

The focus of the Working Group was to identify matters upon which the Scientific Committee would require policy advice in order to allow it to be able to provide scientific advice.

Appendix 1 provides a fuller discussion of the background to these issues.

2. JAPANESE SMALL-TYPE COASTAL WHALING FOR COMMON MINKE WHALES

(A) Data availability

The Scientific Committee will require data on *inter alia* stock structure, abundance and catch history to provide advice on catch limits. These data will need to be made available for all hypothesised populations. It should be recognised that stock structure and abundance issues are the most critical. Data will be required for management and thus will fall under Procedure A of the Data Availability Agreement, which means that the data used in analyses will be made available to the Scientific Committee with appropriate safeguards in place to ensure that they are only used in the context of Scientific Committee work. Given the importance of stock structure information, the Group **requests** the SWG to ask the Scientific Committee to review the DAA with respect to tissue samples and DNA itself as well as to provision of sequenced data.

(B) Methods for providing management advice and evaluating whether catch limits are acceptable

The Group assumes that catch limits, should they be set, will be on the basis of scientific advice. There are several possible general methods that the Scientific Committee could use within its simulation modelling evaluation framework. In all cases the Committee would inform the Commission of a summary of the status of knowledge and available samples/data on whale populations likely to be impacted by STCW as part of its provision of advice.

	RMP	Case specific for Japanese STCW	AWMP (for comparison)
Objectives (conservation)	No catches allowed if population below 54% of unexploited size	Would need to be specified	'Minimum' level at which catch = 0 Don't increase extinction risk Move towards specified target level (usually around 60% of unexploited level)
Objectives (user)	Stability of catches Highest sustainable yield	Would need to be specified	Allow catches to meet specified need
Input data	Catches, abundance, stock structure, time/area knowledge of expected whaling operations and whale populations	At least catches, abundance, stock structure time/area knowledge of expected whaling operations and whale populations	At least catches, abundance, stock structure, time/area knowledge of expected whaling operations and whale populations
Timeline	If the 2003 <i>Implementation</i> * is used, this could occur at Madeira. If full <i>Review</i> occurs then would take at least until 2010 meeting..	Developing a new procedure would probably take at least three years based upon experience with AWMP	N/a
Other comments	If Commission decides J-stock (or other non-target populations should they occur) is not considered within RMP objectives (since not direct target of whaling) then decision on conservation objective(s) for J-stock would be needed		N/a

If requested it may be possible to develop interim advice for the 5-year period *if conservation objectives are specified*. For example, potential objectives could include:

- (a) populations should be allowed to increase (with a specified level of certainty) if below a particular target level;
- (b) populations should not decrease (with a specified level of certainty) below current abundance;
- (c) population trajectories should not be significantly different over a longer period (say 25 years) if the catches were reduced to zero after the interim period expires or if the catches were zero throughout the period.

The Scientific Committee would inform the Commission that it would not be able to provide it with interim advice if it believed the uncertainty surrounding key data precluded this.

The Commission needs to instruct the Committee on how it would like management advice provided. Implications with respect to **timelines** and the **need to provide objectives** are given in the Table. Options include:

- (1) *Undertake a full RMP Implementation Review*
- (2) *Use existing 2003 Implementation* to provide advice until full review undertaken*
- (3) *Provide, if deemed possible by the Committee, some kind of ad hoc interim advice until management procedure advice (either the RMP or case-specific)*
- (4) *Develop a new, case specific approach*

With respect to interim advice or case-specific advice, the Commission would need to provide information on pre-specified catch levels should that be the approach taken for user objectives.

(C) Practical implications if more than the target population are taken

It should be noted that individual animals from a common minke whale population are identified based on genetic analysis. For example J-stock animals can be assigned with about 90% probability. This has implications for monitoring catch limits and examples are given in Appendix 1. The Commission would need to specify one or more mechanisms to ensure that catch limits were not exceeded (e.g. stop all catches once a certain number of J-stock animals have been taken) – a system to obtain and analyse genetic samples in near real time may be required. Proposed mechanisms would need to be tested in a simulation framework to ensure that conservation objectives are met.

3. RESEARCH UNDER SPECIAL PERMIT

The Group recognises that there are many policy and scientific aspects related to special permit whaling. It did not attempt to discuss these. In its short discussion it focussed on the fact that if the Commission requires the Scientific Committee to provide advice on the effects of particular catches upon stocks, then it needs to provide more specific advice than e.g. ‘pending interim advice on sustainability’ as was included on one of the options for the Chair’s summary. This is related, for example, to the need to be more specific about conservation objectives (e.g. see comments on interim advice, above). The Group noted that the Scientific Committee has asked for advice on this matter in the past with respect to consideration of the effects of special permit catches upon stocks.

4. ADOPTION OF REPORT

The report was adopted at 16.08 on 12 March.

- Note that if the 2003 *Implementation* approach is used, the division of opinions on stock structure hypotheses may remain

Appendix 1

A NOTE ON SOME OF THE SCIENTIFIC ASPECTS OF POTENTIAL PACKAGES FOR WHICH THE SCIENTIFIC COMMITTEE REQUIRES ADVICE

GREG DONOVAN

Background: The need for objectives when asking for advice on ‘sustainability’ or effects of catches on stocks

Scientists can advise on the implications of catches on stocks but how that advice is provided and the choice of the criteria by which it is interpreted is primarily a ‘political’ issue – in essence this refers to the ‘objectives’ of management both in the context of the needs of the user and the status of the resource. Once known, scientists can design procedures to meet objectives and provide advice accordingly.

Examples of objectives

Table 1 summarises the Commission sanctioned objectives for commercial whaling and aboriginal subsistence whaling; these have been incorporated in to the RMP and the agreed SLAs (Bowhead and Gray and interim of the AWMP last year - all have been tested for uncertainty using the simulation modelling approach pioneered by the Scientific Committee.

Table 1
Objectives and principles for the RMP and AWMP

	RMP	AWMP
Resource (priority)	Protection Level 54% In effect maintain at ‘target level’	No explicit protection level... ‘minimum level’ Don’t increase extinction risk At least maintain at or move towards ‘target level’
User	Stability in catches Highest sustainable yield	Allow catches to meet need ‘in perpetuity’
Type	Generic, all baleen whales but ISTs	Case-specific, species and area
Data ‘needs’	‘Lowest common’	Actual (data rich, intermediate or data poor)

It should be noted that whilst the *objectives* of the two approaches are different and calculated catch limits may be different, the advice is always conservative with respect to conservation implications (e.g. catches of bowhead whales would not be allowed under the RMP if the estimated protection level of 54% was invoked, but catches do allow the population to increase).

The Commission took the policy decision to ask for a primarily generic approach (the *Catch Limit Algorithm*) for commercial whaling applicable for all species of baleen whales (case specificity does not occur until an individual *Implementation*). By contrast it agreed to a case-specific approach for the AWMP (different *Strike Limit Algorithms* for each fishery) as (a) it was not envisioned that the number of operations would be large and (b) because it took better account of the quite different situations with respect to available data.

A further consequence of the different objectives is the nature of the way in which the advice is provided. For an RMP *Implementation*, the Scientific Committee would provide the Commission with the advice on the *highest total number* of anthropogenic removals that will allow the objectives to be met giving priority to the conservation objectives – this would include commercial whaling catches and also bycatches, scientific permit catches and ship strikes should any or all of these occur. By contrast, for aboriginal subsistence whaling operations, the Committee is provided with an estimated ‘need’ level by the Commission. It then evaluates this against the objectives, taking into account any other anthropogenic removals that might occur from that population, and provides the Commission with *advice on whether this level of need can be safely met*.

As noted above, the Committee’s preferred approach to giving management advice is via management procedures tested for uncertainty using simulation modelling (either RMP or AWMP) rather than providing *ad hoc* short-term advice.

With respect to the work of the SWG, this document provides information on a number of options that the SWG would need to provide advice to the Scientific Committee on, for illustrative purposes, the information provided in the Chair’s suggestions.

(1) Japanese small type coastal whaling

Aspect 1. *The Chair's suggestion refers to an 'interim' quota for O-stock common minke whales in Japanese coastal waters for a 5-year period and asks the Scientific Committee to provide 'interim advice' concerning the total removals of O- and J-stock common minke whales under two scenarios (a) constant catches for 5 years and 0 thereafter; (b) constant catches for 5 years with the same level of catches thereafter.*

The Scientific Committee will need further information on how the 'interim advice' should be obtained, and in what form that advice should take. In addition, scenario (b) would not be strictly applicable if an RMP approach is used – RMP simulation testing implies surveys every six years and a feedback mechanism with the CLA setting catches i.e. not a constant catch.

Scientific background.

The Scientific Committee did complete an *Implementation* in 2003. This was a somewhat controversial exercise, took over ten years and did not result in consensus advice but rather a 'majority' and 'minority' view, largely over differences of view on stock structure hypotheses. As a result of this exercise, the Committee developed new guidelines to carry out *Implementations* and *Implementation Reviews* that have thus far proved successful.

The primary scientific complications surrounding this *Implementation* included (and these are inter-related):

- (1) Catches and bycatches are taken on migration;
- (2) Stock structure – complex hypotheses;
- (3) Abundance of J- and O-stock (really requires full synoptic survey estimates from the full feeding grounds with associated biopsy sampling, at least once – complicated by possible mixing of O- and J-stock (and perhaps 'W').

In addition, although not the target of the *Implementation*, the results also revealed that under several scenarios, the 'J-stock' of common minke whales was considerably below the level at which catches would be allowed under the RMP (although significant numbers of bycatches of J-stock animals occur). As a result of the concern over J-stock, the Scientific Committee established an 'in-depth' assessment of western North Pacific common minke whales with an emphasis on J-stock – that is not yet complete. J-stock issues are considered further under Aspect 2.

The Scientific Committee should have begun the process for a full *Implementation Review* but agreed to postpone this until (a) the review of the JARPN II programme was completed (particularly in the light of the work on stock structure occurring within that programme) and (b) the in-depth assessment was completed. The results of (a) will be presented at Madeira and (b) is ongoing.

With respect to *data availability*, if catches were to be allowed then it would seem that protocol (a) of the data availability agreement would need to be followed, as for the RMP and AWMP cases.

Options that could be considered:

There are a number of ways in which the Scientific Committee could try to provide advice – but it should be the Commission's responsibility to instruct the Committee as to its preferred approach.

(1) Undertake full RMP Implementation Review

This could probably not be completed in Madeira – a full review could not be undertaken in one Annual Meeting unless the new data could be easily interpreted and agreed to and did not require any changes to the existing simulation trial structure (or associated work such as 'conditioning').

(2) Use existing Implementation to provide advice until full review undertaken

This could be undertaken in Madeira. Disagreements on stock structure hypotheses would remain unless new analyses presented at the meeting could be agreed by consensus (the JARPA II review has recommended analyses to re-evaluate the old hypotheses with the new data) – the outcome of such analyses is as yet unknown. New abundance estimates, if agreed by the Committee would be incorporated. The results of the existing *Implementation* would need to be re-examined using the Committee's guidelines developed after the previous *Implementation*. The 'with research' option may be applicable.

(3) Provide some kind of ad hoc interim advice until management procedure advice (either the RMP Implementation Review or some yet to be specified case-specific approach – see 4 below) becomes available

This option would require the most advice from the SWG as there are a number of options for providing *ad hoc* advice should the Commission desire it. As outlined earlier, it would need the specification of objectives with respect to both conservation and users. Some examples that have been used or proposed elsewhere with respect to marine living resources are given in Table 2. The difficulties with respect to stock structure hypotheses would remain. *If* the advice provided to the Scientific Committee related to a *Commission-specified catch level* (similar to the 'need' under the AWMP), this could for example be incorporated into the RMP-simulation approach but

with catches set to the specified level for 5 years and then (a) set by the *CLA* (which could include zero) or (b) set for a further period at the specified level and the long-term trajectories examined for conservation measures compared.

(4) Develop a new, case specific approach

This option would again require advice from the Commission with respect to objectives and would require considerable work. It would certainly not be possible to develop this in Madeira and may even be a challenge to complete the work within three years. The problems related to catches on migration, stock structure and abundance estimates remain.

Table 2
Some possible examples of objectives that have been suggested for marine living resources

User	Resource
Sufficient for small operation	Prevent extinction
Maximum catch asap	> some %initial
Maximum eventually with some catch now	Current level
Stable catches	Keep at pre- specified target level
Quick return on investment	Return to initial
No effect on fishery (bycatches only)	Keep trend in abundance
	Maximum productivity level

Aspect 2. J-stock issues- The Chair's suggestions refers to advice on total removals of J-stock animals as well as O-stock animals implying a joint management regime

Scientific background

Existing information suggests that the J-stock is at levels below which catches would not be allowed under the RMP at least under some scenarios. The lack of good information on the full abundance of J-stock compounds the problems. It should be noted that J-stock animals can *only* be identified (with a 90% probability and this needs to be further examined) from genetic analyses. Thus both for determining abundance and for examining catch composition, genetic samples are required. The implications will also need to be examined by simulation modelling.

Levels of J-stock removals

If any direct (but accidental) catches of J-stock animals was to be allowed then (1) either a different conservation objective would have to be set from that of the RMP for J-stock (e.g. J-stock should still be able to recover) if it is at less than 54% of initial or (2) catches by Japanese STCW would have to stop as soon as a single J-stock animal was taken. If option (2) was chosen then simulation testing would be required to determine what level of removals would still allow the population to increase with some degree of probability.

As the primary intention is that the Japanese STCW only takes minke whales, then the geographical and temporal segregation of J- and O- stock animals needs to be fully investigated to see the extent to which it is possible to develop time/area restrictions to minimise/eliminate direct catches of J-stock. It is expected that this analyses will be presented to the Scientific Committee in Madeira.

Practical implications during a catching season

If the management regime is such that there is a 'limit', say x whales on removals of J-stock (e.g. based on option 1 or 2 above) then this will have practical implications and will require decisions from the Commission as to how to implement this. Some options (which would need to be examined by simulation modelling) are:

- (1) assume a bycatch level based on recent Korean and Japanese bycatch levels and subtract this to develop a 'direct' catch limit for J-stock animals – the Japanese catches would have to be monitored as close to real time as possible in terms of genetic analyses and catches stopped when the J-stock limit is reached in either (a) any one season or (b) based on a 5-year total – while still complicated this seems easier to implement than (2) below;
- (2) obtain as close to real time estimates of all J-stock removals in bycatches from both Korea and Japan and then stop STCW catches when the total removal level is reached – this will require co-operation from Korea and Japan;

Note that under either option a mechanism for obtaining genetic samples, analysing the data and reporting the results will need to be established (the document refers to this being accomplished by the Secretariat but a precise mechanism would need to be developed by a technical group similar to that which examined DNA registers under the RMS discussions).

2 Research under special permit

The Chair's suggestions include reference to 'all removal levels would be reviewed by the Scientific Committee and consistent with its recommendations' (their option 1(3)), and pending [interim] advice on sustainability from the Scientific Committee (or similar words in Option 2). In both options, it appears that the Committee will be provided with numbers to evaluate rather than have to calculate them.

From the Scientific Committee's review process, as special permit whaling refers to catches made for scientific purposes, the initial focus has been on determining what is the appropriate sample size to meet specified objectives followed by examining the effect of that level of catches on the stocks involved. This is the approach adopted in Annex P. The Chair's suggestions do not appear to consider the sample size issue except perhaps in the comment about experimental design made after the two options are elaborated.

A difficulty that the Scientific Committee has had for many years is that there is no Commission guidance on how to provide the necessary advice on the effects of permit catches on stocks, especially for long-term programmes with no specified end date, although the Committee has requested such advice on a number of occasions. In particular, the question here is what are the appropriate conservation objectives (see the earlier discussion of objectives)? Some options that have been suggested include:

- (1) retain the objectives of the RMP;
- (2) populations should be allowed to increase if below the level giving highest sustainable yield;
- (3) populations should not decrease.

This difficulty has been stressed at the recent JARPN II expert review workshop (SC/61/Rep1) who have again requested advice. As noted earlier, choosing the most appropriate objective is not a scientific matter but a political one.

In any event, the preferred method of the Committee is to undertake simulation modelling that accounts for uncertainty and to examine resultant population trajectories – as a minimum this would include a comparison of trajectories with and without catches and an examination of trends.

It should be noted that the Committee has not undertaken an *Implementation* of Antarctic minke whales for over 15 years. New abundance estimates are expected in Madeira. Undertaking a full *Implementation Review* could not be undertaken in Madeira and it would require a full re-evaluation of stock structure hypotheses and the development and coding on new trials.

No other Antarctic whales have been considered in an RMP context and in-depth assessments have not been undertaken for fin whales. Some but not all of the Southern Hemisphere humpback whale stocks assessments have been completed. In the North Pacific, the Bryde's whale *Implementation* was completed successfully. In-depth assessments have not occurred for the other species.

The Committee will require instructions on how to provide advice.

Annex E

Work plan for consideration and action on the issues that would be before the Commission during the interim period

This work plan is without prejudice to differing positions.

Procedures currently exist regarding *small cetaceans* (Element 31), *bycatch* (3) and *animal welfare* (2).

While disagreement remains regarding the competence of the IWC concerning *small cetaceans*, the Scientific Committee has continued to provide advice and this state of affairs may be sufficient to avoid the need for further process at this stage. The issue of small cetaceans may also be addressed by the Conservation Committee and in conservation management plans.

With respect to *bycatch*, all contracting parties are reminded of their reporting obligations under ICRW. The issue of *bycatch* is dealt with by the Scientific Committee and may also be addressed under *conservation management plans* (element 10).

While disagreement remains regarding the competence of the IWC concerning animal welfare, there is an institutionalized IWC working group that has made progress in addressing concerns regarding *animal welfare*, but there are issues that need to be resolved during the interim period related to collection, provision and use of data.

Provision needs to be made for the continuation of this work and appropriate oversight and guidance from the Commission. Everything else remaining equal, they would not need to be part of a work plan for addressing Stage 2 issues during the interim period.

The remaining issues in stage 2 (*commercial whaling moratorium* (7), *compliance and monitoring* (8), *purpose of the Convention* (11), *objections and reservations* (21) as well as RMP (24) and RMS (25) should be dealt with in a group that is as widely representative as possible while not exceeding (10) members. The group should address outstanding issues related to *small cetaceans*, *bycatch* and *animal welfare* not currently being dealt with under existing procedures and might also address outstanding issues not covered within a Stage 1 package. In order to best ensure the effective conservation of whale stocks and the management of all whaling activities, that group should propose a package or packages for the consideration of the Commission no later than one year before the end of the interim period. The group shall provide annual progress reports to the Commission.

The group may set up *ad hoc* expert groups to address aspects of the Stage 2 elements.

Reference was made to the Technical Committee, currently existing only on paper, as a possible venue for dealing with these matters, but it was considered unsuitable because of its open-ended and hence potentially unwieldy character.

Annex F

Guidance on furthering category (b) issues

The Intersessional Meeting of the Commission *inter alia* assigned the SWG to develop ‘guidance on category (b) issues including elaboration of how these issues will be advanced beyond IWC/61’.

The intersessional meeting noted that scientific category (b) issues, to a significant extent, are already being addressed by the Scientific Committee (see Annex C). This guidance therefore addresses the following issues:

- 1 - Advisory/Standing Committee or Bureau – need for
- 2 – Animal Welfare
- 4 (e) – Climate change – mitigation actions
- 5 – Civil society – involvement of
- 9 – Conservation Committee
- 10 (b) – Conservation Management Plans
- 13 – Data provision
- 14 – Developments in Ocean Governance
- 16 (b) – Environmental threats
- 17 – Ethics
- 18 – Financial contributions scheme
- 19 – Frequency of meetings
- 20 (d) – Marine Protected Areas
- 22 – Improvements to procedural issues (addressed in Santiago to a certain extent)
- 29 – Secretariat
- 31 – Socio-economic implications
- 32 – Trade restrictions

It is suggested that the issues of 9 – *Conservation Committee*, 13 – *Data provision*, 14 – *Developments in Ocean Governance*, 16 (b) – *Environmental threats* and 20 (d) – *Marine Protected Areas* should be dealt with by a group that is as widely representative as possible. The Group may set up *ad hoc* expert groups to address specific aspects of the issues. Where a need for action is identified but no mechanism recommended, the Commission will decide on the mechanism.

1. ADVISORY/STANDING COMMITTEE OR BUREAU – NEED FOR

Depending on the outcome of discussions on the future of the organisation, a revised Advisory/Standing Committee or Bureau with broader participation and responsibilities (e.g. if the Commission were to meet biennially in future) may be required.

It is suggested that the Advisory Committee’s Terms of Reference be reviewed. This would be most appropriately done by the F&A Committee and it is suggested that this item be included on its agenda for its meeting at IWC/61 in Madeira.

The review should examine:

- the Advisory Committee’s current role and tasks; and
- the roles and responsibilities of advisory bodies/bureaus of a number of other Conventions by building on and updating the review previously done by the Secretariat for the F&A Committee in 2006 (Document IWC/58/F&A 5).

2. ANIMAL WELFARE

While IWC’s competence to address animal welfare issues is a matter of debate (and being handled under category (a)), the Commission addresses animal welfare issues in its Working Group on Whale Killing Methods and Animal Welfare Issues.

It is noted that in relation to animal welfare there are both technical and policy issues to be considered (e.g. decision support for stranding and/or entanglement incidents).

With respect to technical issues, it is suggested the Terms of Reference for the Working Group on Whale Killing Methods and Animal Welfare Issues be reviewed. It is noted that this Working Group is already addressing whale killing methods and welfare issues related to the euthanasia of stranded animals and that a workshop on welfare issues associated with the entanglement of large whales is planned in the intersessional period after IWC/61.

3. (e) CLIMATE CHANGE– MITIGATION ACTIONS

Understanding climate change and its effects on cetaceans is being partially addressed by the Scientific Committee. It is recognised that the IWC is not an appropriate body to recommend mitigation measures. However, it is suggested that any work that is being done on the effects of climate change on cetaceans, should be communicated through appropriate mechanisms, still to be established, to the relevant bodies.

5. CIVIL SOCIETY

Recent changes were made to the Commission's Rules of Procedure to allow broader participation by removing the requirement for an NGO to be international in nature before it can become accredited. The fee structure was also changed to be more equitable. At IWC/60 and at the March 2009 Intersessional Meeting of the Commission in Rome, sessions have been held, on a trial basis, in which individual NGOs have been allowed to address the meeting for 5 minutes each.

It is suggested that the Commission establish a mechanism to consider again the level of participation of NGOs through a review and updating of document IWC/58/F&A 3 which compared rules and procedures regarding NGO involvement in decision-making bodies of other IGOs.

9. CONSERVATION COMMITTEE

It is noted that there are a range of issues relevant to the conservation and management of whales to be addressed by the Commission. While scientific issues are addressed in the Scientific Committee, the mechanism for dealing with conservation and management issues needs to be considered by the Commission.

It is suggested that the Group consider the issues and develop recommendations on how to proceed.

10(b) CONSERVATION MANAGEMENT PLANS – THE APPROPRIATE WAY TO LINK THE WORK OF THE COMMISSION AND ITS SUBSIDIARY BODIES ON THE SCIENTIFIC AND MITIGATION MEASURE/MANAGEMENT ACTIONS

It is noted that there is work already being undertaken in the Scientific Committee on the development of Conservation Management Plans and that there is a need to translate scientific advice into appropriate mitigation measures for consideration by the Commission. This would involve stakeholders.

13. DATA PROVISION

It is suggested that this issue be reviewed by the Group.

14. DEVELOPMENTS IN OCEAN GOVERNANCE

It is suggested that this issue be reviewed by the Group.

16. (b) ENVIRONMENTAL THREATS – NEED FOR CO-OPERATION WITH OTHER BODIES THAT HAVE SOME REGULATORY CAPACITY ON FACTORS OUTSIDE WHALING.

It is suggested that this issue be reviewed by the Group.

17. ETHICS

There are no suggestions on how to advance this issue.

18. FINANCIAL CONTRIBUTIONS SCHEME

It is noted that this topic is already an element of the F & A Committee work programme.

19. FREQUENCY OF MEETINGS

It is noted that, given the ongoing nature of discussions on the future of the IWC, there may be implications for the programme of work for the Commission and has not made any recommendation.

20.(d) MARINE PROTECTED AREAS

It is suggested that this issue be reviewed by the Group.

29. SECRETARIAT

The outcome of discussions on the future of the IWC may have an impact on the role of and expertise required in the Secretariat. However, it is believed premature to address this issue until the discussions on IWC's future are further progressed.

31. SOCIO-ECONOMIC ISSUES

The significance of these issues is recognised, but no immediate action is required.

32. TRADE

No recommendations are made on this issue.

Annex G

Request for advice from the Scientific Committee in relation to Japanese small-type coastal whaling

The primary task of the Scientific Committee in Madeira with respect to its evaluation of the Japanese proposal will be to develop a work plan and timetable (including at least one intersessional workshop) for it to be able to provide advice to the Commission on the effects of the proposed catches by the 2010 annual meeting. In the normal manner, the work plan will be included in the Scientific Committee report for approval or otherwise by the Commission in Madeira.

BACKGROUND

The need for advice from the Scientific Committee with respect to any proposals for Japanese small-type coastal whaling has been recognised. An important component of the process for providing the advice is the review by the Scientific Committee of the scientific information developed by Japan as supporting material for its proposal for a take of 150 common minke whales by its small-type coastal whaling operations for a five-year interim period.

Any advice that may be provided by the Scientific Committee will of course not be binding; as has been stated throughout the process, nothing is agreed until everything is agreed. Japanese small-type coastal whaling is one element in a potential package(s) of measures to resolve IWC's problems that is currently under discussion. Consequently, the requesting of advice from the Scientific Committee is only to obtain further background information on one aspect of one potential element of a package or packages to assist in Commission discussions.

REQUEST FOR ADVICE

The Scientific Committee is instructed to:

- (1) review the Data Availability Agreement with respect to tissue samples, DNA and sequenced data; and
- (2) develop plans to complete a full *Implementation Review* for western North Pacific common minke whales as soon as possible and certainly before the end of any interim period.

The Scientific Committee, beginning at its meeting in Madeira, will assess and provide its advice on Japan's proposal for an interim 5-year catch limit of 150 O-stock common minke whales for its small type coastal whaling operations and on the scientific analysis provided to support its proposal. Final scientific advice on the effects of the proposed catches⁶ on stocks that may be impacted (at least J- and O-stock) will need to be available by the 2010 Annual Meeting. The documentation supporting the proposal will be made available to the Scientific Committee **at least three weeks** before the start of the 2009 meeting. Data used for the analysis will be made available to the Scientific Committee in accordance with Procedure A of the DAA; these data will be made available by **15 May 2009**. The software used for modelling purposes will be made available to the IWC Secretariat by **15 May 2009**. Fully evaluating the effects of anthropogenic removals on the stocks will involve considerable work and will require at least one intersessional workshop. The report and recommendations from the Expert Workshop to Review the Ongoing JARPN II Programme (SC/61/Rep1) with respect to issues of stock structure and effects of catches on the stocks will form an important component relevant to the discussions of the Japanese proposal.

The Japanese proposal must at least incorporate the following:

- (1) A statement of the 'user objectives' chosen by the proposers for the 5-year interim period and any scenarios proposed for the period after the interim period (recognising that final decisions on user objectives are the responsibility of the Commission);

⁶ in conjunction with other anthropogenic removals arising out of bycatches and special permit whaling.

(2) Proposals for 'conservation objectives' for O- and J-stock animals using the discussion paper (Annex D) as a guide; (recognising that final decisions on conservation objectives are the responsibility of the Commission);

(3) Details of the method(s) used to support the proposal and to evaluate proposed catch limits, including:

- (a) use of a simulation modelling framework to take into account uncertainty in stock structure and the numbers of anthropogenic removals from each stock, with due reference to the discussion of the effects of JARPN II catches on western North Pacific common minke whales given in SC/61/Rep1;
- (b) a full discussion of the temporal and geographical distribution of stocks that may be impacted by the proposed catches (at least J- and O-stocks), in particular with reference to the proposed measure to refrain from catching within 10 n.miles of the coast in order to minimise takes of J-stock animals;
- (c) consideration of the uncertainty in stock structure using the 2003 *Implementation Simulation Trials* as a guide although taking into account analyses of new data and with due reference to the discussion of stock structure given in SC/61/Rep1.
- (d) presentation of results in such a form⁷ as to allow comparison of stock trajectories (for a period of at least 30 years) with and without catches during the interim period for stocks that may be impacted by the catches (at least J- and O-stocks).

The provision of such trajectories will allow the ultimate evaluation of the results for a number of potential conservation objectives (see Annex D) – as noted above it is a Commission responsibility to decide on final user and conservation objectives.

At this stage, it is not appropriate for the Scientific Committee to use the *CLA* to calculate catch limits in the provision of advice on this interim proposal. However, the Scientific Committee should complete a full *Implementation Review* as soon as possible and certainly before the end of any interim period. A decision on the appropriate long-term management regime for Japanese small-type coastal whaling will need to be taken by the Commission before the end of any interim period.

⁷ Where relevant, the summary tables and graphs used to present the results of recent *Implementation Simulation Trials* (e.g. western North Pacific Bryde's whales) provide a useful guide.