

Annual Report of the International Whaling Commission 1999

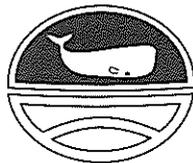


Covering the 1998-99 financial year
and the 51st Annual Meeting
held in Grenada in 1999

Annual Report of the International Whaling Commission 1999

Covering the fiftieth financial year 1998-99

THE INTERNATIONAL WHALING COMMISSION WAS CONSTITUTED UNDER THE
INTERNATIONAL CONVENTION FOR THE REGULATION OF WHALING
SIGNED AT WASHINGTON ON 2 DECEMBER 1946



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List of Members of the Commission

<i>Contracting Government</i>	<i>Adherence</i>	<i>Commissioner</i>	<i>Appointment</i>
Antigua & Barbuda	21.07.82	Mr D.C. Joseph	03.06.96
Argentina	18.05.60	Ambassador O.R. Rebagliati	06.12.96
Australia	10.11.48	Mr H. Bamsey	16.03.98
Áustria	20.05.94	Dr A. Nouak	09.08.96
Brazil	04.01.74	Mr R.A. Barbosa	25.01.94
Chile	06.07.79	Not notified	
People's Republic of China	24.09.80	Mr Zhou Youzhan	01.05.81
Costa Rica	24.07.81	Not notified	
Denmark	23.05.50	Mr H. Fischer	24.04.86
Dominica	18.06.92	His Excellency G. Williams	19.09.97
Finland	23.02.83	Mr A. Haapanen	01.07.83
France	03.12.48	Mr S. Hofmann	13.11.96
Germany	02.07.82	Mr N. Kleeschulte	01.03.84
Grenada	07.04.93	The Hon. M. Baptiste	20.06.96
India	09.03.81	Mr S.C. Sharma	22.04.98
Ireland	02.01.85	Mr M. Canny (Chairman)	20.12.90
Italy	06.02.98	Mr G. Ambrosio	02.04.98
Japan	21.04.51	Mr K. Shima	14.10.87
Kenya	02.12.81	Mr N. Otero	01.11.84
Republic of Korea	29.12.78	Mr K.S. Park	28.08.98
Mexico	30.06.49	Ambassador S. Oñate	30.04.97
Monaco	15.03.82	Prof. F. Doumenge	15.11.93
Netherlands	14.06.77	Mr F.H.J. von der Assen	01.01.90
New Zealand	15.06.76	The Hon. J.K. McLay	01.01.94
Norway	23.09.60	Ambassador K. Bryn	24.02.95
Oman	15.07.80	Mr H.S.A. Ambusaidi	24.05.96
Peru	18.06.79	Mr J. Vertiz C.	01.07.82
Russian Federation	10.11.48	Mr V.Y. Ilyashenko	02.05.95
St Kitts and Nevis	24.06.92	Mr. A. Hart	20.08.97
St Lucia	29.06.81	The Hon. C. Elias	05.05.98
St Vincent & The Grenadines	22.07.81	The Hon. S. Nanton	08.09.89
Senegal	15.07.82	Not notified	
Solomon Islands	10.05.93	Mr A. Wata	22.01.98
South Africa	10.11.48	Mr G. de Villiers	21.09.95
Spain	06.07.79	Mr I. Ybáñez	16.12.98
Sweden	15.06.79	Prof B. Fernholm (Vice-Chairman)	15.02.96
Switzerland	29.05.80	Dr T. Althaus	24.02.97
UK	10.11.48	Mr C.I. Llewelyn	26.01.94
USA	10.11.48	Dr D.J. Baker	19.01.94
Venezuela	11.07.91	Mr C.E. Gimenez	03.10.94

Dr R. Gambell O.B.E. Secretary to the Commission, 31.12.99

Preface

Welcome to the second of the new series, the '*Annual Report of the International Whaling Commission*'. This comprises the non-scientific sections of the old series, the '*Report of the International Whaling Commission*'. The scientific sections have now been replaced by the new journal, the '*Journal of Cetacean Research and Management*', with the report of the Scientific Committee being included as a supplement to that journal. The first volume of that journal (three issues and a supplement) was published in 1999, along with a the first special issue of the Journal (*Chemical Pollutants and Cetaceans* edited by P.J.H. Reijnders, A. Aguilar and G.P. Donovan). Subscription details for the new publications can be found on the Commission web site (<http://ourworld.compuserve.com/homepages/iwcoffice>), by e-mailing subscriptions@iwcoffice.org or by the more traditional means of writing, telephoning or faxing the Office of the Commission (details are given on the title page and on the back cover of this volume).

This report contains the Chairman's Report of the Fifty-First Meeting of the IWC, held in Grenada in May 1999. In addition to the usual material found in the first sections of the old *Rep. int. Whal. Commn* series, the text of the Convention and its Protocol have been included, as well as the latest versions of the Schedule to the Convention and the Rules of Procedure and Financial Regulations.

G.P. DONOVAN

Editor

International Whaling Commission Report 1998-99

This report sets out the main activities of the Commission in the year following the 50th Annual Meeting which was held from 16-20 May 1998 in Muscat, Oman. The report of this meeting, which took place under the Chairmanship of Mr M. Canny (Ireland), was published in the *Annual Report of the International Whaling Commission 1998*.

CATCH LIMITS FOR COMMERCIAL WHALING

In 1982, the Commission took the decision, which came into force from the 1986 and 1985/86 whaling seasons, that catch limits for all commercial whaling would be set to zero. As in previous years, the Commission did not adopt a proposal by Japan at the 50th Annual Meeting for an interim relief allocation of 50 minke whales to be taken by coastal community-based whaling. Norway lodged objections to the ban and has exercised its right to set national catch limits for its coastal whaling operations for minke whales. The Commission again called on Norway to halt all whaling activities under its jurisdiction. The catches taken by Norway in 1988 are shown in Table 1.

SCIENTIFIC PERMIT CATCHES

Japan issued two permits for conducting scientific research involving the taking of minke whales. One was for continuation of its programme to estimate biological parameters for management of Antarctic minke whales and the elucidation of the role of whales in the Antarctic marine ecosystem. Besides a sightings component, it included a catch of 400±10% minke whales from Southern Hemisphere waters south of 55°S, east of 130°E, west of 140°W, excluding the 200 mile zones of foreign countries. The second permit for a take of 100 minke whales in the waters north of 35°N and west of 170°W was to clarify minke whale stock structure in the western North Pacific. The Commission continued to call on the Government of Japan to refrain from issuing these permits. The catches taken under these permits are shown in Table 1.

ABORIGINAL SUBSISTENCE WHALING

The catch limits previously adopted by the Commission for the several stocks subject to aboriginal subsistence whaling remained unchanged. The catches taken by IWC member nations in the past year are shown in Table 1.

Noting that Canada had issued licences for aboriginal subsistence whaling on two stocks of bowhead whales for which the IWC Scientific Committee has expressed concern, the Commission has again invited Canada to rejoin the Commission and not to issue further licences.

The Scientific Committee has continued to make progress towards developing new management regimes for aboriginal subsistence whaling and this work has been given high priority by the Commission. Simulation trials are being carried out to examine the performance of candidate *Strike Limit Algorithms (SLAs)* to meet the Commission's objectives for an aboriginal whaling management scheme that ensures that the risks of extinction to individual stocks are not seriously increased; to enable aboriginal peoples to harvest whales in perpetuity appropriate to their requirements; and to maintain or allow stocks to increase to the levels giving the highest net recruitment.

INFRACTIONS

No infractions of the Commission's whaling regulations were reported in the aboriginal subsistence whaling operations conducted by IWC members in 1998.

REVISED MANAGEMENT SCHEME

Although the Commission has accepted and endorsed the Revised Management Procedure (RMP) for commercial whaling developed by its Scientific Committee, it has noted that work on a number of issues, including specification of an inspection and observer system, must be completed before it will consider establishing catch limits other than zero. This work is ongoing. It has also confirmed how anthropogenic removals (e.g. incidental catches, catches

Table 1
Catches by IWC member nations in the 1998 and 1998/99 seasons.

	Fin	Minke	Bowhead	Gray	Humpback	Operation
North Atlantic						
Denmark						
West Greenland	11 ¹	166 ²	-	-	-	Aboriginal subsistence
East Greenland	-	10	-	-	-	
Norway	-	625 ³	-	-	-	Objection
St Vincent & The Grenadines	-	-	-	-	2	Aboriginal subsistence
North Pacific						
Japan	-	100 ⁴	-	-	-	Special Permit
Russian Federation	-	-	1	125 ⁵	-	Aboriginal subsistence
USA	-	-	54 ⁶	-	-	Aboriginal subsistence
Antarctic						
Japan	-	389	-	-	-	Special Permit

¹Including 2 struck and lost. ²Including 3 struck and lost. ³Including 11 lost. ⁴Plus 1 Bryde's whale caught through mis-identification. ⁵Including 3 struck and lost, 1 definitely died. ⁶Including 12 struck and lost + 1 killed but abandoned.

under scientific permit, aboriginal subsistence whaling) other than commercial catches should be taken into account when setting catch limits under the RMP.

THE IRISH INITIATIVE

In 1997 Ireland introduced a proposal for discussion intended to lead to a break in the deadlock between the governments opposed to a resumption of commercial whaling and those in favour. The elements include: completion and adoption of the Revised Management Scheme; designation of a global sanctuary for whales; permission for closely regulated and monitored coastal whaling within 200 mile zones by communities with a long tradition for such activity; prohibition of international trade in whale products; and the cessation of scientific research catches. Reaching consensus on such a package of measures is proving extremely difficult, but many Commissioners have expressed their interest in continuing discussions. The Chairman of the Commission has therefore held informal discussions with Commissioners and further exchanges of views have taken place at various times and locations through the year.

WHALE KILLING METHODS

The Commission had developed terms of reference and established the practical arrangements for a specialist Workshop on Whale Killing Methods to be held in Grenada immediately before the 51st Annual Meeting in May 1999. This considered all methods of killing whales currently in use, assessed their efficacy and physiological effects, and evaluated the time to death achieved by the various methods. The data available, including from aboriginal subsistence whaling, were reviewed and evaluated with a view to improving whale killing techniques.

SCIENTIFIC RESEARCH

The Commission's *Southern Ocean Whale and Ecosystem Research* (IWC-SOWER) programme has continued as a broad-based research activity in the Southern Hemisphere.

The Government of Japan again provided two vessels for continuing research into shipboard identification methods for 'true' and 'pygmy' blue whales. This included the collection of skin samples for genetic analysis, photographing whales for identification of individuals, recording whale sounds and the collection of behavioural data as well as sightings. The research was conducted for 12 days in January 1999 in the southeastern part of Antarctic Area III.

The same two vessels were also used to carry out the 21st Antarctic Minke Whale Sightings Cruise in Area IV (south of 60°S, from 70°E to 130°E) from 20 January to 23 February 1999. The objectives were to estimate the population size and distribution of minke whales in the research area, and the programme was carried out by a team of eight scientists from New Zealand, Japan, Norway, Brazil and the USA.

The Commission continues to fund database contracts to analyse the sightings records obtained by the Antarctic minke whale sightings cruises, to enter additional sightings data, and to evaluate and present new analytical methods which may be applied to these data.

The Commission has provided advice to its Scientific Committee on the objectives of the Southern Ocean Sanctuary. These particularly relate to monitoring depleted

populations and undertaking research on the effects of environmental change. The Commission is strengthening its commitment to research on environmental changes and the effects on cetaceans. In particular it has reiterated its support for two major collaborative research initiatives made by its Scientific Committee with respect to: (1) chemical pollutants; and (2) baleen whale habitat and prey studies in cooperation with CCAMLR and Southern Ocean GLOBEC. This commitment is shown by a proposal to establish a major fund for environmental research to be considered in 1999. The Scientific Committee is developing a major cooperative research programme with SO-GLOBEC and CCAMLR in the Southern Ocean Sanctuary for the years 2000 and 2001.

In addition, two intersessional meetings of the Scientific Committee were held to advance knowledge in these areas. A Workshop to Develop Methods for Cetacean Components of Multidisciplinary Research Programmes was held in Edinburgh, UK, 1-6 March 1999 and organised by the University of St Andrews. A Planning Workshop to Develop Research Programmes to Investigate Pollution Cause and Effect Relationships in Cetaceans was held in the University of Barcelona, Spain, 13-17 March 1999.

SMALL CETACEANS

Notwithstanding the different views of member countries over the legal competence of the IWC to manage small cetaceans, the Contracting Governments continue to cooperate in consideration of small cetaceans, particularly with respect to the work of the Scientific Committee. The Commission has expressed concern over the directed takes of white whales in the Arctic and has encouraged a precautionary approach to their management. They, along with narwhals, will be the priority topic at the 1999 meeting and national scientists and invited experts have been encouraged to prepare suitable documentation to allow a full review of the status and trends of the stocks.

SECRETARIAT ACTIVITY

The IWC Secretariat has continued its work on data entry of whale records into machine-readable format. This includes entry and verification of additional Southern Hemisphere catch and sightings records. The coding of Southern Hemisphere whale marking and recovery data (excluding Soviet records) is now almost completed. Verification and development of the programs for the baleen whale *Catch Limit Algorithm* (part of the RMP), aboriginal subsistence whaling management procedure and North Pacific minke whale trials within the RMP have also continued.

The firm of Deloitte Touche Tohmatsu International was engaged to carry out an external review of the Commission's administrative systems and the Secretariat. The consultants spent considerable time talking to the members of the Secretariat and attended part of the 50th Annual Meeting. Their report has been considered by the Commission's Advisory Committee and will be discussed at the 51st Annual Meeting. A number of the recommendations put forward have already been implemented by the Secretariat. These include: the installation of a computerised book-keeping system; the recruitment of an Assistant Editor, who took up post in January 1999; and a review of staff training needs.

At the 50th Annual Meeting the Commission approved the establishment of a major new scientific publication, *The Journal of Cetacean Research and Management*. All the necessary preparatory work for this was carried out to

publish the first issue which appeared in April 1999. This will maintain and improve the high quality of scientific publications previously published by the IWC (the *Reports of the International Whaling Commission* and Special Issues). The first Annual Report in the new series was also published in April.

ADVISORY COMMITTEE

The Advisory Committee established by the Commission in 1997 has dealt with a number of issues raised by the Secretary during the year. These included the Resolutions referred to the Committee, action arising from the Administrative Review, the appointment of a new Secretary, and arrangements for the Whale Killing Methods Workshop and the 51st Annual Meeting. The Advisory Committee has also been kept informed of various other administrative matters and queries. A meeting of all the members was held in Cambridge on 19-20 January 1999. This resulted in the production of a number of papers to be presented to the 51st Annual Meeting of the Commission.

COOPERATION WITH OTHER ORGANISATIONS

The Commission has noted the importance of cooperation with other organisations, particularly in the context of scientific research. Further research cooperation with a number of organisations has been strengthened, including: the Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas (ASCOBANS); the International Council for the Exploration of the Sea (ICES); the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR); and Southern Ocean GLOBEC (SO-GLOBEC).

The Commission was represented in an Observer capacity at meetings of:

NAMMCO, Oslo, Norway, 1-4 September 1998
 ICES, Cascais, Spain, 16-19 September 1998
 IATTC, La Jolla, California, USA, 15-16 October 1998
 CCAMLR, Hobart, Tasmania, Australia, 26 October-6 November 1998

ICCAT, Santiago de Compostela, Spain, 16-23 November 1998

FAO (COFI), Rome, Italy, 15-19 February 1999

ASCOBANS Advisory Committee, Aberdeen, UK, 12-14 April 1999

FINANCE

The statement of estimated income and expenditure for the financial year ending 31 August 1998 was approved at the 50th Annual Meeting of the Commission. The audited accounts appear on pages 57-61 of the *Annual Report of the International Whaling Commission 1998*.

The Commission adopted a budget of £1,323,968 for the year 1998/99, including £247,910 for research activity, at its 50th (1998) Annual Meeting. This budget is shown on page 47 of the *Annual Report of the International Whaling Commission 1998*.

Contributions from Contracting Governments for 1998/99 were set at £939,221, making allowance for a projected shortfall which in the event amounted to £183,756 due to the failure of 11 Governments to pay in full: Antigua & Barbuda, Argentina, Costa Rica, Dominica, Italy, Kenya, Peru, St Kitts & Nevis, St Lucia, St Vincent & The Grenadines and Senegal. The Commission imposes the sanctions of withholding Commission documentation and the suspension of the right to vote for a Government more than 3 months in arrears with its annual payments.

A further sum of £815,936 representing non-payments from previous years was still outstanding from Antigua & Barbuda, Argentina, Costa Rica, Kenya, Peru, St Kitts & Nevis and Senegal, together with interest. The Government of Antigua & Barbuda has made arrangements to repay its arrears of contributions by instalments.

The six former members Belize, Ecuador, Egypt, Philippines, Seychelles and Uruguay still owe £251,085 for unpaid contributions and interest.

MEMBERSHIP

The 40 members of the International Whaling Commission and their Commissioners are listed at the front of this volume.

Chairman's Report of the Fifty-First Annual Meeting

1. DATE AND PLACE

The 51st Annual Meeting of the International Whaling Commission was held in the Grand Beach Resort and Conference Centre, St George's, Grenada, 24-28 May 1999. Mr Michael Canny (Ireland) was in the Chair, and Commissioners and delegates from 34 of the 40 Contracting Governments attended, along with observers from 7 non-member governments, 3 Inter-Governmental Organisations and 91 Non-Governmental Organisations (NGOs). The List of Delegates is given on p. 63.

2. ADDRESS OF WELCOME

The Prime Minister of Grenada, the Hon. Keith Mitchell, welcomed participants to the Spice Isle. He recalled that the IWC has been addressing the various issues surrounding the preservation of the world's whale stocks for more than 50 years, during which time there have been substantial changes in the methods used to gather and analyse data. However, the balance between conservation and harvest continues to challenge the Commission. Sustaining marine resources is an important objective for coastal states like Grenada, which must harvest the resources of the sea, while tourism includes recreational use of the sea. He expected vigorous negotiations in managing this shared resource and wished the meeting well.

The Chairman thanked the Prime Minister and the people of Grenada for their warm welcome to this Annual Meeting, the first to be held in the Caribbean.

3. OPENING STATEMENTS

As usual, the Opening Statements submitted by Contracting Governments and Observers were included in the meeting documentation.

4. ADOPTION OF AGENDA

The Chairman outlined his proposals for meeting management, including a daily order of business, and requested that no repeat Resolutions should be submitted. He asked Commissioners to limit themselves to one intervention only on each subject. The provisional annotated agenda, which had been circulated 60 days in advance of the meeting, was adopted. Japan requested that Agenda Items 23.1 Voting Procedures, 23.3 Observers and 22.6 Observer status of Greenpeace should be considered first. The Chairman referred Agenda Items 7 Sanctuaries and 13 Revised Management Scheme to the Technical Committee for initial consideration. The Agenda as adopted is given on p. 59.

Japan requested that the credentials of all the delegations and observers should be checked by a Credentials Committee, which the Chairman established. This Committee met during an adjournment in Agenda Item 23.1 and was attended by the Chairman, Secretary, Antigua and Barbuda, Australia, Austria, Dominica, Italy, Japan, Norway, South Africa, Sweden, St Lucia, UK and USA. The Credentials Committee noted that all Governments had been asked to submit credentials in February 1999. Members of the Committee expressed concern that some credentials were presented by fax or e-mail with originals to follow, and that some credentials had been signed by the Commissioner.

The Secretary reminded the Credentials Committee of the Commission's decision at the 35th (1983) Annual Meeting that

It was agreed that for this purpose [the form of accreditation by governments] by the term 'governments' is meant the Minister of Foreign Affairs (including: on behalf of the Minister of Foreign Affairs), the Minister responsible for whaling or whale conservation (including: on behalf of this Minister), the Commissioner, the Diplomatic Mission (*Rep. int. Whal. Commn 34:28*).

The Credentials Committee decided that all credentials should be accepted this year, but Japan indicated that it would submit proposals next year to clarify matters. It believed it irrational and contradictory for Commissioners to sign their own credentials; Government Ministries were the proper authorities.

5. SOCIO-ECONOMIC IMPLICATIONS AND SMALL-TYPE WHALING

5.1 Japanese proposal for Schedule amendment

Japan recalled that for the past 11 years it has made an application for a modest take of minke whales for its four coastal communities. It has submitted more than 50 documents detailing the importance of minke whales to these communities, and has minimised the commercial aspects of the proposed operations. Agenda 21 emphasises the use of sustainable marine resources, and the 1995 Kyoto Declaration on Food Security gave a broad framework for international cooperation in this area. The 1993 IWC Resolution recognised the socio-economic needs and the distress of the four communities, and Japan requested an interim allocation until the RMS is implemented. It proposed a Schedule amendment to add a new paragraph 10 (f):

Notwithstanding the other provisions of paragraph 10 and those of paragraph 12, the taking of 50 minke whales from the Okhotsk Sea-West Pacific stock of the North Pacific is permitted in the 1999 season in order to alleviate the hardship in the four community-based whaling communities.

This was accompanied by a proposed Resolution which had the effect of agreeing that the take of minke whales provided by paragraph 10 (f) of the Schedule be allocated to the communities of Abishiri, Ayukawa, Wadoura and Taijii in Japan.

Sweden commented that this could only be accepted as part of the Irish Initiative, a position held by Finland, Switzerland, Spain and South Africa; Austria also could not give support. Australia could not support a new category of commercial whaling. The USA pointed out the similar requests since 1988 and the commercial element; it was sympathetic to the needs and wished to continue a dialogue. The Netherlands, Germany, New Zealand, France and the UK had similar views.

Denmark, Norway, Oman, St Vincent and The Grenadines, St Lucia, Dominica, Solomon Islands and Grenada expressed their support.

On being put to the vote, the Schedule amendment and Resolution received 12 votes in favour, with 15 against and 7 abstentions and so failed.

6. WHALEWATCHING

6.1 Report of the Scientific Committee*

The Scientific Committee had established an intersessional Correspondence Group to review (especially in the context of focusing its work) the four priority areas first agreed in 1996:

- (1) scientific protocols for research on the effects of whalewatching;
- (2) the scientific basis for management;
- (3) research on the effectiveness of management;
- (4) criteria for selection of suitable areas for long-term studies on the effects of whalewatching on cetaceans.

The Scientific Committee had identified a number of priority areas for further work. These areas formed the basis of the agenda for this year's meeting and included:

- (1) a more detailed review of the approach distances, effort and activity limitations in place in existing operations for a range of species, and information on the basis for such controls;
- (2) an assessment of current studies of the effects of different approach distances and platforms;
- (3) a review of the quantitative methods used to assess the short-term reactions of cetaceans and the basis for judgements of adverse effects; and
- (4) comparative studies on different approaches/distances and other controls which may be required on areas important for feeding, resting, and reproduction.

The Scientific Committee noted that the 1996 document 'A review of whalewatching guidelines and regulations around the world' (SC/48/O25) was an ongoing matter that would be revised to include new developments and implementation of new guidelines and made available to the Committee for review.

6.1.1 Review of the guidelines

The effects of whalewatching vessels on research activities was discussed. The Scientific Committee noted that whalewatching activities could hinder or assist research activities depending on the nature of the research.

The Scientific Committee focused on information necessary to assess long-term effects of whale-watching on the status of the affected whale stocks. It proposes that a workshop be convened immediately before the 2000 meeting of the Committee to expedite the collection, exchange, and synthesis of information necessary to assess long-term effects of whalewatching on cetaceans.

The Scientific Committee noted that the existing extent and potential growth of whalewatching in the Caribbean underscored the importance of monitoring the potential effects of whalewatching in the region. The regulation of whalewatching in the Azores included research on and monitoring of the potential effects, but researchers are required to 'give precedence to commercial operators...'. The Scientific Committee agreed that, in the context of conducting research aimed at evaluating the potential effects of whalewatching on whales, scientific research should be given high priority.

6.1.2 Assessment of short term reactions

The Scientific Committee noted that the use of high speed vessels in areas populated by whales needs to be examined due to the increased risk of collision associated with

increased speed (e.g. owing to the search and reaction time of vessel operators being reduced). The use of acoustic devices to warn whales of the presence of approaching vessels does not appear promising. The Scientific Committee discussed methods of allowing a more quantitative assessment of collision risk. Although this concern was raised in the context of whalewatching vessels, it is clearly applicable to all vessels travelling at high speed. The Scientific Committee concluded that vessels travelling at high speeds pose an increased risk of collision with whales, and recommended that authorities discourage the operation of vessels at high speed in areas where whales occur and, where possible, vessel operators should post observers on vessels when transiting such areas.

The Scientific Committee discussed several aspects of the interactions between whalewatching and scientific research. Whalewatching activities can in some instances prevent research from being conducted or confound results. The Scientific Committee agreed that researchers' efforts to inform the public about the importance of the research and its objectives could improve the public's view of scientific research. In this regard, researchers need to be aware of the restrictive effects research activities can have on limiting whalewatching activities, such as limiting the number of vessels allowed to be around whales. The Scientific Committee recognised that in some cases whalewatching provides the only means for researchers to gain access to whales for the purpose of obtaining information that they otherwise would be unable to obtain. It agreed that, depending upon the circumstances, whalewatching could aid or hinder scientific research.

6.1.3 Assessment of long term reactions

The Scientific Committee discussed several aspects of contributions from whalewatching to the long-term assessment of whales. It noted that, while there may exist concerns about short-term effects on whales from whalewatching, often those were not matched by concerns for long-term changes in the whales' utilisation of the areas where they were exposed to whalewatching activities. The Scientific Committee noted that whales exposed to whalewatching may represent only some unknown portion of a stock, and that drawing inferences about long-term effects on the entire stock from information on only a portion of a stock could be biased. In contrast, it agreed that in instances where annual reproduction occurred in a specific location (e.g. a particular section of coastline, or bay), any detrimental effects from exposure to whalewatching in those areas could affect an entire year's production and ultimately the status of the stock.

The Scientific Committee discussed the issue of the reliability of information from non-scientific observers and agreed that data collectors should be trained scientists or naturalists. Research objectives need to be clearly defined beforehand so that relevant data are collected. The Scientific Committee also cautioned that encouraging whalewatching operators to obtain information, such as photographs, could encourage them to get as close as possible to whales; this could increase disturbance to whales and possibly cause the operators to violate regulations governing minimum approach distances.

The Scientific Committee also recognised that there exist successful 'citizen science' model programmes that involve private citizens and provide them with opportunities to make contributions to scientific investigations; some aspects of these programmes could serve as useful examples for whalewatching programmes.

* Editor's note: The full Report of the Scientific Committee is published in *J. Cetacean Res. Manage.* 2 (Suppl.).

The Scientific Committee discussed the scale of population changes that would need to be considered to assess the status of whale stocks. It also discussed various experimental designs that could be used to assess long term effects of whalewatching on whales. It recognised that there are a number of models for the design of such experiments, and that the appropriate design would depend upon the specific situation to be investigated and its objectives. The Scientific Committee agreed that this topic requires further discussion and invites members to submit examples of research and monitoring programmes that utilise various experimental designs (e.g. with and without controls) and other research approaches to the convenors of the proposed workshop to assess long term effects.

The Scientific Committee agreed that whalewatching programmes have a limited ability to provide information to assess the long-term status of whales. However, to varying degrees they have the potential to contribute valuable information to dedicated scientific research programmes aimed at this. It agreed that:

- (1) whalewatching programmes should include a scientific monitoring programme to gather information on the potential effects of whalewatching on whales;
- (2) such programmes should be conducted by qualified scientists;
- (3) such scientific monitoring programmes should be impartial; and
- (4) management authorities need to utilise the information generated by monitoring programmes to review, evaluate, and, as appropriate, modify the regulations governing the whalewatching operations to avoid long-term irreversible effects.

The Scientific Committee therefore recommended:

- (1) wherever practical and appropriate, the assessment of the potential effects of whalewatching operations on cetaceans should be undertaken and overseen by independent scientists;
- (2) whalewatching interests (i.e. members of the industry and national licensing authorities) need to be sensitive to the need effectively to monitor cetacean populations that are the focus of whalewatching activities to ensure that whalewatching activities are sustainable and not otherwise detrimental to cetaceans concerned;
- (3) national licensing authorities or other regulatory bodies should:
 - (i) ensure that investigations into the effects of the industry on cetaceans and other scientific studies are accommodated along with the interests of the industry; and
 - (ii) encourage industry to recognise the value of scientific research for its own benefit and for wildlife conservation in general;
- (4) in instances where there are no national licensing authorities or regulatory bodies, the whalewatching industry should conduct the activities listed under (1) and (2) as part of their operations.

6.1.4 Comparative studies

A method for tracking whales and measuring distances between whales and vessels using a combined video and compass binocular system was described to the Scientific Committee. This system can provide accurate data on the position of whales and vessels from a moving vessel at sea similar to that obtained by land-based theodolite tracking studies.

6.1.5 Dolphin feeding programmes

The Scientific Committee received no new information on dolphin feeding programmes. It reiterated its view that the concept of dolphin feeding does not concur with the principle that cetaceans should 'be allowed to control the nature and duration of interactions', and agreed to keep this item on its agenda. It requested member governments to provide new information next year.

6.1.6 Work plan

The Scientific Committee believed that the Whalewatching Workshop proposed for next year's meeting would expedite the collection, exchange and synthesis of information necessary to assess long-term effects of whalewatching on cetaceans, and recommended that this workshop be convened immediately before the 2000 meeting of the Scientific Committee, with two days for presentation and discussion of the issues and one day to produce a report. Approximately £8,000 is required for invited participants. The Terms of Reference for this workshop are:

- (1) the identification and presentation of case studies of established whalewatching programmes and accompanying research programmes to monitor the potential effects of whalewatching on whales (e.g. history of the whalewatching programme, trends in whalewatching effort, cetacean species observed, experimental design utilised to monitor these programmes including data collection techniques and analyses);
- (2) the development of a list of population parameters that can be monitored in conjunction with whalewatching programmes and used to assess the long term status of whale stocks. Such parameters might include: seasonal abundance and density in whalewatching areas, habitat use patterns, measures of fecundity or calving rates of individuals and evidence of physical injury etc.

The Scientific Committee established an Intersessional Steering Group to develop the agenda and to plan this workshop.

The Scientific Committee accepted the workplan for next year's meeting which includes, in priority order:

- (1) review the findings of the workshop on assessing the long term effects of whalewatching on whales;
- (2) review the updated report on National Whalewatching Guidelines;
- (3) review new information on dolphin feeding programmes; and
- (4) review 'swim with' programmes that involve whales and dolphins.

6.1.7 Other matters

The Scientific Committee was informed that the UK Foreign and Commonwealth Office, through the Department of Environment, Science and Energy in London, had written to the British Overseas Territories in the Caribbean on the possibility of hosting a workshop on whalewatching in the Caribbean in one of the territories next year. The Scientific Committee welcomed this information, encouraged the proposed workshop on whalewatching in the Caribbean to go forward and looks forward to the workshop report.

6.2 Action arising

In the Commission, the UK spoke of the potential economic value of whalewatching in the Caribbean, with estimated revenue in 1998 of US\$10 million contributing to the

US\$13.5 billion tourist expenditure. This is a truly sustainable use and a soundly-based economic activity. It also commended the Caribbean whalewatching workshop which the Turks and Caicos had offered to host, leading to economic benefits, research and educational programmes.

The UK drew attention to two sets of whalewatching disturbance guidelines it had published in implementation of the European Union's Habitat Directive and in pursuit of the objectives of ASCOBANS/CMS.

It also introduced the report of a workshop on the legal aspects of whalewatching, convened by IFAW (the International Fund for Animal Welfare) to complement the previous workshops it had organised on the scientific, social, economic and educational aspects, and the special features of watching sperm whales. The legal workshop had a number of recommendations on options which the UK thought could assist member states.

Norway pointed out that although whalewatching was offered as an alternative to whaling, both activities took place in Norway.

Dominica noted the work of the Scientific Committee but questioned the competence of the IWC on this topic. Antigua and Barbuda also congratulated the Scientific Committee, spoke of the potential for whalewatching in the Eastern Caribbean, but emphasised that regulation must be a national responsibility, not the IWC's. It warned against the traditional users of a resource for food being displaced by incoming recreational use. It supported multiple use and self-determination of that use.

Brazil recognised the economic, social and cultural aspects of whalewatching and had encouraged such activity in its waters, while protecting cetaceans from disturbance. It supported the Scientific Committee's proposed workshop.

Japan spoke of the IWC's objectives and considered that whalewatching is outside the Convention. Any discussion must be based on science, with no sacrifice of the whaling and fishing industries. It rated the proposed workshop very low in the Commission's budget.

South Africa spoke of the progress in the Scientific Committee's research and the promise of future advances. Whalewatching is spreading and guidelines are needed to develop ecotourism and education. The workshop will improve the IWC's image and so thus it supported this as a way to continue to share experiences.

The USA also took note of the Scientific Committee's recommendations and the UK's submissions, remarking on the growth of whalewatching in Puerto Rico since it started in the mid 1990s.

St Lucia pointed out that scientists must get permission from the appropriate national authorities to conduct research to assess the effects of whalewatching on stocks. There are not so many whales in the southern Caribbean, so the industry there will develop at its own pace.

The Chairman concluded the discussion by confirming that the Commission endorsed the report of the Scientific Committee.

7. SANCTUARIES

7.1 Report of the Technical Committee

7.1.1 Southern Ocean Sanctuary

7.1.1.1 REPORT OF THE SCIENTIFIC COMMITTEE

Last year the Commission provided advice on the agreed objectives for the Southern Ocean Sanctuary in IWC Resolution 1998-3, which also directed the Scientific Committee to undertake a number of tasks. The Scientific

Committee reported its progress on these in the context of the recommendations of the Norfolk Island Intersessional Meeting of the Working Group on a Sanctuary in the Southern Ocean:

- (1) increased cooperation, which is being developed through the SOWER 2000 programme, collaboration with CCAMLR and SO-GLOBEC;
- (2) non-lethal research, through the SOWER cruises monitoring whale species abundance south of 60°S and the blue whale project; and
- (3) long-term framework for non-lethal research, included in (1) and the Report of the Workshop on Climate Change and Cetaceans.

The Scientific Committee discussed whether the designation of the Sanctuary was important to research. Japan argued that research conducted in the area would have occurred whether or not the Sanctuary had been designated. A number of national programmes were cited in addition to the SOWER cruises and the JARPA programme, while the Australian programme was a direct response to the establishment of the Sanctuary.

The Scientific Committee recalled its earlier inconclusive discussions concerning the issue of the Southern Ocean Sanctuary.

7.1.1.2 ABOLITION OF THE SOUTHERN OCEAN SANCTUARY

Japan argued that the Southern Ocean Sanctuary was not based on scientific grounds when it was established in 1994, and was legally contrary to the Convention. It introduced two amendments to Schedule paragraph 7(b):

- (1) to delete the word 'irrespective' in the 3rd sentence of Paragraph 7(b) thereof and inserting the words 'in respect of' in its place; and
- (2) to insert the following sentence after the 4th sentence of Paragraph 7(b) thereof: 'This prohibition does not apply to minke whales'.

France recalled that the Southern Ocean Sanctuary was subject to revision 10 years after it was established, i.e. in 2004, and suggested waiting until then. Accumulation of evidence, especially on environmental aspects, is slow and there is no need to re-open discussion now.

On being put to the vote, the first amendment was defeated with 9 votes in favour, 22 against and 1 abstention.

Japan saw this as the Technical Committee turning down respect for science and, since the second amendment was also based on science, it withdrew its request for a vote on the proposal to save time.

7.1.2 South Atlantic Sanctuary

Brazil stated that there are still important issues to discuss and resolve amongst the range states, and it therefore wished to postpone this matter until next year.

7.1.3 South Pacific Sanctuary

Australia reported that since the 50th Annual Meeting it and New Zealand had conducted extensive consultations on their joint proposal. A document setting out the case for the Sanctuary had been submitted to the Commission. It looked forward to further discussions before consideration at the 52nd Annual Meeting following reference to the Scientific Committee.

New Zealand voiced strong support for the proposal, as the Southern Ocean Sanctuary protected only feeding

grounds, not the breeding grounds of several baleen whales species whose abundance had been drastically reduced by whaling.

Denmark saw the proposal as a move to close waters to future commercial whaling, and wondered how this related to Schedule paragraph 8(d), which already closed the area to most factory ship whaling.

Japan strongly questioned the scientific content of the proposal and looked forward to the scientific review of the proposal next year, pointing out the abundance and recovery of some stocks. It also saw the possibility of conflict between the Sanctuary and other fisheries and food resources.

The discussion ended after both Brazil and Monaco supported the proposal.

7.2 Action arising

In the Commission, Japan reiterated that its proposed amendments were based on science, and it could not accept the language in Schedule paragraph 7(b) 'irrespective' of scientific findings.

The USA could not support any erosion of the Southern Ocean Sanctuary. It was aware of the robust status of the minke whale stocks but that does not affect the purpose of the Sanctuary. It believed the Commission should wait until the review due in 2004. The Netherlands and Brazil supported this position, as did New Zealand, who noted the vote in the Technical Committee and thought Japan could not be serious.

Norway recalled that it did not participate in the 1994 vote, and supported Japan.

France wished to protect all whales regardless of their stock status and did not want to break the global approach. It preferred to wait for the full 10 years and so opposed Japan. Chile concurred. Australia also supported the continued integrity of the Southern Ocean Sanctuary, while Monaco wished to consolidate and not erode the Sanctuary.

Antigua and Barbuda supported scientific integrity and supported Japan, as did Dominica, the Solomon Islands, St Lucia, Grenada and St Kitts and Nevis.

Finally, Japan commented that there seemed to be different views on whether the Sanctuary had been established regardless of scientific findings, or if there were factors other than science. It withdrew its right to call a vote.

8. ADOPTION OF THE REPORT OF THE TECHNICAL COMMITTEE

The Technical Committee, composed of all the delegations attending the 51st Annual Meeting, was Chaired by the Vice Chairman of the Commission, Prof. Bo Fernholm (Sweden), and discussed plenary Agenda Items 7 and 13. It adopted its report after review and amendment, and this report was then adopted by the Commission.

9. HUMANE KILLING

9.1 Report of the Whale Killing Methods Workshop

A three-day Workshop on Whale Killing Methods was held in Grenada 17-19 May, just before the Annual Meeting. Dr Sam Ridgway (USA) was prevented by health problems from taking the Chair as originally planned, and so the Vice-Chairman of the Commission, Prof. Bo Fernholm

(Sweden) acted as Chairman. Participants from 19 Contracting Governments attended, together with NGO observers.

9.1.1 Methods in use and development

9.1.1.1 COMMERCIAL WHALING

Norway described the development of a new penthrite grenade, the construction of new harpoons for 50 and 60mm harpoon guns, a study on pathological changes in the minke whale after penthrite grenade detonation, an illustration chart for the position of the brain in the minke whale and also measurements of stress hormones in minke whales. In 1998, 63% of the 625 whales caught died instantaneously (≤ 10 s) and the mean time from the shot until all signs of life ceased was 198s.

Norway also gave details of its programme to improve weapons and hunting methods during the 1981-86 Norwegian minke whale hunt. Several methods were evaluated, including electricity, drugs and compressed air. None of these resulted in new equipment design or field trials. However, field trials using high-velocity projectiles, traditional and modified cold harpoons and penthrite grenades were conducted. The work resulted in development and implementation of a new penthrite grenade that gave a substantially higher (45%) percentage of instantaneous death than former killing methods (17% with the cold harpoon). The conclusions of the investigation into the rifle strongly suggest that rifles with calibre 9.3mm, .375 and .458 with round-nosed full metal jacketed projectiles have sufficient impact energy and penetration force to kill a minke whale when the projectiles hit in or near the brain.

Norway stressed that the primary killing method (harpoon), is aimed at the thoracic/lung region. The secondary killing method (rifle) is aimed at the head and brain. Work has been undertaken to determine the position of the brain in the minke whale in relation to external features to provide a target area for gunners and also an illustration chart which could be used for educational purposes on whaling vessels from the 1999 hunting season.

For the sake of convenience, information on the Japanese scientific whaling was discussed at this point in the Workshop. Japan commenced its research on whale killing methods on a regular basis in its Whale Research Programmes under Special Permits in the Antarctic and northwestern Pacific Oceans from the 1993/94 season. The object of the research is improvement of whale killing methods to shorten the time to death by analysing the sampling vessels' chase and catch data, and the data from the necropsies of sampled whales. The rapid feedback to the gunners of the efficiency of the rifle shots and the education of the crews has succeeded in reducing the time to death. On no occasion since the introduction of the rifle as the secondary killing method has the electric lance been deployed.

New Zealand asked for information on the use of electricity to kill other cetaceans, in particular Dall's porpoises, but Japan stated it would not enter into discussion on this matter since it considers small cetaceans to be outside the competence of the IWC.

Japan expressed concern that it was always being asked to provide data and yet when similar requests had been made to other countries concerning terrestrial hunts no information had been provided. Requests had been made of Australia for kangaroo culls, Sweden for moose hunts and UK for red deer culls. Norway said that this had been its experience too. In reply, the UK said that it was aware of the outstanding

request and a working paper had been prepared and could be distributed for information. Sweden also presented data on its moose hunt.

9.1.1.2 ABORIGINAL SUBSISTENCE WHALING

The USA described the history of the AEWG's weapons improvement programme since 1987, when it began working with Dr Øen (Norway) to develop a penthrate grenade for use in the Alaskan bowhead subsistence hunt. Field trials of the penthrate grenade conducted in Barrow, Alaska in several years since 1988 have resulted in a number of modifications to the grenade. There was a demonstration of the darting gun with the old and new barrels, and with a replica of the penthrate grenade. The darting gun with a 35 fathom line and float attached is used as the primary killing method and could be fired more than once before the shoulder gun was used as the secondary weapon. These two weapons were the only ones used in the hunt.

Greenland introduced a number of papers providing the status for the Greenland Action Plan on Whale Hunting Methods, a report on improvements in Greenlandic whaling and an overview on the efficiency in the Greenlandic hunt of minke and fin whales in the years 1990-1998.

The USA reviewed information presented to the Commission in 1997 on weaponry used in the Makah whale hunt, and provided the Workshop with an update on research conducted since then. The efforts of the Makah tribe relative to their subsistence hunt of the gray whale were focused on the development of the rifle as a means of killing whales. In summary, the .50BMG was confirmed and improved as a suitable killing weapon to use in the Makah tribal hunt and the .577 is also suitable and has the additional advantages of lighter weight and multiple shot capability.

The Russian Federation described the techniques used by Chukchi whalers for the gray whale catch. They take basically young whales in the coastal waters of the Chukchi Peninsula (up to 20km offshore) initially using 6-10 manual harpoons with attached buoys to slow animal movements. Then the kill is performed using darting guns (obtained as a humanitarian aid from Alaska), rifles and sometimes special spears. When using darting guns the time from first harpooning to death takes on average 30-40 minutes. Chukchi whalers do their best to reduce whaling time and animal suffering as much as possible and will continue these efforts in future. Questions on the number of bullets fired, and the use of automatic guns, were raised but not discussed further.

St. Vincent and The Grenadines indicated that it would provide more detailed information on its hunt than appeared in a book on whaling in Bequia during the Commission meeting.

The Government of the Faroe Islands had for information purposes only provided the Workshop with material on killing methods and equipment in its pilot whale hunt. The UK produced a list of questions to the Faroe Islands with reference to this material and Denmark stated that the questions and comments should be forwarded to the Faroe Islands Government.

9.1.1.3 EUTHANASIA OF STRANDED WHALES

New Zealand explained that sperm whale strandings have a high media profile, and there is a public expectation in New Zealand that live stranded sperm whales should be humanely euthanased if re-floating is not possible. After extensive trials of a number of weapons and projectiles, it was decided

to concentrate on a modified 14.5 × 114mm anti-aircraft round to develop the Sperm Whale Euthanasia Device (SWED).

In March 1997 the SWED was used to euthanase two large male sperm whales stranded on Farewell Spit, South Island. The first animal was killed immediately by a single shot. The second animal was thought to have been rendered insensible by the first shot but continued breathing and was shot a second time using the same target area. After 30 minutes, however, the animal resumed breathing. Failure to kill both whales emphasises the need to target the brain accurately if a humane death is to be achieved.

9.1.2 Assessment of methods

Norway introduced evidence from pathological findings on tissue and brain damage caused by the detonation of the penthrate grenade to suggest that the IWC criterion of death based on immobility is incomplete and sometimes misleading. Conversely, New Zealand presented a paper which concluded that the current IWC criteria result in mean times to death values for whales being underestimated.

New Zealand also presented a study of the legislation in 53 countries to assess the legal requirements for slaughtering animals for meat consumption. The main conclusions were that stunning is usually required when the animals are killed in slaughterhouses; the majority of countries require the humane treatment of animals prior to and during slaughter; in many countries religious slaughter is exempt from stunning; and the requirements for humane slaughter apply to a wide range of species killed for meat consumption.

9.1.3 Times to death and evaluation

The Netherlands introduced a paper resulting from a meeting of experts held in Lelystad in March 1999. This dealt with the determination of the occurrence of irreversible unconsciousness in whales, as it has been considered that the IWC criteria for determining death are not valid and do not correspond to current scientific or clinical standards. It was suggested that the parameters which seem at present to be most promising for further evaluation and actual application are:

- (1) behaviour: frequency of breathing;
- (2) responses: blowhole-, corneal, pupillary- and pain responses.

After an extended discussion, the Chairman concluded that the Workshop agreed on the need to find better criteria based on better evidence.

9.1.4 Review and evaluation of relevant data

A paper from the UK reviewed recent data submitted to the IWC relating to the efficiency and humaneness of whale killing methods. Norwegian data indicated that in 1984-86, 45% of whales were killed immediately. There has been a gradual increase to 60% as training programmes have been implemented. Japanese data indicate that in 1983/84, 30% of whales were killed immediately and that there has been no improvement in this figure since. It was concluded that at least 40% of whales are not killed immediately in the Norwegian industry and in Japanese whaling this figure is 70%. Survival times for 50% of wounded whales is more than 6 minutes and some whales can survive for an hour or more. In discussion, it was suggested that the percentage of whales killed immediately in both the Japanese and Norwegian hunts would increase with better criteria for death in whales.

9.1.5 Revised Action Plan on whale killing methods

Delegations discussed a modified version tabled by the UK and New Zealand of the Revised Action Plan on Whale Killing Methods that was adopted at the previous Workshop in Dublin.

Denmark stated in relation to item D(9) in the Plan that Denmark does not recognise IWC competence on small cetaceans and would consequently not provide such information.

After extensive and comprehensive discussion on matters mainly of principle, the UK and New Zealand proposal on the Revised Action Plan was adopted with changes (Appendix 1).

9.1.6 Any other business

Norway proposed that scientific papers on technical improvements and killing methods such as those currently presented to the Workshops on Whale Killing Methods could be submitted for publication to the new journal published by the IWC. So far the journal is only publishing papers within the field of interest of the Scientific Committee of the IWC.

The Netherlands questioned the added value of the new journal for publication of scientific papers relating to the Workshop topics and noted that journals already existed where such papers could be submitted.

The Chairman concluded that he could not see agreement from the floor and suggested that Norway may wish to explore this matter further with the Commission.

9.1.7 Commission discussion

In the Commission, Norway spoke of the new material submitted by the whaling nations and commended the improvements in the times to death and hunters' safety, as well as the New Zealand progress in killing stranded whales. To avoid the same questions being asked at each meeting it believed that delegates should have technical expertise in the subject. It commended the progress made in this work, but noted that suffering in animals is difficult to quantify. Because of the very strict criteria it used for death times, it believed that whale hunts are better than those for most large terrestrial animals.

New Zealand was pleased that Japan no longer uses the electric lance, but regretted the lack of information on the Dall's porpoise hunt. It noted that some 40-70% of whales are not killed instantly in the Norwegian and Japanese hunts, questioned the number of bullets used in the Greenland hunt, and thought the situation in the Russian Federation hunt requires attention. It will continue its own work on the euthanasia of stranded cetaceans.

The UK associated itself with these remarks, commended the progress achieved, but looked for more information on the aboriginal subsistence hunts. There still need to be improvements in the effectiveness and humaneness, and it was disappointed that the Workshop did not address small cetaceans, since white whales and narwhals are included in the Action Plan. It had concerns over the use of electric harpoons in the Dall's porpoise hunt, since the Berne Convention prohibits the use of electrical methods for killing wild animals.

Denmark mentioned that the members of the small Faroese administration had been occupied with other matters and so could not attend the meeting but had provided information.

Sweden supported the comments from the previous speakers in thanking the whaling nations, noted the repetitive arguments and spoke of the need for more data.

Brazil and the USA thought that humane killing is within the Commission's competence. The latter provided substantial information on Alaska bowhead and Makah whaling practices, but pointed out that it is difficult to get detailed data from aboriginal subsistence hunts.

Japan maintained that this subject is outside the IWC's competence, and it participated and provided data on a voluntary basis. It appreciated the cooperation with Norway, but noted that while the whaling nations collect the data as a courtesy to the IWC, they are often misused. It deplored the way that jurisdiction was extending to small cetaceans and remote environmental issues, and the subjective use of the word humane.

The Russian Federation explained that automatic guns are prohibited in its hunt, commented that it received technical assistance only from Japan, Norway and the AEWG; it did not have enough experienced whalers and so was arranging a training seminar.

The Netherlands noted that some progress had been made since the Dublin Workshop, but better criteria (such as cranial nerve reflexes) are needed for permanent insensibility since the present ones are not satisfactory. It regretted the lack of information on aboriginal subsistence hunts, commented on the difference between the Norwegian and Japanese percentages for immediate kills and asked for information on sea conditions.

The Solomon Islands spoke of the cultural differences and practices carried over generations which exist, regretted the imposition of values from others, and called for cooperation in the future and respect for the coastal communities. Dominica supported this statement, and reiterated its view that management of small cetaceans is outside IWC competence.

Following some further comments on technical details, the Commission then accepted the report of the Workshop, noting the comments made.

9.2 Name of the Working Group

There was considerable discussion at the 50th (1998) Annual Meeting on the name of the Humane Killing Working Group, with no consensus, and it was concluded that any decision should be taken at the plenary session of the 51st Meeting.

This year Japan opposed the use in the name of the term 'Humane', which is subjective and cultural, and proposed instead 'Whale Killing'. France, Norway, Antigua and Barbuda and Denmark agreed.

The UK had some difficulty with this since it attached importance to the word and concepts of humaneness. This idea is not unique to one culture, reflecting a minimum of pain and suffering. English is the language of the Commission, but it would not insist if there was some acknowledgement of improvement. It suggested the name 'Working Group on Welfare Considerations of Whale Killing Methods'.

The USA viewed improvements as the ultimate goal, believing that the Commission has full competency as reflected in the 1992 Resolution and the Action Plan, and would consider the UK proposal. Australia and New Zealand had similar positions to the UK's, preferring to retain the name but they considered the alternative sensible. France also accepted the UK proposal.

Japan would not support this, nor St Lucia, who suggested 'Whale Harvesting Methods'. Denmark thought welfare was a very positive term and preferred 'Killing', as did Antigua and Barbuda, while St Vincent and The Grenadines thought

there should not be an implied judgement in the title. The Solomon Islands agreed, recalling its comments on different cultures.

Switzerland could agree with the UK, but suggested 'Whale Killing Methods and Pertaining Welfare Issues'. The UK responded that the name at the moment of Humane Killing reflects the main purpose, humane is said to be inappropriate, and it thought welfare could be the primary focus. It took up Switzerland's point by proposing the term 'associated' instead of 'pertaining'. The Chairman, in response to a query from Antigua and Barbuda, indicated that 'welfare' applied also to users.

On being put to the vote, Japan's proposal for the title to be the 'Working Group on Whale Killing Methods' was defeated, with 10 votes in favour, 15 against, with 9 abstentions. Japan commented that the second name would win by a clear majority so a vote would be a waste of time, but it still objected to the name. The Chairman then concluded that the Commission had agreed that the name should be 'Working Group on Whale Killing Methods and Associated Welfare Issues'.

9.3 Information on improving the humaneness of aboriginal subsistence whaling

9.4 Other matters

Both these items were included in the report of the Workshop.

9.5 Action arising

9.5.1 Recommendations from the Whale Killing Methods Workshop

Norway re-stated its suggestion that papers on technical improvements should be considered for publication in the *Journal of Cetacean Research and Management*, if submitted. Australia thought this a sensible proposal and the Commission agreed.

Australia then introduced a draft Resolution arising from the Workshop, sponsored together with Austria, Brazil, New Zealand, UK and USA, to encourage obtaining more and better information, and to accept the revised Action Plan. The Netherlands thought this a good resolution and wished to be a co-sponsor. It suggested adding sea conditions prior to death to the data to be submitted annually.

St Vincent and The Grenadines stated that it had not taken part in the Workshop, the element of welfare prevents it, and it would not be bound by the resolution. St Lucia and Dominica took the same position.

Japan recalled that it had responded positively to the Workshop, and had provided technical data to the Working Group, but these were used with malice against it, including humaneness as a subjective judgement. It called for the Commission to complete the RMS and stock assessments, but it will continue its efforts to shorten times to death and provide data on a voluntary basis, but not to those who misuse it. It believed that the resolution deviates the IWC from its task and it would not participate in a vote.

Denmark, on behalf of Greenland, shared the views of St Vincent and The Grenadines and Japan and would not participate in the vote. It believed the issue is outside IWC competence, but since 1987 Greenland had submitted more than 20 documents with information, and the improvement of equipment was not without cost. Very detailed information was requested which is difficult to obtain in Greenland.

The Resolution shown in Appendix 2 was then adopted by a majority, noting that Antigua and Barbuda, Grenada and St Kitts and Nevis also did not participate.

10. INFRACTIONS, 1998 SEASON

10.1 Report of Infractions Sub-Committee

The Infractions Sub-Committee met with Mr N. Kleeschulte (Germany) in the Chair, and was attended by delegates from 27 Contracting Governments.

Japan objected to the admission of observers from the Whale and Dolphin Conservation Society (WDCS) and Greenpeace International (GPI). It noted that WDCS had leaked the contents of discussion of the Workshop on Whale Killing Methods whilst the workshop was still in session and made it available on its web site. The Chairman of the Workshop had excluded WDCS with immediate effect and Japan requested that WDCS not be admitted as an observer to this meeting. With respect to Greenpeace International, Japan noted that when the Japanese research mother-ship had made an emergency call at Noumea, Greenpeace had delayed the ship by force and it requested that they not be allowed to observe this Sub-committee. Observers from inter-governmental organisations and NGOs except for WDCS and GPI were admitted.

Norway, supported by Japan, referred to the terms of reference of the Sub-Committee and stated its belief that the item concerning stockpiles of whale products and trade questions is not within the scope of the Convention. Consequently, it proposed that this item be deleted. The USA and New Zealand did not concur with this view. It was agreed, as in previous years, that an exchange of views was nonetheless useful.

10.1.1 Infractions reports from Contracting Governments

The Infractions Reports from Denmark, St Vincent and The Grenadines, the USA and the Russian Federation received by the Commission in 1998 were summarised.

The USA expressed its concern about the report by St Vincent and The Grenadines. It noted the agreement of the Scientific Committee that there is a high probability that any humpback whale less than 8m in length in the breeding area during the winter season is a calf. It therefore was probable that the smaller animals caught in 1998 and 1999 were calves, and if so, those taken were in violation of paragraph 14 of the Schedule. By extension, it believed that the larger females taken were accompanying the probable calves, given the hunting methods used for that fishery, and thus would also have been taken in violation of paragraph 14 of the Schedule.

Given the terms of reference of this Sub-Committee and its past practice, the Chairman asked the floor to limit discussions only to the take in 1998, noting that discussion of infractions for the 1999 season will take place next year.

St Vincent and The Grenadines emphasised that it did not believe that the takes constituted an infraction and had not reported them as such. Such takes had not been considered as infractions in the past and it believed that the precedent had been set.

New Zealand, Netherlands and the UK noted that paragraph 14 of the Schedule prohibits the taking of a suckling calf and the taking of a female whale accompanied by a calf. Takes of either clearly constitute an infraction. The UK further quoted from a previous Chairman's report that in 1993 St Vincent and The Grenadines had accepted that the hunting of a calf and a female accompanied by the calf was a possible infraction. St Vincent and The Grenadines argued

that it had not accepted that it had committed such an infraction but that it had accepted that the case of taking a suckling animal would comprise an infraction.

Norway argued that paragraph 14 is part of the provisions established for commercial baleen whale catches and does not apply to the aboriginal subsistence whaling by St Vincent and The Grenadines. Aboriginal subsistence whaling is regulated in a special paragraph, paragraph 13. The provisions of this paragraph expressly prohibit the take of a calf or female accompanied by a calf for bowhead whales and gray whales but there is no such provision in the section on the take of humpback whales by St Vincent and The Grenadines.

New Zealand and the Netherlands disagreed with the interpretation of Norway, believing that paragraph 14 applied to all whaling operations for baleen whales, including aboriginal subsistence whaling operations. Australia further noted that paragraph 17 contained an identical provision to paragraph 14, and this time referred to paragraph 16 related to sperm whales. The USA concurred, stating that the specific provision under paragraph 13(b)(1)(ii) had been introduced for emphasis when there was great concern over the status of the stock. It believed that there were now enough data to judge the take by St Vincent and The Grenadines as an infraction, citing the agreement by the Scientific Committee. It therefore urged St Vincent and The Grenadines to end its present hunting practice. It noted that this was a long-standing issue and that as long ago as 1987, St Vincent and The Grenadines had indicated that in future it would make every effort to comply with paragraph 14.

Denmark questioned if such provision had existed before the introduction of the aboriginal subsistence whaling. The Secretariat replied that it had been included in the first Schedule, and had in fact been included as part of the London Agreement in 1938, well before the establishment of the IWC.

Sweden pointed out the need to take further advice from the Scientific Committee on the rationale for the prohibition on the taking of calves, believing that it may have been based on outdated management theory. In addition, it believed that it might be easier, and hence quicker and more humane, to kill a small animal.

St Vincent and The Grenadines responded to the Netherlands, New Zealand and the USA that since it had been reported that the smaller animal had no milk in its stomach it was not suckling. Under such circumstances it believed that the Sub-Committee should follow precedent if a difference in opinion over interpretation exists.

Japan, recognising the existence of the two different views, agreed with Norway and believed that this clearly meant that no infraction had occurred. It further noted that the prohibition on the taking of calves had its origin in the period of major commercial whaling and considerations of economic efficiency. It believed that such a prohibition was inappropriate in this aboriginal subsistence whaling case, noting that the proposed catch of two was from a population now estimated at more than 10,000 animals.

Antigua and Barbuda supported the interpretation by Norway as well as the idea of Sweden and suggested that the discussion should conclude with a request that St Vincent and The Grenadines submit more detailed reports in the future.

The Chairman concluded that there was clearly no unanimous view in the Sub-Committee. In such circumstances it was appropriate to forward the different views to the Commission. He summarised these as follows:

- (1) Some delegations believe that paragraph 14 of the Schedule only applies to commercial whaling of baleen whales, noting the specific reference to calves in paragraphs 13(b)(1)(ii) and 13(b)(2)(ii) and its absence in paragraphs 13(b)(3) and 13(b)(4). Those delegations therefore believed that no infractions could have occurred.
- (2) Other delegations believed that paragraph 14 applied to all baleen whale operations.
- (3) Some delegations believed that as the small animal had no milk in its stomach it was not a suckling calf and thus not an infraction. They also referred to the precedent previously set by the Sub-Committee.
- (4) Other delegations believed that the length information was sufficient to identify the animal taken in 1998 as a calf and hence that this constituted an infraction. By implication, the female taken was accompanying a calf and also therefore comprised an infraction. With respect to precedents, they believed that more data were now available than in previous years and that this was sufficient reason for the Sub-Committee to assert that infractions had occurred.
- (5) Some delegations believed that the Scientific Committee should re-examine the need for a provision to prohibit calves, from a management and conservation perspective.

The Netherlands noted that in a paper presented by the Russian Federation to the Scientific Committee, the takes by the Chukotka peoples included many animals under one year old and that in the 1996 catch 75% of mature females had been lactating females. The Netherlands requested further explanation by the Russian Federation. In response to a question, the Secretariat explained that the summary in the Scientific Committee's report did not include information on either the age distribution or the reproductive status of the catch. The Chairman suggested that the Russian Federation could discuss this matter bilaterally with the Netherlands outside the meeting (and the Russian Federation subsequently provided further information to the Netherlands).

10.1.2 Reports from Contracting Governments on availability, sources and trade in whale products

A number of resolutions on this matter have been passed by the Commission (IWC Resolution 1994-7, Resolution 1995-6, Resolution 1996-3, Resolution 1997-2, Resolution 1998-8). Responses this year had been received only from Australia and the UK, neither of which have any stockpiles.

10.1.3 Other matters

10.1.3.1 SURVEILLANCE OF WHALING OPERATIONS

The Infractions Reports submitted by the USA and the Russian Federation stated that 100% of their aboriginal catches were under direct national inspection. Denmark reported that the IWC catch limits for minke and fin whales were not violated for Greenland.

10.1.3.2 CHECKLISTS OF INFORMATION REQUIRED OR REQUESTED UNDER SECTION VI OF THE SCHEDULE

The available information supplied in the Checklists is summarised below:

- (1) *Denmark*: Information on date, position, species, length, sex and whether a foetus is present is collected for between 90-100% of the catch, depending on the item.

Information on killing methods, struck and lost animals and whether a female is lactating is also recorded for some animals.

- (2) *USA*: Information on date, species, position, length, sex, killing method and numbers struck and lost is collected for 80-100% of the catch depending on the item. Other biological information is recorded for about 60% of animals.

Although Norway has not submitted a Checklist, it has submitted the required information to the Secretariat as noted in the Scientific Committee report.

10.1.3.3 SUBMISSION OF NATIONAL LAWS AND REGULATIONS

A summary of national legislation supplied to the Commission was prepared by the Secretariat.

10.1.3.4 OTHER

The UK reminded Japan that last year Japan had been requested to provide further information on the gray whale whose upper body had been found with several harpoon heads in Hokkaido, Japan in 1996. Japan explained that it is the standing policy of the Government of Japan to take strict measures against illegal activities and it was willing to receive any constructive suggestions from the Contracting Governments. However, it believed that the reports of this issue at the 49th Annual Meeting had been sufficient for the discussion to have been concluded.

Australia asked whether the take of a Bryde's whale during the JARPN research survey in 1998 should be considered in the Sub-Committee on Infractions. Japan noted that the issue was inappropriate to be discussed in this Sub-Committee since the right to conduct scientific research is granted as a sovereign right of the Contracting Government in Article VIII of the Convention.

10.2 Action arising

The Commission took note of the matters contained in the report of the Infractions Sub-Committee.

11. ABORIGINAL SUBSISTENCE WHALING

11.1 Aboriginal subsistence whaling scheme

11.1.1 Report of Aboriginal Subsistence Whaling Sub-Committee

The Aboriginal Subsistence Whaling Sub-Committee met with Mr Stein Owe (Norway) in the Chair and delegates from 23 Contracting Governments attending.

Japan objected to the admission of two NGO observers, as in the Infractions Sub-Committee (Item 10 above), but all other observers were admitted.

The Chairman of the Scientific Committee's Standing Working Group (SWG) on the Development of the Aboriginal Subsistence Whaling Management Procedure (AWMP), Mr Greg Donovan (Secretariat), presented its report.

A major feature of the SWG's discussions this year was how to make as rapid progress as possible in the light of the agreement last year that it is possible to provide the Commission with components of an AWMP as soon as they are available. This means that *Strike Limit Algorithms* (SLAs) for bowhead and gray whales will be able to be developed before those for other species. As in previous years, a number of scientific issues related to simulation trials were looked at.

Thanks to the advice sought from the Commission during the development process, the SWG has been able to make further progress in both the design features of SLAs and the trial structure by which they can be evaluated against the Commission's objectives. Those addressed this year included: catch variability; block quotas; short-term need; and multi-species considerations.

With regard to the level of progress and when this work might be finished, the aim is to ensure as rapid progress as possible to provide recommendations to the Commission for each of the fisheries. In this respect, a timetable has been developed, but this by nature must be somewhat tentative as the development process is an iterative one and it is not possible to predict the performance of candidate SLAs in the trials.

11.1.1.1 FUTURE WORK PLAN

With respect to the Bering-Chukchi-Beaufort Seas stock of bowhead whales both a 'faster' and 'slower' timetable have been provided to illustrate the tentative nature of the process. With the 'faster' timetable, a recommendation should be ready to be presented to the Commission at the 2002 meeting. The present catch limits for bowhead whales are set up to and including the 2002 season. It was emphasised that the timetable will be lengthened considerably if consideration has to be given to developing multi-stock trials.

The eastern stock of gray whales has not been looked at in any detail yet but given the similarities between this and the bowhead whale, at least with respect to information available, it is expected that this can be developed in parallel. Thus, under the 'faster' timetable the expectation is that a recommendation will be presented to the 2002 Commission meeting.

As noted last year, with the currently available data for the Greenland fisheries for minke and fin whales it would be extremely difficult, if not impossible, for development of an SLA that will satisfy all the Commission's objectives for this fishery. Last year the Commission had accepted the recommendation of the need to develop a cooperative research programme with Greenlandic scientists to advance this work. Work began this year on developing this programme, and the feasibility of a new approach is being investigated. Initially it will require a field trial of a biopsy sampling gun and, assuming success with this, it will probably involve a large-scale biopsy sampling programme as well as aerial surveys. This will have financial implications for future years. There are a number of practical and theoretical issues still to be resolved for this multi-species fishery and it looks likely to be at least 2006 before management advice and recommendations will be able to be provided.

St Vincent and The Grenadines humpback whales have not yet been looked at in any detail. Both the major review of North Atlantic humpback whales to be undertaken at the 2001 meeting and proposed research work in the eastern Caribbean will be important to this work. The question of stock identity and the relationship of these whales to those of the wider western North Atlantic will be very important to this work and the Scientific Committee has recommended that at least tissue samples are obtained from any animals taken under this quota.

Some general matters regarding progress were outlined, including issues relating to computing and the dependence of the speed with which the work can be done on having appropriate software as soon as possible; the importance of

intersessional meetings and workshops to the development process; and the general scientific aspects of the scheme. The first two of these points have particular financial implications and, with respect to the third, a discussion paper will be produced for next year's meeting to promote dialogue with the Commission.

The USA expressed satisfaction at the progress made and said that it looked forward to the results of the work at coming meetings. Denmark expressed the willingness of Denmark/Greenland to cooperate with the IWC and its Scientific Committee but underlined the situation with resources in Greenland and the need for assistance, including financial assistance, from the IWC.

The Aboriginal Subsistence Whaling Sub-Committee agreed to forward this report to the Commission.

11.1.2 Action arising

The Commission noted the comments in the report.

11.2 Review of aboriginal subsistence whaling catch limits

11.2.1 Report of Aboriginal Subsistence Whaling Sub-Committee

11.2.1.1 BERING-CHUKCHI-BEAUFORT SEAS STOCK OF BOWHEAD WHALES

The Scientific Committee agreed that there is no reason to change the management advice given last year that it is very likely that a catch limit of 102 whales or less would be consistent with the requirements of the Schedule.

11.2.1.2 NORTH PACIFIC EASTERN STOCK OF GRAY WHALES

The Scientific Committee agreed that it has no reason to change the advice given in 1997 that a take of up to 482 whales per year is sustainable, and is likely to allow the population to stabilise above *MSYL*.

Given the level of interest, the USA offered to provide some preliminary information on the Makah hunt, noting that it would not normally provide such information at this stage. It advised that the hunt began on 17 May when the Makah struck and landed a whale. The harpoon was thrown from a canoe, it was attached to a float, the whale dived, and was then pursued by a motorised chase boat. The kill was then completed by use of a .577 calibre rifle, with two of four shots striking the whale. The total incident took eight minutes.

11.2.1.3 NORTH ATLANTIC WEST GREENLAND STOCK OF MINKE WHALES

The Scientific Committee noted that it has never been able to provide satisfactory scientific advice on either fin or minke whales off Greenland. It strongly recommended the establishment of a research programme for fin and minke whales off Greenland and endorsed the plan for such a programme outlined in its report.

Sweden endorsed the recommendation referred to by the Scientific Committee concerning the feasibility study, and in agreeing with Sweden, the UK noted that such a decision is likely to have financial consequences in future years, which members should bear in mind, and indicated its readiness to support such a study.

The Aboriginal Subsistence Whaling Sub-Committee then endorsed the proposal of the Scientific Committee for the feasibility study proposed in its report.

11.2.1.4 NORTH ATLANTIC HUMPBACK WHALES

The Scientific Committee repeated its advice from the 1997 meeting that a catch of up to three whales annually is unlikely to harm this stock. It also drew attention to the fact that the comprehensive stock assessment for North Atlantic humpback whales, previously agreed to take place in 2000, would now not take place until 2001. The Commission may wish to look at this when considering the Scientific Committee's Work Plan.

St Vincent and The Grenadines requested a renewal of its quota of two humpback whales a year. It stressed the need for the continuance of this small quota and reiterated its request of previous years that this be for a three year period.

There followed an extensive debate, covering the issues of the possibility of continued whaling after the retirement of the original whaler; the killing methods used; the possibility that a calf and its mother may be taken; the importance of a documented needs statement; the social, subsistence and cultural aspects; the impact of the small catch on the stock estimated to number 10,600 animals; and the balanced and multiple use of resources in the Caribbean.

11.2.2 Action arising

11.2.2.1 RECOMMENDATIONS FROM THE ABORIGINAL SUBSISTENCE WHALING SUB-COMMITTEE

It was agreed that the Sub-Committee's report of the above discussions would be forwarded to the Commission. In particular, the Chairman of the Sub-Committee noted that while many delegations had expressed support for the St Vincent and The Grenadines request, there was no consensus, including on the question of need. The various points of view were reflected in the Sub-Committee's report.

In the Commission, St Vincent and The Grenadines repeated the request it has made since 1988 for a quota of two whales for each of the next three years. The nutritional need had been accepted in 1994 and 1996 and continues. It is collecting tissue samples and providing more information. It maintained that no infractions had occurred, despite the concern over the small whale taken in 1998. This was based on its belief that paragraph 14 of the Schedule is not applicable, and refers only to commercial whaling, and that lactating is equivalent to suckling.

It proposed that the Scientific Committee should be instructed to consider the effect on the stock of taking calves, small whales and lactating females. It wondered what is the problem of taking two whales from a stock of 10,600, which is subject to annual review, when a catch of three whales would not cause harm.

Although it was not obliged to answer questions raised by the UK on welfare, it did state that the times to death are 20-30 minutes, a bomb lance is not used, only two whales had been lost out of 12 struck since 1989, one or two attempts are needed with a steel-tipped lance to kill the whale, there were six men in each of the two boats used in 1998 and 1999, and a motorised boat is used only to tow the whale after the hunt. It also stated that the larger of two whales together is always struck first.

St Vincent and The Grenadines was aware of the concerns raised by the false reports, and discussions had been initiated with technical people. It noted that it can expect to kill more whales with improved efficiency, and the demand for whale meat had increased because of the publicity.

Ireland proposed an amendment to the suggested Schedule text, by adding to paragraph 13(b)(4):

It is forbidden to strike, take or kill calves or any humpback whale accompanied by a calf.

Although Ireland does not take whales and has declared its waters a sanctuary, it respected other people's cultures and traditions.

It asked for a definition of a calf, which the Chairman said was an animal of less than 8m in length. The Scientific Committee should review this next year.

Although St Vincent and The Grenadines undertook to cooperate, the Netherlands still had concerns over the needs statement, possible violation of paragraph 14, when the whaling would stop, and wished for reassurance on these matters. The matter was then adjourned for further negotiations outside the meeting, following which the Chairman of the Commission reported that consensus had been reached on the Schedule amendment proposed by St Vincent and The Grenadines to delete the dates '1996/97 to 1998/99' and replace with '2000 to 2002' and with the additional sentence put forward by Ireland.

In reaching this consensus, the Commission took note of:

- (1) its decision that a humpback whale calf is an animal less than 8m in length, subject to review by the Scientific Committee next year;
- (2) commitments of the Government of St Vincent and The Grenadines that it will:
 - (i) review and improve hunting and killing methods;
 - (ii) ensure that the hunt is properly regulated;
 - (iii) ensure cooperation in research related to this hunt; and
 - (iv) submit a detailed needs statement when the quota is next considered for renewal.

Australia said its reservations remain, but it welcomed the commitments and regulation. Denmark expressed satisfaction on reaching agreement. New Zealand associated itself with these remarks. The Netherlands still had concerns over the way the hunt is conducted and will watch future conduct, while the UK welcomed the changes concerning calves but still had reservations on need.

The USA, as an aboriginal subsistence whaling nation, supported native groups in other countries. It had been troubled in the past but was somewhat encouraged by the amendment and definition of a calf; targeting calves and accompanying whales is unacceptable. Monaco thought that clarification on excluding the killing of mothers and calves is essential.

Japan welcomed the agreement; this non-issue had taken too long, since people commonly eat small chickens, lamb and veal.

The Solomon Islands and Chile congratulated the Chairman for his guidance, believing that understanding by countries is the way to go forward. St Vincent and The Grenadines thanked everyone.

11.3 Catches by non-member nations

11.3.1 Report of Aboriginal Subsistence Whaling Sub-Committee

The Scientific Committee considered bowhead whales other than the Bering-Chukchi-Beaufort Seas stock and reported that a bowhead whale was taken at Pangmirtung, eastern Baffin Island, in the summer of 1998. The Scientific Committee reiterated its advice that given the apparent interest in continuing harvests from the Baffin Bay-Davis Strait and Hudson Bay stocks that were depleted by commercial whaling, additional knowledge of their status is crucially needed.

12. COMPREHENSIVE ASSESSMENT OF WHALE STOCKS

12.1 Revised Management Procedure

12.1.1 Report of the Scientific Committee

12.1.1.1 COMPLETION OF THE CLA PROGRAM REVISION AND TUNING

The work needed to re-code the CLA program has continued. The new program will be applied to selected input data and once the testing is successfully completed the Secretariat will use the program to determine a more accurate value for the tuning parameter specified by the IWC.

12.1.1.2 ABUNDANCE ESTIMATION

An intersessional Working Group was established last year to review abundance estimation projects of interest to the IWC, and to document and enlarge the project to evaluate abundance estimators that incorporate $g(0)$ and heterogeneities. This work is continuing and there will be a report to next year's meeting.

12.1.1.3 NORTH PACIFIC MINKE WHALE TRIALS

REVIEW RESULTS OF IMPLEMENTATION SIMULATION TRIALS

Last year, the Scientific Committee revised the *Implementation Simulation Trials* for North Pacific minke whales. Trials were completed for the management option in which the *Small Areas* were equal to the sub-areas, and the RMP is applied separately to each *Small Area*. The Scientific Committee expressed appreciation to Mrs Allison on completing what turned out to be a much larger task than expected.

Results from trials for two options regarding the level of Japanese incidental take were presented. The total catch for a sub-area was taken to be the catch limit set by the RMP or the level of incidental catch, whichever was the greater, as specified by the Commission.

The results of all *Implementation Simulation Trials* considered suggest that irrespective of how the RMP would be used to manage commercial whaling, the J stock, which is found predominantly in the Sea of Japan, the Yellow Sea and the East China Sea, is likely to decline markedly because of the incidental catches in that area. Although the primary focus of the trials is to examine performance relative to the O stock, the Scientific Committee expressed its concern at the implications of the result for the status of this stock.

The Scientific Committee noted that the data for some sub-areas used to condition the trials (a CPUE series and some minimum estimates of abundance) are sparse and of uncertain reliability.

The Scientific Committee noted that catch limits other than zero are set for some of the *Small Areas* in which animals from the J stock are occasionally found, and proposed that a new output statistic be defined to determine the impact of management using the RMP on the J stock. It also considered which of the trials specified last year could be omitted to obtain a final set, noting that the primary purpose of the trials was to examine the application of the RMP to the O stock.

SIGHTINGS SURVEYS

The Scientific Committee received a report on a sightings survey conducted last year in the Okhotsk Sea, and the research plan for a repeat sighting survey in the Okhotsk Sea in August-September 1999. The Scientific Committee reiterated its recommendation from last years' meeting that methods in addition to visual observations (e.g. VHF telemetry) be used to determine dive times, and urged that this work take place as a matter of priority.

The Scientific Committee was pleased to note that the Russian Federation had granted permission for the 1998 survey to operate in its EEZ. It recommended that the Commission requests the relevant authorities of the Russian Federation to grant permission in timely fashion for Japanese vessels to survey its EEZ in 1999.

Plans for a joint Republic of Korea-Japan sightings survey in sub-area 6 were introduced for a survey intended as a pilot study for a proposed two-year series of surveys in this area. The objectives of the programme are to collect information on the distribution of cetaceans and to provide abundance information for inclusion in *Implementation Simulation Trials* for North Pacific minke whales.

UNCERTAINTY OVER INCIDENTAL CATCHES

The Scientific Committee was unable to reach agreement on a best estimate of incidental catches in Japanese waters. It recalled that a working group had been established two years ago with the aim of specifying a time series of total incidental catches, but that this initiative had not yet resulted in agreement. The Scientific Committee encouraged further collaborative work with the aim of determining the best estimates of incidental take. Although it is necessary to agree a series of best estimates in order to implement the RMP, *Implementation Simulation Trials* only require the levels of incidental catch that span the plausible range.

Some members noted that no account had been taken of possible additional incidental catches, i.e. in the Japanese driftnet fishery, and by the Democratic People's Republic of Korea, China (Taiwan), the People's Republic of China and the Russian Federation. The Scientific Committee encouraged the collection and analysis of data for these fisheries/nations.

SPECIFICATION OF FINAL TRIALS

The Scientific Committee discussed several issues related to new trials. It agreed the revised specifications for North Pacific minke whale *Implementation Simulation Trials* and recommended that the Secretariat conduct the trials during the intersessional period and report the results to next year's meeting.

Considering all of the information presented and discussed, and in the absence of agreement on a best estimate, the Scientific Committee agreed that an appropriate range of annual incidental take of minke whales by Japan for the purposes of *Implementation Simulation Trials* would be 25-75. Prior to making a recommendation on options for implementation of the RMP, the Scientific Committee will need to determine the best estimate of incidental take.

12.1.1.4 NORTH PACIFIC BRYDE'S WHALES TRIALS

INSHORE/OFFSHORE STOCK STRUCTURE

Last year, the Scientific Committee did not have sufficient time to finalise discussion on how to model the structure of inshore and offshore Bryde's whales around major island groups. New information was available this year about Bryde's whales in inshore waters off Kochi (Pacific side) and Kasasa (East China Sea side) which the Scientific Committee agreed represented a major contribution on the stock structure of Bryde's whales. It encouraged the authors to conduct their proposed photo-ID and genetics studies to understand this issue further.

Some members considered that the hypothesis that waters around major island groups in the western and central Pacific could contain inshore form animals had been based on analogy with the situation in Kochi. The Scientific

Committee could not reach consensus on this issue and two positions emerged: (1) inshore form Bryde's whales are not found in and around major island groups in the western and central Pacific, and (2) this possibility cannot be excluded as implausible given the lack of information for many of the island groups concerned.

The Scientific Committee considered this issue in the context of the development of *Implementation Simulation Trials*. After some discussion it agreed to define an area around each island group in which inshore form animals could plausibly be located and to exclude that area when estimating abundance for conditioning the trials. The question of whether inshore form Bryde's whales are, in fact, found in and around island groups could be examined through surveys and biopsy work in the territorial waters of the countries involved in the island groups. Japan is prepared to extend support to countries to facilitate this work. The Scientific Committee welcomed this offer and encouraged such research.

WITHIN- (OFFSHORE) STOCK SPATIAL STRUCTURE

Last year, the Scientific Committee agreed to two alternative stock-structure hypotheses:

- (1) there is only one stock (stock 1) of (offshore form) Bryde's whales in sub-areas 1 and 2;
- (2) there are two stocks (stocks 1 and 2) of (offshore form) Bryde's whales in sub-areas 1 and 2, one stock of which is found in both sub-areas and the other in sub-area 2 only;

but had failed to agree on whether or not there was evidence for within-stock spatial structure.

After considerable discussion, the Scientific Committee agreed that the available data did not provide evidence of sub-stock structure in offshore form Bryde's whales in the western North Pacific and agreed to develop a set of *Implementation Simulation Trials* to assess whether some form of catch cascading is necessary to prevent possible local depletion. If this proved to be the case, further trials/discussion may be needed to select the number of *Small Areas* within sub-area 1.

It also agreed that the three alternative hypotheses for the dynamics of the area east of 180° (sub-area 2) would be as follows:

- (1) only stock 1 is found in sub-area 2;
- (2) there is a separate stock (stock 2), and that stock only, in sub-area 2; and
- (3) there is stochastic mixing of stocks 1 and 2 in sub-area 2 (a 50:50 split between the two stocks in the pristine state).

The Scientific Committee agreed to divide sub-area 1 into eastern and western sub-areas and to assume that when sub-area 1 is treated as a *Small Area*, all of the catches are taken from the (more depleted) western sub-stock. This is an extreme scenario. The Scientific Committee then discussed whether it was appropriate to divide sub-area 1 west further (into northern and southern sub-areas). It agreed that the probability that the coastal waters of northern Japan contained a local sub-stock was low because the abundance in this area had never been high, and that the evidence did not support the need to consider trials in which sub-area 1 west was further sub-divided to reflect possible separate localised aggregations.

The Scientific Committee discussed whether it was necessary to divide sub-area 1 by lines of longitude into more than two (east and west) and agreed not to sub-divide

it further at this stage. The Scientific Committee also discussed whether the trials should allow for the possibility that the boundary between stocks 1 and 2 differs from 180°.

ABUNDANCE ESTIMATES

The Scientific Committee focused first on data sources and desirable characteristics of abundance estimates for the purpose of conditioning the *Implementation Simulation Trials* for western North Pacific Bryde's whales. It noted that rough abundance estimates would be sufficient for conditioning, as opposed to the actual abundance estimates to be used for calculating catch limits. Two potentially useful sets of sighting data were identified:

- (1) Japanese Scouting Vessel (JSV), May-September, 1972-1981.
- (2) dedicated, May-September, 1982-1998.

The JSV data have potential biases because the positions were allocated to noon positions and primary and secondary sightings were not distinguished.

The Scientific Committee judged that it should be possible to obtain the rough abundance estimates required as input to the trials for the June-July period from the dedicated survey data, and to form the sighting mixing matrixes using the JSV data for a broader range of months.

CATCHES

The Scientific Committee received a paper which compared official Soviet catch statistics with estimates of catches reported recently by Russian and US scientists. The Scientific Committee could not reach agreement on whether Bryde's whales may have been reported as sei whales. It recommended further investigation of this matter intersessionally, and looked forward to receiving a report at next year's meeting.

BIOLOGICAL PARAMETERS

The Scientific Committee considered values for the biological and operational parameters of the operating model. It briefly discussed which component of the population density dependence should apply in the RMP. Points raised included: whether or not this should be consistent between the RMP and the AWMP; the biology of the species concerned (noting that West Greenland minke whales are relevant to both Management Procedures); and any effect changing this in the RMP has in the context of the tuning of the RMP. The Scientific Committee agreed to consider this issue next year taking due note of previous extensive discussions in the Standing Working Group on the AWMP.

SPECIFICATION OF TRIALS

The Scientific Committee agreed the specifications for *Implementation Simulation Trials* and recommended that the Secretariat conduct the trials during the intersessional period and report the results to next year's meeting.

The Scientific Committee discussed how catches for the trials should be specified, particularly in the context of the extent to which known mis-reporting in other areas and on other species could be extrapolated, and the uncertainty regarding catches by China (Taiwan) and the Philippines. It was noted that the main purpose of *Implementation Simulation Trials* was to examine the relative performance of different management options and that this was likely to be insensitive to the level of historical catch. The Scientific

Committee therefore agreed that these initial trials would be based on the base-case catch series in the 1996 assessment.

SIGHTINGS SURVEYS

A report on a sightings survey for Bryde's whales conducted in August and September 1998 in the area bounded by 10°-43°N and 145°-165°E and a description of Japan's research plans for a 1999 Bryde's whale abundance survey for future implementation of the RMP were provided. The Scientific Committee agreed that it would be useful to obtain estimates of the probability of detection on the transect line $g(0)$.

12.1.2 Action arising

The UK expressed its concern that the J stock of minke whales might decline because of the incidental catches. Japan believed the hypotheses of three or four sub-stocks is unrealistic, and asked when a catch quota will be calculated, given that the assessment started in 1993. The Chairman of the Scientific Committee responded that ideally the details will be finalised next year, with recommendations the following year. The Republic of Korea commented that the simulation trials used CPUE data and a bycatch of 150, although the latter is actually less.

The Republic of Korea again drew attention, as it has done in the past two years, to the use of the name 'Sea of Japan'. It would like simultaneous use of the name with 'East Sea', noting that the UN has called for a resolution of the problem. Japan responded that the issue has nothing to do with, and is outside the competence of, the IWC.

Japan questioned the number and definition of the sub-areas being considered for Bryde's whales, and the Chairman of the Scientific Committee noted that these were two possibilities being explored in the trials. Japan expressed its gratitude for the work of the Scientific Committee and hoped that it would not take as much time as the North Pacific minke whales.

The Commission then endorsed the recommendations of the Scientific Committee.

12.2 Whale stocks

12.2.1 Report of the Scientific Committee

12.2.1.1 SOUTHERN HEMISPHERE BLUE WHALES

DIFFERENTIATION OF SUBSPECIES

An examination of the surfacing behaviour and blow-hole shape of blue whales used a total of 575 high-resolution video sequences including 353 from 101 putative pygmy blue whales and 162 from 25 putative 'true' blue whales obtained on four cruises. Putative pygmy blue whales tended to submerge without exposing the caudal keel (or sometimes even the dorsal fin). In 67 individuals the blowholes were scored as either 'neat' or 'skewed' in shape, and the 'skewed' type was rare in the small sample of putative true blue whales. During the 1997/98 and 1998/99 cruises, the topmen also categorised the overall body shape of 118 blue whales seen. The results indicated that the 'tadpole' shape category (larger head and shorter tail) was peculiar to pygmy blue whales, and the authors believed that this is a strong field character for subspecies recognition.

Of the video-taped animals, about 20% had been biopsied but few were putative blue whales. The Scientific Committee agreed that while the morphological and behavioural criteria discussed might allow a statistical differentiation between the two forms, they did not appear adequate to make a positive allocation of an individual to a subspecies in the field. On the question of possible genetic

distinction between the two subspecies, the earlier apparent separation between the two had become less distinct now that a larger sample size had been examined. The Scientific Committee agreed that voucher material was urgently needed, especially from true blue whales. In the meantime, the Southwest Fisheries Center was now looking at microsatellites to see if they could possibly provide a better basis for separation between the two subspecies.

Acoustic recordings made on the 1998/99 SOWER cruise in the vicinity of Antarctic blue whales showed some features in common with recordings made on the 1996/97 and 1997/98 Antarctic cruises. All three sets of recordings were different from those made south of Madagascar in December 1996. Those made off the coast of Chile in 1997/98 proved to be more like the vocalisations of blue whales from the eastern North Pacific than blue whales from the Antarctic, and were different from those made south of Madagascar at the same time of year. The Scientific Committee agreed that acoustics had not yet provided a definitive answer on how to recognise the subspecies, and that what was needed was a positive link between the call types recorded and one or more of the other (e.g. morphological) features of the two subspecies.

ABUNDANCE ESTIMATION

The abundance estimates of blue whales from the three IWC/IDCR-SOWER sightings surveys from 1978/79 to 1996/97 were 500 (CV = 0.54), 700 (0.45) and 1,300 (0.42) respectively. The analysis used sightings recorded as 'blue whales' as true blue whales. There was an extensive and inconclusive sub-committee discussion concerning whether and when pygmy blue whales might have been found south of 60°S, the effect this would have had on abundance estimates, and whether survey data were recorded in a way that would permit adjustment for them.

Although the relevant sub-committee had suggested that a new 'best' estimate could be proposed, the full Scientific Committee agreed that it was preferable for additional analyses to be completed first.

The Scientific Committee recommended that consideration of estimates of abundance of blue whales be accorded high priority at next year's meeting.

OTHER

Recently retrieved data on blue whale catches by the *Slava*, 1946-1957, showed that true catches of blue whales were frequently smaller than those reported; this was apparently so that blue whale catch limits would not be reduced, and to hide the undeclared catches of other species. Certain biological characteristics of the catch were also misreported – the proportion of undersized blue whales, for instance, was reported as 1.6-3.4% of the catch whereas it was actually 22.2-36.7%. There were also significant alterations to the catch positions, apparently to hide the locations of whaling grounds from competitors. Work on restoring the actual Soviet catch data would continue. The Scientific Committee expressed its sincere appreciation to Dr Mikhalev and his colleagues for their persistence in carrying out this very important task, and encouraged them to continue.

12.2.1.2 WESTERN NORTH ATLANTIC RIGHT WHALES

ABUNDANCE, TRENDS AND VITAL RATES

Last year an Intersessional Steering Group had been set up to review ongoing work in relation to the status and trends of the North Atlantic right whale population, and to consider whether sufficient progress had been made to hold a special

meeting on this topic. The meeting has not yet been held due to both insufficient progress and conflicts with other meetings. The situation will be reviewed again in June.

Discussion first centered around a recently published analysis of trends in the survival probability of North Atlantic right whales that estimated a decrease in annual survival rate from 0.99 in 1980 to 0.94 in 1994 and an expected time to extinction of less than 191 years.

The Scientific Committee concluded that whilst it had some questions on the approach used, these did not alter its conclusion of last year that there are 'serious concerns over the status of the stock'. These concerns are based on *inter alia* the small size (300-350 animals) of the stock; an increase in calving interval from an average of 3.67 years in the 1980s to over 5 years now; poor recent calf production (only 9 in the past 2 years); the possibility of an unusually high degree of female senescence (only 38% of females are reproductively active); and the level of anthropogenic mortality (see below). In these circumstances the Scientific Committee strongly recommended that:

- (1) the comprehensive assessment of this stock should remain of high priority;
- (2) research into the status of the stock and the possible causes for its reproductive impairment and decreased survival should be intensified in the USA and Canada;
- (3) information on human-inflicted mortality should be reported to the IWC on a regular basis, as had been done in the latest USA Progress Report; and
- (4) measures to mitigate the effects of ship strikes and entanglement on the population should be implemented as soon as possible.

In connection with (1) the Scientific Committee recommended that the proposed workshop should occur during the intersessional period, provided that the Intersessional Steering Group believes that sufficient progress has been made in the development of a spatial and age-structured model and the necessary participants are available.

The high anthropogenic mortality in this population motivated (3) and (4). Between 1970 and May 1999, 45 right whale mortalities have been recorded. In connection with (4), attention was drawn to last year's report, in which the Scientific Committee had endorsed many recommendations arising from the Cape Town workshop concerning mitigation of anthropogenic impacts on North Atlantic right whales.

Relative to these recommendations, the status of management actions is as follows:

- (1) *Ship strike mortality*: dissemination/publication of information in Notice to Mariners, charts and brochures (done or in production), development of early warning system surveys (done in NE and SE USA, with effectiveness being evaluated), development of areas to be avoided and acoustic deterrents (in discussion), development of sonar detection of whales (research projects in progress), proposal of Mandatory Ship Reporting System (accepted by the International Maritime Organisation and to be implemented in July 1999), consideration of ship speed reductions (in discussion but legally very complex) or shifting of shipping lanes (probable in the Bay of Fundy, in discussion or in need of data elsewhere);
- (2) *Entanglement mortality*: research gear modifications (much progress, and likely to be technically feasible though politically difficult to implement), monitor entanglement rates (study complete, further monitoring

planned), continue/expand disentanglement programme (underway), consideration of gear closures (some seasonal closures mandated, others considered but unlikely soon); and

- (3) *Facilitation of research*: permit facilitation (done for biopsy of calves, still a major impediment to sample transfer through CITES), facilitation of necropsies for right whales (done), mitigation of potential harassment from whalewatching (in discussion), and establishment of protected areas (done in some areas, but associated regulations still in discussion).

It was noted that a moratorium on attachment of satellite tags to North Atlantic right whales was in effect, pending results of a study of long-term effects of tissue reaction to tag implantation. The Scientific Committee looks forward to receiving a report on this issue at its next meeting.

12.2.1.3 SOUTHERN HEMISPHERE HUMPBACK WHALES REVIEW INTERSESSIONAL PROGRESS

It had not been possible to make any progress with the modelling of the pre-exploitation sizes of southern humpback whales, as envisaged in last year's report. The Scientific Committee recommended that such an exercise should be attempted intersessionally and at its next meeting, particularly now that revised estimates of humpback whale abundance from the IDCR/SOWER cruise programme are available.

ESTABLISHMENT OF SOUTHERN HEMISPHERE DIRECTORY AND ANTARCTIC CATALOGUE

An interim report on the IWC research contract to set up an Antarctic humpback whale catalogue noted that the contract has recently been finalised and photographic collections are still being received. The Scientific Committee agreed that past researchers on IDCR/SOWER cruises should be approached to submit pictures from their private collections, using the IWC's Southern Hemisphere directory.

The Scientific Committee welcomed this progress and looked forward to receiving an annual update on the development of the catalogue. The question of access to the Antarctic catalogue was raised and the Scientific Committee agreed to a case-by-case approach. It also recommended funding of the maintenance of the Antarctic catalogue.

COMPARATIVE DATA FROM NORTHERN STOCKS ON RATES OF INCREASE

A report on the work done by an intersessional group showed that opinions had differed on the approach to be taken, recognising that differences in estimated population growth rates could arise from a number of methodological and biological factors. The group recommended the following approaches to future exploration of the problem:

- (1) senior authors should be asked to provide comments on possible biases in their methodology (several had responded to date);
- (2) analyses should be conducted to assess the impact of changing age structure on recovery rates, and to consider whether this is likely to be a factor in any of the populations concerned;
- (3) analyses of maximum theoretical rates of increase should be further investigated to provide realistic bounds with which to judge results from field studies;
- (4) papers giving apparently conflicting rates from the same population should be examined in the context of how differences in methods may affect results;
- (5) published data on differing age and sex structures of a population at different stages of the life cycle should be

examined, and simulations conducted to determine the impact of such differences on apparent rates of increase; and

- (6) a summary of published information relating to vital rates in each humpback whale population should be produced.

The East Australian population was one where (4) could be applied; shore-based censuses gave an increase rate for the period 1986-96 of 12.1% (95% CI 8.4-15.8%) whereas mark-recapture analyses gave an increase rate from 1988-1996 of 6.3% (95% CI 2-11%). After considerable discussion it was concluded that not only were the two rates of increase not significantly different, but it was highly likely they were measuring different components of the population (a core area and the migratory stream). Both studies indicated continued growth in the east Australian population.

Maximum possible increase rates had been calculated using a range of reasonable values for post-first-year annual survival rate, age at first parturition and annual pregnancy rate, and assuming an equal sex-ratio of calves and that first-year survival cannot exceed that of post-first-year survival. The results showed that population growth rates of 10% or more could be obtained if the average pregnancy rate was 0.5, survival rates were at least 0.96 and the age at first parturition eight years or less.

Independent estimates of age at maturation/first parturition or calving interval/pregnancy rate will assist greatly in deciding which population growth rates are more likely to occur than others.

The relative merits of various approaches for estimating the above parameters in the Southern Hemisphere were discussed. Without data on these parameters, further investigation of differences in rates of increase between southern and northern stocks is unlikely to be productive. The Scientific Committee noted that different rates of increase should not be unexpected from populations with different catch histories and potentially different environmental conditions. It recommended completion of a tabular summary of published vital rates for different humpback populations, including data from the most recent periods of whaling. It also recommended incorporation of vital rates, where believed reliable, into a framework for maximum possible increase rates.

Estimates of abundance of humpback whales from the IWC/IDCR-SOWER surveys using the same approach as for blue whales were considered. Because of large sample sizes, mean school sizes and effective search half-widths were estimated separately for each circumpolar set of surveys. The consequent estimates of abundance for the first, second and third sets of cruises, corresponding to different extents of partial coverage of the area south of 60°S (as detailed above for blue whales), were 7,400 (CV 0.38), 10,000 (CV 0.27) and 9,300 (CV 0.23). Extrapolating to the complete area south of 60°S by the same coarse method as used for blue whales yields values for this total area of 11,400, 12,400 and 14,200 respectively, reflecting a non-significant annual increase rate of about 2%.

Some concern was expressed over the method of extrapolation used to make the third circumpolar set comparable with the first two. The missing sectors included the whole of Area IV, which in the second circumpolar set had contained the biggest population of all the areas and was known to be increasing. Hence a simple extrapolation from the ratio of unsurveyed to surveyed areas might have

underestimated the contribution of Area IV to the total. In addition, it was preferable to standardise on common northern boundaries, as proposed for the equivalent blue whale estimates. However, unlike the situation for Antarctic blue whales, there was likely to be a substantial proportion of the humpback whale population north of 60°S in mid-summer, suggesting the need for extrapolation further north, perhaps using JSV data.

The Scientific Committee considered that the present situation, in which the Commission had no agreed estimate, was inappropriate given the amount of information that was available. The Scientific Committee agreed that the unextrapolated estimate of 10,000 (CV 0.27; 95%CI, 5,900-16,800) from the second circumpolar series represents the best estimate of humpback whale abundance south of 60°S in summer for 1988, the median year of the set of surveys. Southern Hemisphere humpback abundance will be considered again next year as part of the scheduled preliminary assessment.

With respect to increase rate, the Scientific Committee agreed that the surveys on the west and east coasts of Australia had shown that those populations are increasing as follows: East Australia, 1981-96, 12.3% (10.1-14.4%), 1984-92, 11.7% (9.6-13.8%); West Australia, 1977-91, 10.9% ($\pm 3.0\%$).

Not directly related to this agenda item, the Scientific Committee noted newly discovered recoveries of Soviet (VNIRO) marks from the *Sovietskaya Ukraina* between 1959 and 1972.

The Scientific Committee recommended, in order to facilitate the Comprehensive Assessment of southern humpback whales, that surveys aimed at establishing population size and stock identity for Southern Hemisphere humpback whales should be encouraged wherever possible, especially in areas where there is currently little published information.

12.2.1.4 OTHER STOCKS

NORTH ATLANTIC HUMPBACK WHALES

The question of timing of an in-depth assessment of North Atlantic humpback whales was discussed. Last year the Scientific Committee had recommended that this occur in the year 2000. However uncertainties surrounding the population identity and status of humpback whales in the eastern Caribbean remain, and two pertinent studies were proposed: a review of whaling logbooks to identify historical whaling grounds in the region (this is underway); and a multinational sighting and acoustic survey in the southeastern Caribbean. There are plans for such a survey to take place from January to April 2000. The location of the year 2000 meeting makes it more difficult for scientists from North Atlantic countries to attend. The Scientific Committee therefore agreed that the assessment be postponed to the 2001 meeting.

Last year, the Scientific Committee had recommended that the possibility of collaborative research on humpback whales in the southeastern Caribbean be explored with national authorities in the area and that the use of combined acoustic and visual methods be investigated to facilitate the collection of abundance and individual identification data. In response, some US scientists developed a research proposal modelled on the IWC's successful IDCR/SOWER surveys. The USA has offered to provide a research vessel that would support up to 15 visiting scientists from participating nations for a survey lasting up to 60 days each year. The proposal was presented to the Inter-Governmental Oceanographic

Commission's (IOC) IOCARIBE, an inter-governmental organisation responsible for coordinating scientific research on marine issues in the Caribbean. IOCARIBE endorsed the proposed research program at its 6th Inter-Governmental Session held 25-29 April 1999 in Costa Rica. Recognising the IWC's competence and expertise, IOCARIBE has written to the Committee asking it to review and provide comment on the proposed research.

The primary objectives of the proposed programme are to (1) obtain information on the current distribution of humpback whales in the southeastern Caribbean, and (2) establish their relationship to the humpback whales in the rest of the North Atlantic. The Scientific Committee recognises the value of the proposed programme and requested that the Commission encourages the relevant nations to consider participation in the research. Results from such a programme will be of great value to the assessment in 2001. The USA has offered to host, on behalf of IOCARIBE, a research planning meeting for participating nations during the 1999 summer to develop the cruise plan and survey design. It is hoped that the first survey would be planned for the months of January to April 2000, with results available to the IWC Scientific Committee at its meeting in 2001. The results of this first survey would be used to plan subsequent surveys with the results reported each following year.

The Scientific Committee recognised the potential importance of the proposed survey for establishing the current status of humpback whales in the eastern Caribbean. It recommended that a detailed research plan and protocol be worked out before and during the proposed 1999 planning meeting and offered its support in this process. In order to facilitate matters, an Intersessional Working Group was established and the Scientific Committee thanked IOCARIBE for drawing this matter to its attention.

NORTH PACIFIC RIGHT WHALES

A progress report on eastern North Pacific right whale research was also discussed. The current catalogue at the Southwest Fisheries Science Center for the eastern North Pacific contained photographs from at least 14 right whale sightings, where a minimum of 17 whales were seen. So far there had been no matches, but only 7 to 10 individuals are readily identifiable by their callosity patterns. The Scientific Committee believed that the situation of eastern North Pacific right whales was as bad if not worse than in the western North Atlantic. Numbers were of the order of tens of individuals, with only one sighting of a possible juvenile in the 20th century. It strongly recommended that research into the status of eastern North Pacific right whales be continued and intensified, specifically that:

- (1) surveys to establish the summer distribution and feeding grounds be continued;
- (2) photo-identification and photogrammetry effort be combined with attempts to obtain photographs suitable for examination of evidence of entanglement and ship strikes; and
- (3) genetic sampling of individuals be continued and the use of genotypic mark/recapture methods for population estimation be investigated.

EASTERN NORTH ATLANTIC RIGHT WHALES

The Scientific Committee also drew attention to the situation of right whales in the eastern North Atlantic, where the occasional sighting was still being recorded, suggesting that

there might still be a remnant population. Survey efforts by European members of the Scientific Committee was encouraged.

SOUTHERN HEMISPHERE MINKE WHALES

VPA analyses, based on commercial and JARPA catch-at-age data and abundance estimates from sighting surveys, had indicated an increasing trend in recruitment of minke whales in Area IV prior to exploitation. The Scientific Committee agreed that the papers received dealing with the various aspects of selectivity and segregation show that parameters potentially important for management (natural mortality, trends in recruitment) can be estimated from age data obtained from the catch. However, some work remains to be done. A fully agreed approach for computing abundance estimates used in the VPA analyses from the JARPA data is not yet available.

The Scientific Committee considered work undertaken to understand and correct the apparent negative bias in abundance estimates obtained from JARPA survey data due to the non-random location of effort. It strongly encouraged further work on the GAM-based estimator, including the development of a standard method to determine the degrees of freedom and investigation of whether bias in trend estimates can result from changes over time in the type of clustering. It was agreed that the approach offered a way to correct bias in IDCR/SOWER estimates from closing mode data as well as JARPA estimates; the sighting and sampling survey mode is an extreme form of closing mode. The ability to incorporate environmental and other covariates also broadens the applicability of the approach.

A microsatellite analysis to investigate stock structure in the Antarctic minke whale was presented. JARPA samples from Area III, IV, V and VI were examined. Allele frequencies of five microsatellite loci were similar among areas.

BAFFIN BAY, DAVIS STRAIT AND HUDSON BAY STOCKS OF BOWHEAD WHALES

Historically, bowhead whales were abundant in the Baffin Bay-Davis Strait area, but the current population is believed to be in the low hundreds.

No new information was available on the Hudson Bay stock. The Scientific Committee noted that both of these stocks are endangered and have small populations. There is no new information from last year except that a bowhead whale was taken at Pangmirtung, eastern Baffin Island, in the summer of 1998. Accordingly, the Scientific Committee reiterated last year's advice i.e.

Given the apparent interest in continuing harvests from these two stocks (Baffin Bay-Davis Strait and Hudson Bay) that were depleted by commercial whaling, additional knowledge of their status is crucially needed.

The Scientific Committee also noted an urgent need to resolve the question of stock identity of these two stocks using genetic samples and any other data.

OKHOTSK SEA BOWHEAD WHALES

Information on Okhotsk Sea bowheads was available in a recent English translation of a Russian paper, which supports the opinion that bowheads are isolated in the Okhotsk Sea. Soviet scientists first rediscovered bowheads there in 1967. A bowhead whale was retrieved dead in September 1995 in a Japanese-type crab trap from a depth of 230-250m in the north central Okhotsk Sea.

The Scientific Committee recommended that the joint Russian-American research be continued on Okhotsk Sea bowheads. It also recommended that in addition to bowhead whale sightings being recorded, time is allocated for the collection of biopsy samples.

No information was available on other bowhead stocks, but Norwegian researchers have repeated observations of small numbers of bowheads, including calves, around Franz Josef Land and western Spitsbergen. These observations show that bowheads are still extant in these regions.

WESTERN NORTH PACIFIC STOCK OF GRAY WHALES

A number of papers on western (or Asian) gray whales were discussed. The history of exploitation was reviewed. The last commercial catches were made off Korea in 1966. In 1995, a joint American-Russian project was started on western gray whales in their summer feeding grounds off Sakhalin Island. In May 1996 one gray whale was killed off the western coast of Hokkaido, Japan. Results from a recent review to consider the status of western gray whales, human-related threats to the population, and research and monitoring were also reported. The Scientific Committee endorsed and encouraged this joint research. It recalled it had already identified this population as one of the most endangered baleen whale populations in the world. It again recommended that a long-term research, monitoring and management programme be continued and expanded for these whales and their habitat. The Scientific Committee strongly requested that the Commission urges the relevant authorities to develop and implement a comprehensive, long-term conservation and monitoring programme.

12.2.2 Action arising

12.2.2.1 NORTH ATLANTIC HUMPBACK WHALES

The Commission endorsed the report and recommendations from the Scientific Committee, but there was wider discussion of the following matters. Antigua and Barbuda pointed out to the Commission that research in EEZs needs much regulation and discussion beforehand. Coastal states have overall rights, and it reserved its rights concerning the proposed Caribbean humpback research until more information is made available. It urged deeper consultation. Dominica shared these concerns.

The USA responded that it had made a good faith effort through IOCARIBE in this regard and had offered to host the planning meeting.

Japan hoped that research will be carried out for proper management and thought that the Caribbean nations should carry out their own research plans which it would support.

St Lucia drew attention to the implications of conducting research in territorial seas. This proposal had been taken to IOCARIBE even when reservations had been expressed, and it suggested such nations should sign the Law of the Sea Convention. St Vincent and The Grenadines supported the comments of its Eastern Caribbean colleagues, as did Grenada, which reserved the right to determine research proposals in its EEZ and territorial sea.

Antigua and Barbuda noted that assistance had been offered and it suggested that IOCARIBE should be asked to delay until the Japanese offer was clear. St Vincent and The Grenadines pointed out that DNA samples had been taken.

The USA countered the impression that it had done something wrong. It was concerned to ensure that whoever did the work had obtained the appropriate permits and offered a vessel to further the goals, but this had not been accepted in the spirit offered.

The Netherlands emphasised the importance of encouraging nations to get on with the work, and the discussion on this matter concluded with acceptance of this part of the Scientific Committee's report, subject to the comments and reservations expressed. Japan later intimated that it would assist with abundance estimates by non-lethal methods.

12.2.2.2 BAIRD'S BEAKED WHALE

The UK asked about abundance estimates of Baird's beaked whale, since Japan has increased its quota and the stock was last assessed in 1990. The Chairman of the Scientific Committee indicated that there were no plans to look at this stock. It is a small cetacean and it would be considered if information was provided.

Japan stated its belief that Baird's beaked whale is outside IWC competence, and since it is within its coastal waters, the Government of Japan is responsible for management. The UK responded that it is included in the Interpretation section of the Schedule, but Japan retorted that the name does not appear in the Annex of Nomenclature to the Convention. It is carrying out sightings surveys and IWC intervention is inappropriate.

12.2.2.3 NORWEGIAN WHALING

The UK then referred to the Resolution adopted last year on Norwegian whaling. This called on Norway to reconsider its objection and halt catching. The UK regretted that this had not been heeded, rather the quota had been increased, which was contrary to the spirit if not the letter of the resolution.

Norway spoke of its legal and sovereign rights. It sets the quota using the RMP, which would be the same if the IWC set the limit.

Australia, Austria, Brazil, Chile, France, Finland, Germany, Italy, Mexico, Monaco, New Zealand, Oman, South Africa, Spain, Sweden and the USA all associated themselves with the UK statement.

Japan considered the statement made by the UK inappropriate and asked for it to be withdrawn. Norwegian whaling is legitimate and in conformity with the Scientific Committee procedures. The Convention is a contract or rule-book and any country breaking the rules should leave. Both Norway and Japan are conforming to the rule-book.

Denmark opposed the statement by the UK on the resolution, and was joined by Antigua and Barbuda, Dominica, Grenada, Japan, St Kitts and Nevis, St Lucia, St Vincent and The Grenadines, Solomon Islands and the Russian Federation. Argentina also did not associate with the UK, although it had voted for the resolution last year.

13. REVISED MANAGEMENT SCHEME

13.1 Report of the Working Group on the Revised Management Scheme (RMS)

The Working Group, comprising delegates from 25 Contracting Governments, met under the Chairmanship of Mr. Fer von der Assen (Netherlands). Its terms of reference were to complete work on:

- (1) an effective inspection and observation scheme;
- (2) arrangements to ensure that total catches over time are within the limits set under the RMS; and
- (3) incorporation into the Schedule of the specification of the Revised Management Procedure (RMP) and all other elements of the RMS.

13.1.1 Inspection and observation schemes

The Chairman of the Working Group recalled that at the end of the 1998 meeting Japan had offered to revise Chapter V of the Schedule: Inspection and Observation Scheme. He invited Japan to introduce its paper.

Japan explained that it had prepared the revised draft which reflected amendments to the main outstanding issues (inspection, observation, supervision and control). However, as adoption would require changes to other chapters these had also been incorporated in the revised draft Schedule. One major consequential amendment would be the deletion of paragraph 10(e) in Chapter III.

Japan said that most of the revisions centered around discussions at the last meeting, for instance in relation to the activities of inspectors and observers, and that it had tried to separate and distinguish between pelagic and coastal whaling. Some additional and specific modifications had been included in response to previous discussions on issues such as status of observers, costs and the question of waivers.

The USA, UK and New Zealand congratulated Japan on its hard work in compiling the document but pointed out that they had some difficulty with the process; in particular, as the revised text had only been circulated the previous evening there had been insufficient time to consider it and to consult respective national governments. Therefore, while agreeing to discuss the text and primarily Chapter V, they emphasised that lack of comment should not be considered as acceptance and reserved the right to submit comments in writing.

Subsequently, a number of possible options were proposed for taking work forward:

- (1) to adjourn the Working Group and resume later during the course of the Annual Meeting; or, if this was not possible;
- (2) to hold an intersessional meeting; and
- (3) to convene an extended RMS Working Group at the next Annual Meeting in Australia.

Following discussion on how to consider the revised text it was agreed that the Working Group should quickly go through the document, and Chapter V in particular, to determine whether it would be possible to agree any points at this stage and to identify outstanding issues or areas of disagreement which would need to be addressed at a further meeting. It was agreed that the next revision document should include options (clearly marked in square brackets) in areas of disagreement.

13.1.1.1 INTERNATIONAL OBSERVERS' RIGHTS

The Working Group went on to consider the individual paragraphs set out in Chapter V in some detail. This included the results of the investigations the Secretary had undertaken following the last meeting to determine observers' rights under other international fisheries agreements. CCAMLR operated various bilateral arrangements and designated observers remained subject to the jurisdiction of the Contracting Party of which they are nationals. IATTC maintained a pool of technicians who were not required to sign any waiver. Discussions with the International Labour Organisation (ILO) had indicated that IWC observers would not be protected by any ILO Conventions and it seemed fair and proper for the IWC and/or national governments to provide adequate insurance.

The Chairman summarised discussion by saying that the Working Group had gone through the text of the revised Chapter V and taken note of remarks and questions. The proposal made earlier was that delegations should have the opportunity to send written comments to the Chairman who would revise the text on the basis of all the comments received. He would then consult with those with a particular interest in this matter and circulate a revised draft, with alternative options set out in square brackets, before the next meeting. The Chairman noted that the Working Group could not carry forward the incorporation of the RMP and other elements of the RMS into the Schedule at this stage.

It was agreed that the Working Group should recommend to Plenary that the next meeting to discuss the RMS should take place immediately before the next annual meeting in Australia.

13.1.2 Total catches over time

In Resolution 1998-2 the Commission had agreed that catch limits for commercial purposes for any species of whale in any region should be calculated by deducting all human-induced mortalities that were known or could be reasonably estimated, other than commercial catches, from the total allowable removal and had asked the Scientific Committee to provide advice on this for consideration for inclusion in the RMS.

The Scientific Committee took Resolution 1998-2 into account when setting up the *Implementation Simulation Trials* for North Pacific minke whales. However, it seemed that there had been some misunderstanding of the Commission's request as set out in Resolution 1998-2 and the Scientific Committee would try to provide suitable wording for consideration by the Commission for inclusion in the RMS in time for next year's meeting. It was agreed that the Scientific Committee should take this forward.

13.1.3 Other matters

The Chairman of the Scientific Committee reported on progress under the agenda item 'Completion of *CLA* programme and tuning'. The Norwegian Computer Centre had been approached about completing the work needed to meet the most important requirements of re-coding the *CLA* program. Once testing was successfully completed the Secretariat would use the program to determine a more accurate value for the tuning parameter. Results would be reported to the next meeting of the Scientific Committee.

The Chairman of the Scientific Committee then drew attention to the fact that the Committee had also addressed a number of items that did not require the immediate attention of the Commission and was continuing work related to:

- (1) additional variance;
- (2) general work on abundance estimation, including methods to estimate abundance from multi-year surveys; and the IWC-DESS database and estimation system; and
- (3) uncertainty in future catches.

In relation to the latter, the Working Group endorsed the recommendation that in cases where there is uncertainty about future catches, the effects should be investigated through case-specific *Implementation Simulation Trials*.

Turning to survey data, the Chairman of the Scientific Committee noted that the Secretariat had received Icelandic sighting data but that there had been insufficient time to develop guidelines on the use of survey data from non-member nations. The Scientific Committee would endeavour to do so for the next meeting.

13.1.4 Schedule amendments

No Schedule amendments were proposed.

13.2 Action arising

13.2.1 Recommendations from the Working Group

It was agreed that member governments should provide written comments to the Chairman of the Working Group on the draft text and that a further revised text would be circulated prior to the next Annual Meeting for discussion in an extended RMS Working Group.

In the Technical Committee, Spain suggested comparison with the schemes of similar organisations, and the inclusion of control and inspection of market products.

Japan introduced a further revised draft to incorporate the points raised in the Working Group in order to finalise the text quickly and so allow a resumption of whaling.

Many delegations thanked and commended Japan for its considerable effort in undertaking this work. However, a number, including New Zealand, UK, USA, Spain and Switzerland were simply not in a position to accept or reject anything at such short notice.

A number of delegations, including Antigua and Barbuda, St Lucia, St Vincent and The Grenadines and the Solomon Islands, agreed with Japan that decisions should be made now on the text, which included alternative language options. Discussion had been going on every year since 1993 with no decisions, and there should be no more delay.

The Chairman of the Technical Committee concluded the discussion by recommending that the Commission should proceed as the Working Group had suggested. The Chairman of the Working Group indicated he would ask for detailed comments on the latest text by mid-October, from which he would prepare a revised draft to be circulated by the Secretariat. This process would finish by February 2000, in good time before the discussion at the 52nd Annual Meeting in Australia.

Japan stated that this proposal was not acceptable because it does not make sense to decide the future procedures without trying to make good faith efforts to finalise the draft at this meeting.

In the Commission Japan pointed out that the Working Group had met six days earlier, the Technical Committee the day before, and still the USA could not comment, and it reaffirmed its wish to complete Chapter V. The Chairman recalled that a number of governments had indicated that they needed more time.

The UK commented that it had consistently participated in discussions in a constructive way and had sent its detailed comments to the Chairman of the Working Group last year. The new Japanese draft had not been available well in advance and it was not reasonable to provide detailed comments without time to examine the text. Some key elements are not covered, such as spot checks on whale products. The Working Group had proposed a practical way forward, any text for a Schedule amendment had to be distributed 60 days in advance, and the UK was tired of the games being played.

Japan responded by requesting that any missing text should be forwarded.

The USA was in complete agreement with the UK, and it noted that the International Dolphin Conservation Programme Agreement had negotiating texts prepared in advance while here the text arrived the evening before the meeting.

The Chairman confirmed that the recommendations from the Working Group were adopted, and there would be a 2-3

day meeting before the 52nd Annual Meeting, the Advisory Committee to finalise details.

Japan concluded by wishing for a deadline for finalisation, remarking that paragraph 10(e) of the Schedule was meant to be reviewed by 1990 at the latest, and next year will be 2000.

14. SCIENTIFIC PERMITS

14.1 Report of the Scientific Committee

14.1.1 Southern Hemisphere minke whales

14.1.1.1 EXISTING PERMITS

In 1998, the Committee had undertaken a detailed review of the JARPA programme and had identified a number of areas for future work. Most progress had been made on items which relate to the stock identity issue, although work on the other tasks continued.

The research activities of the 1998/99 JARPA cruise had to be modified due to a fire on board the research mother ship *Nisshin Maru* on 19 November 1998 during transit to the Antarctic. The vessel returned to Japan on 20 December 1998, and departed again on 5 January 1999 for the Antarctic; this resulted in a seven week delay to the original schedule and other adjustments to the programme.

Minke whales predominated throughout the research period. Compared to previous cruises in this region, more minke whales and fewer fin, sperm and southern bottlenose whales were seen.

There was some discussion on the likely influence of the change from the original plan on the results, for example in the proportions of males to females and the various reproductive classes. At present it is not possible to distinguish between two hypotheses proposed, but work is continuing.

Commenting on the lack of success of the satellite tagging experiment, the Scientific Committee suggested that the organisers consult with a number of US researchers who had now developed a reasonably reliable system for at least the larger orquals. It emphasised the contribution that satellite telemetry could make to determining important breeding areas.

14.1.1.2 NEW OR REVISED PROPOSALS

The JARPA survey plans for the 1999/2000 season were reviewed. This is a continuation of the programme that has been extensively discussed previously by the Scientific Committee. This is the 11th full-scale survey of a 16 year research programme, and the objectives, survey items and methods are the same as in previous years. The survey will cover Area IV and the eastern half of Area III to focus on the issue of stock distribution within the framework of the objectives of the programme.

14.1.2 North Pacific

14.1.2.1 EXISTING PERMITS

The 1998 JARPN survey took place in the eastern part of sub-area 7 and sub-area 8 from 26 April to 21 June 1998. The survey also covered the early period of migration as had that in 1997, in response to the comments made by the working group on North Pacific minke whale trials in 1996.

The Scientific Committee noted that several documents relating to the JARPN programme were presented to the meeting and were discussed in the relevant sub-committees.

14.1.2.2 NEW OR REVISED PROPOSALS

The Scientific Committee first received a proposal for a special permit for minke whales in 1994 when it undertook a detailed review. Subsequent discussions for future years largely referred to the comments in the 1994 review. After some general discussion last year, the Scientific Committee was informed that more detailed information would be presented.

This year, after reviewing briefly progress to date, two options for the 1999 JARPN survey were proposed. The first was for the survey to occur in sub-area 7W and 11 from June-August with 50 individuals in each area. The second was for the survey to occur in sub-areas 7 in June, 11 in July and 12 in August with 25 whales being taken in each of sub-areas 7 and 11 and 50 individuals in sub-area 12.

In discussion, a number of concerns were raised. These included the fact that the focus of the research whaling plans described by Japan for 1999 is in areas (sub-areas 7, 11,12) where minke whales from the so-called 'J' stock (primarily occurring in the Sea of Japan and Yellow Sea) mix with animals from the genetically distinct 'O' stock, occurring in the Pacific side of Japan. The specific objectives of this year's research includes estimating mixing rates of J stock animals with O stock animals in these sub-areas. The principal objectives of JARPN is determining the mixing rate between the O stock and the putative W stock further to the east, not between the O and J stock. Further, such information is not needed to improve the already specified *Implementation Simulation Trials*.

Another concern raised was the prospect that it was expected that the programme would take three to five J stock animals; given the uncertain status of the J stock due to the continuing incidental takes and historical over-exploitation, these removals have the potential for an adverse effect on this stock; given the uncertainties involved, conducting this research, especially in sub-areas 7 and 11, is not consistent with the precautionary principle.

Concern was also expressed that to address mixing rates, greater statistical power is required than the proposed catches would allow. It was suggested that this could be remedied by using non-lethal biopsy sampling. The potential for this methodology for minke whales has improved in recent years and the Scientific Committee has recommended feasibility testing in Greenland waters.

A number of points were raised in response to these concerns. One was that the precautionary arguments raised above must be weighed against the important information that a sample in sub-areas 11 and 7 will produce. With respect to adverse effects on the J stock, the mixing rates data available to try to estimate expected numbers of J stock animals were obtained in the time of commercial whaling. The present mixing rate of J stock animals will be much smaller. Even so, the expected catch of J stock whales is negligible compared with the annual bycatch by the Republic of Korea and Japan.

After this full discussion, a majority of the Scientific Committee was unable to respond positively to a request for the Committee to ask the Commission to urge the Russian Federation to allow access to the JARPN vessels to sample minke whales in sub-area 12.

14.1.2.3 JARPN REVIEW

Last year, the Scientific Committee agreed that a comprehensive review of JARPN should be planned for the year 2000.

An *ad hoc* group was convened to examine this further. The proposal for this review was patterned on the review of the Japanese Southern Hemisphere research programme. However, one difference was that the previous review was a mid-point review, while this is a review at the end of the planned research period.

The Scientific Committee agreed the following terms of reference for the review meeting:

- (1) Review methods and results of the research programme, 1994-1999.
- (2) Assess further potential of existing data for:
 - (a) meeting JARPN objectives;
 - (b) other objectives.
- (3) Evaluate whether the main objectives have been achieved.

The main objectives of JARPN were (1) to determine whether or not the W stock exists, and if so to estimate mixing rates between the O and W stocks, and (2) to determine the feeding ecology of minke whales in the North Pacific.

It is expected that the report of the results of this review will inform the Scientific Committee relative to the plausibility of options being considered in the *Implementation Simulation Trials* of the RMP when those results are considered during the next Annual Meeting.

The Scientific Committee recommended that the review meeting planned should be adopted and it established an Intersessional Steering Group.

In the Commission, Japan clarified that when the Scientific Committee is satisfied that the objectives of the research have been achieved, leading to the setting of catch limits, it will end its programme. The USA responded that there are many steps before catch limits can be set, including establishing an inspection and observation scheme.

14.2 Review of ethical considerations

Last year the Commission adopted IWC Resolution 1998-4 which *inter alia* requested that the Secretariat undertake for the next Annual Meeting a comprehensive review of the ethical considerations taken into account by other international scientific organisations with respect to scientific research.

The Secretary therefore wrote to a number of international scientific organisations to seek information on this topic.

The general conclusion drawn was that the broad sense of the legislation, guidelines and codes of conduct which exist emphasises causing the minimum of stress and distress, suffering and pain, and at the same time considering if the research results can be achieved using fewer animals or by other (non-lethal) means.

New Zealand commented on the creative analysis made by the Secretary, and particularly noted one comment from the Council for International Organisations of Medical Sciences which stated that 'scientists should not lose sight of their moral obligations to have a humane regard for their subjects.'

The UK also congratulated the Secretary, and went on to comment on its domestic legislation which includes an internal ethical review process.

The Chairman remarked that the Commission noted the paper.

14.3 Action arising

A resolution on special permits for scientific research was introduced by New Zealand on behalf of the co-sponsors Austria, Brazil, France, Italy, Germany, Monaco,

Netherlands, Oman, South Africa, Switzerland, UK and the USA. This requested the Scientific Committee to ask two questions when it considers such programmes: is the information sought required for management purposes, and could it be obtained by non-lethal means? New Zealand confirmed that these questions are in addition to the other guidelines already in place.

Japan commented that certain information can only be obtained by lethal methods and using only non-lethal means could be limiting for studies such as those on age, growth and pregnancy. Pollution studies also need a lethal approach as well as stock management. It appealed for an accurate judgement.

Monaco responded that Japan implied that the lethal take is done for science, but there is no justification for catches on this scale. It called for an intersessional workshop on non-lethal methods of study, recalling the EC directive for alternative techniques.

Norway pointed out that any party to the Convention has a right to issue scientific permits, and supported the Japanese views. Dominica asked if countries will abide by the advice obtained.

The resolution shown in Appendix 3 was then adopted by a majority, noting the views expressed.

A second resolution on whaling under special permit was then introduced by Australia on behalf of Austria, Brazil, France, Germany, Monaco, Netherlands, New Zealand, South Africa, UK and the USA. This requested the Government of Japan to refrain from issuing any scientific permits for the take of minke whales in the Southern Ocean Sanctuary and the North Pacific in the 1999/2000 seasons. Australia endorsed the development of non-lethal techniques and noted the conclusion of the Secretary's review of ethical considerations with respect to scientific research.

New Zealand recalled that some 4,000 whales had been killed in the Southern Ocean Sanctuary since 1994 and the meat was sold in the markets. Such a high level of sampling was not acceptable, although it acknowledged the treaty rights of Japan. It thought there was a lack of scientific papers resulting and pointed to the success of the Larsen gun for biopsy sampling. The only motive for such research must be if it is vital for management.

France agreed with the statements by Australia and New Zealand.

Sweden also expressed its concern over the scientific permit programme since the moratorium, and supported a phase out as suggested in the Irish proposal.

Japan felt that it must rebut these comments. It spoke of the ethical aspects and Japanese culture, in which whales are killed with care and the treasure of life is recalled before a meal. Over 150 papers had been published from the programmes, and Japan mentioned the quantity and quality of the information supplied to the IWC. This would lead to improvement of management as discussed in the JARPA review, and it would continue its research under its sovereign rights of Article VIII.

Norway agreed that the JARPA review two years ago by the Scientific Committee had found useful results, pointed out the value of age data for management, and so could not support the resolution.

The Republic of Korea spoke of the relationship between whales and fisheries, and encouraged a limited number of samples.

Dominica wanted to ask the Scientific Committee on the use of special permits for managing stocks, and thought the questions asked had been answered already. It concurred with Norway in placing emphasis on the good results

obtained, the rights in Article VIII, and the possible stress imposed by satellite tagging. It would not support the resolution.

Monaco said that Japan's whaling was contrary to the spirit and intention of the Convention in design and scale. It urged all Contracting Governments to refrain from invoking Article VIII unless approved by the Scientific Committee and the Commission. Japan responded that it is exercising its legitimate right and requested Monaco to withdraw from the Convention.

The resolution given in Appendix 4 was then adopted, with 20 votes in support, 10 against and 4 abstentions.

15. ENVIRONMENTAL CONCERNS

15.1 Report of the Scientific Committee

15.1.1 *Pollution programme*

A Planning Workshop was held in Barcelona, Spain, in March 1999 as a direct result of an outline research proposal which had been agreed by the Scientific Committee and the Commission in 1997. Subsequently, the proposal was strongly endorsed by ASCOBANS and the ICES Working Group on Marine Mammal Habitats. The Workshop strongly believed that this project represents fundamental research necessary if the effects of pollutants and contaminants on cetaceans are to be determined. In addition to central IWC funding it therefore urged IWC member governments to consider providing support to this project at the national level.

The Barcelona Workshop addressed the request of the Commission, its Scientific Committee and the SWG on Environmental Concerns (SWGEC) to develop further the research proposal on cetaceans and pollutants, hereafter called POLLUTION 2000+. The starting point for the Workshop was established by the SWGEC, the Scientific Committee and the Commission in which the measured variables-pollutants and biomarkers (indicators of exposure and/or effects) and the target species had been identified and agreed upon.

PCBs were chosen as model compounds because of their overwhelming anthropogenic origin, very high concentrations in some cetacean populations, recognised effects upon wildlife and the substantial background information already available on patterns in variation, geographical distribution, tissue kinetics and mechanisms of action.

The programme will focus on harbour porpoises and bottlenose dolphins. Last year the Scientific Committee stressed that the programme was intended to address specifically the main recommendation of the IWC Pollution Workshop. Researchers are encouraged to address the other recommendations of that Workshop and consider other species and sources of samples. The priorities of POLLUTION 2000+ do not imply that other approaches are untenable but rather that it is important for the IWC to focus its effort on particularly important questions that would have wide ranging benefits to studies of cause-effect relationships in cetaceans. The programme is intended to produce a model for studies of other contaminants in other species and areas, by bringing together biologists, toxicologists, pathologists, toxico-pathologists and others in a multidisciplinary collaborative programme.

The following short-term objectives are identified for POLLUTION 2000+:

- (1) To select and examine a number of biomarkers of exposure to and/or effect of PCBs and try to determine

whether a predictive and quantitative relationship with PCB levels in certain tissues exists.

- (2) To validate/calibrate sampling and analytical techniques to address such questions for cetaceans, specifically:

- (a) determination of changes in concentrations of variables with post-mortem times;
- (b) examination of relationships between concentrations of variables obtained from biopsy sampling with those of concentrations in other tissues that can only be obtained from fresh carcasses.

Given these objectives and the levels of resources and effort necessary to examine them, the Scientific Committee agreed that the work should be divided into two phases – information from Phase 1 is important in providing the calibration/validation tools necessary to better focus and design Phase 2. Data from Phase 1 will provide information not only essential for completing Phase 2 of POLLUTION 2000+ but also of fundamental importance to many research programmes examining issues of chemical pollutants and cetaceans. Phase 1 concentrates largely on Objective (2) above and comprises two sub-projects: (a) effect of post-mortem time; and (b) relationship between information obtained from biopsy samples with that obtained from live-captured animals or carcasses (either from bycaught or freshly stranded animals).

Highest priority is to be accorded to sub-project (a) which includes the field research component as well as analyses of the bottlenose dolphin sub-project in the Sarasota Bay, and the field research component of the bottlenose dolphin sub-project in Mauritania, Bahamas and the Mediterranean but that only the PCB analyses are being undertaken as part of Phase 1.

Phase 1 data will be analysed initially in a specialist workshop, before embarking on Phase 2. This will result in a revised programme to be presented to the Scientific Committee and the Commission.

The Scientific Committee endorsed and strongly recommended approval of POLLUTION 2000+, and encouraged the Commission to fund what it can of the costs, and work with national governments and other organisations to secure the rest of the funds.

The Scientific Committee also considered a number of papers including general overviews of environmental concerns for cetaceans and specific information on pollutant levels in a variety of species and areas.

15.1.2 *Antarctic SOWER 2000 programme*

A Workshop was held in March 1999 in Edinburgh, UK, to develop proposals for the IWC component of collaborative work in the Antarctic between the IWC, CCAMLR and SO-GLOBEC, to address the aims of the SOWER 2000 research programme.

A specific objective of the SOWER 2000 programme is to 'relate distribution, abundance and biomass of baleen whale species to the same for krill in a large area in a single season'. Conducting sighting surveys from the CCAMLR vessels in 2000, and from SO-GLOBEC vessels in 2000/01 will help achieve this objective. While details of the data collection methods will need to be finalised at a future planning meeting, the Workshop recommended the framework of a broad design to accomplish this.

The Workshop anticipated that two dedicated vessels will be available. The Scientific Committee agreed that the change of location for the 2001 collaboration with

SO-GLOBEC from the Antarctic Peninsula to the vicinity of 70°E is acceptable, and will still allow the programme to achieve its objectives.

The Scientific Committee drew the attention of the Commission to the proposal to attach remote sensing devices (including satellite tags) to minke whales as part of this collaborative research. For some member governments, participation of their scientists will/may require the issue of permits under relevant domestic legislation. Detailed descriptions of the remote sensing devices to be used will be required in sufficient time to allow the permit processes to be followed.

The studies proposed for SOWER 2000 in collaboration with SO-GLOBEC and CCAMLR will greatly improve our understanding of many aspects of Antarctic whale ecology. However, they are only a first step towards addressing questions about the present or future dynamics of Antarctic whales necessary to meet the long-term objectives of the SOWER 2000 programme. To make further progress, a variety of practical and theoretical problems must be addressed.

The Workshop strongly recommended continued close collaboration between both the IWC and SO-GLOBEC, and the IWC and CCAMLR in the long term. Given the importance of continuing IWC involvement in CCAMLR and SO-GLOBEC planning, modelling and analysis activities, and the further work necessary to finalise the practical details for the SOWER 2000 programme, the Workshop recommended that the Scientific Committee should establish a Steering Group to coordinate the planning exercise.

In summary, the Scientific Committee strongly recommended endorsement and funding of the SOWER 2000 proposal and established a Planning Steering Group.

Papers on habitat use patterns (other than SOWER 2000) and environmental research were also considered by the Scientific Committee, as well as visual and acoustic surveys conducted in the Southern Ocean Sanctuary.

15.1.3 Arctic matters

The Scientific Committee received two companion documents which together presented the basis for an Arctic Initiative that will address both climate change and pollutant concerns. These documents were prepared in response to requests by the Scientific Committee at the 1997 and 1998 annual meetings.

A better understanding of whale ecology and responses to climate change in the Arctic will require coordination among cetacean-focused and oceanographic-focused research programmes.

The Arctic Initiative will coordinate with and benefit from ongoing efforts that address this issue, of which the Arctic Environmental Protection Strategy (AEPS) Program and two groups within this organisation, the Arctic Monitoring and Assessment Program (AMAP) and the Conservation of Arctic Flora and Fauna (CAFF), are examples.

The Scientific Committee thanked the authors for the contributions made by these documents to advance planning for an Arctic Initiative, and fully supported the Initiative's further development. The Scientific Committee recommended continued development of the Arctic Initiative, and invited presentation of the revised framework at next year's meeting.

The Scientific Committee established an Intersessional Working Group, using the SOWER 2000 approach as a

template, to produce a draft Arctic Initiative proposal, provisionally named ARCTIC 2000, by next year's meeting.

15.1.4 Other Concerns

15.1.4.1 NOISE

The Scientific Committee considered potential impacts that intense sounds might have on cetaceans. The sub-committee on small cetaceans discussed the use of acoustic pingers to reduce entanglement of harbour porpoises in fishing gear at this year's meeting. Arising from that focus, there was discussion concerning the potential for unintended, negative effects of acoustic devices on cetaceans. These effects potentially work on two levels: overall sound pollution of the environment, and possible exclusion of cetaceans from important habitats.

As a result, the Scientific Committee expressed concern over potential adverse effects of anthropogenic noise on cetaceans. It recognised that this is a complex subject and that scientific study on this issue involves the integration of a broad range of disciplines including acoustics, audiology, physiology, behavioural ecology and population biology. The Scientific Committee further recognised that with our current limited knowledge of cetaceans, the risks associated with noise exposure cannot be easily quantified for most species.

The Scientific Committee discussed how it might become better informed on the subject of anthropogenic noise impacts on cetaceans without expending unnecessary amounts of time and energy. Over the past several years there have been a number of national and intersessional workshops and special meetings as well as several major research efforts on this subject. One important result of the workshops and research has been that some consensus has been reached on the most important concerns and the most critical research needs.

The Scientific Committee did not recommend convening an IWC workshop on this topic in the near future since it would not be an effective use of IWC resources.

15.1.4.2 OZONE DEPLETION AND UV-B

It has been shown that chemical processes that underlie ozone depletion in the Arctic are not the same as in the Antarctic. Even though CFC emissions are decreasing, it is expected that there will be continued loss of atmospheric ozone over the Arctic for at least 15 more years due to nitrification processes. In addition, certain other halons are increasing in the atmosphere and will also contribute to ozone depletion.

15.1.4.3 HABITAT DEGRADATION

Concern was expressed regarding possible habitat degradation for gray whales if a proposed salt works is constructed at San Ignacio Lagoon located in the Baja California peninsula in the Mexican state of Baja California Sur, one of the three main breeding grounds for the eastern North Pacific gray whale. It was pointed out that an environmental impact study is in progress, and it would be appropriate for the Scientific Committee to wait until that study is received to give the matter further consideration.

The Scientific Committee received a revised proposal for the Workshop on Habitat Degradation. An Intersessional Steering Group was established to develop a final proposal to next year's meeting.

15.1.4.4 DISEASE AND MORTALITY EVENTS

In response to a concern raised, the Scientific Committee was referred to information on gray whale mortality at the breeding grounds in the Baja California peninsula. During the past winter season (1998/99) strandings of gray whales attracted public attention. Much concern was expressed in both the local and international media. However, the pattern of strandings is in fact not notably different from expectation, and there is little reason for alarm. Authors of reviews were encouraged to use caution in using media reports as sources of scientific information.

15.1.4.5 ECOSYSTEM-LEVEL EFFECTS

After considering papers on whale diet and prey, feeding and species diversity, the Scientific Committee agreed that, while the subject matter is important, no consensus was reached regarding whether any conclusions could be drawn from them. It was agreed that this topic should be considered at a future meeting of the Scientific Committee. It should be identified as such sufficiently in advance so that sufficient expertise can be made available. A quantitative modelling framework should be used in that consideration.

15.2 Reports from Contracting Governments

The USA gave an illustrated presentation of the threats to cetaceans posed by global environmental change. The previous Chairman of the Commission, Dr Peter Bridgewater (Australia) had stated that 'global climate change, pollution and the hole in the ozone layer are greater risks to the world's whale populations than whaling'. The USA illustrated this by reference to chemical contaminants and intestinal cancers in stranded whales; human health concerns over PCB levels in women in Greenland, a 1-3.5°C global temperature increase and 15-95cm rise in sea level; the size of the Antarctic ozone hole and resulting UV-B exposure; shipping, oil and gas activities in Arctic regions; and epizootic infection by the morbillivirus killing seals and dolphins in European waters. In addition to supporting the work of the IWC Scientific Committee's Standing Working Group on environmental concerns, the USA has established research and management efforts covering these major areas, but not limited to the IWC arena.

The UK congratulated the USA on its presentation. It believed that environmental risks should be a key issue in the IWC and wished to contribute to that debate. It outlined examples of its own work on Southern Ocean ecosystems and the disruptive effect of contaminants on endocrine systems in wildlife. The UK took a precautionary approach to cetacean management, and saw the IWC as having a key role to play in coordinating and encouraging the activities of relevant research bodies.

Italy expressed its concern about the extent of threats to conservation. It saw this as the focus of work for the third millennium, and thought any resumption of commercial whaling would be unsustainable.

Norway also recognised the environmental threats and was involved in research as well as the politics. It asked if the IWC and the Scientific Committee is the right forum. There are other international bodies involved and the IWC should focus on the cetacean aspects. It thought that there is no general pollution problem in cetaceans except at the regional level. Climate change may affect Europe, but what is the relevance to whales? It mentioned migration and food chain

effects as possibilities, and biological parameters can be monitored with food and pollutant effects. If the IWC moves into this new field and closes its monitoring of whaling and whales subject to whaling, it would have to move its management advice to another body such as NAMMCO.

Denmark, while concerned about the environment, noted that there is no information reliably linking human health effects to the consumption of whale products. The aim must be to stop pollution.

The Netherlands thought the IWC could develop into an effective body for the conservation of cetaceans and drew attention to the major threats in the environment of pollution and climate change. It welcomed the proposed research programmes, POLLUTION 2000+ and SOWER 2000, and offered an in-kind contribution of Dr P.J.H. Reijnders to coordinate the POLLUTION 2000+ programme.

Switzerland commented that we do not know what environmental changes are doing to cetaceans. The IWC should gather information and there should be a parallel movement by governments to reduce pollutants.

Austria welcomed the advances made and supported the initiatives represented by the two major programmes. It noted that its scientist would chair the group producing the annual report on the state of the cetacean environment.

Australia recalled its long concern and active involvement in these issues, and it spoke for a major role and leadership by the IWC.

Japan introduced a paper on the estimation of total food consumption by cetaceans in the world's oceans using three methods of analysis, concluding that total food consumption by cetaceans is three to six times the world-wide marine commercial fish catch.

New Zealand congratulated the USA on its presentation and endorsed the comments by the UK. It then went on to say that it did not accept Japan's conclusion that whales compete with humans for limited food resources, since baleen whales eat krill, not fish, and sperm whales eat deep water squid and fish. The problems of the fishing industry had more to do with over-capitalisation and unsustainable catches.

The USA similarly disagreed with Japan, pointing out that there have been fishery conflicts throughout the 20th century, and that there is no scientific consensus that killing whales will increase fish stocks. Man is the primary cause of fish depletion, and now possibly climate change.

The Netherlands agreed with New Zealand and the USA. It saw serious problems in the Japanese analysis. Since some of the whale populations are over-estimated, there is a question over the total consumption, and fish consumed by cetaceans are not all commercial species.

Japan subsequently countered these criticisms, believing the order of magnitude of 100 million tons consumed is correct.

Norway pointed out the serious problems raised in the Japanese paper and the need for research on the interactions of species, a matter it has investigated in its Barents Sea ecosystem studies and which is on the Scientific Committee agenda.

Dominica saw the need for an ecosystem approach, and recognised the difficulties with the analyses which make it premature to judge until the Scientific Committee have looked into them. It had similar concerns over an Australian paper.

Antigua and Barbuda spoke on the issue of marine interactions and pointed out that FAO has acknowledged the problem of predator/prey relationships. It is the vanguard of this problem and it thought that the Scientific Committee should collaborate with FAO.

St Lucia applauded the comments of its Caribbean colleagues, believing that the members of the like-minded core group will never change their minds but only sought to discredit the Japanese scientists. The RMS is always deferred, and it would prefer the Commission to be more realistic.

Sweden referred to the report of the Scientific Committee's Standing Working Group on Environmental Concerns on the community-level effect and the problems with simplistic views. It believed the Scientific Committee should continue with its work.

A paper presented by Australia dealt with the potential for impact of large whales on commercial fishing in the South Pacific Ocean, considering how much of marine production is consumed by cetaceans and the competition with fisheries. Although there is evidence of an increase in some populations of large whales, dietary overlap with commercially fished species is low. There are complex ecosystem interactions which require further consideration.

15.3 Health effects

This item had been added at the request of the UK Commissioner in the context of the Commission's Resolution 1998-11. The Chairman of the Scientific Committee noted that at last year's Commission meeting he had specifically asked the Chairman of the Commission if the intention had been for this item to be discussed by the Scientific Committee and had been told that this was not the case. However, the matter was briefly discussed.

The Scientific Committee agreed that it had insufficient expertise in this field to consider the effects on humans of consuming cetacean products, although it could produce information on levels of pollutants in certain tissues for some species and areas. It suggested that the manner in which the Commission addressed certain issues within the Technical Committee might provide a suitable model for consideration of this issue e.g. by periodically holding specialist workshops (e.g. whale killing methods).

The Secretary introduced a document summarising the two replies received from Commissioners in response to that part of IWC Resolution 1998-11 inviting Governments to submit information on this subject. Both Australia and the UK indicated that they had no information to submit. The Secretary also summarised a report of the Arctic Monitoring and Assessment Programme produced by the eight Arctic countries which included information on the accumulation of persistent contaminants in traditional foods.

Denmark, on behalf of Greenland, recognised the IWC interest in these issues, even though it prefers them to be dealt with in appropriate bodies. There is a need to monitor contaminants in Greenlandic and Arctic food, and to see the healthy effects as well, since the people have low rates of heart disease and thrombosis through eating marine mammal food. It called on member governments to reduce PCB and other pollutants which affect the Arctic region.

Norway also spoke of the health advantages (including the low incidence of heart disease, asthma and psoriasis) stemming from the consumption of fish and marine mammals because of their oil content, while St Vincent and The Grenadines reminded the meeting of its 78-year-old active whaler. Japan similarly recalled the longevity of its inhabitants who traditionally eat fish and whale meat, with positive effects on blood flow and brain function, and noted there is little contamination in whales in the Antarctic or North Pacific. People of the Russian Federation also eat whale meat and it too supported Norway's comments.

15.4 Action arising

15.4.1 Recommendations from the Scientific Committee

Japan recalled its interest in questions of climate change and the Antarctic ecosystem. It has provided two vessels for research, which represents a substantial contribution to the Commission's work. It spoke of the El Niño phenomenon and its very important effect, and suggested that its two vessels may not go the Antarctic in the future but to higher priority areas.

The Chairman of the Scientific Committee reminded the Commission of the need to reduce the emission of greenhouse gases, and the Commission noted the comments from the Scientific Committee and endorsed its recommendations.

15.4.2 Other

A resolution on health effects from the consumption of cetaceans proposed by Monaco, Austria, Italy, UK and the USA was amended by consultations between delegations outside the meeting, and a revised version, including a number of language changes suggested by Norway, was adopted by consensus. This is given in Appendix 5.

Denmark gave its support, pointing out that regional organisations are already collecting the data requested, including the Arctic Council. It was also clarified that the role of the Scientific Committee would be to collate the information and pass it on to health authorities.

16. SCIENTIFIC RESEARCH

16.1 Report of the Scientific Committee

The Scientific Committee noted that it would receive a report at next year's meeting concerning the research proposal funded last year for retrospective analysis and method development for integrated analysis for the SOWER 2000 survey of baleen whales and krill.

Four proposals were reviewed by the intersessional review group and outside reviewers and discussed further during this meeting. One, a user-friendly data entry system for DESS and software for data checking, retrieval and summary which would be designed for use on IWC-SOWER and SOWER 2000 cruises, was praised for the competence of the proposers and relevance of the work to the Scientific Committee. It was given a high score and was recommended for funding.

16.1.1 Southern Ocean Whale and Ecosystem Research (SOWER)

16.1.1.1 REPORT ON THE 1998/99 CRUISE

The 1998/99 IWC/SOWER Antarctic cruise was conducted in Areas III and IV. During the blue whale component of the cruise no blue whales were found. During the minke whale component, 155 sightings of 390 minke whales were made. The IWC Larsen gun proved to be particularly effective in obtaining biopsy samples of blue whales, with an estimated effective range of about 70m.

In discussion, attention was drawn to the high proportion (about 50%) of sightings scored as 'undetermined minke' and 'like minke' in this year's cruise. There was concern that this proportion had increased on recent cruises, affecting comparability from year to year. The Scientific Committee agreed that a general review of the estimates from the IDCR/SOWER cruises is overdue and recommended that this should take place in the year 2001.

Two *ad hoc* working groups were established to consider matters relating to SOWER cruises, one on logistics and the other on survey design, analysis and related matters.

16.1.1.2 PLANS FOR THE 1999/2000 CRUISE

Last year, the Scientific Committee had recommended that (1) the third circumpolar set of cruises should be completed as soon as possible, and that (2) in 2000/2001 the vessels should be dedicated to working as part of the SOWER 2000 project.

In terms of (1) there are four areas left to complete. The Scientific Committee recommended that in 1999/2000, the region 80°-60°W be surveyed; this overlaps with the CCAMLR-48 survey area. Blue whale research (for which 10 days were allocated) will be incorporated in the overall cruise. The Japanese Government has offered two vessels (*Shonan Maru* and *Shonan Maru No. 2*). A planning meeting should be held in Tokyo for four days in September. A detailed budget was prepared and presented to the Finance and Administration Committee (see Agenda Item 21.2.1).

The SOWER analysis group examined a number of recommendations arising from recent SOWER cruises which required analytical input, as well as queries of a similar nature referred to them by the logistics sub-group. The Scientific Committee welcomed its report and endorsed its recommendations.

The Scientific Committee expressed its gratitude to the Japanese Government for its generosity in providing the vessels, and recommended that the survey as outlined be supported. The Scientific Committee also recommended that the possibility of carrying out biopsy trials for minke whales during the cruise be considered seriously by the planning meeting, along with the implications this might have for other components of the cruise programme.

It was noted that permission to undertake research within national EEZs would be required, and such permission should be sought as soon as possible.

16.1.1.3 LONGER TERM PLANNING

The Scientific Committee agreed the following schedule for future SOWER cruises to complete the third circumpolar series:

- (1) 2000/2001 - Cooperation with SOWER 2000;
- (2) 2001/2002 - 140°-110°W;
- (3) 2002/2003 - 170°W-160°E;
- (4) 2003/2004 - 130°-160°E.

The Scientific Committee noted that the order of (3) and (4) can be switched, depending upon ice conditions (and the possibility of getting access to the Ross Sea) in the intended year of survey.

16.2 Action arising

The Commission endorsed the proposals from the Scientific Committee.

The USA, on behalf of the co-sponsors Australia, Austria, Brazil, Denmark, Finland, Italy, Monaco, Netherlands, New Zealand, Oman, Switzerland and the UK, introduced a resolution endorsing the SOWER 2000 and POLLUTION 2000+ programmes and deciding to provide £126,000 as core funding for research on environmental threats to cetaceans, of which £100,000 would be drawn from the Commission's reserves.

Antigua and Barbuda saw some merit in the proposal, but thought there was a need to streamline funding in IWC contributions, and St Vincent and The Grenadines pointed out the high contribution of £34,000 it pays compared to some G8 countries paying the basic contribution of £20,000.

Japan expressed support apart from the money aspect. There are many international organisations involved in this field and the IWC must try to avoid duplication. This work is not within the scope of the IWC, which should have assessment and sustainable use of whale stocks as its priorities. It would not support the resolution. In a second intervention it noted that SOWER uses two Japanese vessels, provided since 1978 to carry out research related to the objectives of the Convention. It was concerned over the other purposes now stipulated and would have to consider the vessel use.

St Lucia pointed out that other organisations are already undertaking research in this area. This is not short-term work and we are no closer to the resumption of commercial whaling. Depleting the reserves will require increased contributions from the member countries, a decision forced by the like-minded core group. Dominica shared the views expressed by Antigua and Barbuda and St Lucia.

South Africa saw the need for research on the environment and gave full support in principle. SOWER 2000 is a unique opportunity, but very expensive and long-term. With the promise that the IWC will provide only seed-money it was prepared to support the resolution, but only for one year, with no increase in fees. Argentina took the same position, since this is very exceptional and needed further consideration as reserves should be kept for emergencies.

Denmark noted the Greenlandic aspects of the work proposed and appreciated the assistance offered. It suggested adding 'and abundance' to the fifth preambular paragraph.

Mexico recognised the relevance of this proposal and spoke of the specific conventions concerned, such as MARPOL, IOC, Montreal, Climate Change, etc. The IWC must answer specific questions from its mandate, and called for institutional coordination.

Norway could not support the resolution since such big programmes take the focus of the Scientific Committee away from providing advice on management questions, although it did support the West Greenland component.

The Solomon Islands would support the idea when the intentions are clearly stated as it saw ambiguity at present. It believed environmental concerns are outside the IWC unless management is involved, and it thought the sponsors of the resolution should contribute more.

The UK, as a co-sponsor, expressed its strong support. The implications for cetaceans are serious. The Commission has big reserves of £900,000 due to prudent management, so while £600,000 are a sufficient reserve, it would be sensible to use £100,000 in a positive way as agreed in principle last year.

Chile also gave its support, noting the cooperation involved. The Netherlands spoke of the common interest to promote the recovery of depleted stocks, and only the IWC addresses the effects of climate change on cetaceans. France expressed its support and Spain encouraged others to be involved.

On being put to the vote, the Resolution shown in Appendix 6 was adopted, with 21 votes in support, 12 against and 1 abstention.

17. COOPERATION WITH OTHER ORGANISATIONS

The Scientific Committee received and considered the relevant aspects of the reports from IWC Observers who had attended the meetings of other Inter-Governmental Organisations with whom we have reciprocal arrangements.

These included CMS (Scientific Council and ASCOBANS), ICES, IATTC, CCAMLR, NAMMCO, SO-GLOBEC, FAO/COFI. Its comments were noted by the Commission.

17.1 CMS

CMS had requested that the IWC consider developing a Memorandum of Understanding to improve communication between the two Secretariats.

Japan saw this as a low priority since it concerns small cetaceans and would not support the idea.

Germany pointed out that CMS also deals with whales through ASCOBANS and ACCOBAMS and thought it would be useful to have close contact and that the idea should be explored. The Netherlands, Switzerland, Austria, UK, France, Finland and Sweden agreed with Germany, while the Russian Federation, although not a member of CMS thought it would be useful to use the results from that organisation and so supported cooperation.

Dominica expressed its reservation because of the small cetacean question.

The Chairman concluded that there was wide support to explore the idea further.

17.2 CITES

The USA introduced a resolution on cooperation between the IWC and CITES, co-sponsored by Austria, Brazil, Monaco, Finland, France, Germany, Ireland, Italy, Mexico, Netherlands, New Zealand and the UK. It commented that all species of whales are listed in CITES Appendix I apart from the West Greenland minke, which are listed in Appendix II.

Norway saw this as an attempt to divert the legal responsibility of the IWC, since CITES is concerned with species threatened with extinction. Grenada agreed, commenting that CITES has particular functions. It recorded its serious reservations. Japan also concurred, believing that CITES should make its own judgements. The zero catch limit is a political decision and scientific information is required.

Spain endorsed the resolution, noting that commercial and market questions are the responsibility of the EC.

Denmark recalled that trade issues are the concern of CITES and the WTO and would abstain, and noted that there had not been much progress on the RMS.

Antigua and Barbuda thought the resolution badly drafted, confrontational and interfering, and requested it be withdrawn.

Switzerland supported the resolution, pointing out that these are separate Conventions which act independently, and the CITES Secretariat has an obligation to consult with the IWC on cetacean issues. Oman and Chile also gave their support. Finland voiced its support to prevent illegal trade in whale meat, noting that this is appropriate because of the CITES Conference of the Parties to be held in Spring 2000. Sweden agreed.

St Lucia believed that the 140 countries in CITES will take the right decision as they did with elephants. The Russian Federation supported cooperation but opposed the resolution for the reasons given by Norway, Denmark, Antigua and Barbuda and others. The Solomon Islands were also opposed, pointing out the respective memberships of 140 and 40. Dominica noted that the Scientific Committee has not recommended zero catch limits, and St Kitts and Nevis would not support a resolution of this kind.

Australia believed that this proposal does not interfere with the flow of scientific information and gave its support, since there are different positions in the two bodies.

In response to a question from Antigua and Barbuda, the Secretary related how scientific advice is forwarded to CITES through provision of the appropriate sections of the reports of the Scientific Committee. Antigua and Barbuda thought this resolution would restrict the flow of information.

Japan commented that FAO promotes the sustainable use of resources, and thought that CITES should manage whale stocks rather than the IWC.

The Resolution given in Appendix 7 was then adopted, with 21 votes in favour, 10 against and 3 abstentions.

18. ADOPTION OF REPORT OF THE SCIENTIFIC COMMITTEE

18.1 Future Work Plan

18.1.1 Longer term priorities and directions

Last year the Scientific Committee identified the seven topic areas of RMP, AWMP, Aboriginal Whaling, Comprehensive Assessment, Environmental Concerns, Small Cetaceans and Whalewatching as those which it believed were of priority in terms of the advice required by the Commission, and the perceived links between them. These were subsequently endorsed by the Commission.

The Scientific Committee agreed that the seven topics remain its priority topics. It further agreed to modify slightly the links between Whalewatching, Environmental Concerns and Comprehensive Assessment.

The Scientific Committee recalled that a major function of the Committee is to review Special Permits in the light of guidelines developed by the Commission and noted that aspects of the review are covered under several priority topics, including RMP, Comprehensive Assessment and Environmental Concerns, as reflected in the discussions this year. It noted that this is also true with respect to discussions of Sanctuaries, where, in the light of the Commission resolution, much of the relevant discussion occurred in the SWG on Environmental Concerns.

18.1.2 1999/2000 work plan and initial Agenda for the 2000 meeting

As last year, with the Scientific Committee's agreement, after the close of the meeting the sub-committee Convenors drew up a work plan as the basis of an initial agenda for the 2000 meeting. They took into account the priority items, and, within them, the highest priority items agreed by the Scientific Committee on the basis of sub-committee discussions. The Scientific Committee noted that priorities may be revised in the light of the Commission's decisions. Following the Commission meeting, the Chairman will forward a summary of the Commission's conclusions as they affect next year's work to members for information; the summary will form the basis of the draft agenda to be circulated 60 days before the next meeting. It will also provide a framework for determining invited participants to the 2000 meeting.

18.2 Small Cetaceans

The Scientific Committee's sub-committee on small cetaceans this year focused its discussions on the status of white whales and narwhals, and recent advances in bycatch mitigation measures (especially acoustic deterrents).

18.2.1 Status of white whales

The Scientific Committee last reviewed the status of white whales in 1992. Since that time a great deal of relevant research had been undertaken.

New information on life history, particularly deposition rate of Growth Layer Groups (GLGs) led to the conclusion that a model of tooth development for this species (i.e. how GLGs are formed) was required before the question could be resolved.

18.2.1.1 DEFINITION OF 'STOCK' OR MANAGEMENT UNIT

The Scientific Committee agreed on the principle that management units should be established with the goal of maintaining white whales throughout the full extent of their historical range. To achieve this goal, it is necessary to adopt the smallest reasonable population units. This precautionary approach is intended to ensure that removals based on large area population estimates are not inadvertently taken from smaller discrete stocks within the area. Evidence of white whale fidelity to estuaries, bays or other small areas, and persistent local depletion after severe hunting, suggests that such takes could lead to the extinction of small populations. In several areas, there is traditional knowledge and scientific evidence that animals move sequentially between two or more aggregation sites within a season. As such information becomes available, the small 'stocks' defined *a priori* as separate can be combined into larger units. Shifting the burden of proof in this way represents a fundamental change in the policy of the Scientific Committee towards white whale stock identity.

Contaminant data alone are unreliable for identifying stocks.

18.2.1.2 REVIEW OF CURRENT KNOWLEDGE ON A STOCK-BY-STOCK BASIS

At the 1992 meeting a total of 16 'stocks' was provisionally identified. A large amount of new data has become available since then particularly with regard to molecular DNA.

The Scientific Committee discussed the evidence of stock identity for each part of the white whale's circumpolar range. The available information on geographical range and migrations, abundance, directed takes, indirect takes, known and potential threats and status of each of the 29 putative stocks was then reviewed and tabulated.

White whales are not currently commercially harvested anywhere throughout their range. Direct takes are from aboriginal hunting. Indirect takes are primarily from incidental catches in fishery operations. Current known or potential threats include a wide variety of human activities: oil and gas development, over harvesting, fisheries, vessel traffic (recreational, commercial and military), hydroelectric development in Hudson Bay, and industrial and urban pollution. The most immediate concerns relate to continuing harvests from small and depleted populations.

The Scientific Committee expressed concerns about the conservation status of a number of stocks because of their:

- (1) depleted status relative to historical abundance (Cook Inlet, West Greenland, Ungava Bay, Cumberland Sound, East Hudson Bay, St. Lawrence River);
- (2) likely depleted status relative to historical abundance (Svalbard, Ob Gulf, Yenese Gulf, Onezhskiy Bay, Dvinski Bay, Mezhsenskiy Bay, Shelikov Bay, Shantar Bay, Sakhalin-Amur);
- (3) current small population size or reduced range (Cook Inlet, Ungava Bay, Cumberland Sound, West Greenland, Ob Gulf, Yenese Gulf); or

- (4) recent decline (Cook Inlet, West Greenland).

In the majority of stocks, the Scientific Committee recommended that surveys be continued to determine current abundance and assess trends.

There is very little evidence, other than summer distribution, that supports the stock delineations of many of the Russian stocks proposed. The Scientific Committee recommended that studies, including genetics, be undertaken to resolve the stock structure of white whales in Russian waters.

18.2.1.3 PRIORITY RECOMMENDATIONS

The Scientific Committee recommended:

- (1) That stocks that are either depleted, small in size, or currently declining in numbers or range be considered as of highest conservation concern. Efforts to improve their current status should be undertaken and supported. Particular emphasis should be placed on those stocks where all three characteristics apply, e.g. Cook Inlet, Ungava Bay, West Greenland, and East Hudson Bay. It is important to document catch localities and stock affinities of whales taken by settlements in Ungava Bay and Hudson Strait in order to evaluate the implications for the Ungava Bay and East Hudson Bay stocks.
- (2) That genetic and contaminant studies continue in order to further resolve questions about local structuring and movement patterns, and that sampling programmes be initiated in other areas, Russia in particular, to resolve questions of stock structure.
- (3) That sampling programmes to assess the health status of white whales continue throughout Alaska, Canada and Greenland, and that such programmes be initiated in Russia. Of particular concern are areas of high anthropogenic influence, including the SE Barents Sea, which is the probable wintering ground for many of the Russian stocks (e.g. the Ob Gulf, Yenese Gulf), and the Sakhalin-Amur region in the Okhotsk Sea.
- (4) Noting that tagging and telemetry studies of white whales have provided important new information relevant to stock identity, migrations, habitat use and abundance, that such studies are continued to increase sample size and expanded to other regions.
- (5) That surveys of white whale distribution and abundance continue, particularly in areas where there is little recent information on either.
- (6) Further research on age estimation, including the examination of teeth from known-age captive-born white whales, and encouraged greater cooperation among relevant institutions and scientists to resolve this important issue.

18.2.2 Status of narwhals

In comparison with white whales, little new information has become available for the narwhal since the Scientific Committee last reviewed the species. Discussions on questions of stock identity, range and migrations, abundance, takes, threats and status were summarised.

The summer distribution of the narwhal, including new areas identified during the meeting, were considered. Catches in Greenland and Canada are known to be continuing, but none are thought to be at unsustainable levels. Nevertheless, information on both the biology and hunting pressure on this species is incomplete. The Scientific Committee therefore drew attention to, and reiterated, its previous recommendations concerning the importance of

genetic and telemetry studies to identify stocks, and improved catch reporting (including estimation of hunting loss) in Canada and Greenland.

18.2.3 Bycatch mitigation – acoustic devices

The need for bycatch mitigation measures has long been acknowledged in view of the large numbers of cetaceans killed incidentally in passive fishing gear, particularly gillnets, around the world. The most prominent and widely applied approach to reducing cetacean bycatch in gillnets is the attachment of small sound-generating devices, called pingers, to the fishing gear. The effectiveness of pingers and the difficulties associated with their use were considered in two previous international meetings. The reports of those meetings were treated as benchmarks; the Scientific Committee's discussions focused on new findings and on concerns not previously noted.

18.2.3.1 RECENT EXPERIMENTS

Information was presented about the most recent research on pinger use to reduce cetacean bycatches. Most controlled experimentation has been with a single species, the harbour porpoise, and with one type of fishing gear which is known to cause high levels of porpoise bycatch in many areas throughout its range (bottom-set gillnets). With one exception, where no porpoises were captured, all have shown substantial reductions in bycatch when pingers were properly deployed. The Scientific Committee agreed that the results of these experiments can be generalised to other situations where harbour porpoises are taken in bottom set gillnet fisheries.

To date, no experiments have been carried out on the use of pingers to reduce harbour porpoise bycatch in driftnet fisheries. However, the results of behavioural studies and from experiments with bottom set gillnet fisheries suggest that the use of pingers may be effective in reducing the bycatch of harbour porpoises in driftnets. The Scientific Committee recommended that suitable, scientifically monitored, field trials be undertaken with pingers in driftnet fisheries. However, this may not be an appropriate strategy for populations thought to be at low levels (e.g. harbour porpoises in the Baltic Sea) because of unacceptable bycatch mortality during the trials.

Currently, results are available for only one scientific experiment that used pingers on driftnets to reduce the bycatch of small cetaceans other than harbour porpoises. The results of this study are promising, especially in relation to common dolphins. The Scientific Committee recommended that further controlled experiments be conducted to test pingers in fisheries that experience bycatch of delphinids and other small cetaceans.

18.2.3.2 IMPLEMENTATION

The Scientific Committee was informed that pingers are already in use to reduce cetacean bycatch in many fisheries around the Developed World. In most cases there was no attempt before implementation to test whether they would be successful, nor is any monitoring programme in place to investigate their effect after deployment. In only three areas, all in US waters, is pinger use both mandatory in a commercial fishery and being monitored.

When acoustic alarms are being considered to reduce the bycatch of a small cetacean species in a fishery, the Scientific Committee recommended the following approach: (1) controlled scientific experiments be conducted to demonstrate whether the devices significantly reduce bycatch; (2) field trials be conducted to address practical

operational issues and acoustic properties with respect to ambient noise and spacing of pingers; and (3) when the devices are used routinely, a scientific monitoring programme be implemented, preferably using independent observers at sea. The monitoring programme should evaluate pinger function and note the location of bycatch in relation to functioning and any malfunctioning pingers. The Scientific Committee recalled the Recommendation of the 1990 Workshop on Gillnets and Cetaceans, that fishermen should be involved directly in the process of developing and implementing bycatch mitigation measures.

The Scientific Committee is concerned that there are a significant number of places around the world where pingers are being deployed without any apparent attempt either to test their efficacy beforehand nor to monitor their effects afterwards. Given the poor information on the subject, the Scientific Committee recommended that a survey of pinger use around the world should be conducted.

18.2.3.3 GENERAL ISSUES CONCERNING ACOUSTIC ALARMS

WHY ARE PINGERS EFFECTIVE?

The Scientific Committee reviewed the results of recent work to address the question of how pingers reduce the bycatch of harbour porpoises and common dolphins in gillnet fisheries.

The harbour porpoise and the short-beaked common dolphin are the only cetacean species for which properly designed studies with sufficient statistical power have been conducted to evaluate pinger effectiveness. In all cases, significant reductions in bycatch have been achieved through the use of pingers. Nevertheless, some bycatch has occurred in nets with active pingers during experiments, sea trials and fishery implementation. Thus, pingers are not 100% effective in eliminating the bycatch of these two species.

The Scientific Committee recognised the value of collecting data from observer programmes that would contribute to understanding why pingers are, or are not, effective. The Scientific Committee recommended that observer programmes should collect data on where cetaceans are caught in nets (both in general and in relation to pingers), associated environmental information, pinger failure rates etc.

HABITUATION

Habituation by small cetaceans could reduce the effectiveness of pingers over time. The Scientific Committee agreed that monitoring programmes are essential to detect the potential for habituation once pingers are implemented in gillnet fisheries.

18.2.3.4 OTHER

The Scientific Committee agreed that pingers may not be an appropriate solution to the problem of bycatch in all circumstances, for example, where the cost of pingers is high relative to the economic return to fishermen.

The Scientific Committee discussed a number of practical features that should be incorporated into current and future pinger design. Pingers should:

- (1) be quieter;
- (2) have a longer battery life;
- (3) possibly be incorporated into the headrope or have improved mechanisms for attachment;
- (4) have an acoustic or visual mechanism for testing functionality;
- (5) have a guaranteed life span for enforcement and replacement;

- (6) stand up to operational rigours; and
- (7) be cheaper.

The Scientific Committee recommended that research and development emphasise these aspects in the future.

18.2.3.5 USE WITH VAQUITA

The Scientific Committee endorsed the recommendation made by the International Committee for the Recovery of the Vaquita (CIRVA) that pingers should not be used to reduce the bycatch of vaquita in gillnet fisheries in the Upper Gulf of California. CIRVA noted that pingers were not an effective solution to the bycatch of vaquita because:

- (1) pingers will not reduce the bycatch to zero;
- (2) it would be extremely difficult to convince fishermen to use pingers and to ensure that the devices were kept in working order;
- (3) the need for experimental verification would result in the mortality of some vaquita;
- (4) the cost of an experiment would be prohibitive due to the low bycatch rate; and
- (5) that other more effective alternatives exist to conserve this highly endangered species.

Two workshops have reached similar conclusions.

18.2.3.6 FURTHER RESEARCH

The Scientific Committee noted with great concern that, for most of the world's fisheries, there is still no information available on cetacean bycatch, and that this precludes any attempt at mitigation in circumstances where it might otherwise be appropriate and possible. As in previous years, the Scientific Committee recommended that information on cetacean bycatch be collected from all marine fisheries, preferably using independent observers at sea.

It also recommended research on potential problems with wide-spread pinger use, including displacement of small cetaceans from important habitat, habituation, depredation of caught fish and effects on other species.

The Scientific Committee noted that pingers are only one of several potential tools to mitigate bycatch, and recommended that research should be conducted to identify any other measures that could be effective.

18.2.4 Review of progress of the IWC/ASCOBANS joint harbour porpoise Working Group

At last year's meeting the Scientific Committee established a joint working group with ASCOBANS to provide scientific assistance to its Advisory Committee on issues relating to assessment of the status of harbour porpoises in the North Sea and adjacent waters. The report of that Working Group was received and the Scientific Committee commended the Working Group for the successful outcome to its work, and endorsed its report.

18.2.5 Review of progress of the vaquita recovery programme

The Scientific Committee was informed of the results of the second meeting of the International Committee for the Recovery of the Vaquita (CIRVA). The mandate of this group was to develop a recovery plan based on the best available scientific information, taking into account the socio-economic impacts of any necessary regulations.

CIRVA concluded that the vaquita is critically endangered, and that bycatch was the most immediate and direct threat to the survival of the species. To prevent extinction, bycatch of vaquita must be reduced to zero as rapidly as possible. Complete protection will need to

continue for at least 20-30 years. CIRVA called upon the international community and NGOs to join the Government of Mexico in this conservation initiative. The Scientific Committee supported this request for help from the international community and, noting its earlier recommendations and IWC Resolution 1994-3, strongly recommended that the Commission calls upon member nations to respond in a prompt and generous manner.

The Scientific Committee welcomed the CIRVA report and commended the Government of Mexico for the process it has followed to develop a recovery strategy for the vaquita. The vaquita is endemic to the Gulf of California, Mexico, but CIRVA includes scientists from several countries. The Scientific Committee endorsed the Recovery Plan and urged the Commission to encourage the Government of Mexico to implement it urgently. It looks forward to receiving an update of the implementation at its next meeting.

18.2.6 Review of other presented information on small cetaceans

The interim results of an ongoing bycatch monitoring scheme were presented in which independent observers monitored gillnet vessel catches in the North Sea and to the West of Scotland between 1995 and 1998. The Scientific Committee welcomed this study and recommended that the pelagic sector and the freezer-netter fleet should receive increased attention in this regard and that estimates of bycatch in the turbot fishery should also be refined.

The population structure of harbour porpoises in the Barents Sea and northern North Sea was investigated using mitochondrial DNA analysis. The results confirm those of previous studies suggesting greater philopatry among female harbour porpoises than among males.

A survey of small cetaceans in Ghana found six cetacean species had been recorded in the region, and surveys of four ports suggested that cetacean bycatches were widespread and frequent, with a local market for cetacean meat. The Scientific Committee expressed its concern over the apparent development of a directed fishery for small cetaceans from a pre-existing bycatch without any accompanying controls on the level of take or assessment of the stock. The Scientific Committee recommended that such takes be monitored and their impacts on the stocks assessed.

Recent information on the directed take of Dall's porpoise in Japan was presented. The most recent abundance estimates came from surveys in 1989/1990, which estimated a central Okhotsk Sea true-stock of 217,000 (CV 0.23) and a stock of dalli-type porpoises in the Southern Okhotsk Sea numbering 226,000 (CV 0.15), but no corrections had been made for possible survey bias. The Scientific Committee recommended that existing biological samples from this fishery are worked up in accordance with the recommendations made in the 1991 Scientific Committee report.

The Scientific Committee recognised that there is a lack of current data on the bycatch of this species. Russian observers are present on Japanese driftnetters working in Russian waters and the Scientific Committee recommended that data on porpoise bycatch should be provided from this observer programme.

The Scientific Committee reiterated its previously expressed concern for these stocks. The estimate of approximately 440,000 has not been revised since 1991, and population surveys planned for 1998 were not completed. Further survey work is planned for 1999.

Considering the question of population structure, the Scientific Committee was informed that recent genetic analyses had yielded results consistent with its earlier conclusions for this species. The Scientific Committee welcomed this information and recommended that further genetic analysis should be undertaken.

The Scientific Committee has offered advice on Dall's porpoise to the Government of Japan in the past, and such advice has led to very positive responses from the Government of Japan. The Scientific Committee looked forward to continuing this productive process.

The Scientific Committee agreed that the issue of Dall's porpoises should be reviewed in the near future.

18.2.7 Takes of small cetaceans in 1998

The Scientific Committee noted that the table of recent small cetacean catches is incomplete. In particular, it does not contain information about known or presumed high levels of bycatch in many parts of the world. The Scientific Committee therefore reiterated its recommendation of earlier years that member nations should submit full and complete information about all direct and indirect takes in their progress reports. Without such information the Scientific Committee is unable to carry out its work in assessing the conservation status of small cetacean populations and identifying areas of particular concern in this regard.

18.2.8 Small Cetacean topics for consideration by the Scientific Committee in 2000, 2001 and 2002

The Scientific Committee reviewed its proposed schedule of priority topics in light of the unacceptably high workload it had undertaken at the 1999 meetings. It agreed that the list of topics previously identified should remain unchanged, and recommended that the second bycatch mitigation measures topic should be addressed in a separate two-day meeting, preferably immediately before the Scientific Committee's meeting in the year 2000. This meeting should, however, be considered part of the normal Scientific Committee meeting. It also agreed that the status of freshwater cetaceans topic scheduled for 2000 should be expanded to embrace coastal marine populations of tucuxi, Irrawaddy dolphin and finless porpoise. The species to be considered are boto, baiji, Indus and Ganges susus, tucuxi, Irrawaddy dolphin and finless porpoise. No new priority topics were added to the list for consideration in the years 2001 and later.

18.3 Other

18.3.1 Mathematically-based techniques for recognition analysis

A report on progress in developing methods of automated (computer-aided) photo-identification led to an extensive discussion of risks of missing matches, use of multiple images and scoring of photos for quality and distinctiveness.

The Scientific Committee agreed that there is no need for an intersessional group in the coming year, but that it will review this next year. In the meantime, it would appreciate receiving reports of new advances in the development of automated matching methods.

18.3.2 Data processing and computing needs for 1999/2000

The Scientific Committee identified the requests for intersessional computing work and in the light of its discussions on Committee priorities, agreed that the work

identified for furthering the AWMP and RMP should be accorded highest priority. It noted that target dates had been included for the highest priority tasks. The Scientific Committee recognised that final decisions on priorities would need to be made after the Commission meeting to take into account Commission deliberations. It agreed that an Intersessional Steering Group will review progress during the year to decide if priorities need to be changed in the light of Commission decisions and/or experience. The Scientific Committee agreed that the Intersessional Steering Group should also develop a draft proposal, in consultation with Mrs Cherry Allison (Computing Manager), to address concerns expressed about future workload.

18.3.3 Publications

Mr Greg Donovan (Scientific Editor) reported on progress with the new publications series agreed last year. The supplement to the *Journal for Cetacean Research and Management* (i.e. the Scientific Committee Report) was available to the meeting, as was the first volume of the Annual Report of the IWC 1998 (the administrative papers including the Chairman's Report, the Convention and Schedule, and the Rules of Procedure). Technical problems meant that the first issue of the Journal, whilst printed, was not able to be delivered in time to the meeting. It will be posted to members.

Mr Donovan also noted that the Editorial Board will be expanded to include expertise on the new areas that the Scientific Committee is considering. Two special issues of the Journal are almost complete: one concerning pollutants and cetaceans and the other concerning gray whales. They will be published in the intersessional period.

The Scientific Committee congratulated Mr Donovan on the new series of IWC publications. In particular, it expressed appreciation at the strenuous efforts he had made in improving the scientific quality of IWC publications, culminating in the establishment of the new Journal.

18.3.4 Advances in non-lethal methods available for whale research

The Scientific Committee received information from Monaco about a Workshop entitled 'Advances in non-lethal methods available for whale research' it would propose to the Commission. The Workshop was to comprise a critical review of recent advances in non-lethal methodologies and technologies now available to whale science. Particular focus would be given to the relevance of tools available for assessing stock structure, population dynamics and cetacean health. It would include a comparison of lethal and non-lethal techniques.

In discussing this outline proposal, the Scientific Committee noted that although the topic was extremely interesting, it believed that such a Workshop would be more appropriate in the context of a relevant society such as the European Cetacean Society or the Society for Marine Mammalogy. It noted that the focus of the Scientific Committee's work was problem-oriented rather than methodology-oriented. The wide geographical and disciplinary spread of Scientific Committee members meant that the Committee was well-informed of recent developments in the methodology and technology relevant to the specific issues it had to address. Given the intersessional workload already identified, it agreed that such a Workshop should not be accorded high priority in its work plan at this time.

18.3.6.3 SIGHTINGS SURVEYS

The results of a minke whale survey in the EN *Small Area* of the Eastern *Medium Area* used in the RMP implementation for minke whales in the eastern North Atlantic were received. Following Scientific Committee recommendations, adjustments had been made to ensure greater comparability over years. The survey planned for 1999 will cover the ES *Small Area*, i.e. the northern Norwegian Sea including Svalbard. In 2000 the EB *Small Area*, north and east of Norway in the Barents Sea, will be the target area. The sighting survey vessels were not allowed in Russian EEZ waters when this *Small Area* was surveyed in 1996. If present difficulties in obtaining entry of Norwegian research vessels into Russian EEZ waters continue, portions of that area may remain unsurveyed in this series.

The Scientific Committee had previously noted the importance of collecting additional surfacing rate data but no progress had been made in obtaining such data.

The Scientific Committee thanked Dr Øien for his oversight role in 1998, and agreed that he should serve in this capacity during the 1999 survey. The Scientific Committee noted the difficulty with obtaining entry to Russian EEZ waters for sighting surveys, and recommended that the Commission contact the relevant authorities of the Russian Federation to request that they grant permission in a timely manner for future surveys.

18.3.7 National Progress Reports on research

The Scientific Committee reaffirmed its view of the importance of national progress reports and recommended that the Commission continues to urge member nations to submit them following the approved guidelines for National Progress Reports.

18.3.8 Commission action

In the Commission, the UK agreed with the recommendations concerning white whales, and the goal to maintain the species throughout its range. Some stocks are stable, others threatened, and it called on Governments to take appropriate action.

Austria recalled the resolution expressing concern adopted last year, and was very concerned about the declining stocks. It encouraged Canada, Alaska, Greenland and the Russian Federation to suspend killing white whales and narwhals and provide scientific data by non-lethal means.

The Netherlands noted that last year's resolution encouraged states to monitor catches, and did not need to be repeated. Denmark pointed out that it opposed the resolution last year as the management already takes place by cooperation between neighbouring states.

The Netherlands also commented on the lack of data for narwhals and encouraged countries to provide adequate information.

Norway spoke on the joint Working Group with ASCOBANS, and although it has not joined the latter because lethal research is not permitted, it is cooperating.

Brazil commended Mexico's work on vaquita and reaffirmed the request for international cooperation.

The UK thought that the topic of Environmental Concerns was rather low in the order of priority for the Scientific Committee's work.

Oman commented on the problem it has with false killer whale inter-actions with fishing activities. There is not much research work in the Gulf of Oman and it will submit a research programme for funding next year.

The Commission noted all the comments by the Scientific Committee and endorsed its recommendations. The Chairman and the Netherlands congratulated Mr Donovan on the new publications.

18.3.8.1 RESOLUTION ON SMALL POPULATIONS

The USA then introduced a resolution on small populations of highly endangered whales, co-sponsored by Australia, Austria, Brazil, Finland, France, Germany, Italy, Mexico, Monaco, Netherlands, New Zealand, Oman, Spain, Sweden, Switzerland and the UK. Stocks are faced with directed takes, anthropogenic sources of mortality, and oil and gas development. The USA itself has active management and research programmes on the right whales in its waters, and joint programmes with the Russian Federation on the western stock of gray whales.

New Zealand thought that little attention has been paid to small populations, there was some research, but it highlighted directed takes of bowheads by Canada, and the status of right whales. It hoped for consensus.

Denmark noted the resolution touched on severely depleted baleen whale stocks. It thought it inappropriate to send the resolution to Canada, because of Article VI, but would welcome its membership. However, its proposal to delete the final sentence was not accepted.

The Netherlands agreed with New Zealand and recalled IWC Resolution 1998-13 last year inviting Canadian membership.

Japan thought that small populations should be protected, but healthy stocks could be rationally utilised. Canada would not be able to harvest within the IWC, and if non-members are invited they should be allowed to continue whaling.

The Solomon Islands appreciated the need to protect small populations, but Canada could not be forced but should be encouraged into membership.

The resolution given in Appendix 8 was then adopted by a majority, noting the comments made.

18.3.8.2 RESOLUTION ON DNA TESTING

A resolution on DNA testing was introduced by New Zealand on behalf of Austria, Brazil, Finland, Italy, Monaco, Netherlands, Oman, Spain, Switzerland and the USA.

This recalled the new methodologies being developed and requested the Scientific Committee to provide advice which will allow market tracking under the RMS.

Denmark wondered what was the intention, since this seemed like over-kill and prejudged the inspection and control debate next year. The Netherlands saw usefulness for more than inspection and observation but also for the other purposes mentioned.

Norway saw some positive aspects in species, stock and individual identification, but believed tracking in trade is outside IWC competence.

Japan agreed with Norway, noting that the RMS is only for commercial whaling. Japan already has a database for whale meat and tuna, available on request, in advance of the FAO eco-labelling.

The UK supported full traceability and wished to be added as a sponsor, while Spain, as a sponsor, spoke of the FAO interest in Responsible Fisheries.

New Zealand thought the operative paragraphs applied to all whaling.

18.3.5 Stock identity

Last year the Scientific Committee established a Working Group on Stock Identification (WGSI) to try to develop 'one or more operational definitions of stock, which are better suited to the types of data currently available to evaluate stock structure and which are based on the management context in which they are to be used'. Terms of reference for the intersessional activities of the WGSI were developed. These included:

- (1) review of published literature on stock concepts for long-lived, highly mobile species;
- (2) review of report on long-lived, highly mobile species;
- (3) review case studies of management advice for large whales;
- (4) prepare a report summarising successful approaches identified in case studies;
- (5) assess the results of studies using suitable spatially explicit population simulation models;
- (6) endeavour to refine existing stock definitions; and
- (7) assess the desirability and means of considering multiple lines of evidence in developing definitions of stocks.

18.3.5.1 INTERSESSIONAL ACTIVITIES

The following intersessional activities were completed:

- (1) a paper on how stock information was used in the *Implementation Simulation Trials*;
- (2) case studies for the North Pacific minke whale, Southern Hemisphere minke whale, and North Atlantic humpback whale; and
- (3) a discussion paper summarising these case studies to serve as a starting point for developing one or more operational definitions of stock.

18.3.5.2 ISSUES FOR FUTURE DISCUSSION

This year the WGSI was re-established. The WGSI reviewed the papers prepared intersessionally, and its primary focus was to identify those issues that need to be resolved prior to developing a generic approach for defining stocks.

The Scientific Committee first considered the question of what 'unit' is to be conserved. Management objectives must be defined before interpreting population structure data. One suggestion was that management should strive to maintain historical range (both breeding and feeding grounds); such a definition requires the calculation of the level of dispersal between small areas required to meet this objective. The Scientific Committee agreed that it was premature to finalise the process for defining stocks until all aspects of the terms of reference developed last year are completed.

Several points for further discussion next year were identified from the case studies on North Atlantic humpback whales, North Pacific minke whales and Southern Hemisphere minke whales. These have implications beyond those for a single species in a single ocean basin.

18.3.5.3 PREPARATIONS FOR NEXT YEAR'S MEETING

The Scientific Committee agreed that the following items are required to assist in the development of a standard process by which stock identification can be undertaken:

- (1) review of stock structure in the bowhead whale;
- (2) review of stock structure in the gray whale;
- (3) summary of stock concepts used in the management of long-lived, highly mobile species of terrestrial mammals, pinnipeds and birds;

- (4) overview of concepts used to define management units in tunas and billfish;
- (5) review of available information for large whales on extirpations (or near extirpations) where recovery has not taken place, and where recovery has taken place;
- (6) report on the estimation of statistical power using molecular data; and
- (7) report on the power of different statistics and the relation between effect size and sample size.

The Scientific Committee recognised that aspects of items 1, 2, 6, and 7 might provide information important to the work of the SWG on the AWMP.

The Scientific Committee agreed that the WGSI should be re-established next year to review the above reports, and others as appropriate, and established an Intersessional Working Group to further this work.

18.3.5.4 OTHER INFORMATION

Geographic differences in whale calls could provide useful information for stock differentiation for some mysticete species (e.g. blue and fin whale); this may not be the case for species that show large seasonal or individual variability in calling behaviour (e.g. humpback whale). However, the Scientific Committee recognised that call types must be related to other stock differentiation criteria to be useful in stock identification.

18.3.6 North Atlantic minke whales

18.3.6.1 ABUNDANCE, CENTRAL STOCK

A revised 1987 estimate of minke whale abundance in the CM *Small Area* of the Central *Medium Area*, which addressed three questions raised at last year's meeting, is 5,609, with a CV of 0.262.

Icelandic sighting survey data from NASS-87 and NASS-95 for the CM *Small Area* are now permanently on file with the IWC Secretariat. The Scientific Committee expressed its appreciation to Prof. Walløe for his efforts in this regard and to the Icelandic authorities.

The Scientific Committee agreed that this further analysis and the arrangements for permanent access to the sighting survey data addresses all of its concerns about this estimate, and accepted it for use in the RMP.

18.3.6.2 STOCK IDENTITY AND AREA BOUNDARIES

The Scientific Committee received a paper which attempted to help clarify the genetic structure of northeastern Atlantic minke whales through an analysis involving random amplification of polymorphic DNA (RAPD). This identified three possibilities concerning stock structure. First, there is only one breeding stock in these *Small Areas*. Second, there are separate breeding stocks that segregate in the *Small Areas*, but the analysis method was not able to discriminate between them. Third, (and in the authors' opinion the most likely) there are two breeding stocks, not necessarily the two groups described above, that share several of the *Small Areas* as feeding grounds and/or cross several of the *Small Areas* before reaching their final destination. The Scientific Committee expressed its appreciation for this initial analysis of samples collected from commercial whaling operations. It noted that results from analyses of such data may help to reduce uncertainties in the *Implementation Simulation Trials* conducted previously for northeast Atlantic minke whales. As such, this and other accumulating information could provide a basis for an *Implementation Review* in the next few years.

On being put to the vote, the resolution given in Appendix 9 was adopted with 23 votes in favour and 11 against.

Antigua and Barbuda explained its no vote because DNA tracing needs the cooperation of those countries whaling, and this resolution is premature.

Denmark agreed with the idea of the resolution but had received no clear answer to its concerns, and this resolution prejudged the discussions next year.

Australia supported the views of Netherlands on the broad application of technologies.

18.3.8.3 RESOLUTION ON DALL'S PORPOISE

A resolution on Dall's porpoise was then introduced by the UK on behalf of Australia, Austria, Brazil, France, Germany, Italy, Netherlands, New Zealand, Sweden, Switzerland and the USA. The Commission had previously addressed Dall's porpoise in 1990. The population was estimated at 440,000 and the size of the direct removals and bycatch suggested the need for a more precautionary approach. Removals of 1% raise concerns about harbour porpoises, and the Scientific Committee is asked to review Dall's porpoise in 2001. The Resolution urges Japan to reconsider the level of quota it sets.

At the request of the Russian Federation the UK agreed to delete a reference to the Japanese drift gillnet fishery in the former's EEZ, and Denmark commented on the last paragraph with respect to the Commission's competence for small cetaceans.

Antigua and Barbuda could not support the resolution because of the issue of small cetacean competence, and it saw this as a tactical approach to creeping jurisdiction over EEZs, whereas the Law of the Sea paragraphs 61 and 62 gave coastal states these rights, also accorded by Article 21 of the Rio Summit.

The Solomon Islands supported the last statement. A noose has been put around the necks of island states with other nations deciding that whales are more important than humans. The 6 million people in the Pacific must be considered and it therefore opposed the resolution.

Dominica, St Lucia, St Kitts and Nevis, Grenada and St Vincent and The Grenadines shared the views of Antigua and Barbuda and the Solomon Islands.

Mexico was happy to share information but does not accept IWC competence for small cetaceans.

Japan pointed out that it is a responsible country, with numerous scientists and it conducted responsible management. It listens to scientific advice but others should not impose their views and this resolution had no constructive elements. It therefore opposed it, noting that the fishery takes place within its EEZ.

Argentina suggested modifying the two last operative paragraphs and consultations were held outside the meeting to try and reach consensus. These were unsuccessful. Monaco expressed its concern over the stock, while respecting sovereignty.

Antigua and Barbuda saw the matter as an infringement of sovereign rights and announced that the eastern Caribbean States would not take any further part.

Japan supported this statement, believed the issue was outside the IWC and requested the resolution be withdrawn, otherwise it would not participate. The delegation then left the meeting.

Norway thought the sponsors should reconsider and try to compromise, but the Chairman called for a vote when the

resolution shown in Appendix 10 was adopted with 18 votes in favour, 6 against and 2 abstentions.

St Lucia commented later that the Commission's action on Dall's porpoise was *ultra vires*.

18.3.8.4 ADVANCES IN NON-LETHAL RESEARCH METHODS

Monaco spoke of its offer to host an intersessional Workshop on advances in non-lethal research methods available for whale research. It thought this an extremely interesting topic, took exception to the Scientific Committee's conclusion and begged to differ. The IWC has jurisdiction in this area and it needs to know the latest information. It was prepared to have the Workshop in 2000 or 2001.

New Zealand supported the proposal, but understood the Scientific Committee's response. The Commission has passed a resolution asking for advice and lethal research is being conducted under Article VIII. A separate discussion seemed timely. Italy associated itself with these comments in support, as did Brazil, which thought countries like its own would benefit.

The Netherlands also expressed its support, and congratulated the Scientific Editor on the new Journal. The USA recognised that the Scientific Committee does receive reports on techniques and supported the proposal, as did the UK, agreeing with the comments by New Zealand, the Netherlands and a number of other countries.

Antigua and Barbuda supported any research which leads to better management, but thought this proposal will not lead to a better body of knowledge. No comparisons are indicated and it was intended to lock out any future resumption of whaling. It had to make sacrifices to pay its contribution and was concerned over the use of Commission funds.

St Lucia concurred with the sentiments expressed by Antigua and Barbuda, and believed that the money is controlled by a small core group of like-minded countries.

Japan had the same concern. Its research take is most useful as indicated by the JARPA review in 1997. This proposal is trying to divert the focus of the IWC to humane killing, environmental concerns and whalewatching and delaying completion of the RMS. It looked forward to the results of non-lethal research to compare with its current Antarctic and North Pacific surveys.

Switzerland thought the Workshop interesting, but asked who would pay the costs and noted that the Scientific Committee did not give it high priority.

Dominica agreed with Switzerland, and supported the comments of Antigua and Barbuda and St Lucia.

St Vincent and The Grenadines pointed out that democracy means the majority rule, but minorities have rights and pay too. It thought lethal methods should also be considered.

South Africa thought a comparison between lethal and non-lethal methods would benefit from a well-informed review next year.

The Chairman of the Scientific Committee pointed out that these topics are discussed in many aspects of the Committee's work, including scientific permits and Greenland stocks, and with the priorities of JARPN and the AWMP, there will be an overload. A review in depth could be done in 2001.

Monaco thanked the delegations which had supported its proposal and it agreed to postpone it until 2001. It had no intent to move the emphasis, and suggested a new title 'Comparative Assessment of Lethal and Non-Lethal Methods Available for Whale Research'. The Monaco

Museum includes exhibits on harpooning and skeletons, and while the meeting could have been done by Monaco itself, it thought IWC involvement important.

18.3.8.5 OTHER

St Lucia described how there was difficulty in reaching consensus on the appointment of the Vice-chairman of the Scientific Committee this year, despite three meetings of the heads of delegations. The Norwegian scientist proposed, Prof Walløe, was not accepted because of the politics in the Committee, where since 1964 there had been a recycling of Chairmen from the USA, UK and Australia.

19. IWC'S COMPETENCE TO MANAGE SMALL CETACEANS

Switzerland introduced a document setting out its views on the IWC's competence to manage small cetaceans based on a legal analysis prepared by a Swiss attorney at law and lecturer at the University of Zurich Law School.

Since Switzerland adhered to the IWC, its delegation has consistently taken the view that nothing in the Convention nor in its 1956 Protocol would prevent the Commission from taking decisions regarding the management of small cetaceans.

This position was essentially determined by the perception of the Swiss authorities that 'whale' means any species of the zoological order Cetacea, because Article II of the Convention does not contain a definition giving a narrower meaning to the term. Also, there are similar environmental threats to all species and direct and indirect takes.

Sweden believed that the IWC should consider the conservation and management of all whale stocks. The Scientific Committee should continue its work, but it was not feasible for the Commission to manage small cetaceans, which would be better dealt with by cooperation with regional organisations. Finland agreed.

The Netherlands agreed with Switzerland, and the UK also agreed with the Swiss conclusions. It spoke of the valuable work of the Scientific Committee on small cetaceans, but believed the IWC's role is not itself to manage, which is the responsibility of national governments and the CMS, but it can provide scientific advice and knowledge. Monaco's view was close to the UK's, while the USA believed that the IWC has full competence on directed takes of all cetaceans, and supported the work of the Scientific Committee. New Zealand had a similar view and Austria agreed with the UK and the USA.

Brazil spoke of its cooperation in the Scientific Committee, including river dolphins, and also supported Switzerland over legal competence. Germany thought the Commission does have competence and looked for cooperation with other organisations and countries, and Italy believed IWC competence extended over all cetacean species.

Mexico was willing to share information, but reserved its position on the legal question. Spain also expressed a strong reservation, believing that the IWC has no competence on small cetaceans. Denmark agreed with Spain, as it thought the founding fathers never imagined that the IWC would manage small cetaceans. It favoured regional agreements, particularly since there has been no agreement for 13 years on the nine baleen whale species, so what prospect was there with 70 small cetacean species? Norway held similar views, while Dominica challenged the competence of the IWC to

manage small cetaceans, and recalled the resolution in the Dublin meeting. St Lucia and Antigua and Barbuda agreed.

France did not wish to formally extend the legal competence, Chile could not accept binding Resolutions, and the Republic of Korea preferred coastal states and regional bodies to have control as in the Law of the Sea.

Japan noted that the IWC has only 40 members compared with over 100 states with small cetaceans, and its activities are extending. It believed jurisdiction was for only the species in the list of nomenclature, and the others come under coastal state and regional management. The issue of interpretation should be discussed at a Conference of the Parties, but although it was outside the IWC mandate, it was prepared to cooperate but may reconsider its approach.

20. THE FUTURE OF THE IWC

The Chairman of the Commission, Mr Michael Canny (Ireland) reported that he had continued to discuss the so-called 'Irish proposal' informally with other Commissioners during the interessional period with a view to achieving consensus. However, consensus had not been reached, although there was some movement in understanding the different views and a will to move forward. He indicated that he will continue to work with delegations on this matter. Oman voiced its support for the Irish proposal.

Norway commented that the IWC is not adhering to the Convention, it has become a protectionist organisation with no will to lift the moratorium. Whaling is carried out by non-members so that the IWC is irrelevant. Norway is willing to continue in the Convention, but any compromise must not establish provisions incompatible with general international law. The continuing dysfunction is a concern to conservationists.

New Zealand spoke of the alleged slow progress on the issues of the RMS and small-type whaling, and the changed views on the international commons. The Commission can still reach decisions and negotiate so it is not hopelessly deadlocked. New Zealand is still prepared to talk on all aspects of the Irish proposal, and asked if Norway is prepared to talk about trade and Japan to discuss a possible end to research whaling.

Denmark supported a compromise allowing cautious limited commercial whaling in a safe procedure. All sides must give up something to keep the IWC alive.

The UK supported the comments by New Zealand. It had given much thought to the Irish proposal, but its ultimate aim is a permanent worldwide moratorium on all whaling other than aboriginal subsistence whaling. It saw no indication yet of an end to whaling on the high-seas, including scientific whaling; it strongly supported proposals for regional sanctuaries; and it wanted to encourage the emphasis of scientific advice to be directed away from management of stocks and more towards conservation issues. The Commission should continue assessment of the impact of environmental changes and have a greater involvement in small cetaceans. It believed whalewatching provides a benign and sustainable way of exploiting natural resources, and that the IWC should continue to concern itself in welfare issues and the development of more efficient and humane killing methods, particularly in aboriginal subsistence whaling. It thought that the IWC does have a future.

Spain believed that the IWC should control whaling all over the world to ensure the conservation and recovery of species, and consensus is needed.

The USA thanked the Chairman for his leadership. It was willing to join in discussions to maintain stocks at healthy levels, and spoke of the issues of trade, lethal scientific and pelagic whaling, and small cetaceans.

Japan noted the Irish proposal as the focus of discussion, and remarked on the use by the UK of the term conservation, which implies rational utilisation, as in CCAMLR. New sanctuaries are being proposed and a core group of four nations is opposed to whaling. There are negative elements in the Irish proposal such as permitting whaling only in coastal waters, halting scientific whaling, and monitoring the trade channels, but it hoped for compromise and the completion of the RMS.

St Vincent and The Grenadines wanted an identification of those countries opposed to a resumption of commercial whaling regardless of the RMS.

Chile wished to continue the search for consensus. It thought a picture is emerging and there is a need for flexibility in negotiation, not confrontation. It was hopeful for the future. Switzerland agreed with these comments and those of Spain and the USA. It noted increased whaling activities outside IWC control and supported the Irish proposal.

Australia commented on the issues which divide members. It supported some of the Irish proposal, but not the return of commercial whaling, and saw no basis for consensus. It hoped that this would not paralyse the other work of the IWC, where there had been solid work and achievement in the past year.

France looked to find a way out of the stalemate, with efficient protection of whales and continuity for communities which rely on whales. It suggested a procedural approach through a small group.

Sweden recognised that the IWC is the only internationally accepted body for the conservation of whales. It looked for a comprehensive solution based on the precautionary principle and sustainable use. Mexico supported these views.

Germany said that the package contains difficult elements for everyone. For it, renewed coastal whaling is one, and it looked for concessions from whaling countries. It wished for credibility of the IWC and the best use of its instruments to effectively conserve the whale stocks.

The People's Republic of China expressed its view that there should be active conservation and rational utilisation of whale resources, with sustainable development based on science as the way to step forward.

The Netherlands welcomed the Irish proposal as a basis for effective conservation. It would continue to play a constructive role, and opposed practices not adopted by the Commission. It supported research on the environment, measures to conserve threatened populations of small cetaceans, development of humane hunting methods and promotion of regulated whalewatching.

Antigua and Barbuda identified other problems. The IWC membership is too narrow, there is a need to attract new members, particularly developing nations, and it noted the money made by NGOs from the whaling issue rather than coastal states.

Finland supported the statements by Sweden, Germany and the Netherlands.

Monaco thought that the cessation of yearly meetings will not change attitudes. There is a need to change the rules, which will take time, with longer intervals.

Brazil wished to keep the spirit of cooperation, discussing all aspects, with intersessional consultations. South Africa also supported the efforts made to break the deadlock and for conservation of the whale resources.

Dominica thought the discussions only perpetuated the deadlock. There are cultural differences and need, and the Commission does not heed scientific advice, and it cited the RMP. Governments are not willing to compromise, and it shared the views stated by Antigua and Barbuda and Monaco.

Finally, St Lucia argued that the IWC is only surviving from year to year, it has postponed the RMS for another year, the finances are controlled by a core group and the membership is small. It commented on the UN scale salary of the Secretary and the high government contributions, and wondered about the future.

21. FINANCIAL STATEMENTS AND BUDGET ESTIMATES

The financial and administrative matters included in Agenda Items 21-24 were considered first by the Finance and Administration Committee. This met under the Chairmanship of Mr Ivor Llewelyn (UK) and was attended by delegates from 19 Contracting Governments.

21.1 Review of provisional financial statement, 1998/99

Key points of the Secretariat's presentation dealt with income, which exceeded the budget by £38,000, largely due to penalty interest charged on late financial contributions and receipt of voluntary contributions; expenditure, which was approximately £8,000 over budget; and extraordinary expenditure, stemming from the Commission's decision last year to draw on reserves by up to £50,000 to implement some elements of the Administrative review. The actual expenditure was £31,000.

There were some developments that had occurred since the Secretariat had arrived in Grenada, including the recovery of arrears of £20,000, additional voluntary contributions of £5,000, and an absence of expenditure on the Whale Killing Methods Workshop, which three together resulted in extra income roughly equivalent to the original deficit. The General Fund therefore remained unchanged at approximately £987,000.

The Finance and Administration Committee recommended approval of the Provisional Financial Statement, subject to audit.

21.2 Consideration of estimated basic budgets, 1999/2000 and 2000/2001

The Secretariat presented the proposed budget, noting that it took into account the Commission's strong overall financial position; the expressed wish of a number of members that membership costs not increase; and discussions at the 50th meeting reaffirming the target of maintaining reserves at the level of approximately six months' costs and taking measures to promote the reduction from the present high level to the target level.

The budget projected income similar to the current year's (after allowance for non-budgeted receipts, such as penalty interest on late contributions and voluntary contributions). It also assumed a similar level of activity for most expenditure items but with some significant expenditure variations. For example, the recruitment and selection of a new Secretary to

the Commission could entail a one-time cost of £60,000. The inclusion in Secretariat costs of the new Assistant Editor post and a provision for staff training are budgeted at £20,000 and £10,000, respectively. A rent review for the Secretariat has the potential to raise costs with effect from June 2000 by up to 50%. The Secretariat's telephone system requires upgrading, probably in 1999-2000, at an estimated cost of £20,000. IWC resolution 1998-6 instructed the Secretariat, in drawing up the provisional budget for 1999-2000, to make provision for the expenditure of £100,000 from the Commission's reserves to fund selected proposals recommended by the Scientific Committee for environmental research.

Germany expressed its concern with the IWC's budgetary practices, saying the present distinction between realised and assessed contributions should not be maintained, and that the Commission's high level of reserves show overbudgeting. It considered both to be unsound budgetary practices. Denmark voiced concern regarding the swift reduction of the level of general reserves.

Concerning the proposal in the budget to increase the meeting attendance fee for NGOs from £490 to £500, the USA expressed its displeasure at the increase, questioning the extra value NGOs would receive for the extra money and asking what the objective of the increase is. The Secretary responded that the primary purpose served by the increase was to keep pace with inflation; he added that it also brings the NGO fee closer to that paid by IGOs (£800/person), in accordance with the Commission's decision.

21.2.1 *Scientific programme*

The Chairman of the Scientific Committee went through a list of research projects and their associated costs. The proposed expenditures fell into two categories: items associated with the Scientific Committee's work over a number of years (regular expenditures); the other items associated with the Scientific Committee's recently developed Environmental Concerns programme (environmental expenditures).

The Chairman of the Finance and Administration Committee noted that the proposals under review were wide-ranging, and reminded delegates that the role of the Committee was to decide how much the Commission can afford, leaving to the Commission the debate over the endorsement of various proposals.

A long discussion led to the consensus view that countries had no problems with the regular expenditures. A spirited debate ensued, however, about the proposed environmental expenditures.

The Chairman of the Finance and Administration Committee eventually summarised the discussion, saying that there appeared to be general agreement on the amount of the total budget and on the items in it other than research, including the proposed fees for observers and press, and the proposed level of the severance pay provision. On research, the Finance and Administration Committee agreed the Scientific Committee's recommendations on regular expenditure. The amount to be spent on environmental research programmes, and the timing of any expenditure, would be examined carefully by the Commission as part of its consideration of those programmes.

In the Commission, Japan commented on the huge amount designated for the environmental fund, which it thought was a misuse and outside the Convention. It gave notice that it was considering withdrawing the SOWER vessels for other purposes.

The Chairman of the Commission reminded the meeting that a resolution on the environmental fund had been adopted last year.

21.2.2 *Assessment of contributions from Contracting Governments*

The Finance and Administration Committee noted the estimate of financial contributions provided by the Secretariat, recognising that the figures were dependent upon budget decisions by the Commission and final delegation sizes. They would be revised after the meeting.

Antigua and Barbuda asked that the Finance and Administration Committee give consideration to the idea of moving to the UN system of country assessments. Dominica agreed, asking for the establishment of a committee to investigate the possibility. St Lucia also agreed, pointing out that the IWC already follows the UN system so far as it concerns salaries and issues such as tax exemptions. If the IWC adopts one part of the UN system, it should adopt it comprehensively, averred Austria. Finally, St Vincent and The Grenadines pointed out that the assessments of some G-7 countries were lower than his own government's, and expressed the view that such a circumstance was clearly unfair.

Other countries, including the USA, Germany, New Zealand and the UK pointed out that the current system was entered into after long and difficult discussions, and said they would be reluctant to enter into any new discussions concerning the system of assessments. New Zealand further stated that the Commission would need much more information about the possible effects on the organisation of such a change, reminding delegates that the IWC was nearly insolvent a decade ago.

The Chairman of the Finance and Administration Committee concluded that views were split on the proposal by Dominica.

21.3 *Action arising*

In the Commission, Antigua and Barbuda introduced a proposal for the reassessment of membership contributions. The importance of the sea means that all states, and particularly developing coastal countries dependent on fishery resources, should be allowed to participate in international organisations such as the IWC. The current membership does not include all countries which hunt whales, in part because of the heavy financial burden of the present contribution system.

Its proposal was to re-examine the way in which contributions are assessed, and to consider adoption of a system more in line with that used by the UN and similar organisations. It offered a possible new system comprising a basic element of 10%, and 90% shared in accordance with the UN contribution rate.

Specifically, Antigua and Barbuda proposed that:

- (1) a committee be established by the Commission to make recommendations towards implementation of its proposed contribution system;
- (2) prior to the convening of this committee, members of the Commission should provide written comments to the Secretariat for consideration by the said committee.

St Lucia supported this proposal, stating that the right to manage whales and whaling is not just for the privileged few, and this was an opportunity to open to the world community. St Vincent and The Grenadines observed the reduction in its contribution under this proposal.

New Zealand wished to examine the proposal and the implementation of a specific system, noting that there might be others. Chile agreed.

The USA was sympathetic to the needs of developing countries, and noted the long discussions which had taken place in earlier years, but regretted the proposal by Antigua and Barbuda, although the issues are worthy of further consideration. The Netherlands had similar reservations but would not stand in the way, and Germany agreed with both New Zealand and the USA.

Argentina wanted to consider the proposal and any written comments before the next meeting.

France noted the unusual characteristics of the IWC, which takes account of the size of delegations and uses one language only. It could not support the proposal. Denmark also commented on the use of delegation size, but would not block future discussion.

Monaco had sympathy with the proposal and thought it useful to consider and make a comparative analysis. Mexico concurred. Spain had some doubts about using the UN system, while the Republic of Korea also thought the current system has some equity problems. Switzerland believed the contributions could be a problem particularly for developing nations to join.

Norway and Oman were also willing to discuss the proposal further, while Dominica and Grenada spoke in support.

The Chairman of the Commission concluded that there was wide support for looking at the options and issues raised by the proposal from Antigua and Barbuda for a reassessment of membership contributions, and asked for written comments.

The budget as presented in Appendix 11 was also adopted, including the core funding for research agreed under Agenda Item 16.

22. ADMINISTRATIVE MATTERS

22.1 Administrative review

The external review of the IWC's administrative systems and the Secretariat was completed in July 1998 and the report circulated to member Governments. The recommendations put forward by the Consultants, the Secretariat's response, specific comments from the Advisory Committee, a proposal from the Secretariat concerning a restructured Finance and Administration Committee, and one from the UK on improving interaction with the Scientific Committee were considered.

New Zealand noted that it had originally sponsored the idea of the review, and it shared the Secretariat's disappointment in the lack of guidance provided by the review while at the same time stating that it felt the tasks the review had proposed for the Secretary were excessive. New Zealand also noted that it had sponsored the idea of the Advisory Committee, and in its original conception it would have acted more as a supervisory, or executive committee, which could have served the role envisaged by the Consultants when they suggest more supervision of the Secretariat. New Zealand praised the Secretary for creativity in working on the review's recommendations.

22.1.1 Secretariat information exchange and publication systems

There was an exchange of views in the Finance and Administration Committee on current practices for reporting Commission meetings. Denmark praised the value of the Chairman's Report of the Annual Meeting in almost its

current form, asking only that it be changed to include resolutions that were voted down as well. This statement triggered a discussion about the time, cost, and relative value of the Chairman's Report as well as the Verbatim Record of the Annual Meeting.

There was unanimous praise for the Chairman's Report, and agreement that it should remain in its present form. The Verbatim Record, however, had fewer defenders. The Finance and Administration Committee considered the time and cost associated with the record and compared it with the report's utility and concluded that it was not cost-effective. The Secretary confirmed that the audio tapes of the meeting would remain available in the event of any disagreement about what had been decided, and would be sent to Contracting Governments at their request at no cost. The public would be able to purchase a copy of the tapes at a little above cost.

22.1.2 Meeting management and Agenda

There was general support in the Finance and Administration Committee for the recommendations for more proactive chairing, Agenda time-tabling, and discussion of issues in only one forum, subject to the comments below.

The Chairman of the Commission pointed out that once a resolution is passed it remains in effect in subsequent years unless contradicted by another resolution.

On the suggestion that the IWC make recommendations instead of resolutions on certain subjects, Australia proposed changing the word 'recommendations' to 'decisions'. The Secretary strongly supported the idea as a way to avoid the long discussions that sometimes occur on preambular texts, and that direct action within house can be taken by decision. Resolutions must remain, however, as they have the standing to be transmitted externally. The Chairman of the Finance and Administration Committee concluded that there was general support for these proposals; however, it would be important for decisions to be clearly identified as such.

22.1.3 Structure, duration, and frequency of the annual IWC and intersessional meetings

The Advisory Committee had concluded that the Technical Committee was redundant. Denmark, the UK and Norway agreed. The Chairman of the Finance and Administration Committee concluded that there was general support for this view.

22.1.4 Improving the Commission's interaction with the Scientific Committee

A paper presented by the UK proposed that either a new working group or the Technical Committee should review the Scientific Committee's report in detail and advise the Commission on all aspects of the Committee's work including priorities for research.

The Chairman of the Scientific Committee commented on the UK proposal, pointing to the following paragraph from the Scientific Committee's report:

A number of comments were made on this proposal. Concern was expressed that the proposal might result in the Committee's report being filtered before being received by the Commission. Some members suggested that adding an extra layer between the Committee and the Commission might hinder rather than improve communication between the Committee and the Commission. The Chairman of the Scientific Committee noted the difficulty already experienced in completing the Committee's report in time for the plenary session. The UK proposal would inevitably make this even more difficult.

The USA stated the need to be able to give direction to the Scientific Committee in the Plenary when the report of the Scientific Committee is presented. The Chairman of the

Finance and Administration Committee concluded that there was not sufficient support for the proposal to move forward.

22.1.5 A restructured Finance and Administration Committee

The Advisory Committee suggested the designation of a Budgetary Sub-Committee of the Finance and Administration Committee, made up of a small number of members to carry out a review of expenditure, forward budgets and scale of financial contributions. This would allow the full Finance and Administration Committee to endorse relatively quickly the findings of the Budgetary Sub-Committee and then to deal with all other issues referred to it.

New Zealand asked whether this could be a proper role for the Advisory Committee (as originally conceived), but the Chairman of the Commission stated his reluctance to give more work to the IWC's principals. A consensus was quickly reached that the idea for a Budgetary Sub-Committee, on a trial basis, would be recommended to the Commission.

22.1.6 Need for Annual Meetings

The Finance and Administration Committee then focused on whether the Commission needed to meet annually. A number of views were expressed. Norway stated that Annual Meetings will be necessary if the Commission resumes the management of commercial whaling. In the same vein, Japan questioned if any need for Annual Meetings exists if the IWC does not wish to resume the management of commercial whaling. Denmark noted that many issues remain to be resolved, such as the RMS. The UK asked to whom the Scientific Committee would report in off-years.

New Zealand suggested that the Secretary make a list of the range of issues likely to impact on the decision on Annual Meetings and to report on this next year. The Secretary said that he would prepare a draft document and circulate it during the year so the Commission could be ready for action at the next meeting. The Chairman of the Finance and Administration Committee noted that there was general support for New Zealand's proposal.

22.1.7 Strategic and financial planning

The Chairman of the Finance and Administration Committee noted that the Advisory Committee had felt that implementation of the recommendations in this area was a matter for the Secretary. If the Commission was not satisfied with his or her performance, the contract would not be renewed. This view was endorsed by the Finance and Administration Committee.

22.2 Recruitment of New Secretary

At a meeting of Commissioners held during the 50th Annual Meeting in Muscat, Oman in May 1998, it was agreed that the Advisory Committee would handle the matters associated with the advertising and recruitment processes entailed in the appointment of the new Secretary to the Commission.

Oman asked how the list of candidates was to be narrowed, and the Chairman of the Commission replied that the Advisory Committee would reduce the short-list to be presented to the Commission to three names in order of preference, after interviewing about eight. The Chairman of the Finance and Administration Committee noted that Commissioners would make the final selection, prompting a question from Antigua and Barbuda concerning the role of the Chairman of the Scientific Committee in the process. A

short debate ensued, which ended when the Chairman of the Commission stated that the decision is a function solely of the Commission.

The subsequent discussion focused on the content of the advertisement for the Secretary's job and the application procedure. Delegates debated the various characteristics they felt would make for an effective Secretary of the Commission and had different views concerning the wording of the solicitation and the application procedure. New Zealand, Australia and a number of other nations felt that the application process should be kept confidential to protect applicants and that there be a suggestion of accountability in the job description. To that end, the words 'in confidence' should be added to the advertisement, as well as a direction to address applications to the Chairman himself, instead of simply the IWC.

New Zealand urged that the Secretary be employed under a formal performance-related contract and that this would be capable of supervision either by the Chairman of the Commission and/or the Advisory Committee. There was some discussion as to whether such a contract was capable of adequate supervision. Finally, it was agreed that the supporting material should include reference to a contract and that this would be phrased to include a performance-related contract if that is considered appropriate. The second paragraph of the job description was therefore amended to read 'The appointment will be for an initial contract period of three years with the possibility of prolongation ... The point on the scale will be determined by qualifications and experience. The contract would be reviewed after the initial three-year period.'

Austria asked whether the Secretary's job justified D1 on the UN scale, and the Chairman of the Commission replied that if the Commission wants the best it must pay for the best. He also said the Secretary's salary level was a reflection of the prestige of the organisation.

Austria also asked why only persons from member states can apply for this post as this is unusual within several other conventions. The Secretary responded that this restriction follows the procedures of IMO (International Maritime Organisation), the major UN organisation based in the UK, which is used by the IWC Secretariat for guidance in administrative matters.

The Chairman of the Finance and Administration Committee concluded that there was general agreement on the recommended procedure and advertisement, subject to the minor amendments detailed above.

In the Commission, Japan pointed out that in the UN appointments are usually for three years, renewable for two terms, whereas the present Secretary has a permanent appointment. It argued for a one year trial period in the first three-year term.

The Chairman of the Commission indicated that the Advisory Committee will work out these details.

Monaco remarked on the qualification that only persons from IWC member states could apply. IMO has more than 100 countries represented and the IWC should seek the best talents and not have this restriction, but the Chairman noted that this idea was not supported.

22.3 Guidelines for Opening Statements from observers

At the 50th Annual Meeting, the Commissioners requested that the Secretary draft guidelines for Opening Statements by observers. In response, the Secretary offered the following proposal:

Opening Statements may be submitted by Observer organisations which will be included in the official documentation of the Annual or

other Meeting concerned. They shall be presented in the format and the quantities determined by the Secretariat for meeting documentation.

The content of Opening Statements shall be relevant to matters under consideration by the Commission, and shall be in the form of views and comments made to the Commission in general rather than directed to any individual or group of Contracting Governments.

He also offered an alternative solution to the problem, which is adopted from a suggestion in the Administrative Review:

Consideration should be given to not including NGO Opening Statements within the Commission's official issued set.

The Chairman of the Finance and Administration Committee commented that the key issue was whether the Opening Statements of observers were included in the official documentation of the IWC. Dominica preferred the alternative solution, saying official documents should reflect the positions of governments. Antigua and Barbuda agreed. Australia disagreed; as the organisation allowed observers to participate in the meeting, their participation should be acknowledged as long as it is clear that the statements are made by observers. The USA agreed with Australia, saying the IWC had a long history of allowing NGOs to make statements.

Japan announced it could agree to the draft guidelines, but with the caveat that an observer's statement should be withdrawn if it does not comply with paragraph 2 of the guidelines. St Lucia asked whether the draft guidelines simply maintained the status quo, and the Chairman of the Finance and Administration Committee replied that such was indeed the case. However, the guidelines were now codified. The Chairman stressed that if a statement does not conform to the guidelines, it is not accepted and does not form part of the official record. New Zealand added that the statement would be subject to *ex post facto* review if an objection is lodged. St Lucia then argued that the damage would already have been done. The Chairman closed the discussion by referring the matter to the Commission.

In the Commission, it was agreed to refer this matter to the Finance and Administration Committee to consider again next year.

22.4 Communications

22.4.1 General

Following a review last year, all standard communications to Commissioners and Contracting Governments have been by electronic means (e-mail or fax), with a hard copy following in the post. All communications to the members of the Scientific Committee are now conducted via e-mail alone.

In view of the lateness of the hour, the Chairman proposed that the scheduled review of the operation of these procedures be postponed until next year.

22.4.2 Between the Scientific Committee and the Commission

A paper produced by the Secretariat dealt with the identification of the Commission origin of each Agenda Item considered by the Scientific Committee; identification of future work priorities; and informal contact meetings on specific topics. Interventions in the Finance and Administration Committee centred on the last topic, with delegates agreeing that in principle the idea of informal meetings with Commissioners is a good one.

The Commission agreed to review these matters again next year.

22.5 Annual Meeting arrangements

At the 49th Annual Meeting the Commission decided that the Press would be allowed access to the next meeting on the same basis as NGOs, given access to documents, and charged a nominal fee equal to the costs of producing the documents they require. The Commission agreed that it would review the matter in light of experience at the 50th Annual Meeting.

The Chairman of the Finance and Administration Committee suggested, however, that the matter would be best reviewed at the next meeting, when the Commission would have two years of experience with the procedure. This was agreed.

In the Commission, Japan proposed expansion of press access to the Commission meetings through video coverage of all plenary sessions, and for those after the opening, one or two representatives should be chosen by the host Government to provide video footage for all press companies. There was general support from Norway, USA, France, Switzerland, Solomon Islands, Denmark, Finland, Brazil, St Lucia, Italy and Chile. However, a number of points of detail were raised, including who pays the costs, the single language used, the question of copyright, editing, and avoidance of disruption. Japan thought that funding could come from the reserves instead of paying for research on the environment, while the Netherlands thought the question was press access, not the cost issue.

The Chairman thought there was general acceptance of the idea which was therefore forwarded to the Advisory Committee for transmission to the Finance and Administration Committee for consideration at the next meeting in Australia.

22.6 Observer status of Greenpeace

Japan introduced a document to the Commission setting out its version of a protest action by Greenpeace activists who attached themselves to the mooring lines of the research mother ship *Nisshin-maru* when it made an emergency port call in Noumea, New Caledonia, following a fire. The protesters also attached themselves to the anchor chain of a catcher boat and entangled a chain round the propeller. Japan requested that the Commission deny observer status to Greenpeace because of these actions.

New Zealand had heard other versions of these events and France thought that Japan had dramatised the incident. There was no damage to the ship or persons, the demonstration ended spontaneously, was for publicity only and there was no disturbance to public order nor sabotage as such. It saw no justification to remove observer status from Greenpeace, nor to remove NGOs protecting whales, since there was no real threat to Japan.

The USA pointed out that this was a non-violent action far short of sabotage or terrorism by Greenpeace, which had offered assistance at the time of the fire. It thought it best to drop the proposal. The Netherlands spoke in similar vein, as did New Zealand, who commented that this was a minor affair and that more robust demonstrations had occurred in its own country. The UK regarded the incident as a peaceful demonstration, with no record of arrests or damage, so Greenpeace should not be excluded. Australia concurred.

Norway recalled that its vessels had been harassed by Greenpeace in the past and the *Rainbow Warrior* was in the North Sea now. Antigua and Barbuda asked how members could engage in debate without fear, and pointed out that trespass had occurred. Dominica agreed.

Japan responded that many irresponsible statements had been made. The actions had been against international and domestic laws, including trespass, and the vessels had been immobilised for days. It detailed a catalogue of numerous similar actions against whaling and fishing vessels and asked if such an NGO is still acceptable. St Lucia supported Japan, but the Chairman believed that a majority were against the proposal. Japan thought the evidence was simple, clear and transparent, but when the matter was put to the vote it was defeated, with 9 votes in favour, 22 against and 3 abstentions.

22.7 Action arising

In the Commission, in addition to noting the comments described above and endorsing the decisions with respect to the individual items, the following observations were made and conclusions drawn:

- (1) The USA and Japan spoke of the value of the Verbatim Record of the plenary sessions, where it is easy to locate topics. It was agreed to continue with the transcript this year and to consider the matter again next year.
- (2) It was agreed to experiment next year by not convening the Technical Committee.
- (3) The Chairman of the Commission announced that he had asked Mr Daven Joseph (Antigua and Barbuda) to convene the Contributions Sub-Committee, and the Hon. Jim McLay (New Zealand) to convene the Budgetary Sub-Committee.

23. AMENDMENT TO THE RULES OF PROCEDURE

23.1 Voting procedures

The Government of Monaco had proposed the following amendment to Rule of Procedure E.3.(d) (new text italic):

Votes can be taken by a show of hands, or by roll call, as in the opinion of the Chairman appears to be most suitable. The election of the Chair, Vice-Chair, the appointment of the Secretary of the Commission, and the selection of IWC Annual Meeting venues shall all proceed by secret ballot.

Japan announced in the Finance and Administration Committee that it would propose an amendment during the Plenary session. Given the political nature of this issue, the Chairman of the Committee suggested that it be referred to the Commission.

In the Commission the USA stated it was in favour of transparency, recalled the long history of open debate, and supported Monaco. Germany spoke similarly.

Norway proposed that the secret ballot should be 'upon request by a Commissioner' and that 'if at least five Commissioners so request any other vote shall proceed by secret ballot.' These amendments were supported by Japan.

Denmark preferred the maximum transparency as a general rule and opposed a secret ballot. It was against the last addition and did not like to change the tradition for election of the Chairman and Vice-Chairman, was hesitant about secret voting for the meeting venue but could accept it for the appointment of the Secretary.

Italy and Finland wished for maximum transparency but could go along with a vote for officers.

New Zealand supported Monaco and Norway since this conformed with the 1982 UN draft Rules of Procedure for election of officers. It was in favour of the freedom of

environmental information and since views expressed were well known, a secret vote is not necessary to protect anyone's position. Sweden, the Solomon Islands and the Netherlands agreed, the latter favouring the first Norwegian amendment.

Antigua and Barbuda spoke of the countries vulnerable to threats by individuals and organisations, and supported Norway so as to vote without fear.

Brazil was in favour of transparency and so did not support the Norwegian proposal, while Germany wished to safeguard transparency and so supported the Monaco proposal.

The Chairman concluded that, with support indicated by Austria, Dominica, Grenada, Ireland, South Africa, Spain, Switzerland, UK and USA, the first addition by Norway was agreed.

The second addition proposed by Norway was then put to the vote, but was not adopted, there being 9 votes in favour, 21 against with 1 abstention. Spain explained its vote against was to improve transparency.

A proposal by Japan to amend the original Monaco text by adding:

and proposals to amend the Rules of Procedure may be decided by secret ballot. For these matters a secret ballot shall be used if requested by a Commissioner and seconded by at least five other Commissioners

was also defeated with 11 votes in favour, 22 against and 1 abstention. Denmark stated that it accepted the majority position, even though it felt it was not transparent enough, and the Chairman confirmed that all the reservations expressed would be noted.

23.2 Environment Research Fund

By IWC Resolution 1998-6 the Commission agreed to consider at the 51st Annual Meeting the establishment of a dedicated Environment Research Fund to facilitate research on environmental change and cetaceans as well as the attendance at the Scientific Committee and other related meetings of Invited Participants with relevant expertise in the priority areas of the Standing Working Group on Environmental Concerns.

In the Finance and Administration Committee, Japan stated that it was not happy with the creation of this fund. It would propose at a later stage a modification of the name of the fund. It was Japan's view that the creation of the fund requires the amendment of the Financial Regulations. The USA explained that this subject was under this Agenda Item in case a change to the Rules of Procedure were needed, which would be the case if a stand-alone fund were established. The alternative would be to earmark funds within the existing research fund, which could be done by a simple Commission decision. The Netherlands agreed with the USA, and it supported the alternative solution.

Denmark stressed its green credentials, but said it was very concerned with this item because of its belief in free choice among scientists. It was unhappy with the idea that scientists will be able to propose research in only one area. The Chairman of the Finance and Administration Committee pointed out that unless a country proposes a change to the rules of procedure, the Committee does not have to deal with the issue. The Chairman closed the discussion by saying it appeared unlikely that a proposal to change the Rules of Procedure to establish a separate environmental research fund would emerge.

In the event, the Commission took no further action.

23.3 Observers

Last year the Commission decided, by IWC Resolution 1998-12, that the Advisory Committee consider the following addition to the Rules of Procedure and report to the 51st Annual Meeting:

The accreditation of an international organisation referred to in [Rule of Procedure] C.1.(b) would be subject to immediate review and decision upon submission to the IWC by a Contracting Government of legal evidence that such an organisation has violated the laws of the Contracting Government or threatened any individual; or upon submission of documentation that such an organisation has caused economic hardship to the Contracting Government because of participation or views expressed in the IWC.

In the Finance and Administration Committee the Netherlands mentioned that, with the USA, it would table a proposal different from the above. Japan announced that it too might propose a different rule. The Chairman of the Commission noted that the Advisory Committee had decided it was an inappropriate topic for that committee. The Chairman of the Finance and Administration Committee then ended discussion by referring the matter to the Commission.

In the Commission the USA and the Netherlands proposed to amend Rule of Procedure C as follows:

(a) Add a new sentence to Rule C.1.(b):

Once an international organisation is accredited, it remains accredited until the Commission votes to revoke the organisation's accreditation.

(b) Add a new Rule C.2:

Observers accredited in accordance with Rule C.1.(a) and (b) are admitted to all meetings of the Commission and the Technical Committee, and to any meetings of subsidiary groups of the Commission and the Technical Committee, except the Commissioners-only meetings and the meetings of the Finance and Administration Committee.

The USA believed that revoking accreditation is a political action, and observers should be admitted to all except Commission only and the Finance and Administration Committee to allow proceedings to be transparent. It disagreed with the suggestion from the Administrative Review that observers should be restricted to the plenary only, and it should not be possible for one delegation to bar an observer. It confirmed that these proposals do not apply to the Scientific Committee, which has its own rules.

The Secretary received confirmation that the present arrangement of retaining an observer on the invitation list up to two years after its last contact with the Commission is acceptable.

Norway thought the present rules function well, including the need for unanimous agreement on admission of observers, so it thought there was no need for change. Japan opposed the proposals which it saw as a violation of minority rights, and Denmark stated that it would abstain from a vote because it would have preferred to discuss an alternative Norwegian proposal first.

The proposed amendments were adopted by 21 votes in favour, with 9 opposed and 4 abstentions.

Norway then introduced a proposal for a new paragraph C.1.(c) worded to reflect the text of last year's Resolution for immediate review and action for behaviour resulting in hardship.

Antigua and Barbuda expressed its disappointment that the Advisory Committee could not handle this matter and the procedure just followed. Denmark suggested deleting the text following the semi-colon referring to economic

hardship, which Norway still thought had merit. The UK queried some of the language proposed; who would carry out the immediate review and decide? The text was ambiguous concerning legal evidence and violating laws, and it would prefer to leave the matter to the procedure already decided. South Africa had similar concerns over the language. The USA found the narrow approach suggested difficult to accept, Switzerland had similar views, while it was sympathetic to the concerns of small states, and the Netherlands thought the proposal was an unnecessary restriction on how to handle such cases.

St Vincent and The Grenadines thought that the Commission should draw the line at economic sanctions, and St Lucia also supported Norway, since Small Island Developing States were convinced that action must be taken against such perpetrators and it was already agreed to admit observers to all meetings. Dominica expressed its support to strengthen the arguments put forward last year. Japan recalled that it had been libelled in a document last year which led to the Resolution resulting in this text, and wondered why governments were opposed now. Some NGOs go too far, and it cited the threats to its research vessel damaged by fire and the leaking of confidential information from a preliminary meeting this year. The Solomon Islands pointed out that it lacked the resources to counter these problems and thought Norway had provided the mechanism. Antigua and Barbuda agreed, stating that less developed members need protection and looked for cooperation in sustainable use of the ocean resources. The People's Republic of China gave its support in principle, seeking to obtain a balance between the NGOs and Contracting Governments in an orderly manner.

After determining that the deletion proposed by Denmark had not been seconded or accepted by Norway, the proposal was put to the vote and was lost by 12 votes in favour to 14 against, with 7 abstentions. Argentina explained that its lack of support did not imply a lack of sympathy and consideration for those affected.

On 26 May the Chairman notified the Commission that demonstrators representing Breach Marine Protection had forced their way into the Secretariat offices in Cambridge and had to be removed by the police. This was not acceptable behaviour by an NGO, and he proposed that the Commission should revoke the accreditation of Breach. This proposal received overwhelming support from the Commission.

A letter signed by many of the NGOs attending the annual meeting also condemned the action.

23.4 Scientific Committee

The Chairman of the Scientific Committee introduced the revised proposals for amendments to the Rules of Procedure of the Scientific Committee. Delegates in the Finance and Administration Committee were encouraged to comment on the changes by the Scientific Committee to its rules.

Australia mentioned that it was glad to see that the language of the preambular clauses had been amended since last year to reflect more closely the Convention text. It further commented that paragraph A.6.(g) of the draft should be further examined. In particular, Australia considered its reference to the Chairman ruling Invited Participants out of order was inappropriate in a letter of invitation. It was agreed that the relevant phrase 'the Chairman may at his/her discretion rule them out of order' would be deleted. In response to a question from the UK, the Chairman of the Scientific Committee confirmed that the proposed procedure (set out at the end of paragraph A.6.(b)) of notifying the governments of domicile of Invited Participants was

intended simply to provide more flexibility within the budget and not as a means of vetting or vetoing participants.

Japan expressed concerns regarding Section F of the proposed Rules, entitled Review of Scientific Permits. It agreed with the proposed changes in principle, but wanted to retain the ability for special permits to be reviewed by postal procedures, e-mail or fax. The Chairman of the Scientific Committee responded by saying that the Scientific Committee believed that past experience had shown the need for face-to-face dialogue in the review process, as such discussions had often led to improvements in proposals.

Antigua and Barbuda and Dominica expressed their concern over the proposed rule F.2 that stated: 'The review process shall take into account guidelines issued by the Commission,' questioning whether that implied a sort of censorship over IWC scientists. The Chairman of the Scientific Committee did not consider that Commission guidance, such as IWC Resolutions 1986-2 and 1995-9, amounted to censorship.

The Chairman of the Finance and Administration Committee noted that the proposed amendments to the Rules of Procedure of the Scientific Committee, as amended above, were endorsed by the Committee and recommended for adoption by the Commission.

In the Commission, Japan repeated its support in principle for the amendments but again expressed its concern over the review process for Special Permits, especially if the annual meeting of the Scientific Committee was held in the Autumn again.

The People's Republic of China questioned the reference to the domicile of Invited Participants, especially if it were not a Contracting Government, and why not nationality? The Secretary explained the present procedure and why the Commission had decided it preferred the place of domicile.

23.5 Action arising

The decisions on the various sub-items of the proposed amendments to the Commission's Rules of Procedure are described above. The texts of the revised Rules adopted are included in the latest published version of the Rules of Procedure from pp. 93-103 of this volume.

The Rules of Procedure of the Scientific Committee were also adopted by the Commission and are published in this volume.

24. DATE AND PLACE OF ANNUAL MEETINGS

24.1 52nd Annual Meeting

Australia had offered to host the 52nd Annual Meeting in Adelaide, from July 3-6, 2000, with associated meetings from June 12. Information materials were provided to delegations. The Chairman expressed the Commission's gratitude to Australia for the invitation.

The Secretary noted that he had drawn up a plan that allowed the Plenary session of the Annual Meeting to be whittled down to four days, and had circulated a proposed timetable of meetings for the 52nd Meeting.

24.2 53rd Annual Meeting

There are as yet no offers to host the 53rd Annual Meeting.

24.3 Time of Annual Meeting

Last year Denmark suggested that the Finance and Administration Committee might consider if meetings could be held other than in the Northern Hemisphere summer. This prompted some discussion in the Committee, with Denmark adding that the original purpose of the summer meetings was in order to set quotas for Antarctic stocks out of season. Since the Commission now sets only aboriginal quotas, perhaps now is the time to move to meetings during the Northern Hemisphere winter. The Netherlands noted that a summer meeting has the advantage of not interfering with what is ordinarily a very busy winter schedule of meetings. Antigua and Barbuda agreed with the Netherlands, and the Chairman closed the discussion.

25. ADOPTION OF REPORT OF THE FINANCE AND ADMINISTRATION COMMITTEE

In adopting the report of the Finance and Administration Committee, the Commission took the opportunity to express its thanks to the retiring Chairman of the Scientific Committee, Mr John Bannister (Australia). He in turn recorded his appreciation of the work of his Committee colleagues, the Scientific Editor, Secretary, Secretariat, and wished his successor, Dr Judy Zeh (USA), well.

26. ADVISORY COMMITTEE

At the end of his two-year term of office, the Commissioner for Mexico, Ambassador Santiago Oñate, was succeeded by the Commissioner for the Netherlands, Mr Fer von der Assen.

27. ANNUAL REPORT

The Secretary presented the draft of the Annual Report for 1998-99, covering the period since the 50th Annual Meeting in Muscat, Oman. This was accepted, subject to any amendments notified.

28. ANY OTHER BUSINESS

There was no further business, and after St Lucia expressed the interest of the Caribbean states in hosting the 53rd Annual Meeting, Japan spoke in appreciation of the effort by Grenada in hosting this meeting, the Chairman and the fairness of the Chairman of the Scientific Committee. The meeting was then concluded.

29. AMENDMENTS TO THE SCHEDULE

The amendments to the Schedule adopted at the meeting are listed in Appendix 12.

Appendix 1

REVISED ACTION PLAN ON WHALE KILLING METHODS

A. Equipment and Methods

- (1) Encourage continued cooperation between Japanese, US, Danish and Norwegian scientists to refine the design of penthrite grenades as far as possible.
- (2) Continue improving accuracy of delivery of penthrite grenade harpoons, including assessment of refined sighting equipment suitable for rapid action under conditions encountered at sea. Support and encourage the development and implementation of programmes to provide training in the safe handling and effective use of killing devices including the penthrite grenade and in other aspects of the hunt.
- (3) Continue to review constraints on shooting distance and relative orientation of vessel and whale and encourage reducing times to death.
- (4) Continue to review effectiveness of secondary killing methods with a view to reducing times to death in whales and encourage the application of the most effective methods.

B. Indication of insensibility and death

- (5) Develop better criteria for determining the onset of permanent insensibility in whales, using physiological and behavioural observations.

C. Assessment of cause of death in relation to observed time to death

- (6) Where possible, examine the effects of trauma, and its consequences, caused by harpoons and other devices used to capture whales, and its relationship to the reactions of the captured whale. Develop standardised guidelines for recording major indications of death.

D. Collection and provision of information on time of death

- (7) Encourage collaboration between technical and scientific experts with a view to suggesting evidence based guidelines for the collection and dissemination of

information in relation to both primary and secondary killing methods in forms that allow the effectiveness of different methods to be compared. The data should be presented to the maximum extent possible with statistical analysis that allows independent appraisal and analysis.

- (8) Encourage collection and presentation of struck and lost rates and standardised time to death records in all aboriginal subsistence catches of whales and undertake assessment of requirements for controls on the use of rifles to kill unsecured whales.
- (9) Encourage the incorporation of data collection and reduction of struck and lost rates in initiatives in Greenland relating to the beluga and narwhal hunts.

E. Assessment of physiological status of hunted animals

- (10) Develop suggested guidelines for, and where possible implement collection of representative biological samples from whales in extremis with an aim to determining reliable indices of stress for animals killed in whaling operations.

F. Next steps

- (11) The Workshop participants encourage the IWC to hold a further Workshop in 3-5 years and to call for improved data collection, analysis and provision in order to evaluate progress made in improving whale killing methods. To emphasise the technical and scientific nature of the Workshop it should be separated in time from the IWC Annual Meeting and Working Group sessions; for example, immediately preceding a meeting of the Scientific Committee. In the meantime information should be provided to the appropriate technical Working Group.

Appendix 2. IWC Resolution 1999-1

RESOLUTION ARISING FROM THE WORKSHOP ON WHALE KILLING METHODS

NOTING that the terms of reference for the 1999 IWC Workshop on Whale Killing Methods included the consideration of all methods of killing currently in use in whaling or known to be in development, and specified that a comparative analysis of the methods be undertaken with a view to improving whale killing techniques and minimising times to irreversible insensibility and death;

RECALLING IWC Resolution 1997-1 which urged aboriginal subsistence whalers to do everything possible to reduce still further any avoidable suffering caused to whales in such hunts;

RECOGNISING the efforts made by some countries to provide information on research and improvements in hunting methods;

WHEREAS the Workshop submitted its report, IWC/51/12, to the Commission for consideration;

NOW THEREFORE the Commission:

COMMENDS the Report of the Workshop and accepts the 11 point Action Plan (which appears as Appendix 1 of the Chairman's Report of the 51st Annual Meeting) as the basis for advice to members of the IWC.

ENCOURAGES where possible the submission to the annual meetings of the Working Group on Whale Killing Methods and Associated Welfare Issues, and future Workshops of relevant information such as:

- (i) number of whales killed by each method;
- (ii) number and proportion of whales killed instantaneously;

- (iii) time to death for each animal not killed instantly;
- (iv) number of whales targeted and missed;
- (v) number of whales struck and lost;
- (vi) calibre of rifle where used and how many bullets used; and
- (vii) methods used to determine unconsciousness/time of death.

ENCOURAGES the development of more accurate indicators for determining time to death other than cessation of movement.

RECOGNISES the difficulty in some aboriginal subsistence hunts of obtaining time to death information; and notes that, where it can be assessed, the lack of information regarding time to death on aboriginal subsistence hunts prohibits an assessment of any improvement in these hunts.

ENCOURAGES all Contracting Governments to provide appropriate technical assistance to reduce time to unconsciousness and death in all aboriginal subsistence whaling.

Appendix 3. IWC Resolution 1999-2

RESOLUTION ON SPECIAL PERMITS FOR SCIENTIFIC RESEARCH

WHEREAS Paragraph 1 of Article VIII of the International Convention for the Regulation of Whaling (Convention) provides that, notwithstanding anything contained in the Convention, any Contracting Government may grant to any of its nationals a Special Permit authorising that national to kill, take and treat whales for the purposes of scientific research, subject to such other conditions as the Contracting Government thinks fit;

WHEREAS Paragraph 30 of the Schedule to the Convention provides that all proposed Special Permits be reviewed by the Scientific Committee;

WHEREAS Paragraph 3 of Article VIII also requires that each Contracting Government shall transmit to such body as shall be designated by the Commission, insofar as is practicable and at intervals of not more than one year, scientific information available to that Government with respect to whales and whaling, including the results of research conducted pursuant to Paragraph 1 of Article VIII;

and,

WHEREAS the Scientific Committee receives and reviews information provided by Contracting Governments under Paragraph 3 of Article VIII and reports on this to the Commission;

NOW THEREFORE, the Commission:

REQUESTS the Scientific Committee, with respect to all Special Permit Research Programmes, to provide advice to the Commission, on the research to be undertaken pursuant to any proposed Special Permit or that has been undertaken in respect of any Special Permit, as to whether the information sought in the research programme under each Special Permit is:

- (1) required for the purposes of management of the species or stock being researched; and
- (2) whether the information sought could be obtained by non-lethal means.

Appendix 4. IWC Resolution 1999-3

RESOLUTION ON WHALING UNDER SPECIAL PERMIT

NOTING that since the 50th Meeting in May 1998, the Government of Japan has issued new Special Permits under the provisions of Article VIII of the Convention for scientific research in the Southern Ocean Whale Sanctuary and the North Pacific Ocean;

NOTING also that information provided to the Whale Killing Workshop in May 1999 indicates that only 30% of

whales are killed instantaneously in the JARPA and JARPN programmes;

NOTING FURTHER that the review of ethical considerations with respect to scientific research, prepared by the Secretary of the IWC in 1999, concludes that 'the broad sense of the legislation, guidelines and codes of conduct which exist emphasise causing the minimum of

stress and distress, suffering and pain, and at the same time considering if the research results can be achieved using fewer animals or by other (non-lethal) means';

RECALLING that grave concerns have been expressed by eminent members of the international scientific community and many others over the continuation of lethal whale research programmes, especially in areas designated as Sanctuaries in paragraph 7 of the Schedule;

NOW THEREFORE the Commission:

REQUESTS that the Government of Japan refrain from issuing any permits in the 1999/2000 seasons for the take of minke whales in the Southern Ocean Whale Sanctuary and the North Pacific Ocean.

Appendix 5. IWC Resolution 1999-4

RESOLUTION ON HEALTH EFFECTS FROM THE CONSUMPTION OF CETACEANS

NOTING that while the consumption of cetacean products may have positive health effects, scientific evidence demonstrates that some communities may be faced with health problems arising from the high levels of organic contaminants and heavy metals present in those products in their diet;

RECALLING that IWC Resolution 1998-11 expressed the Commission's concern about human health effects from the consumption of cetaceans, invited Contracting Governments to submit information to the IWC and asked the Secretariat to correspond with the WHO and other appropriate authorities;

NOTING that regulatory limits for contaminants in food are set by competent national and international authorities;

NOTING that the Scientific Committee is the appropriate body to review and provide to the competent authorities information relevant to the health of cetaceans relating to chemical contaminant burdens;

NOW THEREFORE the Commission:

CALLS ON relevant countries to take measures to reduce pollution that may cause negative health effects from the consumption of cetacean products;

AGREES to keep under review, under the permanent Agenda Item on Environmental Concerns, all effects on Human Health from the consumption of cetacean products;

REQUESTS the Scientific Committee to receive, review and collate data on contaminant burdens in cetaceans and forward these as appropriate to the WHO and competent national authorities, and to report on this matter to the Commission;

ENCOURAGES Contracting Governments, other countries and relevant organisations to continue to forward relevant data concerning contaminants in cetaceans to the Scientific Committee; and

INSTRUCTS the IWC Secretariat to send this Resolution to the WHO Secretariat.

Appendix 6. IWC Resolution 1999-5

RESOLUTION FOR THE FUNDING OF HIGH PRIORITY SCIENTIFIC RESEARCH

RECALLING the directives by the Commission to the Scientific Committee and its Standing Working Group on Environmental Concerns (SWGEC) to consider and act on all priority areas for assessing the impact of environmental change on cetaceans;

NOTING that, while it has identified a number of priority areas that need to be addressed in future years, the SWGEC has agreed to focus on one or two priority topics for consideration at each meeting in order to ensure maximum effectiveness of the working group;

NOTING that, at the 51st Annual Meeting, the SWGEC identified, and the Scientific Committee strongly endorsed, its research priorities as:

(1) SOWER 2000, a collaborative, interdisciplinary, international survey programme in the Southern Ocean with CCAMLR and Southern Ocean GLOBEC; and

(2) POLLUTION 2000+, an interdisciplinary programme of work to investigate pollutant cause-effect relationships in cetaceans;

RECOGNISING that, in order to research and provide recommendations to the Commission on these topics, as well as additional priorities, the Scientific Committee will need additional funds to allow it to initiate research programmes and to invite participants with relevant expertise in these priority areas; and

RECALLING that the Commission has agreed that the Scientific Committee should develop a cooperative research programme that will enable it to provide advice to the Commission on stock structure and abundance of fin and minke whales off West Greenland;

NOW THEREFORE the Commission:

ENDORSES the SOWER 2000 and POLLUTION 2000+

research programmes recommended to it by the Scientific Committee;

DECIDES to provide £126,000 from its budget for 1999/2000 as core funding for research on environmental threats to cetaceans, of which £100,000 shall be withdrawn from the Commission reserves;

URGES Contracting Governments, other governments, international organisations and other bodies to contribute financially and in kind to these programmes;

DIRECTS the Chairman of the Scientific Committee to ensure that scientists with relevant expertise in the priority areas of the SWGEC are adequately represented in the list of Invited Participants to the Scientific Committee; and

AGREES to the feasibility study recommended by the Scientific Committee concerning research into fin and minke whales off West Greenland and, in the light of the results, to give due priority to research on these issues in 2000/2001 and subsequent years.

Appendix 7. IWC Resolution 1999-6

RESOLUTION ON COOPERATION BETWEEN THE IWC AND CITES

WHEREAS it is the purpose of the International Whaling Commission to provide for the effective conservation and management of whale stocks;

WHEREAS the IWC is the universally recognised competent international organisation for the management of whale stocks;

ACKNOWLEDGING with satisfaction that all species of whales in the Schedule to the IWC have been listed in Appendix I of CITES (with the exception of the West Greenland stock of minke whales, which is listed in Appendix II by CITES) pursuant to and in recognition of the establishment of zero catch limits for commercial whaling agreed by the Contracting Governments to the IWC, and other decisions of the IWC relating to the status of great whale species;

WHEREAS by virtue of the inclusion of these species in CITES Appendix I and Resolution Conf. 2.9, CITES requires that Parties not issue any import or export permits for commercial trade in any whale stocks for which the IWC has set zero catch limits;

WELCOMING the recent decision by the 10th meeting of the Conference of the Parties to CITES to uphold CITES Resolution Conf. 2.9;

WELCOMING as well the recent decisions of the 10th meeting of the Conference of the Parties to CITES (Decisions 10.40-10.43) that recognised the need for international cooperation in monitoring and controlling the illegal trade in whale meat;

RECOGNISING that the IWC has made progress toward completing the Revised Management Scheme, specifically by the endorsement of the Revised Management Procedure, by the revision of the requirements and guidelines for conducting surveys and analysing data within the Revised Management Scheme, and by the clarification of arrangements to ensure that total catches over time are within the limits that would be set under the Revised Management Scheme;

NOW THEREFORE the Commission:

RECOGNISES that the IWC management regime prior to the establishment of zero catch limits for commercial whaling led to the global demise of the whale stocks;

FURTHER RECOGNISES that the IWC has not completed the necessary measures to ensure that commercial whaling catch limits are not exceeded, that whale stocks can be adequately protected, and that all whaling by IWC member countries is brought under effective IWC monitoring and control;

RECOGNISES the important role of CITES in supporting the conservation of whale stocks and the IWC's management decisions, and reaffirming the importance of continued cooperation between CITES and IWC;

RECOGNISES as well the important role of CITES in detecting illegal trade in whale meat through inclusion of whale species in CITES Appendix I;

EXPRESSES its appreciation to the Conference of the Parties to CITES for its continuing reaffirmation of the relationship between CITES and the IWC;

DIRECTS the Secretariat, when the IWC is requested to provide comments on any proposal submitted by a CITES Party to transfer any whale species or stock from Appendix I to II, to advise the CITES Conference of the Parties that the IWC has not yet completed a revised management regime which ensures that future commercial whaling catch limits are not exceeded and whale stocks can be adequately protected;

FURTHER DIRECTS the Secretariat to advise the CITES Conference of the Parties that zero catch limits are still in force for species of whales which are managed by the International Whaling Commission; and

INSTRUCTS the Secretariat to send a copy of this resolution to the CITES Secretariat.

Appendix 8. IWC Resolution 1999-7**RESOLUTION ON SMALL POPULATIONS OF HIGHLY ENDANGERED WHALES**

RECALLING that the International Convention for the Regulation of Whaling recognises the interests of the nations of the world in safeguarding the great natural resources represented by the whale stocks;

NOTING that the following small populations, (numbering 500 or less), of great whales remain highly endangered from previous over-exploitation and some are threatened with extinction:

- (1) The Okhotsk Sea and Spitsbergen stocks of bowhead whales;
- (2) The Eastern Canadian Arctic (the Baffin Bay/Davis Strait and the Hudson Bay) stocks of bowhead whales;
- (3) The Western North Pacific stock of gray whales;
- (4) All four Northern stocks of right whales; and
- (5) Various blue whale stocks in both the Northern and Southern Hemispheres;

FURTHER NOTING that some of these small populations have been subjected in recent years to direct takes and anthropogenic sources of mortality, including bycatches and ship strikes;

NOW THEREFORE the Commission:

WELCOMES the initial agenda for the 2000 meeting of the Scientific Committee at which the status and trends of small populations of highly endangered great whales will be discussed and the summary findings reported to the Commission;

ENCOURAGES member and non-member governments to send appropriate representatives and documents to the next meeting of the Scientific Committee to facilitate this work;

CALLS UPON all governments whose nationals have in recent years taken whales from any of these populations of highly endangered whales to refrain from authorising any further takes until the Scientific Committee concludes that adequate scientific advice is available to demonstrate that such takes will not cause a continued threat to the survival or recovery of these populations; and

REQUESTS that the Secretariat transmit the text of this Resolution to the Government of Canada.

Appendix 9. IWC Resolution 1999-8**RESOLUTION ON DNA TESTING**

RECALLING that the Commission is developing a Revised Management Scheme that will require regular updates on relevant new methods and technologies for the inspection and monitoring of commercial whaling operations;

NOTING that one of the most promising of these technologies is DNA-based identification of market products and genetic typing of known catches;

NOW THEREFORE the Commission:

REQUESTS the Scientific Committee to establish an agenda item to provide annual reports on progress in the following areas:

- (1) Genetic methods for species, stock and individual identification;

- (2) Collection and archiving of tissue samples from catches and bycatch;

- (3) Status of and conditions for access to reference databases of DNA sequences or microsatellite profiles derived from directed catches, bycatch, frozen stockpiles and products impounded or seized because of suspected infractions; and

FURTHER REQUESTS the Scientific Committee to provide advice to the Commission on the development and implementation of a transparent and verifiable system of identification and tracking of products derived from whales taken under the RMP, and to provide a means to differentiate such products from those taken outside the RMP.

Appendix 10. IWC Resolution 1999-9**RESOLUTION ON DALL'S PORPOISE**

RECALLING that in 1990 the Commission requested the Japanese Government to urgently consider the advice from the Scientific Committee concerning the Dall's porpoise stocks exploited in the Japanese hand harpoon fishery, to reduce catches to pre-1986 levels, and to consider further reductions in take when new stock assessments became available;

NOTING that eight years have elapsed since the Scientific Committee's last review in 1991, during which time:

- (1) over 115,000 Dall's porpoises have been taken in the fishery, with catches tending to increase in recent years;

- (2) concerns have been raised in the Scientific Committee about the unpublished 1990 abundance estimate, on which the Government of Japan has based its domestic quota;
- (3) the potential for significant bycatch has been identified; and
- (4) a more systematic approach to precaution, within the Scientific Committee and within other national and international bodies charged with the conservation of small cetaceans, has led to significant reductions in the rates of removals considered safely sustainable;

CONSIDERING that the Scientific Committee has in 1999 reiterated its concerns over the status of the exploited stocks;

NOTING that the Scientific Committee has offered advice to the Government of Japan on Dall's porpoise in the past, and that such advice has led to very positive responses from the Government;

NOW THEREFORE the Commission:

WELCOMES the plans of the Japanese Government to conduct abundance surveys, encourages further genetic studies, and looks forward to continued cooperation with, and exchange of information between, the Scientific Committee and the Government of Japan;

DIRECTS the Scientific Committee to review the status of the impacted stocks in the 53rd Annual Meeting;

ENCOURAGES the Government of Japan to make available the data identified by the Scientific Committee as relevant for such a review, in sufficient time to allow analysis before the 53rd Annual Meeting; and

INVITES the Government of Japan meanwhile to reconsider the level of its domestic quota, in the light of the concerns identified above.

Appendix 11

BUDGET 1999-2000

[See page 57]

Appendix 12

AMENDMENTS TO THE SCHEDULE ADOPTED AT THE 51st ANNUAL MEETING OF THE COMMISSION (changes in **bold type**):

Paragraph 13(b)(4):

Delete 1996/97 to 1998/99 and replace with **2000 to 2002**

Add the following text at the end of the paragraph:

It is forbidden to strike, take or kill calves or any humpback whale accompanied by a calf.

Since no changes were made to the provision for zero catch limits for commercial whaling with effect from the 1986 coastal and the 1985/86 pelagic seasons, the following amendments are also necessary:

Paragraphs 11 and 12, and Tables 1, 2 and 3:
Substitute the dates **1999/2000** pelagic season, **2000** coastal season, **2000** season, or **2000** as appropriate.

BUDGET 1999-2000
Income and Expenditure Account

	1999-2000	
Income	£	£
Contracting Government Contributions:		
Realisations required		939,221
<i>(Assessed £1,009,904)</i>		
Recovery of arrears		21,800
Interest on late contributions		0
Voluntary contributions		0
UK tax recoverable		38,000
Staff Assessments		111,000
Annual Meeting attendance fees		60,000
Sales (IWC and Sponsored Publications)		25,000
Bank Interest		75,000
Sundry income		0
		1,270,021
Expenditure		
Secretariat	-833,800	
Annual Meeting	-212,000	
Whale Killing Methods Workshop	0	
Other Meetings	-17,000	
IWC and Sponsored Publications costs	-63,000	
Other printing and copying	-4,900	
Research	-386,971	
Small Cetaceans	-21,750	
Extraordinary expenditure:		
Recruitment of Secretary	-60,000	
Provisions:		
Severance Pay	0	
	-1,599,421	
Excess or deficit (-) of Income/Expenditure		-329,400
Net transfers from and to (-):		
Sponsored Publications Fund		10,000
Small Cetaceans Fund		20,650
Research Fund		77,971
SURPLUS/DEFICIT (-) FOR THE YEAR		-220,779

Agenda of the 51st Annual Meeting

1. ADDRESS OF WELCOME
2. OPENING STATEMENTS
(Papers IWC/51/OS -)
3. ARRANGEMENTS FOR THE MEETING
4. ADOPTION OF AGENDA
5. SOCIO-ECONOMIC IMPLICATIONS AND SMALL-TYPE WHALING
(Chairman's Report of the 50th Meeting, paragraph 5)
 - 5.1 Report of the Technical Committee
 - 5.1.1 Japanese proposal for Schedule amendment
 - 5.2 Action arising
 - 5.2.1 Recommendations from the Technical Committee
 - 5.2.2 Other
(Any provisions adopted may require amendment of the Schedule)
6. WHALEWATCHING
(Chairman's Report of the 50th Meeting, paragraph 6)
 - 6.1 Report of the Technical Committee
 - 6.2 Action arising
 - 6.2.1 Recommendations from the Technical Committee
 - 6.2.2 Other
7. SANCTUARIES
(Chairman's Report of the 50th Meeting, paragraph 13 and Appendix 4)
 - 7.1 Report of the Technical Committee
 - 7.1.1 Southern Ocean Sanctuary
 - 7.1.1.1 Report of the Scientific Committee
(Paper IWC/51/4)
 - 7.1.1.2 Abolition of the Southern Ocean Sanctuary
 - 7.1.2 South Atlantic Sanctuary
(Paper IWC/51/19)
 - 7.1.3 South Pacific Sanctuary
 - 7.1.4 Other
 - 7.2 Action arising
 - 7.2.1 Recommendations from the Scientific Committee
 - 7.2.2 Other
(Any provisions adopted may require amendment of the Schedule)
8. ADOPTION OF REPORT OF THE TECHNICAL COMMITTEE
(To be circulated as Paper IWC/51/5)
9. HUMANE KILLING
(Chairman's Report of the 50th Meeting, paragraph 8 and Appendix 1)
 - 9.1 Report of the Whale Killing Methods Workshop
(Paper IWC/51/12)
 - 9.2 Name of the Working Group
 - 9.3 Information on improving the humaneness of aboriginal subsistence whaling
 - 9.4 Other matters
 - 9.5 Action arising
 - 9.5.1 Recommendations from the Whale Killing Methods Workshop
 - 9.5.2 Other
(Any provisions adopted may require amendment of the Schedule)
10. INFRACTIONS, 1998 SEASON
(Chairman's Report of the 50th Meeting, paragraph 9)
 - 10.1 Report of Infractions Sub-Committee
(Paper IWC/51/7)
 - 10.1.2 Infractions reports from Contracting Governments
(Paper IWC/51/6)
 - 10.1.2 Reports from Contracting governments on availability, sources and trade in whale products
(Paper IWC/51/17)
 - 10.1.3 Other matters
 - 10.2 Action arising
 - 10.2.1 Recommendations from the Infractions Sub-Committee
 - 10.2.2 Other
11. ABORIGINAL SUBSISTENCE WHALING
(Chairman's Report of the 50th Meeting, paragraph 10)
 - 11.1 Aboriginal subsistence whaling scheme
 - 11.1.1 Report of Aboriginal Subsistence Whaling Sub-Committee (Paper IWC/51/13)
 - 11.1.1.1 Future work plan
 - 11.1.2 Action arising
 - 11.1.2.1 Recommendations from the Aboriginal Subsistence Whaling Sub-Committee
 - 11.1.2.2 Other
(Changes to the management procedure or other regulations will require amendment of the Schedule including paragraphs 12, 13 and Table 1)
 - 11.2 Review of aboriginal subsistence whaling catch limits
 - 11.2.1 Report of Aboriginal Subsistence Whaling Sub-Committee
(Paper IWC/51/13)

- 11.2.1.1 Bering-Chukchi-Beaufort Seas stock of bowhead whales
- 11.2.1.2 North Pacific Eastern stock of gray whales
- 11.2.1.3 North Atlantic West Greenland stock of minke whales
- 11.2.1.4 North Atlantic humpback whales
- 11.2.2 Action arising
 - 11.2.2.1 Recommendations from the Aboriginal Subsistence Whaling Sub-Committee
 - 11.2.2.2 Other
(Changes to the catch limits or other regulations will require amendment of the Schedule including paragraphs 12, 13 and Table 1)
- 11.3 Catches by non-member nations
 - 11.3.1 Report of Aboriginal Subsistence Whaling Sub-Committee
(Paper IWC/51/13)
 - 11.3.2 Action arising
 - 11.3.2.1 Recommendations from the Aboriginal Subsistence Whaling Sub-Committee
 - 11.3.2.2 Other
- 12. COMPREHENSIVE ASSESSMENT OF WHALE STOCKS
(Chairman's Report of the 50th Meeting, paragraph 11)
 - 12.1 Revised Management Procedure
 - 12.1.1 Report of the Scientific Committee
(Paper IWC/51/4)
 - 12.1.1.1 Completion of *CLA* program revision and tuning
 - 12.1.1.2 Abundance estimation
 - 12.1.1.3 North Pacific minke whale trials
 - 12.1.1.4 North Pacific Bryde's whales trials
 - 12.1.2 Action arising
 - 12.1.2.1 Recommendations from the Scientific Committee
 - 12.1.2.2 Other
(Changes to the management procedure, classification and catch limits of stocks, areas or sub-areas will require amendment of the Schedule including paragraphs 9, 10, 11, 12 and Tables 1, 2 and 3)
 - 12.2 Whale stocks
 - 12.2.1 Report of the Scientific Committee
(Paper IWC/51/4)
 - 12.2.1.1 Southern Hemisphere blue whales
 - 12.2.1.2 Western North Atlantic right whales
 - 12.2.1.3 Southern Hemisphere humpback whales
 - 12.2.1.4 Other stocks
 - 12.2.2 Action arising
 - 12.2.2.1 Recommendations from the Scientific Committee
 - 12.2.2.2 Other
- 13. REVISED MANAGEMENT SCHEME
(Chairman's Report of the 50th Annual Meeting, paragraph 12 and Appendix 3)
 - 13.1 Report of the Working Group on the Revised Management Scheme
(Paper IWC/51/14)
 - 13.1.1 Inspection and observation schemes
 - 13.1.1.1 International Observers' rights
 - 13.1.2 Total catches over time
 - 13.1.3 Other matters
 - 13.1.4 Schedule amendments
 - 13.2 Action arising
 - 13.2.1 Recommendations from the Working Group
 - 13.2.2 Other
(Incorporation of the Revised Management Procedure and the Revised Management Scheme, and changes to the data requirements, survey guidelines, inspection and observer schemes will require amendment of the Schedule, including Paragraph 10 and Chapters V and VI)
- 14. SCIENTIFIC PERMITS
(Chairman's Report of the 50th Meeting, paragraph 14 and Appendix 5)
 - 14.1 Report of the Scientific Committee
(Paper IWC/51/4)
 - 14.1.1 Southern Hemisphere minke whales
 - 14.1.2 North Pacific minke whales
 - 14.2 Review of ethical considerations
(Paper IWC/51/16)
 - 14.3 Action arising
 - 14.3.1 Recommendations from the Scientific Committee
 - 14.3.2 Other
- 15. ENVIRONMENTAL CONCERNS
(Chairman's Report of the 50th Meeting, paragraphs 15 and 18, and Appendices 6 and 12)
 - 15.1 Report of the Scientific Committee
(Paper IWC/51/4)
 - 15.1.1 Pollution programme
 - 15.1.2 Antarctic SOWER 2000 programme
 - 15.1.3 Arctic matters
 - 15.2 Reports from Contracting Governments
 - 15.3 Health effects
 - 15.4 Action arising
 - 15.4.1 Recommendations from the Scientific Committee
 - 15.4.2 Other
- 16. SCIENTIFIC RESEARCH
(Chairman's Report of the 50th Meeting, paragraph 15 and Appendix 8)
 - 16.1 Report of the Scientific Committee
(Paper IWC/51/4)
 - 16.2 Action arising
- 17. COOPERATION WITH OTHER ORGANISATIONS
(Chairman's Report of the 50th Meeting, paragraph 16 and Appendix 9; papers IWC/51/10 and IWC/51/4)
 - 17.1 CMS
 - 17.1.1 ASCOBANS
 - 17.1.2 ACCOBAMS
 - 17.2 CCAMLR
 - 17.3 FAO
 - 17.4 GLOBEC
 - 17.5 ICES
 - 17.6 IATTC
 - 17.7 ICCAT
 - 17.8 NAMMCO
 - 17.9 Other
 - 17.10 Action arising

18. ADOPTION OF REPORT OF THE SCIENTIFIC COMMITTEE
(To be circulated as paper IWC/51/4)
(Chairman's Report of the 50th Meeting, paragraph 17 and Appendix 8)
 - 18.1 Future Work Plan
 - 18.2 Small Cetaceans
 - 18.2.1 Small Cetacean topics for consideration by the Scientific Committee in 2000, 2001 and 2002
 - 18.3 Other
19. IWC'S COMPETENCE TO MANAGE SMALL CETACEANS
(Paper IWC/51/20)
20. THE FUTURE OF THE IWC
(Chairman's Report of the 50th Meeting, paragraph 18)
21. FINANCIAL STATEMENTS AND BUDGET ESTIMATES
(Chairman's Report of the 50th Meeting, paragraph 19)
 - 21.1 Review of provisional financial statement, 1998/99
(Paper IWC/51/8)
 - 21.2 Consideration of estimated basic budgets, 1999/2000 and 2000/2001
(Paper IWC/51/8)
 - 21.2.1 Scientific programme
(see Item 16 and Paper IWC/51/4)
 - 21.2.2 Assessment of contributions from Contracting Governments
 - 21.3 Action arising
22. ADMINISTRATIVE MATTERS
 - 22.1 Administrative Review
(Chairman's Report of the 50th Meeting, paragraph 20.1)
 - 22.2 Recruitment of new Secretary
 - 22.3 Guidelines for opening statements from observers
(Chairman's Report of the 50th Meeting, paragraph 21.1)
 - 22.4 Communications
 - 22.4.1 General
(Chairman's Report of the 50th Meeting, paragraph 20.4)
 - 22.4.2 Between the Scientific Committee and the Commission
(Chairman's Report of the 50th Meeting, paragraph 17.3 and Appendix 11)
(Paper IWC/51/18)
 - 22.5 Annual Meeting arrangements
(Chairman's Report of the 50th Meeting, paragraph 20.3)
 - 22.6 Observer status of Greenpeace
 - 22.7 Action arising
23. AMENDMENT OF THE RULES OF PROCEDURE
 - 23.1 Voting procedures
 - 23.2 Environment Research Fund
(Chairman's Report of the 50th Meeting, paragraph 15.2.2 and Appendix 7)
 - 23.3 Observers
(Chairman's Report of the 50th Meeting, paragraph 21.2 and Appendix 16)
 - 23.4 Scientific Committee
(Paper IWC/51/15)
 - 23.5 Action arising
(Amendment and addition of various Rules of Procedure are proposed)
24. DATE AND PLACE OF ANNUAL MEETINGS
(Rules of Procedure, Rule B.1; Chairman's Report of the 50th Meeting, paragraph 22)
 - 24.1 52nd Annual Meeting, 2000
 - 24.2 53rd Annual Meeting, 2001
 - 24.3 Time of Annual Meeting
25. ADOPTION OF REPORT OF FINANCE AND ADMINISTRATION COMMITTEE
(Paper IWC/51/9)
26. ADVISORY COMMITTEE
(Chairman's Report of the 50th Meeting, paragraph 20.2)
27. ANNUAL REPORT 1998-99
(Paper IWC/51/11 Draft)
28. ANY OTHER BUSINESS

Delegates and Observers Attending the 51st Annual Meeting

(C) Commissioner; (AC) Alternate Commissioner; (I) Interpreter;
(S) Support Staff; (Alt) Alternate Observer.

Antigua & Barbuda

D. Joseph (C)

Argentina

O. Rebagliati (C)

F. Millicay (AC)

B. Cane

Australia

H. Bamsey (C)

G. Fien (AC)

D. Kay (AC)

D. Mason (AC)

P. Eiser

M. McIntyre

Austria

A. Nouak (C)

M. Stachowitsch

G. Dick (S)

Brazil

M. Nasser (C)

R. Pinto de Lima (AC)

J. Palazzo (AC)

Chile

M. Cardenas (C)

China, People's Republic of

Y. Wang (C)

S. Guifeng

Li Yang

Denmark

H. Fischer (C)

A. Dahl

J.K. Jensen

P.U. Jepsen

A. Jessen

S. Larsen (S)

A. Olsen

L. Witting

Dominica

P. Carbon (C)

N. Lawrence (AC)

Finland

E. Jaakkola (C)

R. Rautiainen

M. von Weissenberg

France

S. Hofmann (C)

M. Bigan (AC)

Germany

N. Kleeschulte (C)

G. Bennemann (AC)

G. Emonds

P. Deimer

Grenada

M. Baptiste (C)

J. Finlay

C. Issac

Ireland

M. Canny (C)

P. Brazel (AC)

Italy

G. Ambrosio (C)

G. Notarbartolo (AC)

P. Galoppini

T. Sabatini

Japan

K. Shima (C)

Y. Takase (AC)

M. Komatsu (AC)

M. Fukuda

N. Hamaguchi

N. Hattori

I. Hino

Y. Iino

H. Ishikawa

H. Isobe

I. Isono

M. Ito

E. Kameya

H. Kameya

C. Kimura

K. Kubo

N. Matsushita

H. Miyoshi

J. Morishita

H. Moronuki

M. Nagano

H. Nakada

K. Ohmagari

S. Ohsumi

H. Oki

J. Okuaki

I. Onodera

Y. Sakamoto

H. Shigemune

Y. Takagi

T. Takayama

T. Tamazawa

Y. Tanaka

H. Watanabe

N. Yagi

S. Yamamoto

K. Yamamura

K. Yazawa

R. Kawagishi (I)

M. Ohta (I)

R. Suzuki (I)

Korea, Republic of

Y.H. Chung (C)

Z.G. Kim

Mexico

O. Ramirez (C)

L. Rojas-Bracho

Monaco

F. Doumenge (C)

F. Briand (AC)

Netherlands

F. von der Assen (C)

P. Reijnders

New Zealand

J. McLay (C)

F. Bloor (AC)

M. Donoghue

A. Gillespie

Norway

S. Andresen (S)

S. Bastesen

R. Bøthun

H.P. Johansen (C)

P. Lied (S)

E. Lorentsen

I. Opdahl (AC)

S. Owe (AC)

E. Øen

L. Plassa

L. Walløe

I. Winsnes

Oman

H. Ambusaidi (C)

Russian Federation

V. Ilyashenko (C)

D. Okhotnikov (AC)

I. Tototto

O. Etylina (I)

St Kitts & Nevis

R. Archibald (C)

J. Simmonds (AC)

St Lucia

C. Elias (C)

H. Walters

V. Charles

W. Joseph

St Vincent & The Grenadines

S. Nanton (C)

F. Hester (AC)

K. Morris (AC)

O. Ollivierre (S)

R. Ryan (S)

Solomon Islands

A. Sasako (C)

S. Diake (AC)

South Africa

G. de Villers (C)

J. Chalmers

Spain

C. Marti (C)

S. Lens

- Sweden**
B. Fernholm (C)
T. Lyrholm (AC)
A. Roos (AC)
- Switzerland**
T. Althaus (C)
- United Kingdom**
C.I. Llewelyn (C)
R.W. Bowman (AC)
P. Birnie
M. Bravington
S. Chapman
M. Fulford
A. King
D. Lettsome
M. Livesey (S)
H. McLachlan
E. Morley
M. Simmonds
M. O'Sullivan
F. Walters
J. Webb (S)
- USA**
D.J. Baker (C)
R.A. Schmitt (AC)
G. Arnold (S)
S. Ashton
N. Azzam
S. Blackwell (S)
V. Botet
R. Brownell
C. Corson
D. Dailey (S)
N. Daves (S)
M. Hayes
D. Jackson (S)
K. Johnson
S. Moss (S)
K. Plummer (S)
A. Schandlbauer
S. Smullen (S)
C. Sparkman (S)
M. Tillman
D. Whaley (S)
- Chairman of Scientific Committee**
J. Bannister
- NON-MEMBER GOVERNMENT OBSERVERS**
- Barbados**
P. McConney
- Canada**
H. Powles
R. Sauvé (Alt)
- Iceland**
E. Gudnason
A. Halldorsson
- Morocco**
M. Semlali
- Namibia**
E. Klingelhofer
- Zimbabwe**
M. Mtsambiwa
- INTERGOVERNMENTAL ORGANISATION OBSERVERS**
- CCAMLR**
B. Fernholm
- CMS**
A. Müller-Helmbrecht
- NAMMCO**
G. Hovelsrud-Broda
- NON-GOVERNMENTAL ORGANISATION OBSERVERS**
- Advisory Committee on Protection of the Sea**
P. Ramage
- African Wildlife Foundation**
K. Baragona
- All Japan Seamen's Union**
S. Kondo
I. Hidaka (I)
- American Friends Service Committee**
B. Nageak
E. Brower (Alt)
- Animal Kingdom Foundation**
K. O'Connell
- Animal Welfare Institute**
B. White
- Antarctic and Southern Ocean Coalition**
R. Mott
- Appel pour les Baleines**
F. Claveau
- Beauty Without Cruelty**
S. Wheeler
- Born Free**
S. Trent
P. Spong (Alt)
- Campaign Whale**
A. Ottaway
- Canadian Marine Environment Protection Society**
A. Sorg
- Care for the Wild International**
S. Wilson
- Caribbean Conservation Association**
G. Medina
- Center for Action on Endangered Species**
D. LeBourrie
- Center for Marine Conservation**
N. Young
- Cetacean Society International**
K. Gray
- Coalition Clean Baltic**
H. Roed
- Cousteau Society**
C. Merriam
- David Shepherd Conservation Foundation**
S. Fisher
- Deutsches Tierhilfswerk e.V.**
R. Bürglin
- Dolphin Connection**
K. Hanly
- Dominica Conservation Association**
H. Shillingford
D. Leborne (Alt)
- Earth Island Institute**
P. Espeut
- Earthtrust**
K. Derrick
- EarthVoice**
B. Dribben
- Eastern Caribbean Coalition for Environmental Awareness**
L. Suttly
- Ecodetectives Ltd**
J. Lonsdale
- Environmental Investigation Agency**
A. Thornton
- Eurogroup for Animal Welfare**
D. van Liere
- European Bureau for Conservation & Development**
D. Symons
- Fauna & Flora International**
S. Komori
- Friends of the Earth – Grenada**
J. Antoine
- Friends of the Gray Whale**
A. Martin
- Friends of Whalers**
A. Macnow
- Gesellschaft zum Schutz der Meeressäuger e.V. GSM**
B. Sloth
- Global Animals Protection Trust**
M. O'Sullivan
- Global Guardian Trust**
H. Yagita
G. Diaz (I)
- Greenpeace**
D. McTaggart
- Group to Preserve Whale Dietary Culture**
C. Mieko
T. Tanahashi (I)
- High North Alliance**
J.O. Olavsen
R. Frovik (Alt)
S. Gudmundsson (I)
- Humane Society International**
P.A. Forkan
- Indigenous World Association**
T. Albert
- Institute for the Study of Animal Problems**
L. Jenkins
- International Association for Religious Freedom in North America**
G. Ahmaogak

International Commission of Jurists J. Lefevre	International Wildlife Coalition D.J. Morast	Nordic Council for Animal Welfare O. Lindquist	TRAFFIC M. Phipps
International Dolphin Watch F. Cipriano	IWMC World Conservation Trust E. Lapointe O. Menghi (Alt) H. Lapointe (I) C. Fechko (Alt) D. Monroe (Alt)	Nordic Fishermen's Council J. Jensen	Union of Marine Mammal Hunters G. Inankeouyas
International Environmental Advisors J. Frizell I. Why (Alt) C. Bonfiglioli (Alt)	Inuit Circumpolar Conference D. Smith B. Nageak (Alt)	Norwegian Whalers Union J. Bakke	Waterlife Association G. Leape
International Foundation for the Conservation of Natural Resources S. Boynton	Inuit Circumpolar Conference Env. Comm. H. Kreutzmann	PANGEA M. Engel	Werkgroep Zeehond G. Drieman
International Fund for Animal Welfare K. Steuer	Japan Fisheries Association J.D. Hastings J. Sato (I)	Patagonia 2000 M. Nielsen	Whale and Dolphin Conservation Society S. Altherr
International Indian Treaty Council J. Arum	Japan Small-type Whaling Association D. Goodman	Riches of the Sea K. Hino M. Hino (I)	Whale Cuisine Preservation Association Y. Shimotsuru C. Yoshiwara (I)
International Institute for Environment and Development G. Shepherd	Japan Whale Conservation Network N. Funahashi	Rondor A. Moss	Women's International League for Peace and Freedom M. Adams
International League for the Protection of Cetaceans O. Neve	Japan Whaling Association M. Noguchi M. Noguchi (I)	St Lucia Whale and Dolphin Watching Association J. Tipson	World Council of Whalers T. Happynook
IMMA Inc. V. Papastavrou	Minority Rights Group D. Pikok Jr.	Save the Children M. Ahmaogak	World Wide Fund for Nature C. Phillips
International Primate Protection League C. Perry	Monitor C. Van Note	Sino-Cetacean International Research Inst. G. Gao	Working Group for the Protection of Marine Mammals S.E. Lüber
International Transport Workers Federation N. Matsushita K. Takahashi (I)	Monitor International K. Block	Sierra Club J. Olmer	
		Survival H. Brower Jr.	
		TEN S. Misaki	

Financial Statements for the year ended 31 August 1999

Report of the Auditors to the Commission

We have audited the financial statements which have been prepared under the accounting policies set out below.

Respective responsibilities of the Secretary and auditors:

As described below, the Secretary is responsible for the preparation of financial statements.

Neither Statute nor the Commission has prescribed that the financial statements should give a true and fair view of the Commission's state of affairs at the end of each year within the specialised meaning of that expression in relation to financial statements. This recognised terminology signifies in accounting terms that statements are generally accepted as true and fair only if they comply in all material aspects with the accepted accounting principles. These are embodied in Accounting Standards as issued by the Accounting Standards Board. The Commission has adopted certain accounting policies which represent departures from Accounting Standards: - Fixed assets are not capitalised within the Commission's accounts. Instead furniture and equipment are charged to the Income and Expenditure account in the year of acquisition. Hence the residual values of the furniture, fixtures and fittings, and equipment are not reflected in the accounts. Publications stocks are charged to the Income and Expenditure account in the year of acquisition and their year-end valuation is not reflected in the accounts.

This is permissible as the financial statements are not required to give a true and fair view. It is our responsibility to form an independent opinion, based on our audit, on those statements and to report our opinion to you.

Deloitte & Touche, Chartered Accountants.

Basis of opinion:

We conducted our audit in accordance with Auditing Standards issued by the Auditing Practices Board. An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgements made by the Secretary in the preparation of the financial statements, and of whether the accounting policies are appropriate to the Commission's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or other irregularity or error. In forming our opinion, we also evaluated the overall adequacy of the presentation of information in the financial statements.

Added Emphasis

In forming our opinion we have taken account of the absence of a requirement for the statements to give a true and fair view as described above.

Opinion

In our opinion the financial statements have been properly prepared in accordance with the accounting policies and present a proper record of the transactions of the Commission for the year ended 31 August 1999.

The Secretary's Responsibilities

The financial responsibilities of the Secretary to the Commission are set out in its Rules of Procedure and Financial Regulations. Fulfilment of those responsibilities requires the Secretary to prepare financial statements for each financial year which set out the state of affairs of the Commission as at the end of the financial year and the surplus or deficit of the Commission for that period. In preparing those financial statements, the Secretary should select suitable accounting policies and then apply them consistently; make judgements and estimates that are

reasonable and prudent; prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Commission will continue in operation.

The Secretary is responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Commission. He is also responsible for safeguarding the assets of the Commission and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Accounting Policies

The accounting policies adopted by the Commission in the preparation of these financial statements are as set out below. The departures from generally accepted accounting practice are considered not to be significant for the reasons stated.

Severance Pay Provision

In accordance with the practice of other intergovernmental organisations, the Commission provides for an indemnity to all full-time members of staff in the event of their appointment being terminated on the abolition of their posts. The indemnity varies according to length of service, therefore an annual provision is made to bring the total provision up to the maximum liability. This liability is calculated after adjusting for staff assessments, since they would not form part of the Commission's liability.

Publications

The full cost of printing publications is written off in the year. No account is taken of stocks which remain unsold at the balance sheet date. Most sales occur shortly after publication and so stocks held are unlikely to result in many sales; consequently their net realisable value is not significant.

Fixed Assets

The full cost of office furniture and equipment is written off in the Income and Expenditure Account in the year in which it is incurred. The total cost of equipment owned by the Commission is some £110,000. Proposed expenditure on new items is included in budgets and raised by contributions for the year.

Interest on overdue contributions

Interest is included in the Income and Expenditure Account on the accruals basis and provision is made where its recoverability is in doubt.

Foreign Exchange

Transactions denominated in foreign currencies are translated into sterling at rates ruling at the date of the transactions. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are translated at the rates ruling at that date. These translation differences are dealt with in the Income and Expenditure Account.

Pensions

The Commission operates a defined contributory pension scheme. The pension costs represent the amount of contributions payable to the pension scheme in respect of the accounting period.

Leases

The costs of operating leases are charged to the Income and Expenditure Account as they accrue.

Convention

These financial statements are prepared under the historical cost convention.

Balance Sheet 31 August 1999

	Note	1999		1998	
		£	£	£	£
Current Assets					
Cash on short term deposit:					
General fund		1,300,494		1,328,006	
Research fund		86,703		66,698	
Publications fund		77,339		70,771	
Small cetaceans fund		23,603		12,069	
		1,488,139		1,477,544	
Cash at bank on current account:					
General fund		(11,086)		15,774	
Research fund		(1,840)		1,000	
Publications fund		1,000		-	
Small cetaceans fund		1,000		1,000	
Cash in hand					
		133		140	
			(10,793)		17,914
			1,477,346		1,495,458
Outstanding contributions from members (including interest)					
		2,060,152		1,961,500	
Less provision for doubtful debts					
		(1,970,416)		(1,892,536)	
			89,736		68,964
Other debtors and prepayments					
			127,969		128,878
			1,695,051		1,693,300
Creditors: amounts falling due within one year					
	6		(106,700)		(234,461)
Net Current Assets					
			1,588,351		1,458,839
Provision for Severance Pay					
	5		(324,974)		(306,429)
			1,263,377		1,152,410
<i>Financed by</i>					
Publications Fund	1		49,660		74,616
Research Fund	2		92,503		76,268
Small Cetaceans Fund	3		21,516		13,815
General Fund	4		1,099,698		987,711
	7		1,263,377		1,152,410

Approved on behalf of the Commission

Ray Gambell, *Secretary*

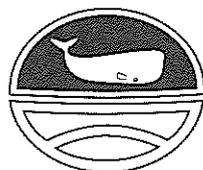
Income and Expenditure Account (year ended 31 August 1999)

	Note	1999	1998
		£	£
Income: continuing operations			
Contributions from member governments		1,009,844	1,025,170
Interest on overdue financial contributions		167,241	148,699
Voluntary contributions for research, small cetaceans work and publications		29,609	6,181
Sales of publications		17,721	17,007
Sales of sponsored publications		1,837	4,887
Observers' registration fees		51,113	32,062
UK taxes recoverable		29,322	29,915
Staff assessments		104,476	100,010
Interest receivable		81,586	94,315
Sundry income		269	13
		<u>1,490,018</u>	<u>1,458,259</u>
Expenditure			
Secretariat		757,278	729,248
Publications		61,170	31,607
Annual meetings		209,570	195,673
Other meetings		1,589	858
Research expenditure		190,985	168,056
Small cetaceans	3	22,509	7,976
Sponsored publications		29,824	1,168
Exceptional items:			
Administrative review		-	58,758
Appointment of Secretary		12,694	-
		<u>1,285,619</u>	<u>1,193,344</u>
Provisions made for:			
Unpaid contributions		(35,142)	12,956
Unpaid interest on overdue contributions		113,029	117,448
Severance pay	5	18,545	29,615
Unpaid observer fees		-	(2,400)
		<u>1,382,051</u>	<u>1,350,963</u>
Excess of Income over Expenditure for the Year: continuing operations			
	7	110,967	107,296
Net Transfers (to) from Funds			
Publications fund	1	24,956	(7,436)
Research fund	2	(16,235)	(21,380)
Small cetaceans fund	3	(7,701)	(3,370)
		<u>1,020</u>	<u>(32,186)</u>
Surplus for the year after transfers	4	<u>111,987</u>	<u>75,110</u>

There are no recognised gains or losses for the current financial year and the preceding financial year other than as stated in the Income and Expenditure account.

**International Convention
for the
Regulation of Whaling, 1946
Schedule**

**As amended by the Commission at the 51st Annual Meeting 1999,
and replacing that dated September 1998**



International Convention for the Regulation of Whaling, 1946 Schedule

As amended by the Commission at the 51st Annual Meeting 1999,
and replacing that dated September 1998

EXPLANATORY NOTES

The Schedule printed on the following pages contains the amendments made by the Commission at its 51st Annual Meeting 1999. The amendments which are shown in *italic bold type* came into effect on 9 September 1999. In Tables 1, 2 and 3 unclassified stocks are indicated by a dash. Other positions in the Tables have been filled with a dot to aid legibility. Numbered footnotes are integral parts of the Schedule formally adopted by the Commission. Other footnotes are editorial. The Commission was informed in June 1992 by the ambassador in London that the membership of the Union of Soviet Socialist Republics in the International Convention for the Regulation of Whaling from 1948 is continued by the Russian Federation. The Commission recorded at its 39th (1987) meeting the fact that references to names of native inhabitants in Schedule paragraph 13(b)(4) would be for geographical purposes alone, so as not to be in contravention of Article V.2(c) of the Convention (*Rep. int. Whal. Commn* 38:21).

I. INTERPRETATION

1. The following expressions have the meanings respectively assigned to them, that is to say:

A. Baleen whales

“baleen whale” means any whale which has baleen or whale bone in the mouth, i.e. any whale other than a toothed whale.

“blue whale” (*Balaenoptera musculus*) means any whale known as blue whale, Sibbald’s rorqual, or sulphur bottom, and including pygmy blue whale.

“bowhead whale” (*Balaena mysticetus*) means any whale known as bowhead, Arctic right whale, great polar whale, Greenland right whale, Greenland whale.

“Bryde’s whale” (*Balaenoptera edeni*, *B. brydei*) means any whale known as Bryde’s whale.

“fin whale” (*Balaenoptera physalus*) means any whale known as common finback, common rorqual, fin whale, herring whale, or true fin whale.

“gray whale” (*Eschrichtius robustus*) means any whale known as gray whale, California gray, devil fish, hard head, mussel digger, gray back, or rip sack.

“humpback whale” (*Megaptera novaeangliae*) means any whale known as bunch, humpback, humpback whale, humpbacked whale, hump whale or hunchbacked whale.

“minke whale” (*Balaenoptera acutorostrata*, *B. bonaerensis*) means any whale known as lesser rorqual, little piked whale, minke whale, pike-headed whale or sharp headed finner.

“pygmy right whale” (*Caperea marginata*) means any whale known as southern pygmy right whale or pygmy right whale.

“right whale” (*Eubalaena glacialis*, *E. australis*) means any whale known as Atlantic right whale, Arctic right whale, Biscayan right whale, Nordkaper, North Atlantic right whale, North Cape whale, Pacific right whale, or southern right whale.

“sei whale” (*Balaenoptera borealis*) means any whale known as sei whale, Rudolphi’s rorqual, pollack whale, or coalfish whale.

B. Toothed whales

“toothed whale” means any whale which has teeth in the jaws.

“beaked whale” means any whale belonging to the genus *Mesoplodon*, or any whale known as Cuvier’s beaked whale (*Ziphius cavirostris*), or Shepherd’s beaked whale (*Tasmacetus shepherdi*).

“bottlenose whale” means any whale known as Baird’s beaked whale (*Berardius bairdii*), Arnoux’s whale (*Berardius arnuxii*), southern bottlenose whale (*Hyperoodon planifrons*), or northern bottlenose whale (*Hyperoodon ampullatus*).

“killer whale” (*Orcinus orca*) means any whale known as killer whale or orca.

“pilot whale” means any whale known as long-finned pilot whale (*Globicephala melana*) or short-finned pilot whale (*G. macrorhynchus*).

“sperm whale” (*Physeter macrocephalus*) means any whale known as sperm whale, spermacet whale, cachalot or pot whale.

C. General

“strike” means to penetrate with a weapon used for whaling.

“land” means to retrieve to a factory ship, land station, or other place where a whale can be treated.

“take” means to flag, buoy or make fast to a whale catcher.

“lose” means to either strike or take but not to land.

“dauhval” means any unclaimed dead whale found floating.

“lactating whale” means (a) with respect to baleen whales - a female which has any milk present in a mammary gland, (b) with respect to sperm whales - a female which has milk present in a mammary gland the maximum thickness (depth) of which is 10cm or more. This measurement shall be at the mid ventral point of the mammary gland perpendicular to the body axis, and shall be logged to the nearest centimetre; that is to say, any gland between 9.5cm and 10.5cm shall be logged as 10cm. The measurement of any gland which falls on an exact 0.5 centimetre shall be logged at the next 0.5 centimetre, e.g. 10.5cm shall be logged as 11.0cm. However, notwithstanding these criteria, a whale shall not be considered a lactating whale if scientific (histological or other biological) evidence is presented to the appropriate national authority establishing that the whale could not at that point in its physical cycle have had a calf dependent on it for milk.

“small-type whaling” means catching operations using powered vessels with mounted harpoon guns hunting exclusively for minke, bottlenose, beaked, pilot or killer whales.

II. SEASONS

Factory Ship Operations

2. (a) It is forbidden to use a factory ship or whale catcher attached thereto for the purpose of taking or treating baleen whales except minke whales, in any waters south of 40° South Latitude except during the period from 12th December to 7th April following, both days inclusive.
- (b) It is forbidden to use a factory ship or whale catcher attached thereto for the purpose of taking or treating sperm or minke whales, except as permitted by the Contracting Governments in accordance with sub-paragraphs (c) and (d) of this paragraph, and paragraph 5.
- (c) Each Contracting Government shall declare for all factory ships and whale catchers attached thereto under its jurisdiction, an open season or seasons not to exceed eight months out of any period of twelve months during which the taking or killing of sperm whales by whale catchers may be permitted; provided that a separate open season may be declared for each factory ship and the whale catchers attached thereto.
- (d) Each Contracting Government shall declare for all factory ships and whale catchers attached thereto under its jurisdiction one continuous open season not to exceed six months out of any period of twelve months during which the taking or killing of minke whales by the whale catchers may be permitted provided that:
 - (1) a separate open season may be declared for each factory ship and the whale catchers attached thereto;
 - (2) the open season need not necessarily include the whole or any part of the period declared for other baleen whales pursuant to sub-paragraph (a) of this paragraph.
3. It is forbidden to use a factory ship which has been used during a season in any waters south of 40° South Latitude for the purpose of treating baleen whales, except minke whales, in any other area except the North Pacific Ocean and its dependent waters north of the Equator for the same purpose within a period of one year from the termination

of that season; provided that catch limits in the North Pacific Ocean and dependent waters are established as provided in paragraphs 12 and 16 of this Schedule and provided that this paragraph shall not apply to a ship which has been used during the season solely for freezing or salting the meat and entrails of whales intended for human food or feeding animals.

Land Station Operations

4. (a) It is forbidden to use a whale catcher attached to a land station for the purpose of killing or attempting to kill baleen and sperm whales except as permitted by the Contracting Government in accordance with sub-paragraphs (b), (c) and (d) of this paragraph.
- (b) Each Contracting Government shall declare for all land stations under its jurisdiction, and whale catchers attached to such land stations, one open season during which the taking or killing of baleen whales, except minke whales, by the whale catchers shall be permitted. Such open season shall be for a period of not more than six consecutive months in any period of twelve months and shall apply to all land stations under the jurisdiction of the Contracting Government: provided that a separate open season may be declared for any land station used for the taking or treating of baleen whales, except minke whales, which is more than 1,000 miles from the nearest land station used for the taking or treating of baleen whales, except minke whales, under the jurisdiction of the same Contracting Government.
- (c) Each Contracting Government shall declare for all land stations under its jurisdiction and for whale catchers attached to such land stations, one open season not to exceed eight continuous months in any one period of twelve months, during which the taking or killing of sperm whales by the whale catchers shall be permitted, provided that a separate open season may be declared for any land station used for the taking or treating of sperm whales which is more than 1,000 miles from the nearest land station used for the taking or treating of sperm whales under the jurisdiction of the same Contracting Government.
- (d) Each Contracting Government shall declare for all land stations under its jurisdiction and for whale catchers attached to such land stations one open season not to exceed six continuous months in any period of twelve months during which the taking or killing of minke whales by the whale catchers shall be permitted (such period not being necessarily concurrent with the period declared for other baleen whales, as provided for in sub-paragraph (b) of this paragraph); provided that a separate open season may be declared for any land station used for the taking or treating of minke whales which is more than 1,000 miles from the nearest land station used for the taking or treating of minke whales under the jurisdiction of the same Contracting Government.

Except that a separate open season may be declared for any land station used for the taking or treating of minke whales which is located in an area having oceanographic conditions clearly distinguishable from those of the area in which are located the other land stations used for the taking or treating of minke whales under the jurisdiction of the same Contracting Government; but the declaration of a separate open season by virtue of the provisions of this sub-paragraph shall not cause thereby the period

of time covering the open seasons declared by the same Contracting Government to exceed nine continuous months of any twelve months.

- (e) The prohibitions contained in this paragraph shall apply to all land stations as defined in Article II of the Whaling Convention of 1946.

Other Operations

5. Each Contracting Government shall declare for all whale catchers under its jurisdiction not operating in conjunction with a factory ship or land station one continuous open season not to exceed six months out of any period of twelve months during which the taking or killing of minke whales by such whale catchers may be permitted. Notwithstanding this paragraph one continuous open season not to exceed nine months may be implemented so far as Greenland is concerned.

III. CAPTURE

6. The killing for commercial purposes of whales, except minke whales using the cold grenade harpoon shall be forbidden from the beginning of the 1980/81 pelagic and 1981 coastal seasons. The killing for commercial purposes of minke whales using the cold grenade harpoon shall be forbidden from the beginning of the 1982/83 pelagic and the 1983 coastal seasons.*
7. (a) In accordance with Article V(1)(c) of the Convention, commercial whaling, whether by pelagic operations or from land stations, is prohibited in a region designated as the Indian Ocean Sanctuary. This comprises the waters of the Northern Hemisphere from the coast of Africa to 100°E, including the Red and Arabian Seas and the Gulf of Oman; and the waters of the Southern Hemisphere in the sector from 20°E to 130°E, with the Southern boundary set at 55°S. This prohibition applies irrespective of such catch limits for baleen or toothed whales as may from time to time be determined by the Commission. This prohibition shall be reviewed by the Commission at its Annual Meeting in 2002.
- (b) In accordance with Article V(1)(c) of the Convention, commercial whaling, whether by pelagic operations or from land stations, is prohibited in a region designated as the Southern Ocean Sanctuary. This Sanctuary comprises the waters of the Southern Hemisphere southwards of the following line: starting from 40 degrees S, 50 degrees W; thence due east to 20 degrees E; thence due south to 55 degrees S; thence due east to 130 degrees E; thence due north to 40 degrees S; thence due east to 130 degrees W; thence due south to 60 degrees S; thence due east to 50 degrees W; thence due north to

the point of beginning. This prohibition applies irrespective of the conservation status of baleen and toothed whale stocks in this Sanctuary, as may from time to time be determined by the Commission. However, this prohibition shall be reviewed ten years after its initial adoption and at succeeding ten year intervals, and could be revised at such times by the Commission. Nothing in this sub-paragraph is intended to prejudice the special legal and political status of Antarctica.***

Area Limits for Factory Ships

8. It is forbidden to use a factory ship or whale catcher attached thereto, for the purpose of taking or treating baleen whales, except minke whales, in any of the following areas:
- (a) in the waters north of 66°N, except that from 150°E eastwards as far as 140°W, the taking or killing of baleen whales by a factory ship or whale catcher shall be permitted between 66°N and 72°N;
- (b) in the Atlantic Ocean and its dependent waters north of 40°S;
- (c) in the Pacific Ocean and its dependent waters east of 150°W between 40°S and 35°N;
- (d) in the Pacific Ocean and its dependent waters west of 150°W between 40°S and 20°N;
- (e) in the Indian Ocean and its dependent waters north of 40°S.

Classification of Areas and Divisions

9. (a) *Classification of Areas*
Areas relating to Southern Hemisphere baleen whales except Bryde's whales are those waters between the ice-edge and the Equator and between the meridians of longitude listed in Table 1.
- (b) *Classification of Divisions*
Divisions relating to Southern Hemisphere sperm whales are those waters between the ice-edge and the Equator and between the meridians of longitude listed in Table 3.
- (c) *Geographical boundaries in the North Atlantic*
The geographical boundaries for the fin, minke and sei whale stocks in the North Atlantic are:

FIN WHALE STOCKS

NOVA SCOTIA

South and West of a line through:

47°N 54°W, 46°N 54°30'W,

46°N 42°W, 20°N 42°W.

NEWFOUNDLAND-LABRADOR

West of a line through:

75°N 73°30'W, 69°N 59°W, 61°N 59°W

52°20'N 42°W, 46°N 42°W and

North of a line through:

46°N 42°W, 46°N 54°30'W, 47°N 54°W.

* The Governments of Brazil, Iceland, Japan, Norway and the Union of Soviet Socialist Republics lodged objections to the second sentence of paragraph 6 within the prescribed period. For all other Contracting Governments this sentence came into force on 8 March 1982.

Norway withdrew its objection on 9 July 1985 and Brazil on 8 January 1992.

Iceland withdrew from the Convention with effect from 30 June 1992.

The objections of Japan and the Russian Federation not having been withdrawn, this sentence is not binding upon these governments.

** The Government of Japan lodged an objection within the prescribed period to paragraph 7(b) to the extent that it applies to the Antarctic minke whale stocks.

The Government of the Russian Federation also lodged an objection to paragraph 7(b) within the prescribed period but withdrew it on 26 October 1994.

For all Contracting Governments except Japan paragraph 7(b) came into force on 6 December 1994.

+ Paragraph 7(b) contains a provision for review of the Southern Ocean Sanctuary "ten years after its initial adoption". Paragraph 7(b) was adopted at the 46th (1994) Annual Meeting. Therefore, the first review is due in 2004.

WEST GREENLAND

East of a line through:

75°N 73°30'W, 69°N 59°W,
61°N 59°W, 52°20'N 42°W,
and West of a line through:52°20'N 42°W, 59°N 42°W,
59°N 44°W, Kap Farvel.**EAST GREENLAND-ICELAND**

East of a line through:

Kap Farvel (South Greenland),
59°N 44°W, 59°N 42°W, 20°N 42°W
and West of a line through:20°N 18°W, 60°N 18°W, 68°N 3°E,
74°N 3°E, and South of 74°N.**NORTH NORWAY**

North and East of a line through:

74°N 22°W, 74°N 3°E, 68°N 3°E,
67°N 0°, 67°N 14°E.**WEST NORWAY-FAROE ISLANDS**

South of a line through:

67°N 14°E, 67°N 0°, 60°N 18°W, and
North of a line through:61°N 16°W, 61°N 0°, Thyborøn (Western entrance to Limfjorden,
Denmark).**SPAIN-PORTUGAL-BRITISH ISLES**

South of a line through:

Thyborøn (Denmark), 61°N 0°, 61°N 16°W,
and East of a line through:

63°N 11°W, 60°N 18°W, 22°N 18°W.

MINKE WHALE STOCKS**CANADIAN EAST COAST**

West of a line through:

75°N 73°30'W, 69°N 59°W, 61°N 59°W,
52°20'N 42°W, 20°N 42°W.**CENTRAL**

East of a line through:

Kap Farvel (South Greenland),
59°N 44°W, 59°N 42°W, 20°N 42°W,
and West of a line through:20°N 18°W, 60°N 18°W, 68°N 3°E,
74°N 3°E, and South of 74°N.**WEST GREENLAND**

East of a line through:

75°N 73°30'W, 69°N 59°W, 61°N 59°W,
52°20'N 42°W, and
West of a line through:52°20'N 42°W, 59°N 42°W,
59°N 44°W, Kap Farvel.**NORTHEASTERN**

East of a line through:

20°N 18°W, 60°N 18°W, 68°N 3°E, 74°N 3°E,
and North of a line through:

74°N 3°E, 74°N 22°W.

SEI WHALE STOCKS**NOVA SCOTIA**

South and West of a line through:

47°N 54°W, 46°N 54°30'W, 46°N 42°W,
20°N 42°W.**ICELAND-DENMARK STRAIT**

East of a line through:

Kap Farvel (South Greenland),
59°N 44°W, 59°N 42°W, 20°N 42°W,
and West of a line through:20°N 18°W, 60°N 18°W, 68°N 3°E,
74°N 3°E, and South of 74°N.**EASTERN**

East of a line through:

20°N 18°W, 60°N 18°W, 68°N 3°E, 74°N 3°E,
and North of a line through:

74°N 3°E, 74°N 22°W.

(d) Geographical boundaries in the North Pacific

The geographical boundaries for the sperm, Bryde's and minke whale stocks in the North Pacific are:

SPERM WHALE STOCKS**WESTERN DIVISION**

West of a line from the ice-edge south along the 180° meridian of longitude to 180°, 50°N, then east along the 50°N parallel of latitude to 160°W, 50°N, then south along the 160°W meridian of longitude to 160°W, 40°N, then east along the 40°N parallel of latitude to 150°W, 40°N, then south along the 150°W meridian of longitude to the Equator.

EASTERN DIVISION

East of the line described above.

BRYDE'S WHALE STOCKS**EAST CHINA SEA**

West of the Ryukyu Island chain

EASTERN

East of 160°W (excluding the Peruvian stock area)

WESTERN

West of 160°W (excluding the East China Sea stock area)

MINKE WHALE STOCKS**SEA OF JAPAN-YELLOW SEA- EAST CHINA SEA**

West of a line through the Philippine Islands, Taiwan, Ryukyu Islands, Kyushu, Honshu, Hokkaido and Sakhalin Island, north of the Equator

OKHOTSK SEA-WEST PACIFIC

East of the Sea of Japan-Yellow Sea- East China Sea stock and west of 180°, north of the Equator

REMAINDER

East of the Okhotsk Sea-West Pacific stock, north of the Equator

(e) Geographical boundaries for Bryde's whale stocks in the Southern Hemisphere**SOUTHERN INDIAN OCEAN**

20°E to 130°E

South of the Equator

SOLOMON ISLANDS

150°E to 170°E

20°S to the Equator

PERUVIAN

110°W to the South American coast

10°S to 10°N

EASTERN SOUTH PACIFIC

150°W to 70°W

South of the Equator (excluding the Peruvian stock area)

WESTERN SOUTH PACIFIC

130°E to 150°W

South of the Equator(excluding the Solomon Islands stock area)

SOUTH ATLANTIC

70°W to 20°E

South of the Equator (excluding the South African inshore stock area)

SOUTH AFRICAN INSHORE

South African coast west of 27°E and out to the 200 metre isobath

Table 1
BALEEN WHALE STOCK CLASSIFICATIONS AND CATCH LIMITS¹ (excluding Bryde's whales)

Area	SEI		MINKE		FIN		BLUE		RIGHT, BOWHEAD, HUMPBACK		PYGMY RIGHT		GRAY		
	Classi- fication	Catch limit	Classi- fication	Catch limit	Classi- fication	Catch limit	Classi- fication	Catch limit	Classi- fication	Catch limit	Classi- fication	Catch limit	Classi- fication	Catch limit	
SOUTHERN HEMISPHERE-1999/2000 pelagic season and 2000 coastal season															
I	120°W-60°W	PS	0	PS	0	PS	0	PS	0	PS	0	PS	0	.	.
II	60°W- 0°	PS	0	PS	0	PS	0	PS	0	PS	0	PS	0	.	.
III	0°- 70°E	PS	0	PS	0	PS	0	PS	0	PS	0	PS	0	.	.
IV	70°E-130°E	PS	0	PS	0	PS	0	PS	0	PS	0	PS	0	.	.
V	130°E- 170°W	PS	0	PS	0	PS	0	PS	0	PS	0	PS	0	.	.
VI	170°W-120°W	PS	0	PS	0	PS	0	PS	0	PS	0	PS	0	.	.
Total catch not to exceed:							0	0	0	0	0	0	0	.	.
NORTHERN HEMISPHERE-2000 season															
ARCTIC															
NORTH PACIFIC															
Whole region		PS	0	.	.	PS	0	PS	0	PS	0	PS	0	.	.
Okhotsk Sea-West Pacific Stock		.	.	.	0	.	.	.	.	.	.	.	.	.	.
Sea of Japan-Yellow Sea- East China Sea Stock		.	.	PS	0	.	.	.	.	.	.	.	.	.	.
Remainder		.	.	IMS	0	.	.	.	.	.	.	.	.	.	.
Eastern Stock		.	.	.	.	.	.	.	.	.	.	.	.	SMS	.
Western Stock		.	.	.	.	.	.	.	.	.	.	.	.	PS	0
NORTH ATLANTIC															
Whole region		.	.	.	.	.	.	PS	0	PS	0	PS	0	.	.
West Greenland Stock		.	.	PS	0	.	19 ²	.	.	.	.	.	.	.	.
Newfoundland-Labrador Stock		.	.	.	.	.	0	.	.	.	.	.	.	.	.
Canadian East Coast Stock		.	.	.	0	.	.	.	.	.	.	.	.	.	.
Nova Scotia Stock		PS	0	.	.	PS	0	.	.	.	.	.	.	.	.
Central Stock		.	.	.	.	.	.	.	.	.	.	.	.	.	.
East Greenland-Iceland Stock		.	.	.	.	SMS	0	.	.	.	.	.	.	.	.
Iceland-Denmark Strait Stock		.	0	.	.	.	.	.	.	.	.	.	.	.	.
Spain-Portugal-British Isles Stock		.	.	.	.	.	0	.	.	.	.	.	.	.	.
Northeastern Stock		.	.	PS*	0	.	.	.	.	.	.	.	.	.	.
West Norway-Faroe Islands Stock		.	.	.	.	PS	0	.	.	.	.	.	.	.	.
North Norway Stock		.	.	.	.	.	0	.	.	.	.	.	.	.	.
Eastern Stock		.	0	.	.	.	.	.	.	.	.	.	.	.	.
NORTHERN INDIAN OCEAN															
		.	.	IMS	0	.	.	PS	0	PS	0	PS	0	.	.

¹ Available to be taken by aborigines or a Contracting Government on behalf of aborigines pursuant to paragraph 13(b)2.

² Available to be taken by aborigines pursuant to paragraph 13(b)3. Catch limit for each of the years 1998, 1999, 2000, 2001 and 2002.

+ The catch limits of zero introduced into Table 1 as editorial amendments as a result of the coming into effect of paragraph 10(e) are not binding upon the governments of the countries which lodged and have not withdrawn objections to the said paragraph.

*The Government of Norway presented objection to the classification of the Northeastern Atlantic stock of minke whales as a Protection Stock within the prescribed period. This classification came into force on 30 January 1986 but is not binding on the Government of Norway.

Classification of Stocks

10. All stocks of whales shall be classified in one of three categories according to the advice of the Scientific Committee as follows:

(a) A Sustained Management Stock (SMS) is a stock which is not more than 10 per cent of Maximum Sustainable Yield (hereinafter referred to as MSY) stock level below MSY stock level, and not more than 20 per cent above that level; MSY being determined on the basis of the number of whales.

When a stock has remained at a stable level for a considerable period under a regime of approximately constant catches, it shall be classified as a Sustained Management Stock in the absence of any positive evidence that it should be otherwise classified.

Commercial whaling shall be permitted on Sustained Management Stocks according to the advice of the Scientific Committee. These stocks are listed in Tables 1, 2 and 3 of this Schedule.

For stocks at or above the MSY stock level, the permitted catch shall not exceed 90 per cent of the MSY. For stocks between the MSY stock level and 10 per cent below that level, the permitted catch shall not exceed the number of whales obtained by taking 90 per cent of the MSY and reducing that number by 10 per cent for every 1 per cent by which the stock falls short of the MSY stock level.

(b) An Initial Management Stock (IMS) is a stock more than 20 per cent of MSY stock level above MSY stock level. Commercial whaling shall be permitted on Initial Management Stocks according to the advice of the Scientific Committee as to measures necessary to bring the stocks to the MSY stock level and then optimum level in an efficient manner and without risk of reducing them below this level. The permitted catch for such

stocks will not be more than 90 per cent of MSY as far as this is known, or, where it will be more appropriate, catching effort shall be limited to that which will take 90 per cent of MSY in a stock at MSY stock level.

In the absence of any positive evidence that a continuing higher percentage will not reduce the stock below the MSY stock level no more than 5 per cent of the estimated initial exploitable stock shall be taken in any one year. Exploitation should not commence until an estimate of stock size has been obtained which is satisfactory in the view of the Scientific Committee. Stocks classified as Initial Management Stock are listed in Tables 1, 2 and 3 of this Schedule.

(c) A Protection Stock (PS) is a stock which is below 10 per cent of MSY stock level below MSY stock level.

There shall be no commercial whaling on Protection Stocks. Stocks so classified are listed in Tables 1, 2 and 3 of this Schedule.

(d) Notwithstanding the other provisions of paragraph 10 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.

(e) Notwithstanding the other provisions of paragraph 10, 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.*

Table 2

Bryde's whale stock classifications and catch limits[†]

	Classification	Catch limit
SOUTHERN HEMISPHERE-1999/2000 pelagic season and 2000 coastal season		
South Atlantic Stock	-	0
Southern Indian Ocean Stock	IMS	0
South African Inshore Stock	-	0
Solomon Islands Stock	IMS	0
Western South Pacific Stock	IMS	0
Eastern South Pacific Stock	IMS	0
Peruvian Stock	-	0
NORTH PACIFIC-2000 season		
Eastern Stock	IMS	0
Western Stock	IMS	0
East China Sea Stock	PS	0
NORTH ATLANTIC-2000 season		
	IMS	0
NORTHERN INDIAN OCEAN-2000 season		
	-	0

[†] The catch limits of zero introduced in Table 2 as editorial amendments as a result of the coming into effect of paragraph 10(e) are not binding upon the governments of the countries which lodged and have not withdrawn objections to the said paragraph.

* The Governments of Japan, Norway, Peru and the Union of Soviet Socialist Republics lodged objection to paragraph 10(e) within the prescribed period. For all other Contracting Governments this paragraph came into force on 3 February 1983. Peru withdrew its objection on 22 July 1983.

The Government of Japan withdrew its objections with effect from 1 May 1987 with respect to commercial pelagic whaling; from 1 October 1987 with respect to commercial coastal whaling for minke and Bryde's whales; and from 1 April 1988 with respect to commercial coastal sperm whaling.

The objections of Norway and the Russian Federation not having been withdrawn, the paragraph is not binding upon these Governments.

Table 3

Toothed whale stock classifications and catch limits [†]

SOUTHERN HEMISPHERE-1999/2000 pelagic season and 2000 coastal season			
Division	Longitudes	Classification	Catch limit
1	60°W-30°W	-	0
2	30°W-20°E	-	0
3	20°E-60°E	-	0
4	60°E-90°E	-	0
5	90°-130°E	-	0
6	130°E-160°E	-	0
7	160°E-170°W	-	0
8	170°W-100°W	-	0
9	100°W-60°W	-	0
NORTHERN HEMISPHERE-2000 season			
NORTH PACIFIC			
Western Division		PS	0 [‡]
Eastern Division		-	0
NORTH ATLANTIC			
		-	0
NORTHERN INDIAN OCEAN			
		-	0
NORTH ATLANTIC			
		PS	0

[‡] No whales may be taken from this stock until catch limits including any limitations on size and sex are established by the Commission.

[†] The catch limits of zero introduced in Table 3 as editorial amendments as a result of the coming into effect of paragraph 10(e) are not binding upon the governments of the countries which lodged and have not withdrawn objections to the said paragraph.

Baleen Whale Catch Limits

11. The number of baleen whales taken in the Southern Hemisphere in the 1999/2000 pelagic season and the 2000 coastal season shall not exceed the limits shown in Tables 1 and 2.
12. The number of baleen whales taken in the North Pacific Ocean and dependent waters in 2000 and in the North Atlantic Ocean in 2000 shall not exceed the limits shown in Tables 1 and 2.
13. (a) Notwithstanding the provisions of paragraph 10, catch limits for aboriginal subsistence whaling to satisfy aboriginal subsistence need for the 1984 whaling season and each whaling season thereafter shall be established in accordance with the following principles:
 - (1) For stocks at or above MSY level, aboriginal subsistence catches shall be permitted so long as total removals do not exceed 90 per cent of MSY.
 - (2) For stocks below the MSY level but above a certain minimum level, aboriginal subsistence catches shall be permitted so long as they are set at levels which will allow whale stocks to move to the MSY level.¹
 - (3) The above provisions 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 these provisions on whale stocks and consider modification.

(b) Catch limits for aboriginal subsistence whaling are as follows:

- (1) The taking of bowhead whales from the Bering-Chukchi-Beaufort Seas stock by aborigines is permitted, but only when the meat and products of such whales are to be used exclusively for local consumption by the aborigines and further provided that:
 - (i) For the years 1998, 1999, 2000, 2001 and 2002, the number of bowhead whales landed shall not exceed 280. For each of these years the number of bowhead whales struck shall not exceed 67, except that any unused portion of a strike quota from any year (including 15 unused strikes from the 1995-97 quota) shall be carried forward and added to the strike quotas of any subsequent years, provided that no more than 15 strikes shall be added to the strike quota for any one year.
 - (ii) It is forbidden to strike, take or kill calves or any bowhead whale accompanied by a calf.
 - (iii) The provision shall be reviewed annually by the Commission in light of the advice of the Scientific Committee, particularly its advice arising from the 1998 Comprehensive Assessment.

¹The Commission, on advice of the Scientific Committee, shall establish as far as possible (a) a minimum stock level for each stock below which whales shall not be taken, and (b) a rate of increase towards the MSY level for each stock. The Scientific Committee shall advise on a minimum stock level and on a range of rates of increase towards the MSY level under different catch regimes.

- (2) The taking of gray whales from the Eastern stock in the North Pacific is permitted, but only by aborigines or a Contracting Government on behalf of aborigines, and then only when the meat and products of such whales are to be used exclusively for local consumption by the aborigines whose traditional aboriginal subsistence and cultural needs have been recognised.
- (i) For the years 1998, 1999, 2000, 2001 and 2002, the number of gray whales taken in accordance with this sub-paragraph shall not exceed 620, provided that the number of gray whales taken in any one of the years 1998, 1999, 2000, 2001 or 2002 shall not exceed 140.
 - (ii) It is forbidden to strike, take or kill calves or any gray whale accompanied by a calf.
 - (iii) This provision shall be reviewed annually by the Commission in light of the advice of the Scientific Committee
- (3) The taking by aborigines of minke whales from the West Greenland and Central stocks and fin whales from the West Greenland stock is permitted and then only when the meat and products are to be used exclusively for local consumption.
- (i) The number of fin whales from the West Greenland stock taken in accordance with this sub-paragraph shall not exceed the limits shown in Table 1.
 - (ii) The number of minke whales from the Central stock taken in accordance with this sub-paragraph shall not exceed 12 in each of the years 1998, 1999, 2000, 2001 and 2002, except that any unused portion of the quota for each year shall be carried forward from that year and added to the quota of any subsequent years, provided that no more than 3 shall be added to the quota for any one year.
 - (iii) The number of minke whales struck from the West Greenland stock shall not exceed 175 in each of the years 1998, 1999, 2000, 2001 and 2002, except that any unused portion of the strike quota for each year shall be carried forward from that year and added to the strike quota of any subsequent years, provided that no more than 15 strikes shall be added to the strike quota for any one year. This provision will be reviewed if new scientific data become available within the 5 year period and if necessary amended on the basis of the advice of the Scientific Committee.
- (4) For the seasons 2000 to 2002 the taking of 2¹ humpback whales each season is permitted by Bequians of St Vincent and The Grenadines, but only when the meat and products of such whales are to be used exclusively for local

consumption in St Vincent and The Grenadines.
It is forbidden to strike, take or kill calves or any humpback whale accompanied by a calf.

14. It is forbidden to take or kill suckling calves or female whales accompanied by calves.

Baleen Whale Size Limits

15. (a) It is forbidden to take or kill any sei or Bryde's whales below 40 feet (12.2 metres) in length except that sei and Bryde's whales of not less than 35 feet (10.7 metres) may be taken for delivery to land stations, provided that the meat of such whales is to be used for local consumption as human or animal food.
- (b) It is forbidden to take or kill any fin whales below 57 feet (17.4 metres) in length in the Southern Hemisphere, and it is forbidden to take or kill fin whales below 55 feet (16.8 metres) in the Northern Hemisphere; except that fin whales of not less than 55 feet (16.8 metres) may be taken in the Southern Hemisphere for delivery to land stations and fin whales of not less than 50 feet (15.2 metres) may be taken in the Northern Hemisphere for delivery to land stations, provided that, in each case the meat of such whales is to be used for local consumption as human or animal food.

Sperm Whale Catch Limits

16. Catch limits for sperm whales of both sexes shall be set at zero in the Southern Hemisphere for the 1981/82 pelagic season and 1982 coastal seasons and following seasons, and at zero in the Northern Hemisphere for the 1982 and following coastal seasons; except that the catch limits for the 1982 coastal season and following seasons in the Western Division of the North Pacific shall remain undetermined and subject to decision by the Commission following special or annual meetings of the Scientific Committee. These limits shall remain in force until such time as the Commission, on the basis of the scientific information which will be reviewed annually, decides otherwise in accordance with the procedures followed at that time by the Commission.
17. It is forbidden to take or kill suckling calves or female whales accompanied by calves.

Sperm Whale Size Limits

18. (a) It is forbidden to take or kill any sperm whales below 30 feet (9.2 metres) in length except in the North Atlantic Ocean where it is forbidden to take or kill any sperm whales below 35 feet (10.7 metres).
- (b) It is forbidden to take or kill any sperm whale over 45 feet (13.7 metres) in length in the Southern Hemisphere north of 40° South Latitude during the months of October to January inclusive.
- (c) It is forbidden to take or kill any sperm whale over 45 feet (13.7 metres) in length in the North Pacific Ocean and dependent water south of 40° North Latitude during the months of March to June inclusive.

¹Each year this figure will be reviewed and if necessary amended on the basis of the advice of the Scientific Committee.

IV. TREATMENT

19. (a) It is forbidden to use a factory ship or a land station for the purpose of treating any whales which are classified as Protection Stocks in paragraph 10 or are taken in contravention of paragraphs 2, 3, 4, 5, 6, 7, 8, 11, 12, 14, 16 and 17 of this Schedule, whether or not taken by whale catchers under the jurisdiction of a Contracting Government.
- (b) All other whales taken, except minke whales, shall be delivered to the factory ship or land station and all parts of such whales shall be processed by boiling or otherwise, except the internal organs, whale bone and flippers of all whales, the meat of sperm whales and parts of whales intended for human food or feeding animals. A Contracting Government may in less developed regions exceptionally permit treating of whales without use of land stations, provided that such whales are fully utilised in accordance with this paragraph.
- (c) Complete treatment of the carcasses of "dauhval" and of whales used as fenders will not be required in cases where the meat or bone of such whales is in bad condition.
20. (a) The taking of whales for treatment by a factory ship shall be so regulated or restricted by the master or person in charge of the factory ship that no whale carcass (except of a whale used as a fender, which shall be processed as soon as is reasonably practicable) shall remain in the sea for a longer period than thirty-three hours from the time of killing to the time when it is hauled up for treatment.
- (b) Whales taken by all whale catchers, whether for factory ships or land stations, shall be clearly marked so as to identify the catcher and to indicate the order of catching.

V. SUPERVISION AND CONTROL

21. (a) There shall be maintained on each factory ship at least two inspectors of whaling for the purpose of maintaining twenty-four hour inspection provided that at least one such inspector shall be maintained on each catcher functioning as a factory ship. These inspectors shall be appointed and paid by the Government having jurisdiction over the factory ship; provided that inspectors need not be appointed to ships which, apart from the storage of products, are used during the season solely for freezing or salting the meat and entrails of whales intended for human food or feeding animals.
- (b) Adequate inspection shall be maintained at each land station. The inspectors serving at each land station shall be appointed and paid by the Government having jurisdiction over the land station.
- (c) There shall be received such observers as the member countries may arrange to place on factory ships and land stations or groups of land stations of other member countries. The observers shall be appointed by the Commission acting through its Secretary and paid by the Government nominating them.
22. Gunners and crews of factory ships, land stations, and whale catchers, shall be engaged on such terms that their remuneration shall depend to a considerable extent upon

such factors as the species, size and yield of whales and not merely upon the number of the whales taken. No bonus or other remuneration shall be paid to the gunners or crews of whale catchers in respect of the taking of lactating whales.

23. Whales must be measured when at rest on deck or platform after the hauling out wire and grasping device have been released, by means of a tape-measure made of a non-stretching material. The zero end of the tape-measure shall be attached to a spike or stable device to be positioned on the deck or platform abreast of one end of the whale. Alternatively the spike may be stuck into the tail fluke abreast of the apex of the notch. The tape-measure shall be held taut in a straight line parallel to the deck and the whale's body, and other than in exceptional circumstances along the whale's back, and read abreast of the other end of the whale. The ends of the whale for measurement purposes shall be the tip of the upper jaw, or in sperm whales the most forward part of the head, and the apex of the notch between the tail flukes.

Measurements shall be logged to the nearest foot or 0.1 metre. That is to say, any whale between 75 feet 6 inches and 76 feet 6 inches shall be logged as 76 feet, and any whale between 76 feet 6 inches and 77 feet 6 inches shall be logged as 77 feet. Similarly, any whale between 10.15 metres and 10.25 metres shall be logged as 10.2 metres, and any whale between 10.25 metres and 10.35 metres shall be logged as 10.3 metres. The measurement of any whale which falls on an exact half foot or 0.05 metre shall be logged at the next half foot or 0.05 metre, e.g. 76 feet 6 inches precisely shall be logged as 77 feet and 10.25 metres precisely shall be logged as 10.3 metres.

VI. INFORMATION REQUIRED

24. (a) All whale catchers operating in conjunction with a factory ship shall report by radio to the factory ship:
- (1) the time when each whale is taken
 - (2) its species, and
 - (3) its marking effected pursuant to paragraph 20(b).
- (b) The information specified in sub-paragraph (a) of this paragraph shall be entered immediately by a factory ship in a permanent record which shall be available at all times for examination by the whaling inspectors; and in addition there shall be entered in such permanent record the following information as soon as it becomes available:
- (1) time of hauling up for treatment
 - (2) length, measured pursuant to paragraph 23
 - (3) sex
 - (4) if female, whether lactating
 - (5) length and sex of foetus, if present, and
 - (6) a full explanation of each infraction.
- (c) A record similar to that described in sub-paragraph (b) of this paragraph shall be maintained by land stations, and all of the information mentioned in the said sub-paragraph shall be entered therein as soon as available.

- (d) A record similar to that described in sub-paragraph (b) of this paragraph shall be maintained by "small-type whaling" operations conducted from shore or by pelagic fleets, and all of this information mentioned in the said sub-paragraph shall be entered therein as soon as available.
25. (a) All Contracting Governments shall report to the Commission for all whale catchers operating in conjunction with factory ships and land stations the following information:
- (1) methods used to kill each whale, other than a harpoon, and in particular compressed air
 - (2) number of whales struck but lost.
- (b) A record similar to that described in sub-paragraph (a) of this paragraph shall be maintained by vessels engaged in "small-type whaling" operations and by native peoples taking species listed in paragraph 1, and all the information mentioned in the said sub-paragraph shall be entered therein as soon as available, and forwarded by Contracting Governments to the Commission.
26. (a) Notification shall be given in accordance with the provisions of Article VII of the Convention, within two days after the end of each calendar week, of data on the number of baleen whales by species taken in any waters south of 40° South Latitude by all factory ships or whale catchers attached thereto under the jurisdiction of each Contracting Government, provided that when the number of each of these species taken is deemed by the Secretary to the International Whaling Commission to have reached 85 per cent of whatever total catch limit is imposed by the Commission notification shall be given as aforesaid at the end of each day of data on the number of each of these species taken.
- (b) If it appears that the maximum catches of whales permitted by paragraph 11 may be reached before 7 April of any year, the Secretary to the International Whaling Commission shall determine, on the basis of the data provided, the date on which the maximum catch of each of these species shall be deemed to have been reached and shall notify the master of each factory ship and each Contracting Government of that date not less than four days in advance thereof. The taking or attempting to take baleen whales, so notified, by factory ships or whale catchers attached thereto shall be illegal in any waters south of 40° South Latitude after midnight of the date so determined.
- (c) Notification shall be given in accordance with the provisions of Article VII of the Convention of each factory ship intending to engage in whaling operations in any waters south of 40° South Latitude.
27. Notification shall be given in accordance with the provisions of Article VII of the Convention with regard to all factory ships and catcher ships of the following statistical information:
- (a) concerning the number of whales of each species taken, the number thereof lost, and the number treated at each factory ship or land station, and
 - (b) as to the aggregate amounts of oil of each grade and quantities of meal, fertiliser (guano), and other products derived from them, together with
- (c) particulars with respect to each whale treated in the factory ship, land station or "small-type whaling" operations as to the date and approximate latitude and longitude of taking, the species and sex of the whale, its length and, if it contains a foetus, the length and sex, if ascertainable, of the foetus.
- The data referred to in (a) and (c) above shall be verified at the time of the tally and there shall also be notification to the Commission of any information which may be collected or obtained concerning the calving grounds and migration of whales.
28. (a) Notification shall be given in accordance with the provisions of Article VII of the Convention with regard to all factory ships and catcher ships of the following statistical information:
- (1) The name and gross tonnage of each factory ship.
 - (2) For each catcher ship attached to a factory ship or land station:
 - (i) the dates on which each is commissioned and ceases whaling for the season
 - (ii) the number of days on which each is at sea on the whaling grounds each season
 - (iii) the gross tonnage, horsepower, length and other characteristics of each; vessels used only as tow boats should be specified.
 - (3) A list of the land stations which were in operation during the period concerned, and the number of miles searched per day by aircraft, if any.
- (b) The information required under paragraph (a)(2)(iii) should also be recorded together with the following information, in the log book format shown in Appendix A, and forwarded to the Commission:
- (1) where possible the time spent each day on different components of the catching operation
 - (2) any modifications of the measures in paragraphs (a)(2)(i)-(iii) or (b)(1) or data from other suitable indicators of fishing effort for "small-type whaling" operations.
29. (a) Where possible all factory ships and land stations shall collect from each whale taken and report on:
- (1) both ovaries or the combined weight of both testes
 - (2) at least one ear plug, or one tooth (preferably first mandibular).
- (b) Where possible similar collections to those described in sub-paragraph (a) of this paragraph shall be undertaken and reported by "small-type whaling" operations conducted from shore or by pelagic fleets.
- (c) All specimens collected under sub-paragraphs (a) and (b) shall be properly labelled with platform or other identification number of the whale and be appropriately preserved.
- (d) Contracting Governments shall arrange for the analysis as soon as possible of the tissue samples and specimens collected under sub-paragraphs (a) and (b) and report to the Commission on the results of such analyses.

30. A Contracting Government shall provide the Secretary to the International Whaling Commission with proposed scientific permits before they are issued and in sufficient time to allow the Scientific Committee to review and comment on them. The proposed permits should specify:

- (a) objectives of the research;
- (b) number, sex, size and stock of the animals to be taken;
- (c) opportunities for participation in the research by scientists of other nations; and
- (d) possible effect on conservation of stock.

Proposed permits shall be reviewed and commented on by the Scientific Committee at Annual Meetings when possible. When permits would be granted prior to the next Annual Meeting, the Secretary shall send the proposed permits to members of the Scientific Committee by mail for their comment and review. Preliminary results of any research resulting from the permits should be made available at the next Annual Meeting of the Scientific Committee.

31. A Contracting Government shall transmit to the Commission copies of all its official laws and regulations relating to whales and whaling and changes in such laws and regulations.

Appendix A

TITLE PAGE

(one logbook per catcher per season)

Catcher name Year built

Attached to expedition/land station

Season

Overall length Wooden/steel hull

Gross tonnage

Type of engine H.P.

Maximum speed Average searching speed

Asdic set, make and model no.

Date of installation

Make and size of cannon

Type of first harpoon used explosive/electric/non-explosive

Type of killer harpoon used

Length and type of forerunner

Type of whaleline

Height of barrel above sea level

Speedboat used, Yes/No

Name of Captain

Number of years experience

Name of gunner

Number of years experience

Number of crew

DAILY RECORD SHEET

TABLE 1

Date Catcher name Sheet No.

Searching: Time started (or resumed) searching
 *Time whales seen or reported to catcher
 Whale species
 Number seen and no. of groups
 Position found
 Name of catcher that found whales

Chasing: Time started chasing (or confirmed whales)
 Time whale shot or chasing discontinued
 Asdic used (Yes/No)

Handling: Time whale flagged or alongside for towing
 Serial No. of catch
 Towing: Time started picking up
 Time finished picking up or started towing
 Date and time delivered to factory

Resting: Time stopped (for drifting or resting)
 Time finished drifting/resting
 Time ceased operations

WEATHER CONDITIONS

	Time	Sea state	Wind force and direction	Visibil
Total searching time.....				
Total chasing time				
A) with asdic				
B) without asdic				
Total handling time				
Total towing time				
Total resting time				
Other time				
(e.g. bunkering, in port)				

Whales Seen (No. and No. of schools)

Blue.....	Bryde's
Fin.....	Minke
Humpback.....	Sperm
Right.....	Others (specify)
Sei.....	.....
Signed.....	.....

*Time whales reported to catcher means the time when the catcher is told of the position of a school and starts to chase it.

SCHOOLING REPORT

TABLE 2

To be completed by pelagic expedition or coastal station for each sperm whale school chased. A separate form to be used each day.

Name of expedition or coastal station

Date Noon position of factory ship

Time School Found

Total Number of Whales in School

Number of Takeable Whales in School

Number of Whales Caught from School by each Catcher

Name of Catcher

Name of Catcher

Name of Catcher

Name of Catcher

Total Number Caught from School

Remarks:

Explanatory Notes

- A. Fill in one column for each school chased with number of whales caught by each catcher taking part in the chase; if catchers chase the school but do not catch from it, enter 0; for catchers in fleet which do not chase that school enter X.
- B. A school on this form means a group of whales which are sufficiently close together that a catcher having completed handling one whale can start chasing another whale almost immediately without spending time searching. A solitary whale should be entered as a school of 1 whale.
- C. A takeable whale is a whale of a size or kind which the catchers would take if possible. It does not necessarily include all whales above legal size, e.g. if catchers are concentrating on large whales only these would be counted as takeable.
- D. Information about catchers from other expeditions or companies operating on the same school should be recorded under Remarks.

Rules of Procedure and Financial Regulations

**As amended by the Commission at the 51st Annual Meeting,
May 1999, and replacing those dated September 1998**

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Rules of Procedure

A. Representation

1. A Government party to the International Convention for the Regulation of Whaling, 1946 (hereafter referred to as the Convention) shall have the right to appoint one Commissioner and shall furnish the Secretary of the Commission with the name of its Commissioner and his designation and notify him promptly of any changes in the appointment. The Secretary shall inform other Commissioners of such appointment.

B. Meetings

1. The Commission shall hold a regular Annual Meeting in such place as the Commission may determine. Any Contracting Government desiring to extend an invitation to the Commission to meet in that country shall give formal notice thereof in advance of the preceding Meeting. Attendance by a majority of the members of the Commission shall constitute a quorum. Special Meetings of the Commission may be called at the direction of the Chairman after consultation with the Contracting Governments.

C. Observers

1. (a) Any Government not a party to the Convention or any intergovernmental organisation may be represented at meetings of the Commission by an observer or observers, if such non-party government or intergovernmental organisation has previously attended any meeting of the Commission, or if it submits its request in writing to the Commission 60 days prior to the start of the meeting, or if the Commission issues an invitation to attend.
 - (b) Any international organisation with offices in more than three countries may be represented at meetings of the Commission by an observer, if such international organisation has previously attended any meeting of the Commission, or if it submits its request in writing to the Commission 60 days prior to the start of the meeting and the Commission issues an invitation with respect to such request. The Commission shall levy a registration fee and determine rules of conduct, and may define other conditions for the attendance of such observers. Once an international organisation is accredited, it remains accredited until the Commission votes to revoke the organisation's accreditation.
2. Observers accredited in accordance with Rule C.1.(a) and (b) are admitted to all meetings of the Commission and the Technical Committee, and to any meetings of subsidiary groups of the Commission and the Technical Committee, except the Commissioners-only meetings and the meetings of the Finance and Administration Committee.

D. Credentials

1. (a) The names and status of all participants, advisers and observers to any meeting of the Commission or committees, as specified in the Rules of Procedure of the Commission, Technical and Scientific Committees, shall be notified to the Secretary in writing before their participation and/or attendance at each meeting. The written notification shall be made

by governments or the authority appointed by them or the heads of organisations as the case may be.

- (b) In the case of members of delegations who will attend the Annual Commission Meeting and its associated meetings, the notification may be made *en bloc* by submitting a list of the members who will attend any of these meetings.
- (c) The Secretary, or his representative, shall report on the received notifications at the beginning of a meeting.
- (d) In case of any doubt as to the authenticity of notification or in case of apparent delay in their delivery, the chairman of the meeting shall convene an *ad hoc* group of no more than one representative from any Contracting Government present to decide upon the question of participation in the meeting.

E. Voting

1. Each Commissioner shall have the right to vote at Plenary Meetings of the Commission and in his absence his deputy or alternate shall have such right. Experts and advisers may address Plenary Meetings of the Commission but shall not be entitled to vote. They may vote at the meetings of any committee to which they have been appointed, provided that when such vote is taken, representatives of any Contracting Government shall only exercise one vote.
2. The right to vote of representatives of any Contracting Government whose annual payments including any interest due have not been received by the Commission within 3 months of the due date prescribed in Regulation E.2 of the Financial Regulations, shall be automatically suspended until payment is received by the Commission, unless the Commission decides otherwise.
3. (a) Where a vote is taken on any matter before the Commission, a simple majority of those casting an affirmative or negative vote shall be decisive, except that a three-fourths majority of those casting an affirmative or negative vote shall be required for action in pursuance of Article V of the Convention.
 - (b) Action in pursuance of Article V shall contain the text of the regulations proposed to amend the Schedule. A proposal that does not contain such regulatory text does not constitute an amendment to the Schedule and therefore requires only a simple majority vote. A proposal that does not contain such regulatory text to revise the Schedule but would commit the Commission to amend the Schedule in the future can neither be put to a vote nor adopted.
 - (c) At meetings of committees appointed by the Commission, a simple majority of those casting an affirmative or negative vote shall also be decisive. The committee shall report to the Commission if the decision has been arrived at as a result of the vote.
 - (d) Votes shall be taken by show of hands, or by roll call, as in the opinion of the Chairman, appears to be most suitable. The election of the Chair, Vice-Chair, the appointment of the Secretary of the Commission, and the selection of IWC Annual Meeting venues shall, upon request by a Commissioner, all proceed by secret ballot.

4. Between meetings of the Commission or in the case of emergency, a vote of the Commissioners may be taken by post, or other means of communication in which case the necessary simple, or where required three-fourths majority, shall be of the total number of Contracting Governments whose right to vote has not been suspended under paragraph 2.

F. Chairman

1. The Chairman of the Commission shall be elected from time to time from among the Commissioners and shall take office at the conclusion of the Annual Meeting at which he is elected. He shall serve for a period of three years and shall not be eligible for re-election as Chairman until a further period of three years has elapsed. He shall, however, remain in office until his successor is elected.
2. The duties of the Chairman shall be:
 - (a) to preside at all meetings of the Commission;
 - (b) to decide all questions of order raised at meetings of the Commission, subject to the right of any Commissioner to request that any ruling by the Chairman shall be submitted to the Commission for decision by vote;
 - (c) to call for votes and to announce the result of the vote to the Commission;
 - (d) to determine after consultation with the Commissioners and the Secretary the provisional order of business so that the Secretary may despatch it by airmail not less than 100 days in advance of the meeting;
 - (e) to sign, on behalf of the Commission, a report of the proceedings of each annual or other meeting of the Commission, for transmission to Contracting Governments and others concerned as an authoritative record of what transpired;
 - (f) generally, to make such decisions and give such directions to the Secretary as will ensure, especially in the interval between the meetings of the Commission, that the business of the Commission is carried out efficiently and in accordance with its decision.

G. Vice-Chairman

1. The Vice-Chairman of the Commission shall be elected from time to time from among the Commissioners and shall preside at meetings of the Commission, or between them, in the absence or in the event of the Chairman being unable to act. He shall on those occasions exercise the powers and duties prescribed for the Chairman. The Vice-Chairman shall be elected for a period of three years and shall not be eligible for re-election as Vice-Chairman until a further period of three years has elapsed. He shall, however, remain in office until his successor is elected.

H. Secretary

1. The Commission shall appoint a Secretary and shall designate staff positions to be filled through appointments made by the Secretary. The Commission shall fix the terms of employment, rate of remuneration including tax assessment and superannuation and travelling expenses for the members of the Secretariat.
2. The Secretary is the executive officer of the Commission and shall:
 - (a) be responsible to the Commission for the control and supervision of the staff and management of its office

- and for the receipt and disbursement of all monies received by the Commission;
- (b) make arrangements for all meetings of the Commission and its committees and provide necessary secretarial assistance;
 - (c) prepare and submit to the Chairman a draft of the Commission's budget for each year and shall subsequently submit the budget to all Contracting Governments and Commissioners as early as possible before the Annual Meeting;
 - (d) despatch by airmail:
 - (i) a draft agenda for the Annual Commission Meeting to all Contracting Governments and Commissioners 100 days in advance of the meeting for comment and any additions with annotations they wish to propose;
 - (ii) an annotated provisional agenda to all Contracting Governments and Commissioners not less than 60 days in advance of the Annual Commission Meeting. Included in the annotations should be a brief description of each item, and in so far as possible, documentation relevant to agenda items should be referred to in the annotation and sent to member nations at the earliest possible date;
 - (e) receive, tabulate and publish notifications and other information required by the Convention in such form and manner as may be prescribed by the Commission;
 - (f) perform such other functions as may be assigned to him by the Commission or its Chairman;
 - (g) where appropriate, provide copies or availability to a copy of reports of the Commission including reports of Observers under the International Observer Scheme, upon request after such reports have been considered by the Commission.

I. Chairman of Scientific Committee

1. The Chairman of the Scientific Committee may attend meetings of the Commission and Technical Committee in an *ex officio* capacity without vote, at the invitation of the Chairman of the Commission or Technical Committee respectively in order to represent the views of the Scientific Committee.

J. Order of Business

1. No order of business which involves amendment of the Schedule to the Convention, or recommendations under Article VI of the Convention, shall be the subject of decisive action by the Commission unless the subject matter has been included in the provisional order of business which has been despatched by airmail to the Commissioners at least 60 days in advance of the meeting at which the matter is to be discussed.

K. Financial

1. The financial year of the Commission shall be from 1st September to 31st August.
2. Any request to Contracting Governments for financial contributions shall be accompanied by a statement of the Commission's expenditure for the appropriate year, actual or estimated.
3. Annual payments and other financial contributions by Contracting Governments shall be made payable to the Commission and shall be in pounds sterling.

L. Offices

1. The seat of the Commission shall be located in the United Kingdom.

M. Committees

1. The Commission shall establish a Scientific Committee, a Technical Committee and a Finance and Administration Committee. Commissioners shall notify their desire to be represented on the Scientific, Technical and Finance and Administration Committees 28 days prior to the meetings, and shall designate the approximate size of their delegations.
2. The Chairman may constitute such *ad hoc* committees as may be necessary from time to time, with similar arrangements for notification of the numbers of participants as in paragraph 1 above where appropriate. Each committee shall elect its Chairman. The Secretary shall furnish appropriate secretarial services to each committee.
3. Sub-committees and working groups may be designated by the Commission to consider technical issues as appropriate, and each will report to the Technical Committee or the plenary session of the Commission as the Commission may decide.
4. The Scientific Committee shall review the current scientific and statistical information with respect to whales and whaling, shall review current scientific research programmes of Governments, other international organisations or of private organisations, shall review the scientific permits and scientific programmes for which Contracting Governments plan to issue scientific permits, shall consider such additional matters as may be referred to it by the Commission or by the Chairman of the Commission, and shall submit reports and recommendations to the Commission.
5. The preliminary report of the Scientific Committee should be completed and available to all Commissioners by the opening date of the Annual Commission Meeting.
6. The Secretary shall be an *ex officio* member of the Scientific Committee without vote.
7. The Technical Committee shall, as directed by the Commission or the Chairman of the Commission, prepare reports and make recommendations on:
 - (a) Management principles, categories, criteria and definitions, taking into account the recommendations of the Scientific Committee, as a means of helping the Commission to deal with management issues as they arise;
 - (b) technical and practical options for implementation of conservation measures based on Scientific Committee advice;
 - (c) the implementation of decisions taken by the Commission through resolutions and through Schedule provisions;
 - (d) Commission agenda items assigned to it;
 - (e) any other matters.
8. The Finance and Administration Committee shall advise the Commission on expenditure, budgets, scale of

contributions, financial regulations, staff questions, and such other matters as the Commission may refer to it from time to time.

N. Language of the Commission

1. English shall be the official and working language of the Commission but Commissioners may speak in any other language, if desired, it being understood that Commissioners doing so will provide their own interpreters. All official publications and communications of the Commission shall be in English.

O. Records of Meetings

1. The proceedings of the meetings of the Commission and those of its committees shall be recorded in summary form.

P. Reports

1. Commissioners should arrange for reports on the subject of whaling published in their own countries to be sent to the Commission for record purposes.
2. The Chairman's Report of the most recent Annual Commission Meeting shall be published in the Annual Report of the year just completed.

Q. Commission Documents

1. Reports of all committees, sub-committees and working groups of the Commission are strictly confidential until the opening plenary session of the Commission meeting to which they are submitted. Procedures applying to the Scientific Committee are contained in its Rules of Procedure E.6.1 and 6.2.
2. Reports of intersessional meetings are similarly confidential until they have been distributed by post to Commissioners and Contracting Governments.
3. Any document submitted to the Commission for distribution to Commissioners, Contracting Governments or members of the Scientific Committee is considered to be in the public domain unless it is designated by the author or government submitting it to be restricted. Such restriction is automatically lifted when the report of the meeting to which it is submitted becomes publicly available under 1. above.
4. All meeting documents shall be included in the Commission's archives in the form in which they were considered at the meeting.

R. Amendment of Rules

1. These Rules of Procedure may be amended from time to time by a simple majority of the Commissioners voting, but notice of any proposed amendment shall be despatched by airmail to the Commissioners by the Secretary to the Commission not less than 60 days in advance of the meeting at which the matter is to be discussed.

Financial Regulations

A. Applicability

1. These regulations shall govern the financial administration of the International Whaling Commission.
2. They shall become effective as from the date decided by the Commission and shall be read with and in addition to the Rules of Procedure. They may be amended in the same way as provided under Rule Q.1 of the Rules of Procedure in respect of those Rules.
3. In case of doubt as to the interpretation and application of any of these regulations, the Chairman is authorised to give a ruling.

B. Financial Year

1. The financial year of the Commission shall be from 1st September to 31st August (Rules of Procedure, Rule K.1).

C. General Financial Arrangements

1. There shall be established a Research Fund and a General Fund, and a Voluntary Fund for Small Cetaceans.
 - (a) The Research Fund shall be credited with voluntary contributions and any such monies as the Commission may allocate for research and scientific investigation and charged with specific expenditure of this nature.
 - (b) The General Fund shall, subject to the establishment of any other funds that the Commission may determine, be credited or charged with all other income and expenditure.
 - (c) The details of the Voluntary Fund for Small Cetaceans are given in Appendix I.
The General Fund shall be credited or debited with the balance on the Commission's Income and Expenditure Account at the end of each financial year.
2. Subject to the restrictions and limitations of the following paragraphs, the Commission may accept funds from outside the regular contributions of Contracting Governments.
 - (a) The Commission may accept such funds to carry out programmes or activities decided upon by the Commission and/or to advance programmes and activities which are consistent with the objectives and provisions of the Convention.
 - (b) The Commission shall not accept external funds from any of the following:
 - (i) Sources that are known, through evidence available to the Commission, to have been involved in illegal activities, or activities contrary to the provisions of the Convention;
 - (ii) Individual companies directly involved in legal commercial whaling under the Convention;
 - (iii) Organisations which have deliberately brought the Commission into public disrepute.
3. Monies in any of the Funds that are not expected to be required for disbursement within a reasonable period may be invested in appropriate Government or similar loans by the Secretary in consultation with the Chairman.
4. The Secretary shall:

- (a) establish detailed financial procedures and accounting records as are necessary to ensure effective financial administration and control and the exercise of economy;
- (b) deposit and maintain the funds of the Commission in an account in the name of the Commission in a bank to be approved by the Chairman;
- (c) cause all payments to be made on the basis of supporting vouchers and other documents which ensure that the services or goods have been received, and that payment has not previously been made;
- (d) designate the officers of the Secretariat who may receive monies, incur obligations and make payments on behalf of the Commission;
- (e) authorise the writing off of losses of cash, stores and other assets and submit a statement of such amounts written off to the Commission and the auditors with the annual accounts.

5. The accounts of the Commission shall be audited annually by a firm of qualified accountants selected by the Commission. The auditors shall certify that the financial statements are in accord with the books and records of the Commission, that the financial transactions reflected in them have been in accordance with the rules and regulations and that the monies on deposit and in hand have been verified.

D. Yearly Statements

1. At each Annual Meeting, there shall be laid before the Commission two financial statements:
 - (a) a provisional statement dealing with the actual and estimated expenditure and income in respect of the current financial year;
 - (b) the budget estimate of expenditure and income for the ensuing year including the estimated amount of the individual annual payment to be requested of each Contracting Government.

Expenditure and income shall be shown under appropriate sub-heads accompanied by such explanations as the Commission may determine.

2. The two financial statements identified in Regulation D.1 shall be despatched by airmail to each Contracting Government and each Commissioner not less than 60 days in advance of the Annual Commission Meeting. They shall require the Commission's approval after having been referred to the Finance and Administration Committee for consideration and recommendations. A copy of the final accounts shall be sent to all Contracting Governments after they have been audited.
3. Supplementary estimates may be submitted to the Commission, as and when may be deemed necessary, in a form consistent with the Annual Estimates. Any supplementary estimate shall require the approval of the Commission after being referred to the Finance and Administration Committee for consideration and recommendation.

E. Contributions

1. As soon as the Commission has approved the budget for any year, the Secretary shall send a copy thereof to each Contracting Government (in compliance with Rules of Procedure, Rule K.2), and shall request it to remit its annual payment.
2. Payment shall be in pounds sterling, drafts being made payable to the International Whaling Commission and shall be payable within 90 days of the said request from the Secretary or by the following 28 February, the "due date" whichever is the later. It shall be open to any Contracting Government to postpone the payment of any increased portion of the amount which shall be payable in full by the following 31st August, which then becomes the "due date".
3. New Contracting Governments whose adherence to the Convention becomes effective during the first six months of any financial year shall be liable to pay the full amount of the annual payment for that year, but only half that amount if their adherence falls within the second half of the financial year. The due date for the first payment by new Contracting Governments shall be defined as 6 months from the date of adherence to the Convention. If any new Contracting Government's first payment has not been received by the due date, the provisions of Regulation F.1 shall apply immediately and Regulations F.2 and F.3 on the expiration of the appropriate period thereafter.
4. The Secretary shall report at each Annual Meeting the position as regards the collection of annual payments.

F. Arrears of Contributions

1. If a Contracting Government's annual payments have not been received by the Commission by the due date referred to under Regulation E.2 compound interest shall be added to the outstanding annual payment at a rate of 10% per annum with effect from the day following the due date and thereafter on the anniversary of that day. The interest, calculated to the nearest pound, shall be payable in respect of complete years and continue to be payable in respect of any outstanding balance until such time as the amount in arrears, including interest, is settled in full.
2. If a Contracting Government's annual payments, including any interest due, have not been received by the Commission within 3 months of the due date, the Secretary shall not make available any Commission documentation, excluding individual correspondence, to the Contracting Government concerned, such documentation to be reserved for provision at such time as the amount in arrears, including interest, is settled in full.
3. If a Contracting Government's annual payments, including any interest due, have not been received by the Commission within 3 months of the due date, the right to vote of the Contracting Government concerned shall be suspended as provided under Rule E.2 of the Rules of Procedure.
4. Any interest paid by a Contracting Government to the Commission in respect of late annual payments shall be credited to the General Fund.
5. Any payment to the Commission by a Contracting Government in arrears with annual payments shall be used to pay off debts to the Commission, including interest due, in the order in which they were incurred.

Appendix 1**VOLUNTARY FUND FOR SMALL CETACEANS***Purpose*

The Commission decided at its 46th Annual Meeting in 1994 to establish an IWC voluntary fund to allow for the participation from developing countries in future small cetacean work and requested the Secretary to make arrangements for the creation of such a fund whereby contributions in cash and in kind can be registered and utilised by the Commission.

Contributions

The Commission has called on Contracting Governments and non-contracting Governments, intergovernmental organisations and other entities as appropriate, in particular those most interested in scientific research on small cetaceans, to contribute to the IWC voluntary fund for small cetaceans.

Acceptance of contributions from entities other than Governments will be subject to the Commission's procedures for voluntary contributions. Where funds or support in kind are to be made available through the Voluntary Fund, the donation will be registered and administered by the Secretariat in accordance with Commission procedures.

The Secretariat will notify all members of the Commission on receipt of such voluntary contributions.

Where expenditure is incurred using these voluntary funds the Secretariat will inform the donors of their utilisation.

Distribution of Funds

1. Recognising that there are differences of view on the legal competence of the Commission in relation to small cetaceans, but aware of the need to promote the development of increased participation by developing countries, the following primary forms of disbursement will be supported in accordance with the purpose of the Voluntary Fund:
 - (a) provision of support for attendance of invited participants at meetings of the Scientific Committee;
 - (b) provision of support for research in areas, species or populations or research methodology in small cetacean work identified as of direct interest or priority in the advice provided by the Scientific Committee to the Commission;
 - (c) other small cetacean work in developing countries that may be identified from time to time by the Commission and in consultation with intergovernmental agencies as requiring, or likely to benefit from support through the Fund.
2. Where expenditure is proposed in support of invited participants, the following will apply:
 - (a) invited participants will be selected through consultation between the Chairman of the Scientific Committee, the Convenor of the appropriate sub-committee and the Secretary;
 - (b) the government of the country where the scientists work will be advised of the invitation and asked if it can provide financial support.
3. Where expenditure involves research activity, the following will apply:
 - (a) the normal procedures for review of proposals and recommendations by the Scientific Committee will be followed;
 - (b) appropriate procedures for reporting of progress and outcomes will be applied and the work reviewed;
 - (c) the Secretariat shall solicit the involvement, as appropriate, of governments in the regions where the research activity is undertaken.

Rules of Debate

A. Right to Speak

1. The Chairman shall call upon speakers in the order in which they signify their desire to speak.
2. A Commissioner or Observer may speak only if called upon by the Chairman, who may call a speaker to order if his remarks are not relevant to the subject under discussion.
3. A speaker shall not be interrupted except on a point of order. He may, however, with the permission of the Chairman, give way during his speech to allow any other Commissioner to request elucidation on a particular point in that speech.
4. The Chairman of a committee or working group may be accorded precedence for the purpose of explaining the conclusion arrived at by his committee or group.

B. Submission of Motions

1. Proposals and amendments shall normally be introduced in writing in the working language of the meeting and shall be submitted to the Secretariat which shall circulate copies to all delegations in the session. As a general rule, no proposal shall be discussed at any plenary session unless copies of it have been circulated to all delegations normally no later than 6pm, or earlier if so determined by the Chairman in consultation with the Commissioners, on the day preceding the plenary session. The presiding officer may, however, permit the discussion and consideration of amendments, or motions, as to procedure, even though such amendments, or motions have not been circulated previously.

C. Procedural Motions

1. During the discussion of any matter, a Commissioner may rise to a point of order, and the point of order shall be immediately decided by the Chairman in accordance with these Rules of Procedure. A Commissioner may appeal against any ruling of the Chairman. The appeal shall be immediately put to the vote and the Chairman's ruling shall stand unless a majority of the Commissioners present and voting otherwise decide. A Commissioner rising to a point of order may not speak on the substance of the matter under discussion.
2. The following motions shall have precedence in the following order over all other proposals or motions before the Commission:
 - (a) to adjourn the session;
 - (b) to adjourn the debate on the particular subject or question under discussion;
 - (c) to close the debate on the particular subject or question under discussion.

D. Arrangements for Debate

1. The Commission may, in a proposal by the Chairman or by a Commissioner, limit the time to be allowed to each speaker and the number of times the members of a delegation may speak on any question. When the debate

is subject to such limits, and a speaker has spoken for his allotted time, the Chairman shall call him to order without delay.

2. During the course of a debate the Chairman may announce the list of speakers, and with the consent of the Commission, declare the list closed. He may, however, accord the right of reply to any Commissioner if a speech delivered after he has declared the list closed makes this desirable.
3. During the discussion of any matter, a Commissioner may move the adjournment of the debate on the particular subject or question under discussion. In addition to the proposer of the motion, a Commissioner may speak in favour of, and two Commissioners may speak against the motion, after which the motion shall immediately be put to the vote. The Chairman may limit the time to be allowed to speakers under this rule.
4. A Commissioner may at any time move the closure of the debate on the particular subject or question under discussion, whether or not any other Commissioner has signified the wish to speak. Permission to speak on the motion for the closure of the debate shall be accorded only to two Commissioners wishing to speak against the motion, after which the motion shall immediately be put to the vote. The Chairman may limit the time to be allowed to speakers under this rule.

E. Procedure for Voting on Motions and Amendments

1. A Commissioner may move that parts of a proposal or of an amendment shall be voted on separately. If objection is made to the request of such division, the motion for division shall be voted upon. Permission to speak on the motion for division shall be accorded only to two Commissioners wishing to speak in favour of, and two Commissioners wishing to speak against, the motion. If the motion for division is carried, those parts of the proposal or amendments which are subsequently approved shall be put to the vote as a whole. If all operative parts of the proposal or of the amendment have been rejected, the proposal or the amendment shall be considered to have been rejected as a whole.
2. When the amendment is moved to a proposal, the amendment shall be voted on first. When two or more amendments are moved to a proposal, the Commission shall first vote on the last amendment moved and then on the next to last, and so on until all amendments have been put to the vote. When, however, the adoption of one amendment necessarily implies the rejection of another amendment, the latter amendment shall not be put to the vote. If one or more amendments are adopted, the amended proposal shall then be voted upon. A motion is considered an amendment to a proposal if it merely adds to, deletes from or revises part of that proposal.
3. If two or more proposals relate to the same question, the Commission shall, unless it otherwise decides, vote on the proposals in the order in which they have been submitted. The Commission may, after voting on a proposal, decide whether to vote on the next proposal.

Rules of Procedure of the Technical Committee

A. Participation

1. Membership shall consist of those member nations that elect to be represented on the Technical Committee. Delegations shall consist of Commissioners, or their nominees, who may be accompanied by technical experts.
2. The Secretary of the Commission or a deputy shall be an *ex officio* non-voting member of the Committee.
3. Observers may attend Committee meetings in accordance with the Rules of the Commission.

B. Organisation

1. Normally the Vice-Chairman of the Commission is the Chairman of the Technical Committee. Otherwise the Chairman shall be elected from among the members of the Committee.
2. A provisional agenda for the Technical Committee and each sub-committee and working group shall be prepared by the Technical Committee Chairman with the assistance of the Secretary. After agreement by the Chairman of the Commission they shall be distributed to Commissioners 30 days in advance of the Annual Meeting.

C. Meetings

1. The Annual Meeting shall be held between the Scientific Committee and Commission meetings with reasonable overlap of meetings as appropriate to agenda requirements. Special meetings may be held as agreed by the Commission or the Chairman of the Commission.
2. Rules of conduct for observers shall conform with rules established by the Commission for meetings of all committees and plenary sessions.

D. Reports

1. Reports and recommendations shall, as far as possible, be developed on the basis of consensus. However, if a consensus is not achievable, the committee, sub-committee or working group shall report the different views expressed. The Chairman or any national delegation may request a vote on any issue. Resulting recommendations shall be based on a simple majority of those nations casting an affirmative or negative vote.
 2. Documents on which recommendations are based should be available on demand immediately following each committee, sub-committee or working group meeting.
 3. Technical papers produced for the Commission may be reviewed by the Committee for publication by the Commission.
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Rules of Procedure of the Scientific Committee

TERMS OF REFERENCE

The Scientific Committee, established in accordance with the Commission's Rule of Procedure M.1, has the general terms of reference defined in Rule of Procedure M.4.

In this regard, the DUTIES of the Scientific Committee can be seen as a progression from the scientific investigation of whales and their environment, leading to assessment of the status of the whale stocks and the impact of catches upon them, and then to provision of management advice on the regulation of whaling. This can be defined in the following terms for the Scientific Committee to:

- Encourage, recommend, or if necessary, organise studies and investigations related to whales and whaling [Convention Article IV.1(a)]
- Collect and analyse statistical information concerning the current condition and trend of whale stocks and the effects of whaling activities on them [Article IV.1 (b)]
- Study, appraise, and disseminate information concerning methods of maintaining and increasing the population of whale stocks [Article IV.1 (c)]
- Provide scientific findings on which amendments to the Schedule shall be based to carry out the objectives of the Convention and to provide for the conservation, development and optimum utilisation of the whale resources [Article V.2 (a) and (b)]
- Publish reports of its activities and findings [Article IV.2]

In addition, specific FUNCTIONS of the Scientific Committee are to:

- Receive, review and comment on Special Permits issued for scientific research [Article VIII.3 and Schedule paragraph 30]
- Review research programmes of Contracting Governments and other bodies [Rule of Procedure M.4]

SPECIFIC TOPICS of current concern to the Commission include:

- Comprehensive Assessment of whale stocks [*Rep. int. Whal. Commn* 34:30]
- Implementation of the Revised Management Procedure [*Rep. int. Whal. Commn* 45:43-44]
- Assessment of stocks subject to aboriginal subsistence whaling [Schedule paragraph 13(b)]
- Development of the Aboriginal Subsistence Whaling Management Procedure [*Rep. int. Whal. Commn* 45:42-3]
- Effects of environmental change on cetaceans [*Rep. int. Whal. Commn* 43:39-40; 44:35; 45:49]
- Scientific aspects of whale sanctuaries [*Rep. int. Whal. Commn* 33:21-2; 45:86]
- Scientific aspects of small cetaceans [*Rep. int. Whal. Commn* 41:48; 42:48; 43:51; 45:41]
- Scientific aspects of whalewatching [*Rep. int. Whal. Commn* 45:49-50]

A. Membership and Observers

1. The Scientific Committee shall be composed of scientists nominated by the Commissioner of each Contracting Government which indicates that it wishes to be represented on that Committee. The Secretary of the Commission and relevant members of the Secretariat shall be *ex officio* non-voting members of the Scientific Committee.
2. The Scientific Committee recognises that representatives of Inter-Governmental Organisations with particular relevance to the work of the Scientific Committee may also participate as non-voting members, subject to the agreement of the Chairman of the Committee acting according to such policy as the Commission may decide.
3. Further to paragraph 2 above, the World Conservation Union (IUCN) shall have similar status in the Scientific Committee.
4. Non-member governments may be represented by observers at meetings of the Scientific Committee, subject to the arrangements given in Rule C.1(a) of the Commission's Rules of Procedure.
5. Any other international organisation sending an accredited observer to a meeting of the Commission may nominate a scientifically qualified observer to be present at meetings of the Scientific Committee. Any such nomination must reach the Secretary not less than 60 days before the start of the meeting in question and must specify the scientific qualifications and relevant experience of the nominee. The Chairman of the Scientific Committee shall decide upon the acceptability of any nomination but may reject it only after consultation with the Chairman and Vice-Chairman of the Commission. Observers admitted under this rule shall not participate in discussions but the papers and documents of the Scientific Committee shall be made available to them at the same time as to members of the Committee.
6. The Chairman of the Committee, acting according to such policy as the Commission or the Scientific Committee may decide, may invite qualified scientists not nominated by a Commissioner to participate by invitation or otherwise in committee meetings as non-voting contributors. They may present and discuss documents and papers for consideration by the Scientific Committee, participate on sub-committees, and they shall receive all Committee documents and papers.
 - (a) Convenors will submit suggestions for Invited Participants (including the period of time they would like them to attend) to the Chairman (copied to the Secretariat) not less than four months before the meeting in question. The Convenors will base their suggestions on the priorities and initial agenda identified by the Committee and Commission at the previous meeting. The Chairman may also consider offers from suitably qualified scientists to contribute to priority items on the Committee's agenda if they submit such an offer to the Secretariat not less than four months before the meeting in question, providing information on the contribution they believe that they can make. Within two weeks of this, the Chairman, in consultation with the Convenors and Secretariat, will develop a list of invitees.
 - (b) The Secretary will then promptly issue a letter of invitation to those potential Invited Participants suggested by the Chairman and Convenors. That letter will state that there may be financial support available, although invitees will be encouraged to find their own support. Invitees who wish to be considered for travel and subsistence will be asked to

submit an estimated airfare (incl. travel to and from the airport) to the Secretariat, within 2 weeks. Under certain circumstances (e.g. the absence of a potential participant from their institute), the Secretariat will determine the likely airfare.

At the same time as (b) a letter will be sent to the government of the country where the scientists is domiciled for the primary purpose of enquiring whether that Government would be prepared to pay for the scientist's participation. If it is, the scientist is no longer an Invited Participant but becomes a national delegate.

- (c) At least three months before the meeting, the Secretariat will supply the Chairman with a list of participants and the estimated expenditure for each, based on (1) the estimated airfare, (2) the period of time the Chairman has indicated the IP should be present and (3) a daily subsistence rate based on the actual cost of the hotel deemed most suitable by the Secretary and Chairman*, plus an appropriate daily allowance.

At the same time as (c) a provisional list of the proposed Invited Participants will be circulated to Commissioners, with a final list attached to the Report of the Scientific Committee.

- (d) The Chairman will review the estimated total cost for all suggested participants against the money available in the Commission's budget. Should there be insufficient funds, the Chairman, in consultation with the Secretariat and Convenors where necessary, will decide on the basis of the identified priorities, which participants should be offered financial support and the period of the meeting for which that support will be provided. Invited Participants without IWC support, and those not supported for the full period, may attend the remainder of the meeting at their own expense.
- (e) At least two months before the meeting, the Secretary will send out formal confirmation of the invitations to all the selected scientists, in accordance with the Commission's Guidelines, indicating where appropriate that financial support will be given and the nature of that support.
- (f) In exceptional circumstances, the Chairman, in consultation with the Convenors and Secretariat, may waive the above time restrictions.
- (g) The letter of invitation to Invited Participants will include the following ideas:
Under the Committee's Rules of Procedure, Invited Participants may present and discuss papers, and participate in meetings (including those of sub-groups). They are entitled to receive all Committee documents and papers. They may participate fully in discussions pertaining to their area of expertise. However, discussions of Scientific Committee procedures and policies are in principle limited to Committee members nominated by member governments. Such issues will be identified by the Chairman of the Committee during discussions. Invited Participants are also urged to use their discretion as regards their involvement in the formulation of

potentially controversial recommendations to the Commission; the Chairman may at his/her discretion rule them out of order.

7. A small number of interested local scientists may be permitted to observe at meetings of the Scientific Committee on application to, and at the discretion of, the Chairman. Such scientists should be connected with the local Universities, other scientific institutions or organisations, and should provide the Chairman with a note of their scientific qualifications and relevant experience at the time of their application.

B. Agenda

1. The initial agenda for the Committee meeting of the following year shall be developed by the Committee prior to adjournment each year. The agenda should identify, as far as possible, key issues to be discussed at the next meeting and specific papers on issues should be requested by the Committee as appropriate.
2. The provisional agenda for the Committee meeting shall be circulated for comment 60 days prior to the Annual Meeting of the Committee. Comments will normally be considered for incorporation into the draft agenda presented to the opening plenary only if received by the Chairman 21 days prior to the beginning of the Annual Meeting.

C. Organisation

1. The Scientific Committee shall include standing sub-committees and working groups by area or species, or other subject, and a standing sub-committee on small cetaceans. The Committee shall decide at each meeting on sub-committees for the coming year.
2. The sub-committees and working groups shall prepare the basic documents on the identification, status and trends of stocks, including biological parameters, and related matters as necessary, for the early consideration of the full Committee.
3. The sub-committees, except for the sub-committee on small cetaceans, shall concentrate their efforts on stocks of large cetaceans, particularly those which are currently exploited or for which exploitation is under consideration, or for which there is concern over their status, but they may examine matters relevant to all cetaceans where appropriate.
4. The Chairman may appoint other sub-committees as appropriate.
5. The Committee shall elect from among its members a Chairman and Vice-Chairman who will normally serve for a period of three years. They shall take office at the conclusion of the annual meeting at which they are elected. The Vice-Chairman shall act for the Chairman in his/her absence.

D. Meetings

1. Meetings of the Scientific Committee as used in these rules include all meetings of sub-groups of the Committee, e.g. sub-committees, working groups, workshops, etc.
2. The Scientific Committee shall meet prior to the Annual Meeting of the Commission. Special meetings of the Scientific Committee or its sub-groups may be held as agreed by the Commission or the Chairman of the Commission.

*Footnote: Invited participants who choose to stay at a cheaper hotel will receive the actual rate for their hotel plus the same daily allowance.

3. The Scientific Committee will organise its work in accordance with a schedule determined by the Chairman with the advice of a group comprising sub-committee/working group chairmen and relevant members of the Secretariat.

E. Scientific Papers and Documents

The following documents and papers will be considered by the Scientific Committee for discussion and inclusion in its report to the Commission:

1. Progress Reports. Each nation having information on the biology of cetaceans, cetacean research, the taking of cetaceans, or other matters it deems appropriate should prepare a brief progress report following in the format agreed by the Committee.
2. Special Reports. The Committee may request special reports as necessary on matters to be considered by the Committee for the following year.
3. Sub-committee Reports. Reports of the sub-committees or working groups shall be included as annexes to the Report to the Commission. Recommendations contained therein shall be subject to modification by the full Committee before inclusion in its Report.
4. Scientific and Working Papers.
 - (a) Any scientist may submit a scientific paper for consideration by the Committee. The format and submission procedure shall be in accordance with guidelines established by the Secretariat with the concurrence of the Committee. Papers published elsewhere may be distributed to Committee members for information as relevant to specific topics under consideration.
 - (b) Scientific papers will be considered for discussion and inclusion in the papers of the Committee only if the paper is received by the Secretariat on or by the first day of the annual Committee meeting, intersessional meeting or any sub-group. Exceptions to this rule can be granted by the Chairman of the Committee where there are exceptional extenuating circumstances.
 - (c) Working papers will be distributed for discussion only if prior permission is given by the chairman of the committee or relevant sub-group. They will be archived only if they are appended to the meeting report.
 - (d) The Scientific Committee may receive and consider unpublished scientific documents from non-members of the Committee (including observers) and may invite them to introduce their documents at a meeting of the Committee provided that they are received under the same conditions (with regard to timing etc.) that apply to members.
5. Publication of Scientific Papers and Reports.
 - (a) Scientific papers and reports considered by the Committee that are not already published shall be included in the Commission's archives in the form in which they were considered by the Committee or its sub-committees. Papers submitted to meetings shall be available on request at the same time as the report of the meeting concerned (see (b) below).
 - (b) Reports of the meetings of the Scientific Committee shall be available outside the Commission after distribution to the Commission. They are strictly confidential prior to that time. In particular, the Report of the Annual Meeting of the Scientific Committee shall be available at the time of the opening plenary of the Commission meeting.

(i) Reports of intersessional Workshops or Special Committee Meetings are considered confidential until they have been distributed by post to the full Committee, Commissioners and Contracting Governments.

(ii) Reports of intersessional Steering Groups or Sub-committees are considered confidential until they have been discussed by the Scientific Committee, normally at an Annual Meeting.

The Scientific Committee should identify the category of any intersessional meetings at the time they are recommended.

- (c) Scientific papers and reports (revised as necessary) may be considered for publication by the Commission. Papers shall be subject to peer review before publication. Papers submitted shall follow the Guidelines for Authors published by the Commission.

F. Review of Scientific Permits

1. When proposed scientific permits are sent to the Secretariat before they are issued by national governments the Scientific Committee shall review the scientific aspects of the proposed research at its annual meeting, or during a special meeting called for that purpose and comment on them to the Commission.
2. The review process shall take into account guidelines issued by the Commission.
3. The proposed permits and supporting documents should include specifics as to the objectives of the research, number, sex, size, and stock of the animals to be taken, opportunities for participation in the research by scientists of other nations, and the possible effect on conservation of the stock resulting from granting the permits.
4. Preliminary results of any research resulting from the permits should be made available for the next meeting of the Scientific Committee as part of the national progress report or as a special report, paper or series of papers.

G. Financial Support for Research Proposals

1. The Scientific Committee shall identify research needs.
2. It shall consider unsolicited research proposals seeking financial support from the Commission to address these needs. A sub-committee shall be established to review and rank research proposals received 4 months in advance of the Annual Meeting and shall make recommendations to the full Committee.
3. The Scientific Committee shall recommend in priority order those research proposals for Commission financial support as it judges best meet its objectives.

H. Availability of data

The Scientific Committee shall work with the Secretariat to ensure that catch and scientific data that the Commission holds are archived and accessible using modern computer data handling techniques. Access to such data shall be subject to the following rules.

1. Information identified in Section VI of the Schedule that shall be notified or forwarded to the IWC or other body designated under Article VII of the Convention.

This information is available on request through the Secretariat to any interested persons with a legitimate claim relative to the aims and purposes of the Convention¹.

2. Information and reports provided where possible under Section VI of the Schedule.

When such information is forwarded to the IWC a covering letter should make it clear that the information or report is being made available, and it should identify the pertinent Schedule paragraph under which the information or report is being submitted.

Information made available to the IWC under this provision is accessible to accredited persons as defined under 4. below, and additionally to other interested persons subject to the agreement of the government submitting the information or report.

Such information already held by the Commission is not regarded as having been forwarded until such clarification of its status is received from the government concerned.

3. Information neither required nor requested under the Schedule but which has been or might be made available to the Commission on a voluntary basis.

This information is of a substantially different status from the previous two types. It can be further divided into two categories:

- (a) Information collected under International Schemes.

- (i) Data from the IWC sponsored projects.
- (ii) Data from the International Marking Scheme.
- (iii) Data obtained from international collaborative activities which are offered by the sponsors and accepted as contributions to the Comprehensive Assessment, or proposed by the Scientific Committee itself.

- (iv) Information collected as the result of IWC sponsored activities and/or on a collaborative basis with other organisations, governments, institutions or individuals is available within those contributing bodies either immediately,

or, after mutual agreement between the IWC and the relevant body/person, after a suitable time interval to allow 'first use' rights to the primary contributors.

- (b) Information collected under national programmes, or other than in (a).

- (i) Information in this category is likely to be provided by governments under special conditions and would hence be subject to some degree of restriction of access. This information can only be held under the following conditions.

- (ii) A minimum level of access should be that such data could be used by accredited persons during the Scientific Committee meetings using validated techniques or methods agreed by the Scientific Committee. After the meeting, at the request of the Scientific Committee, such data could be accessed by the Secretariat for use with previously specified techniques or validated programs. Information thus made available to accredited persons should not be passed on to third parties but governments might be asked to consider making such records more widely available or accessible.

- (iii) The restrictions should be specified at the time the information is provided and these should be the only restrictions.

- (iv) Restrictions on access should not discriminate amongst accredited persons.

- (v) All information held should be documented (i.e. described) so that accredited persons know what is held, along with stated restrictions on the access to it and the procedures needed to obtain permission for access.

4. Accredited persons.

Accredited persons are those scientists defined under sections A.1, 2, 3 and 6 of the Rules of Procedure of the Scientific Committee. Invited participants are also considered as 'accredited' during the intersessional period following the meeting which they attend.

¹ The Government of Norway notes that for reasons of domestic legislation it is only able to agree that data it provides under this paragraph are made available to accredited persons.



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