



CCAMLR

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Nouvelles initiatives nécessaires pour réduire la capture accidentelle des oiseaux de mer de l'océan Austral dans les pêcheries à la palangre

TO ALL MEMBERS OF THE COMMISSION AND THE SCIENTIFIC COMMITTEE

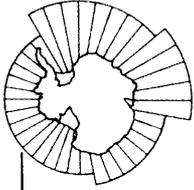
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CIRCULAIRE À L'ATTENTION DE TOUS LES MEMBRES DE LA COMMISSION ET DU COMITÉ SCIENTIFIQUE

COMM CIRC 02/22
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Hobart, le 16 avril 2002

Nouvelles initiatives nécessaires pour réduire la capture accidentelle des oiseaux de mer de l'océan Austral dans les pêcheries à la palangre

Lors de CCAMLR-XX, la Commission a pris note de l'avis du Comité scientifique selon lequel, avec l'impact probable de la pêche illégale, non réglementée et non déclarée à la légine dans la zone de la Convention, le plus grand risque pour la préservation des albatros et des pétrels se reproduisant dans la zone de la Convention concerne le niveau de la mortalité associée à la pêche à la palangre dans les eaux adjacentes à la zone de la Convention (CCAMLR-XX, paragraphe 6.25; SC-CAMLR-XX, paragraphe 4.73).

Le Comité scientifique a indiqué qu'il conviendrait de mettre en œuvre, dans toutes les pêcheries des secteurs adjacents à la zone de la Convention, des mesures visant à réduire la mortalité des oiseaux de mer qui soient au moins aussi efficaces que celles en vigueur dans la zone de la Convention (SC-CAMLR-XX, paragraphe 4.59 et SC-CAMLR-XX, annexe 5, paragraphe 7.158).

Les Membres qui mènent des opérations de pêche à la palangre en dehors de la zone de la Convention de la CCAMLR dans des régions où sont tués les oiseaux marins de la zone de la Convention, ou qui délivrent des permis de pêche pour ces régions, ont été chargés (SC-CAMLR-XX, annexe 5, paragraphe 7.158) de fournir au secrétariat des données sur :

- i) l'effort de pêche à la palangre (à une échelle au moins aussi grande que celle d'une zone OAA) déployé dans chaque type de pêcherie à la palangre;
- ii) les taux de mortalité accidentelle des oiseaux de mer associés à chaque pêcherie à la palangre et des précisions sur les espèces dont il s'agit;
- iii) les mesures visant à réduire la mortalité des oiseaux de mer dans chaque pêcherie, et des précisions quant au caractère obligatoire ou non de ces dispositions; et
- iv) les caractéristiques des programmes d'observation, notamment la couverture des opérations de pêche par les observateurs, pour chaque pêcherie.

Les Membres ont également été chargés d'établir une collaboration (notamment un échange de données) avec les commissions thonnières et autres organisations de pêche régionales pertinentes (CCAMLR-XX, paragraphe 6.33). Les Membres (surtout ceux qui ont été désignés observateurs de la CCAMLR) participant aux réunions de telles organisations cette année sont chargés de fournir au secrétariat, dès que possible après chaque réunion, des informations sur les discussions qui y ont eu lieu sur la capture accidentelle d'oiseaux de mer et la possibilité de mettre en place des programmes en collaboration, notamment des échanges de données.

Une liste de toutes les organisations pertinentes, dressée par le WG-IMAF, est annexée. Également ci-joint est une note d'information préparée par le secrétariat et destinée aux Membres qui assisteront cette année aux réunions des organisations mentionnées, et en particulier à ceux qui ont été désignés observateurs de la CCAMLR.



D.G.M. Miller
Secrétaire exécutif

P.J.

**Regional Fisheries Management Organisations identified for contacts
with respect to tasks on the mitigation of by-catch of Southern Ocean seabirds
in longline fisheries**

(membership information is taken from the FAO Fisheries Regional Bodies website page)

Inter-American Tropical Tuna Commission (I-ATTC)

The following CCAMLR Members are Contracting Parties of the organization: France, Japan and United States.

International Commission for the Conservation of Atlantic Tunas (ICCAT)

The following CCAMLR Members are Contracting Parties of the organization: European Community, France, Japan, Republic of Korea, Namibia, Russia, South Africa, UK, USA and Uruguay.

Indian Ocean Tuna Commission (IOTC)

The following CCAMLR Members are Contracting Parties of the organization: Australia, European Community, France, India, Japan and United Kingdom.

Commission for the Conservation of Southern Bluefin Tuna (CCSBT)

The following CCAMLR Members are Contracting Parties of the organization: Australia, Japan and New Zealand.

Commission for Highly Migratory Species in the Central and Western Pacific (WCPFC)

The Convention, establishing WCPFC has not yet entered into force and the Commission does not yet exist as a functioning body. However, the Standing Committee on Tuna and Billfish currently operates under the Oceanic Fisheries Program of the Secretariat of the Pacific Community (SPC)

The following CCAMLR Members are members the Pacific Community: Australia, France, New Zealand, the United Kingdom and the United States of America.

The South Pacific Forum Fisheries Agency (FFA)

The following CCAMLR Members are Members of the FFA – Australia and New Zealand.

Agreement on the Organization of the Permanent Commission on the Exploitation and Conservation of the Marine Resources of the South Pacific, 1952 (CPPS)

The following CCAMLR Members are Contracting Parties of the organization: Chile

Western Indian Ocean Tuna Organization Convention (WIOTO)

The Organization does not have regulatory powers.

The following CCAMLR Members are Contracting Parties of the organization : India.

CCAMLR's work on the elimination of seabird mortality associated with fishing

(CCAMLR Secretariat)

Introduction

1. Over the last few years, CCAMLR has played an important role in the creation and implementation of measures designed to reduce seabird mortality associated with fishing. CCAMLR's leading role in this area has received international recognition.
2. The assessment and avoidance of incidental mortality of Antarctic marine living resources have always been very important issues for the CCAMLR Commission and the Scientific Committee. In order to assess and monitor the incidental mortality of birds and marine mammals, the Commission in 1984 asked its Members to start keeping records and report the number, species, and where appropriate the age, size, sex and reproductive status of any birds and marine mammals taken incidentally during fishing operations.
3. The Scheme of International Scientific Observation was introduced by CCAMLR in the 1992/93 season. The observation on the incidental mortality of marine mammals and birds is a priority item under this Scheme. Under the CCAMLR Conservation Measures, deployment of international scientific observers is mandatory for all longline fishing vessels and also for trawl fishing vessels engaged in all new and exploratory fisheries in the Convention Area. In a number of maritime zones of coastal States in the Convention Area national observers also collect the required data. Guidelines and instructions for seabird observations are published in the *CCAMLR Scientific Observers Manual*.
4. All Conservation Measures adopted by the Commission are subject to the international inspection process established in accordance with the CCAMLR System of Inspection. This System has been in operation since the 1989/90 season. In addition, all Members must inspect their fishing vessels at ports of departure and arrival in order to verify compliance with the conditions fishing licenses issued, including compliance with measures on the reduction of incidental mortality of seabirds.
5. In 1992 CCAMLR established the *Ad hoc* Working Group on Incidental Mortality Arising from Longline Fishing (WG-IMALF). The group's terms of reference include the review of data on seabird by-catch and the performance of CCAMLR seabird-related measures. In 2001, taking into account that the Group also considers incidental mortality associated with trawl fishing, the name of the Group was amended to the *Ad hoc* Working Group on Incidental Mortality Associated with Fishing (WG-IMAF). The group's advice is submitted annually to the CCAMLR Scientific Committee for consideration.

Current CCAMLR measures aimed at reducing incidental mortality of seabirds

6. The current set of measures adopted by CCAMLR on the reduction of seabird mortality apply to different types of fishing gear. They comprise measures related to fishing regulations, reporting and compliance, as well as guidelines for scientific observation and the publication of materials for training and education. All of these measures are briefly described in the following paragraphs.

Driftnet fishing

7. With respect to fishing with driftnets, CCAMLR decided in 1990 that there should be no expansion of large-scale pelagic driftnet fishing into the high seas of the Convention Area (Resolution 7/IX). The decision remains unchanged, and no driftnet fishing is being carried out in the Convention Area.

Trawl fishing

8. For a number of years only occasional seabirds were reported as incidentally killed in trawl fishing operations in the Convention Area. In 1994, the Commission banned the use of trawl netsonde cables as seabirds were reportedly killed as a result of interactions with cables. This measure was later reinforced and trawl vessels were demanded to arrange the location and level of deck lighting so as to

minimize illumination directed out of the vessel. The discharge of offal was also prohibited during the setting and hauling of trawl gear.

9. However, in 2001 trawlers fishing for mackerel icefish in Subarea 48.3 reported a total of 132 seabirds entangled, three times the total estimated seabird mortality of all regulated longline fishing in this Subarea.

10. In response to this, the Commission required special recording and reporting arrangements, tests of potential mitigation measures and imposed an interim precautionary limit of a total of 20 seabirds killed per vessel, after which fishing by that vessel would cease.

Longline fishing

11. In 1989, CCAMLR noted that the introduction of longline fishing in the Convention Area posed a potential threat to seabirds. CCAMLR has mounted a major campaign, directed by WG-IMALF, to reduce the incidental capture and mortality of seabirds in longline fisheries. In 1989, CCAMLR adopted Resolution 5/VIII "Protection of seabirds from incidental mortality arising from longline fishing". In 1991, CCAMLR adopted the Conservation Measure 29/X "Minimisation of the Incidental Mortality of Seabirds in the Course of Longline Fishing or Longline Fishing Research in the Convention Area" which has subsequently been modified to include a suite of measures designed to prevent, or minimise, the incidental mortality of seabirds. CCAMPR keeps these actions under annual review.

12. The development of the current Conservation Measure 29/XIX is summarised in Appendix 1. The complete text of the Conservation Measure 29/XIX is in Appendix 2.

13. As part of its continued efforts to minimise seabird mortality in longline fisheries, in 1996 CCAMLR published an educational book for fishermen "Fish the Sea, Not the Sky". The book was published in English, French, Spanish and Russian. The book promotes practical ways in which longline fishermen can reduce incidental catches of seabirds in bottom longline operations. The book was widely distributed to companies and vessels engaged in longline fishing in the Convention Area and adjacent waters. In addition, fliers and stickers promoting the message of the book were also published and widely distributed

14. In cooperation with CCAMLR, in 1999 the Museum of New Zealand published *Identification of Seabirds of the Southern Ocean – A Guide for Scientific Observers aboard Fishing Vessels*. The Guide was published in English, French, Spanish and Russian. It has been made available to all scientific observers who work onboard fishing vessels in the Convention Area and adjacent areas.

15. Over the past four years the seabird by-catch and by-catch rate in regulated fisheries in the Convention Area has been significantly reduced. This has been achieved by a combination of improved compliance with Conservation Measure 29/XIX and by delaying the start of fishing until the end of the breeding season of most albatross and petrel species (Table 1).

16. By 2001, the operation of regulated longline fisheries in the Convention Area had achieved negligible levels and rates of seabird bycatch in Subarea 48.3 (21-30 birds per annum at 0.002 birds/thousand hooks), low levels (200 birds at 0.02 birds/thousand hooks) in the South African EEZ in Subareas 58.6 and 58.7 and no incidental mortality in Subarea 88.1 for the fourth successive year.

17. Thus, in the Convention Area, the only remaining serious seabird bycatch problem is in the French EEZs in Subarea 58.6 and division 58.5.1, where over 2000 white-chinned petrels were killed during the summer-season longline fishery in 2000.

18. In addition to requiring the use of an appropriate suite of measures to minimise seabird bycatch in regulated fisheries, CCAMLR also considers the advice of WG-IMAF for all proposed new and exploratory fisheries. Each year WG-IMAF reviews these proposals and, taking account of the magnitude of potential risk of seabird bycatch in each area concerned, recommends the appropriate suite of mitigation measures (considering especially the need for fishing season restriction and night setting of longlines).

19. In terms of fishery-related threats to seabirds in the Convention Area, CCAMLR recently endorsed the advice of WG-IMAF and the Scientific Committee that the main threats are now posed by bycatch in IUU fishing in the Convention Area and by bycatch in longline fisheries adjacent to the Convention Area.

20. By-catch of seabirds in IUU longline fishing in the Convention Area remains a serious problem. The overall estimated totals for the whole Convention Area in 2001 indicate a potential seabird by-catch in IUU fisheries of 36 000 to 69 000 (lower level) to 48 000 to 90 000 birds (higher level) in 2001. These figures were similar to those calculated for IUU fishing from 1997 to 2000 (Table 2). CCAMLR concluded that such levels of mortality are entirely unsustainable for the populations of albatrosses and giant and white-chinned petrels breeding in the Convention Area. This situation is viewed by CCAMLR with the greatest concern, and strict measures have been implemented to address the problem of unregulated fishing, with additional measures under development.

21. To address problems of bycatch of Convention Area seabirds in areas adjacent to the Convention Area - historically (since the 1970s) the most important cause of many of the population declines of albatrosses and petrels in the Convention Area - CCAMLR has requested closer collaboration with Members and regional fishery management organisations with jurisdiction and responsibility for longline fisheries in these areas. In particular, CCAMLR is advocating that the use of appropriate measures to minimise seabird bycatch be made obligatory for all longline fishing vessels and that appropriate assistance be given to facilitate this.

22. The work of WG-IMAF continues to focus on determining the status of seabirds vulnerable to the impact of longline fishing, evaluating the impact of new and exploratory fisheries in the Convention Area, assessing incidental mortality of seabirds during regulated and IUU fisheries in the Convention Area and adjacent waters and reviewing research into and experience with mitigating measures.

23. In the immediate future CCAMLR's activities relating to seabird by-catch will include:

- (i) continuing compulsory placement of international and national scientific observers on board all longline vessels fishing in the Convention Area;
- (ii) ensuring full compliance with the existing suite of CCAMLR mitigation measures contained in Conservation Measure 29/XIX;
- (iii) supporting the conduct of rigorous experiments on the effects of different elements of Conservation Measure 29/XIX when applied to the Spanish longline system;
- (iv) conducting further field trials in order to define a line-weighting regime for autoliners to be incorporated in Conservation Measure 29/XIX; and
- (v) continued encouragement for the development and use of underwater longline setting gear and methods and far improved methods of weighting longlines.

Other types of fishing

24. No incidental mortality of seabirds has been recorded for the exploratory squid fishery or the toothfish pot fishery being conducted in Subarea 48.3 of the Convention Area.

International Cooperation

25. CCAMLR has kept in regular contact with a number of international fisheries and conservation organizations in order to exchange information on the prevention of incidental mortality of seabirds during fishing operations, the state of Southern Ocean seabird populations affected by longline fisheries, incidental catches of seabirds in these fisheries, and CCAMLR's experience with mitigating techniques and with the formulation of conservation measures.

26. CCAMLR has consistently collaborated with FAO, particularly in contributing to the latter's activities in reducing incidental mortality of seabirds in longline fisheries. Most of the CCAMLR measures

in Conservation Measure 29/XIX, are now incorporated in the FAO International Plan of Action for Reducing the Incidental Catch of Seabirds in Longline Fisheries (IPOA-SEABIRDS).

27. On the recommendation of its Scientific Committee, the CCAMLR Commission encouraged all its Members to support the adopted IPOA-SEABIRDS. It also requested all CCAMLR Members fishing in the Convention Area to adopt their own National Plans of Action (within the framework of IPOA-SEABIRDS). In addition, the Commission encouraged its Members to implement measures to reduce seabird by-catch in longline fisheries at least to below 0.05 birds/thousand hooks.

28. CCAMLR Members and the Commission as an observer took part in the establishment of the Agreement for the Conservation of Albatrosses and Petrels under the CMS/Bonn Convention.

Conclusion

29. The prompt action of CCAMLR in developing and implementing measures to reduce seabird mortality in general (and of albatrosses in particular), coupled with the willingness of captains of many fishing vessels to cooperate with scientific observers, has done much to alleviate the problem within the regulated fishery in the Convention Area.

30. There has been a continued substantial reduction in the level of incidental capture of seabirds in regulated longline fisheries operating in the Convention Area over the period 1997-2000. This trend has been sustained over the past four years and is directly attributable to improved compliance with Conservation Measure 29/XVI and the later commencement of the fishing season in most longline fisheries. Some improvement is still possible.

31. In spite of the significant progress achieved by CCAMLR Members in reducing seabird by-catch in regulated longline fishing in the Convention Area, high levels of incidental capture, and associated mortality, are believed to occur during IUU fishing. In addition to measures already implemented by CCAMLR, bringing IUU fishing under control requires a concentrated international effort.

32. CCAMLR has encouraged Members to ratify and promote the entry into force of such international instruments as UNIA, the FAO Compliance Agreement and the Code of Conduct for Responsible Fisheries, noting that this will contribute to the elimination of IUU fishing in the Convention Area. The Commission also considers contributions that may be made by CCAMLR to international initiatives within the FAO IPOA-IUU, including participation in the international network for fisheries monitoring, control and surveillance and the development of a model uniform catch documentation and reporting measures.

33. CCAMLR urges its Members to implement their own National Plans of Action in support of the FAO International Plan of Action on the Reduction of the Catch of Seabirds in Longline Fisheries. When the agreement for the conservation of Albatrosses and Petrels under the CMS/Bonn Convention comes into force, this should considerably strengthen existing international cooperation.

34. At CCAMLR-XX (2001), the Commission decided that closer cooperation is required with a number of Regional Fishery Management Organisations (RFMOs) with jurisdiction in areas adjacent to the CCAMLR Convention Area and where seabirds breeding in the Convention Area are killed.

35. To this end, it was decided that Members of CCAMLR who are also members of these bodies should take steps to ensure that mitigating measures to protect seabirds are used by all vessels operating under the auspices of such organisations. As far as possible, the mitigating measures used should be consistent between areas and fisheries and be at least as effective as the methods used currently within the CCAMLR Convention Area.

36. A complete list of relevant papers considered by CCAMLR and in particular by WG-IMALF over the past several years is available on the CCAMLR Website at www.ccamlr.org (see Main Index -> Scientific Committee -> Seabirds and Marine Mammals Fisheries Interactions (*ad hoc* WG-IMAF)). The page also contains extracts from recent reports of WG-IMALF and the Scientific Committee on matters of incidental mortality of marine mammals and seabirds associated with fishing.

Table 1: Total estimated seabird by-catch and by-catch rate (birds/thousand hooks) in longline fisheries in Subareas 48.3, 58.6 and 58.7, from 1997 to 2001* (From the report of WG-FSA-01, Table 55).

Subarea	1997	1998	Year 1999	2000	2001
48.3					
Estimated by-catch	5 755	640	210**	21	30
By-catch rate	0.23	0.032	0.013**	0.002	0.002
58.6, 58.7					
Estimated by-catch	834	528	156	516	199
By-catch rate	0.52	0.194	0.034	0.046	0.018

* No incidental mortality was produced in Subarea 88.1 in fisheries being conducted there for the past four years;

** Excluding *Argos Helena* line weighting experiment cruise.

Table 2: Estimates of potential seabird by-catch in unregulated longline fishing in the Convention Area in 2000/01 (From the report of WG-FSA-01, table 61).

Subarea/ Division	Potential By-catch Level	Summer	Winter	Total ¹
48.3	Lower (mean)	1 600–2 100	10–30	1 600–2 100
	Higher (max)	5 600–7 400	100–200	5 800–7 500
58.6	Lower	10 400–13 800	60–110	10 500–13 900
	Higher	18 600–24 800	230–460	19 100–25 000
58.7	Lower	1 500–2 000	10–20	1 500–2 000
	Higher	2 600–3 500	30–70	2 700–3 500
58.4.4	Lower	9 200–12 300	50–100	9 300–12 400
	Higher	16 500–22 100	210–410	16 900–22 300
58.5.1	Lower	8 800–11 700	50–100	8 900–11 800
	Higher	15 800–21 000	200–390	16 200–21 200
58.5.2	Lower	4 400–5 900	20–50	4 500–5 900
	Higher	7 900–10 500	100–200	8 100–10 600
Total	Lower	35 900–67 000 ¹	200–900 ¹	36 000–69 000 ²
	Higher	47 800–89 300 ¹	400–1 700 ¹	48 000–90 000 ²

¹ Rounded to nearest hundred birds

² Rounded to nearest thousand birds

Appendix 1

History of the development of a suit of mitigation measures to minimise seabird bycatch under Conservation Measure 29/XIX

Group of mitigation measures	CM29/X (1991)	CM29/XI (1992)	CM29/XIII (1994)	CM29/XIV (1995)	CM29/XV (1996)	CM29/XVI (1997)	CM29/XIX (2000)
Weighting regime for sinking line with baited hooks	General request for a provision that baited hooks sink as soon as possible	No changes	Added - Only thawed bait shall be used	Footnote added - weight specification for Spanish type of longlines, i.e. weights of minimum 6 kg at no more than 20 m intervals	No changes	Footnote on weighting regime for Spanish type longlines (6kg at no more than 20m) intervals was incorporated into the main text	Line-weighting regime revised to include weights of minimum 8.5 kg at no more than 40 m intervals.
Night setting of lines	Request to use minimum lights when setting lines at night	No changes	Added - Requirement to set lines only at night, i.e. between times of nautical twilight	Added - setting of lines should be, where possible, completed at least 3 hours before dawn (to reduce by-catch of white-chinned petrels)	Clarified - references given to exact times of nautical twilight, also the term 'sunrise' replaced with the term 'dawn'	No changes	No changes
Dumping of trash/offal	Prohibition of dumping while longline operations are in progress	No changes	Added - if dumping of offal is unavoidable, shall be done as far away as possible from the site where longlines are set/hailed	Clarified - If dumping is unavoidable, it should take place on the side of the vessel opposite to that where longlines are set/hailed	No changes	Revised - Dumping is prohibited while longlines are being set. The condition for cases 'if dumping is unavoidable' now applies only to hauling longlines	Revised- vessels unable to process or retain offal on board, or discharge offal on the opposite site of the vessel, shall not be authorised to fish in the Convention Area
Handling seabirds caught on longlines			Request added that every effort be made to release alive birds caught during hauling lines with any hooks being removed	No changes	No changes	No changes	No changes

Use of streamer lines	Request to use streamer lines when setting longlines during daylight	Clarified that streamer lines shall be towed during all deployments of longlines	Allowed slightly greater flexibility in the design of streamer lines.	Added - more flexibility to the design of a device dragged in a water to create tension in a streamer line	No changes	No changes	No changes
Specification of a streamer line design	Exact specification of the streamer line is given	No changes	Added - conditions for testing variations of specified design of the streamer line	Added - more clarification of conditions for testing streamer lines	No changes	No changes	

CONSERVATION MEASURE 29/XIX^{1,2}

Minimisation of the Incidental Mortality of Seabirds in the Course of Longline Fishing or Longline Fishing Research in the Convention Area

The Commission,

Noting the need to reduce the incidental mortality of seabirds during longline fishing by minimising their attraction to fishing vessels and by preventing them from attempting to seize baited hooks, particularly during the period when the lines are set,

Adopts the following measures to reduce the possibility of incidental mortality of seabirds during longline fishing.

1. Fishing operations shall be conducted in such a way that the baited hooks sink as soon as possible after they are put in the water. Only thawed bait shall be used.
2. For vessels using the Spanish method of longline fishing, weights should be released before line tension occurs; weights of at least 8.5 kg mass shall be used, spaced at intervals of no more than 40 m, or 6 kg mass shall be used, spaced at intervals of no more than 20 m.
3. Longlines shall be set at night only (i.e. during the hours of darkness between the times of nautical twilight³)⁴. During longline fishing at night, only the minimum ship's lights necessary for safety shall be used.
4. The dumping of offal is prohibited while longlines are being set. The dumping of offal during the haul shall be avoided. Any such discharge shall take place only on the opposite side of the vessel to that where longlines are hauled.
5. Vessels which are so configured that they lack on-board processing facilities or adequate capacity to retain offal on board, or the ability to discharge offal on the opposite side of the vessel to that where longlines are hauled, shall not be authorised to fish in the Convention Area.
6. A streamer line designed to discourage birds from settling on baits during deployment of longlines shall be towed. Specification of the streamer line and its method of deployment is given in the appendix to this measure. Details of the construction relating to the number and placement of swivels may be varied so long as the effective sea surface covered by the streamers is no less than that covered by the currently specified design. Details of the device dragged in the water in order to create tension in the line may also be varied.

7. Other variations in the design of streamer lines may be tested on vessels carrying two observers, at least one appointed in accordance with the CCAMLR Scheme of International Scientific Observation, providing that all other elements of this conservation measure are complied with¹.
8. Every effort should be made to ensure that birds captured alive during longlining are released alive and that wherever possible hooks are removed without jeopardising the life of the bird concerned.

¹ Except for waters adjacent to the Kerguelen and Crozet Islands

² Except for waters adjacent to the Prince Edward Islands

³ The exact times of nautical twilight are set forth in the Nautical Almanac tables for the relevant latitude, local time and date. All times, whether for ship operations or observer reporting, shall be referenced to GMT.

⁴ Wherever possible, setting of lines should be completed at least three hours before sunrise (to reduce loss of bait to/catches of white-chinned petrels).

⁵ The streamer lines under test should be constructed and operated taking full account of the principles set out in WG-IMALF-94/19 (available from the CCAMLR Secretariat); testing should be carried out independently of actual commercial fishing and in a manner consistent with the spirit of Conservation Measure 65/XII.

APPENDIX TO CONSERVATION MEASURE 29/XIX

1. The streamer line is to be suspended at the stern from a point approximately 4.5 m above the water and such that the line is directly above the point where the baits hit the water.
2. The streamer line is to be approximately 3 mm diameter, have a minimum length of 150 m and have a device at the end to create tension so that the main line streams directly behind the ship even in cross winds.
3. At 5 m intervals commencing from the point of attachment to the ship five branch streamers each comprising two strands of approximately 3 mm diameter cord should be attached. The length of the streamer should range between approximately 3.5 m nearest the ship to approximately 1.25 m for the fifth streamer. When the streamer line is deployed the branch streamers should reach the sea surface and periodically dip into it as the ship heaves. Swivels should be placed in the streamer line at the towing point, before and after the point of attachment of each branch streamer and immediately before any weight placed on the end of the streamer line. Each branch streamer should also have a swivel at its attachment to the streamer line.

