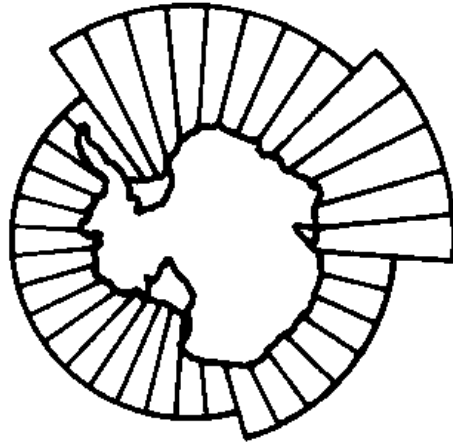


**COMMISSION FOR THE CONSERVATION  
OF ANTARCTIC MARINE LIVING RESOURCES**



**SCHEDULE OF  
CONSERVATION MEASURES  
IN FORCE**

**1998/99**

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(as of November, 1998)

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**SCHEDULE OF  
CONSERVATION MEASURES  
IN FORCE  
1998/99 SEASON**

(As amended by the Commission at the Seventeenth Meeting,  
26 October to 6 November 1998)

This schedule lists Conservation Measures adopted by the Commission in accordance with Article IX of the Convention for the Conservation of Antarctic Marine Living Resources.

Conservation Measures are numbered in simple consecutive order in arabic numerals with a roman numeral identifying the number of the meeting of the Commission at which they were adopted. For example, Conservation Measure 3/IV denotes the third Conservation Measure adopted by the Commission, and indicates that the Measure was adopted at the Fourth Meeting of the Commission, i.e. in 1985. If a Conservation Measure is amended it retains its arabic numeral, but the roman numeral is changed to that of the meeting at which it was amended.

The map depicts the CCAMLR Convention Area and its Statistical Areas, Subareas and Divisions.

The texts of the CCAMLR System of Inspection and the CCAMLR Scheme of International Scientific Observation are appended.



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## SUMMARY OF CURRENT CONSERVATION MEASURES AND RESOLUTIONS\*

### General

Conservation Measure		Area	Species/Fishery	Period in Force and/or Fishing Season
No.	Title			
63/XV	Regulation of the use and disposal of plastic packaging bands on fishing vessels	All areas	All fisheries	Indefinite
64/XII <sup>1</sup>	The application of conservation measures to scientific research	All areas	All fisheries	Indefinite
118/XVII	Scheme to promote compliance by non-Contracting Party vessels with CCAMLR conservation measures	All areas	All fisheries	Indefinite
119/XVII <sup>1</sup>	Licensing and inspection obligations of Contracting Parties with regard to their flag vessels operating in the Convention Area	All areas	All fisheries	Indefinite
146/XVII <sup>2</sup>	Marking of fishing vessels and fishing gear	All areas	All fisheries	Indefinite
147/XVII <sup>2</sup>	Cooperation between Contracting Parties to ensure compliance with CCAMLR Conservation Measures with regard to their vessels	All areas	All fisheries	Indefinite
148/XVII	Automated satellite-linked vessel monitoring systems (VMS)	All areas	All fisheries with the exception of the krill fishery	Indefinite
Res. 7/IX	Driftnet Fishing in the Convention Area	All areas	All fisheries	Indefinite
Res. 10/XII	Resolution on harvesting of stocks occurring both within and outside the Convention Area	All areas	All fisheries	Indefinite
5/V <sup>3</sup>	Prohibition of directed fishery on <i>Notothenia rossii</i> in the Peninsula area (Statistical Subarea 48.1)	Subarea 48.1	<i>Notothenia rossii</i>	Indefinite
72/XVII	Prohibition of directed fishing for finfish in Statistical Subarea 48.1	Subarea 48.1	Finfish fisheries	Indefinite until reopened by the Commission on the advice of the Scientific Committee.
6/V <sup>3</sup>	Prohibition of directed fishery on <i>Notothenia rossii</i> around South Orkneys (Statistical Subarea 48.2)	Subarea 48.2	<i>Notothenia rossii</i>	Indefinite

<sup>1</sup> Except for waters adjacent to the Kerguelen and Crozet Islands and the Prince Edward Islands

<sup>2</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

<sup>3</sup> Conservation Measures 5/V and 6/V, which prohibit directed fishing for *Notothenia rossii* in Subareas 48.1 and 48.2 respectively, remain in force but are currently encompassed within the provisions in Conservation Measures 72/XVII and 73/XVII.

\* This summary is provided for reference purposes only. For details please refer to relevant conservation measures.

**General (continued)**

Conservation Measure		Area	Species/Fishery	Period in Force and/or Fishing Season
No.	Title			
73/XVII	Prohibition of directed fishing for finfish in Statistical Subarea 48.2	Subarea 48.2	Finfish fisheries	Indefinite until reopened by the Commission on the advice of the Scientific Committee.
7/V	Regulation of fishing around South Georgia (Statistical Subarea 48.3)	Subarea 48.3	All species upon which fisheries are permitted	Indefinite
3/IV	Prohibition of directed fishery on <i>Notothenia rossii</i> around South Georgia (Statistical Subarea 48.3)	Subarea 48.3	<i>Notothenia rossii</i>	Indefinite
160/XVII <sup>4</sup>	Prohibition of directed fishing for <i>Dissostichus eleginoides</i> in Statistical Subarea 58.7	Subarea 58.7	<i>Dissostichus eleginoides</i>	From 7 November 1998 until reopened by the Commission on the advice of the Scientific Committee.
149/XVII	Prohibition on directed fishing for <i>Dissostichus</i> spp. except in accordance with specific Conservation Measures in the 1998/99 season	Subareas 48.5, 88.2, 88.3 Division 58.4.1 (east of 90°E)	<i>Dissostichus</i> spp.	From 7 November 1998 to 30 November 1999.

<sup>4</sup> Except for waters adjacent to the Prince Edward Islands

**Trawl Fisheries**

Conservation Measure		Area	Species/Fishery	Period in Force and/or Fishing Season
No.	Title			
2/III	Mesh size	All areas	<i>Notothenia rossii</i> , <i>Dissostichus eleginoides</i> , <i>Gobionotothen gibberifrons</i> , <i>Notothenia kempfi</i> , <i>Lepidonotothen squamifrons</i>	Indefinite
4/V	Regulation on mesh size measurement	All areas	Supplements Conservation Measure 2/III	Indefinite
19/IX <sup>5</sup>	Mesh size for <i>Champocephalus gunnari</i>	All areas	<i>Champocephalus gunnari</i>	Indefinite
30/X <sup>5</sup>	Net monitor cables	All areas	All trawl fisheries	Indefinite

<sup>5</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

**Trawl Fisheries (continued)**

Conservation Measure		Area	Species/Fishery	Period in Force and/or Fishing Season
No.	Title			
32/X	Precautionary catch limitations on <i>Euphausia superba</i> in Statistical Area 48	Area 48	<i>Euphausia superba</i>	Indefinite until the total catch in any season exceeds 620 000 tonnes.
95/XIV	Limitation of the by-catch of <i>Gobionotothen gibberifrons</i> , <i>Chaenocephalus aceratus</i> , <i>Pseudochaenichthys georgianus</i> , <i>Notothenia rossii</i> and <i>Lepidonotothen squamifrons</i> in Statistical Subarea 48.3	Subarea 48.3	<i>Gobionotothen gibberifrons</i> , <i>Chaenocephalus aceratus</i> , <i>Pseudochaenichthys georgianus</i> , <i>Notothenia rossii</i> , <i>Lepidonotothen squamifrons</i>	Indefinite until by-catch limits in any season are reached.
152/XVII	Prohibition of directed fishery on <i>Gobionotothen gibberifrons</i> , <i>Chaenocephalus aceratus</i> , <i>Pseudochaenichthys georgianus</i> , <i>Lepidonotothen squamifrons</i> and <i>Patagonotothen guntheri</i> in Statistical Subarea 48.3 for the 1998/99 season	Subarea 48.3	<i>Gobionotothen gibberifrons</i> , <i>Chaenocephalus aceratus</i> , <i>Pseudochaenichthys georgianus</i> , <i>Lepidonotothen squamifrons</i> , <i>Patagonotothen guntheri</i>	From 7 November 1998 to 30 November 1999.
155/XVII	Precautionary catch limit for <i>Electrona carlsbergi</i> in Statistical Subarea 48.3 for the 1998/99 season	Subarea 48.3	<i>Electrona carlsbergi</i>	From 7 November 1998 to 30 November 1999 or until the catch limit or the by-catch limit of any species listed in Conservation Measure 95/XIV is reached, whichever is sooner. Special provision for Shag Rocks applies.
153/XVII	Limitation of total catch of <i>Champscephalus gunnari</i> in Statistical Subarea 48.3 in the 1998/99 season	Subarea 48.3	<i>Champscephalus gunnari</i>	From 7 November 1998 until the catch limit or the by-catch limit of any species listed in Conservation Measure 95/XIV is reached, whichever is sooner. Closed from 1 April to 30 November 1999.
106/XV	Precautionary catch limitation on <i>Euphausia superba</i> in Statistical Division 58.4.1	Division 58.4.1	<i>Euphausia superba</i>	Indefinite until the total catch in any season exceeds 775 000 tonnes.
45/XIV	Precautionary catch limitation on <i>Euphausia superba</i> in Statistical Division 58.4.2	Division 58.4.2	<i>Euphausia superba</i>	Indefinite until the total catch in any season exceeds 450 000 tonnes.
129/XVI	Prohibition of directed fishing for <i>Lepidonotothen squamifrons</i> in Statistical Division 58.4.4 (Ob and Lena Banks)	Division 58.4.4	<i>Lepidonotothen squamifrons</i>	Indefinite until reopened by the Commission on the advice of the Scientific Committee.

### Trawl Fisheries (continued)

Conservation Measure		Area	Species/Fishery	Period in Force and/or Fishing Season
No.	Title			
158/XVII	Fishery for <i>Dissostichus eleginoides</i> in Statistical Division 58.5.2 for the 1998/99 season	Division 58.5.2	<i>Dissostichus eleginoides</i>	From 7 November 1998 to 30 November 1999 or until the catch limit or the by-catch of any of the species listed in Conservation Measure 157/XVII is reached, whichever is sooner.
159/XVII	Fishery for <i>Champocephalus gunnari</i> in Statistical Division 58.5.2 in the 1998/99 fishing season	Division 58.5.2	<i>Champocephalus gunnari</i>	From 7 November 1998 to 30 November 1999 or until the catch limit or the by-catch of any of the species listed in Conservation Measure 157/XVII is reached, whichever is sooner.
157/XVII	Limitation of the by-catch in Statistical Division 58.5.2 in the 1998/99 fishing season	Division 58.5.2	All species other than <i>Dissostichus eleginoides</i> and <i>Champocephalus gunnari</i>	From 7 November 1998 to 30 November 1999 or until by-catch limits are reached in any directed fishery open in Division 58.5.2.

### Longline Fisheries

Conservation Measure		Area	Species/Fishery	Period in Force and/or Fishing Season
No.	Title			
29/XVI <sup>6</sup>	Minimisation of the incidental mortality of seabirds in the course of longline fishing or longline fishing research in the Convention Area	All areas	All longline fisheries	Indefinite
154/XVII	Limits on the fishery for <i>Dissostichus eleginoides</i> in Statistical Subarea 48.3 for the 1998/99 season	Subarea 48.3	<i>Dissostichus eleginoides</i>	From 15 April to 31 August 1999 or until the catch limit is reached, whichever is sooner.

<sup>6</sup> Except for waters adjacent to the Kerguelen and Crozet Islands and the Prince Edward Islands

### Longline Fisheries (continued)

Conservation Measure		Area	Species/Fishery	Period in Force and/or Fishing Season
No.	Title			
156/XVII	Catch limit on <i>Dissostichus eleginoides</i> and <i>Dissostichus mawsoni</i> in Statistical Subarea 48.4 for the 1998/99 season	Subarea 48.4	<i>Dissostichus eleginoides</i> , <i>D. mawsoni</i>	From 15 April to 31 August 1999, or until the catch limit for <i>Dissostichus eleginoides</i> in Subarea 48.4 is reached, or until the catch limit for <i>Dissostichus eleginoides</i> in Subarea 48.3, as specified in Conservation Measure 154/XVII, is reached, whichever is sooner.

### Crab Fishery

Conservation Measure		Area	Species/Fishery	Period in Force and/or Fishing Season
No.	Title			
150/XVII	Experimental harvest regime for the crab fishery in Statistical Subarea 48.3 for seasons 1998/99 and 1999/2000	Subarea 48.3	All crab fisheries	From 7 November 1998 to 30 November 2000.
151/XVII	Limits on the crab fishery in Statistical Subarea 48.3 in the 1998/99 season	Subarea 48.3	All crab fisheries	From 7 November 1998 to 30 November 1999, or until the catch limit is reached, whichever is sooner.

### New and Exploratory Fisheries

Conservation Measure		Area	Species/Fishery	Period in Force and/or Fishing Season
No.	Title			
31/X <sup>7</sup>	Notification that Members are considering initiating a new fishery	All areas	All new fisheries	Indefinite
65/XII <sup>7</sup>	Exploratory fisheries	All areas	All exploratory fisheries	Indefinite
161/XVII <sup>7</sup>	General measures for new and exploratory longline fisheries for <i>Dissostichus</i> spp. in the Convention Area for the 1998/99 season	All areas	<i>Dissostichus</i> spp. All new and exploratory longline fisheries	In the 1998/99 season, fishing in any fine-scale rectangle shall cease when the reported catch reaches 100 tonnes.

<sup>7</sup> Except for waters adjacent to the Kerguelen and Crozet Islands and the Prince Edward Islands

### New and Exploratory Fisheries (continued)

Conservation Measure		Area	Species/Fishery	Period in Force and/or Fishing Season
No.	Title			
165/XVII	Exploratory fishery for <i>Martialia hyadesi</i> in Statistical Subarea 48.3 in the 1998/99 season	Subarea 48.3	<i>Martialia hyadesi</i> Exploratory fishery	From 7 November 1998 to 30 November 1999 or until the catch limit is reached, whichever is sooner.
162/XVII	New fisheries for <i>Dissostichus eleginoides</i> and <i>Dissostichus mawsoni</i> in Statistical Subarea 48.6 in the 1998/99 season	Subarea 48.6	<i>Dissostichus eleginoides</i> , <i>D. mawsoni</i> New longline fishery	North of 60°S from 1 March to 31 August 1999 or until the catch limit is reached. South of 60°S from 15 February until 15 October 1999 or until the catch limit is reached.
166/XVII	Exploratory trawl fishery for <i>Dissostichus</i> spp. in Statistical Division 58.4.1 in the 1998/99 season	Division 58.4.1 (west of 90°E)	<i>Dissostichus</i> spp. Exploratory trawl fishery	From 7 November 1998 to 30 November 1999 or until the catch limit is reached, whichever is sooner.
163/XVII	New longline fishery for <i>Dissostichus</i> spp. in Statistical Division 58.4.3 outside areas under national jurisdictions in the 1998/99 season	Division 58.4.3	<i>Dissostichus</i> spp., New longline fishery	From 15 April to 31 August 1999 or until the catch limit is reached, whichever is sooner.
167/XVII	Exploratory trawl fishery for <i>Dissostichus</i> spp. in Statistical Division 58.4.3 in the 1998/99 season	Division 58.4.3	<i>Dissostichus</i> spp. Exploratory trawl fishery	From 7 November 1998 to 30 November 1999 or until the catch limit is reached, whichever is sooner.
164/XVII <sup>8</sup>	New longline fisheries for <i>Dissostichus eleginoides</i> in Statistical Division 58.4.4 in the 1998/99 season	Division 58.4.4	<i>Dissostichus eleginoides</i> New longline fishery	From 15 April to 31 August 1999 or until the catch limit is reached, whichever is sooner.
168/XVII <sup>9</sup>	Exploratory longline fisheries for <i>Dissostichus eleginoides</i> in Statistical Subarea 58.6 in the 1998/99 season	Subarea 58.6	<i>Dissostichus eleginoides</i> Exploratory longline fishery	From 15 April to 31 August 1999 or until the catch limit is reached, whichever is sooner.
169/XVII	Exploratory longline fishery for <i>Dissostichus eleginoides</i> and <i>Dissostichus mawsoni</i> in Statistical Subarea 88.1 in the 1998/99 season	Subarea 88.1	<i>Dissostichus eleginoides</i> , <i>D. mawsoni</i> Exploratory longline fishery	From 15 December 1998 to 31 August 1999 or until the catch limit is reached, whichever is sooner.

<sup>8</sup> Except for waters adjacent to the Prince Edward Islands

<sup>9</sup> Except for waters adjacent to the Crozet Islands and the Prince Edward Islands

### CCAMLR Reporting Systems

Conservation Measure		Area	Species/Fishery	Period in Force
No.	Title			
40/X	Monthly catch and effort reporting system	All areas	All fisheries	Indefinite
51/XII	Five-day catch and effort reporting system	All areas	All fisheries	Indefinite
61/XII	Ten-day catch and effort reporting system	All areas	All fisheries	Indefinite
121/XVI <sup>10</sup>	Monthly fine-scale biological data reporting system for trawl and longline fisheries	All areas	All trawl and longline fisheries	Indefinite
122/XVI <sup>10</sup>	Monthly fine-scale catch and effort data reporting system for trawl and longline fisheries	All areas	All trawl and longline fisheries	Indefinite

<sup>10</sup> Except for waters adjacent to the Kerguelen and Crozet Islands and the Prince Edward Islands

### Conservation Measures Relating to CEMP Sites

Conservation Measure		Period in Force
No.	Title	
18/XIII	Procedure for according protection to CEMP sites	Indefinite
62/XI	Protection of the Seal Islands CEMP site	To be reviewed every five years in accordance with Conservation Measure 18/XIII.
82/XIII	Protection of the Cape Shirreff CEMP site	To be reviewed every five years in accordance with Conservation Measure 18/XIII.



## CONSERVATION MEASURES AND RESOLUTIONS RELATING TO FISHERIES

### CONSERVATION MEASURE 2/III

#### Mesh Size

(as amended in accordance with Conservation Measure 19/IX)

1. The use of pelagic and bottom trawls having the mesh size in any part of a trawl less than indicated is prohibited for any directed fishery for:
 

<i>Notothenia rossii</i> , <i>Dissostichus eleginoides</i>	–120 mm
<i>Gobionotothen gibberifrons</i> , <i>Notothenia kempfi</i> , <i>Lepidonotothen squamifrons</i>	– 80 mm
2. It is prohibited to use any means or device which would obstruct or diminish the size of the meshes.
3. This Conservation Measure does not apply to fishing conducted for scientific research purposes.
4. This Measure will apply as of 1 September 1985.

### CONSERVATION MEASURE 3/IV

#### Prohibition of Directed Fishery on *Notothenia rossii* around South Georgia (Statistical Subarea 48.3)

1. Directed fishing on *Notothenia rossii* around South Georgia (Statistical Subarea 48.3) is prohibited.
2. By-catches of *Notothenia rossii* in fisheries directed to other species shall be kept to the level allowing the optimum recruitment to the stock.

### CONSERVATION MEASURE 4/V

#### Regulation on Mesh Size Measurement

This Conservation Measure supplements Conservation Measure 2/III

Regulations on Mesh Size Measurement

#### ARTICLE 1

##### Description of Gauges

1. Gauges to be used for determining mesh sizes shall be 2 mm thick, flat, of durable material and capable of retaining their shape. They shall have either a series of parallel-edged sides connected by intermediate tapering edges with a taper of one to eight on each side, or only tapering edges with the taper defined above. They shall have a hole at the narrowest extremity.

2. Each gauge shall be inscribed on its face with the width in millimetres both on the parallel-sided section, if any, and on the tapering section. In the case of the latter the width shall be inscribed every 1 mm interval and the indication of the width shall appear at regular intervals.

## **ARTICLE 2**

### Use of the Gauge

1. The net shall be stretched in the direction of the long diagonal of the meshes.
2. A gauge as described in Article 1 shall be inserted by its narrowest extremity into the mesh opening in a direction perpendicular to the plane of the net.
3. The gauge shall be inserted into the mesh opening either with a manual force or using a weight or dynamometer, until it is stopped at the tapering edges by the resistance of the mesh.

## **ARTICLE 3**

### Selection of Meshes to be Measured

1. Meshes to be measured shall form a series of 20 consecutive meshes chosen in the direction of the long axis of the net.
2. Meshes less than 50 cm from lacings, ropes or codline shall not be measured. This distance shall be measured perpendicular to the lacings, ropes or codline with the net stretched in the direction of that measurement. Nor shall any mesh be measured which has been mended or broken or has attachments to the net fixed at that mesh.
3. By way of derogation from paragraph 1, the meshes to be measured need not be consecutive if the application of paragraph 2 prevents it.
4. Nets shall be measured only when wet and unfrozen.

## **ARTICLE 4**

### Measurement of Each Mesh

The size of each mesh shall be the width of the gauge at the point where the gauge is stopped, when using this gauge in accordance with Article 2.

## **ARTICLE 5**

### Determination of the Mesh Size of the Net

1. The mesh size of the net shall be the arithmetical mean in millimetres of the measurements of the total number of meshes selected and measured as provided for in Articles 3 and 4, the arithmetical mean being rounded up to the next millimetre.
2. The total number of meshes to be measured is provided for in Article 6.

## ARTICLE 6

### Sequence of Inspection Procedure

1. The inspector shall measure one series of 20 meshes, selected in accordance with Article 3, inserting the gauge manually without using a weight or dynamometer.

The mesh size of the net shall then be determined in accordance with Article 5.

If the calculation of the mesh size shows that the mesh size does not appear to comply with the rules in force, then two additional series of 20 meshes selected in accordance with Article 3 shall be measured. The mesh size shall then be recalculated in accordance with Article 5, taking into account the 60 meshes already measured. Without prejudice to paragraph 2, this shall be the mesh size of the net.

2. If the captain of the vessel contests the mesh size determined in accordance with paragraph 1, such measurement will not be considered for the determination of the mesh size and the net shall be remeasured.

A weight or dynamometer attached to the gauge shall be used for remeasurement.

The choice of weight or dynamometer shall be at the discretion of the inspector.

The weight shall be fixed to the hole in the narrowest extremity of the gauge using a hook. The dynamometer may either be fixed to the hole in the narrowest extremity of the gauge or be applied at the largest extremity of the gauge.

The accuracy of the weight or dynamometer shall be certified by the appropriate national authority.

For nets of a mesh size of 35 mm or less as determined in accordance with paragraph 1, a force of 19.61 newtons (equivalent to a mass of 2 kilograms) shall be applied and for other nets, a force of 49.03 newtons (equivalent to a mass of 5 kilograms).

For the purposes of determining the mesh size in accordance with Article 5 when using a weight or dynamometer, one series of 20 meshes only shall be measured.

### **CONSERVATION MEASURE 5/V<sup>1</sup>** **Prohibition of Directed Fishery on *Notothenia rossii*** **in the Peninsula Area (Statistical Subarea 48.1)**

The Commission hereby adopts the following Conservation Measure in accordance with Article IX of the Convention:

Directed fishing on *Notothenia rossii* in the Peninsula Area (Statistical Area 48.1) is prohibited.

By-catches of *Notothenia rossii* in fisheries directed to other species shall be kept to the level allowing the optimum recruitment to the stock.

<sup>1</sup> This Conservation Measure remains in force, but is currently encompassed within the provisions in Conservation Measure 72/XVII.

**CONSERVATION MEASURE 6/V<sup>1</sup>**  
**Prohibition of Directed Fishery on *Notothenia rossii***  
**around South Orkneys (Statistical Subarea 48.2)**

The Commission hereby adopts the following Conservation Measure in accordance with Article IX of the Convention:

Directed fishing on *Notothenia rossii* around South Orkneys (Statistical Subarea 48.2) is prohibited.

By-catches of *Notothenia rossii* in fisheries directed to other species shall be kept to the level allowing the optimum recruitment to the stock.

<sup>1</sup> This Conservation Measure remains in force, but is currently encompassed within the provisions in Conservation Measure 73/XVII.

**CONSERVATION MEASURE 7/V**  
**Regulation of Fishing around South Georgia**  
**(Statistical Subarea 48.3)**

Without prejudice to other Conservation Measures adopted by the Commission, for species upon which fisheries are permitted around South Georgia (Statistical Subarea 48.3), the Commission shall, at its 1987 Meeting, adopt limitations on catch, or equivalent measures, binding for the 1987/88 season.

Such limitations of catch or equivalent measures shall be based upon the advice of the Scientific Committee, taking into account any data resulting from fishery surveys around South Georgia.

For each fishing season after 1987/88, the Commission shall establish such limitations or other measures, as necessary, around South Georgia on a similar basis at the meeting of the Commission immediately preceding that season.

**CONSERVATION MEASURE 19/IX<sup>2</sup>**  
**Mesh Size for *Champocephalus gunnari***

1. The use of pelagic and bottom trawls having the mesh size in any part of a trawl less than 90 mm is prohibited for any directed fishery for *Champocephalus gunnari*.
2. The mesh size specified above is defined in accordance with the regulations on mesh size measurement, Conservation Measure 4/V.
3. It is prohibited to use any means or device which would obstruct or diminish the size of the meshes.
4. This Conservation Measure does not apply to fishing conducted for scientific research purposes.
5. This Measure will apply as of 1 November 1991.
6. Conservation Measure 2/III is amended accordingly.

<sup>2</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

**CONSERVATION MEASURE 29/XVI<sup>1,2</sup>**  
**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 6 kg mass should 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 twilight<sup>3</sup>)<sup>4</sup>. 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 as far as possible; if discharge of offal during the haul is unavoidable, this discharge shall take place on the opposite side of the vessel to that where longlines are hauled.
5. 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.
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 with<sup>5</sup>.

<sup>1</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

<sup>2</sup> Except for waters adjacent to the Prince Edward Islands

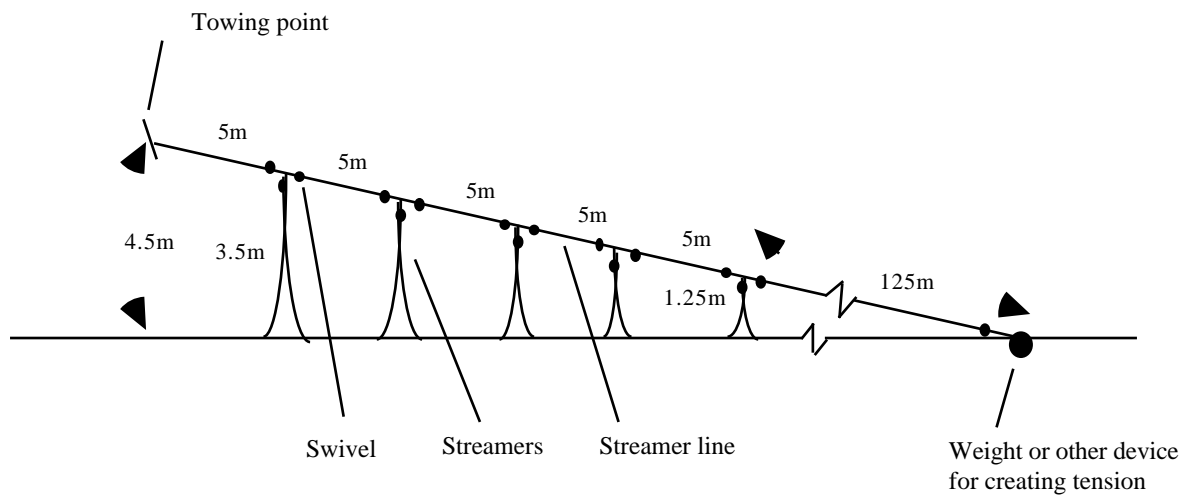
<sup>3</sup> The exact times of nautical twilight are set forth in the Nautical Almanac tables for the relevant latitude, local time and date. All times, whether for ship operations or observer reporting, shall be referenced to GMT.

<sup>4</sup> 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).

<sup>5</sup> 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/XVI

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.



**CONSERVATION MEASURE 30/X<sup>1</sup>**  
**Net Monitor Cables**

The use of net monitor cables on harvesting vessels in the CCAMLR Convention Area is prohibited from the 1994/95 fishing season.

<sup>1</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

**CONSERVATION MEASURE 31/X<sup>1,2</sup>**  
**Notification that Members are Considering**  
**Initiating a New Fishery**

The Commission,

Recognising that in the past, Antarctic fisheries have been initiated in the Convention Area before sufficient information was available upon which to base management advice,

Noting that in recent years new fisheries have started without adequate information being available to evaluate either the fishery potential or the possible impacts on the target stocks or species dependent on them,

Believing that without prior notification of a new fishery, the Commission is unable to fulfil its function under Article IX,

hereby adopts the following Conservation Measure in accordance with Article IX of the Convention:

1. A new fishery, for the purposes of this Conservation Measure, is a fishery on a species using a particular fishing method in a statistical subarea for which:
  - (i) information on distribution, abundance, demography, potential yield and stock identity from comprehensive research/surveys or exploratory fishing have not been submitted to CCAMLR;
  - or
  - (ii) catch and effort data have never been submitted to CCAMLR;
  - or
  - (iii) catch and effort data from the two most recent seasons in which fishing occurred have not been submitted to CCAMLR.
  
2. A Member intending to develop a new fishery shall notify the Commission not less than three months in advance of the next regular meeting of the Commission, where the matter shall be considered. The Member shall not initiate a new fishery pending the process specified in paragraphs 4 and 5 below.
  
3. The notification shall be accompanied by as much of the following information as the Member is able to provide:
  - (i) the nature of the proposed fishery including target species, methods of fishing, proposed region and any minimum level of catches that would be required to develop a viable fishery;
  - (ii) biological information from comprehensive research/survey cruises, such as distribution, abundance, demographic data and information on stock identity;

- (iii) details of dependent and associated species and the likelihood of them being affected by the proposed fishery; and
  - (iv) information from other fisheries in the region or similar fisheries elsewhere that may assist in the valuation of potential yield.
4. The information provided in accordance with paragraph 3, together with any other relevant information, shall be considered by the Scientific Committee, which shall then advise the Commission.
  5. After its review of the information on the proposed new fishery, taking full account of the recommendations and the advice of the Scientific Committee, the Commission may then take such action as it deems necessary.

<sup>1</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

<sup>2</sup> Except for waters adjacent to the Prince Edward Islands

**CONSERVATION MEASURE 32/X**  
**Precautionary Catch Limitations on *Euphausia superba***  
**in Statistical Area 48**

The total catch of *Euphausia superba* in Statistical Area 48 shall be limited to 1.5 million tonnes in any fishing season. A fishing season begins on 1 July and finishes on 30 June of the following year.

This limit shall be kept under review by the Commission, taking into account the advice of the Scientific Committee.

Precautionary limits to be agreed by the Commission on the basis of advice of the Scientific Committee shall be applied to subareas, or on such other basis as the Scientific Committee may advise, if the total catch in Statistical Subareas 48.1, 48.2 and 48.3 in any fishing season exceeds 620 000 tonnes.

For the purpose of implementing this Conservation Measure the catches shall be reported to the Commission on a monthly basis.

**CONSERVATION MEASURE 40/X**  
**Monthly Catch and Effort Reporting System**

This Conservation Measure is adopted in accordance with Conservation Measure 7/V where appropriate:

1. For the purposes of this Catch and Effort Reporting System the reporting period shall be defined as one calendar month.
2. At the end of each reporting period, each Contracting Party shall obtain from each of its vessels its total catch and total days and hours fished for that period and shall, by cable or telex, transmit the aggregated catch and days and hours fished for its vessels so as to reach the Executive Secretary not later than the end of the next reporting period.
3. Such reports shall specify the month to which each report refers.



4. Immediately after the deadline has passed for receipt of the reports for each period, the Executive Secretary shall notify all Contracting Parties of the total catch taken during the reporting period, the total aggregate catch for the season to date together with an estimate of the date upon which the total allowable catch is likely to be reached for that season. The estimate shall be based on a projection forward of the trend in daily catch rates, obtained using linear regression techniques from a number of the most recent catch reports.
5. In the case of finfish, if the estimated date of completion of the TAC is within one reporting period of the date on which the Secretariat received the report of the catches, the Executive Secretary shall inform all Contracting Parties that the fishery will close on that estimated day or on the day on which the report was received, whichever is the later.

**CONSERVATION MEASURE 45/XIV**  
**Precautionary Catch Limitation on *Euphausia superba***  
**in Statistical Division 58.4.2**

The total catch of *Euphausia superba* in Statistical Division 58.4.2 shall be limited to 450 000 tonnes in any fishing season. A fishing season begins on 1 July and finishes on 30 June of the following year.

This limit shall be kept under review by the Commission, taking into account the advice of the Scientific Committee.

For the purposes of implementing this Conservation Measure, the catches shall be reported to the Commission on a monthly basis.

**CONSERVATION MEASURE 51/XII**  
**Five-day Catch and Effort Reporting System**

This Conservation Measure is adopted in accordance with Conservation Measure 7/V where appropriate:

1. For the purposes of this Catch and Effort Reporting System the calendar month shall be divided into six reporting periods, viz: day 1 to day 5, day 6 to day 10, day 11 to day 15, day 16 to day 20, day 21 to day 25 and day 26 to the last day of the month. These reporting periods are hereinafter referred to as periods A, B, C, D, E and F.
2. At the end of each reporting period, each Contracting Party shall obtain from each of its vessels its total catch and total days and hours fished for that period and shall, by cable, telex or facsimile, transmit the aggregated catch and days and hours fished for its vessels so as to reach the Executive Secretary not later than the end of the next reporting period. In the case of longline fisheries, the number of hooks shall also be reported.
3. A report must be submitted by every Contracting Party taking part in the fishery for each reporting period for the duration of the fishery even if no catches are taken.
4. The catch of all species, including by-catch species, must be reported.
5. Such reports shall specify the month and reporting period (A, B, C, D, E or F) to which each report refers.

6. Immediately after the deadline has passed for receipt of the reports for each period, the Executive Secretary shall notify all Contracting Parties engaged in fishing activities in the area, of the total catch taken during the reporting period, the total aggregate catch for the season to date together with an estimate of the date upon which the total allowable catch is likely to be reached for that season. The estimate shall be based on a projection forward of the trend in daily catch rates, obtained using linear regression techniques from a number of the most recent catch reports.
7. At the end of every six reporting periods, the Executive Secretary shall inform all Contracting Parties of the total catch taken during the six most recent reporting periods, the total aggregate catch for the season to date together with an estimate of the date upon which the total allowable catch is likely to be reached for that season.
8. If the estimated date of completion of the TAC is within five days of the date on which the Secretariat received the report of the catches, the Executive Secretary shall inform all Contracting Parties that the fishery will close on that estimated day or on the day on which the report was received, whichever is the later.

### **CONSERVATION MEASURE 61/XII Ten-day Catch and Effort Reporting System**

This Conservation Measure is adopted in accordance with Conservation Measure 7/V where appropriate:

1. For the purposes of this Catch and Effort Reporting System the calendar month shall be divided into three reporting periods, viz: day 1 to day 10, day 11 to day 20, day 21 to the last day of the month. These reporting periods are hereinafter referred to as periods A, B and C.
2. At the end of each reporting period, each Contracting Party shall obtain from each of its vessels its total catch and total days and hours fished for that period and shall, by cable, telex or facsimile, transmit the aggregated catch and days and hours fished for its vessels so as to reach the Executive Secretary not later than the end of the next reporting period. In the case of longline fisheries, the number of hooks shall also be reported.
3. A report must be submitted by every Contracting Party taking part in the fishery for each reporting period for the duration of the fishery even if no catches are taken.
4. The retained catch of all species and by-catch species, must be reported.
5. Such reports shall specify the month and reporting period (A, B and C) to which each report refers.
6. Immediately after the deadline has passed for receipt of the reports for each period, the Executive Secretary shall notify all Contracting Parties engaged in fishing activities in the area, of the total catch taken during the reporting period, the total aggregate catch for the season to date together with an estimate of the date upon which the total allowable catch is likely to be reached for that season. The estimate shall be based on a projection forward of the trend in daily catch rates, obtained using linear regression techniques from a number of the most recent catch reports.
7. At the end of every three reporting periods, the Executive Secretary shall inform all Contracting Parties of the total catch taken during the three most recent reporting periods, the total aggregate catch for the season to date together with an estimate of the date upon which the total allowable catch is likely to be reached for that season.

8. If the estimated date of completion of the TAC is within ten days of the date on which the Secretariat received the report of the catches, the Executive Secretary shall inform all Contracting Parties that the fishery will close on that estimated day or on the day on which the report was received, whichever is the later.

**CONSERVATION MEASURE 63/XV**  
**Regulation of the Use and Disposal of Plastic**  
**Packaging Bands on Fishing Vessels**

The Commission,

Recollecting that for many years it has received evidence from the Scientific Committee that substantial numbers of Antarctic fur seals have been entangled and killed in plastic packaging bands in the Convention Area.

Noting that, despite the recommendations of CCAMLR and the provisions of the MARPOL Convention and its Annexes which prohibit the jettisoning of all plastics at sea, substantial entanglement of fur seals is still continuing.

Recognising that the bait boxes used on fishing vessels in particular and other packages in general need not be secured by plastic packaging bands because suitable alternatives exist.

Agrees to adopt the following Conservation Measure, to reduce the incidental mortality of Antarctic fur seals due to entanglement, in accordance with Article IX of the Convention.

1. The use on fishing vessels of plastic packaging bands to secure bait boxes shall be prohibited.
2. The use of other plastic packaging bands for other purposes on fishing vessels which do not use on-board incinerators (closed systems) shall be prohibited.
3. Any packaging bands, once removed from packages, shall be cut, so that they do not form a continuous loop and at the earliest opportunity burned in the on-board incinerator.
4. Any plastic residue shall be stored on board the vessel until reaching port and in no case discarded at sea.

**CONSERVATION MEASURE 64/XII<sup>1, 2</sup>**  
**The Application of Conservation Measures**  
**to Scientific Research**

This Conservation Measure governs the application of Conservation Measures to scientific research and is adopted in accordance with Article IX of the Convention.

1. General application.
  - (a) Catches taken by any vessel for research purposes will be considered as part of any catch limits in force for each species taken, and shall be reported to CCAMLR as part of the annual STATLANT returns.
  - (b) The CCAMLR within season catch and effort reporting systems shall apply whenever the catch within a specified reporting period exceeds five tonnes, unless more specific regulations apply to the particular species.

2. Application to vessels taking less than 50 tonnes of catch for any purpose.
  - (a) Any Member planning to use a vessel for research purposes when the estimated catch is expected to be less than a total of 50 tonnes shall notify the Secretariat of the Commission which in turn will notify all Members immediately, according to the format provided in Annex 64/A. This notification shall be included in the Members' Activities Reports.
  - (b) Vessels to which the provisions of paragraph 2(a) above apply, shall be exempt from Conservation Measures relating to mesh size regulations, prohibition of types of gear, closed areas, fishing seasons and size limits, and reporting system requirements other than those specified in paragraphs 1(a) and (b) above.
3. Application to vessels taking more than 50 tonnes of finfish.
  - (a) Any Member planning to use any type of vessel to conduct fishing for research purposes when the estimated catch is expected to be more than 50 tonnes, shall notify the Commission and provide the opportunity for other Members to review and comment on its research plan. The plan shall be provided to the Secretariat for distribution to Members at least six months in advance of the planned starting date for the research. In the event of any request for a review of such plan being lodged within two months of its circulation, the Executive Secretary shall notify all Members and submit the plan to the Scientific Committee for review. Based on the submitted research plan and any advice provided by the appropriate Working Group, the Scientific Committee will provide advice to the Commission where the review process will be concluded. Until the review process is complete the planned fishing for research purposes shall not proceed.
  - (b) Research plans shall be reported in accordance with the standardised guidelines and formats adopted by the Scientific Committee, given in Annex 64/A.
  - (c) A summary of the results of any research subject to these provisions shall be provided to the Secretariat within 180 days of the completion of the research fishing. A full report shall be provided within 12 months.
  - (d) Catch and effort data resulting from the research fishing in accordance with paragraph (a) above, should be reported to the Secretariat according to the haul-by-haul reporting format for research vessels (C4).

<sup>1</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

<sup>2</sup> Except for waters adjacent to the Prince Edward Islands

**ANNEX 64/A**

**FORMATS FOR NOTIFICATION OF RESEARCH VESSEL ACTIVITY**

Format 1

**NOTIFICATION OF RESEARCH VESSEL ACTIVITY WHEN THE TOTAL CATCH IS EXPECTED TO BE LESS THAN 50 TONNES**

Name and registration number of vessel \_\_\_\_\_

Division and subarea in which research is to be carried out \_\_\_\_\_

Estimated dates of entering and leaving CCAMLR Convention Area \_\_\_\_\_

Purpose of research \_\_\_\_\_

\_\_\_\_\_

Fishing equipment likely to be used:

Bottom trawl \_\_\_\_\_

Midwater trawl \_\_\_\_\_

Longline \_\_\_\_\_

Crab pots \_\_\_\_\_

Other fishing gear (specify) \_\_\_\_\_

Format 2

**FORMAT FOR REPORTING PLANS FOR FINFISH SURVEYS IN THE CONVENTION AREA WHEN THE TOTAL CATCH IS EXPECTED TO BE MORE THAN 50 TONNES**

CCAMLR MEMBER \_\_\_\_\_

**SURVEY DETAILS**

A statement of the planned research objectives \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Survey Area/Subarea/Division \_\_\_\_\_

Geographical Boundaries: Latitude from \_\_\_\_\_ to \_\_\_\_\_

Longitude from \_\_\_\_\_ to \_\_\_\_\_

Is a map of area surveyed (preferably including bathymetry and positions of sampling stations/hauls) appended to the format: \_\_\_\_\_

Proposed dates of survey: from \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ (Y/M/D)  
to \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ (Y/M/D)

The name(s) and address of the chief scientist(s) responsible for planning and coordinating the research \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Number of scientists \_\_\_\_\_ and crew \_\_\_\_\_ to be aboard the vessel.

Is there opportunity for inviting scientists from other Members \_\_\_\_\_

If so, indicate a number of such scientists \_\_\_\_\_

**DESCRIPTION OF VESSEL**

Name of vessel \_\_\_\_\_

Name and address of vessel owner \_\_\_\_\_  
\_\_\_\_\_

Vessel type (dedicated research or chartered commercial vessel) \_\_\_\_\_

Port of registration \_\_\_\_\_ Registration number \_\_\_\_\_

Radio call sign \_\_\_\_\_ Overall length \_\_\_\_\_ (m)

Tonnage \_\_\_\_\_

Equipment used for determining position \_\_\_\_\_

Fishing capacity (limited to scientific sampling activities only or commercial capacity) \_\_\_\_\_ (tonnes/day)

Fish processing capacity (if vessel type is commercial) \_\_\_\_\_ (tonnes/day)

Fish storage capacity (if vessel type is commercial) \_\_\_\_\_ (m<sup>3</sup>)

**DESCRIPTION OF FISHING GEAR TO BE USED:**

Trawl type (i.e. bottom, midwater) \_\_\_\_\_

Mesh shape (i.e. diamond, square) and mesh size in codend (mm) \_\_\_\_\_

Longline \_\_\_\_\_

Other sampling gear as plankton nets, CTD probes, water samplers, etc. (specify) \_\_\_\_\_

## DESCRIPTION OF ACOUSTIC GEAR TO BE USED

Type \_\_\_\_\_ Frequency \_\_\_\_\_

## SURVEY DESIGN AND METHODS OF DATA ANALYSES

Survey design (random, semi-random) \_\_\_\_\_

Target species \_\_\_\_\_

Stratification (if any) according to -

Depth zones (list) \_\_\_\_\_

Fish density (list) \_\_\_\_\_

Other (specify) \_\_\_\_\_

Duration of standard sampling stations/hauls (preferably 30 min) \_\_\_\_\_ (min)

Proposed number of hauls \_\_\_\_\_

Proposed sample size (total): \_\_\_\_\_ (number) \_\_\_\_\_ (kg)

Proposed methods of survey data analyses  
(i.e. swept area method, acoustic survey) \_\_\_\_\_

## DATA TO BE COLLECTED

Haul-by-haul catch and effort data in accordance with CCAMLR Form C4 for reporting results of fishing for research purposes: \_\_\_\_\_

\_\_\_\_\_

Fine-scale biological data in accordance with CCAMLR Forms B1, B2 and B3:

\_\_\_\_\_

\_\_\_\_\_

Other data (as applicable)

\_\_\_\_\_

**CONSERVATION MEASURE 65/XII<sup>1, 2</sup>**  
**Exploratory Fisheries**

The Commission,

Recognising that in the past, some Antarctic fisheries had been initiated and subsequently expanded in the Convention Area before sufficient information was available upon which to base management advice, and

Agreeing that exploratory fishing should not be allowed to expand faster than the acquisition of information necessary to ensure that the fishery can and will be conducted in accordance with the principles set forth in Article II,

hereby adopts the following Conservation Measure in accordance with Article IX of the Convention:

1. For the purposes of this Conservation Measure, exploratory fisheries are defined as follows:
  - (i) an exploratory fishery shall be defined as a fishery that was previously classified as a 'new fishery', as defined by Conservation Measure 31/X;
  - (ii) an exploratory fishery shall continue to be classified as such until sufficient information is available:
    - (a) to evaluate the distribution, abundance, and demography of the target species, leading to an estimate of the fishery's potential yield,
    - (b) to review the fishery's potential impacts on dependent and related species, and
    - (c) to allow the Scientific Committee to formulate and provide advice to the Commission on appropriate harvest catch levels, as well as effort levels and fishing gear, where appropriate.
2. To ensure that adequate information is made available to the Scientific Committee for evaluation, during the period when a fishery is classified as exploratory:
  - (i) the Scientific Committee shall develop (and update annually as appropriate) a Data Collection Plan, which will identify the data needed and describe the actions necessary to obtain the relevant data from the exploratory fishery;
  - (ii) each Member active in the fishery shall annually (by the specified date) submit to CCAMLR the data specified by the Data Collection Plan developed by the Scientific Committee;
  - (iii) each Member active in the fishery or intending to authorise a vessel to enter the fishery shall annually prepare and submit to CCAMLR by a specified date a Research and Fishery Operations Plan for review by the Scientific Committee and the Commission;
  - (iv) prior to any Member authorising its vessels to enter an exploratory fishery that is already in progress, that Member shall notify the Commission not less than three months in advance of the next regular meeting of the Commission, and the Member shall not enter the exploratory fishery until the conclusion of that meeting;



- (v) if the data specified in the Data Collection Plan have not been submitted to CCAMLR for the most recent season in which fishing occurred, continued exploratory fishing by the Member which failed to report its data shall be prohibited until the relevant data have been submitted to CCAMLR and the Scientific Committee has been allowed an opportunity to review the data;
  - (vi) fishing capacity and effort shall be limited by a precautionary catch limit at a level not substantially above that necessary to obtain the information specified in the Data Collection Plan and required to make the evaluations outlined in paragraph 1(ii);
  - (vii) the name, type, size, registration number, and radio call sign of each vessel participating in the exploratory fishery shall be registered with the CCAMLR Secretariat at least three months in advance of starting fishing each season; and
  - (viii) each vessel participating in the exploratory fishery shall carry a scientific observer to ensure that data are collected in accordance with the agreed Data Collection Plan, and to assist in collecting biological and other relevant data.
3. The Data Collection Plan to be formulated and updated by the Scientific Committee shall include, where appropriate:
- (i) a description of the catch, effort, and related biological, ecological, and environmental data required to undertake the evaluations described in paragraph 1(ii), and the date by which such data are to be reported annually to CCAMLR;
  - (ii) a plan for directing fishing effort during the exploratory phase to permit the acquisition of relevant data to evaluate the fishery potential and the ecological relationships among harvested, dependent, and related populations and the likelihood of adverse impacts; and
  - (iii) an evaluation of the time-scales involved in determining the responses of harvested, dependent and related populations to fishing activities.
4. Research and Fisheries Operations Plans to be prepared by Members participating or intending to participate in the exploratory fishery shall include as much of the following information as the Member is able to provide:
- (i) a description of how the Member's activities will comply with the Data Collection Plan developed by the Scientific Committee;
  - (ii) the nature of the exploratory fishery, including target species, methods of fishing, proposed region and maximum catch levels proposed for the forthcoming season;
  - (iii) biological information from comprehensive research/survey cruises, such as distribution, abundance, demographic data, and information on stock identity;
  - (iv) details of dependent and related species and the likelihood of them being affected by the proposed fishery; and
  - (v) information from other fisheries in the region or similar fisheries elsewhere that may assist in the evaluation of potential yield.

<sup>1</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

<sup>2</sup> Except for waters adjacent to the Prince Edward Islands

**CONSERVATION MEASURE 72/XVII  
Prohibition of Directed Fishing for Finfish  
in Statistical Subarea 48.1**

Taking of finfish, other than for scientific research purposes, is prohibited in Statistical Subarea 48.1 from 7 November 1998 until at least such time that a survey of stock biomass is carried out, its results reported to and analysed by the Working Group on Fish Stock Assessment and a decision that the fishery be reopened is made by the Commission based on the advice of the Scientific Committee.

**CONSERVATION MEASURE 73/XVII  
Prohibition of Directed Fishing for Finfish  
in Statistical Subarea 48.2**

Taking of finfish, other than for scientific research purposes, is prohibited in Statistical Subarea 48.2 from 7 November 1998 until at least such time that a survey of stock biomass is carried out, its results reported to and analysed by the Working Group on Fish Stock Assessment and a decision that the fishery be reopened is made by the Commission based on the advice of the Scientific Committee.

**CONSERVATION MEASURE 95/XIV  
Limitation of the By-catch of *Gobionotothen gibberifrons*,  
*Chaenocephalus aceratus*, *Pseudochaenichthys georgianus*,  
*Notothenia rossii* and *Lepidonotothen squamifrons*  
in Statistical Subarea 48.3**

This Conservation Measure is adopted in accordance with Conservation Measure 7/V:

In any directed fishery in Statistical Subarea 48.3 in any fishing season, the by-catch of *Gobionotothen gibberifrons* shall not exceed 1 470 tonnes; the by-catch of *Chaenocephalus aceratus* shall not exceed 2 200 tonnes; and the by-catch of *Pseudochaenichthys georgianus*, *Notothenia rossii* and *Lepidonotothen squamifrons* shall not exceed 300 tonnes each.

These limits shall be kept under review by the Commission taking into account the advice of the Scientific Committee.

**CONSERVATION MEASURE 106/XV  
Precautionary Catch Limitation on *Euphausia superba*  
in Statistical Division 58.4.1**

The total catch of *Euphausia superba* in Statistical Division 58.4.1 shall be limited to 775 000 tonnes in any fishing season. A fishing season begins on 1 July and finishes on 30 June the following year.

This limit shall be kept under review by the Commission, taking into account the advice of the Scientific Committee.

For the purposes of implementing this Conservation Measure, the catches shall be reported to the Commission on a monthly basis.

**CONSERVATION MEASURE 118/XVII**  
**Scheme to Promote Compliance by Non-Contracting Party**  
**Vessels with CCAMLR Conservation Measures**

The Commission hereby adopts the following Conservation Measure in accordance with Article IX.2(i) of the Convention:

1. A non-Contracting Party vessel which has been sighted engaging in fishing activities in the Convention Area is presumed to be undermining the effectiveness of CCAMLR Conservation Measures. In the case of any transshipment activities involving a sighted non-Contracting Party vessel inside or outside the Convention Area, the presumption of undermining the effectiveness of CCAMLR Conservation Measures applies to any other non-Contracting Party vessel which has engaged in such activities with that vessel.
2. Information regarding such sightings shall be transmitted immediately to the Commission in accordance with Article XXII of the Convention. The Secretariat shall transmit this information to all Contracting Parties within one business day of receiving this information, and to the Flag State of the sighted vessel as soon as possible.
3. The Contracting Party which sights the non-Contracting Party vessel shall attempt to inform the vessel that it has been sighted engaging in fishing activities in the Convention Area and is accordingly presumed to be undermining the objective of the Convention and that this information will be distributed to all Contracting Parties to the Convention and to the Flag State of the vessel.
4. When a non-Contracting Party vessel referred to in paragraph 1 enters a port of any Contracting Party, it shall be inspected by authorised Contracting Party officials knowledgeable of CCAMLR Conservation Measures and shall not be allowed to land or tranship any fish until this inspection has taken place. Such inspections shall include the vessel's documents, logbooks, fishing gear, catch on board and any other matter, which may include information from a VMS<sup>1</sup>, relating to the vessel's activities in the Convention Area.
5. Landing and transshipments of all fish from a non-Contracting Party vessel, which has been inspected pursuant to paragraph 4, shall be prohibited in all Contracting Party ports if such inspection reveals that the vessel has on board species subject to CCAMLR Conservation Measures, unless the vessel establishes that the fish were caught outside the Convention Area or in compliance with all relevant CCAMLR Conservation Measures and requirements under the Convention.
6. Contracting Parties shall ensure that their vessels do not receive transshipments of fish from a non-Contracting Party vessel which has been sighted and reported as having engaged in fishing activities in the Convention Area and therefore presumed as having undermined the effectiveness of CCAMLR Conservation Measures.
7. Information on the results of all inspections of non-Contracting Party vessels conducted in the ports of Contracting Parties, and on any subsequent action, shall be transmitted immediately to the Commission. The Secretariat shall transmit this information immediately to all Contracting Parties and to the relevant Flag State(s).

<sup>1</sup> The term VMS shall be taken to mean a system which operates to the same standard as defined in Conservation Measure 148/XVII.

**CONSERVATION MEASURE 119/XVII<sup>1,2</sup>**  
**Licensing and Inspection Obligations of Contracting Parties**  
**with regard to their Flag Vessels Operating in the Convention Area**

1. Each Contracting Party shall prohibit fishing by its flag vessels in the Convention Area except pursuant to a licence<sup>3</sup> that the Contracting Party has issued setting forth the specific areas, species and time periods for which such fishing is authorised and all other specific conditions to which the fishing is subject to give effect to CCAMLR Conservation Measures and requirements under the Convention.
2. A Contracting Party may only issue such a licence to fish in the Convention Area to vessels flying its flag, if it is satisfied of its ability to exercise its responsibilities under the Convention and its Conservation Measures, by requiring from each vessel, *inter alia*, the following:
  - (i) timely notification by the vessel to its Flag State of exit from and entry into any port;
  - (ii) notification by the vessel to its Flag State of entry into the Convention Area and movement between areas, subareas/divisions;
  - (iii) reporting by the vessel of catch data in accordance with CCAMLR requirements; and
  - (iv) operation of a VMS system on board the vessel in accordance with Conservation Measure 148/XVII.
3. The licence or an authorised copy of the licence must be carried by the fishing vessel and must be available for inspection at any time by a designated CCAMLR inspector in the Convention Area.
4. Each Contracting Party shall verify, through inspections of all of its fishing vessels at the Party's departure and arrival ports, and where appropriate, in its Exclusive Economic Zone, their compliance with the conditions of the licence as described in paragraph 1 and with the CCAMLR Conservation Measures. In the event that there is evidence that the vessel has not fished in accordance with the conditions of its licence, the Contracting Party shall investigate the infringement and, if necessary, apply appropriate sanctions in accordance with its national legislation.
5. Each Contracting Party shall include in its annual report pursuant to paragraph 12 of the CCAMLR System of Inspection, steps it has taken to implement and apply this Conservation Measure; and may include additional measures it may have taken in relation to its flag vessels to promote the effectiveness of CCAMLR Conservation Measures.

<sup>1</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

<sup>2</sup> Except for waters adjacent to the Prince Edward Islands

<sup>3</sup> Includes permit

**CONSERVATION MEASURE 121/XVI<sup>1,2</sup>**  
**Monthly Fine-Scale Biological Data Reporting System**  
**for Trawl and Longline Fisheries**

The Commission hereby adopts the following Conservation Measure in accordance with Conservation Measure 7/V, where appropriate.

This Conservation Measure is invoked by the Conservation Measures to which it is attached.

1. Specification of 'target species' and 'by-catch species' referred to in this Conservation Measure shall be made in the Conservation Measure to which it is attached.
2. At the end of each month each Contracting Party shall obtain from each of its vessels representative samples of length composition measurements of the target species and by-catch species from the fishery (Form B2, latest version). It shall transmit those data in the specified form to the Executive Secretary not later than the end of the following month.
3. For the purpose of implementing this Conservation Measure:
  - (i) length measurements of fish should be of total length to the nearest centimetre below;
  - (ii) a representative sample of length composition should be taken from each single fine-scale grid rectangle (0.5° latitude by 1° longitude) in which fishing occurs. In the event that the vessel moves from one fine-scale grid rectangle to another during the course of a month, then a separate length composition should be submitted for each fine-scale grid rectangle.
4. Should a Contracting Party fail to transmit the fine-scale length composition data to the Executive Secretary in the appropriate form by the deadline specified in paragraph 2, the Executive Secretary shall issue a reminder to the Contracting Party. If at the end of a further two months those data have still not been provided, the Executive Secretary shall notify all Contracting Parties of the closure of the fishery to vessels of the Contracting Party which has failed to supply the data as required.

<sup>1</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

<sup>2</sup> Except for waters adjacent to the Prince Edward Islands

**CONSERVATION MEASURE 122/XVI<sup>1,2</sup>**  
**Monthly Fine-Scale Catch and Effort Data Reporting System**  
**for Trawl and Longline Fisheries**

The Commission hereby adopts the following Conservation Measure in accordance with Conservation Measure 7/V, where appropriate.

This Conservation Measure is invoked by the Conservation Measures to which it is attached.

1. Specification of 'target species' and 'by-catch species' referred to in this Conservation Measure shall be made in the Conservation Measure to which it is attached.
2. At the end of each month each Contracting Party shall obtain from each of its vessels the data required to complete the CCAMLR fine-scale catch and effort data form (trawl fisheries Form C1, latest version or longline fisheries Form C2, latest version). It shall transmit those data in the specified format to the Executive Secretary not later than the end of the following month.
3. The catch of all target and by-catch species must be reported by species.
4. The numbers of seabirds and marine mammals of each species caught and released or killed must be reported.
5. Should a Contracting Party fail to transmit the fine-scale catch and effort data to the Executive Secretary in the appropriate form by the deadline specified in paragraph 2, the

Executive Secretary shall issue a reminder to the Contracting Party. If at the end of a further two months those data have still not been provided, the Executive Secretary shall notify all Contracting Parties of the closure of the fishery to vessels of the Contracting Party which has failed to supply the data as required.

<sup>1</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

<sup>2</sup> Except for waters adjacent to the Prince Edward Islands

**CONSERVATION MEASURE 129/XVI**  
**Prohibition of Directed Fishing for *Lepidonotothen squamifrons***  
**in Statistical Division 58.4.4 (Ob and Lena Banks)**

Directed fishing for *Lepidonotothen squamifrons*, other than for scientific research purposes, is prohibited in Statistical Division 58.4.4 from 8 November 1997 until at least such time that a survey of stock biomass is carried out, its results reported to and analysed by the Working Group on Fish Stock Assessment and a decision that the fishery be reopened is made by the Commission based on the advice of the Scientific Committee.

**CONSERVATION MEASURE 146/XVII<sup>1</sup>**  
**Marking of Fishing Vessels and Fishing Gear**

The Commission hereby adopts the following Conservation Measure in accordance with Article IX of the Convention:

1. All Contracting Parties shall ensure that their fishing vessels licensed<sup>2</sup> in accordance with Conservation Measure 119/XVII to operate in the Convention Area are marked in such a way that they can be readily identified in accordance with internationally recognised standards, such as the FAO Standard Specifications and Guidelines for the Marking and Identification of Fishing Vessels.
2. Marker buoys and similar objects floating on the surface and intended to indicate the location of fixed or set fishing gear shall be clearly marked at all times with the letter(s) and/or numbers of the vessels to which they belong.

<sup>1</sup> Except for waters adjacent to Kerguelen and Crozet Islands

<sup>2</sup> Includes permitted

**CONSERVATION MEASURE 147/XVII<sup>1</sup>**  
**Cooperation between Contracting Parties to Ensure Compliance**  
**with CCAMLR Conservation Measures with Regard to their Vessels**

1. When a fishing vessel licensed<sup>2</sup> by a Contracting Party to fish in the Convention Area in accordance with Conservation Measure 119/XVII approaches the port of another Contracting Party in order to land or tranship its catch, it shall notify the Port State, 72 hours in advance, of its intended arrival. The Port State, in exercise of its rights under international law, shall undertake an inspection of the vessel, within 48 hours of the vessel entering the port, to confirm that it has carried out activities in the Convention Area in accordance with CCAMLR Conservation Measures. The inspection shall be carried out in an expeditious fashion, shall impose no undue burdens on the vessel or its crew, and shall be guided by the relevant provisions of the CCAMLR System of Inspection.

2. In the event that there is evidence that the vessel has fished in contravention of the CCAMLR Conservation Measures, the Contracting Party shall inform the Flag State of the vessel of its inspection findings. The two Contracting Parties shall, in the spirit of cooperation, take such appropriate action as is required by the Flag State of the vessel to enable it to investigate the infringement and, if necessary, apply appropriate sanctions in accordance with its national legislation.

<sup>1</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

<sup>2</sup> Includes permitted

### **CONSERVATION MEASURE 148/XVII** **Automated Satellite-Linked Vessel Monitoring Systems (VMS)**

The Commission hereby adopts the following Conservation Measure in accordance with Article IX of the Convention:

1. Each Contracting Party shall, no later than 1 March 1999, establish an automated Vessel Monitoring System (VMS) to monitor the position of its fishing vessels, which are licensed<sup>1</sup> in accordance with Conservation Measure 119/XVII, to harvest marine living resources in the Convention Area, and for which catch limits, fishing seasons or area restrictions have been set by Conservation Measures adopted by the Commission.
2. Any Contracting Party unable to establish VMS in accordance with paragraph 1 shall inform the CCAMLR Secretariat within 90 days following the notification of this Conservation Measure, and communicate its intended timetable for implementation of VMS. However, the Contracting Party shall establish VMS at the earliest possible date, and in any event, no later than 31 December 2000.
3. The implementation of VMS on vessels while participating only in a krill fishery is not currently required.
4. For the purpose of this Measure, VMS means a system where, *inter alia*:
  - (i) through the installation of satellite-tracking devices on board its fishing vessels, the Flag State receives automatic transmission of certain information. This information includes the fishing vessel identification, location, date and time, and is collected by the Flag State at least every four hours to enable it to monitor effectively its flag vessels;
  - (ii) performance standards provide, as a minimum, that the VMS:
    - (a) is tamper proof;
    - (b) is fully automatic and operational at all times regardless of environmental conditions;
    - (c) provides real time data;
    - (d) provides the geographical position of the vessel, with a position error of less than 500 m with a confidence interval of 99%, the format being determined by the Flag State; and
    - (e) in addition to regular messages, provides special messages when the vessel enters or leaves the Convention Area and when it moves between one CCAMLR area, subarea or division within the Convention Area.

5. In the event of technical failure or other non-function of the VMS, the master or the owner of the fishing vessel, as a minimum:
  - (i) shall communicate at least once every 24 hours, starting from the time that this event was detected, the data referred in paragraph 4(i) by telex, by fax, by telephone message or by radio to the Flag State; and
  - (ii) shall take immediate steps to have the device repaired or replaced as soon as possible, and, in any event, within two months. If during that period the vessel returns to port it shall not be allowed to commence a further fishing trip without having the defective device repaired or replaced.
6. In the event that the VMS ceases to operate, the Contracting Party as soon as possible shall advise the Executive Secretary of the name of the vessel, the date, time and the location of the vessel when the VMS failed. The Party shall also inform the Executive Secretary when the VMS becomes operational again. The Executive Secretary shall make such information available to Contracting Parties upon request.
7. Contracting Parties shall report to the Secretariat before the start of the annual meeting of the Commission in 1999, on the VMS which has been introduced in accordance with paragraphs 1 and 2, including its technical details, and each year thereafter, on:
  - (i) any change in the VMS;
  - (ii) in accordance with paragraph XI of the CCAMLR System of Inspection, all cases where they have determined, with the assistance of the VMS that vessels of their flag had fished in the Convention Area in possible contravention of CCAMLR Conservation Measures.

<sup>1</sup> Includes permitted

**CONSERVATION MEASURE 149/XVII**  
**Prohibition on Directed Fishing for *Dissostichus* spp. except in**  
**Accordance with Specific Conservation Measures in the 1998/99 Season**

The Commission,

Concerned to ensure the regulation of directed fishing for *Dissostichus* spp. in all statistical areas and subareas in the Convention Area, and

Noting that Conservation Measures in respect of the regulation of *Dissostichus* spp. have been agreed for all areas except Statistical Subareas 48.5, 88.2, 88.3 and Statistical Division 58.4.1 (east of 90°E),

hereby adopts the following Conservation Measure in accordance with Article IX of the Convention:

Directed fishing for *Dissostichus* spp. in Statistical Subareas 48.5, 88.2, 88.3 and Statistical Division 58.4.1 (east of 90°E) is prohibited from 7 November 1998 to 30 November 1999.



**CONSERVATION MEASURE 150/XVII**  
**Experimental Harvest Regime for the Crab Fishery in**  
**Statistical Subarea 48.3 for the Seasons 1998/99 and 1999/2000**

The following measures apply to all crab fishing within Statistical Subarea 48.3 for the 1998/99 and 1999/2000 fishing seasons. Every vessel participating in the crab fishery in Statistical Subarea 48.3 shall conduct fishing operations in accordance with an experimental harvest regime as outlined below:

1. The experimental harvest regime shall consist of at least two phases. Each vessel participating in the fishery shall complete all of the phases. Phase 1 shall be conducted during the first season that a vessel participates in the experimental harvest regime. Phase 2, and any additional phases, shall be completed in the next season of fishing.
2. Vessels shall conduct Phase 1 of the experimental harvest regime at the start of their first season of participation in the crab fishery. For the purposes of Phase 1, the following conditions shall apply:
  - (i) Phase 1 shall be defined as a vessel's first 200 000 pot hours of effort at the start of its first fishing season;
  - (ii) every vessel conducting Phase 1 shall expend its first 200 000 pot hours of effort within a total area delineated by twelve blocks of 0.5° latitude by 1.0° longitude. For the purposes of this Conservation Measure, these blocks shall be numbered A to L. In Annex 150/A, the blocks are illustrated (Figure 1), and the geographic position is denoted by the coordinates of the northeast corner of the block. For each string, pot hours shall be calculated by taking the total number of pots on the string and multiplying that number by the soak time (in hours) for that string. Soak time shall be defined for each string as the time between start of setting and start of hauling;
  - (iii) vessels shall not fish outside the area delineated by the 0.5° latitude by 1.0° longitude blocks prior to completing Phase 1;
  - (iv) during Phase 1, vessels shall not expend more than 30 000 pot hours in any single block of 0.5° latitude by 1.0° longitude;
  - (v) if a vessel returns to port before it has expended 200 000 pot hours in Phase 1, the remaining pot hours shall be expended before it can be considered that the vessel has completed Phase 1; and
  - (vi) after completing 200 000 pot hours of experimental fishing, it shall be considered that vessels have completed Phase 1 and shall commence fishing in a normal fashion.
3. Normal fishing operations shall be conducted in accordance with the regulations set out in Conservation Measure 151/XVII.
4. For the purposes of implementing normal fishing operations after Phase 1 of the experimental harvest regime, the Ten-day Catch and Effort Reporting System set out in Conservation Measure 61/XII shall apply.
5. Vessels shall conduct Phase 2, and any additional phases, of the experimental harvest regime during their second season of participation in the crab fishery. If any vessel initiates Phase 1 of the experimental harvest regime during the 1998/99 or 1999/2000 fishing seasons, the Scientific Committee, and its Working Group on Fish Stock

Assessment, shall advise the Commission on an appropriate experimental harvest strategy, Phase 2, for the following fishing season. This advice shall include provisions for:

- (i) requiring each vessel to expend approximately one month of experimental fishing effort during its second season of participation in the experimental harvest regime; and
  - (ii) a data collection and submission policy appropriate to the experimental fishing strategy that is being recommended.
6. Data collected during the experimental harvest regime in both Phase 1 and Phase 2 up to 30 June in any split-year shall be submitted to CCAMLR by 31 August of the following split-year.
  7. Vessels that complete all phases of the experimental harvest regime shall not be required to conduct experimental fishing in future seasons. However, these vessels shall abide by the guidelines set forth in Conservation Measure 151/XVII.
  8. Fishing vessels shall participate in the experimental harvest regime independently (e.g. vessels may not cooperate to complete phases of the experiment).
  9. Crabs captured during the experimental harvest regime shall be considered part of the prevailing catch limit for the current fishing season (e.g. for 1998/99, experimental catches shall be considered part of the 1 600-tonne catch limit outlined in Conservation Measure 151/XVII).
  10. All vessels participating in the experimental harvest regime shall carry at least one scientific observer on board during all fishing activities.
  11. The experimental harvest regime shall be instituted for a period of two fishing seasons (1998/99 and 1999/2000), and the details of the regime may be revised by the Commission during this period of time. Fishing vessels commencing experimental fishing in the 1998/99 season must complete the experimental harvest regime during the 1999/2000 season.

## ANNEX 150/A

### LOCATIONS OF FISHING AREAS FOR THE EXPERIMENTAL HARVEST REGIME OF THE EXPLORATORY CRAB FISHERY

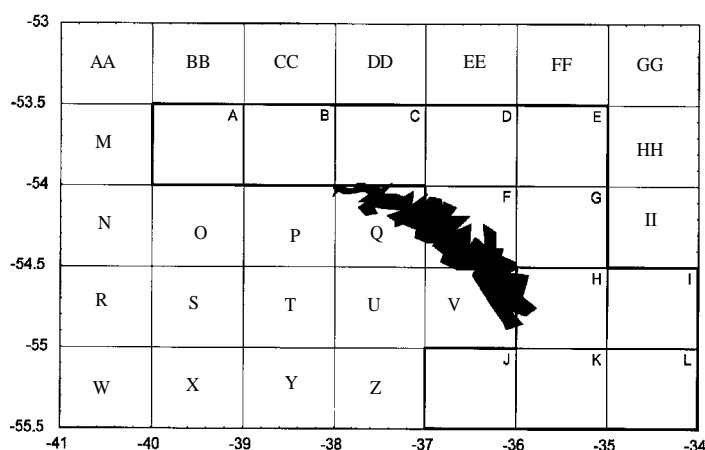


Figure 1: Operations area for Phase 1 of the experimental harvest regime for the crab fishery in Statistical Subarea 48.3.

**CONSERVATION MEASURE 151/XVII**  
**Limits on the Crab Fishery in Statistical Subarea 48.3**  
**in the 1998/99 Season**

The Commission hereby adopts the following Conservation Measure in accordance with Conservation Measure 7/V:

1. The crab fishery is defined as any commercial harvest activity in which the target species is any member of the crab group (Order Decapoda, Suborder Reptantia).
2. In Statistical Subarea 48.3, the crab fishing season is defined as the period from 7 November 1998 to 30 November 1999, or until the catch limit is reached, whichever is sooner.
3. The crab fishery shall be limited to one vessel per Member.
4. The total catch of crab from Statistical Subarea 48.3 shall be limited to 1 600 tonnes during the 1998/99 crab fishing season.
5. Each vessel participating in the crab fishery in Statistical Subarea 48.3 in the 1998/99 season shall have a scientific observer, appointed in accordance with the CCAMLR Scheme of International Scientific Observation, on board throughout all fishing activities within the fishing period.
6. Each Member intending to participate in the crab fishery shall notify the CCAMLR Secretariat at least three months in advance of starting fishing of the name, type, size, registration number, radio call sign, and research and fishing operations plan of the vessel that the Member has authorised to participate in the crab fishery.
7. All vessels fishing for crab shall report the following data to CCAMLR by 31 August 1999 for crabs caught prior to 31 July 1999:
  - (i) the location, date, depth, fishing effort (number and spacing of pots and soak time), and catch (numbers and weight) of commercially sized crabs (reported on as fine a scale as possible, but no coarser than 0.5° latitude by 1.0° longitude) for each 10-day period;
  - (ii) the species, size, and sex of a representative subsample of crab sampled according to the procedure set out in Annex 151/A (between 35 and 50 crabs shall be sampled every day from the line hauled just prior to noon) and by-catch caught in traps; and
  - (iii) other relevant data, as possible, according to the requirements set out in Annex 151/A.
8. For the purposes of implementing this Conservation Measure, the Ten-day Catch and Effort Reporting System set out in Conservation Measure 61/XII shall apply.
9. Data on catches taken between 31 July and 31 August 1999 shall be reported to CCAMLR by 30 September 1999 so that the data will be available to the Working Group on Fish Stock Assessment.
10. Crab fishing gear shall be limited to the use of crab pots (traps). The use of all other methods of catching crabs (e.g., bottom trawls) shall be prohibited.

11. The crab fishery shall be limited to sexually mature male crabs – all female and undersized male crabs caught shall be released unharmed. In the case of *Paralomisspinosissima* and *Paralomisformosa*, males with a minimum carapace width of 102 mm and 90 mm, respectively, may be retained in the catch.
12. Crab processed at sea shall be frozen as crab sections (minimum size of crabs can be determined using crab sections).

## ANNEX 151/A

**DATA REQUIREMENTS ON THE  
CRAB FISHERY IN STATISTICAL SUBAREA 48.3**

## Catch and Effort Data:

## Cruise Descriptions

cruise code, vessel code, permit number, year.

## Pot Descriptions

diagrams and other information, including pot shape, dimensions, mesh size, funnel position, aperture and orientation, number of chambers, presence of an escape port.

## Effort Descriptions

date, time, latitude and longitude of the start of the set, compass bearing of the set, total number of pots set, spacing of pots on the line, number of pots lost, depth, soak time, bait type.

## Catch Descriptions

retained catch in numbers and weight, by-catch of all species (see Table 1), incremental record number for linking with sample information.

Table 1: Data requirements for by-catch species in the crab fishery in Statistical Subarea 48.3.

Species	Data Requirements
<i>Dissostichus eleginoides</i>	Numbers and estimated total weight
<i>Notothenia rossii</i>	Numbers and estimated total weight
Other Species	Estimated total weight

## Biological Data:

For these data, crabs are to be sampled from the line hauled just prior to noon, by collecting the entire contents of a number of pots spaced at intervals along the line so that between 35 and 50 specimens are represented in the subsample.

## Cruise Descriptions

cruise code, vessel code, permit number.

## Sample Descriptions

date, position at start of the set, compass bearing of the set, line number.

## Data

species, sex, length of at least 35 individuals, presence/absence of rhizocephalan parasites, record of the destination of the crab (kept, discarded, destroyed), record of the pot number from which the crab comes.

**CONSERVATION MEASURE 152/XVII**  
**Prohibition of Directed Fishery on *Gobionotothen gibberifrons*,  
*Chaenocephalus aceratus*, *Pseudochaenichthys georgianus*,  
*Lepidonotothen squamifrons* and *Patagonotothen guntheri*  
in Statistical Subarea 48.3 for the 1998/99 Season**

The Commission hereby adopts the following Conservation Measure in accordance with Conservation Measure 7/V:

Directed fishing on *Gobionotothen gibberifrons*, *Chaenocephalus aceratus*, *Pseudochaenichthys georgianus*, *Lepidonotothen squamifrons* and *Patagonotothen guntheri* in Statistical Subarea 48.3 is prohibited in the 1998/99 season, defined as the period from 7 November 1998 to 30 November 1999.

**CONSERVATION MEASURE 153/XVII**  
**Limitation of the Total Catch of *Champocephalus gunnari*  
in Statistical Subarea 48.3 in the 1998/99 Season**

The Commission hereby adopts the following Conservation Measure in accordance with Conservation Measure 7/V:

1. The total catch of *Champocephalus gunnari* in the 1998/99 season shall be limited to 4 840 tonnes in Statistical Subarea 48.3.
2. The fishery for *Champocephalus gunnari* in Statistical Subarea 48.3 shall close if the by-catch of any of the species listed in Conservation Measure 95/XIV reaches its by-catch limit or if the total catch of *Champocephalus gunnari* reaches 4 840 tonnes, whichever is sooner.
3. If, in the course of the directed fishery for *Champocephalus gunnari*, the by-catch in any one haul of any of the species named in Conservation Measure 95/XIV
  - is greater than 100 kg and exceeds 5% of the total catch of all fish by weight, or
  - is equal to or greater than 2 tonnes, then

the fishing vessel shall move to another location at least 5 n miles distant<sup>1</sup>. The fishing vessel shall not return to any point within 5 n miles of the location where the by-catch of species named in Conservation Measure 95/XIV exceeded 5% for a period of at least five days<sup>2</sup>. The location where the by-catch exceeded 5% is defined as the path followed by the fishing vessel from the point at which the fishing gear was first deployed from the fishing vessel to the point at which the fishing gear was retrieved by the fishing vessel.

4. Where any haul contains more than 100 kg of *Champocephalus gunnari*, and more than 10% of the *Champocephalus gunnari* by number are smaller than 240 mm total length, the fishing vessel shall move to another fishing location at least 5 n miles distant<sup>1</sup>. The fishing vessel shall not return to any point within 5 n miles of the location where the catch of small *Champocephalus gunnari* exceeded 10%, for a period of at least five days<sup>2</sup>. The location where the catch of small *Champocephalus gunnari* exceeded 10% is defined as the path followed by the fishing vessel from the point at which the fishing gear was first deployed from the fishing vessel to the point at which the fishing gear was retrieved by the fishing vessel.
5. The use of bottom trawls in the directed fishery for *Champocephalus gunnari* in Statistical Subarea 48.3 is prohibited.

6. The fishery for *Champocephalus gunnari* in Statistical Subarea 48.3 shall be closed from 1 April to 30 November 1999.
7. Each vessel participating in the directed fishery for *Champocephalus gunnari* in Statistical Subarea 48.3 in the 1998/99 season shall have a scientific observer, appointed in accordance with the CCAMLR Scheme of International Scientific Observation, on board throughout all fishing activities within the fishing period.
8. For the purpose of implementing paragraphs 1 and 2 of this Conservation Measure:
  - (i) the Five-day Catch and Effort Reporting System set out in Conservation Measure 51/XII shall apply in the 1998/99 season; and
  - (ii) the Monthly Fine-scale Catch and Effort Data Reporting System set out in Conservation Measure 122/XVI shall apply for *Champocephalus gunnari*. Data shall be reported on a haul-by-haul basis.
9. Fine-scale biological data, as required under Conservation Measure 121/XVI shall be collected and recorded. Such data shall be reported in accordance with the Scheme of International Scientific Observation.
  - <sup>1</sup> This provision is adopted pending the adoption of a more appropriate definition of a fishing location by the Commission.
  - <sup>2</sup> The specified period is adopted in accordance with the reporting period specified in Conservation Measure 51/XII, pending the adoption of a more appropriate period by the Commission.

**CONSERVATION MEASURE 154/XVII**  
**Limits on the Fishery for *Dissostichus eleginoides***  
**in Statistical Subarea 48.3 for the 1998/99 Season**

The Commission hereby adopts the following Conservation Measure in accordance with Conservation Measure 7/V:

1. The total catch of *Dissostichus eleginoides* in Statistical Subarea 48.3 in the 1998/99 season shall be limited to 3 500 tonnes.
2. For the purposes of the fishery for *Dissostichus eleginoides* in Statistical Subarea 48.3, the 1998/99 fishing season is defined as the period from 15 April to 31 August 1999, or until the catch limit is reached, whichever is the sooner.
3. Each vessel participating in the *Dissostichus eleginoides* fishery in Statistical Subarea 48.3 in the 1998/99 season shall have at least one scientific observer appointed in accordance with the CCAMLR Scheme of International Scientific Observation, on board throughout all fishing activities within the fishing period.
4. For the purpose of implementing this Conservation Measure:
  - (i) the Five-day Catch and Effort Reporting System set out in Conservation Measure 51/XII shall apply in the 1998/99 season, commencing on 15 April 1999; and

- (ii) the Monthly Fine-scale Catch and Effort Reporting System set out in Conservation Measure 122/XVI shall apply in the 1998/99 season, commencing on 15 April 1999. Data shall be submitted on a haul-by-haul basis. For the purpose of Conservation Measure 122/XVI the target species is *Dissostichus eleginoides* and 'by-catch species' are defined as any species other than *Dissostichus eleginoides*.
5. Fine-scale biological data, as required under Conservation Measure 121/XVI shall be collected and recorded. Such data shall be reported in accordance with the System of International Scientific Observation.
  6. Directed fishing shall be by longlines only. The use of all other methods of directed fishing for *Dissostichus eleginoides* in Statistical Subarea 48.3 shall be prohibited.

**CONSERVATION MEASURE 155/XVII**  
**Precautionary Catch Limit for *Electrona carlsbergi***  
**in Statistical Subarea 48.3 for the 1998/99 Season**

The Commission hereby adopts the following Conservation Measure in accordance with Conservation Measure 7/V:

1. For the purposes of this Conservation Measure the fishing season for *Electronacarlsbergi* is defined as the period from 7 November 1998 to 30 November 1999.
2. The total catch of *Electronacarlsbergi* in the 1998/99 season shall be limited to 109 000 tonnes in Statistical Subarea 48.3.
3. In addition, the total catch of *Electronacarlsbergi* in the 1998/99 season shall be limited to 14 500 tonnes in the Shag Rocks region, defined as the area bounded by 52°30'S, 40°W; 52°30'S, 44°W; 54°30'S, 40°W and 54°30'S, 44°W.
4. In the event that the catch of *Electronacarlsbergi* is expected to exceed 20 000 tonnes in the 1998/99 season, a survey of stock biomass and age structure shall be conducted during that season by the principal fishing nations involved. A full report of this survey including data on stock biomass (specifically including area surveyed, survey design and density estimates), age structure and the biological characteristics of the by-catch shall be made available in advance for discussion at the 1999 meeting of the Working Group on Fish Stock Assessment.
5. The directed fishery for *Electronacarlsbergi* in Statistical Subarea 48.3 shall close if the by-catch of any of the species named in Conservation Measure 95/XIV reaches its by-catch limit or if the total catch of *Electronacarlsbergi* reaches 109 000 tonnes, whichever is sooner.
6. The directed fishery for *Electronacarlsbergi* in the Shag Rocks region shall close if the by-catch of any of the species named in Conservation Measure 95/XIV reaches its by-catch limit or if the total catch of *Electronacarlsbergi* reaches 14 500 tonnes, whichever is sooner.
7. If, in the course of the directed fishery for *Electronacarlsbergi*, the by-catch in any one haul of any species other than the target species
  - is greater than 100 kg and exceeds 5% of the total catch of all fish by weight, or
  - is equal to or greater than 2 tonnes, then

the fishing vessel shall move to another fishing location at least 5 n miles distant<sup>1</sup>. The fishing vessel shall not return to any point within 5 n miles of the location where the by-catch of species, other than the target species, exceeded 5%, for a period of at least five days<sup>2</sup>. The location where the by-catch exceeded 5% is defined as the path followed by the fishing vessel from the point at which the fishing gear was first deployed from the fishing vessel to the point at which the fishing gear was retrieved by the fishing vessel.

8. For the purpose of implementing this Conservation Measure:
- (i) the Catch Reporting System set out in Conservation Measure 40/X shall apply in the 1998/99 season;
  - (ii) the Monthly Fine-scale Catch and Effort Data Reporting System set out in Conservation Measure 122/XVI shall also apply in the 1998/99 season. For the purposes of Conservation Measure 122/XVI, the target species is *Electronacarlbergi*, and 'by-catch species' are defined as any cephalopod, crustacean or fish species other than *Electrona carlsbergi*; and
  - (iii) the Monthly Fine-scale Biological Data Reporting System set out in Conservation Measure 121/XVI shall also apply in the 1998/99 season. For the purposes of Conservation Measure 121/XVI, the target species is *Electronacarlbergi*, and 'by-catch species' are defined as any cephalopod, crustacean or fish species other than *Electronacarlbergi*. For the purposes of paragraph 8(ii) of Conservation Measure 121/XVI a representative sample shall be a minimum of 500 fish.

<sup>1</sup> This provision is adopted pending the adoption of a more appropriate definition of a fishing location by the Commission.

<sup>2</sup> The specified period is adopted in accordance with the reporting period specified in Conservation Measure 51/XII, pending the adoption of a more appropriate period by the Commission.

**CONSERVATION MEASURE 156/XVII**  
**Catch Limit on *Dissostichus eleginoides* and *Dissostichus mawsoni***  
**in Statistical Subarea 48.4 for the 1998/99 Season**

1. The total catch of *Dissostichus eleginoides* in Statistical Subarea 48.4 in the 1998/99 season shall be limited to 28 tonnes.
2. Taking of *Dissostichus mawsoni*, other than for scientific research purposes, is prohibited.
3. For the purposes of the fishery for *Dissostichus eleginoides* in Statistical Subarea 48.4, the 1998/99 fishing season is defined as the period from 15 April to 31 August 1999, or until the catch limit for *Dissostichus eleginoides* in Subarea 48.4 is reached, or until the catch limit for *Dissostichus eleginoides* in Subarea 48.3, as specified in Conservation Measure 154/XVII, is reached, whichever is sooner.
4. Each vessel participating in the *Dissostichus eleginoides* fishery in Statistical Subarea 48.4 in the 1998/99 season shall have at least one scientific observer appointed in accordance with the CCAMLR Scheme of International Scientific Observation, on board throughout all fishing activities within the fishing period.



5. For the purpose of implementing this Conservation Measure:
  - (i) the Five-day Catch and Effort Reporting System set out in Conservation Measure 51/XII shall apply in the 1998/99 season, commencing on 15 April 1999; and
  - (ii) the Monthly Fine-scale Catch and Effort Data Reporting System set out in Conservation Measure 122/XVI shall apply in the 1998/99 season, commencing on 15 April 1999. Data shall be reported on a haul-by-haul basis. For the purposes of Conservation Measure 122/XVI, the target species is *Dissostichus eleginoides*, and 'by-catch species' are defined as any species other than *Dissostichus eleginoides*.
6. Fine-scale biological data, as required under Conservation Measure 121/XVI shall be collected and recorded. Such data shall be reported in accordance with the Scheme of International Scientific Observation.
7. Directed fishing shall be by longlines only. The use of all other methods of directed fishing for *Dissostichus eleginoides* in Statistical Subarea 48.4 shall be prohibited.

**CONSERVATION MEASURE 157/XVII**  
**Limitation of the By-catch in Statistical Division 58.5.2**  
**in the 1998/99 Fishing Season**

1. There shall be no directed fishing for any species other than *Dissostichus eleginoides* and *Champscephalus gunnari* in Statistical Division 58.5.2 in the 1998/99 fishing season.
2. In directed fisheries in Statistical Division 58.5.2 in the 1998/99 fishing season, the by-catch of *Channichthysrhinocerotus* shall not exceed 150 tonnes, and the by-catch of *Lepidonotothen squamifrons* shall not exceed 80 tonnes.
3. The by-catch of any fish species not mentioned in paragraph 2, and for which there is no other catch limit in force, shall not exceed 50 tonnes in Statistical Division 58.5.2.
4. If, in the course of a directed fishery, the by-catch in any one haul of any by-catch species for which by-catch limitations apply under this Conservation Measure is equal to, or greater than 2 tonnes, then the fishing vessel shall not fish using that method of fishing at any point within 5 n miles<sup>1</sup> of the location where the by-catch exceeded 2 tonnes for a period of at least five days<sup>2</sup>. The location where the by-catch exceeded 2 tonnes is defined as the path followed by the fishing vessel from the point at which the fishing gear was first deployed from the fishing vessel to the point at which the fishing gear was retrieved by the fishing vessel.

<sup>1</sup> This provision is adopted pending the adoption of a more appropriate definition of a fishing location by the Commission.

<sup>2</sup> The specified period is adopted in accordance with the reporting period specified in Conservation Measure 51/XII, pending the adoption of a more appropriate period by the Commission.

**CONSERVATION MEASURE 158/XVII**  
**Fishery for *Dissostichus eleginoides* in**  
**Statistical Division 58.5.2 for the 1998/99 Season**

1. The total catch of *Dissostichus eleginoides* in Statistical Division 58.5.2 shall be limited to 3 690 tonnes in the 1998/99 season.
2. For the purpose of this fishery for *Dissostichus eleginoides*, the 1998/99 fishing season is defined as the period from 7 November 1998 to 30 November 1999.
3. Fishing shall cease if the by-catch of any species reaches its by-catch limit as detailed in Conservation Measure 157/XVII.
4. The catch limit may only be taken by trawling.
5. Each vessel participating in the fishery for *Dissostichus eleginoides* in Statistical Division 58.5.2 shall have at least one scientific observer, and include, if available, one appointed in accordance with the CCAMLR Scheme of International Scientific Observation, on board throughout all fishing activities.
6. Each vessel operating in the fishery for *Dissostichus eleginoides* in Statistical Division 58.5.2 shall be required to operate a VMS at all times, in accordance with Conservation Measure 148/XVII.
7. A ten-day catch and effort reporting system shall be implemented:
  - (i) for the purpose of implementing this system, the calendar month shall be divided into three reporting periods viz: day 1 to day 10, day 11 to day 20, day 21 to the last day of the month. These reporting periods are hereinafter referred to as periods A, B and C;
  - (ii) at the end of each reporting period, each Contracting Party participating in the fishery shall obtain from each of its vessels information on total catch and total days and hours fished for the period and shall, by electronic transmission, cable, telex or facsimile, transmit the aggregated catch and days and hours fished for its vessels so as to reach the Executive Secretary not later than the end of the next reporting period;
  - (iii) a report must be submitted by every Contracting Party taking part in the fishery for each reporting period for the duration of the fishery, even if no catches are taken;
  - (iv) the catch of *Dissostichus eleginoides* and of all by-catch species must be reported;
  - (v) such reports will specify the month and reporting period (A, B and C) to which each report refers;
  - (vi) immediately after the deadline has passed for receipt of the reports for each period, the Executive Secretary shall notify all Contracting Parties engaged in fishing activities in the division of the total catch taken during the reporting period and the total aggregate catch for the season to date; and
  - (vii) at the end of every three reporting periods, the Executive Secretary shall inform all Contracting Parties of the total catch taken during the three most recent reporting periods and the total aggregate catch for the season to date.

8. A fine-scale effort and biological data reporting system shall be implemented:
- (i) the scientific observer(s) aboard each vessel shall collect the data required to complete the CCAMLR fine-scale catch and effort data form C1, latest version. These data shall be submitted to the CCAMLR Secretariat not later than one month after the vessel returns to port;
  - (ii) the catch of *Dissostichus eleginoides* and all by-catch species must be reported;
  - (iii) the numbers of seabirds and marine mammals of each species caught and released or killed must be reported;
  - (iv) the scientific observer(s) aboard each vessel shall collect data on the length composition from representative samples of *Dissostichus eleginoides* and by-catch species:
    - (a) length measurements shall be to the nearest centimetre below;
    - (b) representative samples of length composition shall be taken from each fine-scale grid rectangle (0.5° latitude by 1° longitude) fished in each calendar month; and
  - (v) the above data shall be submitted to the CCAMLR Secretariat not later than one month after the vessel returns to port.
9. The total number and weight of *Dissostichus eleginoides* discarded, including those with the jellymeat condition, shall be reported. These fish will count towards the total allowable catch.

**CONSERVATION MEASURE 159/XVII**  
**Fishery for *Champscephalus gunnari* in Statistical Division 58.5.2**  
**in the 1998/99 Fishing Season**

1. The total catch for *Champscephalus gunnari* in Statistical Division 58.5.2 shall be limited to 1 160 tonnes in the 1998/99 fishing season.
2. Areas in Statistical Division 58.5.2 outside that defined in paragraph 4 below shall be closed to directed fishing for *Champscephalus gunnari*.
3. Fishing shall cease if the by-catch of any of the species reaches its by-catch limit as detailed in Conservation Measure 157/XVII.
4. For the purpose of this fishery for *Champscephalus gunnari*, the area open to the fishery is defined as that portion of Statistical Division 58.5.2 that lies within the area enclosed by a line:
  - (i) starting at the point where the meridian of longitude 72°15'E intersects the Australia–France Maritime Delimitation Agreement Boundary then south along the meridian to its intersection with the parallel of latitude 53°25'S;
  - (ii) then east along that parallel to its intersection with the meridian of longitude 74°E;
  - (iii) then northeasterly along the geodesic to the intersection of the parallel of latitude 52°40'S and the meridian of longitude 76°E;

- (iv) then north along the meridian to its intersection with the parallel of latitude 52°S;
- (v) then northwesterly along the geodesic to the intersection of the parallel of latitude 51°S with the meridian of longitude 74°30'E; and
- (vi) then southwesterly along the geodesic to the point of commencement.

A chart illustrating the above definition is appended to this Conservation Measure (Annex 159/A).

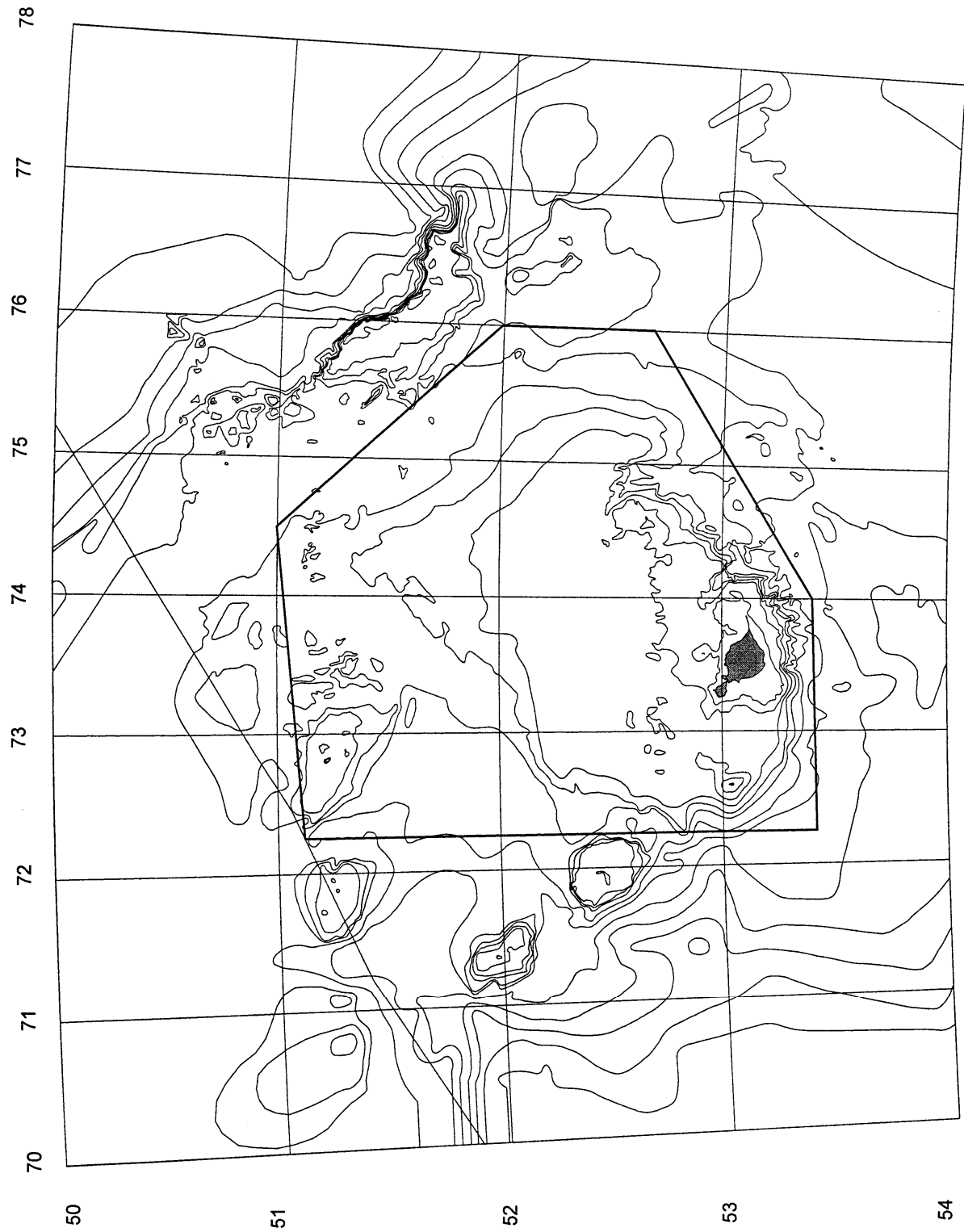
5. For the purposes of this fishery for *Champocephalus gunnari*, the 1998/99 fishing season is defined as the period from 7 November 1998 to 30 November 1999.
6. The catch limit may only be taken by trawling.
7. Where any haul contains more than 100 kg of *Champocephalus gunnari*, and more than 10% of the *Champocephalus gunnari* by number are smaller than 240 mm total length, the fishing vessel shall move to another fishing location at least 5 n miles distant<sup>1</sup>. The fishing vessel shall not return to any point within 5 n miles of the location where the catch of small *Champocephalus gunnari* exceeded 10% for a period of at least five days<sup>2</sup>. The location where the catch of small *Champocephalus gunnari* exceeded 10% is defined as the path followed by the fishing vessel from the point at which the fishing gear was first deployed from the fishing vessel to the point at which the fishing gear was retrieved by the fishing vessel.
8. Each vessel participating in the fishery shall have at least one scientific observer, and include, if available, one appointed in accordance with the CCAMLR Scheme of International Scientific Observation, on board throughout all fishing activities.
9. Each vessel operating in the fishery for *Champocephalus gunnari* in Statistical Division 58.5.2 shall be required to operate a VMS at all times, in accordance with Conservation Measure 148/XVII.
10. A ten-day catch and effort reporting system shall be implemented:
  - (i) for the purpose of implementing this system, the calendar month shall be divided into three reporting periods, viz: day 1 to day 10, day 11 to day 20 and day 21 to the last day of the month. The reporting periods are hereafter referred to as periods A, B and C;
  - (ii) at the end of each reporting period, each Contracting Party participating in the fishery shall obtain from each of its vessels information on total catch and total days and hours fished for that period and shall, by cable, telex, facsimile or electronic transmission, transmit the aggregated catch and days and hours fished for its vessels so as to reach the Executive Secretary no later than the end of the next reporting period;
  - (iii) a report must be submitted by every Contracting Party taking part in the fishery for each reporting period for the duration of the fishery, even if no catches are taken;
  - (iv) the catch of *Champocephalus gunnari* and of all by-catch species must be reported;
  - (v) such reports shall specify the month and reporting period (A, B and C) to which each report refers;

- (vi) immediately after the deadline has passed for receipt of the reports for each period, the Executive Secretary shall notify all Contracting Parties engaged in fishing activities in the division of the total catch taken during the reporting period and the total aggregate catch for the season to date; and
  - (vii) at the end of every three reporting periods, the Executive Secretary shall inform all Contracting Parties of the total catch taken during the three most recent reporting periods and the total aggregate catch for the season to date.
11. A fine-scale effort and biological data reporting system shall be implemented:
- (i) the scientific observer(s) aboard each vessel shall collect the data required to complete the CCAMLR fine-scale catch and effort data form C1, latest version. These data shall be submitted to the CCAMLR Secretariat not later than one month after the vessel returns to port;
  - (ii) the catch of *Champscephalus gunnari* and of all by-catch species must be reported;
  - (iii) the numbers of seabirds and marine mammals of each species caught and released or killed must be reported;
  - (iv) the scientific observer(s) aboard each vessel shall collect data on the length composition from representative samples of *Champscephalus gunnari* and by-catch species:
    - (a) length measurements shall be to the nearest centimetre below; and
    - (b) representative samples of length composition shall be taken from each fine-scale grid rectangle (0.5° latitude by 1° longitude) fished in each calendar month; and
  - (v) the above data shall be submitted to the CCAMLR Secretariat not later than one month after the vessel returns to port.

<sup>1</sup> This provision is adopted pending the adoption of a more appropriate definition of a fishing location by the Commission.

<sup>2</sup> The specified period is adopted in accordance with the reporting period specified in Conservation Measure 51/XII, pending the adoption of a more appropriate period by the Commission.

CHART OF THE HEARD ISLAND PLATEAU



**CONSERVATION MEASURE 160/XVII<sup>1</sup>**  
**Prohibition of Directed Fishing for *Dissostichus eleginoides***  
**in Statistical Subarea 58.7**

Taking of *Dissostichus eleginoides*, other than for scientific research purposes in accordance with Conservation Measure 64/XII, is prohibited in Statistical Subarea 58.7 from 7 November 1998. This prohibition shall apply until at least such time that a survey of the *Dissostichus eleginoides* stock in this subarea is carried out, its results reported to and analysed by the Working Group on Fish Stock Assessment and a decision that the fishery be reopened is made by the Commission based on the advice of the Scientific Committee.

<sup>1</sup> Except for waters adjacent to the Prince Edward Islands

**CONSERVATION MEASURE 161/XVII<sup>1,2</sup>**  
**General Measures for New and Exploratory Longline Fisheries**  
**for *Dissostichus* spp. in the Convention Area for the 1998/99 Season**

The Commission,

Noting the need for the distribution of fishing effort and appropriate catch levels in fine-scale rectangles<sup>3</sup> in these new fisheries,

hereby adopts the following Conservation Measure:

1. Fishing should take place over as large a geographical and bathymetric range as possible to obtain the information necessary to determine fishery potential and to avoid over-concentration of catch and effort. To this end, fishing in any fine-scale rectangle shall cease when the reported catch reaches 100 tonnes and that rectangle shall be closed to fishing for the remainder of the season. Fishing in any fine-scale rectangle shall be restricted to one vessel at any one time.
2. In order to give effect to paragraph 1 above:
  - (i) the precise geographic position of the mid-point between the start and end of the longline shall be determined using appropriate means;
  - (ii) catch and effort information for each species by fine-scale rectangle shall be reported to the Executive Secretary every five days using the Five-Day Catch and Effort Reporting System set out in Conservation Measure 51/XII; and
  - (iii) the Secretariat shall notify Contracting Parties participating in these fisheries when the total longline catch for *Dissostichus eleginoides* and *Dissostichus mawsoni* combined in any fine-scale rectangle exceeds 100 tonnes.
3. The by-catch of any species in the new and exploratory fisheries other than *Dissostichus* spp. in the Statistical Subareas and Divisions concerned shall be limited to 50 tonnes.
4. The total number and weight of *Dissostichus eleginoides* and *Dissostichus mawsoni* discarded, including those with the 'jellymeat' condition, shall be reported.
- 5<sup>2</sup>. Each vessel participating in the new and exploratory fisheries for *Dissostichus* spp. during the 1998/99 season shall have at least one scientific observer appointed in accordance with the CCAMLR Scheme of International Scientific Observation, on board throughout all fishing activities within the fishing season.

6. The data collection plan (Annex 161/A) shall be implemented. Data collected pursuant to the plan for the period up to 31 August 1999 shall be reported to CCAMLR by 30 September 1999 so that the data will be available to the 1999 meeting of the Working Group on Fish Stock Assessment. Such data taken after 31 August shall be reported to CCAMLR not later than three months after the closure of the fishery.

<sup>1</sup> Except for waters adjacent to the Kerguelen and Crozet Islands

<sup>2</sup> Except for waters adjacent to the Prince Edward Islands

<sup>3</sup> A fine-scale rectangle is defined as an area of 0.5° latitude by 1° longitude with respect to the northwest corner of the Statistical Subarea or Division. The identification of each rectangle is by the latitude of its northernmost boundary and the longitude of the boundary closest to 0°.

## ANNEX 161/A

### DATA COLLECTION PLAN FOR NEW AND EXPLORATORY LONGLINE FISHERIES

1. All vessels will comply with conditions set by CCAMLR. These include five-day catch and effort reporting system (Conservation Measure 51/XII) and monthly fine-scale effort and biological data reporting system (Conservation Measures 121/XVI and 122/XVI) will be followed.
2. All data required by the CCAMLR *Scientific Observers Manual* for finfish fisheries will be collected. These include:
  - (i) haul-by-haul catch and catch per effort by species;
  - (ii) haul-by-haul length frequency of common species;
  - (iii) sex and gonad state of common species;
  - (iv) diet and stomach fullness;
  - (v) scales and/or otoliths for age determination;
  - (vi) by-catch of fish and other organisms; and
  - (vii) observation on occurrence and incidental mortality of seabirds and mammals in relation to fishing operations.
3. Data specific to longline fisheries will be collected. These include:
  - (i) number of fish lost at surface;
  - (ii) number of hooks set;
  - (iii) bait type;
  - (iv) baiting success (%);
  - (v) hook type;
  - (vi) setting, soak, and hauling times;
  - (vii) sea depth at each end of line on hauling; and
  - (viii) bottom type.

### CONSERVATION MEASURE 162/XVII

#### New Longline Fishery for *Dissostichus eleginoides* and *Dissostichus mawsoni* in Statistical Subarea 48.6 in the 1998/99 Season

The Commission,

Welcoming the notification of South Africa of its intention to conduct a new longline fishery in Statistical Subarea 48.6 for *Dissostichus eleginoides* and *Dissostichus mawsoni* in the 1998/99 fishing season,



hereby adopts the following Conservation Measure in accordance with Conservation Measure 31/X:

1. Fishing for *Dissostichus eleginoides* and *Dissostichus mawsoni* in Statistical Subarea 48.6 shall be limited to the new longline fishery by South Africa. The fishery shall be conducted by South African flagged vessels using longlining only.
2. The precautionary catch limit for this new longline fishery in Statistical Subarea 48.6 shall be limited to 707 tonnes of *Dissostichus* spp. north of 60°S, and 495 tonnes of *Dissostichus* spp. south of 60°S. In the event that either limit is reached, the relevant fishery shall be closed.
3. For the purpose of this new longline fishery, the 1998/99 fishing season to the north of 60°S is defined as the period from 1 March to 31 August 1999. The 1998/99 fishing season south of 60°S is defined as the period from 15 February to 15 October 1999.
4. The new longline fishery for the above species shall be carried out in accordance with Conservation Measures 29/XVI and 161/XVII.
5. Each vessel participating in this new longline fishery will be required to operate a VMS at all times, in accordance with Conservation Measure 148/XVII.

#### **CONSERVATION MEASURE 163/XVII**

#### **New Longline Fishery for *Dissostichus* spp. in Statistical Division 58.4.3 outside Areas under National Jurisdictions in the 1998/99 Season**

The Commission,

Welcoming the notification of France of its intention to conduct a new longline fishery in Statistical Division 58.4.3 outside areas under national jurisdictions for *Dissostichus* spp. in the 1998/99 fishing season,

hereby adopts the following Conservation Measure in accordance with Conservation Measure 31/X:

1. Fishing for *Dissostichus* spp. in Statistical Division 58.4.3 outside areas under national jurisdictions shall be limited to the new longline fishery by France. The fishery shall be conducted by French flagged vessels using longlining only.
2. The precautionary catch limit for this new longline fishery in Statistical Division 58.4.3 shall be limited to 700 tonnes of *Dissostichus* spp. north of 60°S. In the event that this limit is reached, the fishery shall be closed.
3. For the purpose of this new longline fishery, the 1998/99 fishing season to the north of 60°S is defined as the period from 15 April to 31 August 1999.
4. The new longline fishery for the above species shall be carried out in accordance with Conservation Measures 29/XVI and 161/XVII.
5. Each vessel participating in this new longline fishery will be required to operate a VMS at all times, in accordance with Conservation Measure 148/XVII.

**CONSERVATION MEASURE 164/XVII<sup>1</sup>**  
**New Longline Fisheries for *Dissostichus eleginoides***  
**in Statistical Division 58.4.4 in the 1998/99 Season**

The Commission,

Welcoming the notifications of France, South Africa, Spain and Uruguay of their intention to conduct new longline fisheries in Statistical Division 58.4.4 for *Dissostichus eleginoides* in the 1998/99 season,

hereby adopts the following Conservation Measure in accordance with Conservation Measure 31/X:

1. Fishing for *Dissostichus eleginoides* in Statistical Division 58.4.4 shall be limited to the new longline fisheries by France, South Africa, Spain and Uruguay. The fisheries shall be conducted by French, South African, Spanish and Uruguayan flagged vessels using longlining only.
2. The precautionary catch for Statistical Division 58.4.4 shall be limited to 572 tonnes of *Dissostichus* spp. north of 60°S, to be taken by longlining. In the event that this limit is reached, the fisheries shall be closed.
3. For the purpose of these new longline fisheries, the 1998/99 fishing season is defined as the period from 15 April to 31 August 1999.
4. The new longline fisheries for the above species shall be carried out in accordance with Conservation Measures 29/XVI and 161/XVII.
5. Each vessel participating in these new longline fisheries will be required to operate a VMS at all times, in accordance with Conservation Measure 148/XVII.

<sup>1</sup> Except for waters adjacent to the Prince Edward Islands

**CONSERVATION MEASURE 165/XVII**  
**Exploratory Fishery for *Martialia hyadesi* in**  
**Statistical Subarea 48.3 in the 1998/99 Season**

The Commission hereby adopts the following Conservation Measure in accordance with Conservation Measures 7/V and 65/XII:

1. The total catch of *Martialia hyadesi* in the 1998/99 season shall be limited to 2 500 tonnes.
2. For the purposes of this exploratory fishery, the fishing season is defined as the period from 7 November 1998 to 30 November 1999 or until the catch limit is reached, whichever is sooner.
3. For the purposes of implementing this Conservation Measure:
  - (i) the Ten-day Catch and Effort Reporting System, as set out in Conservation Measure 61/XII shall apply;
  - (ii) the data required to complete the CCAMLR standard fine-scale catch and effort data form for squid jig fisheries (Form C3) shall be reported from each vessel. These

data shall include numbers of seabirds and marine mammals of each species caught and released or killed. These data shall be reported to CCAMLR by 31 August 1999 for catches taken prior to 31 July 1999; and

- (iii) data on catches taken between 31 July 1999 and 31 August 1999 shall be reported to CCAMLR by 30 September 1999 so that the data will be available to the 1999 meeting of the Working Group on Fish Stock Assessment.
4. Each vessel participating in this exploratory fishery for *Martialiahyadesi* in Statistical Subarea 48.3 during the 1998/99 season shall have at least one scientific observer appointed in accordance with the CCAMLR Scheme of International Scientific Observation, on board throughout all fishing activities in this subarea.
  5. The data collection plan in Annex 165/A shall be implemented. Data collected pursuant to the plan for the period up to 31 August 1999 shall be reported to CCAMLR by 30 September 1999 so that the data will be available to the 1999 meeting of the Working Group on Fish Stock Assessment. Such data taken after 31 August shall be reported to CCAMLR not later than three months after the closure of the fishery.

#### ANNEX 165/A

#### DATA COLLECTION PLAN FOR EXPLORATORY SQUID (*MARTIALIA HYADESI*) FISHERIES IN STATISTICAL SUBAREA 48.3

1. All vessels will comply with conditions set by CCAMLR. These include data required to complete the data form (Form TAC) for the Ten-day Catch and Effort Reporting System, as specified by Conservation Measure 61/XII; and data required to complete the CCAMLR standard fine-scale catch and effort data form for a squid jig fishery (Form C3). This includes numbers of seabirds and marine mammals of each species caught and released or killed.
2. All data required by the CCAMLR *Scientific Observers Manual* for squid fisheries will be collected. These include:
  - (i) vessel and observer program details (Form S1);
  - (ii) catch information (Form S2); and
  - (iii) biological data (Form S3).

#### CONSERVATION MEASURE 166/XVII Exploratory Trawl Fishery for *Dissostichus* spp. in Statistical Division 58.4.1 in the 1998/99 Season

The Commission,

Welcoming the notification of Australia of its intention to conduct an exploratory trawl fishery in Statistical Division 58.4.1 west of 90°E in the 1998/99 season,

hereby adopts the following Conservation Measure in accordance with Conservation Measure 65/XII:

1. Fishing for *Dissostichus* spp. by trawl in Statistical Division 58.4.1 west of 90°E shall be limited to the exploratory fishery by Australian flagged vessels.
2. The total catch of *Dissostichus* spp. in the 1998/99 season taken by the trawl method shall not exceed 261 tonnes.
3. For the purposes of this exploratory trawl fishery, the 1998/99 fishing season is defined as the period from 7 November 1998 to 30 November 1999 or until the catch limit is reached, whichever is the sooner.
4. Each vessel participating in this exploratory trawl fishery for *Dissostichus* spp. in Statistical Division 58.4.1 west of 90°E in the 1998/99 season shall have at least one scientific observer appointed in accordance with the CCAMLR Scheme of International Scientific Observation on board throughout all fishing activities within this division.
5. Each vessel operating in this exploratory trawl fishery for *Dissostichus* spp. in Statistical Division 58.4.1 west of 90°E shall be required to operate a VMS at all times, in accordance with Conservation Measure 148/XVII.
6. For the purpose of implementing this Conservation Measure:
  - (i) the Five-day Catch and Effort Reporting System set out in Conservation Measure 51/XII shall apply; and
  - (ii) the monthly fine-scale biological data, as required under Conservation Measure 121/XVI, shall be recorded and reported in accordance with the System of International Scientific Observation.
7.
  - (i) There shall be no directed fishing for any species other than *Dissostichus* spp.
  - (ii) The by-catch of any fish species other than *Dissostichus* spp. shall not exceed 50 tonnes.
  - (iii) If, in the course of a directed fishery, the by-catch in any one haul of any by-catch species for which by-catch limitations apply under this Conservation Measure is equal to, or greater than 2 tonnes, then the fishing vessel shall not fish using that method of fishing at any point within 5 n miles<sup>1</sup> of the location where the by-catch exceeded 2 tonnes for a period of at least five days<sup>2</sup>. The location where the by-catch exceeded 2 tonnes is defined as the path followed by the fishing vessel from the point at which the fishing gear was first deployed from the fishing vessel to the point at which the fishing gear was retrieved by the fishing vessel.
8. The total number and weight of *Dissostichus* spp. discarded, including those with the jellymeat condition, shall be reported. These fish will count towards the total allowable catch.
9. The data collection plan in Conservation Measure 167/XVII for BANZARE Bank as a whole shall be implemented and the results reported to CCAMLR not later than three months after the closure of the fishery.

<sup>1</sup> This provision is adopted pending the adoption of a more appropriate definition of a fishing location by the Commission.

<sup>2</sup> The specified period is adopted in accordance with the reporting period specified in Conservation Measure 51/XII, pending the adoption of a more appropriate period by the Commission.

**CONSERVATION MEASURE 167/XVII**  
**Exploratory Trawl Fishery for *Dissostichus* spp. in**  
**Statistical Division 58.4.3 in the 1998/99 Season**

The Commission,

Welcoming the notification of Australia of its intention to conduct an exploratory trawl fishery in Statistical Division 58.4.3 in the 1998/99 season,

hereby adopts the following Conservation Measure in accordance with Conservation Measure 65/XII:

1. Fishing for *Dissostichus* spp. by trawl in Statistical Division 58.4.3 shall be limited to the exploratory fishery by Australian flagged vessels.
2. The total catch of *Dissostichus* spp. in the 1998/99 season taken by the trawl method shall not exceed 625 tonnes.
3. For the purposes of this exploratory trawl fishery, the 1998/99 fishing season is defined as the period from 7 November 1998 to 30 November 1999 or until the catch limit is reached, whichever is the sooner.
4. Each vessel participating in this exploratory trawl fishery for *Dissostichus* spp. in Statistical Division 58.4.3 in the 1998/99 season shall have at least one scientific observer appointed in accordance with the CCAMLR Scheme of International Scientific Observation on board throughout all fishing activities within this division.
5. Each vessel operating in this exploratory trawl fishery for *Dissostichus* spp. in Statistical Division 58.4.3 shall be required to operate a VMS at all times, in accordance with Conservation Measure 148/XVII.
6. For the purpose of implementing this Conservation Measure:
  - (i) the Five-day Catch and Effort Reporting System set out in Conservation Measure 51/XII shall apply; and
  - (ii) the monthly fine-scale biological data, as required under Conservation Measure 121/XVI, shall be recorded and reported in accordance with the System of International Scientific Observation.
7.
  - (i) There shall be no directed fishing for any species other than *Dissostichus* spp.
  - (ii) The by-catch of any fish species other than *Dissostichus* spp. shall not exceed 50 tonnes.
  - (iii) If, in the course of a directed fishery, the by-catch in any one haul of any by-catch species for which by-catch limitations apply under this Conservation Measure is equal to, or greater than 2 tonnes, then the fishing vessel shall not fish using that method of fishing at any point within 5 n miles<sup>1</sup> of the location where the by-catch exceeded 2 tonnes for a period of at least five days<sup>2</sup>. The location where the by-catch exceeded 2 tonnes is defined as the path followed by the fishing vessel from the point at which the fishing gear was first deployed from the fishing vessel to the point at which the fishing gear was retrieved by the fishing vessel.
8. The total number and weight of *Dissostichus* spp. discarded, including those with the jellymeat condition, shall be reported. These fish will count towards the total allowable catch.

9. The data collection plan in Annex 167/A shall be implemented and the results reported to CCAMLR not later than three months after the closure of the fishery.
- <sup>1</sup> This provision is adopted pending the adoption of a more appropriate definition of a fishing location by the Commission.
  - <sup>2</sup> The specified period is adopted in accordance with the reporting period specified in Conservation Measure 51/XII, pending the adoption of a more appropriate period by the Commission.

## ANNEX 167/A

### RESEARCH AND FISHERY OPERATIONS PLAN

During the early stages of exploratory fishing on the Elan and BANZARE Banks, subject to the catch limits set by CCAMLR, Australian vessels will conduct a trawl survey to assess the biomass of commercially important species on each of the banks down to 1 500 m depth. Exploration and surveys might not occur on both banks in the same season, but commercial exploration will not occur unless a survey is conducted at the same time. The survey, once commenced, will be completed in as short a time period as possible.

The survey on each bank will comprise 40 hauls at randomly chosen positions. Because the suitability of the bottom on these banks for fishing is not well known, and even the positions of some parts of the banks are not precisely known, it is likely that a high proportion of the sites will be unsuitable for trawling. To make the survey as practicable as possible, the ground shallower than 1 500 m on each bank has been divided into just over 40 squares, each of 15 n miles square for Elan Bank and 25 n miles square for BANZARE Bank (Figures 1 and 2). Within each square, five randomly chosen trawling positions have been nominated (Tables 1 and 2), and the vessel will trawl at one of the five positions in each square. If no nominated trawl position in a square is suitable, then that square will be abandoned. More accurate charts of these areas will be available soon, and it may be necessary alter the positions of the sampling squares.

### PERMIT CONDITIONS AND DATA COLLECTION PLAN

The vessels will comply with all express and implied conditions set by CCAMLR. General conditions include 120 mm minimum mesh size (Conservation Measure 2/III), and no net monitor cables to be used (Conservation Measure 30/X). The five-day catch and effort reporting system (Conservation Measure 51/XII) and the monthly effort and biological data reporting required by Conservation Measures 121/XVI and 122/XVI will also apply in Statistical Division 58.4.3, and Statistical Division 58.4.1 west of 90°E.

In addition to conditions set by CCAMLR, the Australian Fisheries Management Authority (AFMA) will require that the vessels carry an operating VMS which will enable AFMA to know their position at all times. An inspector/scientific observer will also be aboard all vessels at all times to monitor activities and catches and to collect biological data.

The following data and material will be collected from both the survey and commercial fishing operations, as required by the CCAMLR *Scientific Observers Manual* for finfish fisheries:

- (i) haul-by-haul catch and catch per effort by species;
- (ii) haul-by-haul length frequency of common species;
- (iii) sex and gonad state of common species;

- (iv) diet and stomach fullness;
- (v) scales and/or otoliths for age determination;
- (vi) by-catch of fish and other organisms; and
- (vii) observations on the occurrence of seabirds and mammals in relation to fishing operations, and details of any incidental mortality of these animals.

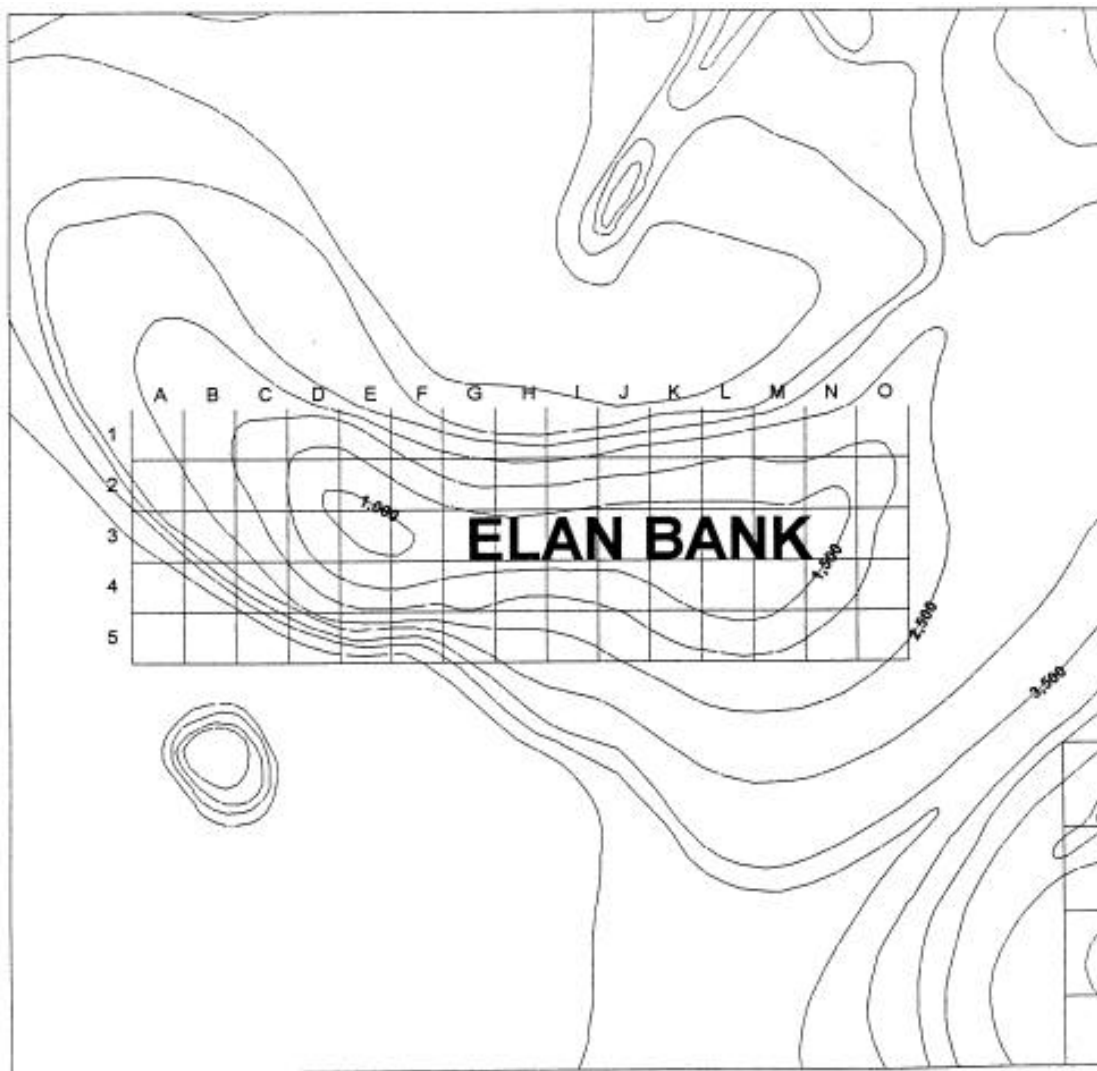


Figure 1: Chart of the Elan Bank area, showing the location and numbering system of the 15 n mile sampling squares.

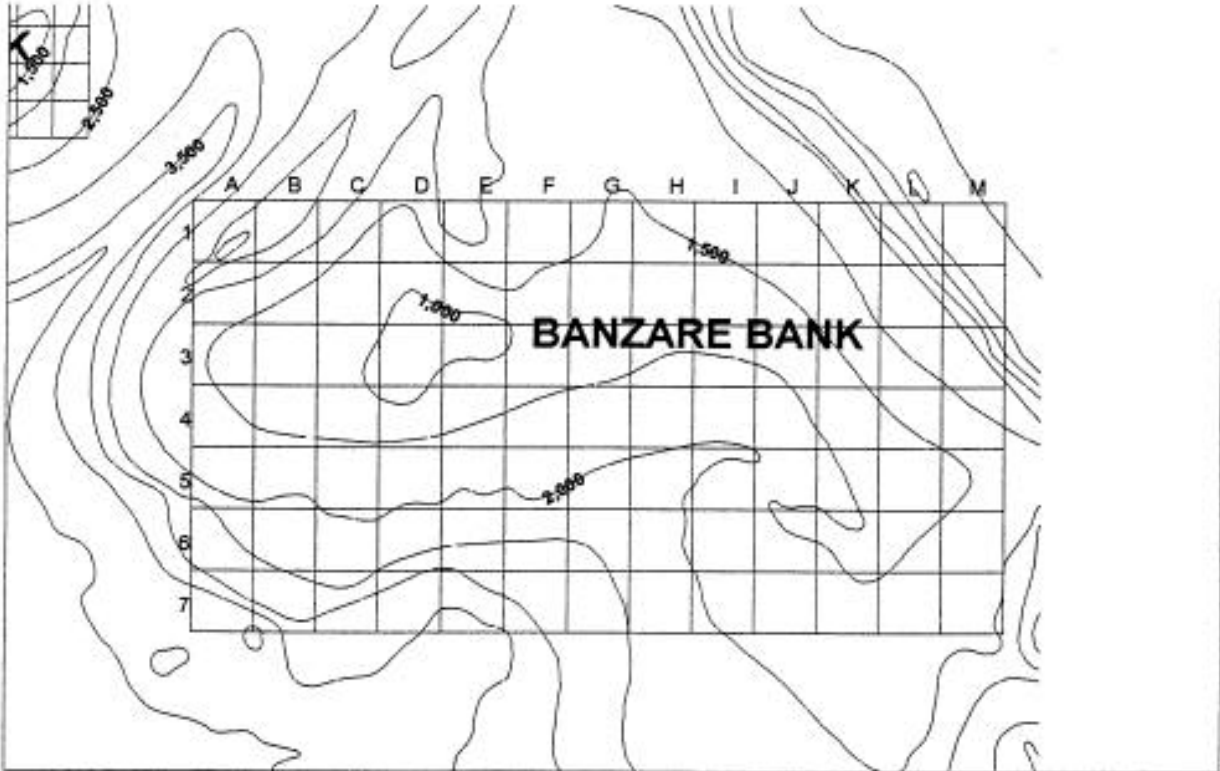


Figure 2: Chart of the BANZARE Bank area, showing the location and numbering system of the 25 n mile sampling squares.



Table 1: List of random trawl stations for Elan Bank. Square grid locations are shown on Figure 1.

Square Grid Locations	First Station	Second Station	Third Station	Fourth Station	Fifth Station
A1	S56 24.55:E065 55.28	S56 21.12:E066 3.82	S56 17.66:E065 50.32	S56 14.65:E066 4.36	S56 26.73:E066 5.89
A2	S56 30.88:E065 50.84	S56 38.82:E066 1.89	S56 41.46:E065 44.57	S56 31.88:E066 4.77	S56 41.86:E066 9.47
A3	S56 43.80:E065 59.38	S56 47.81:E066 10.68	S56 55.20:E066 9.21	S56 56.51:E065 56.59	S56 43.96:E065 47.81
A4	S57 1.86:E065 50.20	S57 11.73:E066 10.04	S57 4.77:E066 2.05	S57 8.51:E065 55.01	S56 57.71:E066 3.60
B1	S56 19.77:E066 24.88	S56 24.48:E066 23.68	S56 27.58:E066 11.59	S56 15.71:E066 14.24	S56 15.57:E066 32.45
B2	S56 32.59:E066 26.48	S56 41.04:E066 33.01	S56 41.31:E066 15.90	S56 36.50:E066 12.88	S56 31.14:E066 16.33
B3	S56 57.24:E066 30.36	S56 56.25:E066 15.73	S56 51.16:E066 25.84	S56 48.05:E066 15.76	S56 43.91:E066 26.87
B4	S57 8.66:E066 31.75	S57 10.15:E066 18.07	S56 57.75:E066 36.28	S56 58.71:E066 11.59	S57 3.86:E066 22.46
C1	S56 13.43:E066 43.93	S56 14.03:E066 51.00	S56 20.12:E066 47.04	S56 20.73:E067 2.48	S56 25.59:E066 56.10
C2	S56 28.07:E066 46.62	S56 33.00:E067 5.98	S56 37.80:E066 55.92	S56 40.03:E067 4.47	S56 38.39:E066 41.83
C3	S56 42.86:E066 59.98	S56 48.13:E066 39.05	S56 53.97:E066 45.39	S56 48.01:E066 56.59	S56 57.31:E067 2.60
C4	S56 59.31:E067 3.75	S57 9.51:E066 59.68	S57 7.15:E066 41.78	S57 12.46:E066 38.81	S57 1.67:E066 49.23
D1	S56 17.42:E067 25.10	S56 22.14:E067 12.51	S56 12.84:E067 21.12	S56 23.03:E067 22.84	S56 13.68:E067 10.66
D2	S56 32.16:E067 7.69	S56 33.54:E067 26.84	S56 37.29:E067 11.22	S56 27.87:E067 28.71	S56 38.10:E067 20.66
D3	S56 50.27:E067 28.99	S56 46.18:E067 12.53	S56 42.89:E067 26.35	S56 56.10:E067 7.64	S56 57.46:E067 31.84
D4	S57 11.71:E067 31.52	S57 11.31:E067 10.26	S57 11.92:E067 20.28	S57 1.14:E067 29.01	S57 1.82:E067 15.79
E1	S56 17.94:E067 47.43	S56 21.58:E067 35.71	S56 22.18:E067 53.91	S56 26.71:E067 43.50	S56 14.81:E067 36.87
E2	S56 34.13:E067 33.41	S56 39.36:E067 43.38	S56 27.69:E067 52.77	S56 27.87:E067 42.28	S56 33.46:E067 44.98
E3	S56 52.19:E067 51.62	S56 48.28:E067 42.73	S56 56.95:E067 57.64	S56 45.39:E067 55.36	S56 55.34:E067 42.67
E4	S57 10.30:E067 45.79	S57 0.91:E067 55.70	S57 6.08:E067 39.83	S57 8.91:E067 59.13	S57 4.51:E067 48.72
F2	S56 31.79:E068 19.54	S56 29.77:E068 7.02	S56 42.14:E068 19.35	S56 39.69:E068 27.72	S56 42.53:E068 2.68
F3	S56 49.85:E068 10.15	S56 53.68:E068 6.36	S56 50.13:E068 26.41	S56 42.67:E068 27.43	S56 44.87:E068 18.07
F4	S57 1.32:E068 15.10	S57 11.30:E068 22.33	S57 5.48:E068 21.23	S56 58.09:E068 24.18	S57 9.65:E068 7.07

Table 1 (continued)

Square Grid Locations	First Station	Second Station	Third Station	Fourth Station	Fifth Station
G3	S56 52.75:E068 44.92	S56 51.43:E068 47.19	S56 43.84:E068 55.14	S56 43.63:E068 40.01	S56 49.36:E068 34.34
G4	S57 9.15:E068 45.12	S57 9.09:E068 54.03	S57 10.80:E068 34.27	S57 0.20:E068 46.70	S57 5.54:E068 38.71
H3	S56 55.61:E069 16.27	S56 45.47:E069 14.63	S56 51.20:E068 57.49	S56 50.62:E069 17.28	S56 43.85:E068 57.67
H4	S57 3.55:E068 58.58	S57 5.71:E069 18.97	S56 59.69:E069 9.34	S57 10.24:E069 7.86	S57 11.67:E069 18.29
I3	S56 54.98:E069 28.76	S56 45.85:E069 44.25	S56 52.47:E069 40.74	S56 47.59:E069 33.11	S56 49.09:E069 23.90
I4	S56 58.09:E069 22.93	S56 58.48:E069 29.63	S57 5.01:E069 28.52	S57 2.20:E069 40.34	S57 6.80:E069 44.71
J2	S56 41.22:E070 12.99	S56 37.35:E070 5.22	S56 28.16:E070 6.82	S56 37.77:E069 50.54	S56 42.32:E069 57.38
J3	S56 44.29:E070 3.81	S56 46.26:E070 4.58	S56 48.97:E070 16.73	S56 53.70:E069 59.62	S56 49.47:E069 50.61
J4	S57 7.43:E070 0.43	S57 6.37:E070 8.17	S56 57.71:E070 14.28	S57 0.09:E069 55.88	S57 11.12:E070 13.28
K2	S56 35.56:E070 23.01	S56 30.25:E070 43.89	S56 38.08:E070 32.86	S56 28.40:E070 21.44	S56 42.07:E070 23.07
K3	S56 48.69:E070 18.37	S56 54.12:E070 24.61	S56 44.02:E070 36.35	S56 54.77:E070 38.90	S56 49.46:E070 39.43
K4	S57 3.49:E070 31.74	S57 9.24:E070 25.28	S56 57.79:E070 28.55	S57 11.43:E070 44.95	S57 0.18:E070 18.83
L2	S56 41.58:E070 52.32	S56 40.63:E071 10.52	S56 28.96:E071 11.74	S56 37.49:E070 46.66	S56 37.42:E071 2.33
L3	S56 43.03:E070 56.09	S56 47.01:E071 3.54	S56 51.73:E070 55.05	S56 56.84:E070 47.53	S56 55.15:E071 4.23
L4	S56 59.49:E070 59.86	S57 8.39:E070 56.57	S57 1.20:E070 48.39	S57 5.07:E071 8.73	S57 9.40:E070 45.68
L5	S57 25.96:E071 4.82	S57 26.01:E071 12.54	S57 16.56:E071 10.81	S57 16.14:E070 58.26	S57 19.40:E070 50.56
M2	S56 30.47:E071 26.49	S56 41.30:E071 32.08	S56 36.42:E071 24.09	S56 38.61:E071 14.23	S56 28.57:E071 16.97
M3	S56 51.90:E071 29.02	S56 51.44:E071 29.81	S56 43.59:E071 21.03	S56 57.22:E071 38.90	S56 55.56:E071 19.31
M4	S57 8.41:E071 36.19	S57 1.54:E071 36.32	S57 8.12:E071 18.90	S56 58.48:E071 14.11	S57 11.74:E071 28.07
M5	S57 24.86:E071 12.87	S57 22.91:E071 29.50	S57 15.88:E071 29.57	S57 18.36:E071 18.60	S57 17.03:E071 38.76
N2	S56 36.28:E071 41.27	S56 36.81:E071 59.21	S56 41.04:E071 44.72	S56 29.13:E071 48.45	S56 28.46:E072 0.76
N3	S56 54.39:E072 3.05	S56 49.45:E071 44.59	S56 45.04:E072 4.42	S56 56.14:E071 42.39	S56 56.67:E071 53.95
N4	S57 10.90:E071 42.78	S56 59.54:E071 51.25	S57 9.56:E072 2.23	S56 59.08:E072 0.75	S57 5.76:E071 52.41

Table 2: List of random trawl stations for BANZARE Bank. Square grid locations are shown on Figure 2.

Square Grid Locations	First Station	Second Station	Third Station	Fourth Station	Fifth Station
A3	S59 6.68:E074 8.29	S58 57.00:E074 8.20	S58 52.09:E073 58.17	S59 1.81:E074 22.81	S58 51.15:E074 7.73
A4	S59 19.98:E074 44.54	S59 24.14:E074 39.25	S59 28.51:E074 16.83	S59 10.38:E074 43.06	S59 16.09:E074 34.18
B2	S58 29.53:E075 8.08	S58 34.35:E075 29.03	S58 25.12:E075 13.44	S58 24.11:E074 49.18	S58 40.60:E074 51.30
B3	S58 43.13:E074 55.73	S59 1.89:E075 11.48	S59 6.61:E074 56.73	S58 47.70:E075 17.89	S59 0.79:E074 48.47
B4	S59 27.04:E074 58.19	S59 24.82:E075 15.60	S59 14.62:E074 48.93	S59 15.43:E075 19.41	S59 31.66:E074 49.16
C1	S58 17.16:E075 36.55	S58 6.50:E075 38.50	S58 12.30:E076 21.48	S57 57.65:E075 40.85	S58 1.11:E075 51.03
C2	S58 36.14:E076 15.55	S58 41.71:E075 43.27	S58 35.57:E075 57.08	S58 18.14:E076 9.18	S58 39.07:E076 4.40
C3	S59 0.99:E075 50.17	S59 7.12:E075 44.47	S58 55.64:E075 43.37	S59 2.32:E076 0.84	S58 53.08:E076 6.38
C4	S59 22.69:E075 41.90	S59 21.69:E075 59.30	S59 9.30:E076 3.10	S59 29.82:E076 11.60	S59 17.08:E075 41.12
D1	S57 54.15:E076 33.90	S58 0.02:E076 46.21	S58 8.06:E076 36.40	S58 14.02:E076 35.91	S58 2.87:E077 5.60
D2	S58 20.00:E076 40.46	S58 34.60:E076 34.08	S58 20.38:E076 55.38	S58 32.81:E076 54.16	S58 27.78:E076 47.82
D3	S58 53.31:E077 7.82	S58 47.37:E077 7.06	S59 0.93:E076 51.30	S59 0.73:E076 34.51	S58 52.71:E076 43.69
D4	S59 31.62:E077 1.82	S59 20.84:E076 25.43	S59 15.43:E076 46.96	S59 24.03:E076 46.41	S59 18.48:E076 58.35
E2	S58 38.66:E077 42.49	S58 20.46:E077 28.30	S58 38.91:E077 55.26	S58 18.90:E077 40.11	S58 31.56:E077 27.30
E3	S58 57.84:E077 44.98	S58 43.81:E077 32.47	S58 49.99:E077 24.67	S58 57.63:E077 19.60	S58 45.47:E077 14.52
E4	S59 24.97:E077 45.35	S59 13.35:E077 44.94	S59 24.86:E077 18.27	S59 9.74:E077 55.79	S59 30.39:E077 58.36
F2	S58 31.85:E078 25.98	S58 37.98:E078 48.39	S58 23.37:E078 26.88	S58 37.55:E078 4.15	S58 35.15:E078 37.45
F3	S59 5.07:E078 47.42	S58 44.51:E078 9.18	S58 49.35:E078 45.16	S58 56.32:E078 21.30	S58 50.65:E078 32.24
F4	S59 32.20:E078 11.72	S59 26.32:E078 20.90	S59 16.74:E078 41.97	S59 8.90:E078 5.97	S59 31.68:E078 1.58
G1	S58 14.30:E078 52.18	S58 1.97:E079 24.58	S58 15.23:E079 1.60	S58 14.37:E079 14.31	S58 9.69:E079 36.73
G2	S58 36.12:E079 33.11	S58 40.88:E078 50.21	S58 28.76:E079 21.33	S58 42.18:E079 25.07	S58 24.86:E079 29.63
G3	S58 55.39:E078 52.74	S58 45.28:E079 18.68	S58 56.05:E079 22.50	S58 52.58:E079 7.93	S59 3.29:E079 36.09

Table 2 (continued)

Square Grid Locations	First Station	Second Station	Third Station	Fourth Station	Fifth Station
H1	S57 55.18:E080 24.42	S58 4.46:E080 13.98	S58 7.82:E080 1.07	S58 13.95:E080 4.73	S58 10.54:E080 24.86
H2	S58 18.32:E079 59.36	S58 28.88:E080 15.16	S58 18.77:E079 46.51	S58 24.00:E079 39.85	S58 39.60:E080 5.92
H3	S58 57.21:E079 53.27	S59 2.66:E080 21.62	S59 5.28:E079 46.51	S59 7.21:E080 3.99	S58 51.29:E079 41.58
12	S58 23.29:E081 7.50	S58 31.36:E081 3.21	S58 38.44:E080 54.85	S58 37.98:E081 11.40	S58 25.91:E080 45.40
13	S58 45.18:E080 46.79	S58 58.96:E080 29.85	S59 2.52:E080 50.64	S59 0.10:E080 42.13	S58 50.30:E080 36.72
J2	S58 42.04:E081 27.22	S58 23.47:E081 33.11	S58 34.05:E081 31.30	S58 38.94:E081 49.52	S58 36.20:E082 0.92
J3	S59 1.04:E081 17.15	S58 59.52:E081 37.81	S58 50.94:E081 52.49	S58 44.76:E081 20.67	S58 48.38:E082 3.04
J4	S 59 28.18:E081 23.78	S59 10.18:E081 25.53	S59 17.05:E081 22.19	S59 19.17:E081 51.46	S59 23.43:E081 39.41
J6	S60 12.55:E081 32.51	S60 4.44:E081 53.65	S60 7.81:E081 18.43	S60 7.67:E082 1.68	S60 17.36:E081 22.43
K3	S58 51.44:E082 17.45	S59 6.54:E082 22.58	S59 0.93:E082 49.02	S58 43.21:E082 7.79	S58 56.98:E082 38.52
K4	S59 9.53:E082 42.21	S59 29.98:E082 30.35	S59 26.46:E082 52.60	S59 18.94:E082 24.71	S59 17.94:E082 9.29
K5	S59 50.21:E082 36.43	S59 42.98:E082 49.35	S59 42.22:E082 9.33	S59 34.72:E082 25.80	S59 36.26:E082 46.60
K6	S60 12.27:E082 28.16	S59 57.88:E082 14.99	S60 4.79:E082 12.27	S60 15.68:E082 18.70	S60 4.65:E082 33.94
L4	S59 13.61:E082 54.09	S59 26.71:E082 57.05	S59 28.84:E083 21.14	S59 18.55:E083 28.86	S59 9.85:E083 35.25
L5	S59 49.16:E082 58.64	S59 43.61:E083 41.57	S59 40.81:E083 15.64	S59 57.45:E083 41.01	S59 54.56:E083 11.15
L6	S60 5.64:E083 24.26	S60 2.70:E083 34.56	S60 20.36:E083 35.41	S60 21.01:E083 12.15	S60 0.21:E083 3.92
M5	S59 45.76:E084 8.87	S59 39.77:E084 21.41	S59 45.64:E083 55.72	S59 46.12:E083 44.18	S59 34.33:E084 11.57

**CONSERVATION MEASURE 168/XVII<sup>1,2</sup>**  
**Exploratory Longline Fisheries for *Dissostichus eleginoides***  
**in Statistical Subarea 58.6 in the 1998/99 Season**

The Commission hereby adopts the following Conservation Measure in accordance with Conservation Measure 65/XII:

1. Fishing for *Dissostichus eleginoides* in Statistical Subarea 58.6 shall be limited to the exploratory longline fisheries by France and South Africa. The fisheries shall be conducted by French and South African flagged vessels using longlining only.
2. The precautionary catch limit for these exploratory fisheries in Statistical Subarea 58.6 shall be limited to 1 555 tonnes of *Dissostichus eleginoides*, to be taken by longlining. In the event that this limit is reached, the fisheries shall be closed.
3. For the purpose of these exploratory longline fisheries, the 1998/99 fishing season is defined as the period from 15 April to 31 August 1999.
4. The exploratory longline fisheries for the above species shall be carried out in accordance with Conservation Measures 29/XVI and 133/XVI.
5. Each vessel participating in these exploratory longline fisheries will be required to operate a VMS at all times, in accordance with Conservation Measure 148/XVII.

<sup>1</sup> Except for waters adjacent to the Crozet Islands

<sup>2</sup> Except for waters adjacent to the Prince Edward Islands

**CONSERVATION MEASURE 169/XVII**  
**Exploratory Longline Fishery for *Dissostichus eleginoides***  
**and *Dissostichus mawsoni* in Statistical Subarea 88.1**  
**in the 1998/99 Season**

The Commission hereby adopts the following Conservation Measure in accordance with Conservation Measure 65/XII:

1. Fishing for *Dissostichus eleginoides* and *Dissostichus mawsoni* in Statistical Subarea 88.1 shall be limited to the exploratory longline fishery by New Zealand. The fishery shall be conducted by no more than two New Zealand flagged vessels using longlining only.
2. The precautionary catch for these exploratory longline fisheries in Statistical Subarea 88.1 shall be limited to 271 tonnes of *Dissostichus* spp. north of 65°S and 2 010 tonnes of *Dissostichus* spp. south of 65°S. In the event that these limits are reached, the fishery shall be closed.
3. For the purposes of this exploratory longline fishery, the 1998/99 fishing season is defined as the period from 15 December 1998 to 31 August 1999.
4. The directed longline fishery for *Dissostichus* spp. in Statistical Subarea 88.1 north of 65°S shall be carried out in accordance with Conservation Measure 29/XVI. South of 65°S the directed fishery for the above species shall be carried out in accordance with all the provisions of Conservation Measure 29/XVI, except paragraph 3. To permit experimental line weighting trials south of 65°S, longlines may be set during daylight hours if the vessels can demonstrate a consistent minimum line sink rate of 0.3 metres per second. Vessels shall revert to setting longlines at night in accordance with Conservation Measure 29/XVI if a significant level of seabird by-catch occurs.

5. The directed longline fishery for the above species shall be carried out in accordance with Conservation Measure 161/XVII.
6. Each vessel participating in this exploratory longline fishery shall be required to operate a VMS at all times, in accordance with Conservation Measure 148/XVII.

**RESOLUTION 7/IX**  
**Driftnet Fishing in the Convention Area**

1. The Commission endorsed the goals of the UN General Assembly Resolution 44/225 on large-scale pelagic driftnet fishing, which calls, *inter alia*, for a cessation of any further expansion of large-scale pelagic driftnet fishing on the high seas. Recognising the concentration of marine living resources present in Antarctic waters, it was noted that large-scale pelagic driftnet fishing can be a highly indiscriminate and wasteful fishing method that is widely considered to threaten the effective conservation of living marine resources. Although no Member is currently engaged in large-scale pelagic driftnet fishing in the Convention Area, the Commission expressed concern about the potential impact on marine living resources if large-scale pelagic driftnet fishing were to expand into the Convention Area.
2. To this end, the Commission agreed, in accordance with UN Resolution 44/225, that there will be no expansion of large-scale pelagic driftnet fishing into the Convention Area.
3. It was agreed that, in accordance with Article X, the Commission would draw this Resolution to the attention of any State that is not a Party to the Convention and whose nationals or vessels engage in large-scale pelagic driftnet fishing.

**RESOLUTION 10/XII**  
**Resolution on Harvesting of Stocks Occurring**  
**Both Within and Outside the Convention Area**

The Commission,

Recalling the principles of conservation in Article II of the Convention and in particular that of the maintenance of the ecological relationships between harvested, dependent and related populations of Antarctic marine living resources,

Recalling the requirement under Article XI of the Convention for the Commission to seek to cooperate with Contracting Parties which may exercise jurisdiction in marine areas adjacent to the area to which the Convention applies in respect of the conservation of any stock or stocks of associated species which occur both within those areas and the area to which the Convention applies, with a view to harmonising the Conservation Measures adopted in respect of such stocks,

Emphasising the importance of further research on any stock or stocks of species which occur both within the area of the Convention and within adjacent areas,

Noting the concerns expressed by the Scientific Committee on the substantial exploitation of such stocks inside and outside the Convention Area,

reaffirmed that Members should ensure that their flag vessels conduct harvesting of such stocks in areas adjacent to the Convention Area responsibly and with due respect for the Conservation Measures it has adopted under the Convention.

## **CONSERVATION MEASURES RELATING TO CEMP SITES**

### **CONSERVATION MEASURE 62/XI Protection of the Seal Islands CEMP Site**

1. The Commission noted that a program of longterm studies is being undertaken at Seal Islands, South Shetland Islands, as part of the CCAMLR Ecosystem Monitoring Program (CEMP). Recognising that these studies may be vulnerable to accidental or wilful interference, the Commission expressed its concern that this CEMP site, the scientific investigations, and the Antarctic marine living resources therein be protected.
2. Therefore, the Commission considers it appropriate to accord protection to the Seal Islands CEMP site, as defined in the Seal Islands management plan.
3. Members are required to comply with the provisions of the Seal Islands CEMP site management plan, which is recorded in Annex B of Conservation Measure 18/XIII.
4. To allow Members adequate time to implement the relevant permitting procedures associated with this measure and the management plan, Conservation Measure 62/XI shall become effective as of 1 May 1993.
5. In accordance with Article X, the Commission shall draw this Conservation Measure to the attention of any State that is not a Party to the Convention and whose nationals or vessels are present in the Convention Area.

### **CONSERVATION MEASURE 82/XIII Protection of the Cape Shirreff CEMP Site**

1. The Commission noted that a program of longterm studies is being undertaken at Cape Shirreff and the San Telmo Islands, Livingston Island, South Shetland Islands, as part of the CCAMLR Ecosystem Monitoring Program (CEMP). Recognising that these studies may be vulnerable to accidental or wilful interference, the Commission expressed its concern that this CEMP site, the scientific investigations, and the Antarctic marine living resources therein be protected.
2. Therefore, the Commission considers it appropriate to accord protection to the Cape Shirreff CEMP site, as defined in the Cape Shirreff management plan.
3. Members shall comply with the provisions of the Cape Shirreff CEMP site management plan, which is recorded in Annex B 'Cape Shirreff' of Conservation Measure 18/XIII.
4. To allow Members adequate time to implement the relevant permitting procedures associated with this measure and the management plan, Conservation Measure 82/XIII shall become effective as of 1 May 1995.
5. In accordance with Article X, the Commission shall draw this Conservation Measure to the attention of any State that is not a Party to the Convention and whose nationals or vessels are present in the Convention Area.

**CONSERVATION MEASURE 18/XIII**  
**Procedure for According Protection to CEMP Sites**

The Commission,

Bearing in mind that the Scientific Committee has established a system of sites contributing data to the CCAMLR Ecosystem Monitoring Program (CEMP), and that additions may be made to this system in the future;

Recalling that it is not the purpose of the protection accorded to CEMP sites to restrict fishing activity in adjacent waters;

Recognising that studies being undertaken at CEMP sites may be vulnerable to accidental or wilful interference;

Concerned, therefore, to provide protection for CEMP sites, scientific investigations and the Antarctic marine living resources therein, in cases where a Member or Members of the Commission conducting or planning to conduct CEMP studies believes such protection to be desirable;

hereby adopts the following Conservation Measure in accordance with Article IX of the Convention:

1. In cases where a Member or Members of the Commission conducting, or planning to conduct, CEMP studies at a CEMP site believe it desirable that protection should be accorded to the site, it, or they, shall prepare a draft management plan in accordance with Annex A to this Conservation Measure.
2. Each such draft management plan shall be sent to the Executive Secretary for transmission to all Members of the Commission for their consideration at least three months before its consideration by WG-EMM.
3. The draft management plan shall be considered in turn by WG-EMM, the Scientific Committee and the Commission. In consultation with the Member or Members of the Commission which drew up the draft management plan, it may be amended by any of these bodies. If a draft management plan is amended by either WG-EMM or the Scientific Committee, it shall be passed on in its amended form either to the Scientific Committee or to the Commission as the case may be.
4. If, following completion of the procedures outlined in paragraphs 1 to 3 above, the Commission considers it appropriate to accord the desired protection to the CEMP site, the Commission shall adopt a Resolution calling on Members to comply, on a voluntary basis, with the provisions of the draft management plan, pending the conclusion of action in accordance with paragraphs 5 to 8 below.
5. The Executive Secretary shall communicate such a Resolution to SCAR, the Antarctic Treaty Consultative Parties and, if appropriate, the Contracting Parties to other components of the Antarctic Treaty System which are in force.
6. Unless, before the opening date of the next regular meeting of the Commission, the Executive Secretary has received:
  - (i) an indication from an Antarctic Treaty Consultative Party that it desires the resolution to be considered at a Consultative Meeting; or
  - (ii) an objection from any other quarter referred to in paragraph 5 above;



the Commission may, by means of a Conservation Measure, confirm its adoption of the management plan for the CEMP site and shall include the management plan in Annex B to Conservation Measure 18/XIII.

7. In the event that an Antarctic Treaty Consultative Party has indicated its desire for the Resolution to be considered at a Consultative Meeting, the Commission shall await the outcome of such consideration, and may then proceed accordingly.
8. If objection is received in accordance with paragraphs 6(ii) or 7 above, the Commission may institute such consultations as it may deem appropriate to achieve the necessary protection and to avoid interference with the achievement of the principles and purposes of, and measures approved under, the Antarctic Treaty and other components of the Antarctic Treaty System which are in force.
9. The management plan of any site may be amended by decision of the Commission. In such cases full account shall be taken of the advice of the Scientific Committee. Any amendment which increases the area of the site or adds to categories or types of activities that would jeopardise the objectives of the site shall be subject to the procedures set out in paragraphs 5 to 8 above.
10. Entry into a CEMP site included in Annex B shall be prohibited except for the purposes authorised in the relevant management plan for the site and in accordance with a permit issued under paragraph 11.
11. Each Contracting Party shall, as appropriate, issue permits authorising its nationals to carry out activities consistent with the provisions of the management plans for CEMP sites and shall take such other measures, within its competence, as may be necessary to ensure that its nationals comply with the management plans for such sites.
12. Copies of such permits shall be sent to the Executive Secretary as soon as practical after they are issued. Each year the Executive Secretary shall provide the Commission and the Scientific Committee with a brief description of the permits that have been issued by the Parties. In cases where permits are issued for purposes not directly related to the conduct of CEMP studies at the site in question, the Executive Secretary shall forward a copy of the permit to the Member or Members of the Commission conducting CEMP studies at that site.
13. Each management plan shall be reviewed every five years by WG-EMM and the Scientific Committee to determine whether it requires revision and whether continued protection is necessary. The Commission may then act accordingly.

**INFORMATION TO BE INCLUDED IN MANAGEMENT  
PLANS FOR CEMP SITES**

Management plans shall include:

**A. GEOGRAPHICAL INFORMATION**

1. A description of the site, and any buffer zone within the site, including:

- (a) geographical coordinates;
- (b) natural features;
- (c) boundary markers;
- (d) natural features that define the site;
- (e) access points (pedestrian, vehicular, airborne, sea-borne);
- (f) pedestrian and vehicular routes in the site;
- (g) preferred anchorages;
- (h) location of structures within the site;
- (i) areas or zones within the site, described in generic or geographical terms, or both, in which activities are prohibited or otherwise constrained;
- (j) location of nearby scientific stations, research or refuge facilities; and
- (k) location of areas or sites, in or near the site, which have been accorded protected status in accordance with measures adopted under the Antarctic Treaty or other components of the Antarctic Treaty System which are in force.

2. Maps showing:

- (a) the location of the site in relation to major surrounding features; and
- (b) where applicable, the geographical features listed in paragraph 1 above.

**B. BIOLOGICAL FEATURES**

1. A description of the biological features of the site, in both space and time, which it is the purpose of the management plan to protect.

**C. CEMP STUDIES**

1. A full description of the CEMP studies being conducted or planned to be conducted, including the species and parameters which are being or are to be studied.

**D. PROTECTION MEASURES**

1. Statements of prohibited activities:

- (a) throughout the site at all times of the year;
- (b) throughout the site at defined parts of the year;
- (c) in parts of the site at all times of the year; and
- (d) in parts of the site at defined parts of the year.

2. Prohibitions regarding access to and movement within or over the site.
3. Prohibitions regarding:
  - (a) the installation, modification, and/or removal of structures; and
  - (b) the disposal of waste.
4. Prohibitions for the purpose of ensuring that activity in the site does not prejudice the purposes for which protection status has been accorded to areas or sites, in or near the site, under the Antarctic Treaty or other components of the Antarctic Treaty System which are in force.

#### E. COMMUNICATIONS INFORMATION

1. The name, address, telephone, telex and facsimile numbers of:
  - (a) the organisation or organisations responsible for appointing national representative(s) to the Commission; and
  - (b) the national organisation or organisations conducting CEMP studies at the site.

#### Notes:

1. A code of conduct. If it would help towards achieving the scientific objectives of the site, a code of conduct may be annexed to the management plan. Such a code should be written in hortatory rather than mandatory terms, and must be consistent with the prohibitions contained in Section D above.
2. Members of the Commission preparing draft management plans for submission in accordance with this Conservation Measure should bear in mind that the primary purpose of the management plan is to provide for the protection of CEMP studies at the site through the application of the prohibitions contained in Section D. To that end, the management plan is to be drafted in concise and unambiguous terms. Information which is intended to help scientists, or others, appreciate broader considerations regarding the site (e.g., historical and bibliographic information) should not be included in the management plan but may be annexed to it.

## MANAGEMENT PLANS FOR CEMP SITES

### MANAGEMENT PLAN FOR THE PROTECTION OF SEAL ISLAND, SOUTH SHETLAND ISLANDS, AS A SITE INCLUDED IN THE CCAMLR ECOSYSTEM MONITORING PROGRAM<sup>1</sup>

#### A. GEOGRAPHICAL INFORMATION

##### 1. Description of the site:

- (a) Geographical coordinates. The Seal Islands are composed of small islands and skerries located approximately 7 km north of the northwest corner of Elephant Island, South Shetland Islands. The Seal Islands CEMP Protected Area includes the entire Seal Islands group, which is defined as Seal Island plus any land or rocks exposed at mean low tide within a distance of 5.5 km of the point of highest elevation on Seal Island. Seal Island is the largest island of the group, and is situated at 60°59'14"S, 55°23'04"W (coordinates are given for the point of highest elevation on the island – see Figures 1 and 2).
- (b) Natural features. The Seal Islands cover an area approximately 5.7 km from east to west and 5 km from north to south. Seal Island is approximately 0.7 km long and 0.5 km wide. It has an altitude of about 125 m, with a raised plateau at about 80 m, and precipitous cliffs on most coastlines. There is a raised, sandy beach on the western shore and several coves on the northern and eastern shores. Seal Island is joined to the adjacent island to the west by a narrow sand bar that is approximately 50 m long; the bar is rarely passable on foot, and only when seas are calm and the tide is very low. Other islands in the group are similar to Seal Island, with precipitous cliffs, exposed coasts, and a few sand beaches and protected coves. There is no permanent ice on any of the islands. Seal Island is mainly composed of poorly consolidated sedimentary rocks. Rocks crumble and fracture easily, resulting in prevalent erosion from water runoff and coastal wave action. Geologists have characterised the bedrock 'pebbly mudstone'. No fossils have been reported from the site. Because colonies of penguins are present in virtually all sectors of Seal Island (including the summit), the soil in many areas as well as several vertical rock faces are enriched by guano.
- (c) Boundary markers. As of 1997, no man-made boundary markers indicating the limits of the protected area had been established. The boundaries of the site are defined by natural features (i.e., coastlines).
- (d) Natural features that define the site. The Seal Islands CEMP Protected Area includes the entire Seal Islands group (see Section A.1(a) for definition). No buffer zones are defined for the site.
- (e) Access points. The site may be accessed by boat or aircraft at any point where pinnipeds and seabirds will not be adversely affected (see Sections D.1 and D.2). Access by small boat is recommended in most circumstances because the number of beach landing spots for helicopters (which must approach these spots by flying over water rather than over land) is very limited. There are no landing sites for fixed-winged aircraft.

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<sup>1</sup> As adopted at CCAMLR-XVI (paragraphs 9.67 and 9.68).

- (f) Pedestrian and vehicular routes. Pedestrians should follow the advice of the local scientists in selecting pathways which will minimise disturbance to wildlife (see Section D.2(d)). Land vehicles are not permitted except in the immediate vicinity of the field camp and the beach (see Section D.2(c)).
- (g) Preferred anchorages. Numerous shoals and pinnacles are known to exist in the vicinity of the Seal Islands, and navigation charts of the area are incomplete. Most ships visiting the area recently have preferred an anchorage spot approximately 1.5 km to the southeast of Seal Island (Figure 2), which has a rather consistent depth of approximately 18 m. A second anchorage utilised by smaller vessels is located approximately 0.5 km to the northeast of Seal Island (Figure 2) at a depth of about 20 m. Organisation(s) conducting CEMP studies at the site can provide further details about sailing instructions pertaining to these anchorages (see Section E.2).
- (h) Location structures within the site. As of 1997 there were structures at two locations on Seal Island: a research camp and one observation blind (Figure 2 insert). The temporary field camp, established in December 1986, is located near the sand beach on the western coast of Seal Island. The camp is comprised principally of three structures: two sheds, and an outhouse. In addition, one small blind is located on Seal Island to facilitate scientific observations and to house research equipment.
- (i) Areas within the site where activities are constrained. The protection measures specified in Section D apply to all areas within the Seal Islands Protected Area, as defined in Section A.1(d).
- (j) Location of nearby scientific research or refuge facilities. The nearest research facility to the site is the scientific field camp maintained by the Brazilian government at Stinker Point, Elephant Island (61°04'S, 55°21'W), which is approximately 26 km south of Seal Island. However in some years this site is not occupied. Numerous scientific stations and research facilities are located on King George Island, which is approximately 215 km southwest of Seal Island.
- (k) Areas or sites protected under the Antarctic Treaty System. No areas or sites within or near (i.e., within 100 km) the Seal Island Protected Area have been accorded protected status in accordance with measures adopted under the Antarctic Treaty or other components of the Antarctic Treaty System which are in force.

## 2. Maps of the site:

- (a) Figure 1 shows the geographical position of the Seal Islands in relation to major surrounding features, including the South Shetland Islands and adjacent bodies of water.
- (b) Figure 2 illustrates the location of the entire Seal Islands archipelago and preferred vessel anchorages. The detailed insert of Seal Island in Figure 2 shows the location of structures associated with CEMP studies and the location of the point of highest elevation (indicated by a cross).

## B. BIOLOGICAL FEATURES

1. Terrestrial. There is no information on soil biology at Seal Island but it is likely that similar types of plants and invertebrates are found as at other sites in the South Shetland Islands. Lichens are present on stable rock surfaces. There is no evidence of well-developed moss or grass banks being present on Seal Island.
2. Inland waters. There are no known lakes or ephemeral ponds of significance on Seal Island.
3. Marine. No studies on littoral communities have been carried out.
4. Birds and seals. Seven species of birds are known to breed on the Seal Islands: chinstrap penguins (*Pygoscelis antarctica*), macaroni penguins (*Eudyptes chrysolophus*), Cape petrels (*Daption capensis*), Wilson's storm petrels (*Oceanities oceanicus*), southern giant petrels (*Macronectes giganteus*), southern black-backed gulls (*Larus dominicanus*), and American Sheathbills (*Chionus alba*). The chinstrap penguin (*Pygoscelis antarctica*) population on Seal Island numbers approximately 20 000 breeding pairs, nesting in about 60 colonies throughout the island. About 350 pairs of macaroni penguins (*Eudyptes chrysolophus*) nest on Seal Island in five separate colonies. The nesting and chick-rearing period for chinstrap and macaroni penguins at Seal Island extends from November through March. No surveys have been made of Cape petrel or storm petrel populations, however, both species are numerous; the Cape petrels nest on cliff faces and the storm petrels nest in burrows in the talus slopes. Brown skulls (*Catharacta lonnbergi*) are common. Blue-eyed shags (*Phalacrocorax atriceps*), Adélie penguins (*Pygoscelis adeliae*), gentoo penguins (*Pygoscelis papua*), king penguins (*Aptenodytes patagonicus*) and rockhopper penguins (*Eudyptes crestatus*) are among the avian visitors to the area.
5. Five species of pinnipeds have been observed at Seal Island: Antarctic fur seals (*Arctocephalus gazella*), southern elephant seals (*Mirounga leonina*), Weddell seals (*Leptonychotes weddellii*), leopard seals (*Hydrurga leptonyx*) and crabeater seals (*Lobodon carcinophagus*). Of these, fur seals are the only confirmed breeders on the island, although small numbers of elephant seals probably breed on the island early in the spring. During the last few years approximately 600 fur seal pups have been born in the Seal Islands group, with approximately half of these born on Seal Island and half on Large Leap Island (Figure 2). The fur seal pupping and pup-rearing period at Seal Island extends from late November to early April. During the austral summer, elephant seals are ashore during their moult period; Weddell seals regularly haul out on the beaches; crabeater seals are infrequent visitors; and leopard seals are common both ashore and in coastal waters where they prey on penguins and fur seal pups.

## C. CEMP STUDIES

1. The presence at the Seal Islands of both Antarctic fur seal and penguin breeding colonies, as well as significant commercial krill fisheries within the foraging range of these species make this an excellent site for inclusion in the CEMP network of sites established to help meet CCAMLR objectives. However, recent geological assessments of Seal Island has indicated that soil composition of cliff areas above and around the camp site are unstable and might result in catastrophic failure during periods of intense rainfall. Therefore, the AMLR Program is in the process of reducing its research at the site and dismantling and retrograding all camp and observation blind structures.
2. During this period, limited research will continue. Specifically, the Program will continue to collect data on CEMP Standard Method chick fledging weight (A7) for chinstrap penguins. In addition, banded adult chinstrap penguins and tagged fur seals will be monitored to determine survival rates.

## D. PROTECTION MEASURES

### 1. Prohibited activities and temporal constraints:

- (a) Throughout the site at all times of the year. Any activities which damage, interfere with, or adversely affect the planned CEMP monitoring and directed research at this site are not permitted.
- (b) Throughout the site at all times of the year. Any non-CEMP activities are not permitted which result in:
  - (i) killing, injuring, or disturbing pinnipeds or seabirds;
  - (ii) damaging or destroying pinniped or seabird breeding areas; or
  - (iii) damaging or destroying the access of pinnipeds or seabirds to their breeding areas.
- (c) Throughout the site at defined parts of the year. Human occupation of the site during the period 1 June to 31 August is not permitted except under emergency circumstances.
- (d) In parts of the site at all times of the year. Building structures within the boundaries of any pinniped or seabird colony is not permitted. For this purpose, colonies are defined as the specific locations where pinniped pups are born or where seabird nests are built. This prohibition does not pertain to placing markers (e.g., numbered stakes, posts, etc.) or situating research equipment in colonies as may be required to facilitate scientific research.
- (e) In parts of the site at defined parts of the year. Entry into any pinniped or seabird colonies during the period 2 September to 31 May is not permitted except in association with CEMP activities.

### 2. Prohibitions regarding access to and movement within or over the site:

- (a) Entry of the site at locations where pinniped or seabird colonies are present in the immediate vicinity is not permitted.
- (b) Aircraft overflight of the site is not permitted at altitudes less than 1 000 m unless the proposed flight plan has been reviewed in advance by the organisation(s) conducting CEMP activities at the site (see Section E.2).
- (c) The use of land vehicles is not permitted except to transport equipment and supplies to and from the field camp.
- (d) Pedestrians are not permitted to walk through areas used regularly by pinnipeds and seabirds (i.e., colonies, resting areas, pathways) or to disturb other fauna or flora, except as necessary to conduct authorised research.

### 3. Prohibitions regarding structures:

- (a) Building structures other than those directly supporting CEMP directed scientific research and monitoring activities or to house personnel and/or their equipment is not permitted.
- (b) Human occupation of these structures is not permitted during the period 1 June to 31 August (see Section D.1(c)).

- (c) New structures are not permitted to be built within the site unless the proposed plans have been reviewed in advance by the organisation(s) conducting CEMP activities at the site (see Section E.2).

4. Prohibitions regarding waste disposal:

- (a) Landfill disposal of non-biodegradable materials is not permitted; non-biodegradable materials brought to the site are to be removed when no longer in use.
- (b) Disposal of waste fuels, volatile liquids and scientific chemicals within the site is not permitted; these materials are to be removed from the site for proper disposal elsewhere.
- (c) The burning of any non-organic materials or the open burning of any materials is not permitted (except for properly used fuels for heating, lighting, cooking or electricity).

5. Prohibitions regarding the Antarctic Treaty System:

It is not permitted to undertake any activities in the Seal Islands CEMP Protected Area which are not in compliance with the provisions of : (i) the Antarctic Treaty, including the Agreed Measures for the Conservation of Antarctic Fauna and Flora; (ii) the Convention on the Conservation of Antarctic Seals; and (iii) the Convention on the Conservation of Antarctic Marine Living Resources.

E. COMMUNICATIONS INFORMATION

1. Organisation(s) appointing national representatives to the Commission:

Bureau of Oceans and International Environmental and Scientific Affairs  
US Department of State  
Washington, DC 20520 USA  
Telephone: (202) 647-3262  
Facsimile: (202) 647-1106

2. Organisation(s) conducting CEMP studies at the site:

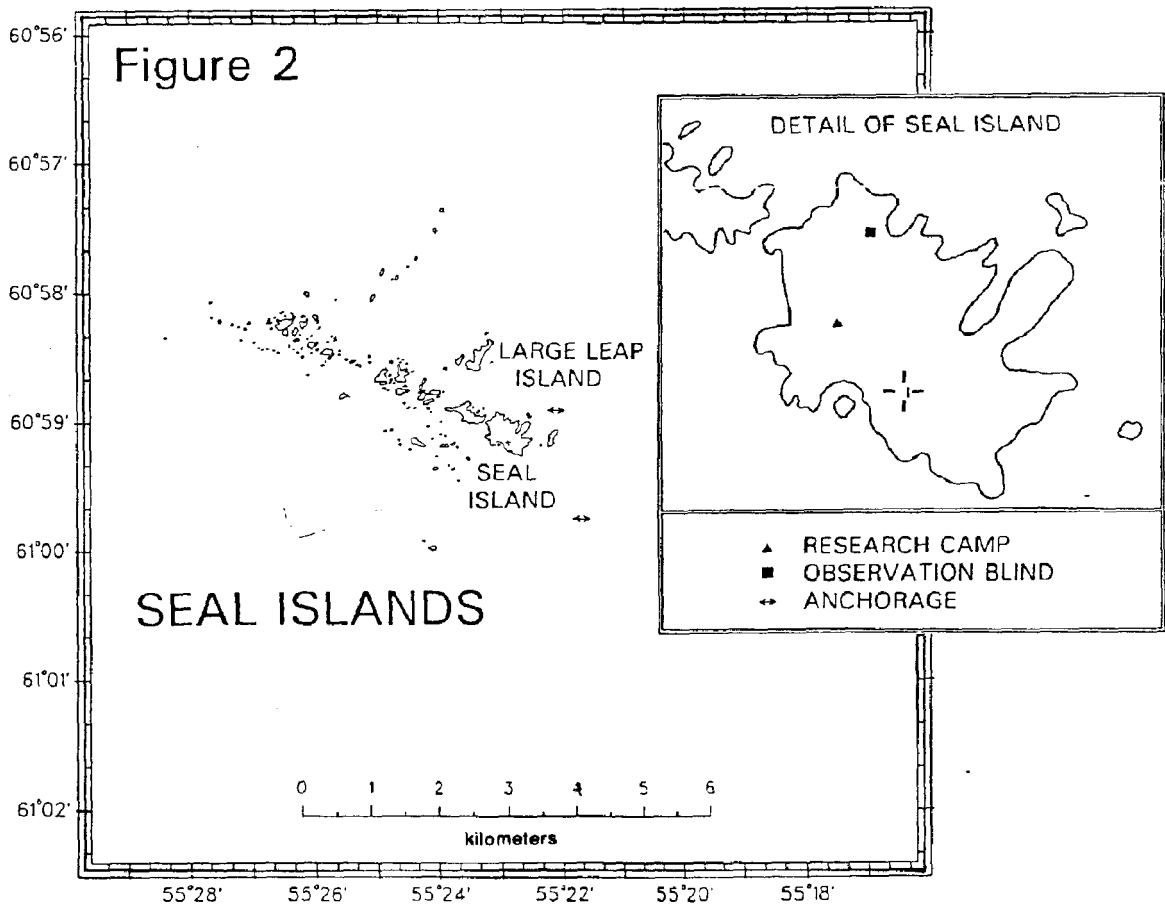
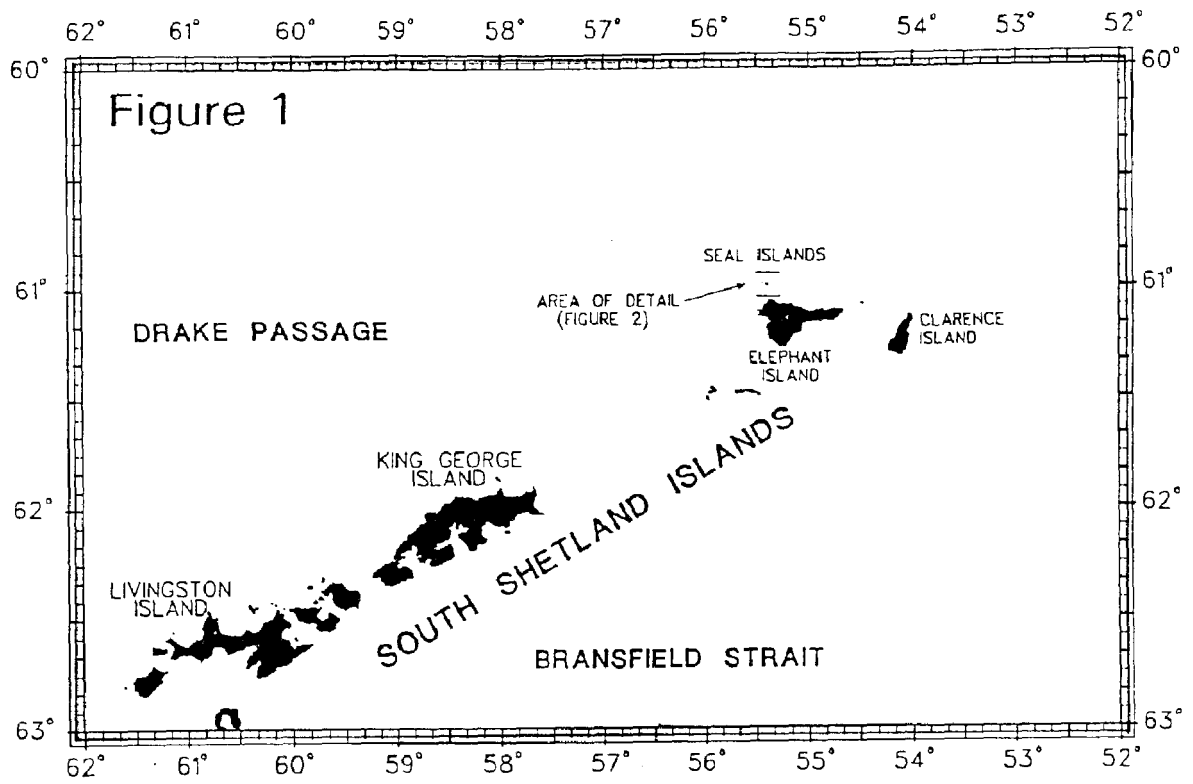
US Antarctic Marine Living Resources Program  
Southwest Fisheries Science Center  
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P.O. Box 271  
La Jolla, CA 92038 USA  
Telephone: (619) 546-5601  
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**ANNEX 18/B SEAL ISLANDS, APPENDIX 1****CODE OF CONDUCT FOR THE SEAL ISLANDS, ANTARCTICA**

Investigators should take all reasonable steps to ensure that their activities, both in implementing their scientific protocols as well as in maintaining a field camp, do not unduly harm or alter the natural behaviour and ecology of wildlife in the Seal Islands. Wherever possible, actions should be taken to minimise disturbance of the natural environment.

Capturing, handling, killing, photographing and taking eggs, blood or other biological samples from pinnipeds and seabirds should be limited to that necessary to provide essential background information or to characterise and monitor individual and population parameters that may change in detectable ways in response to changes in food availability or other environmental factors. Sampling should be done and reported in accordance with: (i) the Antarctic Treaty, including the Agreed Measures for the Conservation of Antarctic Fauna and Flora; (ii) the Convention for the Conservation of Antarctic Seals; and (iii) the Convention on the Conservation of Antarctic Marine Living Resources.

Geological and other studies which can be done inside of the pinniped and seabird breeding seasons in such a way as they do not damage or destroy pinniped or seabird breeding areas, or access to those areas, would be permitted as long as they would not adversely affect the planned assessment and monitoring studies. Likewise, the planned assessment and monitoring studies would not be affected adversely by periodic biological surveys or studies of other species which do not result in killing, injuring or disturbing pinnipeds or seabirds, or damage or destroy pinnipeds or seabird breeding areas or access to those areas.

**ANNEX 18/B SEAL ISLANDS, APPENDIX 2****BACKGROUND INFORMATION CONCERNING  
THE SEAL ISLANDS, ANTARCTICA**

Prior to the discovery of the South Shetland Islands in 1819, there were substantial colonies of fur seals, and possible elephant seals, throughout the archipelago. Commercial exploitation began shortly after discovery and, by the mid-1820s, fur seal breeding colonies had been completely destroyed throughout the South Shetland Islands (Stackpole, 1955; O’Gorman, 1963). Antarctic fur seals were not observed again in the South Shetland Islands until 1958, when a small colony was discovered at Cape Shirreff, Livingston Island (O’Gorman, 1961). The original colonisers probably came from South Georgia where surviving fur seal colonies had substantially recovered by the early 1950s. At present, the fur seal rookeries in the Seal Islands group are the second largest in the South Shetland Islands, with the largest rookeries being at Cape Shirreff and Telmo Islands, Livingston Island (Bengtson et al., 1990).

During the past three decades, the population of Antarctic fur seals in the South Shetland Islands grew to a level at which tagging or other research could be undertaken at selected locations without threatening the population’s continued existence and growth.

During the 1986/87 austral summer, researchers from the United States surveyed areas on the South Shetland Islands and the Antarctic Peninsula to identify fur seal and penguin breeding colonies that might be suitable for inclusion in the network of CEMP monitoring sites being established. The results of that survey (Shuford and Spear, 1987; Bengtson et al., 1990), suggested that the Seal Island area would be an excellent site for long-term monitoring of fur seal and penguin colonies that might be affected by fisheries in the Antarctic Peninsula Integrated Study Region.

To safely and effectively carry out a long-term monitoring program, a temporary, multi-year field camp for a small group of researchers was established on Seal Island. This camp has been occupied annually by US scientists during the austral summer (approximately December to February) since 1986/87.

To protect the site from damage or disturbance that could adversely affect the long-term CEMP monitoring and directed research currently being conducted and planned for the future, in 1991 the Seal Islands were proposed as a CEMP Protected Area.

**MANAGEMENT PLAN FOR THE PROTECTION OF CAPE SHIRREFF  
AND THE SAN TELMO ISLANDS, SOUTH SHETLAND ISLANDS,  
AS A SITE INCLUDED IN THE CCAMLR  
ECOSYSTEM MONITORING PROGRAM**

A. GEOGRAPHICAL INFORMATION

1. Description of the site:

- (a) Geographical coordinates. Cape Shirreff is a low, ice-free peninsula towards the western end of the north coast of Livingston Island, South Shetland Islands, situated at latitude 62°29'S, longitude 60°47'W, between Barclay Bay and Hero Bay. San Telmo Island is the largest of a small group of ice-free rock islets, approximately 2 km west of Cape Shirreff.
- (b) Natural features. Cape Shirreff is approximately 3 km from north to south and 0.5 to 1.2 km from east to west. The site is characterised by many inlets, coves and cliffs. Its southern boundary is bordered by a permanent glacial ice barrier, which is located at the narrowest part of the cape. The cape is mainly an extensive rock platform, 46 to 53 m above sea level, the bedrock being largely covered by weathered rock and glacial deposits. The eastern side of the base of the cape has two beaches with a total length of about 600 m. The first is a boulder beach, the second of sand. Above this is a raised beach with mosses and lichens, crossed by melt-streams from the snow above. The extremity of the cape has a rocky barrier about 150 m long. The western side is formed by almost continuous cliffs 10 to 15 m high above an exposed coast with a few protected beaches. Near the southern base of the cape on the western side is a small sandy beach approximately 50 m long.

The San Telmo Islands are located approximately 2 km west of Cape Shirreff, and are a group of ice-free, rocky islets. The east coast of San Telmo Island (the largest of the group) has a sandy and pebble beach (60 m) at the south end, separated from the northern sandy beach (120 m) by two irregular cliffs (45 m) and narrow pebble beaches.

- (c) Boundary markers. The boundaries of the Cape Shirreff CEMP Protected Area are identical to the boundaries of the Site of Special Scientific Interest No. 32, as specified by ATCM Recommendation XV-7. As of 1993, no man-made boundary markers indicating the limits of the SSSI or protected area had been established. The boundaries of the site are defined by natural features (i.e., coastlines, glacial margins) described in Section A.1(d).
- (d) Natural features that define the site. The Cape Shirreff CEMP Protected Area includes the entire area of the Cape Shirreff peninsula north of the glacier ice tongue margin, and most of the San Telmo Island group. For the purposes of the CEMP protected area, 'the entire area' of Cape Shirreff and the San Telmo Island group is defined as any land or rocks exposed at mean low tide within the area delimited by the map (Figure 3).
- (e) Access points. The Cape Shirreff part of the site may be entered at any point where pinniped or seabird rookeries are not present on or near the beach. Access to the island in the San Telmo group is unrestricted but should be at the least densely populated areas and cause minimal disturbance to the fauna. Access for other than CEMP research should avoid disturbing pinnipeds and seabirds (see Sections D.1 and D.2). Access by small boat or helicopter is recommended in most circumstances. Four areas recommended as helicopter landing sites include:

- (i) the south plain of Playa Yamana, which is situated on the west coast of the cape; and (ii) on the west coast of the cape, on the top plain of Gaviota Hill (10 x 20 M), near the monument erected to commemorate the officers and crew of the Spanish ship *San Telmo*; (iii) the wide plain situated to the east of Condor Hill; and (iv) the plain located at the foot of Condor Hill, on the east coast of the cape. Recommended sites for landing small boats include: (i) the northern end of Half Moon beach, on the east coast of the cape; (ii) on the east coast, 300 m north of El Mirador, there is a deep channel which permits easy disembarkation, and (iii) the northern end of Playa Yamana on the west coast of the cape (during high tide conditions). There are no landing sites for fixed-wing aircraft.
- (f) Pedestrian and vehicular routes. Boats, helicopters fixed-wing aircraft and land vehicles should avoid the site except for operations directly supporting authorised scientific activities. During these operations, boats and aircraft should travel routes that avoid or minimise disturbance of pinnipeds and seabirds. Land vehicles should not be used except to transport needed equipment and supplies to and from the field camp to be established. Pedestrians should not walk through wildlife population areas, especially during the breeding season, or disturb other fauna or flora except as necessary to conduct authorised research.
- (g) Preferred anchorages. Numerous shoals and pinnacles are known to exist in the vicinity of Cape Shirreff and the San Telmo Islands, and navigation charts of the area are incomplete. Therefore, navigators inexperienced with the local conditions at Cape Shirreff are advised to approach the area with caution. Three anchorages that have been used in the past are: (i) northwest coast - situated between Easter Island Point (Punta Rapa-Nui) on Cape Shirreff and the northern extremity of the San Telmo Islands; (ii) east coast - 2.5 km to the east of El Mirador, being alert for icebergs drifting in the area, and (iii) south coast - located about 4 km off the southern coast of Byers Peninsula to support ship-based helicopter operations. Organisation(s) conducting CEMP studies at the site can provide further details about sailing instructions pertaining to recommended anchorages (see Section E.2).
- (h) Location of structures within the site. During the 1991/92 austral summer, a fibreglass cabin for four people was installed by the Instituto Antártico Chileno (Anonymous, 1992) in the El Mirador area. This area is on the cape's east coast, at the base of Condor Hill (near the site of the previous installation of the former Soviet Union). This site was chosen because of its accessibility by helicopter and boat, shelter from winds, good water supply, and absence of seal or bird colonies. There are some minor remains of a hut used in the past by the former Soviet Union as well as sparse evidence of a 19th century sealers' camp.
- (i) Areas within the site where activities are constrained. The protection measures specified in Section D apply to all areas within the Cape Shirreff CEMP Protected Area, as defined in Section A.1(d).
- (j) Location of nearby scientific, research, or refuge facilities. The nearest research facility to the site is Juan Carlos I Station (summer only) maintained by the Spanish government at South Bay, Livingston Island, (62°40'S, 60°22'W), approximately 30 km southeast of Cape Shirreff. Numerous scientific stations and research facilities (e.g., Argentina, Brazil, Chile, China, Korea, Poland, Russia, Uruguay) are located on King George Island, approximately 100 km northeast of Cape Shirreff. The largest of these facilities is Base Presidente Eduardo Frei Montalva (also formerly referred to as Base Teniente Rodolfo Marsh Martin), maintained by the Chilean government on the western end of King George Island (62°12'S, 58°55'W).

- (k) Areas or sites protected under the Antarctic Treaty System. Cape Shirreff and the San Telmo Islands are protected as a Site of Special Scientific Interest (No. 32) under the Antarctic Treaty System (see Section A.1(c)). Several other sites or areas within 100 km of Cape Shirreff are also protected under the Antarctic Treaty System: SSSI No. 5, Fildes Peninsula (62°12'S, 58°59'W); SSSI No. 6, Byers Peninsula (62°38'S, 61°05'W); SSSI No. 35, Ardley Island, Maxwell Bay, King George Island (62°13'S, 58°56'W); Marine SSSI No. 35, Western Bransfield Strait (63°20'S to 63°35'S, 61°45'W to 62°30'W); and SPA No. 16, Coppermine Peninsula, Robert Island (62°23'S, 59°44'W). The Seal Islands CEMP Protected Area (60°59'14"S, 55°23'04"W) is located approximately 325 km northeast of Cape Shirreff.

## 2. Maps of the site

- (a) Figures 1 and 2 show the geographical position of Cape Shirreff and the San Telmo Islands in relation to major surrounding features, including the South Shetland Islands and adjacent bodies of water.
- (b) Figure 3 identifies the boundaries of the site and provides details of specific locations within the vicinity of Cape Shirreff and the San Telmo Islands, including preferred vessel anchorages.

## B. BIOLOGICAL FEATURES

1. Terrestrial. There is no information on soil biology of Cape Shirreff but it is likely that similar types of plants and invertebrates are found as at other sites in the South Shetland Islands (e.g., see Lindsey, 1971; Allison and Smith, 1973; Smith, 1984; Somme, 1985). A moderate lichen cover (e.g., *Polytrichum alpestre*, *Usnea fasciata*) is present on rocks located in the higher geological platforms. In some valleys there are patches of moss and grass (e.g., *Deschampsia antarctica*).
2. Inland waters. There are several ephemeral ponds and streams located on Cape Shirreff. These form from melting snow, especially in January and February. Hidden Lake is the only permanent body of water on the cape. The lake's drainage supports the growth of moss banks along its northeast and southwest slopes. From the southwest slope a stream flows to the western coast at Playa Yamana. The lake's depth is estimated at two to three meters and it is approximately 12 m long when fullest; the lake diminishes considerably in size after February (Torres, unpublished). There are no known lakes or ephemeral ponds of significance on the San Telmo Islands.
3. Marine. No studies on littoral communities have been carried out. There is abundant macroalgae present in the intertidal zone. The limpet *Nacella concinna* is common, as elsewhere in the South Shetland Islands.
4. Seabirds and pinnipeds. In January 1958, 2 000 pairs of chinstrap penguins (*Pygoscelis antarctica*) and 200 to 500 pairs of gentoo penguins (*P. papua*) were reported (Croxall and Kirkwood, 1979). In 1981 two unspecified penguin colonies had 4 328 and 1 686 individuals, respectively (Sallaberry and Schlatter, 1983). A census in January, 1987, produced estimates of 20 800 adult chinstrap penguins and 750 adult gentoo penguins (Shuford and Spear, 1987). Dominican gulls (*Larus dominicanus*), brown skuas (*Catharacta lönnerbergi*), Antarctic terns (*Sternavittata*), blue-eyed shags (*Phalacrocorax triceps*), cape petrels (*Daption capense*), and Wilson's storm petrels (*Oceanites oceanicus*) are also reported to nest on the cape. Giant petrels (*Macronectes giganteus*) are regular visitors during the austral summer (Torres, unpublished).

5. Cape Shirreff is presently the site of the largest known breeding colony of the Antarctic fur seal (*Arctocephalus gazella*) in the South Shetland Islands. The first post-exploitation record of fur seals at Cape Shirreff was reported by O’Gorman (1961) in mid-February 1958 when 27 non-breeding adults were seen. In early February 1959 a group of seven adult males, one female and one male pup were observed; there was also a dead male pup. Over the past 30 years, the colony has continued to increase in size (Aguayo and Torres, 1967, 1968, 1993; Aguayo, 1970, 1978; Laws, 1973; Aguayo et al., 1977; Cattán et al., 1982; Oliva et al., 1987; and Bengtson et al., 1990. Data from 1992 confirm that this trend is continuing: 2 973 pups at Cape Shirreff (Aguayo et al., 1992) and 2 340 pups at the San Telmo Islands (Bengtson, unpublished). Groups of non-breeding southern elephant seals (*Mirounga leonina*), Weddell seals (*Leptonychotes weddelli*), leopard seals (*Hydrurga leptonyx*), and crabeater seals (*Lobodon carcinophagus*) have been observed on the cape (O’Gorman, 1961; Aguayo and Torres, 1967; Bengtson et al., 1990; Gajardo et al, 1988; Oliva et al., 1988; Torres unpublished).

### C. CEMP STUDIES

1. The presence at Cape Shirreff of both Antarctic fur seal and penguin breeding colonies, and of krill fisheries within the foraging range of these species, make this a critical site for inclusion in the ecosystem monitoring network established to help meet the objectives of the Convention on the Conservation of Antarctic Marine Living Resources. The purpose of the designation is to allow planned research and monitoring to proceed, while avoiding or reducing, to the greatest extent possible, other activities which could interfere with or affect the results of the research and monitoring program or alter the natural features of the site.
2. The following species are of particular interest for CEMP routine monitoring and directed research at this site: Antarctic fur seals, chinstrap penguins, and gentoo penguins.
3. Longterm studies are being planned and are underway to assess and monitor the feeding ecology, growth and condition, reproductive success, behaviour, vital rates, and abundance of pinnipeds and seabirds that breed in the area. The results of these studies will be compared with environmental data, offshore sampling data, and fishery statistics to identify possible cause-effect relationships.
4. Although Chilean scientists have been active at the site for many years, in recent seasons they have begun developing studies specifically designed to contribute to CEMP. These studies have mainly focused on Antarctic fur seals, but may be expanded to include seabirds in the near future. US scientists have conducted surveys of marine mammals and birds at the site sporadically since 1987, and are interested in conducting CEMP studies if appropriate logistic and funding arrangements can be made.
5. A number of priority CEMP studies are very well suited for implementation at Cape Shirreff and the San Telmo Islands. Penguin parameters for routine monitoring include trends in populations size (A3), demography (A4), duration of foraging trips (A5), breeding success (A6), chick fledging weight (A7), chick diet (A8), and breeding chronology (A9). Fur seal parameters being monitored include duration of foraging/attendance cycles (C1) and pup growth rates (C2). As new CEMP Standard Methods are approved, additional pinniped and seabird parameters may be included in future monitoring efforts.



6. Directed research relevant to CEMP will also be undertaken on fur seals and seabirds. Research topics include foraging behaviour, foraging areas, energy requirements, seasonal movements, penguin chick growth rates, and relationships between monitored parameters and the physical environment.

#### D. PROTECTION MEASURES

##### 1. Prohibited activities and temporal constraints.

- (a) **Throughout the site at all times of the year:** Any activities which damage, interfere with, or adversely affect the planned CEMP monitoring and directed research at this site are not permitted.
- (b) **Throughout the site at all times of the year:** Any non-CEMP activities are not permitted which result in:
  - (i) killing, injuring, or disturbing pinnipeds or seabirds;
  - (ii) damaging or destroying pinniped or seabird breeding areas; or
  - (iii) damaging or destroying the access of pinnipeds or seabirds to their breeding areas.
- (c) **Throughout the site at defined parts of the year:** Human occupation of the site during the period 1 June to 31 August is not permitted except under emergency circumstances.
- (d) **In parts of the site at all times of the year:** Building structures within boundaries of any pinniped or seabird colony is not permitted. For this purpose, colonies are defined as the specific locations where pinniped pups are born or where seabird nests are built. This prohibition does not pertain to placing markers (e.g., numbered stakes, posts, etc.) or situating research equipment in colonies as may be required to facilitate scientific research.
- (e) **In parts of the site at defined parts of the year:** Entry into any pinniped or seabird colonies during the period 1 September to 31 May is not permitted except in association with CEMP activities.

##### 2. Prohibitions regarding access to and movement within the site.

- (a) Entry of the site at locations where pinniped or seabird colonies are present in densely populated areas is not permitted.
- (b) Aircraft overflight of the site is not permitted at altitudes less than 1 000 m unless the proposed flight plan has been reviewed in advance by the organisation(s) conducting CEMP activities at the site (see Section E.2). Aircraft overflight at altitudes below 200 m is not permitted.
- (c) The use of land vehicles is not permitted except to transport needed equipment and supplies to and from the field camp.
- (d) Pedestrians are not permitted to walk through wildlife population areas (e.g., colonies, resting areas, pathways), or to disturb other fauna or flora, except as necessary to conduct authorised research.

3. Prohibitions regarding structures.

- (a) Building structures other than those directly supporting authorised scientific research and monitoring programs or to house research personnel and their equipment is not permitted.
- (b) Human occupation of these structures is not permitted during the period 1 June to 31 August (see Section D.1(c)).
- (c) New structures are not permitted to be built within the site unless the proposed plans have been reviewed in advance by the organisation(s) conducting CEMP activities at the site (see Section E.2).

4. Prohibitions regarding waste disposal.

- (a) Landfill disposal of any materials is not permitted; all materials brought to the site are to be removed when no longer in use.
- (b) Disposal of waste fuels, volatile liquids, and scientific chemicals within the site is not permitted; these materials are to be removed from the site for proper disposal elsewhere.
- (c) The open burning of any materials is not permitted (except for properly used fuels for heating, lighting or cooking).

5. Prohibitions regarding the Antarctic Treaty System.

It is not permitted to undertake any activities in the Cape Shirreff CEMP Protected Area which are not in compliance with the provisions of: (i) the Antarctic Treaty, including the Agreed Measures for the Conservation of Antarctic Fauna and Flora, and, when it comes into force, the Protocol on Environmental Protection, (ii) the Convention for the Conservation of Antarctic Seals, and (iii) the Convention for the Conservation of Antarctic Marine Living Resources.

E. COMMUNICATIONS INFORMATION

1. Organisation(s) appointing national representatives to the Commission.

- (a) Ministerio de Relaciones Exteriores  
Direccion de Política Especial  
Morandé 441, 2° Piso  
Santiago  
Chile

Telephone: +56 (2) 698 0301  
Facsimile: +56 (2) 699 1202  
Telex: not available

- (b) Bureau of Oceans and International Environmental  
and Scientific Affairs  
US Department of State  
Washington DC 20520  
USA

Telephone: +1 (202) 647 3262  
Facsimile: +1 (202) 647 1106  
Telex: not available

2. Organisation(s) conducting CEMP studies at the site.

- (a) Ministerio de Relaciones Exteriores  
Instituto Antártico Chileno  
Luis Thayer Ojeda 814  
Casilla 16521, Correo 9  
Santiago  
Chile

Telephone: +56 (2) 232 2617  
Facsimile: +56 (2) 232 0440  
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- (b) US Antarctic Marine Living Resources Program  
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Southwest Fisheries Science Center  
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Telex: 910 337 1271

**ANNEX 18/B CAPE SHIRREFF, APPENDIX 1**

**CODE OF CONDUCT FOR THE CAPE SHIRREFF  
CEMP PROTECTED AREA**

Investigators should take all reasonable steps to ensure that their activities, both in implementing their scientific protocols as well as in maintaining a field camp, do not unduly harm or alter the natural behaviour and ecology of wildlife. Wherever possible, actions should be taken to minimise disturbance of the natural environment.

Geological, glaciological, and other studies which can be done outside of the pinniped and seabird breeding season, and which will not damage or destroy pinniped or seabird breeding areas, or access to those areas, would not adversely affect the planned assessment and monitoring studies. Likewise, the planned assessment and monitoring studies would not be affected adversely by periodic biological surveys or studies of other species which do not result in killing, injuring, or disturbing pinnipeds or seabirds, or damage or destroy pinnipeds or seabird breeding areas or access to those areas.

Killing, capturing, handling, photographing, and taking eggs, blood, or other biological samples from pinniped and seabirds should be limited to that necessary to characterise and monitor individual and population parameters that may change in detectable ways in response to changes in food availability or other environmental factors. Sampling should be done and reported in accordance with: (i) the Agreed Measures for the Conservation of Antarctic Fauna and Flora, and, when it comes into force, the Protocol on Environmental Protection, (ii) the Convention for the Conservation of Antarctic Seals, and (iii) the Convention for the Conservation of Antarctic Marine Living Resources.

**ANNEX 18/B CAPE SHIRREFF, APPENDIX 2****BACKGROUND INFORMATION CONCERNING CAPE SHIRREFF**

Prior to the discovery of the South Shetland Islands in 1819, there were substantial colonies of fur seals, and possibly elephant seals, throughout the archipelago. Within a few months of discovery, Cape Shirreff was the scene of intensive sealing activities until about 1825. Sealers' refuges were erected all around the western shores of Livingston Island, with those on the south coast being occupied mainly by American sealers and those on the north coast by British sealers. There were about 60 to 75 men living ashore at Cape Shirreff in January 1821 (Stackpole, 1955) and 95 000 skins were taken during the 1821/22 season (O'Gorman, 1963). There are ruins of at least one sealers' hut on the cape and the shoreline in several bays is littered with timbers and sections of wrecked sealers' vessels. The outcome of the sealing of the early 1820s was the extermination of fur seals from the entire region.

Antarctic fur seals were not observed again in the South Shetland Islands until 1958, when a small colony was discovered at Cape Shirreff, Livingston Island (O'Gorman, 1961). The original colonisers probably came from South Georgia, where surviving fur seal colonies had substantially recovered by the early 1950s. At present, the fur seal rookeries at Cape Shirreff and the San Telmo Islands are the largest in the South Shetland Islands (Bengtson et al., 1990).

During the past three decades, the population of Antarctic fur seals in the South Shetland Islands grew to a level at which tagging and other research could be undertaken at selected locations without threatening the population's continued existence and growth. Chilean studies on Cape Shirreff began in 1965 (e.g., Aguayo and Torres, 1967; Aguayo, 1978), and have been continuous from 1981 to the present. In 1982 Chilean investigators initiated field studies of fur seals, including an ongoing tagging program (Cattan et al., 1982; Torres, 1984; Oliva et al., 1987). United States investigators have conducted occasional pinniped and seabird surveys at Cape Shirreff and the San Telmo Islands since 1986/87 (Shuford and Spear, 1987; Bengtson et al., 1990).

**ANNEX 18/B CAPE SHIRREFF, APPENDIX 3****HISTORY OF PROTECTION AT CAPE SHIRREFF**

Cape Shirreff was designated in 1966 as Specially Protected Area (SPA) No. 11 by ATCM Recommendation IV-11 'on the grounds that the cape supports a considerable diversity of plant and animal life, including many invertebrates, that a substantial population of elephant seals (*Mirounga leonina*) and small colonies of Antarctic fur seals are found on the beaches and that the area is of outstanding interest'. The protection conferred on this site was successful in ensuring that Antarctic fur seals were not disturbed during the important early phases of their recolonisation. Subsequent to the site's designation as a SPA, the locally breeding population of Antarctic fur seals increased to a level at which biological research activities could be undertaken without threatening the continued recolonisation and population increase of this species.

Surveys during the mid-1980s to locate study sites for longterm monitoring of fur seal and penguin populations as part of the CCAMLR Ecosystem Monitoring Program (CEMP) indicated that Cape Shirreff would be an excellent site within the Antarctic Peninsula Integrated Study Region. To carry out such a monitoring program safely and effectively, a multi-year field camp for four to six researchers was needed within the area previously designated as SPA No. 11. This might have been considered inappropriate within a SPA and hence a proposal was made in 1988 to redesignate Cape Shirreff as a Site of Special Scientific Interest (SSSI). Additionally, it was proposed substantially to enlarge the site by the inclusion of the San Telmo Islands group, presently the location of the largest fur seal colony in the Antarctic Peninsula region.

Cape Shirreff was redesignated in 1990 as SSSI No. 32 by Recommendation XV-7, which was adopted by the XVth Consultative Meeting of the Antarctic Treaty. It was understood that SSSI No. 32, Cape Shirreff, should be redesignated an SPA (in its enlarged form) if and when the longterm monitoring of fur seals and seabirds at the site should be ended.

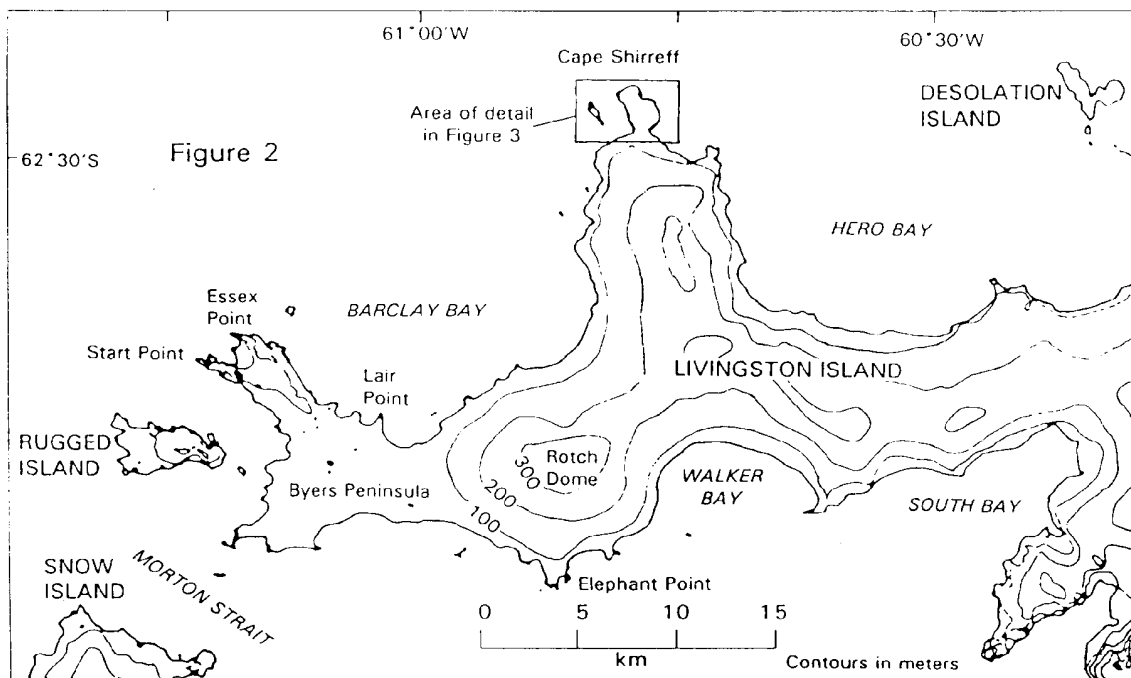
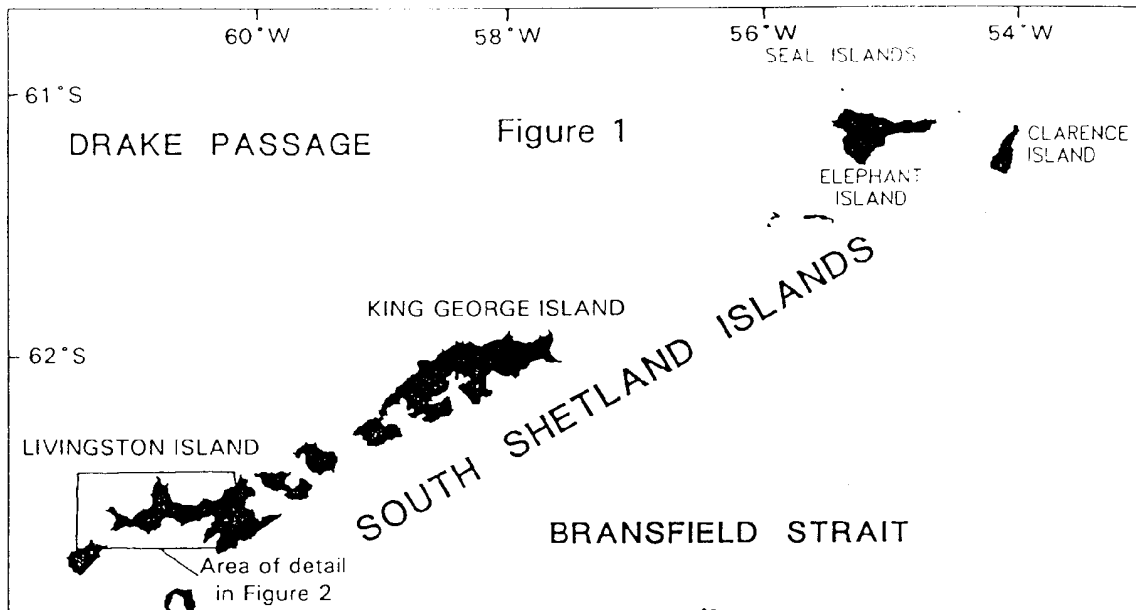
Chilean and US scientists initiated CEMP studies at Cape Shirreff during the late 1980s, and there are plans to continue these studies in the future. To further protect the site from damage or disturbance that could adversely affect the longterm CEMP monitoring and directed research, in 1991 Cape Shirreff was proposed as a CEMP Protected Area.

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Figures 1 and 2: These maps show the general position of Cape Shirreff and the San Telmo Islands CEMP Protected Area (Figure 1) and the location of the CEMP Protected Area in relation to the northwestern portion of Livingston Island.

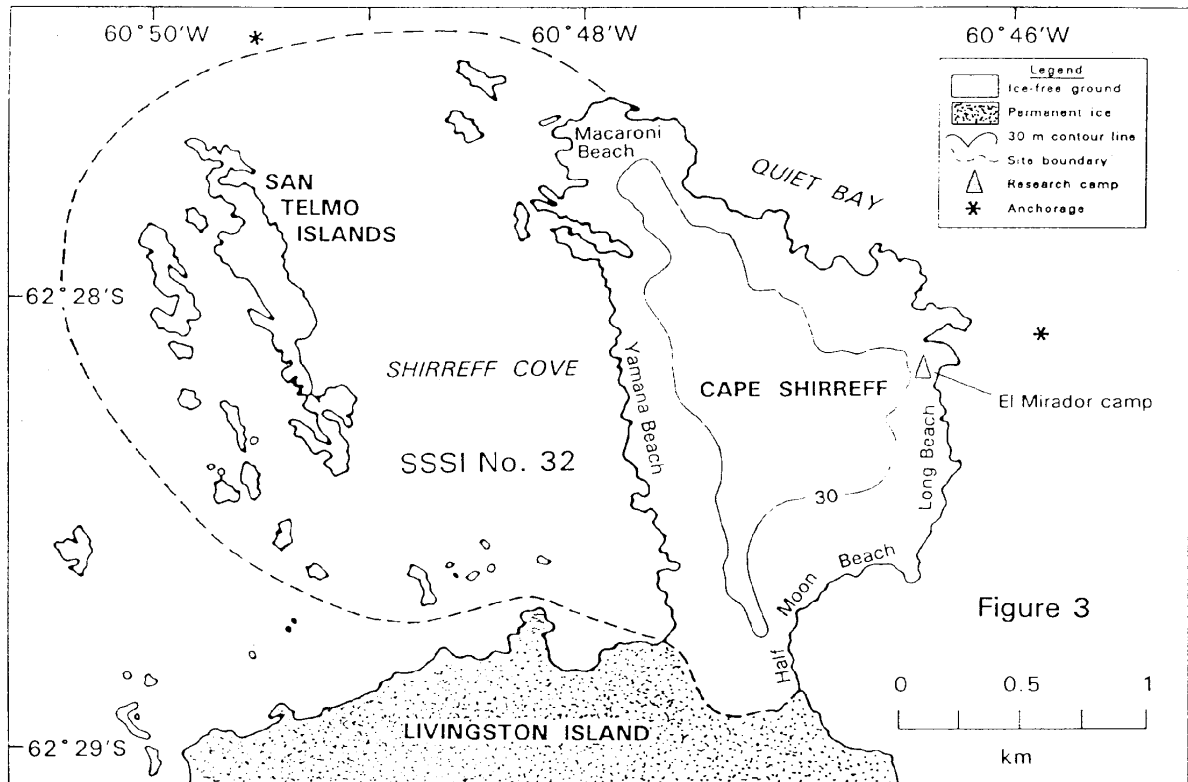


Figure 3: This map shows a detailed view of the Cape Shirreff and the San Telmo Islands CEMP Protected Area. Note that the boundaries of the CEMP Protected Area are identical to the boundaries of Site of Special Scientific Interest No. 32, which is protected under the Antarctic Treaty.

**TEXT OF THE CCAMLR SYSTEM OF INSPECTION**



## TEXT OF THE CCAMLR SYSTEM OF INSPECTION<sup>2</sup>

I. Each Member of the Commission may designate Inspectors referred to in Article XXIV of the Convention.

- (a) Designated Inspectors shall be familiar with the fishing and scientific research activities to be inspected, the provisions of the Convention and measures adopted under it.
- (b) Members shall certify the qualifications of each Inspector they designate.
- (c) Inspectors shall be nationals of the Contracting Party which designates them and, while carrying out inspection activities, shall be subject solely to the jurisdiction of that Contracting Party.
- (d) Inspectors shall be able to communicate in the language of the Flag State of the vessels on which they carry out their activities.
- (e) Inspectors shall be accorded the status of ship's officer while on board such vessels.
- (f) Names of designated Inspectors shall be communicated to the Commission each year by the last day of the Commission meeting. Designations shall remain valid until the last day of the Commission meeting in the following year.

II. The Commission shall maintain a register of certified Inspectors designated by Members.

- (a) The Commission shall communicate, each year, the register of Inspectors to each Contracting Party within a month of the last day of the Commission meeting.

III. In order to verify compliance with Conservation Measures adopted under the Convention, Inspectors designated by Members shall be entitled to board a fishing or fisheries research vessel in the area to which the Convention applies to determine whether the vessel is, or has been, engaged in scientific research, or harvesting, of marine living resources<sup>3</sup>.

- (a) Inspection may be carried out by designated Inspectors from vessels of the designating states.
- (b) Ships carrying Inspectors shall carry a special flag or pennant approved by the Commission to indicate that the Inspectors on board are carrying out inspection duties in accordance with this system.
- (c) Such Inspectors may also be placed on board vessels, with the schedule of embarkation and disembarkation of Inspectors subject to arrangements to be concluded between the designating State and the Flag State.

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<sup>2</sup> As adopted at CCAMLR-VII (paragraph 124) and amended at CCAMLR-XII (paragraphs 6.4 and 6.8), CCAMLR-XIII (paragraph 5.26), CCAMLR-XIV (paragraphs 7.22, 7.26 and 7.28), CCAMLR-XV (paragraph 7.24) and CCAMLR-XVI (paragraph 8.14).

<sup>3</sup> The Commission stated its understanding that the system of Inspection applied to flag vessels of all Members of the Commission and where appropriate, Acceding States (CCAMLR-XIV, paragraph 7.25).

IV. Each Contracting Party shall provide to the Commission by 1 May each year a list of all of its flag vessels intending to harvest marine living resources in the Convention Area during the year beginning 1 July. Such list shall include:

- name of vessel;
- call sign of the vessel registered by appropriate authorities of the Flag State;
- port of registration and nationality of vessel;
- owner or charterer of vessel;
- notification that the Master of the vessel has been informed of the measures in force for the area or areas where the vessel will be harvesting marine living resources in the Convention Area.

- (a) The Commission shall communicate to all Parties by 31 May each year a consolidated list of all such vessels. This list shall also include the names of vessels intending to conduct fishing for research purposes in accordance with Conservation Measure 64/XII 'The Application of Conservation Measures to Scientific Research'.
- (b) Each Contracting Party shall also notify the Commission as soon as possible of any of its flag vessels added to or deleted from the list during an ongoing fishing season. The Commission shall promptly communicate this information to the other Contracting Parties.
- (c) In addition each Contracting Party shall provide to the Commission the following information about licences or permits issued by its authorities to its flag vessels authorising them to fish in the Convention Area:
  - name of the vessel;
  - time period(s) for fishing;
  - area(s) of fishing;
  - species targeted; and
  - gear used.

Such information shall be communicated to the Commission within seven days of the issue of each licence or permit and the Commission shall circulate the information to all Parties within seven days.

- V. (a) Any vessel present in the Convention Area for the purpose of harvesting or conducting scientific research on marine living resources shall, when given the appropriate signal in the International Code of Signals by a ship carrying an Inspector (as signified by flying the flag or pennant referred to above), stop or take other such actions as necessary to facilitate the safe and prompt transfer of the Inspector to the vessel, unless the vessel is actively engaged in harvesting operations, in which case it shall do so as soon as practicable.
- (b) The Master of the vessel shall permit the Inspector, who may be accompanied by appropriate assistants, to board the vessel.

VI. Inspectors shall have the authority to inspect catch, nets and other fishing gear as well as harvesting and scientific research activities, and shall have access to records and reports of catch and location data insofar as necessary to carry out their functions.

- (a) Each Inspector shall carry an identity document issued by the designating State in a form approved or provided by the Commission stating that the Inspector has been designated to carry out inspection in accordance with this system.
- (b) On boarding a vessel, an Inspector shall present the document described in paragraph VI(a), above.
- (c) The inspection shall be carried out so that the vessel is subject to the minimum interference and inconvenience. Inquiries shall be limited to the ascertainment of facts in relation to compliance with the Commission measures in effect for the Flag State concerned.
- (d) Inspectors may take photographs and/or video footage as necessary to document any alleged violation of Commission measures in force.
- (e) Inspectors shall affix an identification mark approved by the Commission to any net or other fishing gear which appears to have been used in contravention to Conservation Measures in effect and shall record this fact in the reports and notification referenced in paragraph VIII, below.
- (f) Inspectors shall be provided appropriate assistance by the Master of the vessel in carrying out their duties, including access as necessary to communications equipment.

VII. If a vessel refuses to stop or otherwise facilitate transfer of an Inspector, or if the Master or crew of a vessel interferes with the authorised activities of an Inspector, the Inspector involved shall prepare a detailed report, including a full description of all the circumstances and provide the report to the designating State to be transmitted in accordance with the relevant provisions of paragraph IX.

- (a) Interference with an Inspector or failure to comply with reasonable requests made by an Inspector in the performance of his duties shall be treated by the Flag State as if the Inspector were an Inspector of that State.
- (b) The Flag State shall report on actions taken under this paragraph in accordance with paragraph XI, below.

VIII. Inspectors shall complete the approved CCAMLR inspection report form.

- (a) The Inspector shall provide a written explanation, on the inspection report form, of any alleged violation of Commission measures in force. The Inspector shall allow the Master of the vessel being inspected to comment, on the inspection report form, about any aspect of the inspection.
- (b) The Inspector shall sign the inspection report form. The Master of the inspected vessel shall be invited to sign the inspection report form to acknowledge receipt of the report.
- (c) Before leaving the vessel that has been inspected, the Inspector shall give the Master of that vessel a copy of the completed inspection form.
- (d) The Inspector shall provide a copy of the completed inspection form along with photographs and video footage to the designating Member not later than 15 days of his/her arrival to port.
- (e) The designating Member shall forward a copy of the inspection form not later than 15 days from its reception along with two copies of photographs and video footage

to the CCAMLR Executive Secretary who shall forward one copy of this material to the Flag State of the inspected vessel not later than seven days from receipt.

- (f) Fifteen days after the transmission of the completed inspection form to the Flag State, the CCAMLR Executive Secretary shall transmit that form to Members together with comments or observations, if any, received from the Flag State.

IX. Any supplementary reports or information, or any report prepared in accordance with Paragraph VII, shall be provided by the designating Member to the CCAMLR Executive Secretary. The latter shall provide such reports or information to the Flag State, which shall be then afforded the opportunity to comment. The CCAMLR Executive Secretary shall transmit the reports or information to Members within 15 days following their receipt from the designating Member, and the observations or comments, if any, received from the Flag State.

X. A fishing vessel present in the area of application of the Convention shall be presumed to have been engaged in scientific research, or harvesting, of marine living resources (or to have been commencing such operations) if one or more of the following four indicators have been reported by an inspector, and there is no information to the contrary:

- (a) fishing gear was in use, had recently been in use or was ready to be used, e.g.:
- nets, lines or pots were in the water;
  - trawl nets and doors rigged;
  - baited hooks, baited pots or traps or thawed bait were ready for use;
  - log indicated recent fishing or fishing commencing.
- (b) fish which occur in the Convention Area were being processed or had recently been processed, e.g.:
- fresh fish or fish waste were on board;
  - fish were being frozen;
  - from operational or product information;
- (c) fishing gear from the vessel was in the water, e.g.:
- fishing gear bore the vessel's markings;
  - fishing gear matched that on the vessel;
  - log indicated gear in the water;
- (d) fish (or their products) which occur in the Convention Area were stowed on board.

XI. If, as a result of inspection activities carried out in accordance with these provisions, there is evidence of violation of measures adopted under the Convention, the Flag State shall take steps to prosecute and, if necessary, impose sanctions.

XII. The Flag State shall at least once a year report to the Commission, in writing, about the results of such prosecutions and sanctions imposed. If a prosecution has not been completed, a progress report shall be made. When a prosecution has not been launched, or has been unsuccessful, the report shall contain an explanation.

XIII. Sanctions applied by Flag States in respect to infringements of CCAMLR provisions shall be sufficiently severe as to effectively ensure compliance with CCAMLR Conservation Measures and to discourage infringements and shall seek to deprive offenders of any economic benefit accruing from their illegal activities.

XIV. The Flag State shall ensure that any of its vessels which have been found to have contravened a CCAMLR Conservation Measure do not carry out fishing operations within the Convention Area until they have complied with the sanctions imposed.



**TEXT OF THE CCAMLR SCHEME OF  
INTERNATIONAL SCIENTIFIC OBSERVATION**



## **TEXT OF THE CCAMLR SCHEME OF INTERNATIONAL SCIENTIFIC OBSERVATION<sup>1</sup>**

A. Each Member of the Commission may designate observers referred to in Article XXIV of the Convention.

- (a) Activities of scientific observers on board vessels will be specified by the Commission. These activities are laid down in Annex I and may be modified taking into account advice from the Scientific Committee.
- (b) Scientific observers shall be nationals of the Member who designates them and shall conduct themselves in accordance with the customs and order existing on the vessel on which they are operating.
- (c) Members shall designate scientific observers who shall be familiar with the harvesting and scientific research activities to be observed, the provisions of the Convention and the measures adopted under it and who are adequately trained to carry out competently the duties of scientific observers as required by the Commission.
- (d) Scientific observers shall be able to communicate in the language of the Flag State of the vessels on which they carry out their activities.
- (e) Scientific observers shall each carry a document issued by the designating Member in a form approved by the Commission identifying them as CCAMLR scientific observers.
- (f) Scientific Observers shall submit to the Commission through the designating Member, not later than one month after the completion of the observer cruise or after the return of the observer to his/her home country, a report of each observation assignment undertaken, using the observation formats approved by the Scientific Committee. A copy shall be sent to the Member whose vessel was involved.

B. In order to promote the objectives of the Convention, Members agree to take on board their vessels engaged in scientific research or harvesting of marine living resources designated scientific observers, who shall operate in accordance with bilateral arrangements concluded.

In such a bilateral arrangement, the Member wishing to place scientific observers on board a vessel of another Member shall be referred to as the 'Designating Member' whilst the Member who accepts on board its vessel shall be referred to as the 'Receiving Member'.

Such a bilateral arrangement shall include the following principles:

- (a) The scientific observers shall be given the status of ship's officers. Accommodation and meals for scientific observers on board shall be of a standard commensurate with this status.
- (b) Receiving Members shall ensure that their vessel operators cooperate fully with the scientific observers to enable them to carry out the tasks assigned to them by the

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<sup>1</sup> As adopted at CCAMLR-XI (paragraph 6.11) and amended at CCAMLR-XVI (paragraph 8.21).

Commission. This will include access to data and to those operations of the vessel necessary to fulfil the duties of a scientific observer as required by the Commission.

- (c) Receiving Members shall take appropriate action on board their vessels to ensure the security and welfare of scientific observers in the performance of their duties, provide them with medical care and safeguard their freedom and dignity.
- (d) Arrangements shall be made for messages to be sent and received on behalf of scientific observers using the vessel's communications equipment and operator. Reasonable costs of such communications shall normally be borne by the Designating Member.
- (e) Arrangements involving the transportation and boarding of scientific observers shall be organised so as to minimise interference with harvesting and research operations.
- (f) Scientific observers shall provide to the relevant masters copies of such records, prepared by the scientific observers, as the masters may wish to retain.
- (g) Designating Members shall ensure that their scientific observers carry insurance satisfactory to the Parties concerned.
- (h) Transportation of scientific observers to and from boarding points shall be the responsibility of the Designating Member.
- (i) Unless otherwise agreed the equipment, clothing and salary and any related allowances of a scientific observer shall normally be borne by the Designating Member. The vessel of the Receiving Member shall bear the cost of on board accommodation and meals of the scientific observer.

C. The Designating Members shall provide details of observation programs to the Commission at the earliest possible opportunity and no later than upon the conclusion of each bilateral arrangement. For each observer deployed, the following details shall be supplied:

- (a) date of signing the arrangement;
- (b) name and flag of the vessel receiving the observer;
- (c) Member designating the observer;
- (d) area of fishing (CCAMLR statistical area, subarea, division);
- (e) type of data to be collected by the observer and submitted to the Secretariat (e.g. by-catch, target species, biological data);
- (f) expected dates of the start and end of the observation program; and
- (g) expected date of returning the observer to his/her home country.

D. Members who have designated scientific observers will take the initiative in implementing assignments identified by the Commission.

E. The scope of functions and tasks described in Annex I should not be interpreted to suggest in any way the number of required observers which will be accepted on board a vessel.

**FUNCTIONS AND TASKS OF INTERNATIONAL SCIENTIFIC OBSERVERS  
ON BOARD VESSELS ENGAGED IN SCIENTIFIC RESEARCH OR  
HARVESTING OF MARINE LIVING RESOURCES**

1. The function of scientific observers on board vessels engaged in scientific research or harvesting of marine living resources is to observe and report on the operation of fishing activities in the Convention Area with the objectives and principles of the Convention for the Conservation of Antarctic Marine Living Resources in mind.

2. In fulfilling this function, scientific observers will undertake the following tasks, using the observation formats approved by the Scientific Committee:

- (i) record details of the vessel's operation (e.g., partition of time between searching, fishing, transit etc., and details of hauls);
- (ii) take samples of catches to determine biological characteristics;
- (iii) record biological data by species caught;
- (iv) record by-catches, their quantity and other biological data;
- (v) record entanglement and incidental mortality of birds and mammals;
- (vi) record the procedure by which declared catch weight is measured and collect data relating to the conversion factor between green weight and final product in the event that catch is recorded on the basis of weight of processed product;
- (vii) prepare reports of their observations using the observation formats approved by the Scientific Committee and submit them to CCAMLR through their respective authorities;
- (viii) submit copies of reports to captains of vessels;
- (ix) assist, if requested, the captain of the vessel in the catch recording and reporting procedures; and
- (x) undertake other tasks as may be decided by mutual agreement of the parties involved.