

PART 1

PLANNING SCIENTIFIC OBSERVATIONS

SECTION 1

TEXT OF THE CCAMLR SCHEME OF
INTERNATIONAL SCIENTIFIC OBSERVATION

**TEXT OF THE CCAMLR SCHEME OF
INTERNATIONAL SCIENTIFIC OBSERVATION¹**

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 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.

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

- (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;
 - (x) undertake other tasks as may be decided by mutual agreement of the parties involved;
 - (xi)¹ collect and report factual data on sightings of fishing vessels in the Convention Area, including vessel type identification, position and activity; and
 - (xii)² collect information on fishing gear loss and garbage disposal by fishing vessels at sea.

¹ Added in accordance with CCAMLR-XVII (paragraph 8.16). The Commission decided to review the effectiveness and the need to continue this activity after a two-year trial period (CCAMLR-XVII, paragraph 8.17).

² Added in accordance with CCAMLR-XVIII (paragraph 8.21).

SECTION 2

LIST OF CURRENT RESEARCH PRIORITIES IDENTIFIED BY THE
SCIENTIFIC COMMITTEE FOR CONDUCTING SCIENTIFIC OBSERVATIONS ON
COMMERCIAL FISHING VESSELS

**LIST OF CURRENT RESEARCH PRIORITIES IDENTIFIED BY THE
SCIENTIFIC COMMITTEE FOR CONDUCTING SCIENTIFIC
OBSERVATIONS ON COMMERCIAL FISHING VESSELS**

The list below represents priority research tasks which have been defined and are kept under periodical review by the Scientific Committee. Scientific observers are not required to conduct the full set of tasks defined below. The list of tasks actually undertaken by an observer should conform with the scientific objectives of bilateral arrangements between Members designating and receiving scientific observers, and depends on the type of the vessel, the number of observers involved and their professional skills.

1. Fishery for *Champscephalus gunnari*:
 - (i) representative length-frequency distributions
 - (ii) observations on sex and maturity stage
 - (iii) collection of otoliths for age determination
 - (iv) observations of the by-catch of other species
 - (v) the incidental mortality of predators (birds and seals).

2. Longline fishery for *Dissostichus eleginoides*:
 - (i) representative length frequency distributions;
 - (ii) observations on sex and maturity stage;
 - (iii) collection of otoliths and scales for age determination;
 - (iv) loss rate of fish from hooks during longline hauling; catching performance of different hook sizes and types; observations on the condition of fish on capture (for tagging experiments);
 - (v) monitoring of total incidental mortality of seabirds by species, sex and age;
 - (vi) assessment of seabird mortality per unit of fishing effort and relative vulnerability of different species;
 - (vii) collection of bird bands and notification of other study markings;
 - (viii) evaluation of the efficacy of mitigation measures;
 - (ix) investigation of the practicalities of the implementation of different mitigation measures;
 - (x) weighing a sample of longline weights while the vessel is alongside the wharf.

3. Fishery for *Electrona carlsbergi*:
 - (i) observations of fishing operations
 - (ii) observations of the by-catch of other species

4. Fishery for *Euphausia superba* including by-catch of fish:
 - (i) observations of fishing operations
 - (ii) collection of haul-by-haul catch and effort data
 - (iii) representative length frequency distributions
 - (iv) representative sex and maturity stage distributions
 - (v) observations on feeding intensity
 - (vi) observations of the by-catch of juvenile fish
 - (vii) observations of incidental mortality of predators (birds and seals).

5. Fishery for *Paralomis* spp. (stone crabs):
 - (i) observations of fishing operations
 - (ii) collection of haul-by-haul catch and effort data
 - (iii) representative length frequency distributions
 - (iv) representative sex and maturity stage distributions
 - (v) collection of samples of ovaries and eggs
 - (vi) representative length frequency distributions by sex and maturity stages from catches of bottom trawls (bottom trawl surveys).

SECTION 3

DATA COLLECTION AND SAMPLING REQUIREMENTS FOR CONDUCTING SCIENTIFIC OBSERVATIONS ON COMMERCIAL FISHING VESSELS

DATA COLLECTION AND SAMPLING REQUIREMENTS FOR CONDUCTING SCIENTIFIC OBSERVATIONS ON COMMERCIAL FISHING VESSELS

Details of the vessel's fishing operations, oceanographic and weather information should be collected for each haul of a trawl, drift of a jig or set of a longline or pot string.

2. Information on the ship's activities (in particular, during krill fishing) could be collected daily by the observer at 20 randomly-selected intervals over the whole of the observation period. A list of standard activities carried out on board the vessel could be drawn up by the observer to be recorded against each time interval, including such activities as fishing, processing of catch, searching for krill aggregations, etc. An example of a timesheet for collection of random samples over the month is given in Table 1.

3. Observers should record details of the movements of birds and mammals including observations of their migratory movements and behaviour in relation to fishing operations. These observations need not be restricted to periods during which fishing is carried out but should be noted as the opportunity arises.

4. Details of the incidental mortality of seabirds and mammals and of the by-catch of fish other than the target species and other marine organisms in fishing operations, should be recorded for each haul of a trawl, drift of a jig or set of a longline or pot string.

5. Due to the technical complexities involved in recording data on incidental mortality of seabirds, two scientific observers, including one international observer, should be present on longline vessels for this purpose whenever this is logistically possible. Members are encouraged to put this advice into practice in appropriate circumstances.

6. Biological samples from commercial species should be taken by sampling randomly from the catch. Demographic information should be recorded in as much detail as possible from as many hauls as possible. As a guideline:

- (i) for the krill fishery, length measurements should be taken from at least 100 krill should be taken from as many hauls per day as possible;
- (ii) for commercial species of fish, a representative sample of fish of each species caught should be measured from as many hauls per day as possible. In addition, as many specimens of other non-commercial species of fish in a by-catch as possible should be measured; and
- (iii) for the crab fishery, length measurement, determination of sex, maturity and relative carapace age of at least 100 specimens per day should be carried out.

7. In addition to length, the following should be recorded:

- for krill - sex and maturity stages for 100 specimens; or
- for fish - weight, sex, maturity and age of 100 specimens.

8. In the krill fishery, samples of the catch should be taken specifically to determine the levels of by-catch of young fish. As many hauls as possible should be analysed for the presence of juvenile and post-larval fish.

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9. An agreement on the fate of data and samples, and plans for their analysis, should be considered at the initiation of observer arrangements by Members designating and receiving observers. Where neither Designating nor Receiving Member is able to process samples in a timely fashion, consideration should be given to sending them elsewhere for processing.

10. All data from observer programs which could be entered into existing CCAMLR databases should be submitted to CCAMLR. A copy of all other data from observer programs should also be lodged with the Secretariat where it will be kept as a hard copy only. All data from observer programs submitted to CCAMLR would be subject to the CCAMLR rules on data access which are given in Section 6 of Part I.

Table 1: CCAMLR Observer Program. Random times of day to be used when recording krill fishing vessel activity. Activity type should be recorded in the boxes provided. Note: Observers are encouraged to use other series of random time whenever possible.

Activity codes:

- F = Fishing (haul in progress)
- S = Vessel searching/steaming
- P = Vessel stopped while processing of previous catch is completed
- A = Vessel stationary either at anchor or hove to
- T = Transhipping catch

- R = Vessel repositioning in preparation for next haul
- L = Passage to or from fishing grounds
- TS = Trawl setting
- TH = Trawl hauling
- SR = Combined search and repositioning

day	1	2	3	4	5	6	7	8	9	10
date:	date:	date:	date:	date:	date:	date:	date:	date:	date:	date:
0:51	0:49	0:23	0:17	0:18	0:57	1:51	0:51	1:07	0:02	
1:12	2:37	1:13	0:28	0:26	1:55	2:01	3:33	2:36	2:36	
2:18	2:46	4:40	1:36	2:08	2:49	2:49	4:24	3:06	3:15	
3:17	4:23	6:41	3:45	2:12	3:17	3:08	5:50	3:18	3:29	
3:59	6:23	7:15	6:02	4:32	4:13	4:02	6:10	3:39	4:12	
6:09	6:25	7:27	6:44	4:49	4:15	4:25	12:06	5:30	5:27	
6:44	6:48	7:59	7:49	5:40	7:36	4:54	14:50	5:41	10:04	
8:17	8:41	8:02	8:24	7:41	8:38	5:13	14:59	6:45	10:28	
10:36	8:57	8:39	10:25	8:17	8:49	7:13	15:55	7:13	10:29	
10:40	9:30	9:04	10:28	9:47	13:22	8:35	16:10	7:36	11:16	
11:35	10:43	10:46	11:38	10:53	14:02	8:58	17:26	7:39	11:19	
11:47	10:54	13:21	15:12	15:16	14:49	9:06	17:50	11:00	11:35	
12:43	11:42	13:33	16:03	16:25	14:58	9:46	18:58	14:42	11:51	
13:09	12:10	14:20	16:48	17:01	15:11	12:13	19:53	16:20	14:32	
13:23	15:32	15:53	17:37	17:19	18:47	15:31	19:56	16:48	17:12	
16:22	15:51	17:55	20:02	18:05	22:17	17:41	20:14	17:35	18:09	
18:14	16:22	19:14	21:47	18:47	22:59	18:56	21:02	17:46	18:50	
19:10	18:26	20:27	22:11	19:43	23:07	18:57	21:27	17:56	20:48	
20:09	19:20	23:22	22:14	20:16	23:35	19:02	21:30	19:07	21:50	
21:34	20:12	23:56	23:12	20:57	23:56	23:20	23:38	21:12	23:15	

Table 1 (continued)

day	11	12	13	14	15	16	17	18	19	20
date:	date:	date:	date:	date:	date:	date:	date:	date:	date:	date:
0:18	0:09	0:21	0:23	1:03	1:07	0:38	0:18	1:41	1:26	
2:39	0:17	0:29	1:40	1:07	1:42	1:01	2:27	2:18	3:45	
3:34	0:44	0:49	2:51	2:11	2:46	1:33	5:38	3:22	4:02	
3:41	3:02	3:55	3:15	2:37	2:56	3:07	10:12	4:36	4:22	
5:28	3:58	4:03	3:41	3:02	6:22	3:08	13:34	4:40	5:02	
6:44	5:27	4:03	4:04	3:14	8:36	8:41	15:32	4:51	5:28	
6:49	7:18	5:25	4:19	4:46	8:55	9:12	15:45	5:18	5:39	
7:42	10:42	7:27	4:42	7:01	9:39	10:04	16:18	8:26	12:34	
9:30	10:45	8:08	4:58	7:52	11:34	10:58	16:43	9:08	13:19	
10:29	12:37	9:44	6:34	9:21	11:46	11:30	18:26	9:22	13:32	
10:42	13:10	11:07	8:12	9:36	15:16	12:34	19:06	9:53	14:04	
11:26	13:54	12:45	10:59	11:03	15:23	12:48	20:32	11:29	14:14	
14:22	16:31	14:19	13:54	12:25	16:22	13:23	20:44	12:48	14:44	
14:48	16:50	15:02	14:04	12:47	16:55	15:02	21:10	12:51	15:21	
17:55	19:35	16:50	16:09	14:17	17:11	16:34	21:26	14:33	15:23	
18:11	20:37	16:50	16:21	17:03	17:44	18:47	21:48	17:18	17:19	
18:34	20:49	18:25	18:07	18:15	20:17	20:58	22:38	17:24	18:15	
19:44	22:09	22:01	18:32	18:24	21:29	22:36	23:04	19:58	20:56	
21:09	23:12	22:33	21:07	20:29	23:03	22:50	23:27	23:15	21:42	
22:06	23:32	23:31	23:54	21:18	23:17	23:18	23:34	23:50	22:03	

Table 1 (continued)

day	22	23	24	25	26	27	28	29	30	31
date:										
0:58	0:19	1:08	0:05	0:48	1:57	0:04	1:55	0:27	0:32	0:32
1:24	1:57	1:47	2:10	0:54	5:34	0:45	3:09	0:30	0:54	2:38
1:34	3:06	2:23	2:56	0:54	5:55	2:48	3:59	2:56	1:31	2:39
2:41	5:56	4:47	3:58	2:15	6:45	5:25	5:21	3:07	2:08	2:40
4:23	6:34	6:00	4:43	2:28	7:34	8:26	7:37	3:27	2:21	3:26
6:26	6:58	6:21	5:33	6:14	8:46	9:19	9:19	3:57	4:15	3:31
8:13	7:27	7:22	5:40	8:50	10:20	14:02	9:34	4:52	9:19	4:15
11:16	7:43	8:30	7:11	10:38	11:00	14:31	10:55	6:55	9:59	4:54
11:40	8:28	9:35	7:36	10:48	13:26	14:38	12:13	7:03	10:16	6:00
15:05	8:55	10:21	7:39	13:17	14:19	14:49	13:43	8:41	11:42	6:39
15:18	10:08	11:36	7:55	13:18	14:26	15:19	14:52	10:37	12:06	8:00
16:10	11:51	12:16	9:13	14:24	16:10	16:22	15:35	16:53	13:37	10:01
16:20	12:58	14:15	15:02	14:41	17:03	16:36	16:21	16:55	14:48	12:18
17:00	14:10	15:51	18:25	16:44	17:59	16:46	17:27	17:50	17:09	12:38
17:45	14:25	16:23	19:40	18:23	19:55	17:16	18:05	19:42	17:47	13:14
19:18	16:25	18:13	19:51	18:33	20:17	19:22	19:42	20:22	19:19	15:43
19:51	19:09	18:23	20:21	18:44	20:55	20:54	20:21	22:48	20:26	16:34
20:21	21:09	21:52	21:14	19:51	21:06	20:55	21:57	23:08	20:34	22:41
21:24	23:02	23:17	21:49	19:55	22:18	21:07	22:31	23:10	20:48	23:19
23:28	23:32	23:38	21:56	20:48	22:39	23:17	23:53	23:14	21:39	23:58

SECTION 4

RECORDING AND REPORTING RESULTS OF SCIENTIFIC OBSERVATIONS ON COMMERCIAL FISHING VESSELS

RECORDING AND REPORTING RESULTS OF SCIENTIFIC OBSERVATIONS ON COMMERCIAL FISHING VESSELS

GENERAL

Scientific observers designated in accordance with the CCAMLR Scheme of International Scientific Observation are required to complete Scientific Observer Logbooks.

2. The scientific observer data forms combine records of a vessel's fishing operations, target species, by-catch, incidental mortality of seabirds and interactions between marine mammals and fishing operations.

3. A set of forms for recording this information is included in Part II of this manual. It is the responsibility of the observer to ensure that for each cruise he/she has sufficient quantities of all forms and all pertinent reference materials from Parts III and IV of this manual.

- **Longline: Form L1**, 'Vessel and Observation Program Details', should be completed once, with some data fields on the form to be completed at the beginning and others at the end of the observation program. Observers should have several copies of **Form L2**, 'Fishing Description'. In general, this form should be completed once at the beginning of the cruise, unless the vessel changes from one type of longline gear to another, e.g. from double-line 'Spanish' longline to single-line gear, or if substantial changes have been made to the design of the bird-scaring device (i.e. streamer line). Where this is the case, the new fishing gear and streamer line should be described on a new form. **Form L3**, 'Daily Work Schedule of Observer', is for recording data several times during the cruise (completion is optional). **Forms L4**, 'Daily Setting Observations', **L5**, 'Daily Hauling Observations', and **L6**, 'Biological Data Collection', should be completed for every set and haul. If there are no observations made, details on the setting and hauling (L4(ii) and L5(ii)) should still be collected. **Form L7**, 'Conversion Factors', should be completed when appropriate (see instructions).
- **Trawl: Form T1**, 'Vessel and Observer Program Details', should be completed once, with some data fields on the form to be completed at the beginning and others at the end of the observation program. **Form T2**, 'Fishing Gear and Processing Details', is designed to collect information on up to six different trawl designs, if the vessel exceeds this number, more forms should be completed. **Form T3**, 'Trawl Details' – details on every trawl made should be recorded on this form, each form can accommodate up to five complete trawls. **Forms T4**, 'Length and Sex Composition', **T5**, 'Otolith / Scale Samples' and **T6**, 'Maturity and Age Determination for Finfish', are to be used for the collection of biological information and should be completed in accordance with the priorities outlined in each observer's program. **Form T7**, 'Conversion Factors', should be completed when appropriate (see instructions).
- **Squid: Form S1**, 'Vessel and Observer Program Details', should be completed once, with some data fields on the form to be completed at the beginning and others at the end of the observation program. **Form S2**, 'Catch Information', should be completed for every drift. **Form S3**, 'Biological Data', is to be used for the collection of biological data and should

be completed in accordance with the priorities outlined in each observer's program. **Form S4**, 'Conversion Factors', should be completed when appropriate (see instructions).

4. Upon the completion of the observation program, the observer should submit completed cruise logs, a summary report, samples of fishing gear (e.g. hooks or jigs) and biological samples to the technical coordinator of the scientific observer program of the country which nominated the observer. An outline of information to be included in scientific observer summary reports to CCAMLR is given in Part 1, Section 5 of this manual. It is the responsibility of the technical coordinator to forward copies of these documents to CCAMLR, together with information on the final destination of collected samples.

THE FUNCTIONS AND TASKS OF SCIENTIFIC OBSERVERS

5. The list of current research priorities identified by the Scientific Committee for scientific observations on commercial fishing vessels is given in Part I, Section 2.

6. Table 1 represents priority research tasks for observations on board longline vessels. These tasks have been defined by the CCAMLR Scientific Committee and are kept under periodical review. Scientific observers are not necessarily required to carry out all the tasks listed. The actual list of tasks undertaken by an observer should conform with the scientific objectives of bilateral arrangements between designating Members and Members receiving the scientific observer, and depends on the type of vessel on which observation is undertaken, the number of observers involved and their professional skills.

Table1: Priorities for CCAMLR scientific observers on board longline fishing vessels.

Priority	Form*	Description
High	L5(vi)	As many length measurements of fish as possible per haul, not exceeding 60.
High	L5(vii)	Fish sex and maturity information.
High	L5(v)	Monitoring the incidental mortality of seabirds. Collecting and recording of bird band information.
High	L2(ii)	Description of streamer lines used.
High	L4(iv)	Information on whether the streamer line was used during every longline set.
Medium	L5(viii)	Estimation of commercial and by-catch species in numbers and weight, per number of hooks observed for each set.
Medium	L5(viii)	Recording fish discards (both target and by-catch species) per number of hooks observed for each set.
Medium	–	Evaluation of the efficiency of mitigation measures.
Medium	L5(vii)	Collection of fish scales and otoliths for age determination.
Medium	L4(iv)	Monitoring the location and time of offal discharge.
Low	L5(v)	Retaining (whole or head and leg) samples of birds for age and species identification.
Low	L5(iv)	The estimation of the number of fish per haul damaged during interaction with marine mammals.
Low	L5(ii)	Estimation of the number of hooks lost.

* See Part II of this manual for forms.

7. Whenever possible, two scientific observers should be present on each vessel. Ideally, one observer should record the seabird data and the other the relevant data on fish and fishing operations. The observer who undertakes the fish-related observations during a voyage, which will principally occur during line hauling, can also accomplish some aspects of seabird data collection. Similarly, the seabird observer can also assist in the collection of fish-related data required during line setting observations.

8. As regards the collection of seabird data, the highest priorities for a single scientific observer are as follows:

- (i) observation of the whole of any longline setting and hauling operation (or parts thereof), together with the appropriate complete records of the number and species of seabirds caught;
- (ii) observation of at least 50% of the line hauling process, ideally divided into periods covering the early, middle and late stages, with a record of the times and numbers of hooks observed and the appropriate complete record of the species of seabirds caught;
- (iii) the retention and labelling of whole specimens from the by-catch (in priority order – albatrosses, giant petrels, white-chinned petrels);
- (iv) documentation of the streamer line used; and
- (v) documentation of the location and timing of offal discharge.

OPERATIONAL PROCEDURE

9. Observers must complete every field of their daily data sheets accurately; this will entail observations during all parts of the fishing operation. It should be remembered that the usefulness of an observer's work relies on his/her recording the duration of observation periods, the actual time at which events occur and on precise knowledge of fishing operations (e.g. the number of baited hooks set, the number of hooks hauled and the observed number of hooks hauled).

10. On all forms, observed data refers to data collected by the **observer personally**. No data derived from the crew should be included unless verified by the observer (e.g. the setting positions from the track plotter). Data reported by the crew should be supplied separately or noted on cruise log forms.

SPECIAL DEFINITIONS AND TERMS

11. Certain terms are used throughout the scientific observer data forms to describe the various fishing processes. The event of fishing with one longline once is called a single longline **set**. This single set is made up of three phases: **setting** the line (paying out the line with baited hooks attached), **fishing** (the time between setting and hauling, frequently referred to as 'soak' time) and **hauling** the line (taking the line back into the vessel, and removing fish from hooks). For the trawl fishery, a **trawl** refers to the act of setting, towing and hauling the gear. For the squid fishery, a **drift** refers to a jigging operational period where the jigs are in use.

12. A **streamer line** refers to any bird-scaring device which consists of a pole and long section of line with streamers attached. This is positioned over the stern during

longline setting. This type of gear has also been described in other publications as ‘tori pole’, ‘bird line’ or ‘pole and line’. The CCAMLR streamer line is the design adopted by CCAMLR. Its configuration is given in Part III, Section 12.

TIME ZONE

13. It is very important that each observer maintains a constant time frame during the cruise. Because vessels move around the ocean through varying time zones, and because local time zones vary due to the imposition of daylight saving, etc., observers are required to nominate the time zone they will use when completing their logs. It is usually most convenient to use the time zone that the vessel is using, irrespective of whether the vessel is actually in that time zone. The time zone used must be specified on the ‘Vessel and Observation Program Details’ form, and must be specified in the number of hours by which this time zone differs from GMT (refer to map of World Time Zones in Part IV, Section 2). For instance, the time zone for South Georgia Island would be specified as GMT-3 hrs.

UNITS

14. If units of measurement are specified beside a data field, care should be taken to record the information in those units, and also in the format indicated. If this is not possible, the field should be highlighted and the units used documented to enable conversion to be carried out later.

GENERAL FORMATS

15. The following formats are used throughout the log:

Field	Format	Explanation
Date	ddmmyy	d = day, m = month, y = year
Time	hhmm	h = hours, m = minutes
Latitude and Longitude	dddmm H	d = degrees, m = minutes, H - hemisphere (i.e. S, E or W)

OBSERVATION GUIDELINES AND SPECIES IDENTIFICATION

16. A set of guidelines for scientific observation in the CCAMLR Convention Area is given in Part III of this manual. For identification of seabirds, observers may refer to the seabird identification plates contained in the book *Fish the Sea Not the Sky* (CCAMLR, 1996), *Identification of Seabirds of the Southern Ocean* (Onley and Bartle, 1999), or any of the many species identification handbooks which are available. For identification of whales and seals, see other available publications, e.g. Volume II of the FAO/CCAMLR Species Identification Sheets for the CCAMLR Convention Area (Fischer, W. and J.-C. Hureau (Eds), 1985).

SECTION 5

SCIENTIFIC OBSERVER CRUISE REPORT

**The cruise report has been deleted from this manual
and is now available only in electronic format.**

**The document may be obtained from the CCAMLR website
(www.ccamlr.org/pu/e/sc/obs/logbooks.htm) or by contacting the
Secretariat's Scientific Observer Data Analyst (eric@ccamlr.org).**

SECTION 6

RULES FOR ACCESS AND USE OF CCAMLR DATA

RULES FOR ACCESS AND USE OF CCAMLR DATA

The following Rules for Access and Use of CCAMLR Data were adopted by the Twenty-Second Meeting of the Commission (CCAMLR-XXII, paragraphs 12.1 to 12.6)*:

It is recognised that:

1. All data submitted to the CCAMLR Secretariat, and maintained by the CCAMLR Data Centre, shall be freely available to Members for analysis and preparation of documents for the Commission, Scientific Committee and their subsidiary bodies.
2. Such data may be analysed in respect of:
 - (a) work specifically outlined and endorsed by the Commission or Scientific Committee;
 - (b) work not specifically endorsed by the Commission or the Scientific Committee.
3. Inclusion of data, analyses or results from data held in the CCAMLR Data Centre into Working Papers, Background Papers, and any other documents tabled at meetings of the Commission, Scientific Committee or one of their subsidiary bodies does not constitute publication and therefore is not a release into the public domain.
4. Inclusion of data held in the CCAMLR Data Centre into the published reports of the Commission, Scientific Committee, Working Groups, *CCAMLR Science*, the *Statistical Bulletin* or any other CCAMLR publication constitutes release into the public domain.
5. Inclusion of data held in the CCAMLR Data Centre in any publication outside CCAMLR constitutes release into the public domain.
6. Subject to paragraphs (1) to (3), originators/owners of data have the right to:
 - (a) be consulted (including assignation of authorship) on the preparation, if necessary including publication, of documents describing analyses and interpretation of their data;
 - (b) approve the level of detail revealed in documents using their data;
 - (c) stipulate terms and/or levels of data security if necessary.

* These rules replace those adopted at the Eleventh Meeting of the Commission (CCAMLR-XI, paragraph 4.35). The current 'Rules for Access to CDS Data' (CCAMLR-XIX, paragraph 5.23) should remain in place alongside the new standard rules until such times as all aspects of CDS data handling are duly taken into account in the new standard rules (CCAMLR-XXII, paragraph 7.22).

Accordingly,

7. Requests to the Secretariat for access and/or use of data maintained by the CCAMLR Data Centre by individual Member scientists/officials shall be approved in writing as appropriate by that Member's Commission Representative, Scientific Committee Representative, or CDS Officer in consultation with the Commission Representative. Members are responsible for informing individual scientists or individuals requesting data of the rules governing access and use of CCAMLR data and for obtaining agreement to comply with such rules.

8. Requests in support of analyses endorsed under (2)(a) above should include the type of data requested, the degree of data aggregation required, the spatial and temporal detail required, and the anticipated format to be used in presenting results of the analyses. For such requests, the Secretariat shall ensure that each request meets the conditions of the approval granted for the original endorsement, and, if so, release the data and inform the data owner(s)/originator(s) accordingly. Release of data by the Secretariat to the requestor does not constitute permission to publish or release data into the public domain. Such permission remains a matter to be determined between the requestor and the data originator(s).

9. Requests in support of non-endorsed analyses under (2)(b) above should include the information listed in (8) as well as details of the analytical procedures to be used and the opportunity for data owner(s)/originator(s) to be involved. For such requests, the Secretariat shall be satisfied that each request contains the required information before forwarding it to the data originator(s) for approval within a specified time period. Once approval has been received the Secretariat shall release the data. Release of data does not constitute permission to publish or for release into the public domain. Such permission remains a matter to be determined between the requestor and the data owner(s)/originator(s).

10. If approval for data release under (9) is not forthcoming within the specified period, the Secretariat shall initiate and facilitate consultation between the data requestor and data owner(s)/originator(s). The Secretariat shall not release data without the written approval of the data owner(s)/originator(s). Failure to achieve agreement shall be brought to the attention of the Scientific Committee and Commission.

11. The following statement shall be placed on the cover page of all Working Papers, Background Papers and any other papers tabled at meetings of the Commission, Scientific Committee or their subsidiary bodies:

'This paper is presented for consideration by CCAMLR and may contain unpublished data, analyses, and/or conclusions subject to change. Data in this paper shall not be cited or used for purposes other than the work of the CCAMLR Commission, Scientific Committee or their subsidiary bodies without the permission of the originators and/or owners of the data.'