

Map of the Western Indian Ocean sector.

SECTION 2

WORLD TIME ZONES

It is important to record the time at which events occurred in a uniform manner, especially where daily reporting of catches is involved. The time zones in the Convention Area are provided in Figure 16 and the time zones for the southern hemisphere (to allow reference to local time in ports) are provided in Figure 17.

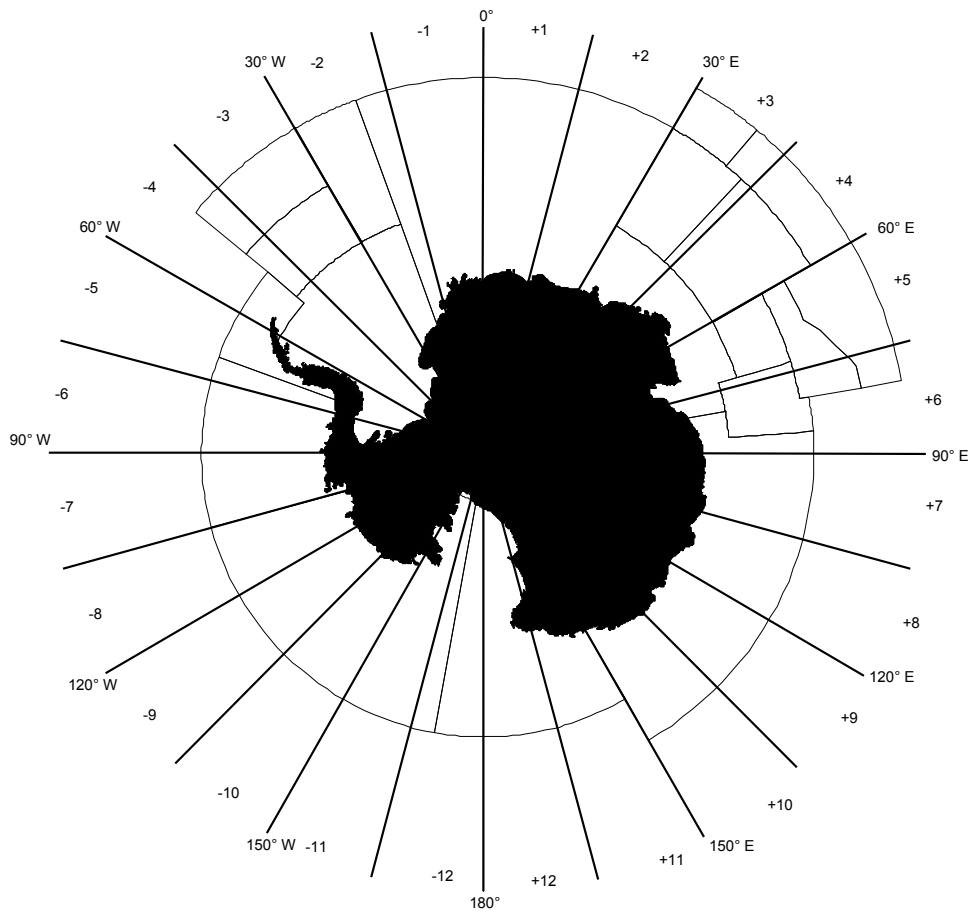


Figure 16: Time zones in the Convention Area (+ or – UTC).

SECTION 3

BEAUFORT SCALE OF WIND FORCE

Beaufort no.	Descriptive term	Mean wind speed (knots)	Probable wave height* (m)
0	Calm	<1	
1	Light air	1–3	0.1 (0.1)
2	Light breeze	4–6	0.2 (0.3)
3	Gentle breeze	7–10	0.6 (1)
4	Moderate breeze	11–16	1 (1.5)
5	Fresh breeze	17–21	2 (2.5)
6	Strong breeze	22–27	3 (4)
7	Near gale	28–33	4 (5.5)
8	Gale	34–40	5.5 (7.5)
9	Strong gale	41–47	7 (10)
10	Storm	48–55	9 (12.5)
11	Violent storm	56–63	11.5 (16)
12	Hurricane	>64	14 (-)

* This table is intended as a rough guide for the open sea. Figures in brackets indicate the probable maximum wave heights.

DEFINITION OF SEA HEIGHT AND SWELL

‘Sea waves’ and ‘swell waves’ may be observed and defined as follows:

- (i) Sea waves are generated locally and move in the same direction as the surface wind.
- (ii) Swell waves have been generated elsewhere and have travelled out of the area in which they were generated.
- (iii) Waves of both types travel in groups, each group being made up of a number of waves of varying height, with the higher waves occurring in the centre of the group. The groups are separated by a relatively flat area, consisting of two or more waves of slight development. Sea waves have a more irregular appearance than swell waves.
- (iv) Swell waves travel in regular succession and in a well-defined direction, and generally have long and rounded crests. Good examples of swell waves may be observed when there has been little or no wind for several hours.

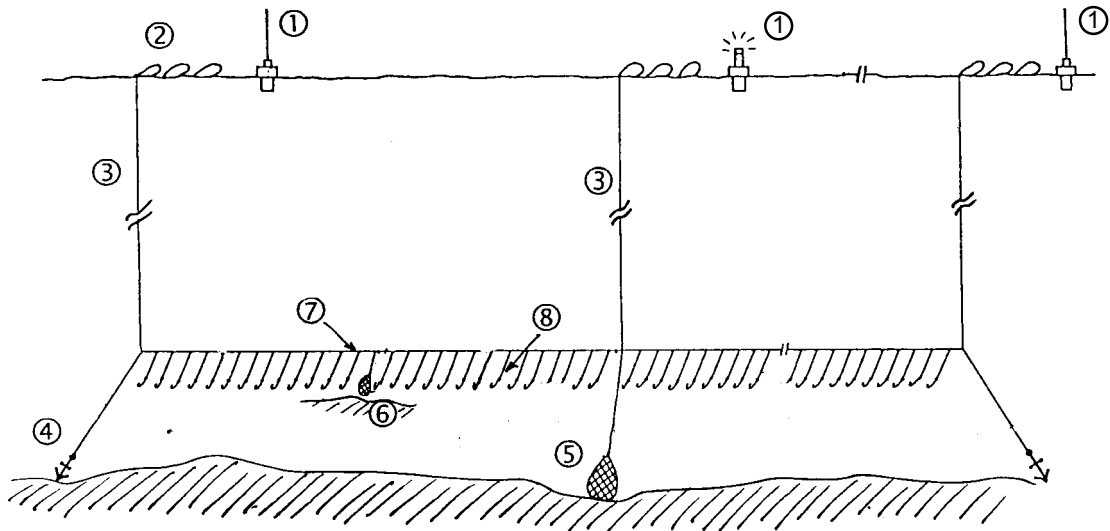
2. If only one wave system is observed, it should be classified as 'sea waves' if the surface wind is blowing in the same direction as the waves are moving; otherwise it should be recorded as 'swell waves'.
3. When the waves move in more than one direction, the sea waves will be those which are aligned with the surface wind direction, or those with the more irregular wave forms. Swell waves will in general have a more regular pattern.
4. If two wave forms are observed and their movement is in the direction of the surface wind, the system which has the longer distance between crests and the more regular form is considered to be the swell.
5. To estimate the height of a wave system, only the well-developed waves in the centre of the groups should be averaged. Wave height is measured as the distance from the trough to the crest of the wave.
6. Observations of waves are to be made where they are not deformed by shallow water, nor reflected or deflected by rocks, breakwaters or other such objects. The observation point must be exposed to seaward and not sheltered by headlands or shoals.

SECTION 4

LONGLINE DESIGNS USED IN THE CAMLR CONVENTION AREA

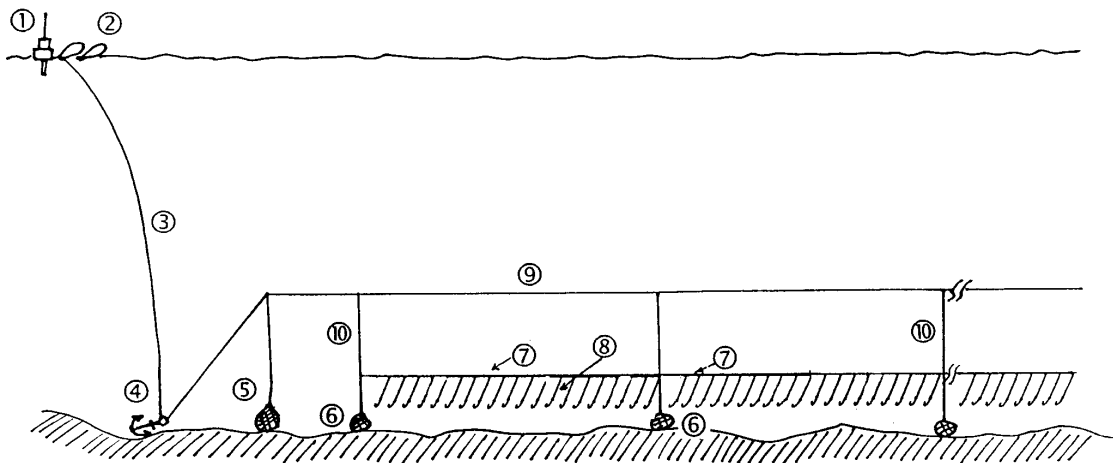
Configuration of a 'traditional' bottom longline.

- ① – Buoys; ② – Floats; ③ – Buoy line; ④ – Anchor; ⑤ and ⑥ – Stone anchors; ⑦ – Main line (ground line); and ⑧ – Branchlines (snoods) with hooks.



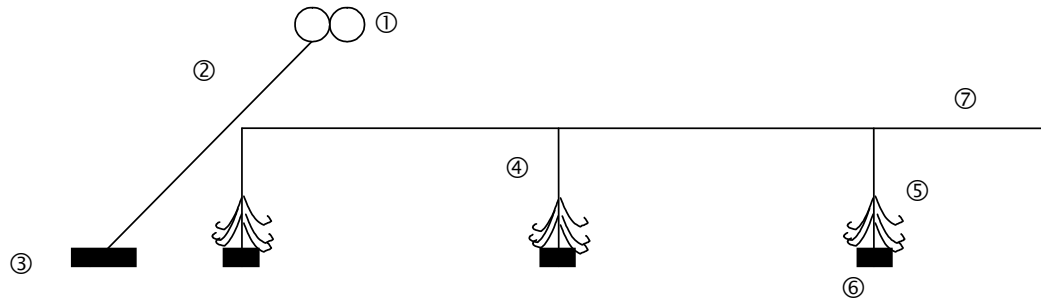
Configuration of a 'Spanish type' bottom longline.

- ① – Buoy; ② – Floats; ③ – Buoy line; ④ – Anchor; ⑤ and ⑥ – Stone anchors; ⑦ – Fishing line; ⑧ – Branchlines (snoods) with hooks; ⑨ – Main line; and ⑩ – Railing.



Configuration of a trotline.

① – Floats; ② – Buoy line; ③ – Anchor; ④ – Trot or vertical dropper; ⑤ – Hooks;
⑥ – Anchors; ⑦ – Main line.



SECTION 5

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.

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

* 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).

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.’

SECTION 6

SELECTION OF CCAMLR DATABASE CODES

TAXONOMIC CODES

The list provided here is of the most frequently used taxonomic codes, a full list of codes can be found in the observer logbooks on the CCAMLR website (www.ccamlr.org). This list is updated annually to include new taxa and to reflect changes in the taxonomy and classification of species.

The unique 3-letter codes are provided by FAO and each has an associated 10-digit numeric code for classification purposes.

The scientific names for each species/taxa are given as well as an English name where available. It is important to recognise that the 'English' names of fish can vary from location to location and fishery to fishery.

Scientific name	CCAMLR/FAO code	English name
<i>Antimora rostrata</i>	ANT	Blue antimora
<i>Bathyraja eatonii</i>	BEA	Eaton's skate
<i>Bathyraja irrasa</i>	BYR	Kerguelen sandpaper skate
<i>Bathyraja murrayi</i>	BMU	Murray's skate
<i>Chaenocephalus aceratus</i>	SSI	Blackfin icefish
<i>Chaenodraco wilsoni</i>	WIC	Spiny icefish
<i>Champscephalus gunnari</i>	ANI	Mackerel icefish
Channichthyidae	ICX	Icefish spp.
<i>Channichthys rhinoceratus</i>	LIC	Unicorn icefish
<i>Chionobathyscus dewitti</i>	CHW	Icefish spp.
<i>Dissostichus eleginoides</i>	TOP	Patagonian toothfish
<i>Dissostichus mawsoni</i>	TOA	Antarctic toothfish
<i>Euphausia superba</i>	KRI	Antarctic krill
<i>Macrourus carinatus</i>	MCC	Ridge-scaled rattail
<i>Macrourus holotrachys</i>	MCH	Bigeye grenadier
<i>Macrourus</i> spp.	GRV	Rat tails, Grenadiers
<i>Macrourus whitsoni</i>	WGR	Rat tail
<i>Muraenolepis</i> spp.	MRL	Moray cods
<i>Notothenia gibberifrons</i>	NOG	Humped rockcod
<i>Notothenia squamifrons</i>	NOS	Grey rockcod
<i>Pseudochaenichthys georgianus</i>	SGI	South Georgia icefish
<i>Raja georgiana</i>	SRR	
<i>Raja taaf</i>	RFA	Whiteleg skate
Rajiformes	SRX	Skates and rays

Common species associated with incidental mortality (seabirds and marine mammals)

<i>Arctocephalus gazella</i>	SEA	Antarctic fur seal
<i>Daption capense</i>	DAC	Cape petrel
<i>Diomedea exulans</i>	DIX	Wandering albatross

Diomedeidae	ALZ	Albatrosses
<i>Macronectes giganteus</i>	MAI	Southern giant petrel
<i>Macronectes halli</i>	MAH	Northern giant petrel
<i>Macronectes</i> spp.	MBX	Giant petrels spp.
<i>Mirounga leonina</i>	SES	Southern elephant seal
<i>Phoebetria fusca</i>	PHU	Sooty albatross
<i>Procellaria aequinoctialis</i>	PRO	White-chinned petrel
<i>Procellaria cinerea</i>	PCI	Grey petrel
<i>Procellaria</i> spp.	PTZ	Procellaria petrels
Procellariidae	PRX	Petrels and shearwaters
<i>Thalassarche chlororhynchos</i>	DCR	Yellow-nosed albatross
<i>Thalassarche chrysostoma</i>	DIC	Grey-headed albatross
<i>Thalassarche melanophris</i>	DIM	Southern black-browed albatross

FISHING GEAR CODES

<u>Bottom trawls</u>	
Otter trawls	OTB
Bottom trawls nei	TB
<u>Midwater trawls</u>	
Otter trawls	OTM
Midwater trawls nei*	TM
Trawls nei	TX
<u>Hooks and Lines</u>	
Set lines (longlines set)	LLS

* Not elsewhere included.

CATCH PROCESSING CODES

Headed and gutted	HAG
Filletted	FLT
Head and tail removed (trunked)	HAT
Whole	WHO
Squid mantle (tubed)	TUB
Tentacles	TEN
Gutted	GUT

LENGTH – TYPE OF MEASUREMENT CODES

Total length of a fish is from the most anterior part of the mouth to the most posterior of the caudal fin when this fin is extended along the length of the body. Fork length is from the most anterior part of the mouth to the end of the rays at the deepest part of the fork in the

caudal fin. Standard length of a fish is from the most anterior point of the mouth to the end of the vertebral column. Standard length of krill is the total length from the front of the eye to the tip of the telson (see Figure 1).

Total	T
Fork	F
Standard	S
Unknown	U

SECTION 7

REFERENCES

- Anon. 1983. Guidelines for collection and initial processing of ichthyological samples in Antarctic waters. VNIRO and AtlantNIRO, Moscow (in Russian)
- CCAMLR. 1996. *Fish the Sea Not the Sky. How to avoid by-catch of seabirds when fishing with bottom longlines*. CCAMLR, Hobart, Australia: 46 pp.
- Fischer, W. and J.-C. Hureau (Eds). 1985. *FAO Species Identification Sheets for Fishery Purposes. Southern Ocean (CCAMLR Convention Area Fishing Areas 48, 58 and 88)*, Vols I and II. Prepared and published with the support of the Commission for the Conservation of Antarctic Marine Living Resources. FAO, Rome.
- Francis, M.P. 2003. Length at maturity of the Antarctic skates *Amblyraja georgiana* and *Bathyraja eatonii* in the Ross Sea. Document WG-FSA-03/42. CCAMLR, Hobart, Australia.
- Gon, O. and P.C. Heemstra (Eds). 1990. *Fishes of the Southern Ocean*. J.L.B. Smith Institute of Ichthyology, Grahamstown: 462 pp.
- Kock, K.-H. and A. Kellerman. 1991. Reproduction in Antarctic notothenioid fish: a review. *Ant. Sci.*, 3 (2): 125–150.
- Lipinski, M. 1979. Universal maturity scale for the commercially important squids. The results of maturity classification of the *Illes illecebrosus* population for the years 1973–77. ICNAF Research Document 79/2/38, Serial 5364: 40 pp.
- Macpherson, E. 1988. Revision of the family Lithodidae Samouelle, 1819 (Crustacea, Decapoda, Anomura) in the Atlantic Ocean. *Monogr. Zool. Mar.*, 2: 9–153.
- Makarov, R.R. and C.J. Denys. 1980. Stages of sexual maturity of *Euphausia superba* Dana. *BIOMASS Handbook*, 11.
- Onley, D. and S. Bartle. 1999. *Identification of Seabirds of the Southern Ocean. A guide for scientific observers aboard fishing vessels*. Te Papa Press, Wellington and CCAMLR.
- Shirihai, H. 2002. *The Complete Guide to Antarctic Wildlife*. 2nd Edition. Princeton University Press.