



Observer Longline Logbook – Instructions

Version: OL_v2024

Introduction

The following instructions cover the 2024 version of the CCAMLR SISO Observer Longline logbook, an excel based series of datasheets which SISO observers are required to complete. Even if you are familiar with CCAMLR excel logbooks, please take time to browse through these instructions as the format and content of the longline logbook has changed significantly from previous versions. General comments that apply to the whole logbook are as follows:

- Data can only be entered into cells with a white background. All other areas of the logbook are locked and cannot be edited. You can fill down data for fields where repetitive information is required to be entered (for example the Haul number for each bycatch record).
- There are numerous data validations and format restrictions that have been applied to data fields. For example the Haul ID field which exists in several worksheets can only be entered as a whole number, and date and time fields must be entered in the format specified. If you attempt to enter an incorrect data type an error message will be displayed with an explanation of why the value cannot be entered.
- In many fields observers select from a series of predefined descriptions of the event appropriate to the data field. This replaces the single letter or number codes that were used in older versions of the logbooks. This makes the logbook much more straightforward to use.
- Comment fields have mostly been removed from the logbook. This is to minimize the unstructured data contained in the logbook. Where comments may be required you can often select an option that refers to the cruise report, in which you can describe the issue in detail and include photos or diagrams if necessary.
- For species and processing codes, drop down reference lists have been included at the top of the sheet, these are cells with a light green background.

In addition to these instructions there is an extensive list of observer resources on the CCAMLR Observer Information webpage: <https://www.ccamlr.org/en/science/information-technical-coordinators-and-scientific-observers>. In particular the common fish species bycatch guide (<https://www.ccamlr.org/en/document/science/common-catch-species-ccamlr-longline-and-trawl-fisheries>), the toothfish and skate tagging guide (<https://www.ccamlr.org/en/document/science/toothfish-and-skate-tagging-methods>), and the Vulnerable Marine Ecosystem Taxa Classification Guide (<https://www.ccamlr.org/en/document/publications/vme-taxa-classification-guide>) should be downloaded for reference if these have not been issued to you by your technical coordinator.

Worksheet - Vessel and Gear

Vessel and Observer Details: To populate the vessel details please enter the vessel IMO number. The vessel name and call sign will be automatically displayed if the IMO number exists in the vessel list. If the number is not recognized please enter the vessel name and call sign into the appropriate cells.

Fishing Gear Details: Upon notification by your technical coordinator of your upcoming CCAMLR trip, the Secretariat or your technical coordinator can provide a copy of the vessel notification details which include gear type and characteristics (anyone with an authorized CCAMLR login can view vessel details here: <https://www.ccamlr.org/en/compliance/list-authorised-vessels>). Please check these when on board the vessel to ensure that they are correct. If there are differences in the gear type and configuration please describe them in your cruise report. Weigh at least 30 line weights at random for Spanish and Trotline gear configurations and report your results.

Streamer Line Details: The required configuration for streamer lines in the CCAMLR area is described in Conservation Measure 25-02 Annex A (<https://www.ccamlr.org/en/measure-25-02-2015>). If the streamer line(s) on the vessel conform to this configuration please fill in the required fields, and only report data in the final section (section 6) if the line is replaced during fishing, or if the streamer line does not conform to CCAMLR specifications. Figure 1 below demonstrates the spacing measurements you are required to record if the line is of a non CCAMLR configuration.

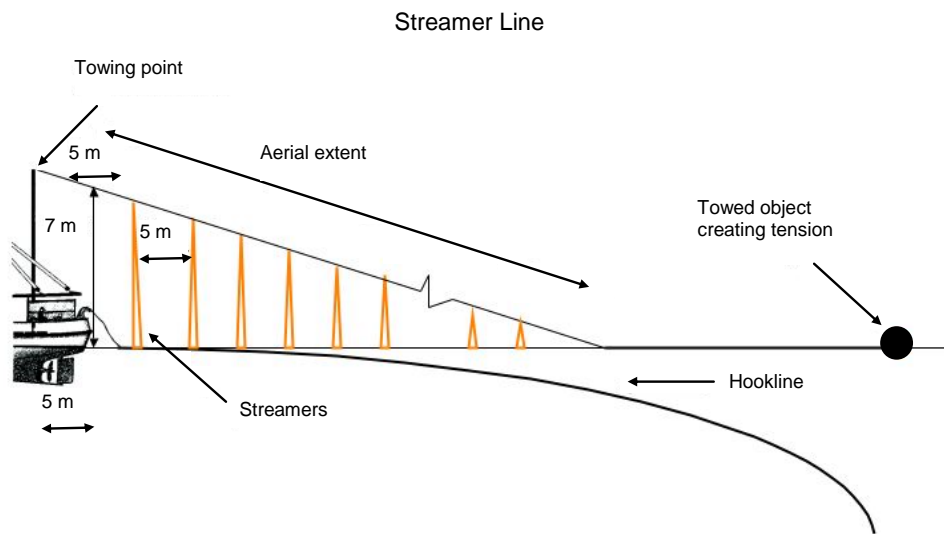


Figure 1: An example of streamer line height and spacing measurements.

Worksheet – Set and Haul Details

This sheet records details for each set and haul that take place during your cruise. The field Set/ Haul ID (which is also included in other worksheets as Haul ID) should be a consecutive, unique number that matches the Haul ID used by the vessel for their commercial data forms. Please fill in all other set and haul details, even if you conduct no catch, bycatch or other observations during their operation. Fill in all other fields as appropriate, selecting an option from the drop-down menus for some fields. Please note that in these forms all times are to be recorded in UTC, rather than local ship time.

Worksheet – Observed Haul Catch

This sheet is for all catch and bycatch species observations that you conduct on deck during your random tally period. Because of the necessity to collect biological material (bycatch species, dead birds etc.) and observe line drop offs, the observer's work station for line hauling should obviously be situated with this in mind. The recommended observation period of a haul is 25% per observer present on the vessel. It is very important to establish a sampling routine such that observations of line-hauling operations cover varying sections of the longline throughout the cruise. The evidence of predation fields are new additions to the 2018 logbook. Specifically, the number of heads with obvious portion(s) of the body removed by predators, and hooks with just lips present on them for any species, are to be tallied for addition to these fields. This information will be used to provide metrics for quantifying the level of, and types of predation that are occurring.

Worksheet – Haul IMAF

Seabird and marine mammal by-catch: Assessing bird catch rates during the haul can only be done accurately by observations made from the outside working deck, because on many vessels a work station on the ship's bridge or factory can obscure visibility. Data-recording tasks to be carried out during longline hauling include observations of seabirds caught on longlines and collection of seabird samples. Observers must record whether they actually sighted the bird come on board during their random bycatch tally period (by selecting yes in the observed field), or if they were given animal, or the information by a crew member. This information is very important as the number of seabirds caught during the random bycatch tally period are used to calculate extrapolated mortality figures.

For each bird or mammal hauled on board, record if its capture was during line setting or line hauling (birds hooked during hauling are usually alive and do not have waterlogged feathers), species and fate of the animal. Refer to the identification plates for Southern Ocean seabirds given in the book *Fish the Sea, Not the Sky* (CCAMLR, 1996).

Seabirds that are taken aboard dead may be retained as frozen samples if required by your organization. Label the sample with the date, time taken aboard, species, vessel name, observer's name and a label number which corresponds to that used on the Haul IMAF data sheet. All birds should be checked for bands upon landing. Look at your assignment issued by your employing organization for information on the handling of collected bird samples and/or bands for when you disembark the vessel.

Worksheet – Marine Mammal Observation

This worksheet is a new addition to the observer logbook, and has been adapted from marine mammal observation programmes undertaken by national observers in the French EEZ fisheries, and around South Georgia. Marine Mammal observations should be recorded during the same random line observation period in which the Observed Haul Catch data is collected. Please fill in all appropriate fields when you conduct, or attempt to conduct a Marine Mammal Observation, not just when the presence of marine mammals is detected. Information on fields in the worksheet is as follows:

Observation Possible: Select no if poor weather, fog, or lack of light prevents an observation being conducted

Depredation Observed: Select yes if signs of obvious signs of depredation behaviour are being observed, or if you are seen fish being hauled with obvious depredation marks. Behaviour examples might be seals are diving around the line or seen taking fish, or cetaceans are diving repeatedly near the line.

Presence or Absence: Select presence if you observe marine mammals, or if you do not sight them but can hear them (e.g. whale blows, or seals barking).

Time first observed: Please enter the time in UTC of the first marine mammal observation.

Species Code: Please enter the lowest taxonomic species code to which you can identify mammals, e.g. enter baleen whales if that is all you can identify.

Minimum and Maximum numbers observed: This is to provide an estimate of abundance for each observation of marine mammal activity. Therefore if you initially see one mammal during your observation, and then observe several animals enter the minimum and maximum numbers.

Worksheet – Haul VME

This sheet is for recording data on Vulnerable Marine Ecosystem (VME)-indicator organisms where required under Conservation Measure 22-06 (<https://www.ccamlr.org/en/measure-22-06-2015>). The vessel is required to divide each longline or pot line into line segments: "Line segment" means a 1 000-hook section of line or a 1200m section of line, whichever is the shorter, and for pot lines a 1200m section. It is strongly recommended that a colour-coding or other system is used for marking each line section, so that crew, master and observer are able to tell which line segment is being hauled.

The vessel will retain all VME-indicator organisms for each line segment in the 10-litre bucket. Some vessels may be able to retain the contents of each bucket for every line segment. Where this is not the case and unless the bucket needs to be retained (i.e. if it has more than 5 VME-indicator units of VME-indicator organisms or if the observer has requested it as part of their random sample) the vessel may place its contents into a larger bin after hauling each line segment, in order that the total number of VME-indicator organisms can be counted.

The observed bucket unit should be selected from the drop-down menu. A VME-indicator unit means a quantity of VME-indicator organisms of those found in the CCAMLR VME Taxa Classification

Guide, measured as either one litre for those VME-indicator organisms that can be placed in a 10 litre container; or one kilogram of those VME-indicator organisms that do not fit into a volume measurement, such as branching species (e.g. Gorgonians). Please note that because of the new design of the VME sheet, if you record multiple species or on a line segment, all of the yellow fields on the worksheet are repeated for each recorded taxa. You can easily copy and fill down the data for each species.

The observer should sample the following buckets: (i) a random sample of approximately 30% of the line segments; and (ii) every line segment that collects 5 or more VME-indicator units of VME-indicator organisms, known as the trigger level. In order to separate the requirements of random sampling from trigger sampling, observers should inform the crew at the start of a line hauling period of the individual random line segments for which a bucket of VME-indicator organisms should be retained. Each randomly sampled bucket should be put to one side by the crew, and clearly labelled by its line segment number. The master should be informed of the random sample requirements, so that the mid-point coordinates of the requested random line segments can be recorded in your logbook. All these buckets should be examined by the observer as part of the random sample and entered as "Random" in the Sample Type field on the form. In addition the observer should require the crew to retain buckets from any other line segment where more than 5 VME-indicator units of VME-indicator organisms were recovered. All line segments from which 5 or more VME-indicator units of VME-indicator organisms were recovered will need to be monitored. All of these buckets should also be set aside by the crew and clearly labelled by its line segment number, so that the mid-point of the line segment can be recorded and will need to be examined by the observer and entered as sample type "Trigger" on the form. Do not confuse random and required sampling. If a random sample happens to be greater than 5 VME-indicator units, still enter on the form as 'random'.

Worksheet – Biological Sampling

A representative sample of fish should be taken from each haul to record biological data characteristics (e.g. length, weight, sex, etc.). Sampling requirements for toothfish described here can be found on the observer sampling requirements webpage (<https://www.ccamlr.org/en/science/observer-sampling-requirements-dissostichus-spp>).

The guide on the sampling rate for toothfish should be approximately 7 fish per 1000 hooks, or an overall total of 35 fish per line (assuming an average line of 5 000 hooks). Of these 35 fish, observers should sample 10 fish per line recording species, total length, sex, gonad stage, total weight and collecting 10 otoliths; and 25 fish per line recording just the biological measurements (i.e. not collecting otoliths). The sampling rates are based on an average number of hooks per set. When vessels set shorter lines with a 'join line' (e.g. to reduce the number of downlines and buoys on the surface that could be caught in ice), they are now required to report them as a single haul, therefore the sampling requirements should also treat joined short lines as if they are one single continuous piece of fishing gear.

To collect a representative sample of all other species, select fish that cover the whole size range of each species caught. If possible sample up to 10 individuals per day for each bycatch species, or up to 100 individuals per bycatch species for your cruise. To estimate the number and location on the

line of hooks relating to each *Dissostichus spp.* sub-sample, the number, or range of the baskets, trots or magazines numbers relating to where the bycatch fish are being sampled from must be recorded. Baskets, trots and magazines should be numbered from 1, where 1 is the first basket, trot or magazine set. It is very important to sample all sections of the longline throughout your cruise.

For all fish measurements ensure that the snout of the fish is butted up to the end of the measuring board, the mouth is closed and the body is straight. If possible record the weight, sex and maturity stage for each individual sampled, and if otoliths are collected ensure they have a unique serial number. Please note the fish serial number field in column D is optional, and is provided for the observer's benefit as serial numbers are often used when recording measurements and taking samples.

For Toothfish (and most other fish with a distinct tail) measure for standard (SL) and total length (TL). Standard length (SL) is measured from the most anterior part of the snout to the end of the vertebral column (Figure 1). An easy way to determine SL is to bend the tail upwards and a crease will form at the point of the last caudal vertebra. Total length (TL) is defined as the distance from the most anterior part of the snout to the furthest tip of the tail. Lightly 'streamline' the tail before measuring: i.e. the tail should not be spread to its extreme, nor completely compressed.

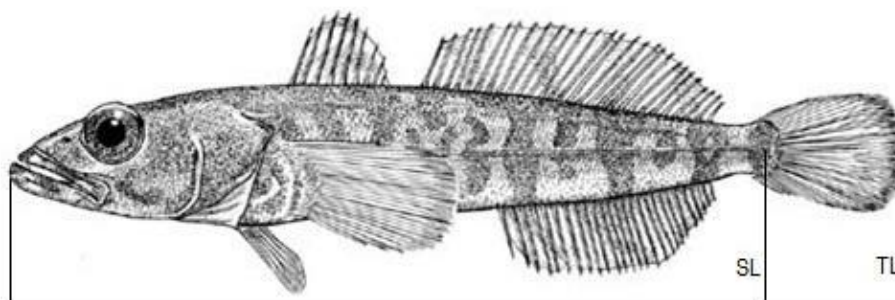


Figure 1: Measurement of Toothfish and most other finfish bycatch species

For *Macrourus spp.* total length and snout to anus (SA) length should also be measured from the tip of the snout to the anus (Figure 2).

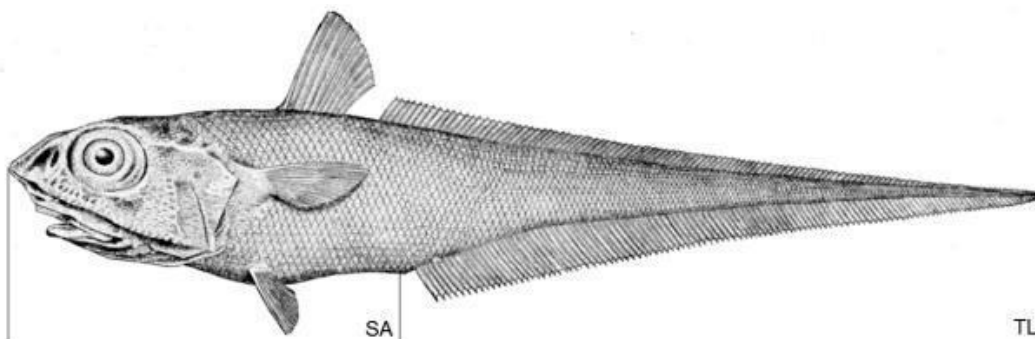


Figure 2: Measurement of *Macrourus spp.*

For skates and rays the wingspan (WS) total length should also be measured (Figure 3).

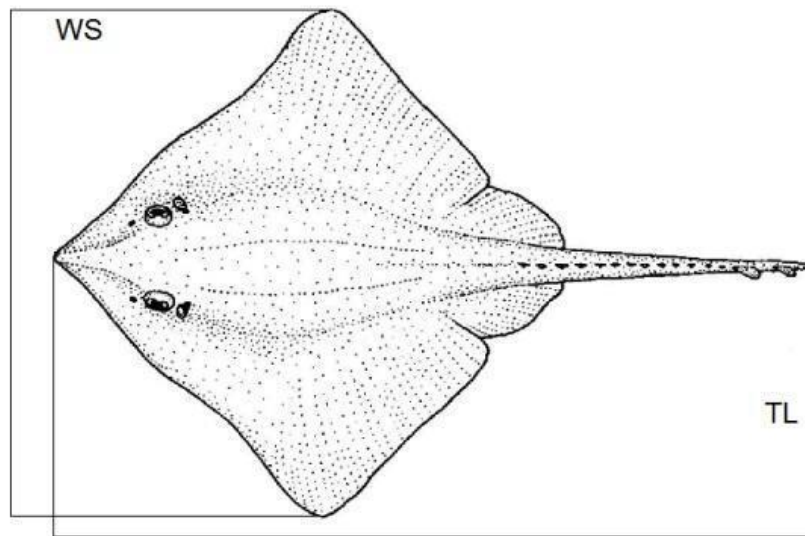


Figure 3: Wingspan measurement for skates and rays.

Worksheet - Conversion Factors

The minimum number of fish sampled for conversion factors are 25 individuals for your cruise. To accurately record the measurements for processed fish that you sample adopt the following procedure:

1. Record total length and weight of toothfish to be processed. If you are sampling multiple fish at a time, then record the minimum and maximum length, and the number of the fish in the sampled group. Length measurements should be taken on the midline of the fish from the tip of the snout to the tail. Fish should be weighted on a motion compensated scale and water must be drained from the stomach prior to weighing (use a sharp knife or tube to achieve this). Weight is recorded in the green weight column
2. Allow the processing crew to cut the fish in the manner adopted by the vessel, then weigh the processed fish and enter into the processed weight column. The worksheet will automatically calculate the conversion factor.
3. Complete the rest of the fields on the conversion factor sheet, using the drop-down menus for fields where appropriate. The Grade will be a product quality code used by the factory manager. A description of the grades used during your cruise can be completed in the conversion factor section of your cruise report.

Worksheet - Tagging

A SISO observer or appropriately trained crew member on each longline vessel should tag and release toothfish. As the vessel is responsible for ensuring tagging and tag recovery protocols are correctly followed, several crew will most likely be trained in tagging procedures, however the vessel is expected to cooperate with the observer if you feel the procedures are not being

undertaken correctly. Any tagging procedures should follow the CCAMLR toothfish and skate tagging guide (<http://www.ccamlr.org/node/85702>). Fish should never be tagged and released if any of the following characteristics are present:

- Hook injuries are present anywhere on body other than in mouth area
- Gills are pink or white
- Gills have visible bleeding, or if excessive bleeding is present anywhere on fish
- There is visible damage to fish body with open wounds
- There is visible damage to eye or penetration of body cavity, including by crustaceans (amphipods/lice)
- Abrasions or recent scale loss equal to or exceeding the area equivalent to the fish tail is present
- No movement of fish is detected

Complete the tagging worksheet ensuring that the tag ID header fields details are recorded. Note that particular fields are required for skates and rays. The worksheet contains conditional formatting to highlight if tag numbers are duplicated. Try to ensure accurate tagging release positions are recorded rather than just haul start or end positions. If extra details are required with regard to any tagging information please use the cruise report to detail these, for example if there are frequent tag breakages it is useful to document these in a table.

Worksheet – Tag Recapture

All tagged fish and skates must be retained by the vessel regardless of their time at liberty, it is good practice to encourage crew to look for tags, particularly as an annual prize is offered by the coalition of legal toothfish operators (COLTO) for tag finders! For each fish caught an electronic time-stamped photograph must be taken of the tags in situ using the “CCAMLR tag photo template”. Please check that the photograph clearly shows the tag numbers and that the number is readable. Attach these photos in your cruise report, or zip up the photos and send them separately to the Secretariat through your technical coordinator. Fill out the required biological measurements in the worksheet, noting the specific fields required for skate and rays and toothfish. The worksheet contains conditional formatting to highlight if tag numbers are duplicated.

Worksheet - Waste Disposal

This form is designed to collect summary information relating to the loss, retention and discarding of fishing gear and waste products at sea. Please select the option from the drop-down menu for each field. Definitions for each item are as follows:

Fishing Gear: This refers to all fishing gear that is no longer usable due to damage, loss, or hooks and sections of line that are cut off (e.g. when the line is cut to release a shark or marine mammal).

General Waste: This refers to all other waste such as plastics, metal, packaging material, oil and sewage.

Lost: Refers to gear or waste that was unintentionally swept into the sea; e.g. washed into the sea due to rough weather or the loss of a longline or trawl net etc.

Discarded: Refers to the intentional dumping of gear or waste into the sea; e.g. the dumping of galley waste, plastics or damaged fishing gear.

For items that are either lost or discarded there are three categories to select from regarding the frequency for which this occurs. Occasionally (less than once a week or once a month), weekly (up to several times a week) and daily (every day).

The retained column refers to how the waste is retained for disposal back on shore: non-incinerated or incinerated.

Please use your cruise report to detailed specific concerns or problems in detail.

Worksheet - IUU Sightings

This worksheet is for reporting sightings by observers of unknown gear, refuse or vessels, or those vessels suspected to be engaging in IUU fishing activities. Please only include sightings and their details that you personally observe. It is a vessel responsibility to report any IUU sightings to the Secretariat as soon as practicable, however information collected by observers also provides important information, particularly supplementary photographs and comments on vessel appearance and activity.

Fill out the details for each gear or vessel sighting as instructed in the worksheet. If necessary provide a more detailed description in the Cruise Report, as well as attaching photos if any are taken. If a vessel is sighted several times within a day complete a record for each time. Vessel name, call sign and flag are to be obtained from what is seen on the vessel or from radio contact with the vessel (the source of this information must be reported). For recovered gill nets please provide measurements of mesh size.