

**Conservation Measure 24-02 (2014)**  
**Longline weighting for seabird conservation**

Species	seabirds
Area	selected
Season	all
Gear	longline

In respect of fisheries in Statistical Subareas 48.4, 48.6, 88.1 and 88.2 and Statistical Divisions 58.4.1, 58.4.2, 58.4.3a, 58.4.3b and 58.5.2, any vessel using longline gear other than that described in paragraphs 2, 3 or 4 of Conservation Measure 25-02 shall demonstrate its ability to fully comply with one of the following protocols.

Protocol A (for vessels monitoring longline sink rate with Time-Depth Recorders (TDRs) and using longlines to which weights are manually attached):

- A1. Prior to entry into force of the licence for this fishery and once per fishing season, either prior to entering the Convention Area or at the first opportunity after entering the Convention Area and before commencing fishing, the vessel shall, under observation by a scientific observer:
- (i) set a minimum of two longlines, unbaited if set in the Convention Area, with a minimum of four TDRs on the middle one-third of each longline, where:
    - (a) for vessels using the auto longline system, each longline shall be at least 6 000 m in length;
    - (b) for vessels using the Spanish longline system, each longline shall be at least 16 000 m in length;
    - (c) for vessels using the Spanish longline system, with longlines less than 16 000 m in length, each longline shall be of the maximum length to be used by the vessel in the Convention Area;
    - (d) for vessels using a longline system other than an autoline or Spanish longline system, each longline shall be of the maximum length to be used by the vessel in the Convention Area;
  - (ii) randomise TDR placement on the longline, noting that, except for trotlines, all tests should be applied midway between weights. In the case of trotlines, TDRs should be placed on droppers less than 1 m from the attachment position of the uppermost cluster of hooks (i.e. hooks most distant from line weight);
  - (iii) calculate an individual sink rate for each TDR when returned to the vessel, where:
    - (a) the sink rate shall be measured as an average of the time taken for the longline to sink from the surface (0 m) to 15 m;
    - (b) this sink rate shall be at a minimum rate of 0.3 m/s;
  - (iv) if the minimum sink rate is not achieved at all eight sample points (four tests on two longlines), continue the testing until such time as a total of eight tests with a minimum sink rate of 0.3 m/s are recorded;

- (v) all equipment and fishing gear used in the tests is to be to the same specifications as that to be used in the Convention Area.
- A2. During fishing, regular longline sink rate monitoring shall be undertaken by the CCAMLR scientific observer. The vessel shall cooperate with the CCAMLR observer who shall:
- (i) attempt to conduct a TDR test on one longline set every twenty-four hour period;
  - (ii) every seven days place at least four TDRs on a single longline to determine any sink rate variation along the longline;
  - (iii) randomise TDR placement on the longline, noting that all tests should be applied halfway between weights;
  - (iv) calculate an individual longline sink rate for each TDR when returned to the vessel;
  - (v) measure the longline sink rate as an average of the time taken for the longline to sink from the surface (0 m) to 15 m.
- A3. The vessel shall:
- (i) ensure that all longlines are weighted to achieve a minimum longline sink rate of 0.3 m/s at all times while operating under this exemption;
  - (ii) report daily to its national agency on the achievement of this target while operating under this exemption;
  - (iii) ensure that data collected from longline sink rate tests and longline sink rate monitoring during fishing are recorded in the CCAMLR-approved format<sup>1</sup> and submitted to the relevant national agency and CCAMLR Data Manager within two months of the vessel departing a fishery to which this measure applies.

Protocol B (for vessels monitoring longline sink rate with bottle tests and using longlines to which weights are manually attached):

- B1. Prior to entry into force of the licence for this fishery and once per fishing season either prior to entering the Convention Area or at the first opportunity after entering the Convention Area and before commencing fishing, the vessel shall, under observation by a scientific observer:
- (i) set a minimum of two longlines, unbaited if set in the Convention Area, with a minimum of four bottle tests (see paragraphs B5 to B9) on the middle one-third of each longline, where:
    - (a) for vessels using the auto longline system, each longline shall be at least 6 000 m in length;
    - (b) for vessels using the Spanish longline system, each longline shall be at least 16 000 m in length;

- (c) for vessels using the Spanish longline system, with longlines less than 16 000 m in length, each longline shall be of the maximum length to be used by the vessel in the Convention Area;
  - (d) for vessels using a longline system other than an autoline or Spanish longline system, each longline shall be of the maximum length to be used by the vessel in the Convention Area;
  - (ii) randomise bottle test placement on the longline, noting that, except for trotlines, all tests should be applied midway between weights. In the case of trotlines, TDRs should be placed on droppers less than 1 m from the attachment position of the uppermost cluster of hooks (i.e. hooks most distant from line weight);
  - (iii) calculate an individual sink rate for each bottle test at the time of the test, where:
    - (a) the sink rate shall be measured as the time taken for the longline to sink from the surface (0 m) to 10 m;
    - (b) this sink rate shall be at a minimum rate of 0.3 m/s;
  - (iv) if the minimum sink rate is not achieved at all eight sample points (four tests on two longlines), continue the testing until such time as a total of eight tests with a minimum sink rate of 0.3 m/s are recorded;
  - (v) all equipment and fishing gear used in the tests is to be to the same specifications as that to be used in the Convention Area.
- B2. During fishing, regular longline sink rate monitoring shall be undertaken by the CCAMLR scientific observer. The vessel shall cooperate with the CCAMLR observer who shall:
- (i) attempt to conduct a bottle test on one longline set every twenty-four hour period;
  - (ii) every seven days conduct at least four bottle tests on a single longline to determine any sink rate variation along the longline;
  - (iii) randomise bottle test placement on the longline, noting that all tests should be applied halfway between weights;
  - (iv) calculate an individual longline sink rate for each bottle test at the time of the test;
  - (v) measure the longline sink rate as the time taken for the longline to sink from the surface (0 m) to 10 m.
- B3. The vessel shall:
- (i) ensure that all longlines are weighted to achieve a minimum longline sink rate of 0.3 m/s at all times while operating under this exemption;
  - (ii) report daily to its national agency on the achievement of this target while operating under this exemption;

- (iii) ensure that data collected from longline sink rate tests and longline sink rate monitoring during fishing are recorded in the CCAMLR-approved format<sup>1</sup> and submitted to the relevant national agency and CCAMLR Data Manager within two months of the vessel departing a fishery to which this measure applies.

B4. A bottle test is to be conducted as described below.

#### Bottle Set Up

- B5. 10 m of 2 mm multifilament nylon snood twine, or equivalent, is securely attached to the neck of a 500–1 000 ml plastic bottle<sup>2</sup> with a longline clip attached to the other end. The length measurement is taken from the attachment point (terminal end of the clip) to the neck of the bottle, and should be checked by the observer every few days.
- B6. Reflective tape should be wrapped around the bottle to allow it to be observed in low light conditions and at night.

#### Test

- B7. The bottle is emptied of water, the stopper is left open and the twine is wrapped around the body of the bottle for setting. The bottle with the encircled twine is attached to the longline<sup>3</sup>, midway between weights (the attachment point).
- B8. The observer records the time at which the attachment point enters the water as  $t_1$  in seconds. The time at which the bottle is observed to be pulled completely under is recorded as  $t_2$  in seconds<sup>4</sup>. The result of the test is calculated as follows:

$$\text{Longline sink rate} = 10 / (t_2 - t_1).$$

- B9. The result should be equal to or greater than 0.3 m/s. These data are to be recorded in the space provided in the electronic observer logbook.

Protocol C (for vessels monitoring longline sink rate with either (TDR) or bottle tests, and using internally weighted longlines with integrated weight of at least 50 g/m and designed to sink instantly with a linear profile at greater than 0.2 m/s with no external weights attached):

- C1. Prior to entry into force of the licence for this fishery and once per fishing season either prior to entering the Convention Area or at the first opportunity after entering the Convention Area and before commencing fishing, the vessel shall, under observation by a scientific observer:
  - (i) set a minimum of two longlines, unbaited if set in the Convention Area, with either a minimum of four TDRs, or a minimum of four bottle tests (see paragraphs B5 to B9) on the middle one-third of each longline, where:
    - (a) for vessels using the auto longline system, each longline shall be at least 6 000 m in length;
    - (b) for vessels using the Spanish longline system, each longline shall be at least 16 000 m in length;

- (c) for vessels using the Spanish longline system, with longlines less than 16 000 m in length, each longline shall be of the maximum length to be used by the vessel in the Convention Area;
  - (d) for vessels using a longline system other than an autoline or Spanish longline system, each longline shall be of the maximum length to be used by the vessel in the Convention Area;
- (ii) randomise TDR or bottle test placement on the longline;
  - (iii) calculate an individual sink rate for each TDR when returned to the vessel, or for each bottle test at the time of the test, where:
    - (a) the sink rate shall be measured as an average of the time taken for the longline to sink from the surface (0 m) to 15 m for TDRs and the time taken for the longline to sink from the surface (0 m) to 10 m for bottle tests;
    - (b) this sink rate shall be at a minimum rate of 0.2 m/s;
  - (iv) if the minimum sink rate is not achieved at all eight sample points (four tests on two longlines), continue the testing until such time as a total of eight tests with a minimum sink rate of 0.2 m/s are recorded;
  - (v) all equipment and fishing gear used in the tests is to be to the same specifications as that to be used in the Convention Area.
- C2. During fishing, regular longline sink rate monitoring shall be undertaken by the CCAMLR scientific observer. The vessel shall cooperate with the CCAMLR observer who shall:
- (i) attempt to conduct a TDR or bottle test on one longline set every twenty-four hour period;
  - (ii) every seven days conduct at least four TDR or bottle tests on a single longline to determine any sink rate variation along the longline;
  - (iii) randomise TDR or bottle test placement on the longline;
  - (iv) calculate an individual longline sink rate for each TDR when returned to the vessel or each bottle test at the time of the test;
  - (v) measure the longline sink rate for bottle tests as the time taken for the longline to sink from the surface (0 m) to 10 m, or for TDRs, the average of the time taken for the longline to sink from the surface (0 m) to 15 m.
- C3. The vessel shall:
- (i) ensure that all longlines are set so as to achieve a minimum longline sink rate of 0.2 m/s at all times while operating under this exemption;

- (ii) report daily to its national agency on the achievement of this target while operating under this exemption;
- (iii) ensure that data collected from longline sink rate tests and longline sink rate monitoring during fishing are recorded in the CCAMLR-approved format<sup>1</sup> and submitted to the relevant national agency and CCAMLR Data Manager within two months of the vessel departing a fishery to which this measure applies.

<sup>1</sup> Included in the scientific observer electronic logbook.

<sup>2</sup> A plastic water bottle that has a 'stopper' is needed. The stopper of the bottle is left open so that the bottle will fill with water after being pulled under water. This allows the plastic bottle to be re-used rather than being crushed by water pressure.

<sup>3</sup> On autolines, attach to the backbone; on the Spanish longline system, attach to the hookline.

<sup>4</sup> Binoculars will make this process easier to view, especially in foul weather.