## Antarctic Marine Living Resources Conservation Regulations ${ }^{2}$ (Amendment)

I, THE GOVERNOR-GENERAL of the Commonwealth of Australia, acting with the advice of the Federal Executive Council, make the following Regulations under the Antarctic Marine Living Resources Conservation Act 1981.
Dated $\quad$ 1998.
18
March

KwILIAM DEANE/ Governor-General
By His Excellency's Command,

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Minister for the Environment

## 1. Commencement

1.1 These Regulations commence on gazettal.

## 2. Amendment

2.1 The Antarctic Marine Living Resources Conservation Regulations are amended as set out in these Regulations.
3. Schedule (Conservation measures)
3.1 Omit "CONSERVATION MEASURE 2/III", substitute:
"PART 1
CONSERVATION MEASURE 2/III".
3.2 Omit "CONSERVATION MEASURE 19/IX", substitute:
"PART 2
CONSERVATION MEASURE 19/IX".
3.3 Omit Conservation Measure 29/XV.
3.4 Omit "CONSERVATION MEASURE 30/X', , substitute:
"PART 3
CONSERVATION MEASURE $30 / \mathbf{X}^{1 .}$.
3.5 Omit "CONSERVATION MEASURE 40/X", substitute:
"PART 4
CONSERVATION MEASURE 40/X".
3.6 After Conservation Measure 40/X, insert:

## "PART 5

## - CONSERVATION MEASURE 64/XII ${ }^{1.2}$

## 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 ST.ATLANT returns.
(b) The CCAMLR within season catch and effort reporting systems shall apply whenever the catch within a specified reporting period exceeds 5 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 excmpt 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 6 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 2 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 iesearch 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).

1 Except for waters adjacent to the Kerguelen and Crozet Islands,
2 Except for waters adjacent to the Prince Edward Islands.

## 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 $\qquad$
Division and subarea in which research is to be carried out
Estimated dates of entering and leaving CCAMLR Convention Area $\qquad$
Purpose of research $\qquad$

Fishing equipment likely to be used:
Bottom trawl
Midwater trawl $\qquad$
Longline
Crab pots
Other fishing gear (specify)

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 $\qquad$
SURVEY DETAILS
A statement of the planned research objectives $\qquad$
$\qquad$
Survey Area/Subarea/Division $\qquad$
Geographical Boundaries:
Latitude from $\qquad$ to
Longitude from $\qquad$ to $\qquad$
Is a map of area surveyed (preferably including bathymetry and positions of sampling stations / hauls) appended to the format: $\qquad$
Proposed dates of survey:
from
$\qquad$ $1=1$ $\qquad$ (Y/M/D) to
 (Y/M/D)

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

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

Is there opportunity for inviting scientists from other Members: $\qquad$
If so, indicate a number of such scientists $\qquad$

## DESCRIPTION OF VESSEL

Name of vessel
Name and address of vessel owner $\qquad$

Vessel type (dedicated research or chartered commercial vessel)
Port of registration ___ Registration number _____
Radio call sign $\qquad$ Overall length $\qquad$ (m)

Tonnage $\qquad$
Equipment used for determining position
Fishing capacity (limited to scientific sampling activities only or commercial capacity) $\qquad$ (tonnes/day)

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

Fish storage capacity (if vessel type is commercial) ( $\mathrm{m}^{3}$ )

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 $\qquad$ Frequency $\qquad$

## SURVEY DESIGN AND METHODS OF DATA ANALYSES

Survey design (random, semi-random) $\qquad$
Target species $\qquad$
Stratification (if any) according to-
Depth zones (list)
Fish density (list) $\qquad$
Other (specify)
Duration of standard sampling stations/hauls (preferably 30 min ) $\qquad$ (min)

Proposed number of hauls $\qquad$
Proposed sample size (total): $\qquad$ (number) $\qquad$ (kg)

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

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

Other data (as applicable)
$\qquad$
9
"PART 6
CONSERVATION MEASURE 63/XV".
3.8 Omit Conservation Measure 64/XII.
3.9 Omit "CONSERVATION MEASURE 106/XV", substitute:
"PART 7
CONSERVATION MEASURE 106/XV".
3.10 Omit Conservation Measure 109/XV, substitute:
"PART 8

## CONSERVATION MEASURE 29/XVI ${ }^{1.2}$

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 $\left.{ }^{3}\right)^{4}$. 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 2 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 ${ }^{5}$.

1 Except for waters adjacent to the Kerguelen and Crozet Islands.
2 Except for waters adjacent to the Prince Edward Islands.
3 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.

4 Wherever possible, setting of lines should be completed at least 3 hours before sunrise (to reduce loss of bait to/catches of white-chinned petrels).
5 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 5 branch streamers each comprising 2 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.


PART 9

## CONSERVATION MEASURE 130/XVI

## Fishery for Champsocephalus gunnari in Statistical Division 58.5.2 in the 1997/98 Fishing Season

1. The total catch for Champsocephalus gunnari on the Heard Island plateau shall be limited to 900 tonnes in the 1997/98 fishing season.
2. Fishing shall cease if the by-catch of any of the species listed in Conservation Measure 132/XVI (other species) reaches its by-catch limit.
3. For the purposes of this Conservation Measure, the Heard Island plateau is defined as that portion of Statistical Division 58.5.2 that lies within the area bounded by the following limits:
(i) starting at the point where the $72^{\circ} 15^{\prime}$ E meridian intersects the Australia-France Maritime Delimitation Agreement Boundary southwards to the point $53^{\circ} 25^{\prime} \mathrm{S}: 72^{\circ} 15^{\prime} \mathrm{E}$;
(ii) then eastwards along the parallel of $53^{\circ} 25^{\prime} \mathrm{S}$ to $74^{\circ} 00^{\prime} \mathrm{E}$;
(iii) then to the point $52^{\circ} 40^{\prime} \mathrm{S}: 76^{\circ} 00^{\prime} \mathrm{E}$;
(iv) then northwards along the meridian $76^{\circ} 00^{\prime} \mathrm{E}$ to $52^{\circ} 00^{\prime} \mathrm{S}$;
(v) then to the point $51^{\circ} 00^{\prime} \mathrm{S}: 74^{\circ} 30^{\prime} \mathrm{E}$; and
(vi) then westwards along the parallel of $51^{\circ} 00^{\prime} \mathrm{S}$ to connect with the starting point.

A chart illustrating the above definition is appended to this Conservation Measure (Annex 130/A).
4. For the purposes of this fishery on Champsocephalus gunnari, the 1997/98 fishing season is defined as the period from 8 November 1997 to the end of the Commission meeting in 1998.
5. The catch limit may only be taken by trawling.
6. Where any haul contains more than 100 kg of Champsocephalus gunnari, and more than $10 \%$ of the Champsocephalus 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 ${ }^{\prime}$. The fishing vessel shall not return to any point within $5 n$ miles of the location where the catch of small Champsocephalus gunnari exceeded $10 \%$ for a period of at least 5 days ${ }^{2}$. The location where the catch of small Champsocephalus 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.
7. 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.
8. Each vessel operating in the Champsocephalus gunnari fishery in Statistical Division 58.5 . 2 shall have a VMS $^{3}$ at all times.
9. A ten-day catch and effort reporting system shall be implemented:
(i) for the purposes of implementing this system, the calendar month shall be divided into 3 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 $\mathrm{A}, \mathrm{B}$ and C ;
(ii) at the end of each reporting period, each Contracting Party participating in the fishery shall obtain from each of its vessels its 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 Champsocephalus gunnari and of all by-catch species must be reported;
(v) such reports shall specify the month and reporting period ( $\mathrm{A}, \mathrm{B}$ 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 3 reporting periods, the Executive Secretary shall inform all Contracting Parties of the total catch taken during the 3 most recent reporting periods and the total aggregate catch for the season to date.
10. 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 Cl , 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 Champsocephalus gunnari 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 observers(s) aboard each vessel shall collect data on the length composition from representative samples of Champsocephalus 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 $\left(0.5^{\circ}\right.$ latitude by $1^{\circ}$ 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.
11. If, in the course of the directed fishery for Champsocephalus gunnari, the by-catch in any one haul of any one of the species Notothenia rossii, Lepidonotothen squamifrons, Channichthys rhinoceratus or Bathyraja spp. either,

- 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 ${ }^{1}$. The fishing vessel shall not return to any point within 5 n miles of the location where the by-catch exceeded $5 \%$ for a period of at least 5 days $^{2}$. 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.

1 This provision is adopted pending the adoption of a more appropriate definition of a fishing location by the Commission.
2 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.
3 As described in Resolution 12/XVI.

Chart of the Heard Island Plateau


PART 10

## CONSERVATION MEASURE 131/XVI

## Precautionary Catch Limits on the Fishery for Dissostichus eleginoides in Statistical Division 58.5.2 for the 1997/98 Season

1. The total catch of Dissostichus eleginoides in Statistical Division 58.5 . 2 in the $1997 / 98$ season shall be limited to 3,700 tonnes.
2. For the purposes of this Conservation Measure the 1997/98 season is defined as the period from 8 November 1997 to the end of the Commission meeting in 1998.
3. Fishing shall cease if the by-catch of any of the species listed in Conservation Measure 132/XVI reaches its by-catch limit.
4. The catch limit may only be taken by trawling.
5. Each vessel participating in the Dissostichus eleginoides fishery in Statistical Division 58.5 .2 shall have at least one scientific observer and, 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 Dissostichus eleginoides fishery in Statistical Division 58.5 .2 shall have a VMS $^{1}$ at all times.
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 3 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 $\mathrm{A}, \mathrm{B}$ and C ;
(ii) at the end of each reporting period, each Contracting Party participating in the fishery shall obtain from each of its vessels its 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 by-catch species must be reported:
(v) such reports will specify the month and reporting period ( $\mathrm{A}, \mathrm{B}$ 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 3 reporting periods, the Executive Secretary shall inform all Contracting Parties of the total catch taken during the 3 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 C 1 , 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; and
(b) representative samples of length composition shall be taken from each fine-scale grid rectangle ( $0.5^{\circ}$ latitude by $1^{\circ}$ longitude) fished in each calendar month.

The above data shall be submitted to the CCAMLR Secretariat not later than one month after the vessel returns to port.
9. If in the course of a directed fishery for Dissostichus eleginoides, the by-catch in any one haul of the species Lepidonotothen squamifrons, Notothenia rossii, Channichthys rhinoceratus or Bathyraja spp. either,
(i) is greater than 100 kg and exceeds $5 \%$ of the total catch of fish species by weight, or,
(ii) is equal to, or greater than 2 tonnes, then
the fishing vessel shall move to another fishing location at least
5 n miles distant ${ }^{2}$. The fishing vessel shall not return to any point within 5 n miles of the location where the by-catch exceeded $5 \%$ for a period of at least 5 days. 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.
10. 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.

1 As described in Resolution 12/XVI
2 This provision is adopted pending the adoption of a more appropriate definition of a fishing location by the Commission.
3 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.

## PART 11

## CONSERVATION MEASURE 132/XVI

Limitation of the Catch of Lepidonotothen squamifrons, Notothenia rossii, Channichthys rhinoceratus and Bathyraja spp. and other Species in Statistical Division 58.5.2 in the 1997/98 Fishing Season

1. There shall be no directed fishing for Lepidonotothen squamifrons, Notothenia rossii, Channichthys rhinoceratus or Bathyraja spp. in Statistical Division 58.5.2 in the 1997/98 fishing season.
2. In directed fisheries in Statistical Division 58.5.2 in the 1997/98 fishing season, the by-catch of Lepidonotothen squamifrons shall not exceed 325 tonnes; the by-catch of Channichthys rhinoceratus shall not exceed 80 tonnes; and the by-catch of Bathyraja spp. shall not exceed 120 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.".
3.11 Omit Conservation Measure 110/XV.
3.12 Omit Conservation Measure $111 / \mathrm{XV}$.
3.13 Omit Conservation Measure $112 / \mathrm{XV}$, substitute:
"PART 12

## CONSERVATION MEASURE 133/XVI ${ }^{1,2}$

General Measures for New And Exploratory Longline Fisheries for Dissostichus spp. in the Convention Area for the 1997/98 Season

The Commission,
Noting the need for the distribution of fishing effort and appropriate catch levels in fine-scale rectangles ${ }^{3}$ in these new fisheries,
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 5 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.
$5^{2}$. Each vessel participating in the new and exploratory fisheries for Dissostichus spp. during the 1997/98 season shall have on board at least one scientific observer, appointed in accordance with the CCAMLR Scheme of International Scientific Observation, throughout all fishing activities within the fishing season.
5. The data collection plan (Annex 133/A) shall be implemented. Data collected pursuant to the plan for the period up to 31 August 1998 shall be reported to CCAMLR by 30 September 1998 so that the data will be available to the 1998 meeting of the Working Group on Fish Stock Assessment. Such data taken after 31 August shall be reported to CCAMLR not later than 3 months after the closure of the fishery.

1 Except for waters adjacent to the Kerguelen and Crozet Islands.
2 Except for waters adjacent to the Prince Edward Islands.
3 A fine-scale rectangle is defined as an area of $0.5^{\circ}$ latitude by $1^{\circ}$ 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 $0^{\circ}$.

## 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 $122 / \mathrm{XVI}$ ) 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.".
3.14 Omit Conservation Measure 113/XV, substitute:
"PART 13

## CONSERVATION MEASURE 144/XVI

## Exploratory Fishery for Dissostichus spp. taken by the Trawl Method in Statistical Division 58.4.3 in the 1997/98 Season

The Commission 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 north of $60^{\circ} \mathrm{S}$ shall be limited to the exploratory fishery by Australian flagged vessels only. The total catch of Dissostichus spp. in the 1997/98 season shall not exceed 963 tonnes taken by the trawl method.
2. For the purposes of this Conservation Measure the 1997/98 season is defined as the period from 8 November 1997 to the end of the Commission meeting in 1998 or until the catch limit is reached, whichever is the sooner.
3. Each vessel participating in the exploratory fishery for Dissostichus spp. in Statistical Division 58.4 .3 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 Division.
4. Each vessel operating in the exploratory fishery for Dissostichus spp. in Statistical Division 58.4 .3 shall have a VMS ${ }^{1}$ at all times.
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; 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.
6. If in the course of a directed fishery for Dissostichus spp., the by-catch in any one haul of the species Lepidonotothen squamifrons, Notothenia rossii, Channichthys rhinoceratus or Bathyraja spp. either,
(i) is greater than 100 kg and exceeds $5 \%$ of the total catch of fish species by weight; or,
(ii) is equal to, or greater than 2 tonnes, then
the fishing vessel shall move to another fishing location at least $5 n$ miles distant $t^{2}$. The fishing vessel shall not return to any point within 5 n miles of the location where the by-catch exceeded $5 \%$ for a period of at least 5 days. 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.
7. 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.
8. The data collection plan in Annex 144/A will be implemented and the results reported to CCAMLR not later than 3 months after the closure of the fishery.

1 As described in Resolution 12/XVI.
2 This provision is adopted pending the adoption of a more appropriate definition of a fishing location by the Commission.
3 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 144/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 $1,500 \mathrm{~m}$ 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 $1,500 \mathrm{~m}$ 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, 5 randomly chosen trawling positions have been nominated (Tables 1 and 2), and the vessel will trawl at one of the 5 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 $2 / \mathrm{IIII}$ ), 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 Division 58.4.3.

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.


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 | $\begin{aligned} & \text { S56 24.55: } \\ & \text { E065 55.28 } \end{aligned}$ | $\begin{aligned} & \text { S56 21.12: } \\ & \text { E066 3.82 } \end{aligned}$ | $\begin{aligned} & \text { S56 17.66: } \\ & \text { E065 50.32 } \end{aligned}$ | $\begin{aligned} & \text { S56 14.65: } \\ & \text { E066 4.36 } \end{aligned}$ | $\begin{aligned} & \text { S56 26.73: } \\ & \text { E066 5.89 } \end{aligned}$ |
| A2 | $\begin{aligned} & \text { S56 30.88: } \\ & \text { E065 50.84 } \end{aligned}$ | $\begin{aligned} & \text { S56 38.82: } \\ & \text { E066 1.89 } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { S56 41.46: } \\ \text { E065 44.57 } \end{array}$ | $\begin{aligned} & \text { S56 31.88: } \\ & \text { E066 } 4.77 \end{aligned}$ | $\begin{aligned} & \text { S56 41.86: } \\ & \text { E066 } 9.47 \end{aligned}$ |
| A3 | $\begin{aligned} & \text { S56 43.80: } \\ & \text { E065 59.38 } \end{aligned}$ | $\begin{aligned} & \text { S56 47.81: } \\ & \text { E066 10.68 } \end{aligned}$ | $\begin{aligned} & \text { S56 55.20: } \\ & \text { E066 } 9.21 \end{aligned}$ | $\begin{aligned} & \text { S56 56.51: } \\ & \text { E065 56.59 } \end{aligned}$ | $\begin{aligned} & \text { S56 43.96: } \\ & \text { E065 47.81 } \end{aligned}$ |
| A4 | $\begin{aligned} & \text { S57 1.86: } \\ & \text { E065 50.20 } \end{aligned}$ | S57 11.73: <br> E066 10.04 | $\begin{aligned} & \text { S57 4.77: } \\ & \text { E066 2.05 } \end{aligned}$ | $\begin{aligned} & \text { S57 8.51: } \\ & \text { E065 55.01 } \end{aligned}$ | $\begin{aligned} & \text { S56 57.71: } \\ & \text { E066 3.60 } \end{aligned}$ |
| B1 | $\begin{aligned} & \text { S56 19.77: } \\ & \text { E066 24.88 } \end{aligned}$ | $\begin{aligned} & \text { S56 24.48: } \\ & \text { E066 } 23.68 \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { S56 27.58: } \\ \text { E066 11.59 } \end{array}$ | $\begin{aligned} & \text { S56 15.71: } \\ & \text { E066 14.24 } \end{aligned}$ | $\begin{aligned} & \text { S56 15.57: } \\ & \text { E066 32.45 } \end{aligned}$ |
| B2 | $\begin{aligned} & \text { S56 32.59: } \\ & \text { E066 26.48 } \end{aligned}$ | $\begin{aligned} & \text { S56 41.04: } \\ & \text { E066 33.01 } \end{aligned}$ | $\begin{aligned} & \text { S56 41.31: } \\ & \text { E066 15.90 } \end{aligned}$ | $\begin{aligned} & \text { S56 36.50: } \\ & \text { E066 12.88 } \end{aligned}$ | $\begin{aligned} & \text { S56 31.14: } \\ & \text { E066 16.33 } \end{aligned}$ |
| B3 | $\begin{aligned} & \text { S56 57.24: } \\ & \text { E066 } 30.36 \end{aligned}$ | $\begin{aligned} & \text { S56 56.25: } \\ & \text { E066 15.73 } \end{aligned}$ | $\begin{aligned} & \text { S56 51.16: } \\ & \text { E066 25.84 } \end{aligned}$ | $\begin{aligned} & \text { S56 48.05: } \\ & \text { E066 15.76 } \end{aligned}$ | $\begin{aligned} & \text { S56 43.91: } \\ & \text { E066 26.87 } \end{aligned}$ |
| B4 | $\begin{aligned} & \text { S57 8.66: } \\ & \text { E066 } 31.75 \end{aligned}$ | $\begin{aligned} & \text { S57 10.15: } \\ & \text { E066 } 18.07 \end{aligned}$ | $\begin{aligned} & \text { S56 57.75: } \\ & \text { E066 36.28 } \end{aligned}$ | $\begin{aligned} & \text { S56 58.71: } \\ & \text { E066 11.59 } \end{aligned}$ | $\begin{aligned} & \text { S57 3.86: } \\ & \text { E066 22.46 } \end{aligned}$ |
| Cl | $\begin{aligned} & \text { S56 13.43: } \\ & \text { E066 } 43.93 \end{aligned}$ | $\begin{aligned} & \text { S56 14.03: } \\ & \text { E066 51.00 } \end{aligned}$ | $\begin{aligned} & \text { S56 20.12: } \\ & \text { E066 } 47.04 \end{aligned}$ | $\begin{aligned} & \text { S56 20.73: } \\ & \text { E067 2.48 } \end{aligned}$ | $\begin{aligned} & \text { S56 25.59: } \\ & \text { E066 56.10 } \end{aligned}$ |
| C 2 | $\begin{aligned} & \text { S56 28.07: } \\ & \text { E066 46.62 } \end{aligned}$ | $\begin{aligned} & \text { S56 33.00: } \\ & \text { E067 5.98 } \end{aligned}$ | $\begin{aligned} & \text { S56 37.80: } \\ & \text { FO66 } 5500 \end{aligned}$ | $\begin{aligned} & \text { S56 40.03: } \\ & \text { E067 4.47 } \end{aligned}$ | $\begin{aligned} & \text { S56 38.39: } \\ & \text { E066 41.83 } \end{aligned}$ |
| C3 | $\begin{aligned} & \text { S56 42.86: } \\ & \text { E066 59.98 } \end{aligned}$ | $\begin{aligned} & \text { S56 48.13: } \\ & \text { E066 39.05 } \end{aligned}$ | $\begin{aligned} & \text { S56 53.97: } \\ & \text { E066 } 45.39 \end{aligned}$ | $\begin{aligned} & \text { S56 48.01: } \\ & \text { E066 56.59 } \end{aligned}$ | $\begin{aligned} & \text { S56 57.31: } \\ & \text { E067 2.60 } \end{aligned}$ |
| C4 | $\begin{aligned} & \text { S56 59.31: } \\ & \text { E067 3.75 } \end{aligned}$ | $\begin{aligned} & \text { S57 9.51: } \\ & \text { E066 59.68 } \end{aligned}$ | $\begin{aligned} & \text { S57 7.15: } \\ & \text { E066 41.78 } \end{aligned}$ | $\begin{aligned} & \text { S57 12.46: } \\ & \text { E066 38.81 } \end{aligned}$ | $\begin{aligned} & \text { S57 1.67: } \\ & \text { E066 49.23 } \end{aligned}$ |
| D 1 | $\begin{aligned} & \text { S56 17.42: } \\ & \text { E067 25.10 } \end{aligned}$ | $\begin{aligned} & \text { S56 22.14: } \\ & \text { E067 12.51 } \end{aligned}$ | $\begin{aligned} & \text { S56 12.84: } \\ & \text { E067 21.12 } \end{aligned}$ | $\begin{aligned} & \text { S56 23.03: } \\ & \text { E067 22.84 } \end{aligned}$ | $\begin{aligned} & \text { S56 13.68: } \\ & \text { E067 } 10.66 \end{aligned}$ |
| D2 | $\begin{aligned} & \text { S56 32.16: } \\ & \text { E067 7.69 } \end{aligned}$ | $\begin{aligned} & \text { S56 33.54: } \\ & \text { E067 } 26.84 \end{aligned}$ | $\begin{aligned} & \text { S56 37.29: } \\ & \text { E067 11.22 } \end{aligned}$ | $\begin{aligned} & \text { S56 27.87: } \\ & \text { E } 0672871 \end{aligned}$ | $\begin{aligned} & \text { S56 38.10: } \\ & \text { E067 } 20.66 \end{aligned}$ |
| D3 | $\begin{aligned} & \text { S56 50.27: } \\ & \text { E067 } 28.99 \end{aligned}$ | $\begin{aligned} & \text { S56 46.18: } \\ & \text { E067 } 12.53 \end{aligned}$ | $\begin{aligned} & \text { S56 42.89: } \\ & \text { E067 26.35 } \end{aligned}$ | $\begin{aligned} & \text { S56 56.10: } \\ & \text { E067 } 7.64 \end{aligned}$ | $\begin{aligned} & \text { S56 57.46: } \\ & \text { E067 31.84 } \end{aligned}$ |
| D4 | $\begin{aligned} & \text { S57 11.71: } \\ & \text { E067 31.52 } \end{aligned}$ | $\begin{aligned} & \text { S57 11.31: } \\ & \text { E067 10.26 } \end{aligned}$ | $\begin{aligned} & \text { S57 11.92: } \\ & \text { E067 } 20.28 \end{aligned}$ | $\begin{aligned} & \text { S57 1.14: } \\ & \text { E067 } 29.01 \end{aligned}$ | $\begin{aligned} & \text { S57 1.82: } \\ & \text { E067 15.79 } \end{aligned}$ |
| E1 | $\begin{aligned} & \text { S56 17.94: } \\ & \text { E067 } 47.43 \end{aligned}$ | $\begin{aligned} & \text { S56 21.58: } \\ & \text { E067 35.71 } \end{aligned}$ | $\begin{aligned} & \text { S56 22.18: } \\ & \text { E067 53.91 } \end{aligned}$ | $\begin{aligned} & \text { S56 26.71: } \\ & \text { E067 43.50 } \end{aligned}$ | $\begin{aligned} & \text { S56 14.81: } \\ & \text { E067 36.87 } \end{aligned}$ |

Table 1-continued

| Square Grid Locations | First Station | Sccond Station | Third Station | Fourth Station | Fifth Station |
| :---: | :---: | :---: | :---: | :---: | :---: |
| E2 | $\begin{aligned} & \text { S56 34.13: } \\ & \text { E067 33.41 } \end{aligned}$ | $\begin{aligned} & \text { S56 39.36: } \\ & \text { E067 43.38 } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { S56 27.69: } \\ \text { E067 52.77 } \end{array}$ | $\begin{aligned} & \text { S56 27.87; } \\ & \text { E067 42.28 } \end{aligned}$ | $\begin{aligned} & \text { S56 33.46: } \\ & \text { E067 } 44.98 \end{aligned}$ |
| E3 | $\begin{aligned} & \text { S56 52.19: } \\ & \text { E067 51.62 } \end{aligned}$ | $\begin{aligned} & \text { S56 48.28: } \\ & \text { E067 } 42.73 \end{aligned}$ | $\begin{aligned} & \text { S56 56.95: } \\ & \text { E067 57.64 } \end{aligned}$ | $\begin{aligned} & \text { S56 45.39: } \\ & \text { E067 55.36 } \end{aligned}$ | $\begin{aligned} & \text { S56 55.34: } \\ & \text { F067 } 4767 \end{aligned}$ |
| E4 | $\begin{aligned} & \text { S57 10.30: } \\ & \text { E067 } 45.79 \end{aligned}$ | $\begin{aligned} & \text { S57 0.91: } \\ & \text { E067 55.70 } \end{aligned}$ | $\begin{array}{\|l\|} \hline 5576.08: \\ \text { E067 39.83 } \end{array}$ | $\begin{aligned} & \text { S57 8.91: } \\ & \text { E067 59.13 } \end{aligned}$ | $\begin{aligned} & \text { S57 4.51: } \\ & \text { E067 } 48.72 \end{aligned}$ |
| F2 | S56 31.79: <br> E068 19.54 | $\begin{aligned} & \text { S56 29.77: } \\ & \text { E068 7.02 } \end{aligned}$ | $\begin{array}{\|l} \text { S56 42.14: } \\ \text { E068 19.35 } \end{array}$ | $\begin{aligned} & \text { S56 39.69: } \\ & \text { E068 27.72 } \end{aligned}$ | $\begin{aligned} & \text { S56 42.53: } \\ & \text { E068 2.68 } \end{aligned}$ |
| F3 | $\begin{aligned} & \text { S56 49.85: } \\ & \text { E068 10.15 } \end{aligned}$ | $\begin{aligned} & \text { S56 53.68: } \\ & \text { E068 6.36 } \end{aligned}$ | $\begin{aligned} & \text { S56 50.13: } \\ & \text { E068 26.41 } \end{aligned}$ | $\begin{aligned} & \text { S56 42.67: } \\ & \text { E068 27.43 } \end{aligned}$ | $\begin{aligned} & \text { S56 44.87: } \\ & \text { E068 18.07 } \end{aligned}$ |
| F4 | $\begin{aligned} & \text { S57 1.32: } \\ & \text { E068 15.10 } \end{aligned}$ | $\begin{aligned} & \text { S57 11:30: } \\ & \text { E068 } 22.33 \end{aligned}$ | $\begin{aligned} & \text { S57 5.48: } \\ & \text { E068 21.23 } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { S56 58.09: } \\ \text { E068 24.18 } \end{array}$ | $\begin{aligned} & \text { S57 9.65: } \\ & \text { E068 7.07 } \end{aligned}$ |
| G3 | $\begin{aligned} & \text { S56 52.75: } \\ & \text { E068 44.92 } \end{aligned}$ | $\begin{aligned} & \text { S56 51.43: } \\ & \text { E068 47.19 } \end{aligned}$ | $\begin{aligned} & \text { S56 } 43.84: \\ & \text { E068 55.14 } \end{aligned}$ | $\begin{aligned} & \text { S56 43.63: } \\ & \text { E068 } 40.01 \end{aligned}$ | $\begin{aligned} & \text { S56 49.36: } \\ & \text { E068 34.34 } \end{aligned}$ |
| G4 | $\begin{aligned} & \text { S57 9.15: } \\ & \text { E068 45.12 } \end{aligned}$ | $\begin{aligned} & \text { S57 9.09: } \\ & \text { E068 54.03 } \end{aligned}$ | $\begin{aligned} & \text { S57 10.80: } \\ & \text { E068 34.27 } \end{aligned}$ | $\begin{aligned} & \text { S57 0.20: } \\ & \text { E068 46.70 } \end{aligned}$ | $\begin{aligned} & \text { S57 5.54: } \\ & \text { E068 38.71 } \end{aligned}$ |
| H3 | $\begin{aligned} & \text { S56 55.61: } \\ & \text { E069 16.27 } \end{aligned}$ | $\begin{aligned} & \text { S56 45.47: } \\ & \text { E069 14.63 } \end{aligned}$ | $\begin{aligned} & \text { S56 51.20: } \\ & \text { E068 } 57.49 \end{aligned}$ | $\begin{aligned} & \text { S56 } 50.62: \\ & \text { E069 17.28 } \end{aligned}$ | $\begin{aligned} & \text { S56 43.85: } \\ & \text { E068 57.67 } \end{aligned}$ |
| H4 | $\begin{array}{\|l\|} \text { S57 3.55: } \\ \text { E068 58.58 } \end{array}$ | $\begin{aligned} & \text { S57 5.71: } \\ & \text { E069 18.97 } \end{aligned}$ | $\begin{aligned} & \text { S56 59.69: } \\ & \text { E069 9.34 } \end{aligned}$ | $\begin{aligned} & \text { S57 10.24: } \\ & \text { E069 7.86 } \end{aligned}$ | $\begin{aligned} & \text { S57 11.67: } \\ & \text { E069 18.29 } \end{aligned}$ |
| 13 | $\begin{array}{\|l} \hline \text { S56 } 54.98: \\ \text { E069 28.76 } \end{array}$ | $\begin{aligned} & \text { S56 45.85: } \\ & \text { E069 44.25 } \end{aligned}$ | $\begin{aligned} & \text { S56 52.47: } \\ & \text { E069 40.74 } \end{aligned}$ | $\begin{aligned} & \text { S56 47.59: } \\ & \text { E069 33.11 } \end{aligned}$ | $\begin{aligned} & \text { S56 49.09: } \\ & \text { E069 23.90 } \end{aligned}$ |
| 14 | $\begin{aligned} & \text { S56 58.09: } \\ & \text { E069 22.93 } \end{aligned}$ | $\begin{aligned} & \text { S56 } 58.48: \\ & \text { E069 } 29.63 \end{aligned}$ | $\begin{aligned} & S 575.01: \\ & \text { E069 28.52 } \end{aligned}$ | $\begin{aligned} & \text { S57 2.20: } \\ & \text { E069 40.34 } \end{aligned}$ | $\begin{aligned} & \text { S57 6.80; } \\ & \text { E069 44.71 } \end{aligned}$ |
| J2 | $\begin{aligned} & \text { S56 41.22: } \\ & \text { E070 12.99 } \end{aligned}$ | $\begin{aligned} & \text { S56 37.35: } \\ & \text { E070 5.22 } \end{aligned}$ | $\begin{aligned} & \text { S56 28.16: } \\ & \text { E070 6.82 } \end{aligned}$ | $\begin{aligned} & \text { S56 37.77: } \\ & \text { E069 50.54 } \end{aligned}$ | $\begin{aligned} & \text { S56 42.32: } \\ & \text { E069 57.38 } \end{aligned}$ |
| J3 | $\begin{aligned} & \text { S56 44.29: } \\ & \text { E070 3.81 } \end{aligned}$ | $\begin{aligned} & \text { S56 46.26: } \\ & \text { E070 4.58 } \end{aligned}$ | $\begin{aligned} & \text { S56 48.97: } \\ & \text { E070 16.73 } \end{aligned}$ | $\begin{aligned} & \text { S56 53.70: } \\ & \text { E069 } 59.62 \end{aligned}$ | $\begin{aligned} & \text { S56 49.47: } \\ & \text { E069 50.61 } \end{aligned}$ |
| J4 | $\begin{aligned} & \text { S57 7.43: } \\ & \text { E070 0.43 } \end{aligned}$ | $\begin{aligned} & \text { S57 6.37: } \\ & \text { E070 } 8.17 \end{aligned}$ | $\begin{aligned} & \text { S56 57.71: } \\ & \text { E070 14.28 } \end{aligned}$ | $\begin{aligned} & \text { S57 0.09: } \\ & \text { E069 55.88 } \end{aligned}$ | $\begin{aligned} & \text { S57 11.12: } \\ & \text { E070 13.28 } \end{aligned}$ |
| K2 | $\begin{aligned} & \text { S56 35.56: } \\ & \text { E070 23.01 } \end{aligned}$ | $\begin{aligned} & \text { S56 30.25: } \\ & \text { E070 43.89 } \end{aligned}$ | $\begin{aligned} & \text { S56 38.08: } \\ & \text { E070 } 32.86 \end{aligned}$ | $\begin{aligned} & \text { S56 28.40: } \\ & \text { E070 21.44 } \end{aligned}$ | $\begin{aligned} & \text { S56 42.07: } \\ & \text { E070 23.07 } \end{aligned}$ |
| K3 | $\begin{aligned} & \text { S56 48.69: } \\ & \text { E070 18.37 } \end{aligned}$ | $\begin{aligned} & \text { S56 54.12: } \\ & \text { E070 24.61 } \end{aligned}$ | $\begin{aligned} & \text { S56 44.02: } \\ & \text { E070 36.35 } \end{aligned}$ | $\begin{aligned} & \text { S56 54.77: } \\ & \text { E070 38.90 } \end{aligned}$ | $\begin{aligned} & \text { S56 49.46: } \\ & \text { E070 } 39.43 \end{aligned}$ |

Table 1-continued

| Square Grid Locations | First Station | Second Station | Third Station | Fourth Station | Fifth Station |
| :---: | :---: | :---: | :---: | :---: | :---: |
| K4 | $\begin{aligned} & \text { S57 3.49: } \\ & \text { E070 31.74 } \end{aligned}$ | $\begin{aligned} & \text { S57 9.24: } \\ & \text { E070 25.28 } \end{aligned}$ | $\begin{aligned} & \text { S56 57.79: } \\ & \text { E070 } 28.55 \end{aligned}$ | $\begin{aligned} & \text { S57 11.43: } \\ & \text { E070 } 44.95 \end{aligned}$ | $\begin{aligned} & \text { S57 0.18: } \\ & \text { E070 18.83 } \end{aligned}$ |
| L2 | $\begin{aligned} & \text { S56 41.58: } \\ & \text { E070 52.32 } \end{aligned}$ | $\begin{aligned} & \text { S56 40.63: } \\ & \text { E071 10.52 } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { S56 28.96: } \\ \text { E071 11.74 } \end{array}$ | $\begin{aligned} & \text { S56 37.49: } \\ & \text { E070 46.66 } \end{aligned}$ | $\begin{aligned} & \text { S56 37.42: } \\ & \text { E071 } 2.33 \end{aligned}$ |
| L3 | $\begin{aligned} & \text { S56 43.03: } \\ & \text { E070 56.09 } \end{aligned}$ | $\begin{aligned} & \text { S56 47.01: } \\ & \text { E071 } 3.54 \end{aligned}$ | S56 51.73: | $\begin{aligned} & \text { S56 56.84: } \\ & \text { E070 47.53 } \end{aligned}$ | $\begin{aligned} & \text { S56 55.15: } \\ & \text { E071 } 4.23 \end{aligned}$ |
| L4 | $\begin{aligned} & \text { S56 59.49: } \\ & \text { E070 59.86 } \end{aligned}$ | $\begin{aligned} & \text { S57 8.39: } \\ & \text { E070 } 56.57 \end{aligned}$ | $\begin{array}{\|l\|l} \text { S57 1.20:. } \\ \text { E070 } 48.39 \end{array}$ | $\begin{aligned} & \text { S57 5.07: } \\ & \text { E071 } 8.73 \end{aligned}$ | $\begin{aligned} & \text { S57 9.40: } \\ & \text { E070 } 45.68 \end{aligned}$ |
| L5 | $\begin{aligned} & \text { S57 25.96: } \\ & \text { E071 } 4.82 \end{aligned}$ | $\begin{aligned} & \text { S57 26.01: } \\ & \text { E071 12.54 } \end{aligned}$ | $\begin{aligned} & \text { S57 16.56: } \\ & \text { E071 } 10.81 \end{aligned}$ | $\begin{aligned} & \text { S57 16.14: } \\ & \text { E070 58.26 } \end{aligned}$ | $\begin{aligned} & S 57 \text { 19.40: } \\ & \text { E070 } 50.56 \end{aligned}$ |
| M2 | $\begin{aligned} & \text { S56 30.47: } \\ & \text { E071 } 26.49 \end{aligned}$ | $\begin{aligned} & \text { S56 41.30: } \\ & \text { E071 32.08 } \end{aligned}$ | $\begin{aligned} & \text { S56 36.42: } \\ & \text { E071 } 24.09 \end{aligned}$ | $\begin{aligned} & \text { S56 38.61: } \\ & \text { E071 14.23 } \end{aligned}$ | $\begin{aligned} & \text { S56 28.57: } \\ & \text { E071 16.97 } \end{aligned}$ |
| M3 | $\begin{aligned} & \text { S56 51.90: } \\ & \text { E071 } 29.02 \end{aligned}$ | $\begin{aligned} & \text { S56 51.44: } \\ & \text { E071 } 29.81 \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { S56 43.59: } \\ \text { E071 21.03 } \end{array}$ | $\begin{aligned} & \text { S56 57.22: } \\ & \text { E071 38.90 } \end{aligned}$ | $\begin{aligned} & \text { S56 55.56: } \\ & \text { E071 } 19.31 \end{aligned}$ |
| M4 | $\begin{aligned} & \text { S57 8.41: } \\ & \text { E071 } 36.19 \end{aligned}$ | $\begin{aligned} & \text { S57 1.54: } \\ & \text { E071 } 36.32 \end{aligned}$ | $\begin{array}{\|l\|} \hline S 578.12: \\ \text { E071 } 18.90 \end{array}$ | $\begin{aligned} & \text { S56 58.48: } \\ & \text { E071 14.11 } \end{aligned}$ | $\begin{aligned} & \text { S57 11.74: } \\ & \text { E071 } 28.07 \end{aligned}$ |
| M5 | $\begin{aligned} & \text { S57 24.86: } \\ & \text { E071 } 12.87 \end{aligned}$ | $\begin{aligned} & \text { S57 22.91: } \\ & \text { E071 29.50 } \end{aligned}$ | $\begin{array}{\|l\|l\|} \hline \text { S57 15.88: } \\ \text { E071 } 29.57 \end{array}$ | $\begin{aligned} & \text { S57 18.36: } \\ & \text { E071 } 18.60 \end{aligned}$ | $\begin{aligned} & \text { S57 17.03: } \\ & \text { E071 38.76 } \end{aligned}$ |
| N2 | $\begin{aligned} & \text { S56 36.28: } \\ & \text { E071 } 41.27 \end{aligned}$ | $\begin{aligned} & \text { S56 36.81: } \\ & \text { E071 } 59.21 \end{aligned}$ | $\begin{array}{\|l\|} \text { S56 41.04: } \\ \text { E071 } 44.72 \end{array}$ | $\begin{aligned} & \text { S56 29.13: } \\ & \text { E071 } 48.45 \end{aligned}$ | $\begin{aligned} & \text { S56 28.46: } \\ & \text { E072 0.76 } \end{aligned}$ |
| N3 | $\begin{aligned} & \text { S56 54.39: } \\ & \text { E072 3.05 } \end{aligned}$ | $\begin{aligned} & \text { S56 49.45: } \\ & \text { E071 } 44.59 \end{aligned}$ | $\begin{aligned} & \text { S56 45.04: } \\ & \text { F } 072440 \end{aligned}$ | $\begin{aligned} & \text { S56 56.14: } \\ & \text { E071 } 42.39 \end{aligned}$ | $\begin{aligned} & \text { S56 56.67: } \\ & \text { E071 53.95 } \end{aligned}$ |
| N4 | $\begin{aligned} & \text { S57 10.90: } \\ & \text { E071 } 42.78 \end{aligned}$ | $\begin{aligned} & \text { S56 59.54: } \\ & \text { E071 51.25 } \end{aligned}$ | $\begin{aligned} & \text { S57 9.56: } \\ & \text { E072 } 2.23 \end{aligned}$ | $\begin{aligned} & \text { S56 59.08: } \\ & \text { F072 } 075 \end{aligned}$ | $\begin{aligned} & \text { S57 5.76: } \\ & \text { E071 52.41 } \end{aligned}$ |

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


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 | $\begin{aligned} & \text { S59 6.68: } \\ & \text { E074 } 8.29 \end{aligned}$ | $\begin{aligned} & \text { S58 57.00: } \\ & \text { E074 8.20 } \end{aligned}$ | $\begin{aligned} & \text { S58 52.09: } \\ & \text { E073 } 58.17 \end{aligned}$ | $\begin{aligned} & \text { S59 1.81: } \\ & \text { E074 22.81 } \end{aligned}$ | $\begin{aligned} & \text { S58 51.15: } \\ & \text { E074 } 7.73 \end{aligned}$ |
| A4 | $\begin{aligned} & \text { S59 19.98: } \\ & \text { E074 44.54 } \end{aligned}$ | $\begin{aligned} & \text { S59 24.14: } \\ & \text { E074 } 39.25 \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { S59 28.51: } \\ \text { E074 16.83 } \end{array}$ | $\begin{aligned} & \text { S59 10.38: } \\ & \text { E074 43.06 } \end{aligned}$ | $\begin{aligned} & \text { S59 16.09: } \\ & \text { E074 34.18 } \end{aligned}$ |
| B2 | $\begin{aligned} & \text { S58 29.53: } \\ & \text { E075 } 8.08 \end{aligned}$ | $\begin{aligned} & \text { S58 34.35: } \\ & \text { E075 29.03 } \end{aligned}$ | $\begin{aligned} & \text { S58 25.12: } \\ & \text { E075 13.44 } \end{aligned}$ | $\begin{aligned} & \text { S58 24.11: } \\ & \text { E074 49.18 } \end{aligned}$ | $\begin{aligned} & \text { S58 40.60: } \\ & \text { E074 51.30 } \end{aligned}$ |
| B3 | $\begin{aligned} & \text { S58 43.13: } \\ & \text { E074 55.73 } \end{aligned}$ | $\begin{aligned} & \text { S59 1.89: } \\ & \text { E075 11.48 } \end{aligned}$ | $\begin{aligned} & \text { S59 6.61: } \\ & \text { E074 56.73 } \end{aligned}$ | $\begin{aligned} & \text { S58 47.70: } \\ & \text { E075 } 17.89 \end{aligned}$ | $\begin{aligned} & \text { S59 0.79: } \\ & \text { E074 48.47 } \end{aligned}$ |
| B4 | $\begin{aligned} & \text { S59 27.04: } \\ & \text { E074 58.19 } \end{aligned}$ | $\begin{aligned} & \text { S59 24.82: } \\ & \text { E075 } 15.60 \end{aligned}$ | $\begin{aligned} & \text { S59 14.62: } \\ & \text { E074 } 48.93 \end{aligned}$ | $\begin{aligned} & \text { S59 15.43: } \\ & \text { E075 19.41 } \end{aligned}$ | $\begin{aligned} & \text { S59 31.66: } \\ & \text { E074 49.16 } \end{aligned}$ |
| C1 | $\begin{aligned} & \text { S58 17.16: } \\ & \text { E075 } 36.55 \end{aligned}$ | $\begin{aligned} & \text { S58 6.50: } \\ & \text { E075 38.50 } \end{aligned}$ | $\begin{aligned} & \text { S58 12.30: } \\ & \text { E076 21.48 } \end{aligned}$ | $\begin{aligned} & \text { S57 57.65: } \\ & \text { E075 40.85 } \end{aligned}$ | $\begin{aligned} & \text { S58 1.11: } \\ & \text { E075 51.03 } \end{aligned}$ |
| C 2 | $\begin{aligned} & \text { S58 36.14: } \\ & \text { E076 } 15.55 \end{aligned}$ | $\begin{aligned} & \text { S58 41.71: } \\ & \text { E075 43.27 } \end{aligned}$ | $\begin{aligned} & \text { S58 35.57: } \\ & \text { F075 } 5708 \end{aligned}$ | $\begin{aligned} & \text { S58 18.14: } \\ & \text { E076 } 9.18 \end{aligned}$ | $\begin{aligned} & \text { S58 39.07: } \\ & \text { E076 4.40 } \end{aligned}$ |
| C3 | $\begin{aligned} & \text { S59 0.99: } \\ & \text { E075 50.17 } \end{aligned}$ | $\begin{aligned} & \text { S59 7.12: } \\ & \text { E075 } 44.47 \end{aligned}$ | $\begin{aligned} & \text { S58 55.64: } \\ & \text { E075 43.37 } \end{aligned}$ | $\begin{aligned} & \text { S59 2.32: } \\ & \text { E076 } 0.84 \end{aligned}$ | $\begin{aligned} & \text { S58 53.08: } \\ & \text { E076 } 6.38 \end{aligned}$ |
| C4 | $\begin{aligned} & \text { S59 22.69: } \\ & \text { E075 } 41.90 \end{aligned}$ | $\begin{aligned} & \text { S59 21.69: } \\ & \text { E075 59.30 } \end{aligned}$ | $\begin{aligned} & \text { S59 9.30: } \\ & \text { E076 } 3.10 \end{aligned}$ | $\begin{aligned} & \text { S59 29.82: } \\ & \text { E076 11.60 } \end{aligned}$ | $\begin{aligned} & \text { S59 17.08: } \\ & \text { E075 41.12 } \end{aligned}$ |
| D1 | $\begin{aligned} & \text { S57 54.15: } \\ & \text { E076 } 33.90 \end{aligned}$ | $\begin{aligned} & \text { S58 0.02: } \\ & \text { E076 46.21 } \end{aligned}$ | $\begin{aligned} & \text { S58 8.06: } \\ & \text { E076 36.40 } \end{aligned}$ | $\begin{aligned} & \text { S58 14.02: } \\ & \text { E076 } 35.91 \end{aligned}$ | $\begin{aligned} & \text { S58 2.87: } \\ & \text { E077 } 5.60 \end{aligned}$ |
| D2 | $\begin{aligned} & \text { S58 20.00: } \\ & \text { E076 } 40.46 \end{aligned}$ | $\begin{aligned} & \text { S58 34.60: } \\ & \text { E076 } 34.08 \end{aligned}$ | $\begin{aligned} & \text { S58 20.38: } \\ & \text { E076 } 55.38 \end{aligned}$ | $\begin{aligned} & \text { S58 32.81: } \\ & \text { E076 54.16 } \end{aligned}$ | $\begin{aligned} & \text { S58 27.78: } \\ & \text { E076 } 47.82 \end{aligned}$ |
| D3 | $\begin{aligned} & \text { S58 53.31: } \\ & \text { E077 } 7.82 \end{aligned}$ | $\begin{aligned} & \text { S58 47.37: } \\ & \text { E077 7.06 } \end{aligned}$ | $\begin{aligned} & \text { S59 0.93: } \\ & \text { E076 51.30 } \end{aligned}$ | $\begin{aligned} & \text { S59 0.73: } \\ & \text { E076 34.51 } \end{aligned}$ | $\begin{aligned} & \text { S58 52.71: } \\ & \text { E076 } 43.69 \end{aligned}$ |
| D4 | $\begin{aligned} & \text { S59 31.62: } \\ & \text { E077 } 1.82 \end{aligned}$ | $\begin{aligned} & \text { S59 20.84: } \\ & \text { E076 } 25.43 \end{aligned}$ | $\begin{aligned} & \text { S59 15.43: } \\ & \text { E076 } 46.96 \end{aligned}$ | $\begin{aligned} & \text { S59 24.03: } \\ & \text { E076 46.41 } \end{aligned}$ | $\begin{aligned} & \text { S59 18.48: } \\ & \text { E076 } 58.35 \end{aligned}$ |
| E2 | $\begin{aligned} & \text { S58 38.66: } \\ & \text { E077 } 42.49 \end{aligned}$ | $\begin{aligned} & \text { S58 20.46: } \\ & \text { E077 28.30 } \end{aligned}$ | $\begin{aligned} & \text { S58 38.91: } \\ & \text { E077 55.26 } \end{aligned}$ | $\begin{aligned} & \text { S58 18.90: } \\ & \text { E077 40.11 } \end{aligned}$ | $\begin{aligned} & \text { S58 31.56: } \\ & \text { E077 27.30 } \end{aligned}$ |
| E3 | $\begin{aligned} & \text { S58 57.84: } \\ & \text { E077 } 44.98 \end{aligned}$ | $\begin{aligned} & \text { S58 43.81: } \\ & \text { E077 } 32.47 \end{aligned}$ | $\begin{aligned} & \text { S58 49.99: } \\ & \text { E077 } 24.67 \end{aligned}$ | $\begin{aligned} & \text { S58 57.63: } \\ & \text { E077 } 19.60 \end{aligned}$ | $\begin{aligned} & \text { S58 45.47: } \\ & \text { E077 14.52 } \end{aligned}$ |
| E4 | $\begin{aligned} & \text { S59 24.97: } \\ & \text { E077 45.35 } \end{aligned}$ | $\begin{aligned} & \text { S59 13.35: } \\ & \text { E077 44.94 } \end{aligned}$ | $\begin{aligned} & \text { S59 24.86: } \\ & \text { E077 18.27 } \end{aligned}$ | $\begin{aligned} & \text { S59 9.74: } \\ & \text { E077 55.79 } \end{aligned}$ | $\begin{aligned} & \text { S59 30.39: } \\ & \text { E077 } 58.36 \end{aligned}$ |

Table 2-continued

| Square <br> Grid Locations | First Station | Sccond Station | Third Station | Fourth Station | Fifth Station |
| :---: | :---: | :---: | :---: | :---: | :---: |
| F2 | $\begin{aligned} & \text { S58 31.85: } \\ & \text { E078 25.98 } \end{aligned}$ | $\begin{aligned} & \text { S58 37.98: } \\ & \text { E078 48:39 } \end{aligned}$ | $\begin{aligned} & \text { S58 } 23.37: \\ & \text { E078 } 26.88 \end{aligned}$ | $\begin{aligned} & \text { S58 37.55: } \\ & \text { E078 4.15 } \end{aligned}$ | $\begin{aligned} & \text { S58 35.15: } \\ & \text { E078 } 37.45 \end{aligned}$ |
| F3 | $\begin{aligned} & \text { S59 5.07: } \\ & \text { E078 } 47.42 \end{aligned}$ | $\begin{aligned} & \text { S58 } 44.51: \\ & \text { E078 } 9.18 \end{aligned}$ | $\begin{aligned} & \text { S58 49.35: } \\ & \text { E078 45.16 } \end{aligned}$ | $\begin{aligned} & \text { S58 56.32: } \\ & \text { E078 21.30 } \end{aligned}$ | $\begin{aligned} & \text { S58 50.65: } \\ & \text { E078 } 32.24 \end{aligned}$ |
| F4 | $\begin{aligned} & \text { S59 32.20: } \\ & \text { E078 11.72 } \end{aligned}$ | $\begin{aligned} & \text { S59 26.32: } \\ & \text { E078 } 20.90 \end{aligned}$ | $\begin{aligned} & \text { S59 16.74: } \\ & \text { E078 41.97 } \end{aligned}$ | $\begin{aligned} & \text { S59 8.90: } \\ & \text { E078 } 5.97 \end{aligned}$ | $\begin{aligned} & \text { S59 31.68: } \\ & \text { E078 } 1.58 \end{aligned}$ |
| G1 | $\begin{aligned} & \text { S58 14.30: } \\ & \text { E078 52.18 } \end{aligned}$ | $\begin{aligned} & \text { S58 1.97: } \\ & \text { E079 24.58 } \end{aligned}$ | $\begin{aligned} & \text { S58 15.23: } \\ & \text { E079 1.60 } \end{aligned}$ | $\begin{aligned} & \text { S58 14.37: } \\ & \text { E079 14.31 } \end{aligned}$ | $\begin{aligned} & \text { S58 9.69: } \\ & \text { E079 36.73 } \end{aligned}$ |
| G2 | $\begin{aligned} & \text { S58 36.12: } \\ & \text { E079 33.11 } \end{aligned}$ | $\begin{aligned} & \text { S58 40.88: } \\ & \text { E078 } 50.21 \end{aligned}$ | $\begin{aligned} & \text { S58 28.76: } \\ & \text { E079 21.33 } \end{aligned}$ | $\begin{aligned} & \text { S58 42.18: } \\ & \text { E079 25.07 } \end{aligned}$ | $\begin{aligned} & \text { S58 24.86: } \\ & \text { E079 29.63 } \end{aligned}$ |
| G3 | $\begin{aligned} & \text { S58 55.39: } \\ & \text { E078 52.74 } \end{aligned}$ | $\begin{aligned} & \text { S58 45.28: } \\ & \text { E079 18.68 } \end{aligned}$ | $\begin{array}{\|l} \text { S58 56.05: } \\ \text { E079 22.50 } \end{array}$ | $\begin{aligned} & \text { S58 52.58: } \\ & \text { E079 } 7.93 \end{aligned}$ | $\begin{aligned} & \text { S59 3.29: } \\ & \text { E079 36.09 } \end{aligned}$ |
| H1 | $\begin{array}{\|l\|} \hline \text { S57 55.18: } \\ \text { E080 24.42 } \end{array}$ | $\begin{aligned} & \text { S58 4.46: } \\ & \text { E080 13.98 } \end{aligned}$ | $\begin{aligned} & \text { S58 7.82: } \\ & \text { E080 1.07 } \end{aligned}$ | $\begin{aligned} & \text { S58 13.95: } \\ & \text { E080 4.73 } \end{aligned}$ | $\begin{aligned} & \text { S58 10.54: } \\ & \text { E080 } 24.86 \end{aligned}$ |
| H 2 | $\begin{array}{\|l\|} \hline \text { S58 18.32: } \\ \text { E079 59.36 } \end{array}$ | $\begin{aligned} & \text { S58 28.88: } \\ & \text { E080 15.16 } \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { S58 18.77: } \\ \text { E079 46.51 } \end{array}$ | $\begin{aligned} & \text { S58 } 24.00: \\ & \text { E079 } 39.85 \end{aligned}$ | $\begin{aligned} & \text { S58 39.60: } \\ & \text { E080 5.92 } \end{aligned}$ |
| H3 | $\begin{array}{\|l} \hline \text { S58 57.21: } \\ \text { E079 53.27 } \end{array}$ | $\begin{aligned} & \text { S59 2.66: } \\ & \text { E080 21.62 } \end{aligned}$ | $\begin{aligned} & \text { S59 5.28: } \\ & \text { E079 46.51 } \end{aligned}$ | $\begin{aligned} & \text { S59 7.21: } \\ & \text { E080 } 3.99 \end{aligned}$ | $\begin{array}{\|l} \text { S58 51.29: } \\ \text { E079 41.58 } \end{array}$ |
| 12 | $\begin{aligned} & \text { S58 23.29: } \\ & \text { E081 } 7.50 \end{aligned}$ | $\begin{aligned} & \text { S58 31.36: } \\ & \text { E081 } 3.21 \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { S58 38.44: } \\ \text { E080 54.85 } \end{array}$ | $\begin{aligned} & \text { S58 37.98: } \\ & \text { E081 11.40 } \end{aligned}$ | $\begin{aligned} & \text { S58 25.91: } \\ & \text { E080 45.40 } \end{aligned}$ |
| 13 | $\begin{array}{\|l\|l} \text { S58 45.18: } \\ \text { E080 } 46.79 \end{array}$ | $\begin{aligned} & \text { S58 58.96: } \\ & \text { E080 29.85 } \end{aligned}$ | $\begin{aligned} & \text { S59 2.52: } \\ & \text { E080 50.64 } \end{aligned}$ | $\begin{aligned} & \text { S59 0.10: } \\ & \text { E080 42.13 } \end{aligned}$ | $\begin{array}{\|l\|} \text { S58 50.30: } \\ \text { E080 36.72 } \end{array}$ |
| J2 | $\begin{array}{\|l\|} \hline \text { S58 42.04: } \\ \text { E081 27.22 } \end{array}$ | $\begin{aligned} & \text { S58 23.47: } \\ & \text { E081 33.11 } \end{aligned}$ | $\begin{aligned} & \text { S58 34.05: } \\ & \text { E081 31.30 } \end{aligned}$ | $\begin{aligned} & \text { S58 38.94: } \\ & \text { E081 49.52 } \end{aligned}$ | $\begin{aligned} & \text { S58 36.20: } \\ & \text { E082.0.92 } \end{aligned}$ |
| J3 | $\begin{array}{\|l\|} \hline \text { S59 1.04: } \\ \text { E081 17.15 } \end{array}$ | $\begin{aligned} & \text { S58 59.52: } \\ & \text { E081 } 37.81 \end{aligned}$ | $\begin{aligned} & \text { S58 50.94: } \\ & \text { E081 } 52.49 \end{aligned}$ | $\begin{aligned} & \text { S58 44.76: } \\ & \text { E081 } 20.67 \end{aligned}$ | $\begin{aligned} & \text { S58 48.38: } \\ & \text { E082 } 3.04 \end{aligned}$ |
| J4 | $\begin{aligned} & \text { S } 5928.18: \\ & \text { E081 } 23.78 \end{aligned}$ | $\begin{aligned} & \text { S59 10.18: } \\ & \text { E081 } 25.53 \end{aligned}$ | $\begin{aligned} & \text { S59 17.05: } \\ & \text { E081 } 22.19 \end{aligned}$ | $\begin{aligned} & \text { S59 19.17: } \\ & \text { E081 51.46 } \end{aligned}$ | $\begin{aligned} & \text { S59 23.43: } \\ & \text { E081 39.41 } \end{aligned}$ |
| J6 | $\begin{aligned} & \text { S60 12.55: } \\ & \text { E081 32.51 } \end{aligned}$ | $\begin{aligned} & \text { S60 4.44: } \\ & \text { E081 53.65 } \end{aligned}$ | $\begin{aligned} & \text { S60 7.81: } \\ & \text { E081 18.43 } \end{aligned}$ | $\begin{aligned} & \text { S60 7.67: } \\ & \text { E082 1.68 } \end{aligned}$ | $\begin{aligned} & \text { S60 17.36: } \\ & \text { E081 } 22.43 \end{aligned}$ |
| K3 | $\begin{aligned} & \text { S58 51.44: } \\ & \text { E082 17.45 } \end{aligned}$ | $\begin{aligned} & \text { S59 6.54: } \\ & \text { E082 22.58 } \end{aligned}$ | $\begin{aligned} & \text { S59 0.93: } \\ & \text { E082 49.02 } \end{aligned}$ | $\begin{aligned} & \text { S58 43.21: } \\ & \text { E082 7.79 } \end{aligned}$ | $\begin{aligned} & \text { S58 56.98: } \\ & \text { E082 } 38.52 \end{aligned}$ |
| K4 | $\begin{aligned} & \text { S59 9.53: } \\ & \text { E082 42.21 } \end{aligned}$ | $\begin{aligned} & \text { S59 29.98: } \\ & \text { E082 } 30.35 \end{aligned}$ | $\begin{aligned} & \text { S59 26.46: } \\ & \text { E082 52.60 } \end{aligned}$ | $\begin{array}{\|l\|l} \text { S59 18.94: } \\ \text { E082 24.71 } \end{array}$ | $\begin{aligned} & \text { S59 17.94: } \\ & \text { E082 9.29 } \end{aligned}$ |

Table 2-continued


## NOTES

1. Notified in the Commonwealth of Australia Gazette on
2. Statutory Rules 1994 No. 345 as amended by 1997 No. 6.
