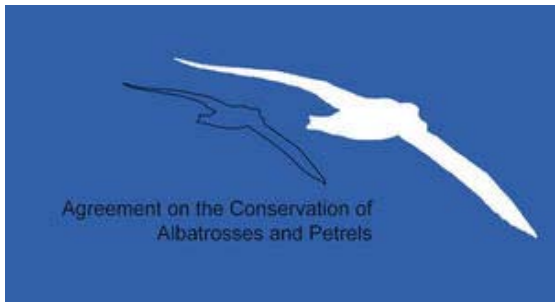

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First Meeting of the Parties

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Agenda Item No.10
ACAP/MOP1/Inf.5
A paper by the CCSBT

REPORT TO ACAP FROM THE COMMISSION FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA (CCSBT)

REPORT TO ACAP FROM THE COMMISSION FOR THE CONSERVATION OF SOUTHERN BLUEFIN TUNA (CCSBT)

The CCSBT came into effect in 1994.The Convention creating the CCSBT prescribes activities in relation to "ecologically related species", which are defined as living marine species which are associated with southern bluefin tuna, including but not restricted to both predators and prey of southern bluefin tuna.

In 1995 the CCSBT created an Ecologically Related Species Working Group to advise it matters related to these species. A copy of the terms of reference for the Working Group is at **Attachment A**. The Working Group meets every second year and has met five times to date. The sixth meeting will be held in February 2006.

Decisions taken by the Commission on seabird related matters on the advice of the Working Group include:

- to require mandatory use by all Commission members of tori poles in all long-line SBT fisheries below 30 degrees south;

- to require non-members to adopt mandatory use of tori poles in all long-line SBT fisheries below 30 degrees south; and

- the publication of education pamphlets on sharks and sea birds for fishers involved in the SBT fishery.

Tori Poles

The CCSBT's decisions to mandate the use of tori poles for longliners in the fishery are reflected in standards to be applied by members and non-members. A copy of the guidelines is at **Attachment B.**

At each meeting of the Ecologically Related Species Working Group, members are required to report using a standard reporting format. The format includes a section related to mitigation measures to minimise seabird and other species by-catch. Reporting is required on mandatory measures, voluntary measures and measures under development.

If ACAT would like to see copies of the members' reports to the last Working Group Meeting, the CCSBT Secretariat will make these available.

Seabird Pamphlets

The CCSBT agreed to prepare educational pamphlets for fishers to assist with the identification of seabirds interacting with the SBT fishery; to provide advice on mitigation measures; and to provide advice on the handling of live seabirds caught incidentally. A copy of the seabird pamphlet is at **Attachment C**.

The pamphlet was prepared for a non-scientific context where the diversity of the fishery meant a large number of seabird species could be identified; different participants in the fishery had different names for a species; fishing crews were largely made up of nationals from non-members; and durability was essential.

The pamphlet reflects these realities. The number of species was restricted to the most common species found in the main longlining components of the fishery; they are published in several languages; the text uses simple terminology; and durable waterproof materials were used. Not including the drafting and translation expenses, which were undertaken by members, the pamphlets cost about $AUS 70,000 to produce for a relatively small production run. A second edition will be required in the near future.

Observer Standards

The CCSBT has agreed to observer standards for members when their vessels are fishing for SBT. The standards require reporting on by-catch. A copy of the data collection requirements with the relevant sections highlighted is at **Attachment D**.

Prepared by the CCSBT Secretariat
October 2004.

Attachment A

Terms of Reference for the Working Group on Ecologically Related Species (ERS)

1. The Ecologically Related Species Working Group will report to the Commission through the Scientific Committee. The Scientific Committee may provide comments to the Commission on the reports (including advice and recommendations) of the Ecologically Related Species Working Group.

2. To provide information and advice on issues relating to species associated with southern bluefin tuna (SBT) (ecologically related species), with specific reference to:
   a) species (both fish and non-fish) which may be affected by SBT fisheries operations;

   b) predator and prey species which may affect the condition of the SBT stock.

3. (a) With respect to species identified in 2 a) above, to monitor trends and review existing information and relevant research, including but not limited to studies on:
      (i) the population biology of ecologically related species;
      (ii) the identification of factors affecting populations of ecologically related species;
      (iii) the assessment of the SBT and other fisheries effects on ecologically related species and of the proportion of the SBT and other fisheries effects to the overall effects;
      (iv) modification to gear and operational aspects of the SBT fishery to minimise the effects on ecologically related species

   (b) With respect to species identified in 2 b) above, to monitor trends and review existing information and relevant research, including but not limited to studies on:
      (i) the population biology of ecologically related species;
      (ii) the identification of factors affecting population of ecologically related species;
      (iii) the assessment of the effects of ecologically related species on the condition of the SBT stock

4. To provide recommendations on data collection programs and research projects with respect to species and issues identified in 2 above, including recommendations on research priorities and estimated costs of such research.

5. To provide advice on measures to minimiase fishery effects on ecologically related species, including but not limited to gear and operational modifications.

6. To provide advice on other measures which may enhance the conservation and management of ecologically related species.

7. To review these terms of reference and to recommend to the Commission changes as and when appropriate.

8. To co-operate and liaise with relevant experts, scientists (from Convention parties and elsewhere) and inter-governmental and non-governmental organisations, in data collection and analysis on ecologically related species subject to the provisions of the data handling criteria (Annex1).

9. To respond to requests for advice on specific matters from the Commission.

Attachment B

Guidelines for Design and Deployment of Tori Lines

Preamble

These guidelines are designed to assist in preparation and implementation of tori line regulations for long-line vessels.

While these guidelines are relatively explicit, they are not intended to inhibit improvement in tori line effectiveness through experimentation. The guidelines have taken into account environmental and operational variables such as weather conditions, setting speed and ship size, all of which influence tori line performance and design in protecting baits from birds. Tori line design and use may change to take account of these variables provided that line performance is not compromised. The working group envisages ongoing improvement in tori line design and consequently review of these guidelines should be undertaken in the future.

Tori Line Design

1. It is recommended that a tori line 150 m in length be used. The diameter of the section of the line in the water may be greater than that of the line above water. This increases drag and hence reduces the need for greater line length and takes account of setting speeds and length of time taken for baits to sink. The section above water should be a strong fine line (e.g. about 3 mm diameter) of a conspicuous colour such as red or orange.
2. The above water section of the line should be sufficiently light that its movement is unpredictable to avoid habituation by birds and sufficiently heavy to avoid deflection of the line by wind.
3. The line is best attached to the vessel with a robust barrel swivel to reduce tangling of the line.
4. The streamers should be made of material that is conspicuous and produces an unpredictable lively action (e.g. strong fine line sheathed in red polyurethane tubing) suspended from a robust three-way swivel (that again reduces tangles) attached to the tori line, and should hang just clear of the water.
5. There should be a maximum of 5-7 m between each streamer. Ideally each streamer should be paired.
6. Each streamer pair should be detachable by means of a clip so that line stowage is more efficient.
7. The number of streamers should be adjusted for the setting speed of the vessel, with more streamers necessary at slower setting speeds. Three pairs are appropriate for a setting speed of 10 knots.

Deployment of Tori Lines

1. The line should be suspended from a pole affixed to the vessel. The tori pole should be set as high as possible so that the line protects bait a good distance astern of the vessel and won't tangle with fishing gear. Greater pole height provides greater bait protection. For example, a height of around 6 m above the water line can give about 100 m of bait protection.
2. The tori line should be set so that streamers pass over baited hooks in the water.
3. Deployment of multiple tori lines is encouraged to provide even greater protection of baits from birds.
4. Because there is the potential for line breakage and tangling, spare tori lines should be carried onboard to replace damaged lines and to ensure fishing operations can continue uninterrupted.
5. When fishers use a bait casting machine (BCM) they must ensure coordination of tori line and machine by:
    a)ensuring the BCM throws directly under the tori line protection and
    b)when using a BCM that allows throwing to port and starboard, ensure that two tori lines are used.
6.Fishers are encouraged to install manual, electric or hydraulic winches to improve ease of deployment and retrieval of tori lines.

A standard design is detailed in various educational material available to fishers eg. *Longline fishing dollars and sense*, *Catch fish not birds*, and *Fish the seas not the sky*.

Attachment C

Seabird Pamphlets (Attachment C) will be made available during plenary.

Attachment D

Type and Format of Scientific Observer Data

A) Details of the observed vessel and gear
The vessel details are recorded only once for an entire trip

All fishing:

- Vessel's Name
- Vessel's Call-sign
- Vessel's Flag Country
- Name of the Captain
- Name of the fishing master
- Year vessel built
- Engine brake power (kw/hp)
- Overall length (metres)
- Gross tonnage (tonnes)
- Number of people in crew (all staff, excluding observers)
- Total freezer capacity (cubic metres)
- Fuel capacity (tonnes)
- Instrumentation and electronic fishing equipment

Instrumentation	Yes/No (or code)
NNSS	
GPS	
Omega	
Radio direction finder	
Radar	
Weather Fax	
Track plotter	
NOAA receiver	
Sounder (1=colour monitor, 2=monochrome monitor, 3=printer)	
Sonar (1=scanning, 2=PPI)	
Doppler current monitor	
Sea surface temperature recorder	
Bathy-thermograph	
Bird radar	

Longliners only:

- Material of mainlines (Nylon, Cotton thread, Other)
- Material of branchlines (Nylon, Cotton thread, Other)
- Material of buoylines (Nylon, Cotton thread, Other)
- Tori Pole used (Y/N)
- Bait thrower/line shooter used (Y/N)

Purse seiners only:

- Capacity of power block
- Capacity of purse winch
- Lengths and depths of all nets on board including expanded figure
- Mesh sizes of nets on board
- Number of net skiffs on board

B) Summary of the observed trip

- Observer's name
- Observer's organisation
- Date observer embarked (translatable to 24 hour clock, UTC to the day)
- Date observer disembarked (translatable to 24 hour clock, UTC to the day)

C) Comprehensive catch, effort and environmental information for each set
This information is recorded for each set while the observer is on-board a vessel, regardless of whether the set/haul was actually observed.

All fishing:

- Date and time at start of Set (translatable to 24 hour clock, UTC)
- Date and time at end of Set (translatable to 24 hour clock, UTC)
- Date and time at start of Retrieval (translatable to 24 hour clock, UTC)
- Date and time at end of Retrieval (translatable to 24 hour clock, UTC)
- Location at start of Set (latitude+N/S and longitude+E/W to a minute of accuracy)
- Wind speed (with unit) and direction (N, NNE, NE, etc.) of the operation
- At the period of the wind measured for operation (e.g. Noon, start of set etc.)
- Sea surface temperature (degrees Celsius, to 1 decimal place) at start of Set
- Intended target species[1]

Longlining:

- Location at end of Set (latitude+N/S and longitude+E/W to a minute of accuracy)
- Direction of line set (eg straight, curved)[2]
- Wind speed (with unit) and direction (N, NNE, NE, etc.)
- (Comment: It is enough to collect the temperature at the start of set) At the period of the location and wind are measured for the operation (e.g. noon, start of set etc.)
- Direction of line set (straight,curved)
- Actually used mainline length (km)
- Actually used branchline length (m)
- Actually used buoyline length (m)
- Intended depth of the shallowest hook (m)
- Intended depth of the deepest hook (m)
- Number of hooks
- Number of baskets

Distance between baskets, beacons, buoys, or floats as is appropriate to the operation (m)

- Percentage of bait by bait categories that were Fish, Squid, Artificial, and Other
- Bait status (live or dead)
- Total number by species[1] of SBT, and other tuna and tuna-like species caught, retained or discarded.
- Total processed weight (kg) and Processed State[3] by species[1] of SBT, and other species caught. (i.e. all fish, birds, turtles etc.)

Purse Seining:

- Spotter plane used (Y/N). If used:
    - Time (translatable to 24 hour clock, UTC) and location aircraft began search
    - Time (translatable to 24 hour clock, UTC) and location aircraft ended search
    - Number, location of schools spotted by aircraft
    - Estimated size of each school spotted by the aircraft
    - Total searched distance
- Bird Radar used (Y/N)
- Logbook number and type
- Start and end Time spent for searching (from xx:xx to yy:yy translatable to 24 hour clock, UTC), location and total searched distance
- School finder (plane/vessel)
- Chumming boat used (yes/no)
- Chum status (Alive/Dead)

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[1] All species should be reported with FAO species codes, or using National codes and providing a translation table to FAO species codes.

[2] Codes will be used to describe the type of line set, eg. S=straight, C=curved, U=u-shaped.

[3] RD=round/whole, GG=gilled and Gutted, DR=dressed etc., as per TIS codes.

- Amount of chum used
- Start and end time for chumming (translatable to 24 hour clock, UTC)
- Start and end time for net shooting (translatable to 24 hour clock, UTC)
- Start and end time for net hauling (translatable to 24 hour clock, UTC)
- Start and end location for net shooting
- Start and end location for net hauling
- Light attraction used (yes/no)
- Total of wattage of lights used
- Start and end time for light attraction
- School type (e.g., shoaling/surface, FAD/debris associated)
- Length (m) of net set
- Height (m) of the net
- Number of net skiffs used
- Date and time that transfer to tow cage commenced
- Identification number of the tow cage to which the SBT were transferred
- Name of Carrier Boat that received the fish
- Estimated catch per set, species composition
- Estimated weight (kg) and/or number by species of SBT and other species caught
- Estimated weight of SBT caught alive
- Estimated weight and/or number of SBT dead during operation

Cage Towing:

- Name of carrier boat
- Tow cage identification number
- Cage depth (metres)
- Cage ring diameter (metres)
- Cage mesh size (in centimetres)
- Cage has second or predator net (Y/N)
- Number of divers used
- Chute fitted in cage (Y/N)
- Effective tow speed (km/hour)
- If the catch was received from fishing operations, then for each catcher boat from which SBT were transferred, record:
    - Name of catcher boat
    - Call sign of catcher boat
    - Date and time (translatable to24 hour clock , UTC) transfer started
    - Estimated weight of SBT transferred (tonnes)/dead SBT before transfer
- If the catch was received from another tow cage, then, record:
    - Name of the carrier boat from which the SBT came
    - Identification number of the tow cage from which the SBT came
    - Date and time (translatable to 24 hour clock, UTC) transfer started.
    - Estimated weight of SBT transferred (tonnes)/dead SBT before transfer
- Date and time (translatable to 24 hour clock, UTC) and place that tow finished
- Total weight of SBT mortalities per day from commencement of towing to end of transfer to farm
- Total number of SBT mortalities per day from commencement of towing to end of transfer to farm

D) Observed catch information

This relates to that part of the catch that was actually observed by the observer during the hauling process. All information recorded here relates only to the period(s) that were observed. Annex 1 provides hierarchies for the collection of data. Observers should use these hierarchies to prioritorise data collection as circumstances prevail on the observed vessel.

Longlining:

- Date and time at the start of the observation period (translatable to 24 hour clock, UTC)
- Date and time at the end of the observation period (translatable to 24 hour clock, UTC)

- Number of hooks observed
- Total number by species[1] of caught and retrieved retained during the observed period
- Total processed weight (kg) by species[1] and Processed State[3] of all species caught and retained during the observed period
- Total number and weight when possible (whole weight, in kilograms) by species[1] caught but discarded during the observed period and life status.

Purse Seining:
The entire purse seining shooting and hauling operation should be observed

- Date and time at the start of the observation period (translatable to 24 hour clock, UTC)
- Date and time at the end of the observation period (translatable to 24 hour clock, UTC)
- Estimated % of school caught
- Estimated weight (tonnes for SBT, kg for all other species) and/or number by species of SBT, and other species caught, retained or discarded including life status
- Weight of SBT mortalities from commencement of fishing to end of transfer to cage
- Number of SBT mortalities from commencement of fishing to end of transfer to cage
- Number of species identified as escaped from commencement of fishing to end of transfer to cage
- Number by species identified as discarded from commencement of fishing to end of net hauling

Cage Towing:
The observer must observe or conduct each mortality count during the period of the tow.

- Date and time at the start of the observation period (translatable to 24 hour clock, UTC)
- Date and time at the end of the observation period (translatable to 24 hour clock, UTC)
- Total weight of SBT mortalities per day from commencement of towing to end of transfer to farm
- Total number of SBT mortalities per day from commencement of towing to end of transfer to farm

E) Biological measurements of individual fish. Biological measurements are only required for SBT, but where possible, effort should be made to measure other species.

For the purposes of SBT analyses, accurate size measurements of SBT are required. SBT should be selected in a manner to ensure within strata randomness. For example, for large numbers of fish caught in a single operation (e.g., a purse seine vessel) a systematic sampling may be appropriate

The actual number of fish should be spread throughout as many separate fishing operations as possible. For example, it is nearly always the case that sampling 20 fish (randomly) from 10 operations is much better than sampling 200 fish from every 10th operation. The required actual number of samples should be re-evaluated from time to time and as needs change.

- Species[1]
- Life status category[4]
- Length (for SBT, fork length measured on straight length, rounded up to the centimetre[5])
- Length unit
- Length code (fork length, eye fork, etc.)
- Length, lower jaw-fork length
- Whole weight (kg), if possible. This is the measured weight before processing as opposed to a calculated whole weight.
- Processed weight (kg)
- Processed State[3]
- Sex (F=female, M=male, I=indeterminate, D= not examined)
- Samples taken, specifying:
    - A unique identification number given to the sample,

[4] The observer program will, as a minimum, distinguish the following life status categories: dead and damaged; dead and undamaged; alive and vigorous; and unknown.
[5] Length should be rounded (not truncated) to the nearest centimeter. For example, 62.4cm becomes 63cm and 62.5cm becomes 63cm (63 cm for both cases).

    - The type of samples taking, including: whole specimen, or samples of otoliths, scales, vertebrae, stomach, muscle, tissue, gonads, etc.)

F) SBT Tag recovery information

Some of the data recorded here duplicates data that already exists in the previous categories of information. This is necessary because tag recovery information may be sent separately to other observer data.

- Observer's name
- Vessel's name
- Vessel's call sign
- Vessel flag
- Collect and provide the actual tags
- Tag colour
- Tag numbers (The tag number is to be provided for all tags when multiple tags were attached to one fish. If only one tag was recorded, a statement is required that specifies whether or not the other tag was missing)
- Date and time of capture (UTC)
- Location of capture (latitude+N/S and longitude+E/W to 1 minute of accuracy)
- Length (fork length, rounded up to the nearest centimetre[5])
- Processed Weight (kg.)
- Processed State[3]
- Details of samples taken, specifying:
    - A unique identification number given to the sample,
    - The type of samples taking, including: whole specimen, or samples of otoliths, scales, vertebrae, stomach, muscle, tissue, gonads, etc.)
- Sex (F=female, M=male, I=indeterminate, D=not examined)
- Condition of recaptured fish and their life status
- Whether the tags were found during a period of fishing that was being observed (Y/N)
- Reward information (e.g., name and address where to send reward)