

Report of the International Observation on the 100-fish Sampling Process and the Transfer of
SBT in Australian SBT Farming

豪州ミナマガロ蓄養業における 100 尾サンプリング及び活け込みに関する
国際オブザーバー報告

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緒言

2013 年 10 月に開催された第 8 回遵守委員会及び CCSBT 第 20 回年次会合において、豪州は、ステレオビデオカメラシステムの技術的・費用的負担が大きいことを理由に 2013 年 12 月 1 日までに同システムを導入するとして宣言を破棄する一方で、100 尾サンプリング手法及び蓄養生け簀への活け込みの観察のためにメンバーを招待すると表明した。日本の代表団はこの招待に応じ、2014 年 2 月、豪州・ポートリンカーンにおいて、豪州の SBT まき網業者または蓄養業者が、蓄養生け簀に SBT を活け込む前に行う 100 尾サンプリング及びその後の蓄養生け簀への活け込みを観察した。豪州政府及び業界からの説明もあり、サンプリングから活け込みまでの一連の流れを把握することができた。しかしながら、商業情報の保護を理由に、今回観察した 100 尾サンプリングの結果の詳細（個別の体長体重データ）を入手することは出来なかった。また、サンプル 100 尾の平均値についても未だ入手出来ていない。いずれにせよ、これらのデータが、曳船用生け簀内の 10,000-12,000 尾全体を代表するか否かは不明である。残念ながら、現時点で、蓄養向け漁獲量に関する懸念を払拭するだけのデータや情報はない。我々は、豪州がそのコミットメントに従って、ステレオビデオカメラシステムの導入による活け込み原魚の監視を一刻も早く行うことを期待する。

Preface

During the CC8 and CCSBT 20 meeting in October 2013, Australia withdrew its previous declaration to install the stereo video camera system into the Australian SBT farming by December 1, 2013 because of the economic burden on its industry. On the other hand, they invited other CCSBT Members to the observation on the 100-fish sampling and transfer process. In February 2014, Japanese delegation observed the 100-fish sampling and the transfer of SBT from a tow cage to a farming cage conducted by Australian SBT purse seine fishery and farming industry in Port Lincoln. With a great help of Australian government and industry, it gave us a good opportunity to understand the flow of the operation from the 100-fish sampling to the transfer procedure. However, we could not obtain the detailed data of individual SBT fork length and weight due to confidentiality. Also we have not received the average length and weight data of 100-fish yet. In any case, it would be unclear that these data has sufficient representativeness for 10,000-12,000 fish in one towing cage. Unfortunately, at this stage we only have insufficient data and information to resolve the uncertainty in the catch amount related to the farming sector. We strongly recommend Australia to introduce the stereo video monitoring system immediately in accordance with its previous statement.

1. 観察参加者

2013年10月の年次会合で豪州がメンバーを100尾サンプリングの観察に招待したことを受け、日本より福釜（水産庁）及び業界関係者計3名がポートリンカーンを訪れた。日本が訪問した期間に他メンバーからの参加はなかった。豪州は、DAFF・AFMA及び豪マグロ協会関係者が対応した。ポートリンカーンでは現地の業界関係者に多大なる協力を頂いた。

2. 日時・場所

100尾サンプリング・活け込み観察は、2014年2月11日(火) 8:00頃～16:00頃にかけて行われた。また、2月10日(月)、2月12日(水)、2月13日(木)には、豪州政府、豪マグロ協会、プロテックマリソ社から、豪州の100尾サンプリングを含む活け込み時のオペレーションに関する詳細な説明を受けた。

3. 活け込み方法の概要

100尾サンプリングを含む活け込み作業の手順については、豪州政府より、事前に、AFMAが公開しているブリーフィング資料の提供を受けた（添付A）。特にp18・19を参照されたい。また、豪州政府より、以下の説明があった。

- 漁場から蓄養場へは、曳船用生け簀を用いて1回あたり約10,000 - 12,000尾のSBTを7日から3週間にわたり運搬する。
- 移動に3週間程度要する場合は3-4回の給餌を行う。移動期間が6-7日の場合は、給餌は1回程度である。
- 蓄養生け簀に活け込む直前に曳船用生け簀内で100尾をサンプリングし個別の体長・重量を計測する。
- その後、蓄養生け簀への活け込みを行う。1つの曳船用生け簀から5つ程度の蓄養生け簀に配分される。1つの蓄養生け簀には2,000 - 3,000尾のSBTが移されることとなる。

4. 観察記録

我々は、100尾サンプリングの一部と、1つの蓄養生け簀への活け込みの様子を観察した。写真を添付Bに示す。

(1) 100尾サンプリング

午前8時頃に観察用の船でマリーナを出航した。午前8時45分頃サンプリング現場に到着した際には、既にサンプリングが始まっていた。我々オブザーバー及び豪州政府関係者は、サンプリングを行う船には乗ることはできず、約15 - 20m離れて、マリーナから乗船してきた船の甲板上から観察を行った。観察用の船が時々位置を変えたため様々な角度からの観察が可能であった。

我々が確認した手順は以下の通りであり、概ねAFMAのマニュアル通りに実施されていたと考えられた。

- ① まず、一度にスコップ1杯程度の撒き餌（イワシ）を甲板から撒く。
- ② 生け簀に浮かべた筏の上から、撒き餌が撒かれた位置の中心部分に、撒き餌と同じ餌をつけた針を投げ、SBTを手釣りする。
- ③ 釣り上げたSBTを、1cmの目盛りのついた金属製の受け台に載せる。

- ④ 受け台ごと船上に持ち上げ、おそらく受け台の目盛りで長さを読む。
- ⑤ 受け台ごとクレーンでつり上げ、バネばかりで重量を測定する。
- ⑥ 計測が終了したら、SBT を船上から滑り台で生け簀内に戻す。

我々は下記の点に注目した。

撒き餌に寄ってくる魚はほぼ表層を泳ぐ魚であることが観察された。針を投げて SBT をかける成功率は約 3 割程度であった。また、針にかかっても、筏の上に引き上げる前に約 2 割の SBT が針から外れた。

Number of try	Success	Failure	
		Dropped out	No hit
72	20	52	
		4	48

加えて、我々観察者の位置が計測地点から遠かったため、尾叉長の計測方法を正確に確認することが出来ず、また、計測結果の読み上げを聞き取ることも出来なかった。受け台における頭の位置を正確に把握出来なかったため、誤差の有無を確認することは出来なかった。

釣り上げた SBT にはタグ等をつけずに蓄養生け簀内に戻していたため、計測済みの個体と未計測の個体を見分けることはできなかった。豪州政府の説明は、一度計測した個体は底層に潜り再び表層に戻ることはないため、同じ個体を 2 度測定することはないというものであった。また、これらのサンプリングに使用する漁具は全てプロテックマリンが製作しているとのことであった。

サンプリング終了後（11 時過ぎ頃）、活け込みが行われる蓄養生け簀まで移動し、曳船用生け簀が到着するのを待った。曳船用生け簀は、豪州政府の説明によれば、1 ノット以下という非常に遅い速度で移動された。

(2) 海上における活け込み尾数の暫定的なカウント

11 日 12 時頃、曳船用生け簀が、活け込みが行われるサイトに到着した。周辺には、同一会社が所有する数個の蓄養生け簀があり、生け簀毎の間隔は 50m 以上あると思われた。曳船用生け簀と蓄養生け簀の接続には約 15 分程度を要した。我々はこの時点でサンプリングを行っていた船に移動し、船内に設置されたモニターで活け込み数量を確認する水中ビデオカメラ映像を視認するとともに、活け込み作業を船上から観察した。

豪州政府による活け込み作業手順の説明は以下の通り。

- ① 両生け簀には水深 1m 以深のところに金属の枠が取り付けられた 3m 四方のゲートがあり、このゲートの枠同士をダイバーがロープでくくりつけ、両生け簀を接続する。この接続作業中に、蓄養生け簀側、ゲートから 1.5m 離れたところに水中カメラを設置し、また両生け簀にゲートを閉じるための網を設置する。
- ② 蓄養業者が希望する活け込み量（トン）に応じ、100 尾サンプリングで得られた平均重量をもとに、生け簀毎に活け込むべき尾数を算出する。
- ③ プロテックマリン社の 2 名が、映像を見ながら蓄養生け簀に移動した SBT のおおよその数をカ

ウントする。船上においては、正式なカウントをプロテックマリン社の事務所で後日行うため、水中カメラの映像をその場でコンピュータに取り込むと同時に VHS テープに録画する。

観察して分かったことは、曳船用生け簀内を回遊する SBT は活け込みゲートを開いただけではなかなか蓄養生け簀に移らないということであった。ダイバーが追い立てたり、クレーンで曳船用生け簀の網を吊り上げるなどのプレッシャーを与えると、SBT は蓄養生け簀に移っていった。このとき、ゲートから一度に沢山の SBT が移動し、画面上で複数の SBT が重なって見えたため、この時点での正確な計数は難しいと思われた。

この日は、豪州側の説明では、今回観察の対象となった蓄養生け簀への活け込みでは、2200 尾程度が活け込まれたとのことであった。

(3) プロテックマリン社における活け込み尾数の確定

2月13日、我々はプロテックマリン社を訪れた。我々が11日に観察した活け込みとは別の活け込み作業のビデオを用いた活け込み数カウントを模擬的に実施していただいた。

プロテックマリン社は、下記の通り説明した。

- ① ビデオには、日時その他、蓄養会社名、番号、曳船用生け簀の通し番号、蓄養生け簀の番号、活け込みの番号（曳船用生け簀からの何番目の活け込みか）がテロップ表示されており、VHS テープに保存されている。早送り・巻き戻しが連続的で、DVD などのデジタル媒体のように飛び飛びにならないため、保存媒体に VHS テープを使用している。
- ② 通常、プロテックマリン社1名、蓄養業者1名が、活け込み時のビデオを見ながら同時にそれぞれ計数し、別個のログブックに記録した上で、計数値を突合する。ビデオ及びカウント用ノートは7年間保存し、政府による抽出監査時に限り外に持ち出される。
- ③ これによって確定した活け込み尾数に、曳航中の死亡尾数を加え、これにサンプリングで得た100尾の平均重量をかけた数値を、漁獲量として確定し、蓄養業者が所有するクォーターの残余から差し引く。

模擬カウントを見る限り、多数の SBT が同時に活け込まれた際も、活け込み時の船上測定と異なり、スロー再生等によって SBT の重なりなどを見分けやすく、丁寧に計数しているという印象を持った。プロテックマリン社と蓄養業者の双方で計数するため、2人が同じミスをしない限り、お互いの計測値の違いを修正することが出来るものと思慮される。最終的に、これらの集計値が正しいか否かは政府による抽出監査により確認されるものと推測される（ただし抽出率についての情報提供は受けていない）。

今回のサンプリング観察結果をより科学的に検証するため、現地において、豪州政府に対し、サンプリングの平均体重・平均体長、100尾サンプリングの個体別実測データの提示を要求した。豪州政府は、どちらも商業的な情報であり、開示されることにより商社の買値に影響を及ぼしかねないので、前者は当該 SBT の販売後（8月頃との説明）に提供可能であるが、後者は、ある特定のデータだけを開示することは難しいとして受け入れなかった（8月13日現在、豪州より当該データの提供はない）。

5. 結果

今回の観察により、100尾サンプリング及び活け込み時における数量の把握のための一連の作業の流れを知ることができた。豪州政府及び業界によるメンバーの招待及び懇切丁寧な説明に感謝の意を表したい。しかしながら、残念なことに、我々は、下記の点について判断することが出来なかった。

(1) 100尾サンプリング

- サンプリングされる100尾のSBTが曳船用生け簀内に存在する約10,000-12,000尾のSBTを代表するか。
- サンプリングに供する個体を選定する際に何らかのバイアスがかかる可能性がないか。
- 個々の尾叉長及び重量の測定方法が適切か。

(2) 活け込み尾数のカウント

- 豪州政府による抽出監査により活け込み尾数が確認されているか。
- 活け込み後に曳船用生け簀内にSBTが残った場合、そのSBTはどのように取り扱われるのか（観察期間中に豪州側より明確な返答を得られなかった。）。

以上を踏まえれば、現行の漁獲量推定のための100尾サンプリング及び活け込み監視スキームが、豪州SBT漁獲量把握の透明性及び正確性の確保に十分であるかどうかの判断は、今回の観察では不可能と言わざるを得ない。国際オブザーバーは、蓄養向けSBTの報告漁獲量の不確実性に関する深刻な懸念を払拭しうるものではない。

6. 提言

CCSBT-OMMP/1406/09 (Rev)及びCCSBT-ESC/1409/BGD 04に述べられているように、豪州の蓄養に関連する報告漁獲量には、潜在的規模の大きな不確実性があることが繰り返し指摘されてきた。我々は、この払拭のためには、豪州がそのコミットメントに従って、ステレオビデオカメラシステムの導入による活け込み原魚の監視を一刻も早く行うことが不可欠であると考えます。

また、同時に、これまで実施されてきた40尾あるいは100尾サンプリングに基づく漁獲量推定の正当性についても、科学的な検証が必要であろう。この意味から、OMMP5の結果に基づく科学委員長からの要請（回章2014/031参照）を、豪州を含むいくつかのメンバーが理由を提示することなく反対したことは非常に残念であり、再考を促したい（回章2014/38参照）。独立パネルを含むCCSBT科学者によるCDSデータの解析をより自由にできるようにすることは、過去の漁獲量に関する検証のみならず、今後のSBTの管理の基礎となる資源評価においても、重要な意味を持つであろう。

1. Participants

Responding to Australia's invitation for Members to observe 100-fish sampling scheme announced during CCSBT 20 in October 2013, Japanese delegation (C. Fukugama (FAJ) and two industrial representatives) visited Port Lincoln. Any other Member did not participate in the observation during our visit. Australian delegation from DAFF, AFMA and Australian Southern Bluefin Tuna Industry Association (ASBTIA) attended the Japanese delegation. Many industrial people also kindly cooperated throughout our observation in Port Lincoln.

2. Date and Place

The observation on the 100-fish sampling scheme and transfer into a farming cage took place from around 8 a.m. to 4 p.m. on February 11, 2014. We received detailed explanation on the 100-fish sampling and transfer procedure by Australian government, ASBTIA and Protec Marine Pty. Ltd. on 10, 12 and 13 February 2014.

3. Summary of the Procedure

Australian government provided us with a briefing document published by AFMA prior to the observation (Attachment A). The procedure is summarized in page 18 – 19 of the document.

According to Australia's explanation, the 100-fish sampling and the transfer procedure are conducted as follows;

- It takes 1 to 3-weeks to tow a towing cage with 10,000 – 12,000 SBT from fishing ground to a farm;
- When towing takes around three weeks, they feed SBT three or four times during the period of towing. In case towing takes only a week, they usually feed SBT only once.
- 100-fish sampling is conducted just before transferring SBT into farm cages. Sampled fish are weighed and measured individually.
- Then, SBT are transferred into about 5 farming cages. It means that each farming cage receives 2,000 – 3,000 SBT.

4. Observation Report

We observed a part of 100-fish sampling and transferring SBT into one farming pontoon. Photographs are shown in attachment B.

(1) 100-fish sampling

We left the marina around 8 am of February 11 on a boat hired by Australia for the observation. When we arrived at the site around 8:45, the 100-fish sampling procedure has already started. Japanese observers and Australian delegation were not able to go on board the sampling boat, and hence, we watched the sampling from the deck of our boat 15-20 meters away from the sampling site. Our boat changed the position several times, and that helped us to observe the sampling process from various angles.

The 100-fish sampling procedure we observed was conducted as follows; it seemed basically pursuant to the AFMA's manual. All equipments for 100-fish sampling were made by Protec Marine.

1. Scatter a full shovel of chum (pilchard) from the deck into the cage.
2. Throw a hook with the same bait from a floater inside the pontoon to the center of the chum to catch an SBT.

3. Land the SBT on a cradle graduated in centimeter.
4. Put the cradle on the deck of the sampling boat, and then measure the SBT presumably using the graduation on the cradle.
5. Uplift the cradle with crane, and weigh the SBT.
6. After measurements, return the SBT to the pontoon with a slide.

We paid attention to some points as follows;

- We observed that mainly SBT swimming just beneath the water surface were gathering to chum.
- Success rate of landing was about 30%. About 20% of SBTs once caught escaped from hooks.

Number of try	Success	Failure	
		Dropped out	No hit
72	20	52	
		4	48

- Because our observation site was far from the measurement site, we could not see the way to measure the fork length in accuracy, nor hear the voice calling out the result of the measurement.
- We could not confirm accuracy of the measurement, as we could not see the position of fish head on the cradle.
- Each SBT sampled was returned without any mark or tag, and it was impossible to discern already measured SBT. Regarding this point, Australia explained that every SBT once caught and measured went to the bottom of cages and would not return to the surface. They told thus a fish once sampled would never be sampled again.

After the 100-fish sampling, we moved to the farming site where transfer was planned, and waited for the arrival of the towing cage. According to the Australian government, the towing cage was carried at the very low speed of less than 1 knot.

(2) Preliminary counting of transferred SBT on board

The towing cage arrived at the farming site around noon. There were other several farming cages around the cage we observed, and each of them was over 50 meters away from one another. It took around 15 minutes to connect the towing cage to the farming cage. We moved from the observation boat to the sampling boat, and observed live image of transfer from underwater camera at the cabin and the transfer procedure from the deck.

Australian government explained the transfer procedure as follows;

1. Both tow cages and growout cages have a gate of 3m x 3m surrounded by metal frame 1m below the water surface. Divers tie up the frames of gates with ropes and connect the two cages. At the time of connection, farmers install a water resistant video camera in the farming cage about 1.5 m away from the gate.

2. In accordance with total weight of SBT requested by each farming company, rough number of SBT to be transferred is calculated using the average weight of SBT by the 100-fish sampling.
3. Two Protec Marine staffs watch the live image to roughly count the number of transferred SBT. They also record it on their computers and VHS video tapes in order to count the number of SBT accurately at their office within a couple of days.

What we found through the observation was that it was not easy to transfer SBT going around the tow cage into the farming cage just by connecting two cages. Physical pressures of divers and a crane which uplifted the bottom of the towing cage forced SBT to swim toward the farming cage. When a number of SBT swam at once through the gate, it looked difficult to count transferred SBT accurately on the screen at this point.

Australia stated that around 2,200 SBTs were transferred from the towing cage to the growout pontoon while we observed.

(3) Formal counting of transferred SBT at the office of Protec Marine

We visited the office of Protec Marine on February 13. They demonstrated how to count transferred SBT using a video image of transfer which was different from the one we observed. We had following explanation;

1. Relevant information including date of transfer, farming company, farm number, towing cage number, farming cage number and the order of the transfer from one towing cage is recorded on video as caption.
2. Generally, one Protec Marine representative and one farm company representative count the number of transferred SBT on the screen and recorded it on logbooks individually. Then, they compare the result of counting each other. Video tapes and the logbooks are stored in Protec Marine for seven years, and may be brought out only for random audits by the government.
3. Protec Marine calculates and finalizes the catch weight by multiplying the number of SBT which are transferred or dead while towing by the average weight of the 100-fish sampling. This finalized catch weight will be subtracted from the farming company's individual catch quota.

As long as we watched the demonstration, it looked that the formal counting was conducted in a very careful way in which they played the video slowly when a lot of SBT passed the gate at once. Besides, as two people count the number at the same time, it would be easy to reconcile possible mistakes. Although it is presumed that the government checks the results of counting time to time by random audits, we did not get information on the frequency of the audits.

We requested Australia to provide us with the average weight and length data and raw data of 100-fish sampling. Australia considered that it was difficult to disclose them at the time of the observation because it contained commercially confidential data which might affect the price of fish. Australia agreed to provide us with the average weight and length of the 100-fish samples after selling the fish possibly around August, but they rejected our latter request since they thought it was problematic to reveal just one company's data. As of August 12, we have not received the average weight and length data from Australia yet.

5. Discussion

The observation gave us a good opportunity to understand the flow of the current operation to estimate the SBT catch for farming from the 100-fish sampling to the transfer procedure. We greatly appreciate Australia and its industry for the invitation and kind explanation on the procedure. Unfortunately, however, we could not judge the points below;

(1) 100-fish sampling

- Whether the 100 fish sampled could secure sufficient representativeness for 10,000-12,000 fish in the towing cage.
- Whether there are not possibilities of biases in the process of sampling.
- Whether the methods for weighing and measuring are accurate and appropriate.

(2) Counting the number of transferred SBT

- Whether the random audit by the government is conducted at a sufficient level to secure the accuracy of the counting.
- How the excessive SBT are treated when excessive amount of SBT exists in a towing cage.

In this regard, we could not determine whether the current method of estimation of SBT catch for farming was adequate in terms of transparency and accuracy. The international observation on farming procedure could not be enough to resolve the grave concern on the uncertainty in reported SBT catch for the farming sector.

6. Recommendations

As described in CCSBT-OMMP/1406/09(Rev), CCSBT-ESC/1409/BGD 04, it has been repeatedly pointed out that there is a potentially large-scale uncertainty in the reported catch related to Australian SBT farming. In order to resolve this issue, it is essential that Australia promptly implements the stereo video camera system in accordance with its commitment.

Simultaneously, scientific verification on the accuracy of the current catch estimation method through 40 or 100-fish sampling scheme must be necessary. In this point of view, it was disappointing that a few Members including Australia refused the request for easier access to CDS Catch Tagging Data by the ESC that based on the discussion at the OMMP5 without any specific reason (CCSBT Circulars #2014/031 and #2014/038). Japan urges these Members to reconsider its decision. Making the CDS data available to the whole community of CCSBT scientists including the independent advisory panel should be meaningful not only for the verification of the accuracy of the past reported catch but also for the SBT stock assessment which would be the base for future stock management.



Australian Government

Australian Fisheries Management Authority



Pre-season Briefing Guide

 SOUTHERN BLUEFIN TUNA FISHERY

 FARM SECTOR

 2013-2014 FISHING SEASON

Purpose

This document is a guide to assist Southern Bluefin Tuna (SBT) farm sector operators with their reporting requirements under the management framework for the fishery during catching, towing and transferring operations. The season will run for a period of 1 year from 1 December 2013a **guide only** and does not replace arrangements in the *Southern Bluefin Tuna Fishery Management Plan 1995* (the Plan) and conditions attached to each fishing concession. Ensure that you read and understand your obligations for operating in the fishery.

Contents

Purpose	2
Contents	2
Contacting AFMA	4
Total Allowable Catch Setting and Value of SBT SFRs	4
Checklists	5
<i>Before you LEAVE port – Catcher Vessel</i>	5
<i>Reporting</i>	5
Checklists	6
<i>Before you LEAVE port – Tow Vessel</i>	6
<i>Reporting</i>	6
General obligations – All Vessels	7
<i>Quota</i>	7
<i>Vessel Monitoring System (VMS)</i>	7
<i>Observers</i>	8
<i>Critical incident reporting</i>	8
<i>Recording SBT Mortalities</i>	8
<i>Threatened Endangered and Protected Species (TEPs)</i>	8
General obligations – Catching Vessels	9
<i>Release of fish - immediately after capture</i>	9
<i>Logbook Requirements – Catching Vessels</i>	9
General obligations – Tow and Auxiliary Vessels	9
<i>Licensing requirements tow and auxiliary vessels</i>	9
<i>Identification of tow cages</i>	9
<i>Pre-departure reports for tow vessels</i>	10
<i>Transferring tow cages between vessels</i>	10
<i>Logbook Requirements – Tow Vessels</i>	10
Returning to port and disposing of fish	10
<i>Prior landing reporting</i>	10
<i>Verified count – fish sample and video count</i>	10
<i>Disposal of fish to a fish receiver - SBT04A farm catch disposal record</i>	11
CCSBT Catch Disposal Scheme (CDS)	11
<i>When a fish is killed (farmed, towing mortality, or poling operation)</i>	13
<i>Transferring fish between farms</i>	13
<i>Re Export</i>	13
<i>Fish receivers licensed to receive SBT</i>	13
<i>Validation</i>	14
<i>Tag distribution</i>	14
<i>More information</i>	14
<i>We know that the Catch Documentation Scheme (CDS) requires more paperwork and it may be difficult to be sure exactly how to complete the forms</i>	14
<i>If you are at all unsure please call Licensing and Data Services section on the numbers below and we will assist you</i>	14
• <i>AFMA Licensing and Data Services – 1300 723 621</i>	14
• <i>Anne Shepherd - Manager Licensing & Data Services – 02 6225 5361</i>	14
• <i>Matt Daniel - Manager SBT Fishery - 02 6225 5338</i>	14
• <i>Trent Timmiss - Senior Manager – 02 6225 5313</i>	14
ATTACHMENT A	15
<i>Take in excess of quota</i>	15
<i>Restricted overcatch – End of season release approved by AFMA</i>	16
<i>Dates Overcatch process will be run</i>	16
<i>For the 2012/13 season overcatch will be run on 16 December 2013. All operators in an over quota position at the end of the 2012/13 season should ensure they have sufficient 2013/14 quota holdings on this date to cover any overcatch amount. Operators who are unsure of their current situation can view their quota position on GoFish or contact the Licensing & Data Services for an update</i>	16
ATTACHMENT B	17

Undercatch 17
Date Undercatch process will be run 17
ATTACHMENT C..... 18

Contacting AFMA

AFMA has a direct number **1300 723 621** which enables anyone to contact AFMA from any landline in Australia for the cost of a local call.

Name	Section	Phone
Trent Timmiss	Senior Manager - Tuna	02 6225 5311
Matt Daniel	Manager - SBT Fishery	02 6225 5338 0417 425 771
John Andersen	Senior Manager - Compliance	02 6225 5330
Glen Salmon	Manager - Compliance	02 6225 5395
Duty Officer	Compliance	0419 205 329
Mike Yates	Observer program	02 6225 5332 0408 287 740
Anne Shepherd	Licensing and Data Services Manager	02 6225 5361 0434 652 110
Licensing and Data Services	SBT Registrar, Logbooks or CDS books	1300 723 621
	Fax number	02 6225 5440
Narelle Williams	VMS Contact	02 6225 5542
Tony Jones	Protec Marine Pty Ltd	08 8683 0599 0419 823 066

Total Allowable Catch Setting and Value of SBT SFRs

The *SBT Fishery Management Plan 1995* (the Plan) requires AFMA to determine Australia's national catch allocation for the Australian SBT fishery at a level that does not exceed the allocation to Australia under a decision by the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) for that season.

In October 2013, AFMA determined the Australian national catch allocation as 5,151,000 kilograms for the 2013-2014 season. AFMA must also calculate the actual live weight value for SBT SFRs. This calculation provides the actual live weight value of a statutory fishing right (SFR) for the 2013-2014 season on the basis of the total allowable catch (TAC).

For the 2013 - 2014 season the live weight value has been set at **0.9674290 kg/SFR**.

Checklists

Before you LEAVE port – Catcher Vessel

Item
Vessel is nominated to a fishing authorisation (Statutory Fishing Right) and a copy of the conditions of the authorisation are onboard
Check VMS is operating
AFMA observer – ensure you carry an observer if requested by AFMA
Catch logbooks and disposal records onboard - Catch and effort logbook (TPB03) and Farm Catch Disposal Record – Purse seine vessels (SBT02)
Ensure appropriate Catch Documentation Scheme (CDS) documents are on board – Tags, Catch Monitoring Forms (CMF) and Catch Tagging Forms (CTF)

Reporting – Catcher Vessel

Event	Details
All Mortalities	Report daily record in logbook (SBT02)
Mortalities to be landed	Fill in Catch Monitoring Form (CMF) and Catch Tagging Form (CTF)
TEP interactions	Record in logbook (TPB03)
Critical incidents	Report immediately to AFMA duty officer 0419 205 329
Notify AFMA of tow cage contents	Submit SBT02 within 24hrs from the last transfer to a tow boat and cage begins to return to port
Release of fish after capture	Report details in logbook (TPB03)

Checklists

Before you LEAVE port – Tow Vessel

Item
Vessel is nominated to a fishing authorisation (Carrier Permit) and a copy of the conditions of the authorisation are onboard
Check VMS operating
Departure report including tow cage number submitted to AFMA within 1 hour of leaving port
AFMA observer – ensure you carry an observer if requested by AFMA
Logbooks - SBT Farm transit log (SBT03B)
Ensure appropriate Catch Documentation Scheme (CDS) documents are on board – Tags, Catch Monitoring Forms and Catch Tagging Forms

Reporting – Tow Vessel

Event	Details
All Mortalities	Record in logbook (SBTO3B)
Mortalities to be landed	Fill in Catch Monitoring Form (CMF) and Catch Tagging Form (CTF)
TEP interactions	Record in logbook (SBTO3B)
Critical incidents	Report immediately to AFMA duty officer 0419 205 329
Prior landing	Notify Protec Marine Pty Ltd

General obligations – All Vessels

Quota

To fish in the fishery the vessel used must have nominated against it an amount of unfished quota.

Overcatch is allowed subject to specific conditions see **Attachment A**.

Undercatch is allowed subject to specific conditions see **Attachment B**.

Vessel Monitoring System (VMS)

It is the concession holder's responsibility to ensure that any vessel nominated to their concession is fitted with an Integrated Computer Vessel Monitoring System (ICVMS) of a category specified in the register of AFMA approved units. This register can be found at: <http://www.afma.gov.au/industry/vms/approved.htm>.

The VMS unit must remain switched on at all times including when the boat is in port or engaged in State fishing. The concession holder must ensure the VMS is reporting correctly before going out to sea for the first time and that no interference occurs with the correct operation of the VMS unit. On becoming aware of a problem with the VMS functioning, the concession holder must advise AFMA as soon as practicable via:

Phone: 02 6225 5369 (if prompted, follow instructions on the voice mail); or

Mobile: 0419 205 329; or

Fax: 02 6225 5440; or

Email: VMSreporting@afma.gov.au

If the VMS is not operating or is malfunctioning the boat must remain in port until the VMS is inspected, repaired if necessary and AFMA has received confirmation from an authorised technician that the Automatic Location Communicator is functioning normally.

Please refer to the VMS conditions on your permit for more information.

If a nominated vessel's VMS unit stops reporting, the concession holder will be required to manually report the vessel's position at a frequency specified by AFMA.

The manual position reports should include:

- the vessel's name;
- the vessel's distinguishing symbol;
- the vessel's present latitude and longitude (in degrees and minutes); and
- the date and time.

Manual position reports are to be made by:

Phone: 02 6225 5369 (if prompted, follow instructions on the voice mail); or

Fax: 02 6225 5440; or

Email: VMSreporting@afma.gov.au

Depending on the circumstances, and in accordance with its enforcement decision principles as outlined in the [Domestic Compliance and Enforcement Policy](#), if a nominated boat's VMS unit stops reporting AFMA may determine that it is appropriate to issue a Direction under section 84(1)(k) of the *Fisheries Management Act 1991*. This Direction will require the boat to immediately return to, and remain in, port until such time as AFMA is satisfied the problems with the VMS unit have been rectified.

A TSO is a formal arrangement that allows a unit to be legitimately switched off. If a nominated vessel is undergoing maintenance, berthed for an extended period or in other exceptional circumstances that render VMS operation impractical, the concession holder can apply for a TSO by filling out an 'Application for VMS Temporary Switch Off' form and sending it to AFMA via:

Fax: 02 6225 5440; or
Email: VMSreporting@afma.gov.au; or
Mail: Data Processing
AFMA
PO Box 7051
CANBERRA BC
ACT 2610

Further information can be found on the AFMA website at:
<http://www.afma.gov.au/industry/vms/default.htm>

Observers

Independent monitoring by observers provides verified fishery information vital to the overall management of the fishery, meets important environmental requirements and is a source of validating the management processes for the community. The observer coverage target for the SBT fishery is 10 percent for purse seine and 10 percent for towing.

Operators must, if requested by AFMA, allow a fishery observer nominated by AFMA and fishery observer's safety and monitoring equipment to be carried on board vessels nominated to fish in the fishery. The concession may be suspended if the holder fails to carry an observer.

Critical incident reporting

All critical incidents or unusual circumstance affecting the fish during the catching process, transfer into the tow cage or towing must be immediately reported to the AFMA Duty Officer. This includes but is not limited to, higher than normal mortality rates, tow cage damage, loss of fish or any fish release.

Recording SBT Mortalities

Each day during fishing, transferring and towing the number of SBT mortalities that occurred must be recorded in the AFMA SBT03B logbook. To ensure that fish are not double counted under the CDS scheme the number of mortalities tagged and retained for landing must also be filled out in SBT03B. If you are going to retain any mortalities they must be tagged under the Catch Documentation Scheme (CDS) and a Catch Monitoring Form (CMF) and Catch Tagging Form (CTF) completed.

Threatened Endangered and Protected Species (TEPs)

Operators must take all reasonable steps to avoid interactions with TEPs. If an interaction occurs:

- record details of the interaction in the relevant AFMA logbook;
- if there is a fishery observer onboard immediately tell the observer about the interaction and give whatever assistance is necessary for the observer to collect any data, or make any observations requested by AFMA;
- if the interaction results in an injury to the TEP, do everything that can practicably be done to give aid to it; and
- if the interaction results in death to the TEP and it is necessary to discharge the carcass from the boat, do so in a way that does not attract birds or mammals to the boat.

General obligations – Catching Vessels

Release of fish - immediately after capture

SBT may be released alive and vigorous at the place they were taken immediately after capture, and before any transfer of the fish to a tow cage or another place and will not be deducted from quota if the following details of the release are noted in the AFMA logbook for the vessel:

- the weight of fish released;
- the location at which the fish were released; and
- the reason the fish were released.

No devices or net configurations are allowed to be used that allow SBT to be released from the tow cage without assistance.

Logbook Requirements – Catching Vessels

Logbook	TPB03 - Australian Purse Seine and Pole Daily Fishing Log - for farmed SBT only	SBT02- SBT Farm Catch Disposal Record – Purse Seine Boat
When should it be completed	Daily	Completion of each transfer from purse seine net to tow cage
When to first submit	By the 14th day of the following month to AFMA. Alternatively submit to <i>Protec Marine Pty Ltd</i> .	Within 24 hrs from the last transfer to a tow cage and tow begins to return to port, FAX white copy to AFMA on 02 6225 5440 or scan and email to sbtmonitoring@afma.gov.au

General obligations – Tow and Auxiliary Vessels

Licensing requirements tow and auxiliary vessels

All vessels, including auxiliary vessels that hold tow cages and carry mortalities must hold a carrier boat permit and abide by the conditions stated on a carrier boat permit and must be recorded on the CCSBT register. If these requirements are not fulfilled you risk fish being rejected at the time of export.

Identification of tow cages

All tow cages must be marked with a unique tow cage identification number allocated by an AFMA agent. *Protec Marine Pty Ltd* is an agent of AFMA for this purpose and can supply operators with an identification number.

The identification number must:

- be displayed on the tow cage radar reflector pole prior to the tow cage leaving port;
- highly visible, in a legible form and in contrasting colours;
- in a position that is not hazardous to working personnel;
- securely attached and not be removed without first notifying AFMA; and
- must be reported to AFMA on the pre-departure report or transfer report and all logbooks completed.

Pre-departure reports for tow vessels

The holder must send a report to AFMA within one hour of the boat nominated on a carrier boat permit navigating south of latitude 34°53'17" South

The information may be sent by either fax (02 6225 5440), or email (sbtmonitoring@afma.gov.au) and contain:

- a) Boat name
- b) Name of port, date and time of departure from a port or place in Australia
- c) If towing cage/s, cage identification

Transferring tow cages between vessels

Any transfer of a tow cage between carrier (two) vessels must be reported to AFMA within 1 hour of the transfer. The following information must be sent either by fax to (02) 6225 5440 or by email to sbtmonitoring@afma.gov.au:

- Vessel name;
- Date and time of transfer;
- Tow cage identification number;
- Carrier vessel name that the tow cage was transferred to; and
- An estimate of weight of fish contained in the cage been transferred.

Logbook Requirements – Tow Vessels

Logbook	SBT03B – SBT Farm Transit Log
When should it be completed	Daily & a separate log sheet for each tow cage. An SBT03B must be completed by all vessels holding a tow cage from the first fish transferred to a cage until the last fish in the cage is transferred to a farm.
When to first submit	Within 24 hrs of the cage being transferred to another carrier boat, FAX white copy to <i>Protec Marine Pty Ltd</i> on 08 86830624 OR: Hand white copy to <i>Protec Marine Pty Ltd</i> before the transfer to the farm commences.

Returning to port and disposing of fish

Prior landing reporting

Protec Marine Pty Ltd must be notified of the date and estimated time of arrival of tow cages in port and the day the transfer is to commence. This notification should be made by calling 08 8683 0599 or mobile 0419 823 066.

Verified count – fish sample and video count

SBT must not be transferred from a tow cage to a farm without a verified count of the fish conducted by AFMA or an agent of AFMA.

Detailed procedures for conducting the fish sample are attached in **Attachment C**.

Disposal of fish to a fish receiver - SBT04A farm catch disposal record

SBT must **not** be transferred to a farm or otherwise dispose of unless the farm owner or person in Australia is a holder of a Commonwealth Fish Receiver Permit.

An SBT04A form must be completed by the Fish Receiver Permit Holder or their authorised agent immediately on completion of the verified count of fish into the receiver's farm cage. Part 1 of the SBT04A form is to be completed by the fish receiver permit holder or their authorised agent and Part 2 is completed by the Quota holder or their authorised agent and Part 3 is completed by *Protec Marine Pty Ltd*.

CCSBT Catch Disposal Scheme (CDS)

New CDS requirements

CCSBT changes or clarification to CDS documentation for the coming season these are:

- Fork length – Catch Tagging Form (CTAU02A)
In cases where SBT can be measured at the time of kill;
Measure the straight line horizontal (not curved over body) length of the fish from the closed mouth to the fork of the tail before freezing and tailing as shown in the diagram contained in the CTAU02A.
In cases where length cannot be measured immediately after the time of kill but is instead measured upon landing, and after tailing and before freezing:
Measure the straight line horizontal (not curved over body) length of the fish from the closed mouth up to the point where the tail was removed, and then apply an appropriate conversion factor to this length measurement to convert it to a fork length measurement you **MUST** record the converted length within this field.
- Fish meat – any meat separated from fish parts is considered to be meat in the context of a sale and requires CDS documentation to be completed.

New CDS books

Two of the CDS books will be replaced for the 2013-2014 season. The previous book will no longer be a valid book from 1 December 2013. The changes are not major but please take the time to read over the instructions in the new books.

- **The CMAU02 will be replaced by the CMAU02A, changes;**
 1. Number of fish column has been added to the Final Product Destination Section, updated instructions
 2. Validation, The name and title box has been split to 2 boxes, updated instructions
 3. The form has been updated with the new product definition codes, updated instructions
 4. Minor changes to some instructions, clarification only.
- **The CTAU02 will be replaced by the CTAU02A, changes;**
 1. Definition of fork length and diagram added to the instructions
 2. The form has been updated with the new product definition codes, updated instructions
 3. Minor changes to some instructions, clarification only

CDS Reminders

Following are a few points that you need to remember when completing CDS documentation.

- Please ensure that every form completed has the year (2 digits 2014 is 14) written in the Document Number box i.e CMAU02A the number is required to be recorded in the top right hand corner between the printed CMAU and the pre printed book number and on the CTAU02A form between the CTAU and pre printed book number.
- Please ensure that the person validating the form is registered on the CCSBT website, if they are not please make sure that you register them **BEFORE** they sign any form, to register the person contact AFMA licensing and Data services.
- Please ensure when completing any CDS form that you complete the form fully and accurately e.g.; the Farm Name must be exactly written as the farm name is registered on the CCSBT website.
- You **cannot** have a domestic shipment and an export shipment recorded on the same CMAU form.
- **Product definitions (Processing Codes).** Please ensure you use the new product definitions on all forms.

CCSBT implemented changes to the definitions of product types (processing codes) so that importers can appropriately verify CDS documentation. The changes took affect from 1 December 2012 and apply to the following forms:

1. Catch Monitoring Form (CMAU02A)
2. Catch Tagging Form (CTAU02A)
3. Re-Export/ Export After Landing of Domestic Product Form (REAU)

Code	Name	Description
RD.	Round	SBT without any processing
GGO	Gilled and gutted – tail on	Processed with gills and gut removed. Operculae (gill plates/covers) and dorsal, pelvic and anal fins may or may not be removed.
GGT	Gilled and gutted – tail off	Processed with gills, gut and tail removed. Operculae (gillplates/covers) and dorsal, pelvic and anal fins may or may not be removed.
DRO	Dressed – tail on	Processed with gills, gut, operculae (gill plates/covers) and head removed. Dorsal, pelvic and anal fins may or may not be removed.
DRT	Dressed – tail off	Processed with gills, gut, operculae (gill plates/covers), head and tail removed. Dorsal, pelvic and anal fins may or may not be removed.
FL	Fillet	Processed further than DRT, with the trunk cut into fillets.
OT	Other	None of the above.

▪ **Certification by Exporter**

The instruction of how to complete this section was not changed but from 1 December 2012 the person who signs as the certifier on any CDS form must be a client of AFMA or a nominated Authorised Agent of an AFMA client. An Authorised Agent form can be obtained by calling the Manager Licensing & Data Services on 02 6225 5361.

Ongoing CDS Requirements

CCSBT Catch Disposal Scheme (CDS) requires all SBT taken and subsequently sold in either **domestic** or **foreign** markets to be tagged and accompanied by forms documenting the history of the product from capture to first sale. No SBT will be accepted by Japan and other CCSBT countries without a tag and the correct accompanying documentation.

When a fish is killed (farmed, towing mortality, or poling operation)

When an SBT is killed the following **must** happen:

- a) Each fish must be tagged at the time of kill (for poling operations and towing mortalities) or within 30 hours (for farmed SBT).
- b) Each fish must be weighed and measured before being frozen and recorded on the **Catch Tagging Form (CTF)**. The Catch Tagging Form is to be certified and returned to AFMA by the fisher/farmer **within 3 days** of landing/harvest.
- c) All catch must be landed through a Fish Receiver Permit (FRP) holder licensed to accept SBT.
- d) A **Catch Monitoring Form (CMF)** must be filled out and signed by the Fish Receiver. The original copy of this form is to go with the fish whether it is exported or sold domestically. A copy of the Catch Monitoring Form is to be sent to AFMA **within 3 days** of it being completed.
- e) In the event that there are not enough tags on board AFMA must be notified of how many fish have been landed without tags within 2 hours of landing via fax (02 6225 5440) or email sbtmonitoring@afma.gov.au. Tags must be obtained and these fish must be tagged before they are landed to a Fish Receiver Permit (FRP) holder licensed to accept SBT.
- f) In the event that a tag is lost and has to be replaced AFMA is to be notified by fax or email (see above) within 24 hours of the incident. The email/fax should include the following details: the old tag number (if known), the new tag number, the old Catch Tagging Form document number (if known) and the new Catch Tagging Form number and the reason for the replacement.

Transferring fish between farms

If you intend to transfer live SBT from your farm to another concession holder contact AFMA or Protec for a **Farm Transfer Form**. The form will need to be completed and signed by both parties and returned to AFMA **within 3 days** of the transfer.

Re Export

In the event that a fish is landed for domestic sale (i.e. the final product destination section of the Catch Monitoring Form has been filled out) and it is then decided to export the fish or is imported and then re-exported a **Re-Export/ Export After Landing of Domestic Product Form** is to be filled in. Please note that this form is **not to be** used for fish landed where the primary intent is to export and the intermediate section of the Catch Monitoring Form (CMF) has been filled out as such.

A copy of the completed form is to be sent back to AFMA **within 3 days** of export and the original is to travel with the SBT along with a copy of the original Catch Monitoring Form (CMAU02A).

Fish receivers licensed to receive SBT

In order to comply with the Catch Documentation Scheme (CDS) all licensed Fish Receiver Permit (FRP) holders will be required to have completed three key actions before they can accept SBT, these include:

- obtaining an Australian Licensed Fish Receiver Stamp which includes your current Fish Receiver Permit Number;

- registering with AFMA using the Validation of Southern Bluefin Tuna CDS Documents form; and
- obtain the relevant CDS forms, tags and instructions

Validation

Licensed Fish Receiver Permit holders who have registered with AFMA to receive SBT have the authority to validate Catch Documentation Scheme (CDS) documents. It should be noted that in situations such as on the Catch Monitoring Form (CMF) where certification and validation are required, the person who certifies the document must not be the same person that validates the document.

Tag distribution

Tags are provided and distributed by ASBTIA. Please ensure that you have sufficient tags before fishing commences. For tags please call ASBTIA on (08) 8682 3257.

To better reconcile tags used during the season AFMA will be requiring the return of all unused tags at the end of the season. These tags may be return to ASBTIA.

More information

We know that the Catch Documentation Scheme (CDS) requires more paperwork and it may be difficult to be sure exactly how to complete the forms.

If you are at all unsure please call Licensing and Data Services section on the numbers below and we will assist you.

- ***AFMA Licensing and Data Services – 1300 723 621***
- ***Anne Shepherd - Manager Licensing & Data Services – 02 6225 5361***

Or the Tuna Section;

- ***Matt Daniel - Manager SBT Fishery - 02 6225 5338.***
- ***Trent Timmiss - Senior Manager – 02 6225 5313***

ATTACHMENT A

Take in excess of quota

Within season

A fishing concession holder does not contravene the management arrangements for the fishery when fish are taken in excess of their quota holdings if the Holder obtains sufficient quota to cover that take within the following period:

- if a transfer weighing has been undertaken - 14 days from the time that the relevant weight is entered against the holders quota;
- if no transfer weighing is undertaken within 30 days of the commencement of the tow operation – 58 days after the tow operation commenced; or
- if no transfer weighing is undertaken within 30 days of the take being transferred to a tow cage and AFMA was not notified of the commencement of the tow operation – 58 days after the date the take was transferred to the tow cage.

Being in an over quota situation beyond the reconciliation period is an offence.

You cannot continue to fish whilst in an over caught quota position.

Season End

Following overcatch parameters for the 2012/13 fishing season:

- the overcatch **determined percentage at 5%**;
- the overcatch **determined amount at 25 tonnes**; and
- the overcatch **determined additional weight at 2 tonnes**.

Below is an explanation of each parameter and how they work under the amended SBT Fishery Management Plan.

- The 'determined percentage' (5%) is the amount of quota that you can catch in one season, but will be deducted from your quota in the following season at a rate of 1:1.
- The 'determined amount' (25 tonnes) is the maximum quota amount that can be taken in excess of your holdings regardless of the percentage, or size of your holding.
- It should be noted that the 'determined percentage' and 'determined amount' are used to work out the 'calculated excess' for the holder of an SFR. The 'calculated excess' must always be the lesser of either the 'determined percentage' or the 'determined amount'.
- The 'determined additional weight' (2 tonnes) is the weight of SBT quota that can be taken above the 'calculated excess'. This is deducted in the following season at a rate of 2:1.

A practical example of how the agreed overcatch arrangements would be below:

Example C

If you hold 600 tonnes of SBT quota at the end of the season, you would have access to the lesser of either the 'determined percentage' or the 'determined amount'. In this case, you could only access the 25 tonnes 'determined amount' of overcatch, as the 5% 'determined percentage' would be 30 tonnes. You would

then repay the 25 tonnes in the following season at a rate of 1:1. If you were to access an additional 2 tonnes of overcatch, or the 'determined additional weight', you would have to repay this additional amount of quota in the following season at a rate of 2:1 (i.e. 4 tonnes).

Example D

If you hold 10 tonnes of SBT quota at the end of the season, you would have access to the lesser of either the 'determined percentage' or the 'determined amount'. In this case, the 'determined percentage' would amount to 500kg. As this is less than the 25 tonnes 'determined amount', you would have access to 500kg of overcatch. This 500kg amount would be taken off your quota holdings in the following season at a rate of 1:1. Under this scenario, you would still have access to an additional 2 tonnes of overcatch, or the 'determined additional weight'. This additional amount would still need to be repaid in the following season at a rate of 2:1 (i.e. 4 tonnes).

Restricted overcatch – End of season release approved by AFMA

An SFR holder, subject to application and approval by AFMA, may release alive and vigorous SBT after the fish have been towed away from the fishing grounds but prior to their transfer to a farm. The purpose is to allow **a single release of fish for the season** in an alive and vigorous state to avoid exceeding Australia's National Catch Allocation.

Dates Overcatch process will be run

For the 2012/13 season overcatch will be run on 16 December 2013. All operators in an over quota position at the end of the 2012/13 season should ensure they have sufficient 2013/14 quota holdings on this date to cover any overcatch amount. Operators who are unsure of their current situation can view their quota position on GoFish or contact the Licensing & Data Services for an update.

ATTACHMENT B

Undercatch

Undercatch is when you catch less than your quota holdings in a season and you are allowed to carry a limited amount of the uncaught quota into the following year. Undercatch is not transferable to other concession holders, which means you have to catch it yourself in the following season. Examples of how undercatch works are outlined below.

Undercatch will be permitted at the end of the 2012/13 season (i.e. you will be able to carry uncaught quota forward from the 2012/13 season into the 2013/14 season).

IMPORTANT NOTE: You will not be able to carry forward quota from the end of 2013/14 season into the following season 2014/15 as CCSBT does not allow carryover between 3 year quota blocks.

Season End

The **undercatch percentage is 20%**, for the 2012/13 fishing season. This means that you can carry forward your uncaught quota, up to 20% of your total holdings from 2012/13 season, and catch it the 2013/14 season.

Practical examples of how undercatch works are below:

Example A

If you own 5 tonnes of SBT quota at the beginning of the season and lease in 5 tonnes of quota during the season, without any outgoing leases, you are deemed to hold 10 tonnes of SBT quota at the end of the season. If you only catch 6 tonnes of that quota you can only carry forward a maximum of 20% of the 10 tonnes, i.e. 2 tonnes (the other 2 tonnes would be lost).

Example B

If you own 5 tonnes of SBT quota at the beginning of the season and lease in 5 tonnes of quota during the season, without any outgoing leases, you are deemed to hold 10 tonnes of SBT quota at the end of the season. If you catch 9 tonnes of that quota you can carry forward 1 tonne into the next season. You cannot access the full 20% as you did not have enough uncaught quota.

IMPORTANT NOTE: You must hold at least 1 SBT quota Statutory Fishing Right (SFR) in the 2013/14 season to utilise undercatch. This SFR can either be permanently held by you, or can be leased in for the 2013/14 season.

Date Undercatch process will be run

For the 2012/13 season undercatch will be run on 16 December 2013. Operators who are unsure of their current situation can view their quota position on GoFish or contact the Licensing & Data Services for an update.
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ATTACHMENT C

AFMA Procedures for Transfer Weighing – 100 Fish Sample

December 2013

The AFMA Authorised Representative (AAR) (currently *Protec Marine Pty Ltd*) verifies the weight sample on behalf of AFMA and must be present at all transfers.

To ensure consistency of application of these rules, all weight samples must be supervised by the principal or one of the two second in charge officers of the AAR. If these officers are unavailable an alternative person may be agreed on between AFMA and the Australian Southern Bluefin Tuna Industry Association.

The weight sample will be conducted as follows:

1. The AAR will supervise the company's representative catching the fish;
2. The AAR has complete say over the taking of the weight sample, and all company representatives will follow their instructions at all times;
3. The AAR will make and supply the standard catching gear for the sample;
4. The standard catching gear will be: 300 mm leader, 25 mm gate barbless hook, and 8 millimetre diameter rope;
5. All divers must be out of the water 10 minutes prior to the start of weight sample, and must remain out of the water until the sample is completed;
6. The company is to supply at least two tonnes of thawed bait for the sampling. The bait used for the sample must be whole fish;
7. The company is to supply at least 4 people to assist the AAR in the sampling;
8. The company catches the fish under the direction of the AAR until they have weighed and measured at least 100 fish of 10 kg or higher to the AAR's satisfaction;
9. The AAR may trial different scales which have the capacity to measure to 0.1 of a kg and these scales will be calibrated before each sampling; and
10. Only whole bait can be used in the chum for the sampling. A full shovel of chum must be thrown prior to the release of each hook. The chum must be thrown at least two (2) meters in front of the catcher. The catcher must not throw the hook until instructed by the AAR. The catcher must throw the baited hook into the centre of the chum. Once the individual fish is recorded, the weight is final with no recourse by the AAR or the company.
11. To assist with minimising the time taken to complete the sample, 2 fish cradles may be used during the sample.
12. In the advent of the cessation of the weight sample due to weather, safety, operational or unforeseen circumstance, the company and AAR will agree when the sampling is to recommence. In such circumstances the fish already caught and weighed in the sample prior to stopping the sample will still be part of the sample of 100 fish of 10kg or higher.

Resolving interference in the 100 fish sampling procedures

If the AAR observes any interference with fish selection in the catching process the sampling is to be stopped and AFMA management is to be advised immediately.

If the sample is stopped and AFMA management advised, the company is to be issued with a first warning. At this stage:

1. the AAR will advise the company why the sampling has been stopped and record the reason on the sampling form;

2. the AAR may instruct the company to use different sampling equipment, or techniques to address the concerns in the sampling process;
3. sampling will not continue until the issue is resolved to the AAR's satisfaction;
4. the fish already caught and weighed in the sample prior to stopping the sample will still be part of the sample of 100 fish of 10 kg or higher;
5. once the issue is resolved sampling will continue in line with the agreed sampling procedures; and
6. should the AAR have concerns with the continued sample, they will again cease to supervise the sampling making any further sampling void. The AAR will return to port and AFMA management are again advised by phone at this point.

If the sample is stopped a second time AFMA will contact the company directly and issue a second warning. The AAR will then return to the tow cage at an agreed time and continue to supervise the sample in line with the agreed sampling procedures. The fish already caught and weighted in the sample prior to stopping the sample will still be part of the sample of 100 fish of 10 kg or higher.

Should the AAR have any further concerns with the continued sample, then they will terminate the sample. AFMA management is to be advised of the terminated sample. If the sample is terminated AFMA will:

1. Send a senior officer to Port Lincoln and assist the AAR to conduct a new 100 fish weight sample to replace the terminated weight sample
2. None of the weights collected in the terminated sample will count in the new sample;
3. No company representative will participate in the new sample but is entitled to be present for the new sample. The AAR will conduct all aspects of the new weight sample;
4. The AAR will conduct all future weight samples for the company involved for the remainder of the season: and
5. All costs associated with conducting the new sample and subsequent samples will be paid by the company involved.

Procedures for video count of fish transferred from the tow cage to the fish farm

Two *Protec Marine Pty Ltd* representatives **must** be present when fish are transferred from the tow cage to the fish farm and oversee the operation of the video.

The Holder of the Statutory Fishing Right under which the SBT in the tow cage were taken must ensure that sufficient equipment and personnel to facilitate the transfer are provided. The transfer should be conducted as follows:

- the video should show a side view covering the opening between the tow cage and the farm in order that all SBT transferred will appear on the video recording;
- there must be a 'drop down' net above the transfer gate that completely covers the opening in the net;
- the drop down must extend at least a metre either side of the opening and at least one metre below;
- the bottom of the net must be heavily weighted to ensure it hangs as vertically as possible to prevent any fish moving through the transfer gate opening and to stop the net being blown away from the opening by current caused by the movement of fish in the cage;
- an attendant must stay for the duration of the transfer directly over the transfer gate to ensure the immediate release of the drop down net; and
- where the fish farm is to be positioned at a site where turbid water occurs, the fish count is to be done prior to the fish farm being positioned at that site.

The use of bait to move fish from cage to cage is **not permitted** except where authorised to do so by the AAR.

1. 100-fish sampling

(1) Sight of tow cage and sampling vessel



• weight calculation

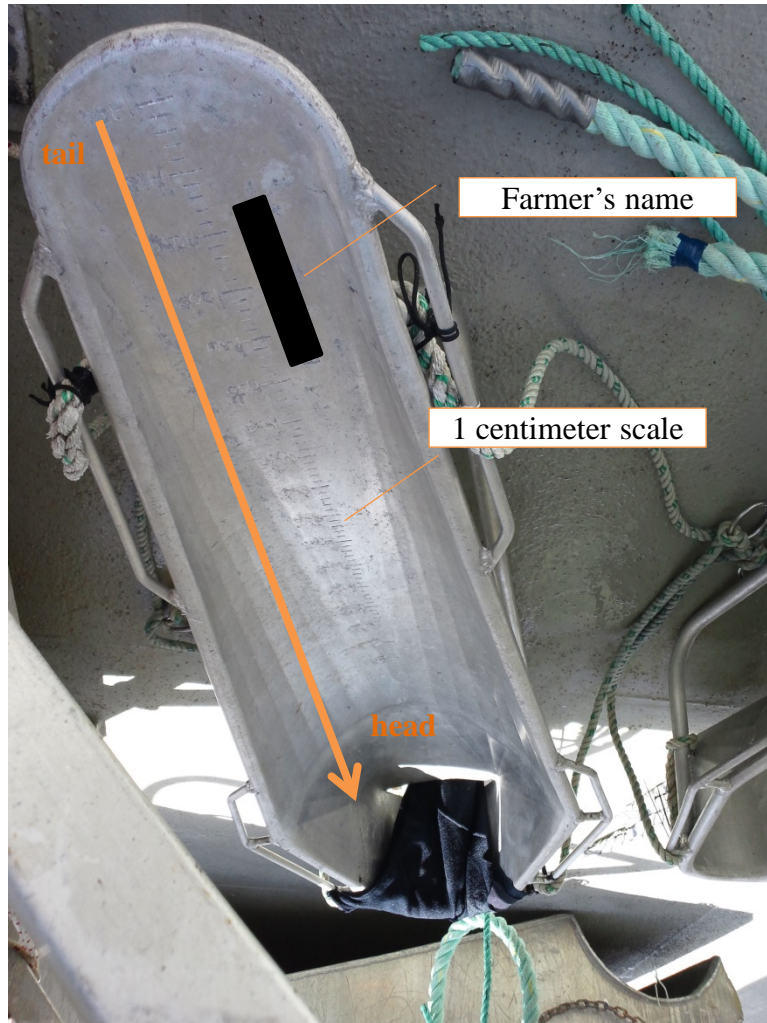


• Release sample SBT to the cage



(3) Measurement Tools

▪Cradle*



▪Shape of hook



* Some parts of images were modified for protection of personal/commercial information.

2. Transfer procedure

(1) Video equipment



(2) Connection of two cages*



* Some parts of images were modified for protection of personal/commercial information.

