## CCSBT－ESC／1009／05

## Surface Fishery Tagging Program－an update

## 1．Introduction

The surface fishery tagging program was designed at the Tagging Program Workshop in October 2001．The program had the following features：－
－Tagging of 5，000－7，000 one year old SBT in Western Australia；
－Tagging of 8，000－10，000 two to four year old SBT in South Australia；
－Fish to be caught using pole and line techniques；and
－Five year timescale．
The tagging program commenced during the 2001／02 surface fishery season and finished in the 2006／07 season．Table 1 shows the number of SBT tagged in the surface fishery each season since commencement of the tagging program．The SBT tagged in 2007／08 and 2009／10 were tagged as part of the operation of other projects．

Table 1：Number of SBT tagged in the surface fishery each season．

| Season | Western Australia | South Australia | Total |
| :---: | :---: | :---: | ---: |
| $2001 / 02$ | 2,855 | 464 | $\mathbf{3 , 3 1 9}$ |
| $2002 / 03$ | 6,735 | 6,412 | $\mathbf{1 3 , 1 4 7}$ |
| $2003 / 04$ | 5,269 | 5,009 | $\mathbf{1 0 , 2 7 8}$ |
| $2004 / 05$ | 7,846 | 9,036 | $\mathbf{1 6 , 8 8 2}$ |
| $2005 / 06$ | 10,231 | 9,884 | $\mathbf{2 0 , 1 1 5}$ |
| $2006 / 07$ | 5,216 | 8,046 | $\mathbf{1 3 , 2 6 2}$ |
| $2007 / 08$ | 82 | 1 | $\mathbf{8 3}$ |
| $2009 / 10$ | 94 | 0 | $\mathbf{9 4}$ |

## 2．Tag Recoveries

As at 22 July 10，a total of 10,785 SBT had been reported as being recaptured from the surface fishery tagging program．As would be expected，most $(9,484)$ of these fish were recovered from the sea cages in Port Lincoln tuna farms．1，301 of these fish were recaptured from the wild，including 983 commercial fishing captures， 166 while conducting tagging in the surface fishery， 101 from amateur fishers and 51 from other sources including tags found on beaches．

During the past year，there has been an increase in the number of recaptures where the primary and secondary tags for a single fish are being reported separately and with different fish measurements．It is possible that some fishers think the tag rewards are for a single fish （regardless of the number of tags）and are reporting the tags separately to gain additional rewards．This is unfortunate，as the rewards are in fact paid for each tag，not each fish．It would be helpful if Members could liaise with their industries and advise them that rewards
are paid for each tag and so it is preferable that they report both tags (if present) at the same time and with the same (correct) information.

The number of surface fishery tags recovered from farms declined by 55\% from the 2007/08 season to the 2008/09 season. This decline was expected due to the cessation of tagging after the 2006/07 season. However, the number of longline recaptures in the same period declined by almost as much (52\%), which was not expected. It may be that increased efforts are required to seek recoveries from the longline fisheries.

Attachment A shows the straight line movement pattern as at July 2010 for fish tagged in the surface fishery (Figure 1) and for fish tagged in the other SRP projects (Figure 2).
Attachments B and C show the same information, but as reported in July 2009 and July 2008 respectively. From Figure 1 in each attachment, it can be seen that there is a noticeable increase in the number of surface fishery tagged SBT reaching New Zealand over the three years. As mentioned in CCSBT-ESC/0809/07 and CCSBT-ESC/0909/05, there are reasons to be less confident in the two movements shown in Figure 1 (of all 3 attachments) with a north easterly direction to the western Pacific, and the northward movement in Figure 1 to the Banda Sea (in Attachments A and B).

Summary information showing recaptures by source are shown in Attachment D.
Tag recovery activity in 2009/10 consists of the following elements:

- A private contractor at Port Lincoln acting on behalf of the CCSBT in promoting the return of tags; the collection of data on tag recapture details; and providing the information with the recovered tags to the Secretariat.
- Twenty days of observation on board freezer vessels by the above contractor to collect tags and tag recovery information. No data was available from the 2009/10 freezer vessel observation at the time of writing this report.
- A tag recovery mechanism with a Taiwanese representative in Mauritius visiting vessels, collecting tags and details, and providing rewards.
- An arrangement with an Indonesian representative for collecting tags and details at Benoa, and providing rewards within Indonesia.
- Member's fishing authorities promoting the tag recovery program in their fisheries
- Provision of rewards and feedback (usually in the form of recapture certificates that provides a history of the recaptured fish) to people who reported the capture of tagged fish.


## 3. The 2010 program

A draft budget for the 2011 tagging program is provided at Attachment E. It represents a $50 \%$ reduction from the 2010 budget. The draft budget assumes continued efforts for tag recovery, but no tag deployment.

The budget also assumes that tag seeding of farms will continue during 2011, but that freezer vessel sampling will not continue as it is likely that very few (if any) tags will be recovered through this mechanism in 2011. The ESC should consider whether it is acceptable to cancel the freezer vessel sampling in 2011, as proposed by the Secretariat.

## Prepared by the Secretariat

Figure 1: Movement of recaptured SBT that were tagged in the surface fishery (as at July 2010).


Figure 2: Movement of recaptured SBT that were tagged in the non-surface fishery component of the SRP tagging program (as at July 2010).


Figure 1: Movement of recaptured SBT that were tagged in the surface fishery (as at July 2009, as reported in CCSBT-ESC/0909/05).


Figure 2: Movement of recaptured SBT that were tagged in the non-surface fishery component of the SRP tagging program (as at July 2009).


Figure 1: Movement of recaptured SBT that were tagged in the surface fishery (as at July 2008, as reported in CCSBT-ESC/0809/07).


Figure 2: Movement of recaptured SBT that were tagged in the non-surface fishery component of the SRP tagging program (as at July 2008).


## Source of Recaptures for the SRP Tagging Projects

(Includes all data received by the Secretariat as at 22 July 2010 - most of the 2009/10 recaptures have yet to be received)
Notes:
(1) The season shown is the season starting in 1 December each year and ending at 30 November each year
(2) Project codes are: SRP_SEED (tag seeding into farms), SRP_TAG (surface fishery tagging project), SRP_TAGA (Australian east coast tagging); SRP_TAGJ (Japanese tagging in the Indian Ocean); and SRP_TAGN (New Zealand tagging).
(3) With the exception of the New Zealand charter fleet, the country/fishing entity listed below is the vessel flag unless the flag is not known, in which case the crew/finder's nationality is used.

|  |  | Research Fishing | Recreational Fishing |  | Farming | Commercial Capture Fisheries |  |  |  |  |  |  |  |  |  | Unknown |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Project Code | Recapture Season |  |  |  | Australia | Australia | Taiwan (via Mauritius agents) | Taiwan (other) | Japan | New Zealand | Korea | Indonesia | Philippines | Thailand | Other |  |
| SRP_SEED | 2004 | 0 | 1 | 0 | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_SEED | 2005 | 0 | 2 | 0 | 126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_SEED | 2006 | 0 | 4 | 0 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| SRP_SEED | 2007 | 0 | 0 | 0 | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_SEED | 2008 | 0 | 0 | 0 | 169 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_SEED | 2009 | 0 | 0 | 0 | 105 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAG |  | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAG | 2002 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAG | 2003 | 13 | 5 | 5 | 391 | 3 | 13 | 4 | 13 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| SRP_TAG | 2004 | 7 | 5 | 7 | 1789 | 3 | 53 | 51 | 29 | 0 | 0 | 1 | 0 | 2 | 0 | 3 |
| SRP_TAG | 2005 | 51 | 11 | 9 | 1345 | 4 | 50 | 29 | 67 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAG | 2006 | 57 | 36 | 10 | 2093 | 2 | 155 | 24 | 74 | 1 | 7 | 2 | 5 | 5 | 0 | 2 |
| SRP_TAG | 2007 | 38 | 25 | 5 | 1843 | 4 | 16 | 25 | 91 | 0 | 3 | 6 | 0 | 2 | 3 | 0 |
| SRP_TAG | 2008 | 0 | 11 | 7 | 1391 | 1 | 59 | 12 | 51 | 6 | 2 | 14 | 0 | 0 | 0 | 0 |
| SRP_TAG | 2009 | 0 | 5 | 0 | 632 | 0 | 13 | 15 | 11 | 11 | 5 | 14 | 0 | 0 | 0 | 0 |
| SRP_TAG | 2010 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 1 | 13 | 0 | 2 | 0 | 0 | 0 | 0 |
| SRP_TAGA | 2002 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGA | 2003 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGA | 2004 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGA | 2005 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGA | 2006 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGA | 2007 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGA | 2010 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGJ | 2002 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGJ | 2003 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGJ | 2004 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGJ | 2005 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGJ | 2006 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGJ | 2007 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGJ | 2008 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGJ | 2009 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| SRP_TAGJ | 2010 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| SRP_TAGN | 2005 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGN | 2007 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SRP_TAGN | 2008 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## CCSBT Tagging Program

Draft Budget for 2011

This proposed budget assumes that no tagging will be conducted during 2011 and the budget is therefore only directed at continued recovery of tags.

| Expenditure Type | Budget <br> $\$$ |
| ---: | :---: |
| Coordination Expenses | 0 |
| Tag purchase | $0,700^{1}$ |
| Tag rewards | $2,270^{2}$ |
| Tag collection expenses | $0^{3}$ |
| Tag collection on freezer boats | $2,500^{4}$ |
| Miscellaneous |  |
|  |  |
| Tag Deployment Expenses | 0 |
| Tag placement contract | 0 |
| Vessel charter |  |
| Total Expenditure | $\mathbf{2 7 , 4 7 0}$ |

[^0]
[^0]:    ${ }^{1}$ This estimate assumes that 1,035 tags will be returned in 2011 at a cost of $\$ 20 /$ tag. Despite the decline in longline tag recoveries during 2008/09, it assumes that non-farm recoveries and seeded tag recoveries will be similar to previously highest levels and that there will be 600 and 300 tags recovered from these sources respectively. It further assumes that approximately 135 tags will be recovered from farms (calculated as $0.5 \%$ of the tags inserted in the 2006/07 season, which is based on previous Secretariat analyses of the farm recovery rates in years following tagging).
    ${ }^{2}$ The Secretariat contracts an agent at Port Lincoln to recover tags and provide recapture details. The agent also promotes tag recovery to industry. The budget assumes 135 tags will be returned through this mechanism and includes a $\$ 500$ increase in the annual fee (to $\$ 4,000$ ) and a 50 c increase in the per tag fee (to $\$ 2.00$ ).
    ${ }^{3}$ It is assumed that freezer vessel sampling is not required for 2011. If this is required, it will cost $\$ 13,500$.
    ${ }^{4}$ This includes provision for freight and mailing costs for reward materials etc.

