Commission for the Conservation of
Southern Bluefin Tuna

みなみまぐろ保存委員会

CCSBT-ESC/0509/08

8.4 CCSBT SCIENTIFIC RESEARCH PROGRAM TAGGING PROGRAM CCSBT 科学調査計画標識放流計画

1. INTRODUCTION 序文

Five tagging programs are operating under the auspices of the CCSBT using scientific research program mortality allowance:
五つの標識放流計画が CCSBT の科学調査計画の死亡枠の中で実施されている。

i. a program in the surface fishery in the waters off the south and western Australian coasts being managed by the CCSBT Secretariat
南・西オーストラリア沖の表層漁業における計画は CCSBT 事務局によって管理されている。
ii. a program being conducted by Japan in the longline fishery in the western Indian Ocean
西インド洋のはえ縄漁業における計画は日本によって実施されている。
iii. a program being conducted by Australia in the east coast and west coast longline fisheries
東西オーストラリア沿岸のはえ縄漁業における計画はオーストラリアによって実施されている。
iv. a global spatial dynamics program being conducted by Australia across the geographical range of SBT using Australian vessels and vessels of other members
全世界規模標識放流計画は、SBT の地理的回遊範囲にわたりオーストラリア及び他のメンバーの漁船によって実施されている。
v. a program being conducted by New Zealand in its domestic longline fishery
ニュージーランドは自国はえ縄漁業において計画を実施している。

This paper reports on the fourth year of activity of the surface fishery tagging program
本紙は４年目となる表層漁業における標識放流活動を報告するものである。

2. GENERAL 一般事項

As designed at the Tagging Program Workshop this element had the following features:-

標識放流計画ワークショップで指定されたとおり、本計画は以下の特徴を持っている。

- tagging of 5-7,000 one year old SBT in Western Australia
- tagging of 8-10,000 two to four year old SBT in South Australia
- fish to be caught using pole and line techniques
- five year timescale
-西オーストラリアで 5-7,000 尾のミナミマグロ 1 才魚の標識放流を行う
-南オーストラリアで 8-10,000 尾のミナミマグロ 2-4 才魚の標識放流を行う
-魚は一本釣りの技術を用いて漁獲される
- ５年間の計画

A total budget of $674,000 was agreed for the fourth year of the program. $100,000 was for coordination expenses and $574,000 for tag deployment costs.
全体で$674,000 ドルの予算額が４年目の計画のため合意されている。$100,000 ドルは調整費に、$574,000 ドルは標識配備費に使われる

3. RESULTS OF TAG DEPLOYMENT IN SURFACE TAGGING PROGRAM
表層標識放流計画における標識配備の結果

Summary of Results
結果の要約

	目標放流尾数	実際の放流尾数	標識放流活動日 (i)	実際の標識放流期間	用船数
西オーストラリア	5-7,000	7,796	36	１月５日～３月４日	1
南オーストラリア	8-10,000	9,036	15	12 月３～17 日及び３月７～17 日	1
合計	10-15,000	16,832	51		2

(i) 75 日間の用船期間中に実際に標識放流が行われた日数

More fish were tagged in each state this year than in previous years but there were some unusual features, which are examined in more detail below, along with a comparison of major changes in the area of distribution and size ranges of fish tagged during the Recruitment Monitoring Program (RMP) of the 1990's and the CCSBT program.
両州にいて本年は昨年より多くの魚が標識放流されたが、下記に詳しく検討するように 1990 年代の加入モニタリング計画（RMP）及び通常の本計画に比べ分布範囲、体長範囲で大きな違いが見られるという幾つかのまれな状況が見られた。

The fish distribution in South Australia was more restrictive this year and the majority of fish tagged were two year olds with fewer than normal one year olds or fish older than two being

found. For both the December and January legs there were greater than normal short term recaptures of fish tagged in these months.
南オーストラリアにおける今年の魚の分布はより限定的で、標識放流された魚はほとんどが２才魚で、他に少数ではあるが通常の１才魚又は２才魚より大きな魚も見られた。12 月及び１月の両方の標識放流の実施において、のこの時期では短期間に一番多い標識放流魚の回収があった。

In Western Australia it seems as if there are more and smaller patches present, and although these patches are spread throughout a greater area than in previous years, the vast majority of fish tagged were one year olds. Two year old fish were very scarce in comparison to their continual presence during the last three years.
西オーストラリアにおいては小さな群れが数多く存在しているようで、前年に比べより広範囲にこの群れは分散していた。標識放流された魚の大部分は１才魚であった。放流魚に占める２才魚の割合は過去３年と比較して非常に低かった。

表１．標識放流魚数

年	西オーストラリア	南オーストラリア
2001/02	2855	464
2002/03	6684	6412
2003/04	5234	5009
2004/05	7796	9036

西オーストラリア

In contrast to previous years when fish were located only at Daw Island in the far east of the search area, fish this year were routinely located in three major areas, Daw Island, and also to the west at Middle Island and the Dampier Reefs, covering a band of longitude from about 124 to 122 E. In addition 87 fish were tagged to the west in the Bremer Bay to Albany area (119 E) in December and early January during a separate charter aimed at acoustic tagging but these fish are not included in the totals outlined above.
調査対象海域のうちかなり東側のダウ島のみに魚が存在した昨年とは対照的に、今年の魚は、東経 122～124 度の帯をカバーする形でダウ島、ミドル島の西側及びダンパイヤー礁の三つの水域にこの時期恒常的に存在した。さらに 87 尾の魚がブリーマー湾西からオールバニ水域（東経 119 度）において 12 月及び１月上旬に別途用船された音響調査船によって標識放流された。これらの魚は上記の合計には含まれていない。

The vast majority of fish located were one year olds, with very few two year olds at all (Fig 1). Patch sizes appeared to be smaller and more numerous this year, and the increase in the total number of fish tagged was due to more patches than normal being located (147 patches were fished this year in comparison to 96 last year). In 2003/04 it was noticeable that the ratio of 1 to 2 year old fish tagged was approximately 40:60 which is in contrast to the approximately 90:10 ratio for this season (Fig 1). This may indicate a poor recruitment of 1

year old fish last year as for other years if the majority of fish tagged were 1 year olds, appreciable numbers of 2 year olds were tagged in the following year.
大部分の魚は１才魚でごくまれに２才魚が出現した（図１）。今年の群れの大きさは小さいが数が多く、合計標識放流数が増加したのは通常より多くの群れが存在しためである（昨年 96 の群れと比べ、今年は 147 の群れが漁獲対象となった）。
2003/04 漁期における標識放流された１才魚及び２才魚の比は 40:60 であったが、本年は 90:10 であり顕著な違いとなった（図１）。昨年以前の標識魚の大部分が１才魚で来年の標識放流魚の大部分が２才魚となった場合、昨年の１才魚の加入が低かったことを示しているかもしれない。

A comparison of the results from this tagging program compared to the RMP program of the 1990's indicates several substantial differences. It is noticeable that the ratio between 1 and 2 year old fish tagged has decreased for the CCSBT program to about 50:50 in comparison to the 90:10 ratio for the RMP program (Fig 2). In general the patches of 1 year old fish tagged now seem to contain more 2 year old fish than previously. It is now common for this age group to now appear first when chumming is started, and then after a while for only 1 year old fish to rise to the chum.
本標識放流計画の結果と 1990 年代の RMP 計画の指標を比較すると実質的に大きな違いがある。１才魚と２才魚の標識魚の比を比較すると RMP 計画の 90:10 から CCSBT 計画の 50:50 に減少していることが分かる（図２）。現在の１才魚の魚群は一般的に以前と比べ２才魚を多く含んでいるようである。現在、魚群に対して撒き餌を始めた際には、これら（１才魚及び２才魚）の年令の魚が現れることは普通で、しばらくすると１才魚のみが撒き餌に対し反応してくる。

There has also been a basic change in the distribution of fish within Western Australia (Fig 3). During the RMP period the vast majority of fish located were on the shelf edge between Bremer Bay and Esperance, and very few were found on the inshore lumps. In contrast, for the past 4 years, no fish have been located on the shelf edge despite one or two trips each year to examine this area and despite a continual contact being maintained with local fishers who have reported on fish activity on the shelf, and until this season all fish located have been on the inshore lumps to the far east of the area searched. This season has been the first in the recent series that substantial numbers of fish have been tagged in localities other than this far eastern area at Daw Island.
また、西オーストラリアにおける魚群の分布においても基本的な違いがあった。RMP の時代には大部分の魚はブリーマー湾とエスペランスの間の瀬の辺縁水域に存在し、ごくまれに沿岸域においても見られた。対照的に過去４年間においては、年間１～２回のこの水域（瀬の辺縁水域）を調査し、かつ本水域の漁業状況を報告している地元漁業者との絶え間ない連絡にもかかわらず魚は存在しなかった。今期まで全ての魚は沿岸水域から調査水域東側まで存在した。今期調査水域のかなり東のダウ島においてかなりの数の標識放流が実施されことは今までの調査のなかで初めてである。

図１.西オーストラリアにおける標識魚の体長分布

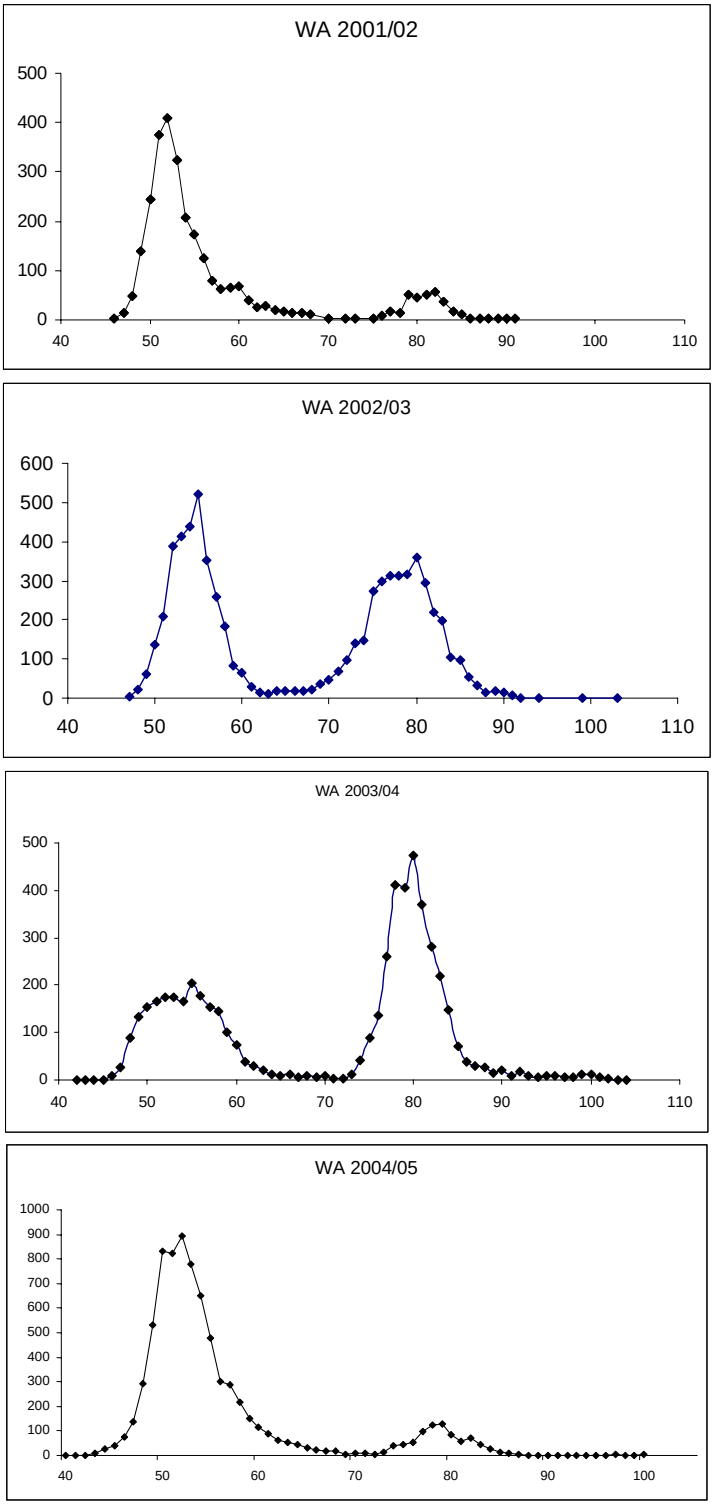


図２. 西オーストラリアにおける RMP と CCSBT 標識放流計画の標識魚体長分布

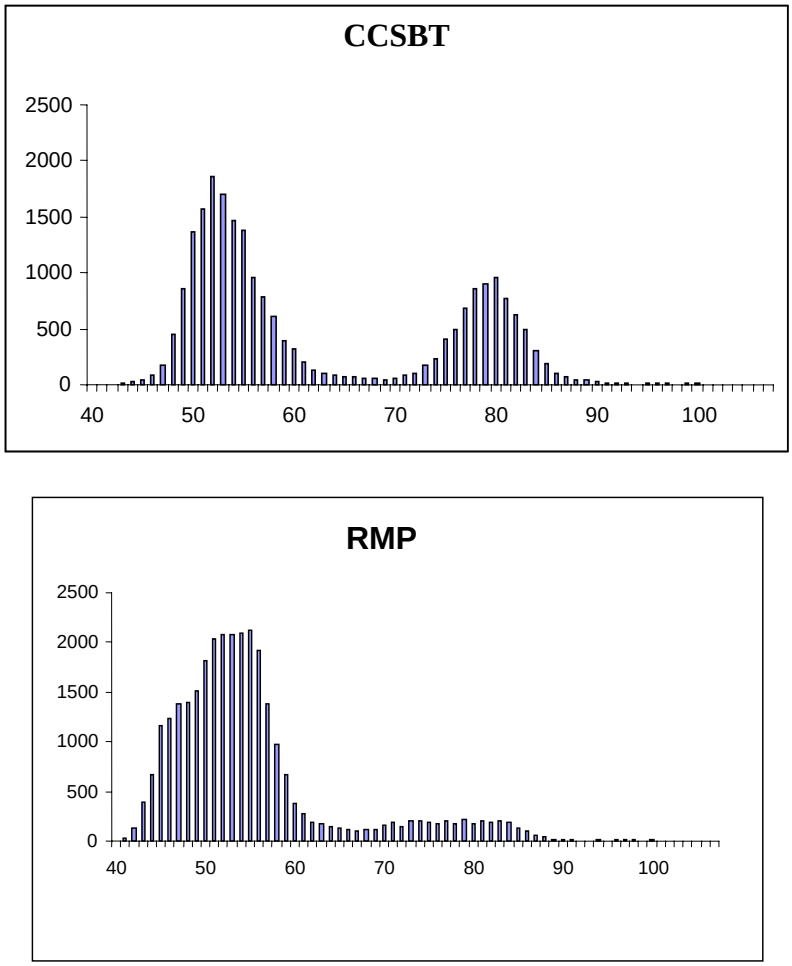
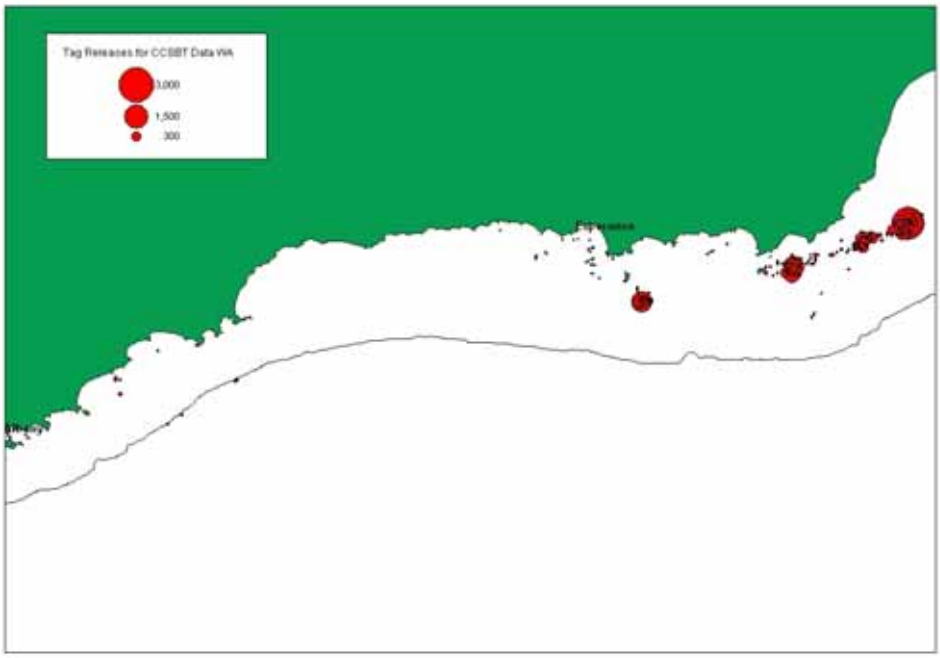
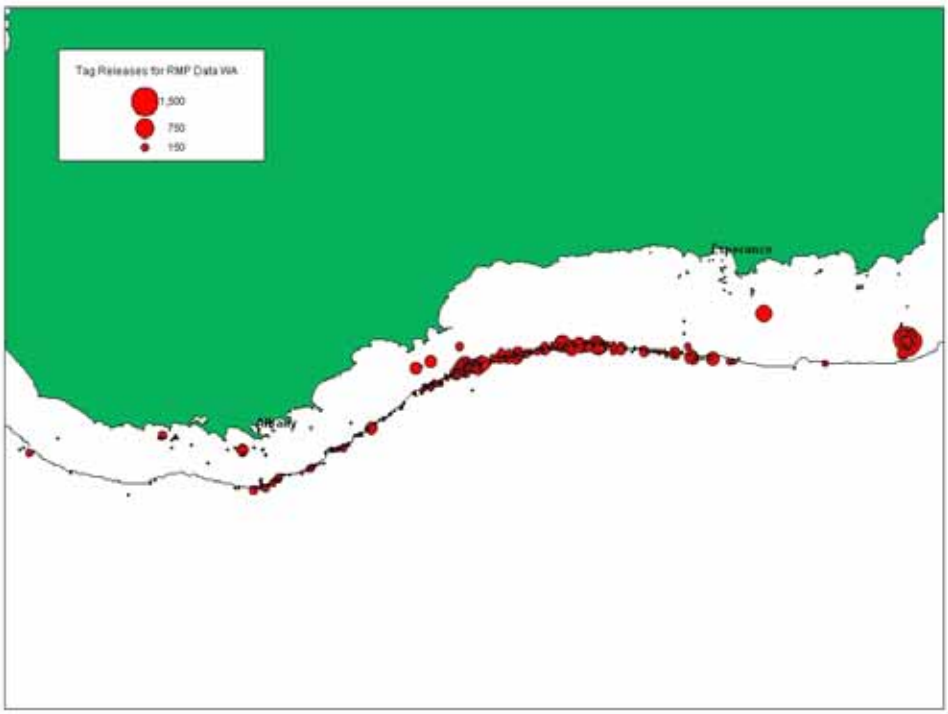


図３．西オーストラリアにおける CCSBT 及び RMP 計画の標識放流位置





South Australia
南オーストラリア

The timing of the tagging program in South Australia was amended to have the second leg in January rather than at the end of the season in March/April. This proved to be very beneficial and almost double the number of fish were tagged than in previous years (Table 1).
南オーストラリアにおける２回目の標識放流計画の実施は漁期終了時の３/４月ではなく１月に行うよう修正された。これは非常に有益な変更で、昨年と比べ約２倍もの魚が標識放流された。

Throughout the first leg in December the weather was consistently poor, cloudy and with too much wind which restricted the ability to spot fish on the surface. The sea surface temperatures were also not high enough to encourage fish up to the surface. This weather was also not suitable for any aerial spotting of surface schools. Thus activities were restricted to the Nuyts Reef area, the only area were fish were located after examining all inshore lumps between Port Lincoln and Nuyts Reef. Many small patches of fish were reported from this area before tagging operations started, and they remained in the general area for the entire month. Thus it was possible, when the weather was suitable, to locate and tag fish. However towards the end of the December trip a disturbing number of recently tagged fish (17) were recaptured suggesting that all available patches of fish had been located.
一回目の 12 月における標識放流では、曇で風が強く表層の群れを見つけることが制限されるように期間を通じ天気が悪かった。また、海面表層温度は魚が表層まで浮いてくるほど十分に暖かくなかった。この天気は他の航空目視による魚群発見にも不適切であった。従ってヌイツ礁水域における標識活動は制限され、唯一魚が確認されたのは調査された後のポートリンカーンとヌイツ礁の間の沿岸の瀬であった。標識放流が始まる前にこの水域に多くの魚群がいることが報告され、これらはすべての期間中において通常の水域にとどまった。これは天気が回復した場合、標識放流が可能になることを意味した。しかし、12 月末に近くなると標識放流したばかりの標識魚（17 尾）が再捕されようになり、漁獲できるすべての魚群の位置は完全に把握されていた。

In January the only fish located were at Yatala Reef, and again fishing operations were restricted to this area. And again towards the end of the trip large numbers of recently tagged fish (34) were recaptured.
１月においてはヤタラ礁のみに魚群が存在したが、またしても標識活動は制限された。さらに航海の後半において標識されたばかりの多くの魚が再捕された(34 尾)。

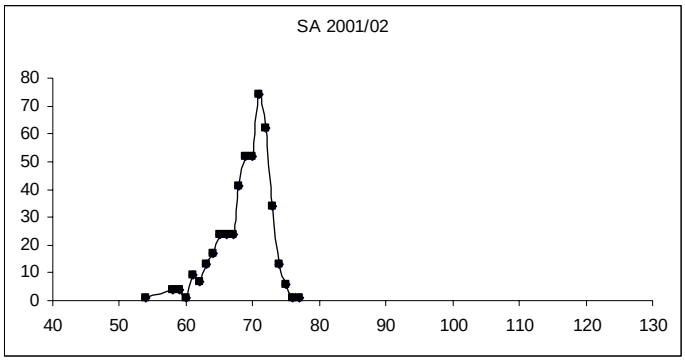
For both trips this concentration on only two areas and on resident fish in these areas for the duration of tagging operations resulted in the tagging of two year old fish only and in a lack of both younger and older age classes tagged in comparison to previous years (Fig 4). The much greater than normal recapture of recently tagged fish is also worthy of note and suggests that at least in the two areas where fish were tagged population sizes were small.
活動期間中の両航海において二つの海域にとどまる魚群に対し集中的な標識放流活動が実施され、前年に比べると２才魚のみが標識放流され、これより若い又は加齢した年級群は存在しなかった（図４）。近年標識放流のために漁獲された魚とは違う傾向を持つことは注目に値することで、またこれは標識放流が行われた二つの海域において資源量が少なかったことを示している。

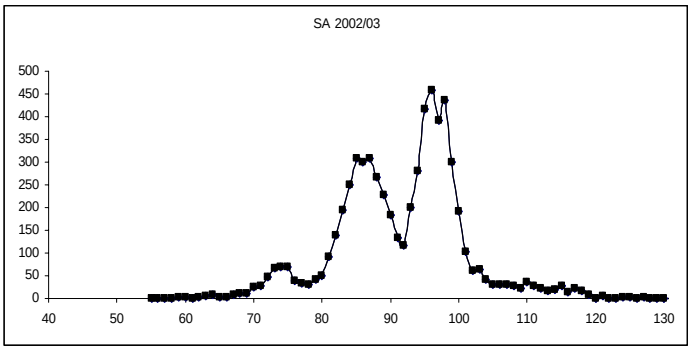
A comparison of the results from this tagging program compared to the RMP program of the 1990’s again indicates several substantial differences. Over the period of the CCSBT program fewer three year old fish (90-100cm) have been tagged (Fig 5). Basically the same

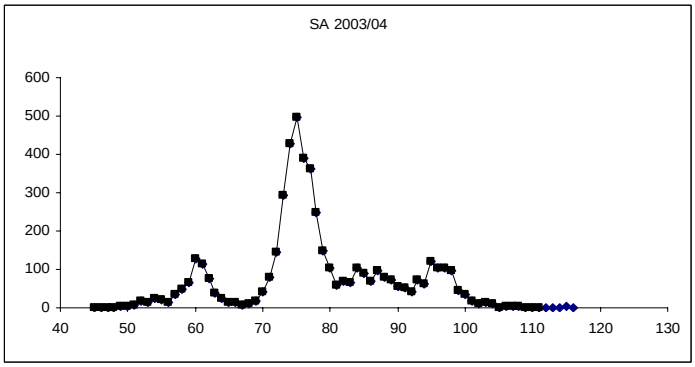
areas have been covered for both the RMP and CCSBT programs (Fig 6), but for this program despite having paid as much attention to the shelf area and the inshore lumps as previously, few fish have been located on the shelf edge or on many of the inshore lumps (most of the small dots in the CCSBT figure both on the shelf edge and inshore represent the location and tagging of very small numbers of fish in places were much larger numbers were tagged during the RMP program). In general fish have been located much farther to the west for the CCSBT program.
本計画と 1990 年代の RMP 計画を比べると再度大きな実質的な違いがあることが分かる。今までの CCSBT 計画ではほとんど３才魚(90-100cm)は標識放流されていない。基本的に RMP 及び CCSBT 計画双方同じ海域を調査しているが（図６）、本計画は前者と同様に大陸棚及び沿岸の瀬を十分に調査しているにもかかわらず、大陸棚周辺又は多くの沿岸の瀬にほとんど魚がいなかった（CCSBT 計画における大陸棚辺縁及び沿岸域のドットの内の多くは、少数の魚が存在し標識放流が行われたことを示しており、これらは RMP 計画時代に多くの標識放流が行われたところと一緒である）。

The comparison of the two sets of data is complicated by changes in the times during which tagging trips were made. During the RMP program vessel charter was available during and towards the end of the fishing season. In contrast for the CCSBT program vessels have only been available either before the start of the season, during it (this last season), or substantially after the end of the season. But as exemplified by this year’s results in January no fish were located in areas where they were in the same period during the RMP program.
二つのデータ関し、いつ標識放流を始めたか時期が異なっているので、その比較は複雑となる。RMP における用船は漁期終盤又は終了してからであった。これと対照的に CCSBT 計画では漁期開始前、期間中（この昨漁期）、又は実質的に漁期が終了してから実施可能であった。しかし、今年の１月の結果に例証されるように、RMP が実施されていた頃魚がいた場所には魚は存在しなかった。

図４．南オーストラリアにおける標識魚の体長分布







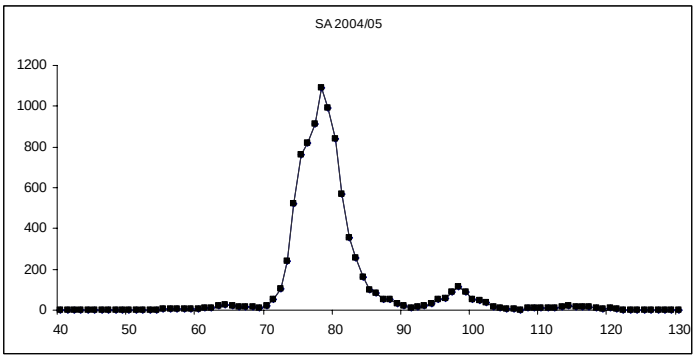
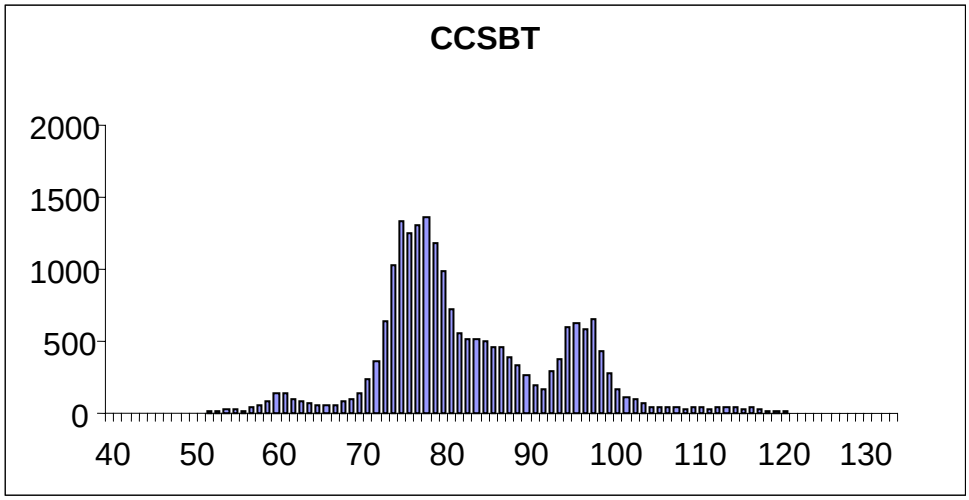


図５．南オーストラリアにおける RMP 及び CCSBT 標識放流計画の標識魚の体長分布



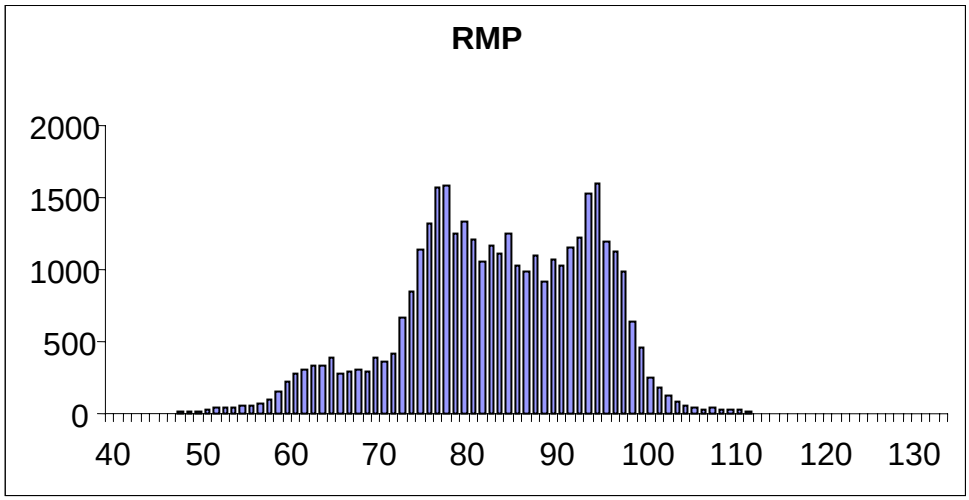
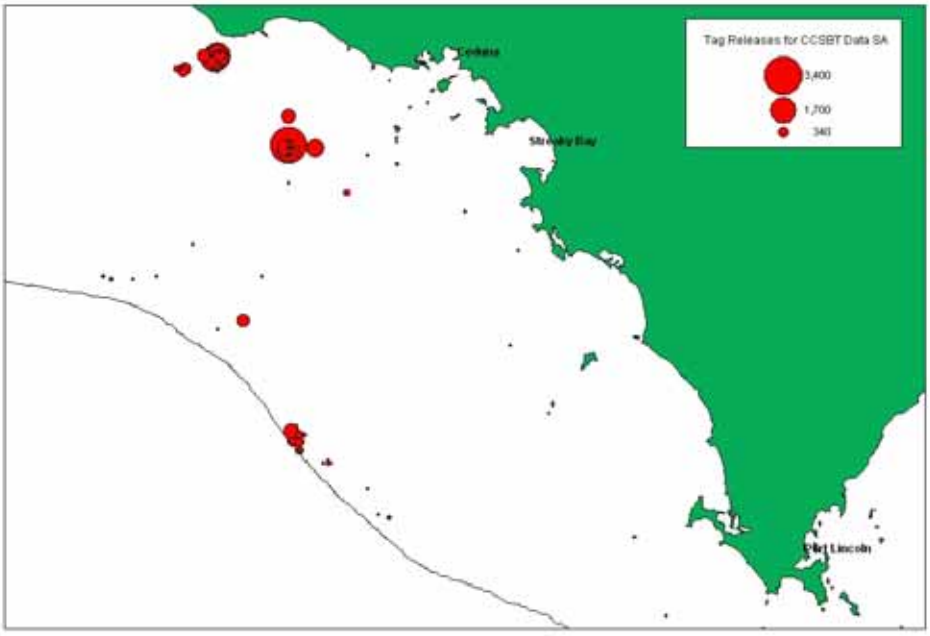
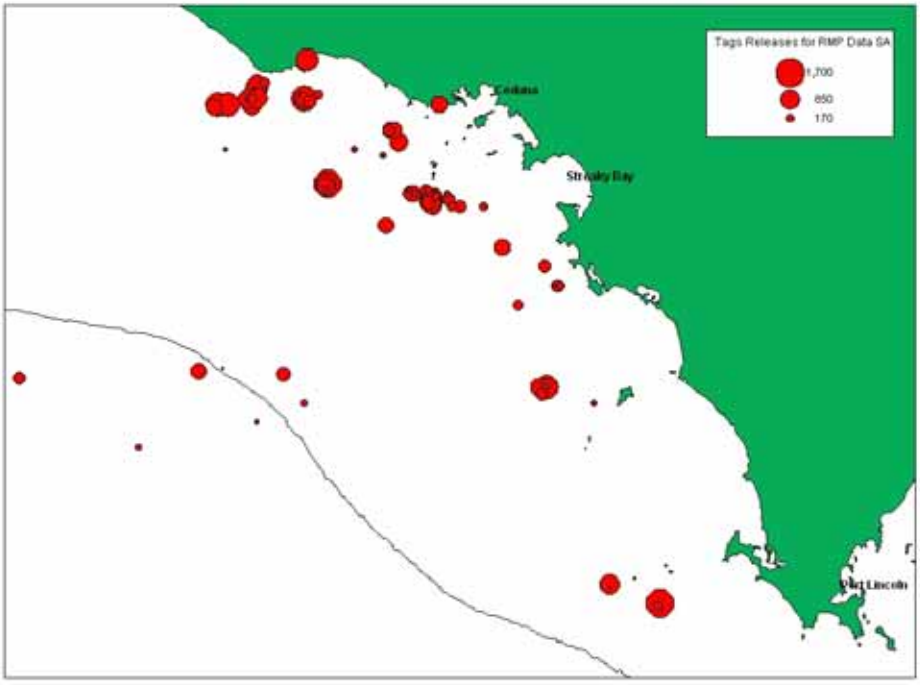


図６． 南オーストラリアにおける RMP 及び CCSBT 標識放流計画の標識放流位置





4. RESULTS OF TAG RECOVERY
標識回収の結果

A total of 2,773 fish have been recaptured from the surface fishery tagging program[1]. As would be expected, most (2,470) of these fish were recovered from the sea cages in Port Lincoln tuna farms. 303 fish were recaptured from the wild, including 189 commercial fishing captures, 71 while conducting tagging in the surface fishery, 16 from amateur fishers and 27 from other sources including tags found on beaches.
合計 2,773 尾の標識魚が表層漁業放流計画で再捕されている。予測通り、ほとんど(2,470 尾)の標識魚はポートリンカーンのまぐろ畜養生け簀で再捕された物である。303 尾が天然から再捕されており、これらには商業漁業からの 189 尾、表層漁業標識放流実施時の 71 尾、遊漁からの 16 尾及び海浜からの 26 尾を含むその他からなっている。

If releases in the past two years are excluded because the fish are unlikely to have entered the longline fisheries, the tag recovery rate from commercial fishing now stands at 1%.
過去２年の放流魚がはえ縄漁業で漁獲される可能性がないとして、この漁業が除外された場合、現在の商業漁業の再捕率は１％である。

Attachment A shows the straight line movement pattern for fish tagged in the surface fishery and for fish tagged in the other SRP projects.
別紙 A は表層漁業における標識魚及び他の SRP において標識放流された魚の動きを直線で示した物である。

Summary information on tag releases and recaptures are set out in Attachment B. The information in Attachment B includes details of all CCSBT tags recaptured including those released in the surface fishery, releases in the various longline fisheries and some other minor releases.
標識放流及び再捕に関する情報の概要は別紙 B に示した。別紙 B には、表層漁業からの放流、様々なはえ縄からの放流及びその他小規模事業より放流された CCSBT 標識の再捕に関する情報が含まれている。

Attachment C shows recaptures by source.
別紙 C は再捕者別再捕数を示している。

Tag recovery activity in 2005 has comprised:
2005 年標識再捕活動は以下の事項を含む：

- 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
  ポートリンカーンの個人契約者が CCSBT に代わりに標識の返還の促進、再捕時のデータ収集及び事務局に対する収集した標識と情報の提供を行っている。

[1] These are fish that had been reported to the Secretariat as at 29 July 2005. However, there are a significant number of fish that have been recaptured at Port Lincoln which have recently been recaptured, but for which the details have yet to reach the Secretariat.
これらの魚に関する情報は 2005 年 7 月 29 日時点までの物である。一方、最近ポートリンカーンで漁獲された漁獲物の中に大量の標識魚含まれていたが、これらの情報はまだ事務局に報告されていない。

- a recovery mechanism with Taiwanese representatives in Mauritius
  モーリシャスにおける台湾代理店による標識回収活動

- members' fishing authorities advertising the tag recovery program with vessels at sea
  メンバー漁業管当局による洋上における標識回収に関する広報活動

- recreational fishing associations in Australia publicising tag recovery by their members
  オーストラリア遊漁協会の会員による標識回収出版物の発行

- an arrangement with the Indonesian catch monitoring team at Benoa
  ベノア港におけるインドネシア人との漁獲モニタリングチームの配置

- providing 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
  標識魚の再捕を報告してくれた者に対する報奨及び情報提供（通常、再捕された魚の履歴を記載した再捕証明書）

6. THE 2006 PROGRAM
2006 年の計画

The 2006 program, the last year of the five year program agreed by the CCSBT, will be conducted along the lines of the activity in 2005 unless the Scientific Committee considers an amendment is required. 15,000 fish will be targeted for the 2005-06 season with the same distribution between South Australia and Western Australia and the same timing.
2006 年の計画は委員会が合意した５年計画の最終年であり、科学委員会がその変更を考慮しない限り 2005 年活動内容に従って実施される。2005-06 年漁期は 15,000 尾に標識放流することを目標としており、南オーストラリアと西オーストラリアにおける匹数の割合及び時期は前年と同様にする予定となっている。

.Continued emphasis will be devoted to tag recovery mechanisms. There are however some observations:
標識回収事業に関しては引き続き努力が払われるが、幾つか注視すべき事項もある。

- Establishing an agent in Cape Town remains a difficulty. The Taiwan office in Cape Town seems reluctant to assist the Secretariat and does not return e-mails; the Government of South Africa is not cooperating with the CCSBT; and the Secretariat cannot locate a contractor who could manage tag recovery.
  ケープタウンに代理店を設立することが困難となっている。ケープタウンの台湾交流協会は事務局を支援することに消極的で電子メールに返信してこない。南アフリカ政府は CCSBT に協力的ではなく、また、事務局も標識の回収を管理する契約者を常駐させることが出来ない状況である。

- Observers on vessels in the fishery became more active in 2005 and more emphasis will be placed on this source for tag recovery. Up to the time of producing this report, no tags from the surface fishery program have been recovered through observers on any of the longline fleets.
2005 年に入り漁船へのオブザーバーの乗船が活発となっており、この手法による標識放流の回収により重点が置かれるであろう。この報告書を作成するまでに、表層漁業標識放流計画によって放流された標識は、はえ縄漁船に乗船するオブザーバーにより未だ回収されたことはない。

A draft budget for 2006 based on a continuation of the original plan for the surface fishery tagging program, is at Attachment D.
表層漁業標識放流計画原案の継続に基づく 2006 年予算案は別紙 D。

Prepared by the Secretariat
事務局作成資料

Figure 1: Movement of recaptured fish that were tagged in the surface fishery.

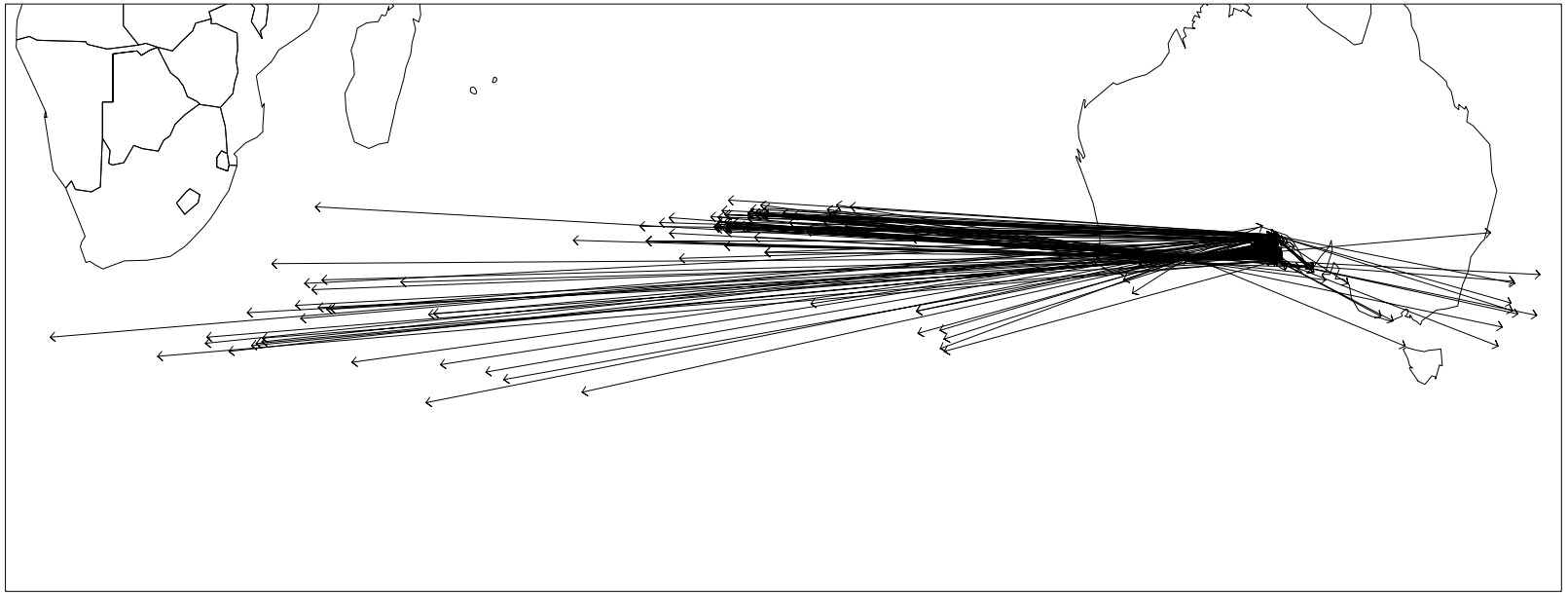
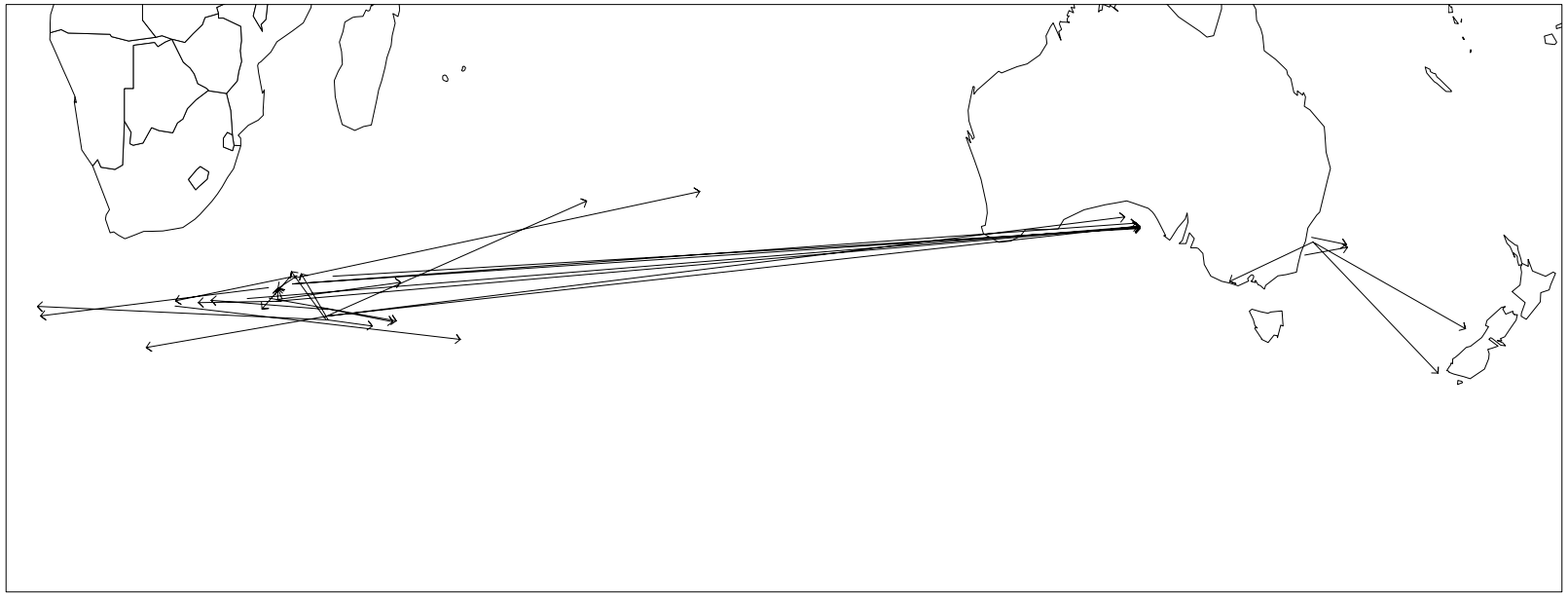


Figure 2: Movement of recaptured fish that were tagged in the Indean Ocean by Japan and the east coast of Australia by Australia.



Attachment B

Summary of the number of SBT recaptured for each month of tag releases in SRP tagging projects

(Includes all data received by the Secretariat as at 20 July 2005 - most of the 2004/05 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 is tag seeding into farms, SRP_TAG is the surface fishery tagging project, SRP_TAGA is the Australian east coast tagging; SRP_TAGJ is the Japanese tagging in the Indian Ocean; and SRP_TAGN is New Zealand tagging.

(3) The column "Farming Related Recaptures" refers to captures from the farm in the case of the SRP_SEED project and the wild capture (before going into the farm) for all other data.

(4) Similar to "2" above, the data for the fishing seasons columns relate to the farm capture date for the SRP_SEED project and the wild capture date (before going into the farm) for all other data.

Project Code	Release Area	Calendar Year of Release	Month of Release	Total Number of Fish Tagged	Total Number of Recaptures	Number of Recaptures in 2000/01	Number of Recaptures in 2002	Number of Recaptures in 2002/03	Number of Recaptures in 2003/04	Number of Recaptures in 2004/05	Commercial Fishing Recaptures	Research Fishing Recaptures	Amateur Fishing Recaptures	Farming Related Recaptures	Other Recaptures
SRP_SEED	Area 03	2003	12	26	6	0	0	0	6	0	0	0	0	6	0
SRP_SEED	Area 03	2004	1	39	22	0	0	0	22	0	0	0	0	22	0
SRP_SEED	Area 03	2004	2	50	11	0	0	0	11	0	0	0	1	10	0
SRP_SEED	Area 03	2004	3	90	66	0	0	0	66	0	0	0	0	66	0
SRP_SEED	Area 03	2004	4	19	5	0	0	0	5	0	0	0	0	5	0
SRP_SEED	Area 03	2004	12	20	0	0	0	0	0	0	0	0	0	0	0
SRP_SEED	Area 03	2005	1	91	9	0	0	0	0	9	0	0	0	9	0
SRP_SEED	Area 03	2005	2	110	8	0	0	0	0	8	0	0	1	7	0
SRP_SEED	Area 03	2005	3	90	0	0	0	0	0	0	0	0	0	0	0
SRP_SEED	Area 03	2005	4	30	1	0	0	0	0	1	0	0	1	0	0
SRP_TAG	Area 02	2002	12	51	2	0	0	1	1	0	0	1	0	1	0
SRP_TAG	Area 02	2004	1	34	1	0	0	0	0	1	0	1	0	0	0
SRP_TAG	Area 02	2004	12	50	0	0	0	0	0	0	0	0	0	0	0
SRP_TAG	Area 02	2005	1	137	0	0	0	0	0	0	0	0	0	0	0
SRP_TAG	Area 03 (SA)	2002	4	464	78	0	0	12	65	1	7	2	0	68	1
SRP_TAG	Area 03 (SA)	2002	12	4284	670	0	0	344	324	2	35	2	4	625	4
SRP_TAG	Area 03 (SA)	2003	3	1928	445	0	0	6	435	4	18	0	0	425	2
SRP_TAG	Area 03 (SA)	2003	4	200	32	0	0	0	32	0	1	1	0	30	0
SRP_TAG	Area 03 (SA)	2003	12	4914	395	0	0	0	344	51	18	8	1	367	1
SRP_TAG	Area 03 (SA)	2004	4	80	4	0	0	0	0	4	0	0	0	4	0
SRP_TAG	Area 03 (SA)	2004	12	3394	32	0	0	0	0	32	0	24	4	4	0
SRP_TAG	Area 03 (SA)	2005	1	5642	21	0	0	0	0	21	2	16	1	2	0
SRP_TAG	Area 03 (WA)	2002	1	522	13	0	1	1	11	0	0	0	0	12	1
SRP_TAG	Area 03 (WA)	2002	2	1655	107	0	1	39	66	1	13	1	2	90	1
SRP_TAG	Area 03 (WA)	2002	3	678	25	0	0	2	23	0	0	1	0	24	0
SRP_TAG	Area 03 (WA)	2003	1	1760	281	0	0	7	263	11	27	4	0	249	1
SRP_TAG	Area 03 (WA)	2003	2	3310	283	0	0	10	266	7	26	7	0	249	1
SRP_TAG	Area 03 (WA)	2003	3	1614	52	0	0	2	48	2	5	0	0	45	2
SRP_TAG	Area 03 (WA)	2004	1	2386	11	0	0	0	1	10	3	0	0	6	2
SRP_TAG	Area 03 (WA)	2004	2	2848	24	0	0	0	11	13	5	3	1	8	7
SRP_TAG	Area 03 (WA)	2005	1	3703	2	0	0	0	0	2	0	0	0	0	2
SRP_TAG	Area 03 (WA)	2005	2	2794	0	0	0	0	0	0	0	0	0	0	0
SRP_TAG	Area 03 (WA)	2005	3	1162	0	0	0	0	0	0	0	0	0	0	0
SRP_TAG	Area 07	2004	4	15	2	0	0	0	1	1	1	0	0	1	0
SRP_TAGA	Area 04	2002	7	159	3	0	1	2	0	0	2	0	0	0	1
SRP_TAGA	Area 04	2002	8	59	1	0	0	0	1	0	1	0	0	0	0

Attachment B

Project Code	Release Area	Calendar Year of Release	Month of Release	Total Number of Fish Tagged	Total Number of Recaptures	Number of Recaptures in 2000/01	Number of Recaptures in 2002	Number of Recaptures in 2002/03	Number of Recaptures in 2003/04	Number of Recaptures in 2004/05	Commercial Fishing Recaptures	Research Fishing Recaptures	Amateur Fishing Recaptures	Farming Related Recaptures	Other Recaptures
SRP_TAGA	Area 04	2003	7	159	1	0	0	0	1	0	1	0	0	0	0
SRP_TAGA	Area 04	2003	8	47	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGA	Area 04	2003	9	5	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGA	Area 04	2003	10	11	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGA	Area 04	2004	6	2	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGA	Area 04	2004	7	118	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGA	Area 04	2004	8	32	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGA	Area 04	2004	9	9	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGJ	Area 02	2002	12	3	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGJ	Area 03 (WA)	2003	1	1	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGJ	Area 03 (WA)	2003	2	29	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGJ	Area 08	2003	1	3	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGJ	Area 09	2001	11	119	4	0	2	1	1	0	4	0	0	0	0
SRP_TAGJ	Area 09	2001	12	251	11	0	1	6	4	0	9	0	0	2	0
SRP_TAGJ	Area 09	2002	1	11	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGJ	Area 09	2002	10	36	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGJ	Area 09	2002	11	79	2	0	0	1	1	0	1	0	0	1	0
SRP_TAGJ	Area 09	2002	12	203	7	0	0	3	4	0	6	0	0	1	0
SRP_TAGJ	Area 09	2003	10	19	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGJ	Area 09	2003	11	280	5	0	0	0	4	1	2	0	0	3	0
SRP_TAGJ	Area 09	2003	12	338	2	0	0	0	2	0	2	0	0	0	0
SRP_TAGN	Area 05	2004	6	2	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGN	Area 06	2004	5	1	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGN	Area 06	2004	6	3	0	0	0	0	0	0	0	0	0	0	0
SRP_TAGN	Area 06	2004	7	1	0	0	0	0	0	0	0	0	0	0	0
					2644	0	3	437	2019	182	189	71	16	2342	26

Attachment C

Source of Recaptures for the SRP Tagging Projects

(Includes all data received by the Secretariat as at 20 July 2005 - most of the 2004/05 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 is tag seeding into farms, SRP_TAG is the surface fishery tagging project, SRP_TAGA is the Australian east coast tagging; SRP_TAGJ is the Japanese taggingin the Indian Ocean; and SRP_TAGN is New Zealand tagging.

(3) With the exception of "Australian Other" (which includes beach and recreational recaptures in Australia), and where otherwise indicated, the country/fishing entity listed below is the flag of the vessel, not the nationality of the person who returned the tags. For example, returns from Indonesian crew on Japanese vessels are recorded under the column for Japan.

Project Code	Recapture Season	Australian Farms	Australian Other	Taiwan Mauritius Agent	Taiwan Other	Japan	New Zealand Japanese Charter Fleet	Thailand	Unknown
SRP_SEED	2003/04	109	1	0	0	0	0	0	0
SRP_SEED	2004/05	16	2	0	0	0	0	0	0
SRP_TAG	2001/02	0	1	1	0	0	0	0	0
SRP_TAG	2002/03	369	27	13	4	13	0	0	1
SRP_TAG	2003/04	1753	22	53	32	28	0	2	1
SRP_TAG	2004/05	92	68	0	0	4	0	0	1
SRP_TAGA	2001/02	0	0	0	0	1	0	0	0
SRP_TAGA	2002/03	0	1	0	0	0	1	0	0
SRP_TAGA	2003/04	0	0	0	0	1	1	0	0
SRP_TAGJ	2001/02	0	0	1	0	2	0	0	0
SRP_TAGJ	2002/03	3	0	0	0	8	0	0	0
SRP_TAGJ	2003/04	3	0	1	0	12	0	0	0
SRP_TAGJ	2004/05	1	0	0	0	0	0	0	0

Attachment D

The following table outlines the proposed budget for 2006 together with a comparison with estimated outlays in 2005.

Expenditure Type	**2005 Estimate $**	**2006 Budget $**
Coordination Expenses		
- Tag purchase	34,000	0[1]
- Tag rewards	65,000	110,000[2]
- Advertising material	0	8,000[3]
- Promotion expenses	0	5,000[4]
- General administration	8,000	8,000[5]
Total Coordination Expenses	107,000	131,000
Tag Deployment Expenses		
- Tag placement contract	240,000	246,000[6]
- Vessel charter	348,750	360,000[7]
Total Deployment Expenses	588,750	606,000
Total Expenditure	697,750	737,000

[1] Current stocks of tags are sufficient for 2006 targets. If it is agreed to extend the program beyond five years, additional expenditure of $35,000 will be required.

[2] Estimated outlays in 2005 are $65,000 and tags deployed have increased by about 60%. The estimate is based on past patterns of tag recoveries from farms and the increased population of tagged fish. However, until returns from the farms in 2005 are available in sufficient numbers this estimate should be regarded as tentative. An updated estimate may be available for the Scientific Committee meeting.

[3] New advertising material will be developed and provided to fishers and other sectors of the industry to maintain momentum in tag recovery once deployment activity ceases. Costs reflect the experience of the original printing of publicity material.

[4] This budget is for the placement of advertisements in fishing industry publications in member countries.

[5] The budgeted amount includes provision for freight and mailing costs for reward materials.

[6] Provides for a 3% increases in wage costs of tag deployment personnel.

[7] Calculated on the basis of the number of charter days and vessel hire rates in 2005 plus a provision for cost increases, particularly fuel expenses.