



Pacific
Community
Communauté
du Pacifique

Tag recovery

Manual for Observers



Got Tags?



Version 3.1 – Sept 2019

SPC Pacific Tuna Tagging - www.spc.int/tagging

Table of Contents

About the Pacific Tuna Tagging Program.....	2
What are the different tags used.....	3
Conventional tags.....	3
Archival tags.....	3
Tag seeding.....	3
White Tag—Special project.....	4
What to do if you find a tagged fish.....	5
What do you do if you find a tagged fish during fishing time?.....	5
What do you do if you find a tagged fish during a well transfer or trans-shipment?.....	5
What do you do if the crew gives you a tag?	5
How to fill out the tag recovery form.....	6
Critical tag information (1).....	7
Fish information (2).....	8
Fish catch information (3).....	9
(A) Date and position when tagged fish is found during fishing time.....	9
(B) Date and position when tagged fish is found after fishing time.....	9
Fishery information (4).....	14
Trans-shipment information (5).....	14
Finder information and comments (6 and 7).....	15
Summarizing the tag recovery form.....	16
The multiple tag recovery form.....	17
What are the rewards for reporting tags.....	18
Tags recovered by observer.....	18
Tags recovered by crew member	18
Tag recovery envelopes	18
The SPC Pacific Tuna Tagging Website.....	19
The tagging posters.....	19
Location and name of tag recovery officers.....	20

Updates from Version 3 March 2017:

Additional information page 4: White tag - Special project

Update page 5: What to do with a white tag and/or an orange tag

Update page 18: New Reward

Update page 19: New Poster

Update page 20: List TRO 2019

Tag recovery form updated on all other pages

About the Pacific Tuna Tagging Program

The objectives of the program are to obtain:

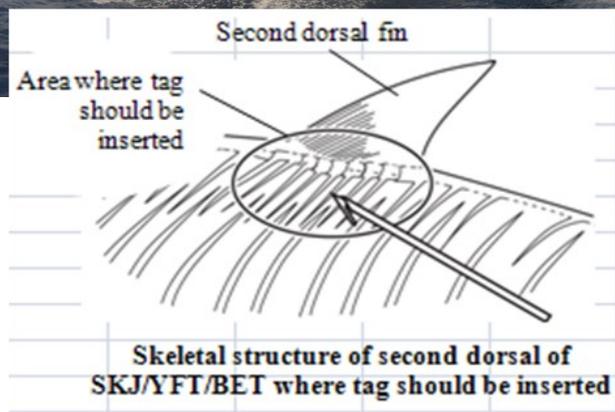
- data that will help provide more accurate stock assessments of tuna in the western and central Pacific Ocean (WCPO);
- information on movement and mixing of tuna in the equatorial WCPO, between this region and adjacent regions of the Pacific, and the impact that fish aggregating devices (FADs) have on movement over large and small areas throughout the region;
- information on the depths that different tuna species- live and move within in the tropical WCPO, and the impacts of FADs on this vertical behaviour;
- information on local exploitation rates and productivity of tuna in various parts of the WCPO.

To achieve these objectives, the project used tags on skipjack, yellowfin and bigeye tuna throughout the equatorial WCPO (10°N–10°S; 120°E–130°W). A chartered commercial pole-and--line vessel suitably modified for tagging operated for 20 months, primarily in the western part of this region (west of 180°). Other smaller chartered vessels undertook shorter cruises of 1–2 months in the central Pacific, targeting bigeye tuna by hand-line fishing on drifting FADs, oceanographic moorings and seamounts.

Three types of tag are used in the project:

- archival tags to measure a range of environmental parameters,
- sonic tags used in monitoring the behavior of tuna around FADs;
- conventional tags (the most commonly used type) to monitor movement, growth and fishery interaction studies or just to indicate the presence of the other types of tags.

Getting a maximum return of recaptured tags is crucial to the success of this work. Wide publicity, attractive rewards, lotteries, in-country tag -recovery officers and tag- seeding experiments are conducted to achieve (and verify) high rates of tag reporting. Tag releases and returns are processed and stored in an established database. Tag- return data are cross--checked against other data sources (logsheets, vessel monitoring systems) to verify reported data and estimate missing data. The work to collect tag recovery data and to verify, correct and compile those data contributes to the conservation and management of the WCPO tuna fishery, one of the world's largest capture fisheries.



Tags are placed behind the second dorsal fin in the fin spines located there. This anchors the tag in the muscle and between the dorsal fin spines (the pterigyphores) to hold it in place.

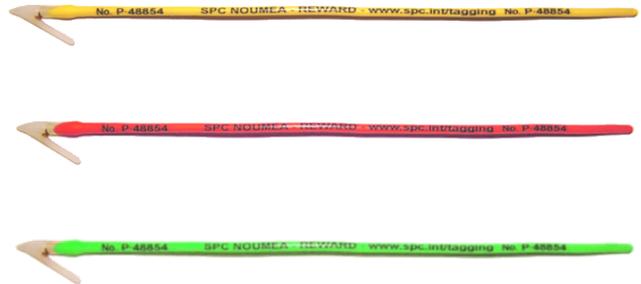
What are the different tags used by SPC

Conventional dart tags

Conventional dart tags are composed of a composite plastic barbed head with a polyvinyl plastic streamer/shaft. The tag series number is written at both ends of the streamer, along with the legend 'SPC NOUMEA - REWARD - www.spc.int/tagging'.

Four colours of conventional tags were used for this project:

- **Yellow** conventional tags were the standard tags used. Two different sizes of yellow tags have been used depending on the size of the tuna when tagged and released.
- **Orange/Red** conventional tags were used to indicate that an archival tag was placed in the abdominal cavity of the tagged tuna on other cruises.
- **Green and white:** These tags may signify a special project that may require special handling or sampling requirements. In such case, the tag release agency should be contacted for clarification.



When the tag is removed from the fish, make sure none of it remains inside the fish!

Archival tags

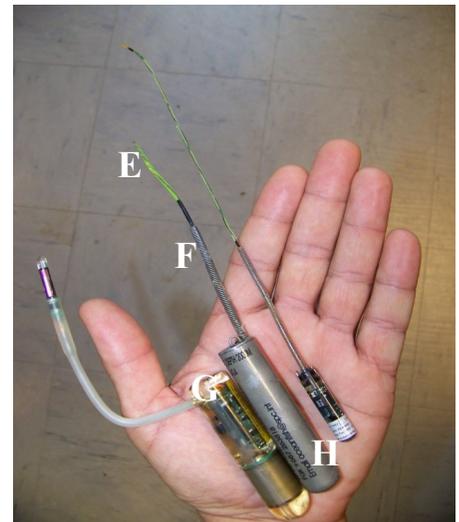
Archival tags are miniature computerised data recorders that are surgically implanted into the peritoneal cavity of a tuna. Archival tags measure a range of parameters, including water pressure, water temperature, light intensity and the internal body temperature of the tagged tuna. These parameters are often recorded every minute and the information is stored into the tag memory. The tag needs to be retrieved to get the information.

E - Light sensor.

F - Thermometer to record water temperature

G - Internal clock, internal temperature thermometer and data storage.

H - Battery



An orange or green dart tag indicates that the fish also carries an archival tag. The archival tag will be located in the peritoneal cavity and can be further identified by the stalk/antenna protruding externally from the peritoneal cavity.

Tag Seeding



Tag seeding with steel head conventional tags is conducted by senior observers only on purse-seine vessels. It is used to measure tag reporting rates in locations where purse-seine catches are unloaded or transhipped.

Steel head tags are secretly deployed by the observer. If an observer deployed some tags before your trip and that the crew finds them while you are onboard, do not inform them that tag seeding was conducted and upon recovery proceed in the same fashion as genuine tag recovery. Fish can be single tagged or double tagged. When removing the tag, be sure that the steel head doesn't remain in the flesh of the fish.



White tag—Special project

Tunas labelled with conventional white tags also received an injection of strontium chloride (SrCl_2) to validate the deposition rate of the increments (often called growth rings) that are observed and counted in fish otoliths to estimate fish age and growth.

Otoliths are small 'ear stones', calcium carbonate structures located on either side of the head. They allow fish to find their balance and perceive linear acceleration, both horizontally and vertically. As otoliths grow, they incorporate chemical 'markers' from the water (such as calcium, strontium, and other elements and stable isotopes), the concentrations of these markers reflecting both the environment the fish swims through, and intrinsic processes like physiology and metabolism. Once a marker is incorporated into a growth ring, it remains there permanently, providing a time-stamped chemical record of the fish's experience.

By counting the growth rings on otoliths, scientists can estimate the age of a fish; however, the periodicity of ring formation needs to be validated. The external application of chemical markers during tagging events has proved a useful method in this regard.

Strontium chloride (SrCl_2 and oxytetracycline (OCT) markers have been widely used to validate increment formation in tunas. SrCl_2 is often preferred over OCT because of public health concerns; the US Federal Drug Administration prohibits the use of OCT in wild fisheries, whereas SrCl_2 is a mineral occurring naturally in seawater, and is regarded as safe for human consumption (Sax and Lewis, 1987). SrCl_2 is even used in toothpaste to reduce dental hypersensitivity!

On-board the tagging vessel, the injection procedure is very rapid. Following capture, the fish is placed on a tagging cradle and the scientists use a self-filling dosing syringe designed for continuous injection. To identify fish that have been injected with SrCl_2 , a white tag is placed behind the second dorsal fin.

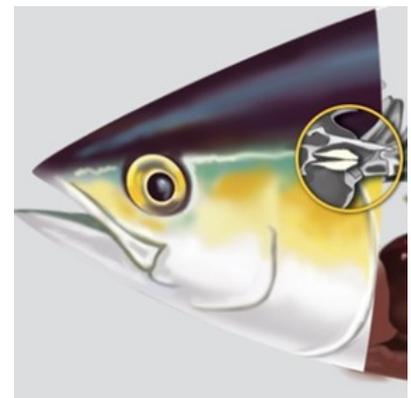
To be able to extract and analyse otoliths from tagged and re-captured fish, SPC scientists will need whole fish. This also allows scientists the opportunity to collect other biological samples: the stomach, the liver, the gonads and the dorsal spine.

To preserve the quality of the samples, following capture aboard purse seine and freezer longline vessels **SrCl_2 injected fish must be kept frozen at all times, whereas fish from 'fresh' longliners can be sampled upon arrival at port.**

Since 2009, biological sampling training including otolith extraction has been provided by SPC, and in each major port samples can be collected by observers, port samplers or fisheries officers.



Injection of SrCl_2 in the muscle of an Albacore



Otoliths located inside the fish head



Otoliths SrCl_2 mark

Clear and all. (2000) Fish.Bull 98:25-40

What to do if you find a tagged tuna

There are three kinds of situation in which you can come across a tag. A tag can be found (1) on a fish during fishing time or (2) on a fish during well transfer/unloading, or (3) a crew member can hand you a tag recovered previously. For each situation there is a specific procedure that you should follow.

FOR ALL TAGS RECOVERED ONBOARD DURING YOUR TRIP, EVEN IF YOU ARE NOT THE FINDER, THE RECOVERY INFORMATION MUST BE RECORDED IN YOUR WORKBOOK.

**DO NOT REMOVE THE FORM FROM YOUR WORKBOOK!
BUT PROVIDE A COPY OF THE INFORMATION TO THE FINDER**

(either by using the tag recovery envelopes or by copying the data on another paper or forms).

What do you do if you find a tagged fish during fishing time?

- Ask permission to put the fish aside.
- Verify that there is no archival tag in the belly. You should be able to see the antenna of the archival tag sticking out.
- If there is an archival tag or a white tag, do not remove the tags from the fish. Place the fish in a freezer. In the PS2, note all information related to the behaviour of the school. Contact SPC immediately. Bring the fish to the closest fisheries office for storage and sampling of the fish.
- Measure the fish. If possible weigh the fish.
- If it is a yellow tag, remove the tag entirely from the fish. Make sure that the dart doesn't remain inside the flesh of the fish.
- Fill in the tag recovery form and report the exact date and position of the catch.
- If you have access to a freezer, you can collect biological samples (otoliths, first dorsal spine, stomach, gonads, muscle, liver).

What do you do if you find a tagged fish during a well transfer or trans-shipment?

- Note the well number and tag number.
- Verify that there is no archival tag in the belly. See above for further information regarding archival tagged fish.
- Measure the fish. If possible weigh the fish.
- If it is a yellow tag, remove the tag entirely from the fish. Make sure that the dart doesn't remain inside the flesh of the fish.
- Fill in the tag recovery form and if there were several sets in the well, report the period and position that includes all the sets.
- If you have access to a freezer, you can collect biological samples (otoliths, first dorsal spine, stomach, gonads, muscle, liver).

What do you do if a crew member gives you a tag?

- Ask when they found the tagged fish and all possible questions to recover information relative to the recovery. If the date when the tag was found is not precise, you can at least enter the month and the year of the catch.
- If the catch position cannot be retrieved, try to at least describe the region where the tagged fish was caught.
- If the crew gives you an approximate date, access the vessel's logbook to find out where the boat was around that date and use the estimate section of the form to report the position.
- If the tag was traded and the tagged fish was recaptured by another fishing vessel that the one you are observing on please note the information in the general comment section of the form.
- Note all the recovery information in your workbook, provide a copy to the finder (report data on another form, or tag recovery envelope). Do not take the tag from the finder.
- On your tag recovery form, in the section 'Tag provided with this form' place a cross in 'No' and specify where the crew will collect his reward.
- Upon Arrival at port you can assist the crew to collect his reward.

How to fill out the tag recovery form

The tag recovery form is used to record the data associated with the recapture of a tagged tuna, a tagged turtle or a tagged bird. It is important that the information be as accurate as possible. Sometimes part of the data will not be available, but later it may be possible for others to trace it using the additional information recorded on the form. This form consists of seven sections. Examples are provided to demonstrate how to complete it. There is also a multiple tag recovery form, which can be used when up to eight tags are recovered at the same time, on the same day from a same vessel.

- 1 {
- 2 {
- 3 {
- 4 {
- 5 {
- 6 {
- 7 {

SINGLE TAG RECOVERY FORM						PAGE / OF						
REVISED SPC - Feb. 2017												
CRITICAL TAG INFORMATION												
TAG NUMBER:			DATE WHEN TAG FOUND: YY MM DD									
WHERE FOUND: <input type="checkbox"/> Fishing vessel <input type="checkbox"/> Reefer / Transfer / Carrier <input type="checkbox"/> Port Fish market <input type="checkbox"/> Cold storage												
ACTIVITY WHEN FOUND: <input type="checkbox"/> Fishing <input type="checkbox"/> Well transfer <input type="checkbox"/> Transhipment <input type="checkbox"/> Unloading at port						WELL NUMBER WHERE FISH FOUND: (If Applicable)						
TAGGED SPECIES INFORMATION												
SPECIES:		SPECIES RELIABILITY: <input type="checkbox"/> Confirmed <input type="checkbox"/> Guessed										
LENGTH 1 : (cm)	LENGTH 2 : if applicable (cm)	NO length information <input type="checkbox"/>	HOW MEASURED? <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated									
WHO MEASURED?		<input type="checkbox"/> Port sampler <input type="checkbox"/> Observer <input type="checkbox"/> Other... <i>Please specify:</i>										
Length 1 code:	Length 2 code:	PROCESSED STATE WHEN MEASURED: <input type="checkbox"/> Alive <input type="checkbox"/> Fresh and dead <input type="checkbox"/> Frozen <input type="checkbox"/> Frozen then thawed										
WEIGHT: (kg)	NO weight information <input type="checkbox"/>	HOW WEIGHED? <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated										
PROCESSED STATE WHEN WEIGHED:		<input type="checkbox"/> Whole weight <input type="checkbox"/> Gilled & gutted <input type="checkbox"/> Other... <i>Please specify:</i>										
TAGGED SPECIES CATCH INFORMATION / Date and position when tagged species was caught by the fishing vessel												
DATE	Exact <input type="checkbox"/>	YY MM DD		Estimated <input type="checkbox"/>	From YY MM DD to YY MM DD							
POSITION	Exact <input type="checkbox"/>	Record 2 lines of latitude and 2 of longitude to form area of catch (box) in which tag was likely recovered										
	Latitude	dd	mm.mmm	N / S	ddd	mm.mmm	E / W					
	Longitude	ddd	mm.mmm	E / W	Latitude	Min	Max					
or DESCRIBE FISHING AREA (If NO Latitude and longitude provided above):												
FISHERY INFORMATION (Catcher / Fishing vessel that caught the tagged species)												
VESSEL NAME:			FLAG:									
FISHING METHOD: <input type="checkbox"/> Longline <input type="checkbox"/> Purse seine <input type="checkbox"/> Troll <input type="checkbox"/> Handline <input type="checkbox"/> Gill net Other: _____												
SCHOOL TYPE: <input type="checkbox"/> Log <input type="checkbox"/> Free school <input type="checkbox"/> Anchored FAD <input type="checkbox"/> Drifting FAD FAD no: _____												
TRANSSHIPMENT INFORMATION/ Carrier only (fill this section only if tagged species found during set share / transhipment / unloading)												
NAME OF CARRIER:		FLAG:	DATE OF TRANSSHIPMENT FROM FISHING VESSEL TO CARRIER: YY MM DD to YY MM DD									
LOCATION OF TRANSSHIPMENT FROM FISHING VESSEL TO CARRIER (EEZ/Port):			TRANSSHIPMENT POSITION: Latitude dd mm.mmm N / S Longitude ddd mm.mmm E / W									
FINDER INFORMATION / finder details for lottery												
FINDER NAME:			FINDER ADDRESS:									
COUNTRY OF RECOVERY:			RECOVERY INFORMATION RECEIVED AT/ON (Cannery/Company/Agency name/vessel name):									
TAG PROVIDED WITH THIS FORM: <input type="checkbox"/> Yes <input type="checkbox"/> No (tag kept by finder IF NO, specify expected reward for reward purpose) location for finder (Port/Country):												
TYPE OF REWARD: <input type="checkbox"/> Not given <input type="checkbox"/> T-shirt <input type="checkbox"/> Cap <input type="checkbox"/> Cash - amount: _____			FORM COMPLETED BY:									
COMMENTS: IF A TAGGED TURTLE / TAGGED BIRD WAS RELEASED ALIVE, DID YOU LEAVE THE TAGS ON ? Specify below.												
ARCHIVAL TAG NUMBER (If applicable):												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Type of tag</th> <th style="text-align: center;">Reward</th> </tr> </thead> <tbody> <tr> <td>Yellow tag, Orange tag or Green tag</td> <td style="text-align: center;">- 10\$ or Cap or T-shirt</td> </tr> <tr> <td>Internal archival tag</td> <td style="text-align: center;">- 250\$</td> </tr> </tbody> </table>							Type of tag	Reward	Yellow tag, Orange tag or Green tag	- 10\$ or Cap or T-shirt	Internal archival tag	- 250\$
Type of tag	Reward											
Yellow tag, Orange tag or Green tag	- 10\$ or Cap or T-shirt											
Internal archival tag	- 250\$											

Critical tag information (1)



Tag number: This is a required field. Every conventional tag has a series number printed on both ends. Write down the **full series number including the single letter prefix**. If you have an archival tag, the series number is written on the archival tag itself; record this series number in the comments. If you have a tagged turtle that has more than 1 tag record the other tag numbers in the comment section.

Date when tag

was found: Note the date when you found the tag. This can be during fishing time, during well transfer or trans-shipment. Use two digits each to write the day, month and the year (DD/MM/YY) e.g. the 3rd of June 2011 would be written as 03/06/11. **If you don't have an exact date, place a dash in the day field and note the month and/or year.** The date for when the tag was found can be different from when the tagged fish was caught. Indeed sometimes crew can keep the tag for a long time before they give it to an observer. This information can help us to determine when the fish was caught.

Where found: Where was the fish when the tag was found. If you find the tagged fish onboard and frozen in a well, tick 'Fishing vessel'. If it is inside the cold storage of a carrier, tick 'Carrier' and 'Cold storage'.

Activity

when found: What was the vessel/crew doing when the tagged fish was found?

Well number

Where found: If the tagged fish was found in a well during a well transfer or during transshipment, note the number and position of the well. Eg: Starboard side well # 2: S2. If the tagged fish is recovered on a fish carrier, note the well number it came from. Ask to obtain the carrier storage plan which details the fishing vessels that unloaded their catch onto the carrier. This will allow to determine where and when the tagged fish was caught.

Example 1: A tagged fish is found during a well transfer on the 26th of August 2011. The tag number is P-234516. According to this example, this is how this section of the form should be filled in.

SINGLE TAG RECOVERY FORM					PAGE	OF	
REVISED SPC - Feb. 2017							
CRITICAL TAG INFORMATION							
TAG NUMBER: P-234516		DATE WHEN TAG FOUND:			YY	MM	DD
					11	08	26
WHERE FOUND:	<input checked="" type="checkbox"/> Fishing vessel	<input type="checkbox"/> Reefer / Transfer / Carrier	<input type="checkbox"/> Port Fish market	<input type="checkbox"/> Cold storage			
ACTIVITY WHEN FOUND:	<input type="checkbox"/> Fishing	<input checked="" type="checkbox"/> Well transfer	<input type="checkbox"/> Transshipment	<input type="checkbox"/> Unloading at port	WELL NUMBER WHERE FISH FOUND: S2 (If Applicable)		

Fish information (2)

Species: The three main tuna species tagged during the field work by SPC are **skipjack, yellowfin and bigeye tuna**. If the tag finder returns the tags only, ask him or her for the species. However other species such as **turtles** and **seabirds** are also tagged by other organisations.

Species reliability: If the tag finder is not sure of the species, then tick the 'Guessed' box in the species reliability section. If the finder is sure and you are confident that the information is reliable then tick the 'Confirmed' box.

Fork length: *If the length of the species hasn't been measured*

Tick the 'No length information' box and go to the next section.

If the length can be measured or has been measured

For tuna species: take the measurement from the upper jaw to the fork in the tail (UF).

For turtle species: take the measurement of the Carapace Length (CL)

For seabird species: take the measurement from the wrist to the fingertips (WL) and the bill length (BL).

It must be given in centimeters. Round down to the nearest cm; eg: 65.4 cm= 65cm.

How measured: Was the measurement an estimate or was the measurement taken using a measuring board, a ruler, a deck tape or a caliper? If the measurement was taken with a piece of string, or by eye, tick the 'Estimated' box.

Processed state

when the fish was measured: How was the fish when it was measured – was the fish fresh, frozen, previously frozen but then thawed (defrosted) ? Was the turtle alive ?

Weight: If the weight of the species hasn't been measured, tick the 'NO weight information' box and go to the next section. If a weight can be taken on board or at port, note the exact weight in kilogram and grams; eg: 2.8 kg.

How weighed: Is the weight an estimate or was it obtained more precisely, using scales? If the weight was estimated by using a length/weight relation, please tick the 'Estimated' box and add a comment explaining that you used a length/weight relation.

Example 2: *During fishing time, an observer found a tagged yellowfin tuna, which was identified with certainty and was measured at 58 cm using a caliper. It was weighed whole at 6.4 kg using the vessel's scale. According to this example, this is how this section of the form should be completed.*

TAGGED SPECIES INFORMATION			
SPECIES: YFT		SPECIES RELIABILITY: <input checked="" type="checkbox"/> Confirmed <input type="checkbox"/> Guessed	
LENGTH 1 : (cm) 58	LENGTH 2 : if applicable (cm) —	NO length Information <input type="checkbox"/>	HOW MEASURED? <input checked="" type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated
Length 1 code: UF	Length 2 code: —	WHO MEASURED? <input type="checkbox"/> Port sampler <input checked="" type="checkbox"/> Observer <input type="checkbox"/> Other.... <i>Please specify:</i>	
WEIGHT: (kg) 6.4		PROCESSED STATE WHEN MEASURED: <input type="checkbox"/> Alive <input checked="" type="checkbox"/> Fresh and dead <input type="checkbox"/> Frozen <input type="checkbox"/> Frozen then thawed	
NO weight information <input type="checkbox"/>		HOW WEIGHED? <input checked="" type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated	
		PROCESSED STATE WHEN WEIGHED: <input checked="" type="checkbox"/> Whole weight <input type="checkbox"/> Gilled & gutted <input type="checkbox"/> Other.... <i>Please specify:</i>	

Species catch information (3)

It is very important to determine the date when the species was caught.

A tagged specie is either found:

(A) During fishing time at an exact position ; or

(B) After fishing time with an approximate date and position.

(A) Date and position when tagged species is found during fishing time (from a single set):

In the case of a tagged species found during fishing time, the date and position of the set can be reported on the form.

Exact Date: Tick the 'Exact' box and enter the exact ship's date. Use two digits each to write the day, month and the year (YY/MM/DD).

Exact Position: Tick 'Exact' box and report the position. This position will be the same as the start of the set. Latitude and longitude are reported in degrees and decimal minutes. In such case, there is no need to complete the other side of this section (when date and position are estimated).

Example 3 – Position and date of a single set: A tagged tuna was found during fishing time on the 26th of August 2011; the position for the start of the set was 03°56.450N and 158°5.300E.

TAGGED SPECIES CATCH INFORMATION / Date and position when tagged species was caught by the fishing vessel															
DATE	Exact	<input checked="" type="checkbox"/>	YY	MM	DD	Estimated	<input type="checkbox"/>	From	YY	MM	DD	to	YY	MM	DD
			26	08	11										
POSITION	Exact	<input checked="" type="checkbox"/>	dd	mm.mmm	N / S	Estimated	<input type="checkbox"/>	Record 2 lines of latitude and 2 of longitude to form area of catch (box) in which tag was likely recovered							
	Latitude		03	56.450	N	Latitude	Min	Max	ddd	mm.mmm	E / W	ddd	mm.mmm	E / W	
	Longitude		158	25.300	E	Latitude	Min	Max							
						Longitude	Min	Max							
or DESCRIBE FISHING AREA (If NO Latitude and longitude provided above):															

(B) Date and position when tagged species is found after fishing time (from several sets) :

This is the case when a tagged fish is found by either a crew member, stevedores or observers when transferring fish from one well to another or during transshipment and unloading. If the well contains only one set, you can retrieve the exact date and position (see previous section). However, if the well contains several sets, you will need to record the date and position of each set (because you don't know which set the tagged fish came from).

Estimate date: Tick the 'Estimated' box and write down the period that includes all the dates of the sets that are present in the well. Use two digits each to write the day, month and the year (DD/MM/YY).

Estimate position: Tick the 'Estimated' box and enter two latitudes and two longitudes outlining an area that encompasses all of the sets present in the well. Latitude and longitude are reported in degrees and decimal minutes.

Examples 4 to 7 on the next pages show to complete this section of the form based on different scenarios.

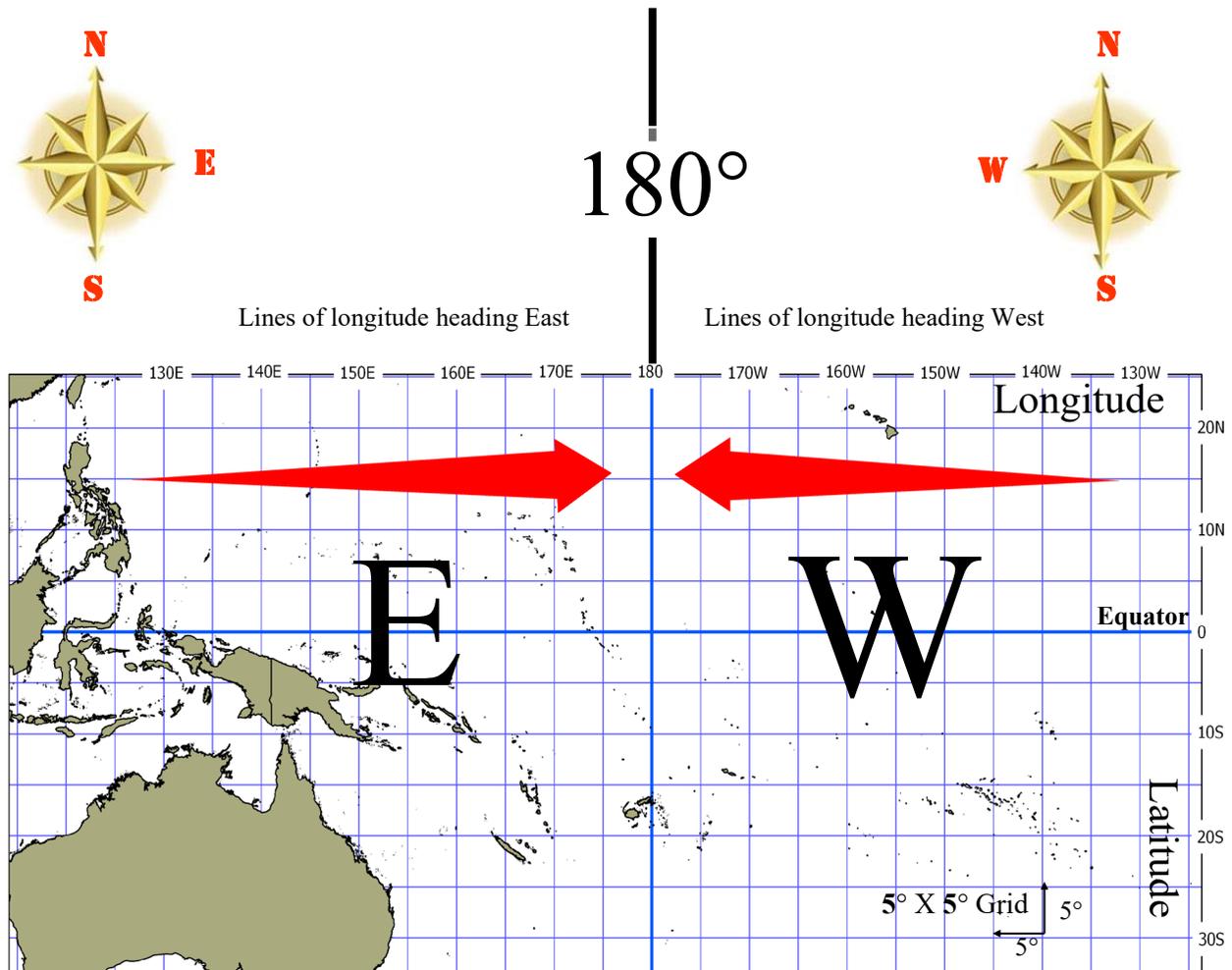


Navigation Reminder

Be aware that on a chart when facing the 180° meridian, the lines of longitude West are on the right side of the chart and the lines of longitude East are on the left side of the chart.

On the left of the 180° meridian, the number of degrees East increase as you move towards the East.

On the right of the 180° meridian, the number of degrees West decrease as you move towards the West.



NOTES: (use your own words to remember how to use the chart):

Example 4 - Sets deployed N and E: A crew member hands you a tag, saying that it was found when the crew were unloading at port. The crew member tells you that the tagged fish came from well # 2 on the port side. You access the vessel's logbook to obtain the information about all the sets that were unloaded from this well.

The well contains six sets:

- Set 1 date: 01st march 2011 position: **05°02.500N** and 146°10.000E
- Set 3 date: 08th March 2011 position: 02°50.100N and **145°12.300 E**
- Set 5 date: 10th March 2011 position: 02°48.200N and 147°30.000E
- Set 7 date: 11th March 2011 position: **00°50.600N** and 148°30.150E
- Set 8 date: 11th March 2011 position: 04°20.300N and 148°50.750E
- Set 12 date: 15th March 2011 position: 04°00.400N and **150°20.450E**

MIN° and MAX°



**MIN° and MAX°
E**

How to fill the 'Estimated' section

Date: You need to find out the time period when the tuna was likely caught. Look at the dates for the first set (set 1) and the last set (set 12). Since the well was composed of six sets which were fished between 01st March 2011 and 15th March 2011, tick 'Estimated' and write down '11/03/01 to 11/03/15', which corresponds to the period when the tagged fish was caught.

Position: All the sets were deployed on the latitude North and the longitude East which makes it easy to determine the minimum and maximum latitude and longitude.

In this example the minimum and maximum latitude is equal to the lowest N position and the highest N position, and the minimum and maximum longitude are equal to the lowest E position and the highest E position.

Select the lowest and highest North position and the lowest and higher East Position.

Go back to the list of sets above, look down the latitude until you find the lowest number (in bold) and the highest number (in bold). Then look down the longitude and also find the lowest and highest number.

The minimum latitude is from the set 7 (00°N – the lowest North value);

The maximum latitude is from the set 1 (05°N – the highest North value);

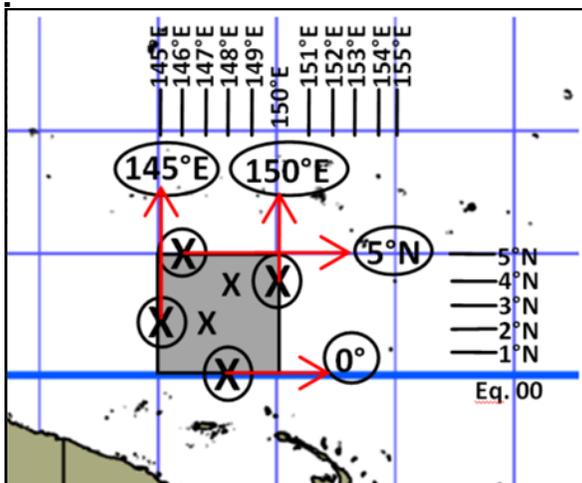
The minimum longitude is from the set 3 (145°E – the lowest East value);

the maximum longitude is from the set 12 (150°E – the highest East value).

Once you have found these positions, report them on the form and tick the 'Estimated' box.

Note: The minimum and maximum latitude and longitude don't have to be from the same set.

This example is also applicable if the sets were deployed on the latitude S and the longitude W



<input checked="" type="checkbox"/>	From	YY	MM	DD	to	YY	MM	DD
		11	03	01		11	03	15
<input checked="" type="checkbox"/>	Record 2 lines of latitude and 2 of longitude to form area of catch (box) in which tag was likely recovered							
	dd	mm.mmm	N / S	ddd	mm.mmm	E / W		
Latitude	Max	05°	02.500'	N	Longitude	150°	20.450'	E
	Min	00°	50.600'	N		145°	12.300'	E

Example 5 – Sets deployed N, S, E and W: A tagged fish was given to you by a crew member who told you the tagged fish had been found during the transfer of well S5. You managed to access the vessel's logbook to determine which sets composed this well before it was transferred.

The well contains 6 sets:

Set 1 date: 01st July 2011 position: 01°20.500N and **176°10.200E**

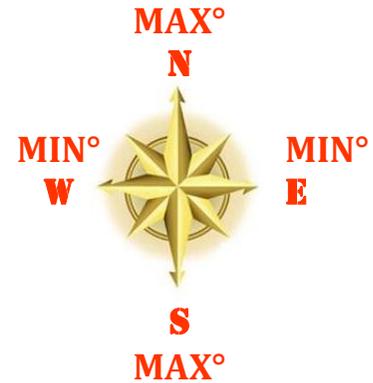
Set 3 date: 04th July 2011 position: **04°00.100N** and 179°59.900E

Set 7 date: 07th July 2011 position: 02°00.200N and **177°30.000W**

Set 9 date: 10th July 2011 position: 02°50.600S and 178°30.150W

Set 11 date: 12th July 2011 position: **03°20.400S** and 179°50.750W

Set 14 date: 15th July 2011 position: 02°40.400S and 179°59.900W



How to fill the 'Estimated' section

Date: Look at the dates for the first set (set 1) and the last set (set 14). Since the well was composed of six sets, which were fished between 01st July 2011 and 15th July 2011, tick 'Estimated' and write down '11/07/01 to 11/07/15', which corresponds to the period when the tagged fish was caught.

Position: The sets were deployed on both side of the 0° of latitude and on both side of the 180° longitude, which can be confusing.

In this example the minimum latitude is equal to the highest South position, the maximum latitude is equal to the highest North position. The minimum longitude is equal to the lowest East on the left on the left of a chart, and the maximum longitude is equal to the lowest West position on the right of the chart.

Select the highest South and North position, and the lowest East and West position.

Go back to the list of sets above and look down the North positions until you find the highest number (in bold) then look down the South positions until you found the highest number (in bold). Look down the East positions until you find the lowest number (in bold) then look down the West position until you found the lowest number (in bold)

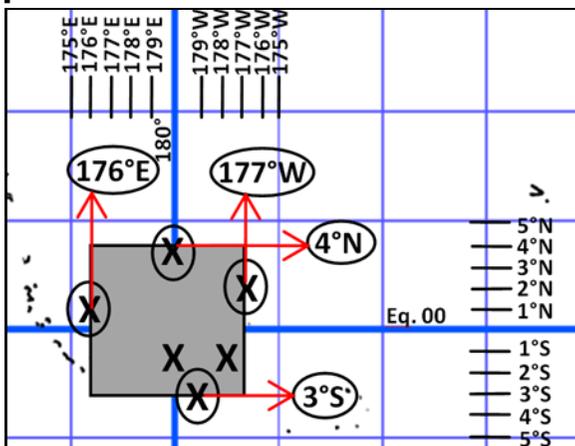
The minimum latitude is from the set 11 (03°S – the highest South value);

The maximum latitude is from the set 3 (04°N – the highest North value);

The minimum longitude is from the set 1 (176°E – the lowest East value);

The maximum longitude is from the set 7 (177°W– the lowest West value).

Once you have found these positions, report them on the form and tick the 'Estimated' box.



Note: In this example, it is better to use the map.

Plot the sets and make sure the extreme positions that outline the area are reported on the form.

<input checked="" type="checkbox"/>	From	YY	MM	DD	to	YY	MM	DD	
		11	07	01		11	07	15	
<input checked="" type="checkbox"/>	Record 2 lines of latitude and 2 of longitude to form area of catch (box) in which tag was likely recovered								
dd	mm.mmm	N / S	ddd	mm.mmm	E / W				
	04	00.100	N	176	10.200	E			
	03	20.400	S	177	30.000	W			

Example 6 – Sets deployed N, S and E: A tagged fish was found during unloading. The well it was found in was composed of the following sets:

- Set 1 date: 05th March 2011 position: **04°40.500N** and 155°10.000E
- Set 3 date: 12th March 2011 position: 02°30.100N and **158°25.300E**
- Set 7 date: 15th April 2011 position: 01°00.200S and 157°30.000E
- Set 9 date: 17th April 2011 position: **03°50.600S** and 156°30.150E
- Set 11 date: 19th April 2011 position: 01°20.400S and 155°50.750E
- Set 14 date: 22th April 2011 position: 02°00.400N and **152°20.450E**



How to fill the 'Estimated' section

Position: The sets were deployed on both side of the 0° of latitude but all in longitude East.

In this example the minimum latitude is equal to the highest South position and the maximum latitude is equal to the highest North position. The minimum and maximum longitude are equal to the lowest and highest East positions.

Select the highest South and North position, and the lowest and highest East position:

Go back to the list of sets above and look down the North positions until you find the highest number (in bold) then look down the South positions until you find the highest number (in bold italic). Look down the East positions until you find the lowest number (in bold) then find the lowest number (in bold italic)

The minimum latitude is from the set 9 (03°S – the highest South value);

The maximum latitude is from the set 1 (04°N– the highest North value);

The minimum longitude is from the set 14 (152°E– the lowest East value);

the maximum longitude is from the set 3 (158°E– the highest East value).

Estimated <input checked="" type="checkbox"/>		From			YY	MM	DD	to			YY	MM	DD
					11	04	05				11	04	22
Estimated <input checked="" type="checkbox"/>		Record 2 lines of latitude and 2 of longitude to form area of catch (box) in which tag was likely recovered											
		dd	mm.mmm	N / S			ddd	mm.mmm			E / W		
Latitude	Max	04	40.500	N			158	25.300			E		
	Min	03	50.600	S			152	20.450			W		
					Longitude								

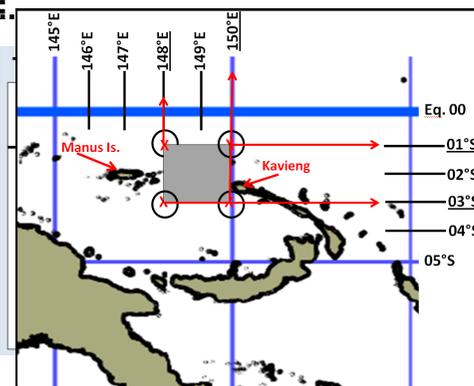
Example 7 – Sets deployed in an approximated zone:

A crew member hands you a tag that he or she says was found during fishing time when the vessel was fishing between Manus Island and Kavieng in PNG. The crew member recalls that it

How to fill the 'Estimated' section

Date: Since it was some time in October 2011, report 11/10/01 and 11/10/31, a range that includes all days in October.

Position: In this example, the observer should provide the outline for the geographic zone described by the crew. To determine this outline it is best to use the map. Also note the information provided by the crew member in the section 'describe fishing area'.



Date and position when tagged species was caught by the fishing vessel																		
MM		DD		Estimated <input checked="" type="checkbox"/>			From			YY	MM	DD	to			YY	MM	DD
										11	10	01				11	10	31
mm.mmm		N / S		Record 2 lines of latitude and 2 of longitude to form area of catch (box) in which tag was likely recovered														
						ddd	mm.mmm	N / S			ddd	mm.mmm			E / W			
Latitude	Max	01 00.000		S				150	00.050			E						
	Min	03 00.000		S				148	00.000			E						
						Longitude												

Latitude and longitude provided above): *Between Manus Island and Kavieng (PNG)*

Fishery information (4)

Vessel name: It is important to record the name of the vessel that recaptured the tagged species. Do not record an abbreviated name; use the full name every time. Be aware that your data are used by a lot of people who will not know the local names for vessels.

If you find a tagged fish on a carrier, provide the name of the fishing vessel that caught the tagged fish and not the carrier name (refer to the carrier storage plan and well number).

Vessel flag: The vessel's country of registration should be easily picked up from the marking on the transom (back) of the boat. The nationalities of the captain and crew may be unrelated to the country of registration of the vessel.

School type: Fill in the appropriate school type and don't forget to add any FAD number if available.

Fishing

method: The fishing method used to catch the fish (if the crew do some hand-line fishing onboard a purse-seine vessel, report that it was hand-line and not purse-seine).

Trans-shipment information (5)

This section will be only completed if you find a tagged fish during trans-shipment or set share or inside a carrier. Do not fill the Trans-shipment section if the tagged fish was found during fishing activities.

Name of

carrier: Write down the unabbreviated name of the carrier.

Dates: Note the start and end dates of the trans-shipment. If it only lasted a day, then write the same date in both fields.

Location: Record the port where the trans-shipment took place or if at sea the EEZ.

Position: Record the latitude and longitude of the trans-shipment only if it happens at sea.

Example 8 – Two day trans-shipment in port: A tagged fish is found during a trans-shipment in Wewak (PNG port). The trans-shipment was conducted during two days between 11/08/06 and 11/08/07 on the Philippino carrier Galaxinia 888.

TRANSSHIPMENT INFORMATION/ Carrier only (fill this section only if tagged species found during set share / transhipment / unloading)																
NAME OF CARRIER:	<i>Galaxinia 888</i>	FLAG:	<i>PH</i>	DATE OF TRANSSHIPMENT FROM FISHING VESSEL TO CARRIER:	YY	MM	DD	to	YY	MM	DD					
					<i>11</i>	<i>08</i>	<i>06</i>		<i>11</i>	<i>08</i>	<i>07</i>					
LOCATION OF TRANSSHIPMENT FROM FISHING VESSEL TO CARRIER (EEZ/Port):	<i>Wewak</i>			TRANSHIPMENT POSITION:	Latitude	dd	°	mm.mmm	'	N / S	Longitude	ddd	°	mm.mmm	'	E / W

Example 9 – One day trans-shipment at sea: A tagged fish is found during a trans-shipment at sea in FSM waters. The trans-shipment was conducted on 08/09/12 on the Chinese carrier Tai Xing.

TRANSSHIPMENT INFORMATION/ Carrier only (fill this section only if tagged species found during set share / transhipment / unloading)																
NAME OF CARRIER:	<i>Tai Xing</i>	FLAG:	<i>CN</i>	DATE OF TRANSSHIPMENT FROM FISHING VESSEL TO CARRIER:	YY	MM	DD	to	YY	MM	DD					
					<i>12</i>	<i>09</i>	<i>08</i>		<i>12</i>	<i>09</i>	<i>08</i>					
LOCATION OF TRANSSHIPMENT FROM FISHING VESSEL TO CARRIER (EEZ/Port):	<i>FSM EEZ</i>			TRANSHIPMENT POSITION:	Latitude	dd	°	mm.mmm	'	N / S	Longitude	ddd	°	mm.mmm	'	E / W
						<i>05</i>		<i>09</i>	<i>112</i>	<i>N</i>		<i>156</i>		<i>00</i>	<i>120</i>	<i>W</i>

Finder information and comments (6 and 7)

Finder's

name: The name of the finder is important for us to know who to send tag return rewards to. Also, tag lotteries are conducted regularly and only tags with names of finders enter this lottery.

Finder's

address: This is important so we are able to get in contact with tag finders in order to pay tag return rewards and in the case of tag lotteries, contact winners. If the finder has no address, note down the company's address.

Port of

recovery: This is the port where the recovery was reported. If you find the tagged fish in the Marshall Islands exclusive economic zone but the boat unloads in Tarawa, the port of recovery will be Tarawa.

Recovery information

received at: In the case where you compile the information, note your name. Name or contact details of the Coordinator, Tag Recovery Officer, cannery, or company that collected and compiled the recovery details concerning a tagged fish.

Tag provided With this form:

In some cases, the finder will need to keep the tag to claim the reward in a major port where a TRO is present. Here you need to mention if the recaptured tag was provided or not with the form. Tick 'Yes' or 'No'. If 'No', please try to indicate in which port the finder would likely hand the tag back for reward purposes.

Type of reward:

For each tag reported there is a reward (see tag reward poster at the end of this manual). It is important to ensure that tag finders are quickly given rewards and are therefore happy to continue returning recaptured tags and providing us with the necessary information associated with tag recaptures. If you are an Observer, you should help the crew to meet the Observer Coordinator or the Tag Recovery Officer to collect his reward. All Tag Recovery Officers are listed by country at the end of the form and they are able to collect forms and give rewards. Try to ensure that recovered tags are reported as soon as you get to port.

Form

completed by: Write down the name of the person who filled out the form. If it is you that completed the form, note OBS. then you name.

Comments: Write information not captured by the form such as the archival tag number and if a tagged turtle or tagged bird was released alive with the tag on. You can attach the tag in the comment section (use sticky tape)

FINDER INFORMATION / finder details for lottery			
FINDER NAME:	<i>Joselito Zamora</i>		FINDER ADDRESS: <i>Frabelle PNG ltd</i>
COUNTRY OF RECOVERY:	<i>PNG</i>		RECOVERY INFORMATION RECEIVED AT/ON (Cannery/Company/Agency name/vessel name): <i>Obs Lindsay Kovero</i>
TAG PROVIDED WITH THIS FORM:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	(tag kept by finder for reward purpose) IF NO, specify expected reward location for finder (Port/Country): <i>Madang</i>
TYPE OF REWARD:	<input type="checkbox"/> Not given	<input type="checkbox"/> T-shirt	<input type="checkbox"/> Cap
	<input checked="" type="checkbox"/> Cash	- amount: <i>30 PGK</i>	
	FORM COMPLETED BY:		<i>Obs Lindsay Kovero</i>
COMMENTS:	IF A TAGGED TURTLE / TAGGED BIRD WAS RELEASED ALIVE, DID YOU LEAVE THE TAGS ON ? Specify below.		
			
ARCHIVAL TAG NUMBER (If applicable):			

The multiple tag recovery form – Front

The multiple tag recovery form is meant to be used when a finder recovers up to eight tagged fish the same day, either from the same set during fishing time or from the same well during transfer or unloading. The critical tag information on the front of the form is similar to the single tag recovery form. The back of the form is composed of the same sections (3 to 7) as the single tag recovery form and should be completed with as much detail as possible. Note that each fish has a unique tag number; they can be different of species and the size and the weight can also be different.

SPC MULTIPLE TAG RECOVERY FORM				AGE	OF
MULTIPLE TAGGED FISH FOUND THE SAME DAY, COMING FROM				Indicate if you have more than 1 series of multiple tag recoveries. →	
REVISED SPC - Feb 2017					
DATE WHEN TAG FOUND:		YY	MM	DD	
		17	8	02	
WHERE FOUND:	<input checked="" type="checkbox"/> Fishing vessel	<input type="checkbox"/> Reefer / Transfer / Carrier	<input type="checkbox"/> Other		
ACTIVITY WHEN FOUND:	<input checked="" type="checkbox"/> Fishing	What were you doing when you found the tagged fish?		at port	WELL NUMBER (If Applicable) WHERE FISH FOUND:
TAG NUMBER:	SPECIES: <input checked="" type="checkbox"/> SKJ <input type="checkbox"/> BET <input type="checkbox"/> YFT		If the tagged fish come from a well, note the number and position (Eg: S2 for starboard well #2). It is very important to note this information first and then using your workbook or the vessel logbook you can determine which sets composed this well.		
FORK LENGTH cm:	<input type="checkbox"/> NO length information	HOW MEASURED: <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated	STATE WHEN MEASURED:		
FISH WEIGHT kg:	<input type="checkbox"/> NO weight information	HOW WEIGHED: <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated	STATE WHEN WEIGHED:		
TAG NUMBER:	P-234587	SPECIES: <input type="checkbox"/> SKJ <input type="checkbox"/> BET <input type="checkbox"/> YFT <input type="checkbox"/> Other Please specify:		FISH IDENTIFICATION: <input type="checkbox"/> Confirmed <input type="checkbox"/> Gussed	
FORK LENGTH cm:	65	HOW MEASURED: <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated	STATE WHEN MEASURED:	If the tagged fish is found by the crew and the fish is not presented to you, are you sure about the species identification?	
FISH WEIGHT kg:	1.8	HOW WEIGHED: <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated	STATE WHEN WEIGHED:		
TAG NUMBER:		SPECIES: <input type="checkbox"/> SKJ <input type="checkbox"/> BET <input type="checkbox"/> YFT <input type="checkbox"/> Other Please specify:		FISH IDENTIFICATION: <input type="checkbox"/> Confirmed <input type="checkbox"/> Gussed	
FORK LENGTH cm:	65	HOW MEASURED: <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated	STATE WHEN MEASURED:	Note the size of the fish, round down to the nearest cm (Eg: 65.7cm=65 cm).	
FISH WEIGHT kg:	1.8	HOW WEIGHED: <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated	STATE WHEN WEIGHED:	If possible, note the exact weight of the fish (Eg: 1.8 kg).	
TAG NUMBER:		SPECIES: <input type="checkbox"/> SKJ <input type="checkbox"/> BET <input type="checkbox"/> YFT <input type="checkbox"/> Other Please specify:		FISH IDENTIFICATION: <input type="checkbox"/> Confirmed <input type="checkbox"/> Gussed	
FORK LENGTH cm:		HOW MEASURED: <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated	STATE WHEN MEASURED:	Were the size and weight measured with an instrument or estimated?	
FISH WEIGHT kg:		HOW WEIGHED: <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated	STATE WHEN WEIGHED:	Select 'Fresh' for a tagged fish caught during fishing time. Select 'Frozen' if found during well transfer/unloading.	
TAG NUMBER:		SPECIES: <input type="checkbox"/> SKJ <input type="checkbox"/> BET <input type="checkbox"/> YFT <input type="checkbox"/> Other Please specify:		FISH IDENTIFICATION: <input type="checkbox"/> Confirmed <input type="checkbox"/> Gussed	
FORK LENGTH cm:		HOW MEASURED: <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated	STATE WHEN MEASURED:	Select the processed state of the fish when weighed.	
FISH WEIGHT kg:		HOW WEIGHED: <input type="checkbox"/> Measuring tool <input type="checkbox"/> Estimated	STATE WHEN WEIGHED:		
TAG NUMBER:		SPECIES: <input type="checkbox"/> SKJ <input type="checkbox"/> BET <input type="checkbox"/> YFT <input type="checkbox"/> Other Please specify:		FISH IDENTIFICATION: <input type="checkbox"/> Confirmed <input type="checkbox"/> Gussed	
FORK LENGTH cm:		HOW MEASURED: <input checked="" type="checkbox"/> Information	STATE WHEN MEASURED:	If there is no length, place a cross and move to the next section.	
FISH WEIGHT kg:		HOW WEIGHED: <input checked="" type="checkbox"/> Information	STATE WHEN WEIGHED:	If there is no weight, place a cross and move to the next section.	
TAG NUMBER:		SPECIES: <input type="checkbox"/> SKJ <input type="checkbox"/> BET <input type="checkbox"/> YFT <input type="checkbox"/> Other Please specify:		FISH IDENTIFICATION: <input type="checkbox"/> Confirmed <input type="checkbox"/> Gussed	

WHEN TO USE AND HOW TO COMPLETE THE MULTIPLE TAG RECOVERY FORM

This multiple tag recovery form is meant to be used when a finder recovers up to 8 tagged fish the **same day**, either from the **same set** during fishing time or from the **same well** during transfer or unloading.

The fishery and finder information must be filled at the back of the form.

What are the rewards for reporting tags?



Every time someone finds a tag and completes a tag recovery form, a reward can be claimed.

In some main ports you can find a **Tag Recovery Officer (TRO)**, who can distribute rewards for recovered tags. **If you find a tag**, to claim your reward you need to give the tag to a TRO.

TROs are stationed in all major ports and they will debrief you on the tag recoveries and collect your forms from your workbook as well as the tags.

For a conventional tag (yellow or orange), the reward is either USD10 (or equivalent in local currency), a hat or a shirt especially designed for the project.

For returning the whole fish with the tags left inside the fish, for a conventional tag (white), the reward for the finder is USD100, for an archival tag, the reward is USD250. For these tags (white or orange) if the tagged fish is recaptured by a longline vessel, the fish is bought not gilled and gutted at a rate of USD10/kg (fish weight)

For the white and orange tags, observers will receive a reward of 50 USD to:

- Fill the tag recovery form as usual when a tag is recovered on-board
- Take a picture of the fish with the tag still inside the fish (with a length reference such as on top of a deck tape)
- Collect samples (if you are not confident to remove properly the otoliths, keep the head) or keep the fish frozen at all time
- Contact SPC and coordinate the return of the fish to the local fisheries office.

Tags recovered by the observer

To retrieve your reward you need to give the tag to the TRO. You can remove the tag from the recovery form (do not remove the tag recovery form from your workbook). Inform the TRO that all information related to the tag has been provided in your observer workbook. If you can make a copy of the tag recovery form, provide it to the TRO. If it is not possible to make a copy of the form, give the TRO your trip ID number (so we can find your workbook and retrieve the tag recovery forms).

Tag recovered by crew member

If a crew member on the vessel finds a tag, fill out the tag recovery form with the crew member so he or she knows what to do next time if there is no observer around. Give the tag back to the finder with a copy of the recovery information – you can use another tag recovery form, a blank piece of paper, or an envelope to copy the information (see next section). Advise the crew member where to collect the reward.

EVEN IF YOU DON'T KEEP THE TAG, NOTE THE RECOVERY INFORMATION IN YOUR WORKBOOK

Tag recovery envelopes

Tag recovery envelopes are also available for you to distribute to fishing vessels. The envelopes can be used to:

- store tags from a single catch date and position, with basic information recorded on the top of the envelopes; or
- copy recovery information for the finder.



Tag Number	Species	Fork Length (cm)	Length accuracy			Fish condition	
			Using tape	By eye	Unknown	Fresh	Cooked
1			<input type="checkbox"/>				
2			<input type="checkbox"/>				
3			<input type="checkbox"/>				
4			<input type="checkbox"/>				
5			<input type="checkbox"/>				

Return envelopes to:
Mrs Helene Ixeco
 Oceanic Fisheries Programme
 Secretariat of the Pacific Community
 BP D5 Noumea Cedex
 98800 New Caledonia


www.spc.int/tagging

Catch Date: _____ Date accuracy: Day Week Month
 Latitude at catch: _____
 Longitude at catch: _____
 Vessel Name: _____
 Gear Type: _____
 Flag: _____

Where found: Cannery Cold storage Fish market Fishing vessel Reefer
 Activity when found: Processing Fishing Transferring Unloading

Tag Finder's Name: _____ Reward provided: Yes No
 Data provided by: _____ Comments: _____
 Contact: _____

The SPC Pacific Tuna Tagging Website

Tag recoveries may also be reported to SPC by email to tagging@spc.int, or on a web-based form at www.spc.int/tagging. You can inform the captain and the crew that they can use the website if they recover tags in the future.

You can inform the captain and the crew that they can use the website if they recover tags in the future. Observers must always use the recovery forms in their workbook to report tag recoveries. At the end of the trip if you have extra forms, you can remove them from your workbook and give them to the captain. If you need more tag recovery forms you can download them from the website and print them onboard.

The website list all the reward location and contact details of the Tag Recovery Officer (TRO). A dynamic map allows you to identify the exact location of the TRO.

For any recovery you can also contact Caroline Sanchez, SPC tag recovery coordinator: Carolines@spc.int / (+687) 24 22 27.



The tagging posters

Our Tuna is our Future! **Better Science is better Management!**

WANTED

NEW CASH REWARD

Found a fish with a tag?
 Now, if it's orange or white, we'd like the whole fish!

- Leave the tags in the fish.
- Place the fish in a freezer! Do not let the fish defrost!
- Contact SPC by email.
- Bring the fish to the closest fisheries office for collection of samples.

Observers:

- Take a picture of the fish with the tag still inside the fish on top of a deck tape.
- Measure the fish accurately.
- Fill the tag recovery form.
- Seek permission from the captain to place the fish aside.
- Contact SPC and your observer coordinator immediately!
- Collect samples if you can, or keep the fish frozen at all times!

Note the information below:

- Date found
- Tag number
- Species
- Fork length (as shown above)
- Date and position of catch (if found in a well, note the well number)
- Catcher vessel name + gear type
- finder name + contact details
- observer name

NEW REWARDS

- ORANGE TAG** + archival tag + whole fish: \$260 for the finder, \$50 for the observer
- WHITE TAG** + whole fish: \$100 for the finder, \$50 for the observer
- YELLOW TAG**: \$10 or a tagging cap or a tagging shirt

To advertise the project and rewards, posters in different languages have been created to be distributed to fishing companies and stevedores and posted onboard vessels, at ports and in processing plants and canneries.

You can ask your Observer Coordinator to give you a few posters in different languages before getting onboard. This will help you advertise the tagging project and ensure that the crew understands you.

TUNA TAGGING IN THE WESTERN AND CENTRAL PACIFIC
REWARD FOR TAGS ON SKIPJACK YELLOWFIN AND BIGEYE
 HELP US TO BETTER UNDERSTAND AND MANAGE OUR TUNA RESOURCES!
 RETURN THE TAGS AND GET A REWARD - REGULAR LOTTERY FOR TAG FINDERS

Each tag has a number (written twice) and the words "SPC NOUMEA-REWARD - www.spc.int/tagging"

\$10 US FOR A DART TAG (YELLOW DART TAG)

\$250 US FOR AN ARCHIVAL TAG (ORANGE OR GREEN DART TAG)

Tuna with a yellow tag will sometimes have a second dart tag.

Please be careful when removing the archival tag, avoid pulling the antenna. Wash the tag and keep it in a dry place.

What to do if you catch or find a tagged fish

Record:

- the species and fork length (from upper jaw to the tail fork, as shown) - Fat, not body curve length
- the tag number (if there is an archival tag, record the number too and keep both tags together)
- date and position of capture
- fishing vessel name and gear type used
- the weight of the fish (if possible)
- finder name and full contact details

Return tags to local/nearest Tag Recovery Officer (TRO). Provide recovery information at this time on recovery form or multiple tag envelope. Store multiple tags and record information / obtain recovery envelope from TRO.

Name + contact

You can use the website to lodge recoveries and download recovery forms. Please visit the website: www.spc.int/tagging

Location and name of Tag Recovery Officers

American Samoa

CIFFO – Cook Island Field Fisheries Office PAGO PAGO
(Contact: Dimary Stowers)

China

China Fisheries Association, BEIJING
(Contact: Zhao Gang)
Ningbo Poseidon Food Company NINGBO
(Contact: Shirley Chen)

Cook Islands

Ministry of Marine Resources RAROTONGA
(Contact: Andrew Jones)

Ecuador

Inter American Tropical Tuna Commission IATTC/CIAT
in MANTA (Contact: Erick Largacha)

Federated States of Micronesia

Secretariat of the Pacific Community POHNPEI
(Contact: Janelle Anson)
National Oceanic Resource Management Authority
POHNPEI (Contact: Ricky Nauruhn)

Fiji

Pacific Community SUVA (Contact: Front Office)
Ministry of Fisheries SUVA (Contact: Apenisa Sauturaga)

Indonesia

Research Centre for Capture Fisheries, JAKARTA
(Contact: Anung Widodo)

Japan

National Research Institute of Far Seas Fisheries
SHIMIZU (Contact: Yoshinori Aoki)

Kiribati

Ministry of Fisheries & Marine Resource Development,
Bairiki TARAWA (Contact: Mamera Afeleti / Benaia Bauro / Tataua Rabunataai)
Ministry of Fisheries & Marine Resource Development,
CHRISTMAS ISLAND (Contact: Taratau Kirata)

Korea

National Institute for Fisheries Science BUSAN
(Contact: Seon Jae Wang (황선재))

Marshall Islands

Marshall Islands Marine Resources Authority MAJURO
(Contact: Berry Muller/Mark Bigler)

New Caledonia

Secretariat of the Pacific Community NOUMEA

Email: Carolines@spc.int
Direct phone line: +687 24 22 27

Papua New Guinea

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