RECENT CATCH, EFFORT AND CATCH COMPOSITION DATA COLLECTION PRACTICES IN AUSTRALIAN TUNA AND BILLFISH FISHERIES.

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The purpose of this paper is to bring up to date the descriptions of Australian logbook data collection arrangements provided by Majkowski (1982), Majkowski and Morris (1986) and Caton (1991). In particular, copies of the logbook data forms are appended for reference.

Commercial tuna fishing operations within the Australian Fishing Zone

Recreational game angling and small-scale commercial trolling preceded for many years a 1950s expansion of more intensive domestic commercial operations. The first development was a domestic pole-and-line live bait fishery off southern New South Wales. It targeted southern bluefin tuna (*Thunnus maccoyii*) but also included a bycatch of skipjack tuna (*Katsuwonus pelamis*) and, to a lesser extent, yellowfin tuna (*T. albacares*) and albacore (*T. alalunga*). The poling operations spread to South Australia during the mid-1950s then to Western Australia by the late 1960s. The southern bluefin tuna pole and purse seine fisheries have contracted in area since the 1970s and are now confined to South Australia. Much of the catch is held live in rearing cages to improve condition, size and market value. Occasionally during the 1980s, and more intensively in the 1990s, there have been purse seine and live-bait-and-pole operations for skipjack tuna off southern New South Wales, northeastern Tasmania and South Australia. Recreational and game angling interest, predominantly in yellowfin tuna and billfish, has grown steadily with the increased use of outboard-powered recreational vessels.

The foreign (mainly Japanese) longline fishery of the North Pacific expanded during the 1950s into the Coral and Tasman Seas off eastern Australia and the eastern Indian Ocean along the Australian northwestern and western coast. The target of the longliners were the larger pelagics – yellowfin, southern bluefin tuna, albacore, bigeye, broadbill swordfish (*Xiphias gladius*), striped marlin (*Tetrapturus audax*), black marlin (*Makaira indica*) and blue marlin (*M. mazara*). A range of incidental species was also taken, especially pelagic sharks but including others such as dolphin fish (*Coryphaena hippurus*). The foreign longline operations eventually spread around much of the eastern, southern and western waters encompassed by the Australian Fishing Zone (AFZ) when it entered into force in 1979. Bilateral arrangements with Japan enabled continued access to some of these waters by licensed Japanese longliners, but these activities were progressively reduced with the expansion of domestic surface fishery and longline operations. An arrangement between the Australian and Japanese tuna industries established joint-venture operations by Japanese longliners from 1989, but the agreement lapsed in 1995, and by late 1997 bilateral-licensed longliners also ceased operations in the AFZ.

The small-vessel (10–25 m) domestic longline fishery for yellowfin tuna developed off the central and south coast of New South Wales in the mid 1980s with the successful establishment of airfreight outlets to the Japanese fresh sashimi market. Prior experimental longlining had produced good catch rates, but the catch was sent to cannery outlets and operations were not viable at the prices paid for fish for canning. The 1980s fishery spread initially between Coffs Harbour (northern New South Wales) and Eden (southern New South Wales), but there are now domestic operations as far north as Cairns and Port Douglas (northern Queensland) and as far south as southern Tasmania. The main target species was initially yellowfin tuna, but recent expansion in northern Queensland has involved bigeye tuna. More recently, there has been substantial growth in fishing for broadbill swordfish in southern Queensland and for southern bluefin tuna off eastern Tasmania.

Commonwealth and State Monitoring Responsibilities

Offshore constitutional settlement (OCS) arrangements have developed since the mid-1980s between the Commonwealth government and the governments of individual States (Including the Northern Territory). The arrangements assign responsibility for management of fisheries for tunas and tuna-like species, and hence for collection of catch, effort and catch composition statistics from these fisheries. The Commonwealth has responsibility for statistics relating to most fishing activities for the larger tunas and for billfishes, whereas the States have responsibilities for collections relating to fisheries for the smaller tunas and tuna-like species (Table 1). An exception is the responsibility for recreational fishing, which rests with the States regardless of species.

The current State and Commonwealth separation of responsibility is reasonably clear, but this was not the case prior to the OCS arrangements. Before the mid-1980s the Commonwealth logbook collections were less comprehensive, and compliance was poor for some tuna fishery components. The independent State systems did not incorporate logbook collections for tuna and billfish fisheries. Their catch data were gathered rather generically by the monthly statistical returns that most States required. Tunas and tuna-like species were of varying importance among States, and it was therefore difficult to assemble a representative series of Australian catch statistics. The main species for which a reasonable time series of domestic catch exists is southern bluefin tuna. Time series of domestic catch for other species should be regarded cautiously. The most representative assemblage of domestic fishery catch data was developed by Stewart *et al* (1991).

All States now have comprehensive statistical collections because of the OCS arrangements, but these may still be limited to aggregate monthly returns in the case of tunas and tuna-like species. Summaries of Commonwealth and State collections of commercial fisheries statistics and collection

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forms used recently are provided in Fisheries Statistics Working Group (1997).

Establishment of a comprehensive recreational fishery statistical collection is likely to be the 'last frontier' for tuna and billfish data collection. There is no licensing system and no Australia-wide framework for imposing mandatory logbook reporting. Most catch estimates have been based on broad estimates of boat numbers, sporadic sampling of catches and interview surveys. Angling club records are also available, but their nature does not always facilitate development of representative catch estimates. Good progress has been made on developing a computer interface for transfer of recreational fishery data among the various Commonwealth and State agencies. This should be of major assistance in advancing the current efforts to quantify recreational catch levels. A National Recreational Fisheries Survey is also in the design phase.

The current report focuses on Commonwealth-maintained collections for the commercial fisheries for the larger tunas and for billfishes. The practical effect of the historic practices and the current OCS arrangements, given the nature of Australian fisheries for tunas, is that the Commonwealth has monitored the domestic surface (pole and purse-seine) fisheries for southern bluefin tuna and skipjack, the foreign (Japanese) and joint venture (Australia–Japan) pelagic longline fisheries in the AFZ, and the more recently developed small-vessel domestic longline fishery. These are the main Australian fisheries involving pelagic species that range beyond the AFZ and which are fished by other countries or entities.

The Commonwealth legislated to establish management plans for fisheries for which it has administrative and management responsibility. Part of the plans involve a requirement that permit holders report details of their fishing operations in prescribed logbooks. The plans have been introduced during the 1990s, but there has been a comprehensive coverage of the domestic pole and purse-seine and foreign longline fisheries since commencement of operation of the AFZ in late 1979. The domestic longline fishery commenced in the mid-1980s, but it was not until the end of the 1980s that logbook collection covered it comprehensively.

A detailed account of Japanese longlining in eastern Australian waters, with particular attention to changes in access conditions, is provided in Ward (1996). The access regimes required strict adherence to logbook and radio reporting conditions. Previously bilateral-licensed Japanese longliners and those involved until 1995 in joint-venture operations were required to make radio reports of location and fishing activity daily, or prior to that every two days, and initially every six days. All catches were required in number and whole weight, but were in fact reported in processed weight. From 1988, both the bilateral licensed and, until cessation of their operations, the joint-venture vessels were required to measure and record the length of each southern bluefin tuna caught in the AFZ. From 1992, they were also required to complete a special logbook detailing shark catches.

Logbook Designs and Usage

Various logbook designs have been used in Australian fisheries for tuna and tuna-like species since 1960. Copies of forms used by the Australian Commonwealth Government are provided in Majkowski and Morris (1986) and Caton (1991). The logbooks currently in use (Appendix A), but presently being redesigned, are:

- Australian Pelagic Longlining Daily Fishing Log [code 'AL04'] (used predominantly by the small-vessel monofilament longline fleet);
- Australian Purse Seine and Pole Daily Fishing Log [code 'TPB02'] (used by domestic pole and purse-seine vessels); and
- Australian Tuna Minor Line Daily Fishing Log [code 'OT03'] (used by small domestic troll, rod-and-reel and handline vessels).

The last three logbooks were introduced in 1997. Their precursors (versions AL03, TPB01 [which replaced separate pole and purse-seine logbooks], and OT02; Appendix B) were introduced in 1996.

The AFZ Catch Record logbook [code 'TL04'; Appendix C] was used from 1983 by Japanese, joint venture and charter longliners. Beginning in 1995, these longliners were required to report daily by satellite transceiver to the Vessel Monitoring System (VMS), and ultimately it was intended that the VMS would replace the logbook system. Both systems, however, were still in use when Japanese longliners were excluded from the AFZ in 1997. The log records had not been punched after 1995, but were used to correct VMS records when necessary.

Time spans for which data were gathered with the various logbook versions are shown in Table 2 for the period since 1979 (when the AFZ commenced operation). Majkowski and Morris (1986) provide details of periods of application for earlier versions. In some cases the time spans overlap because some activities were logged belatedly on new forms or were logged on superseded forms. For example, a small proportion of the foreign longliner daily records in the database for 'numbers only' years contain weight data, and a moderate proportion of daily records in 'number and weight' years have no weight data. These records should be screened before calculations such as average weight are generated from aggregated data.

Percentage coverage by the domestic fisheries collection has varied, and it has been related to the extent of field support. Under-representation is the most common feature, but in some circumstances the logbooks may have over-reported catches and effort. The latter may have occurred when fishers have sought to establish an activity history in an attempt to secure access where restricted entry or catch limits are to be established for a fishery. Attempts have been made to incorporate adjustments for this in annual statistics, where reasonable estimates of the nature of shortcomings can be made, but the logbook data provided by fishers are not adjusted.

In the case of swordfish, the logged catches for the domestic fishery probably under-represented catch in the early years of the longline fishery because mercury content restrictions influenced the extent to which catch could be marketed,

especially in the case of larger fish. In such cases, the fish might not be landed, nor recorded in logbooks. Albacore tuna was not readily marketable either. A component of the catch was discarded, so catch details in logbooks were under-representative. There has been an agreement among commercial longliners and recreational fishers that blue and black marlin would not be retained as commercial species, even if brought alongside dead. For these species, and for non-commercial bycatch, logbook details probably under-represent catches.

Calibration of coverage and accuracy of domestic logbooks has only been practical to date for the southern bluefin tuna component, for which there has been strict monitoring of a system of individual transferable quotas since their introduction in the domestic southern bluefin tuna fishery in the early 1980s. For this reason, these quota data are used as the indicative southern bluefin tuna statistics base. The catch against quota is monitored by quota reporting forms [code 'CR3'; Appendix D], which track landings, product type and movement between the catcher and the processor of southern bluefin tuna product. Vessels towing pontoons of live fish back to farms must also maintain records of the origin, destination and losses of fish [code 'SBT02'; Appendix D].

In 1995, a system of receiver permits, supported by a monitoring program, was established for the southern Australian region, initially for southern bluefin tuna. The system was extended to the eastern coast of Australia in 1997 and expanded to include all fisheries. It is likely that it will be introduced into western fisheries in the near future. This should facilitate validation of logbook reported catches of all species.

A foreign vessel observer program, together with pre- and post-fishing inspections in ports, has provided the basis for calibrating the foreign and joint-venture longline logbook data. The observer program also gathers operational data. The observers monitor catch species composition, providing information on retained and discarded species. They also monitor size composition and collect ancillary biological measurements and samples. There is currently no observer program on domestic tuna vessels. Instead, personal contact with fishers is maintained in ports by the field liaison staff of the logbook programs. An intensive size-composition sampling program has operated for many years in the domestic southern bluefin tuna fishery (Majkowski, 1982; Morris and Majkowski, 1986; Caton, 1991). Since 1997, size sampling has also been undertaken in the east coast tuna and billfish fishery.

Japan requires distant water longliners to maintain a daily record of location of operations, number of hooks set, and catch in number by species. The data are summarized by month and by 1-degree square in Japan, and tabulations of global catch and effort data aggregated monthly for 5-degree squares have been published for each year from 1962 to 1980 (the Japanese 'yellow book' series). While continuing to gather and process the logbooks, Japan ceased publication of the book data after 1980. However, under cooperative research arrangements with the Commonwealth Scientific and Industrial Research Organization (CSIRO) it has given that organization access to monthly 5-degree square aggregated data for grids in which southern bluefin tuna have been taken. Collaborative research projects have also involved use of finer-scale data.

The 'yellow book' series provides an indication of historic catches and catch rates for areas encompassed by the AFZ, but a direct comparison with AFZ catch rate data gathered subsequently is not possible because the two data series are aggregated differently, and the AFZ data are truncated in area of coverage by the zone boundary.

The Australian Fishing Zone Information System

An Australian Fishing Zone Information System (AFZIS), was developed as a joint-access system among the then Commonwealth Department of Primary Industry, CSIRO, and State fisheries authorities. It was the main repository of fleet, catch and effort information for foreign and predominantly Commonwealth-managed domestic fisheries. The system was designed to incorporate licensing, vessel register, catch/catch-size-composition/effort, and foreign vessel observer data, as well as data arising from feasibility fishing and research cruises. The catch and effort component was quickly operational, but the licensing and vessel register components were never integrated. Tuna fishery observer data were not incorporated until 1995. Currently, the monitoring data are kept by the Australian Fisheries Management Authority (AFMA), but no longer formally as 'AFZIS'. Essentially the collection spans a logbook/radio/VMS catch and effort database, and a licensing/quota-monitoring database, with some ancillary observer and size composition components. Its focus is management-oriented data, and input of collections such as research cruise or feasibility fishing operation data is no longer supported.

Majkowski (1982), Majkowski and Morris (1986) and Caton (1991) provide descriptions of AFZIS in relation to domestic and foreign components of the AFZ tuna and billfish fisheries, with a focus on southern bluefin tuna. These descriptions of data collection, processing, storage and access arrangements relate to the pre-1990 AFZIS situation. The system was moved in the early 1990s from a FORDATA database on the CSIRO 'CYBER' computer to an INGRES database on a HP machine under a UNIX operating environment. Data punching and editing routines have been changed from those described in Majkowski and Morris (1986), but are generally similar in concept. The data retrieval routines described in Majkowski and Morris (1986) are no longer relevant. The licensing/boat register and quota monitoring databases are not stored on the logbook/radio-report/VMS/observer database. However, the intention, similar to that of the initial AFZIS concept, is ultimately to link all in a distributed database design.

The logbook/radio/VMS/observer database is no longer easily accessible by users outside AFMA. It is now regarded by AFMA as essentially its corporate database rather than a cooperative database. Confidentiality provisions are specified in logbook regulations and, in association with this, security barriers are imposed to control access to data. Domestic users (such as the Australian Bureau of Resource Sciences and CSIRO) and international bodies (such as the Secretariat for the Pacific Community and the Indo-Pacific Tuna Development and Management Programme) are required to sign deeds of confidentiality that contain provisions about the nature and purpose of use of the data. The outputs are

provided as data 'dumps' on disk from time to time, impeding real-time access to update data holdings. Also, in some circumstances individual fishers' data have to be aggregated before release to maintain commercial confidentiality. While users contribute to identification and correction of errors in the holdings, there is no routine arrangement yet for notification of errors or feedback about consequent database revision. When AFZIS was established a user group was formed to coordinate resolution of issues such as data access and maintenance. Broader collaboration among the Commonwealth and States is facilitated by a Fisheries Statistics Working Group. The former lapsed in the late 1980s, but a recently-formed Commonwealth Fisheries Data Users Group has taken on a generally similar role.

The previous three data collection reports (Majkowski, 1982; Majkowski and Morris, 1986; Caton, 1991) and the current report document the evolution of data-collection processes and provide accessible copies of the data forms. It will be apparent that some data fields have at various times have been considered either 'essential' or 'disposable', as various elaborations and simplifications of forms have taken place. These changes complicate the analysis of long-term time series of data.

References

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Table 1. Commonwealth government and State government responsibilities for monitoring of Australian fisheries for tuna and tuna-like species

Commonwealth Government		
Species	Current fisheries	Previous fisheries
Southern bluefin tuna; yellowfin tuna; skipjack tuna; albacore tuna; bigeye tuna; broadbill swordfish, striped marlin; blue marlin; black marlin; sailfish; short-bill spearfish	Pole-and-bait fishery; purse-seine fishery; small-vessel monofilament longline fishery; troll fishery; rod-and-reel fishery; tuna cage-rearing operations.	Joint-venture longline fishery; and licensed foreign longline fishery
State Governments*		
Species	Current fisheries	Previous fisheries
Spanish mackerels (*i.e.* seerfishes/king mackerels); longtail tuna; kawakawa; little tuna; blue mackerel; bonito; all recreational catches	Spanish mackerel troll fishery; blue mackerel purse-seine fishery; northern shark gillnet fishery (mackerel bycatch); recreational charter fishery	Foreign gillnet fishery (Commonwealth-managed)

* State Governments includes the Northern Territory Government, and it should be noted that an OCS arrangement between the Commonwealth and New South Wales Governments has not been finalised for some species.

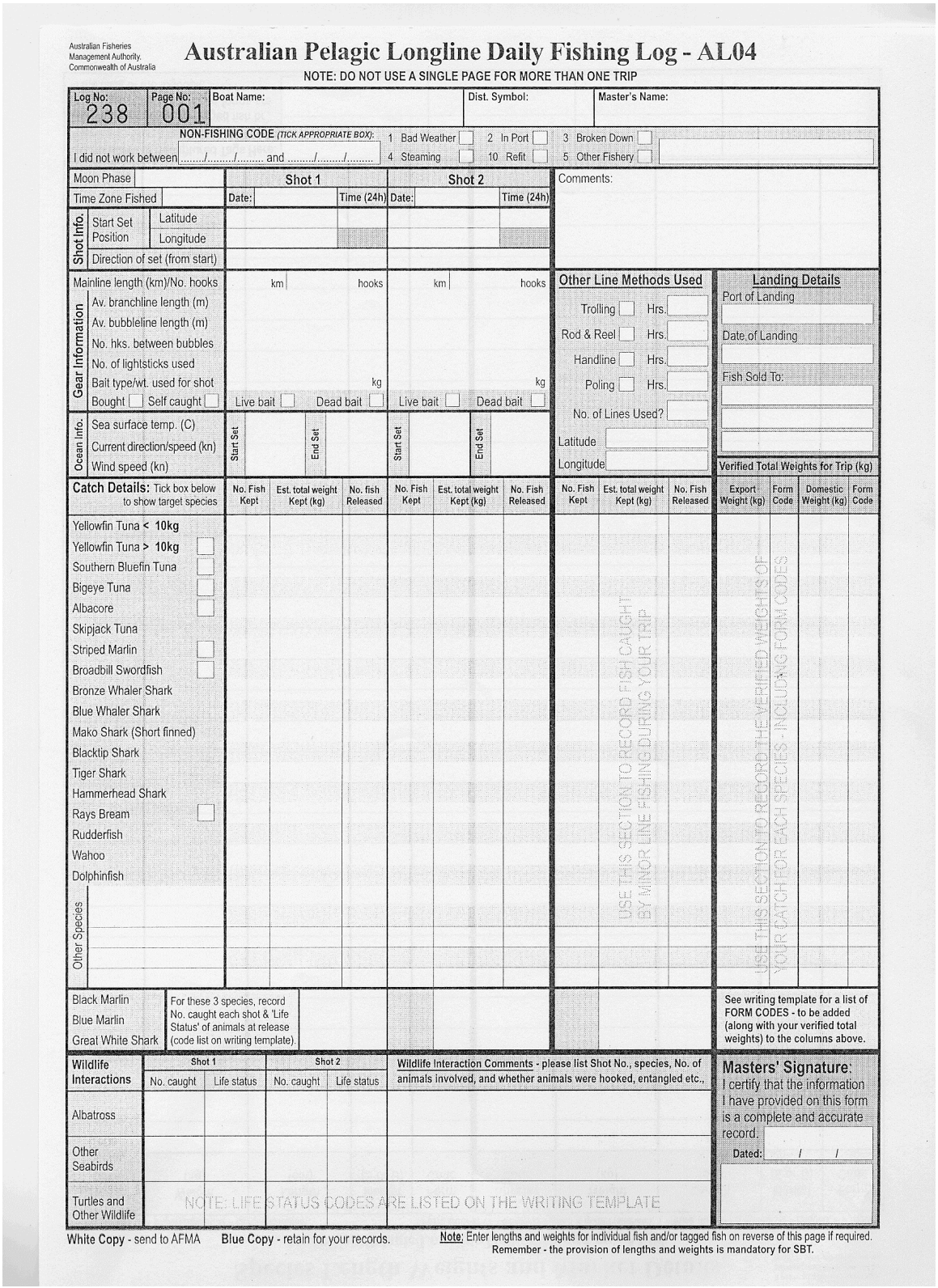
Table 2. Logbook usage since 1979 in Australian tuna fisheries

Fishery component	Logbook version	Time span of data provided on the log format
Foreign longline fishery in AFZ	TL01	1 Sep 79 – 28 Sep 81 (Japan Fisheries Agency Tuna Longline Fishery Logbook)
	TL02	3 Nov 79 – 25 Aug 89
	TL03	(assigned to computer file of Japanese 'Yellow Book' data)
	TL04	18 Nov 80 – 31 Oct 95; subsequently continued as a back-up system
Domestic longline fishery	AL01	(Temporary form; Coral Sea special permit area)
	AL02	1 Mar 85 – 1 Jan 97
	AL03	1 Jan 95 – 10 Feb 97
	AL04	1 Apr 97 – continuing (for reporting 'nil' fishing)
Domestic pole fishery	TP03	17 Aug 76 – 31 Jul 84
	TP05	22 Jan 82 – 31 Jan 97
	TP06	3 Jan 83 – 30 Sep 93 (WA logbook; fishery ceased commercial operation)
Domestic purse-seine fishery	SF04	1 Sep 75 – 21 Apr 82
	SF05	13 Oct 82 – 5 Apr 96
Combination pole and purse-seine fisheries	TPB01	1 Jul 95 – continuing (for reporting 'nil' fishing)
	TPB02	1 Apr 97 – continuing
Domestic 'other line' fishery	TH02	30 Sep 83 – 22 Oct 84
	OT01	26 Jul 89 – 26 Feb 96
	OT02	1 Jul 95 – continuing (for reporting 'nil' fishing)
	OT03	1 Apr 97 – continuing

Source: T. Skousen; Australian Fisheries Management Authority.

APPENDIX A.

Current domestic logsheets Australian Pelagic Longlining Daily Fishing Log [code 'ALO4']



Australian Fisheries Management Authority, Commonwealth of Australia

Australian Pelagic Longline Daily Fishing Log - AL04

NOTE: DO NOT USE A SINGLE PAGE FOR MORE THAN ONE TRIP

Log No: 238 | Page No: 001 | Boat Name: | Dist. Symbol: | Master's Name:

NON-FISHING CODE *(TICK APPROPRIATE BOX)*: 1 Bad Weather ☐ 2 In Port ☐ 3 Broken Down ☐ 4 Steaming ☐ 10 Refit ☐ 5 Other Fishery ☐

I did not work between ...../...../..... and ...../...../.....

Moon Phase | Time Zone Fished

	Shot 1	Shot 2
Date:		
Time (24h)		
Shot Info. – Start Set Position – Latitude		
Shot Info. – Start Set Position – Longitude		
Shot Info. – Direction of set (from start)		

Comments:

Gear Information	Shot 1	Shot 2
Mainline length (km)/No. hooks	km / hooks	km / hooks
Av. branchline length (m)		
Av. bubbleline length (m)		
No. hks. between bubbles		
No. of lightsticks used		
Bait type/wt. used for shot	kg	kg
Bought ☐ Self caught ☐	Live bait ☐ Dead bait ☐	Live bait ☐ Dead bait ☐

Ocean Info.	Shot 1	Shot 2
Sea surface temp. (C)	Start Set / End Set	Start Set / End Set
Current direction/speed (kn)		
Wind speed (kn)		

Other Line Methods Used

Trolling ☐ Hrs. | Rod & Reel ☐ Hrs. | Handline ☐ Hrs. | Poling ☐ Hrs.

No. of Lines Used?

Latitude

Longitude

Landing Details

Port of Landing

Date of Landing

Fish Sold To:

Verified Total Weights for Trip (kg)

Catch Details: Tick box below to show target species	Shot 1 No. Fish Kept	Shot 1 Est. total weight Kept (kg)	Shot 1 No. fish Released	Shot 2 No. Fish Kept	Shot 2 Est. total weight Kept (kg)	Shot 2 No. Fish Released	Other Line Methods Used: No. Fish Kept	Other Line Methods Used: Est. total weight Kept (kg)	Other Line Methods Used: No. Fish Released	Export Weight (kg)	Form Code	Domestic Weight (kg)	Form Code
Yellowfin Tuna < 10kg													
Yellowfin Tuna > 10kg ☐													
Southern Bluefin Tuna ☐													
Bigeye Tuna ☐													
Albacore ☐													
Skipjack Tuna													
Striped Marlin ☐													
Broadbill Swordfish ☐													
Bronze Whaler Shark													
Blue Whaler Shark													
Mako Shark (Short finned)													
Blacktip Shark													
Tiger Shark													
Hammerhead Shark													
Rays Bream ☐													
Rudderfish													
Wahoo													
Dolphinfish													
Other Species													

USE THIS SECTION TO RECORD FISH CAUGHT BY MINOR LINE FISHING DURING YOUR TRIP

USE THIS SECTION TO RECORD THE VERIFIED WEIGHTS OF YOUR CATCH FOR EACH SPECIES, INCLUDING FORM CODES

Black Marlin
Blue Marlin
Great White Shark

For these 3 species, record No. caught each shot & 'Life Status' of animals at release (code list on writing template).

See writing template for a list of FORM CODES - to be added (along with your verified total weights) to the columns above.

Wildlife Interactions	Shot 1 No. caught	Shot 1 Life status	Shot 2 No. caught	Shot 2 Life status
Albatross				
Other Seabirds				
Turtles and Other Wildlife	NOTE: LIFE STATUS CODES ARE LISTED ON THE WRITING TEMPLATE			

Wildlife Interaction Comments - please list Shot No., species, No. of animals involved, and whether animals were hooked, entangled etc.,

Masters' Signature:

I certify that the information I have provided on this form is a complete and accurate record.

Dated: / /

White Copy - send to AFMA Blue Copy - retain for your records.

Note: Enter lengths and weights for individual fish and/or tagged fish on reverse of this page if required. Remember - the provision of lengths and weights is mandatory for SBT.

Species Length Weights and Market Details

If you need a fish measuring ruler, please contact AFMA - we will be happy to send you one on request

Australian Pelagic Longline Daily Fishing Log - AL04

Market Codes: E = Export Market, D = Domestic Market.

Form Codes: W = whole; G = gilled & gutted (sashimi); T = trunk (headed & gutted); H = headed; F = filleted.

Species Code	Weight (kg)	Length (cm)	Market (E or D)	Form Code	Species Code	Weight (kg)	Length (cm)	Market (E or D)	Form Code

List Numbers of Recaptured Tags Here:
Please also fill in a tag recapture form to provide details for each tagged fish or animal that you catch. These forms are in the back of the logbook.

Australian Purse Seine and Pole Daily Fishing Log [code 'TPB02']

Australian Fisheries Management Authority, Commonwealth of Australia

Australian Purse Seine and Pole Daily Fishing Log - TPB02

IMPORTANT NOTE: IF POLING AND DOING DAY TRIPS PLEASE USE THE OT03 LOGBOOK TO RECORD YOUR CATCH

Log No: 063 | Page No: 001 | Boat Name: | Dist. Symbol: | Master's Name:

TICK APPROPRIATE NON-FISHING (NF) CODE BOX AT RIGHT: 1 Bad Weather ☐ 2 In Port ☐ 3 Broken Down ☐ 7 Cage Towing ☐

I did not work between ...../...../..... and ...../...../..... 4 Steaming ☐ 10 Refit ☐ 5 Other Fishery (specify)

Fishing Method Used? (tick appropriate box) Poling ☐ Purse Seining ☐

Distinguishing Nos. of assisting vessels NB: State whether pole or seine boats

Date of Fishing	NF Code?	Search Details - see instructions			Fishing Details						Bait Details		Estimated Catch Weights per Shot (kg) - tick box below fish name to indicate your target species.							
Date (day/month)	Codes listed above	Hours Searched	Spotter Plane Used ? (Y/N)	Sea Surface Temp. (C)	Time Zone used for log entries	Start Time (24hr) (local time)	Latitude	Longitude	No. Poles Used ?	Pole Boat Assisted Y/N	Seine Boat Assisted Y/N	List species of bait caught each day	Total Wt of bait caught & used? (kg)	Southern Bluefin Tuna	Skipjack Tuna	Albacore Tuna	Yellowfin Tuna	Jack Mackerel	Other Spec. (list above)	Other Spec. (list above)	Estimated % of school caught
														☐	☐	☐	☐	☐	☐	☐	

Landing Details

Port of Landing:

Date of Landing:

Owner of Cage - if cage towing:

Fish Sold To:

Verified Catch Weights for Trip: Other species (specify):

Skipjack: kg

Albacore: kg

Southern Bluefin: kg

Yellowfin: kg

Other species (specify): kg

Verified Weights for State Species Bycatch:

Dolphinfish: kg

Yellowtail Kingfish: kg

Other species (specify): kg

Other species (specify): kg

Other species (specify): kg

Wildlife Interactions: List any wildlife interacting with you during your fishing activities, including netted animals. If possible, list Species name, Interaction Date, No. of Animals and Life Status of any animals released after capture. Life Status Codes are listed on the writing template. Please record any extra details in the Comments section.

Species:	Date/s:	Qty:	Life Status:

Comments:

Master's Signature:
I certify that the information I have provided on this form is a complete and accurate record.

Dated:

WHITE COPY - send to AFMA BLUE COPY - retain for your records

Note: There are tagged fish/wildlife recapture forms at the rear of this log.

Australian Tuna Minor Line Daily Fishing Log [code 'OT03']

Australian Fisheries Management Authority
Commonwealth of Australia

Australian Tuna Minor Line Daily Fishing Logbook - OT03

Form Codes: W = Whole; G = Gilled & Gutted; H = Headed ; F = Filleted; T = Trunk (headed & gutted).

NOTE: USE A NEW PAGE FOR EACH FISHING DAY.

Log No: 072 | Page No: 001 | Date: | Boat Name: | Dist. Symbol: | Master's Name:

I did not work between ...../...../..... and ...../...../..... due to: NON-FISHING CODE (TICK APPROPRIATE BOX) 1 Bad Weather ☐ 2 In Port ☐ 3 Broken Down ☐ 4 Steaming ☐ 10 Refit ☐ 5 Other Fishery (specify)

FISHING DETAILS

Time Zone:

Area Fished: Latitude | Longitude

Minor Line Method(s) Used Today (tick appropriate boxes)

- Handline ☐ No. Lines ☐ Hrs. ☐
- Trolling ☐ No. Lines ☐ Hrs. ☐
- Rod & Reel (not trolling) ☐ No. Lines ☐ Hrs. ☐
- Other Method ? (list here) ☐ No. Lines ☐ Hrs. ☐

Poling Details (if applicable)

No. Poles Used ? ☐ Type used (ie. single/double)? ☐

Hours Searched? ☐ Poling Start Time (24 hr) ☐ Hours Fished? ☐

Were you assisting a Seine Boat during your fishing? (Y/N) ☐

Dist. Symbol of assisted seine boat? ☐

Bait Details - list bait type/s used today and tick appropriate boxes

Lures Used ? ☐ Bait Purchased ? ☐

Live Bait Used ? ☐ Bait caught by self ? ☐

Dead Bait Used ? ☐

Type ☐ Qty ☐ kg ☐

Type ☐ Qty ☐ kg ☐

Type ☐ Qty ☐ kg ☐

TOTAL CATCH FOR THE DAY

Species Code (see list on back of writing template)	Fish Retained: No. of Fish caught and kept (kg)	Fish Retained: Estimated Total Weight caught and kept (kg)	No. of Fish Returned to Sea.

Wildlife Interactions

	Number Caught	Life Status on release (codes on template)
Albatross & Other Seabirds (specify)		
Other Wildlife (specify)		

Other Comments - include species name/s if possible, as well as details of the interaction (eg. whether animal/s hooked, entangled, stealing fish etc):

LANDING DETAILS

(Include Total Verified Weights for each species landed. Don't forget to add form codes for these weights - these are listed at the top right of this page.

Verified Weights: Export Wt (kg)	Form Code	Record here as soon as possible after sale of catch: Domestic Wt (kg)	Form Code

USE THIS SECTION TO RECORD THE VERIFIED WEIGHTS OF YOUR CATCH FOR EACH SPECIES - INCLUDING THE FORM CODE

Port of Landing:

Date of Landing:

Fish Sold To:

Comments:

Master's Signature:
I certify that the information I have provided on this form is a complete and accurate record.

Dated:

WHITE COPY - send to AFMA BLUE COPY - retain for your records

If you catch any banded or tagged animals, please forward details to AFMA using one of the Tag recapture forms at the rear of this book (also see instructions at front - TAG RECAPTURES).

Species Length Weights and Market Details

Australian Tuna Minor Line Daily Fishing Log - OT03

Market Codes: E = Export Market, D = Domestic Market.

Form Codes: W = whole; G = gilled & gutted (sashimi); T = trunk (headed & gutted); H = headed; F = filleted.

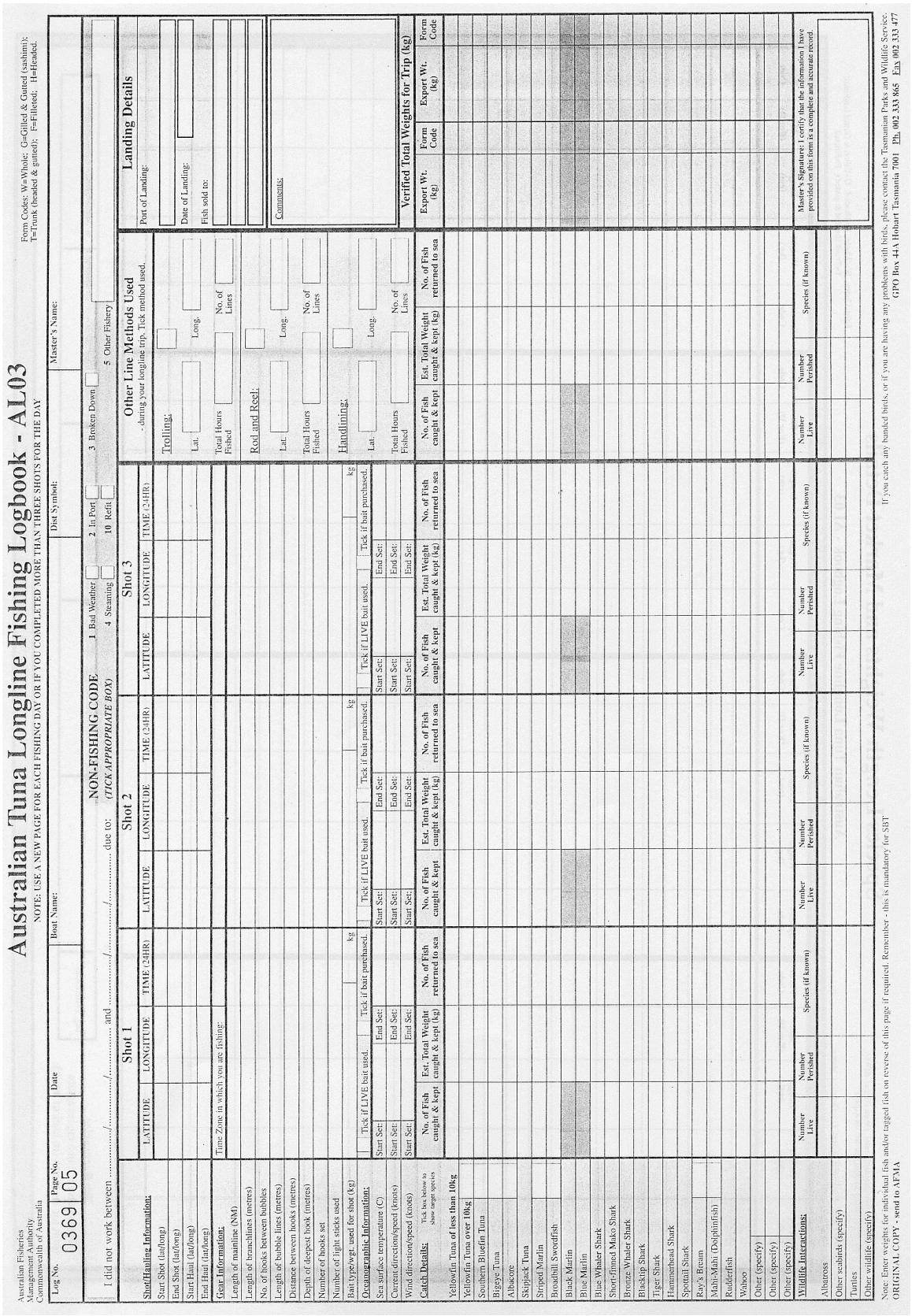
If you need a fish measuring ruler, please contact AFMA - we will be happy to send you one on request

Species Code	Weight (kg)	Length (cm)	Market (E or D)	Form Code	Species Code	Weight (kg)	Length (cm)	Market (E or D)	Form Code	Species Code	Weight (kg)	Length (cm)	Market (E or D)	Form Code

List numbers of any recaptured tags here:
Please also fill in a tag recapture form to provide details for each tagged fish or animal that you catch. These forms are in the back of the logbook.

APPENDIX B. PREVIOUS DOMESTIC LOGSHEETS

Australian Tuna Longline Fishing Logbook [code 'AL03']



Australian Fisheries Management Authority
Commonwealth of Australia

Australian Tuna Longline Fishing Logbook - AL03

NOTE: USE A NEW PAGE FOR EACH FISHING DAY OR IF YOU COMPLETED MORE THAN THREE SHOTS FOR THE DAY

Form Codes: W=Whole; G=Gilled & Gutted (sashimi); T=Trunk (headed & gutted); F=Filleted; H=Headed.

Log No. 0369 | Page No. 05 | Date | Boat Name: | Dist Symbol: | Master's Name:

I did not work between ...../...../..... and ...../...../..... due to: NON-FISHING CODE (TICK APPROPRIATE BOX) 1 Bad Weather 2 In Port 3 Broken Down 4 Steaming 10 Refit 5 Other Fishery

Shot/Hauling Information:	Shot 1 LATITUDE	Shot 1 LONGITUDE	Shot 1 TIME (24HR)	Shot 2 LATITUDE	Shot 2 LONGITUDE	Shot 2 TIME (24HR)	Shot 3 LATITUDE	Shot 3 LONGITUDE	Shot 3 TIME (24HR)
Start Shot (lat/long)									
End Shot (lat/long)									
Start Haul (lat/long)									
End Haul (lat/long)									
Gear Information:	Time Zone in which you are fishing:								
Length of mainline (NM)									
Length of branchlines (metres)									
No. of hooks between bubbles									
Length of bubble lines (metres)									
Distance between hooks (metres)									
Depth of deepest hook (metres)									
Number of hooks set									
Number of light sticks used									
Bait type/wgt. used for shot (kg)			kg			kg			kg
	Tick if LIVE bait used.	Tick if bait purchased.		Tick if LIVE bait used.	Tick if bait purchased.		Tick if LIVE bait used.	Tick if bait purchased.	
Oceanographic Information:									
Sea surface temperature (C)	Start Set:	End Set:		Start Set:	End Set:		Start Set:	End Set:	
Current direction/speed (knots)	Start Set:	End Set:		Start Set:	End Set:		Start Set:	End Set:	
Wind direction/speed (knots)	Start Set:	End Set:		Start Set:	End Set:		Start Set:	End Set:	

Catch Details: Tick box below to show target species	Shot 1 No. of Fish caught & kept	Shot 1 Est. Total Weight caught & kept (kg)	Shot 1 No. of Fish returned to sea	Shot 2 No. of Fish caught & kept	Shot 2 Est. Total Weight caught & kept (kg)	Shot 2 No. of Fish returned to sea	Shot 3 No. of Fish caught & kept	Shot 3 Est. Total Weight caught & kept (kg)	Shot 3 No. of Fish returned to sea
Yellowfin Tuna of less than 10kg									
Yellowfin Tuna over 10kg									
Southern Bluefin Tuna									
Bigeye Tuna									
Albacore									
Skipjack Tuna									
Striped Marlin									
Broadbill Swordfish									
Black Marlin									
Blue Marlin									
Blue Whaler Shark									
Short-finned Mako Shark									
Bronze Whaler Shark									
Blacktip Shark									
Tiger Shark									
Hammerhead Shark									
Spottail Shark									
Ray's Bream									
Mahi-Mahi (Dolphinfish)									
Rudderfish									
Wahoo									
Other (specify)									
Other (specify)									
Other (specify)									

Wildlife Interactions:	Number Live	Number Perished	Species (if known)	Number Live	Number Perished	Species (if known)	Number Live	Number Perished	Species (if known)	Number Live	Number Perished	Species (if known)
Albatross												
Other seabirds (specify)												
Turtles												
Other wildlife (specify)												

If you catch any banded birds, or if you are having any problems with birds, please contact the Tasmanian Parks and Wildlife Service: GPO Box 44A Hobart Tasmania 7001 Ph. 002 333 865 Fax 002 333 477

Note: Enter weights for individual fish and/or tagged fish on reverse of this page if required. Remember - this is mandatory for SBT

ORIGINAL COPY - send to AFMA

Other Line Methods Used - during your longline trip. Tick method used.

Trolling: Lat. Long. Total Hours Fished No. of Lines

Rod and Reel: Lat. Long. Total Hours Fished No. of Lines

Handlining: Lat. Long. Total Hours Fished No. of Lines

Landing Details

Port of Landing:

Date of Landing:

Fish sold to:

Comments:

Verified Total Weights for Trip (kg)	Export Wt. (kg)	Form Code	Export Wt. (kg)	Form Code

Master's Signature: I certify that the information I have provided on this form is a complete and accurate record.

If you need a fish measuring ruler, please contact AFMA,
- we will be happy to send you one on request

Market Codes: E = Export Market, D = Domestic Market

Species Length Weights and Market Details

Australian Tuna Longline Fishing Logbook - AL03

Form Codes: W=Whole; H=Headed; G=Gilled & Gutted (sashimi); T=Trunk (headed & gutted); F=Filleted.

Species Code	Weight (kg)	Length (cm)	Mkt (Eor D)	Form Code	Species Code	Weight (kg)	Length (cm)	Mkt (Eor D)	Form Code	Species Code	Weight (kg)	Length (cm)	Mkt (Eor D)	Form Code	Species Code	Weight (kg)	Length (cm)	Mkt (Eor D)	Form Code

Tag Recoveries
Please also fill in a tag recapture form for each fish (in back of book).

Tag Numbers:					

Australian Tuna Purse Seine and Pole Log [code 'TPB01']

Australian Fisheries Management Authority
Commonwealth of Australia

Australian Tuna Purse Seine and Pole Logbook - TPB01

NOTE: DO NOT PUT DETAILS OF MORE THAN ONE TRIP ON EACH PAGE.

Log No.: 0222 | Page No.: 01 | Boat Name: | Dist. Symbol: | Master's Name:

I did not work between ...../...../..... and ...../...../..... due to: NON-FISHING CODE (TICK APPROPRIATE BOX) 1 Bad weather 2 In port 3 Broken Down 4 Steaming 5 Other Fishery (specify) 7 Cage towing (also see field at bottom of page) 10 Refit

Fishing Method Used? (tick appropriate box) Poling Purse Seining Distinguishing Number/s of Poling Boat/s used (for assistance while setting)

Date of Fishing Operation	Non-Fishing Code (if applicable)	Searching Details (note whether searching for bait or marker fish)		Time Zone you are using for log entry:	Fishing Details			If you are poling note in comments whether more than single poles are used.	Bait Details		Estimated Catch Weights per Shot (kg) - tick box below to indicate species targeted. Note: There are tagged fish recapture forms at rear of log								Estimated % of school caught
Date (day/month) 19____	Codes listed above on right	Hours searched	Spotter Plane Used? (Y/N)	Sea Surface Temp. (C)	Start Time (24 hr clock) (local time)	Latitude	Longitude	No. of Poles Used if Poling?	Pole Boat Assisted if purse setting? (Y/N)	Species of Bait Caught (specify)	Total Wt. of Bait Caught and Used (kg)	Southern Bluefin Tuna Target?	Skipjack Tuna Target?	Albacore Tuna Target?	Yellowfin Tuna Target?	Jack Mackerel Target?	Other species (specify above) Target?	Other species (specify above) Target?	

Landing Details:

Port of Landing:
Date of Landing:
Owner of cage if cage towing:
Fish Sold To:

Wildlife Interactions: List any wildlife caught in your net (eg. turtles, dolphins, seals etc) including the numbers caught.

Species	Qty:	kg
Species	Qty:	kg
Species	Qty:	kg
Species	Qty:	kg

Verified Catch Weights for Trip:

	kg
Skipjack	kg
Albacore	kg
Southern Bluefin	kg
Yellowfin	kg

Other species (specify):

State Species By Catch:

Other species (specify): Yellowtail Kingfish

Other species (specify):

	kg
	kg
	kg
	kg
	kg

Comments:

Master's Signature: I certify that the information I have provided on this form is a complete and accurate record.

ORIGINAL COPY send to AFMA Note: There is space to enter length and weights for individual fish and/or tagged fish on the reverse of this page. If you catch any banded birds or if you have any problems with birds, please contact the Tasmanian Parks and Wildlife Service. GPO box 44A Hobart Tasmania 7001 Ph. 002 333 865 Fax. 002 333 477

If you need a fish measuring ruler, please contact AFMA,
- we will be happy to send you one on request

Market Codes: E = Export Market, D = Domestic Market

Species Length Weights and Market Details

Australian Tuna Purse Seine and Pole Fishing Logbook - TPB01

Form Codes: W=Whole; H=Headed; G=Gilled & Gutted (sashimi); T=Trunk (headed & gutted); F=Filleted.

Species Code	Weight (kg)	Length (cm)	Mkt (E or D)	Form Code	Species Code	Weight (kg)	Length (cm)	Mkt (E or D)	Form Code	Species Code	Weight (kg)	Length (cm)	Mkt (E or D)	Form Code	Species Code	Weight (kg)	Length (cm)	Mkt (E or D)	Form Code

Tag Recoveries
Please also fill in a tag recapture form for each fish (in back of book).

Tag Numbers:					

Australian Tuna Minor Line Fishing Log [code 'OT02']

Australian Fisheries Management Authority
Commonwealth of Australia

Australian Tuna Minor Line Fishing Logbook - OT02

NOTE: USE A NEW PAGE FOR EACH FISHING DAY

Form Codes: W=Whole; G=Gilled & Gutted; T=Trunk (headed & gutted); F=Filleted; H=Headed

Log No: 0262 | Page No: 01 | Date: | Boat Name: | Dist. Symbol: | Master's Name:

I did not work between ...../...../..... and ...../...../..... due to: | NON-FISHING CODE (TICK APPROPRIATE BOX) 1 Bad Weather 2 In Port 3 Broken Down 4 Steaming 5 Other Fishery (specify) 10 Refit

Area Fished Time Zone you are using:

Latitude | Longitude

Fishing Method(s) Used Today (tick)

Handlining		Hrs. Fished	hrs
Trolling		Hrs. Fished	hrs
Rod & Reel (not trolling)		Hrs. Fished	hrs
Other (specify in Comments)		Hrs. Fished	hrs

Number of Lines Used

Bait(s) Used Today (tick & enter Qty.)

Jack Mackerel		Qty	kg
Slimy Mackerel		Qty	kg
Rat Tail		Qty	kg
Yellowtail		Qty	kg
Squid		Qty	kg
Pilchards		Qty	kg
Lures		Live Bait? Y/N	
		Bait Purchased? Y/N	
Other (specify)		Qty	kg

TOTAL CATCH FOR THE DAY

Species Code (see list on back of writing template)	Fish Retained: Number of Fish caught and kept	Fish Retained: Estimated Total Wt. caught and kept (kg)	Number of Fish Returned to Sea

Wildlife Interactions	No. Live	No. Perished
Albatross		
Other Birds (specify)		
Other Wildlife (specify)		

LANDING DETAILS (Include Total Verified Weights for each species caught and sold)

Port of Landing:

Date of Landing:

Sold To:

Species Code:	Export Wt (kg)	Form Code	Domestic Wt (kg)	Form Code

Sold To:

Species Code:	Export Wt (kg)	Form Code	Domestic Wt (kg)	Form Code

Master's Signature: I certify that the information I have provided on this form is a complete and accurate record.

Comments:

Note: There is space to enter lengths and weights for individual fish and/or tagged fish on the reverse of this page if you are able to record these details.
ORIGINAL COPY - send to AFMA

If you catch any banded birds, or if you are having any problems with birds, please contact the Tasmanian Parks and Wildlife Service
GPO Box 44A Hobart Tasmania 7001 Ph. 002 333 965 Fax 002 333 477

If you need a fish measuring ruler, please contact AFMA,
- we will be happy to send you one on request.

Market Codes: E = Export Market, D = Domestic Market

Species Length Weights and Market Details

Australian Tuna Minor LineFishing Logbook - OT02.

Form Codes: W = whole; H = headed; G = gilled & gutted (sashimi); T = trunk (headed & gutted); F = filleted.

Species Code	Weight (kg)	Length (cm)	Mkt (E or D)	Form Code	Species Code	Weight (kg)	Length (cm)	Mkt (E or D)	Form Code	Species Code	Weight (kg)	Length (cm)	Mkt (E or D)	Form Code	Species Code	Weight (kg)	Length (cm)	Mkt (E or D)	Form Code

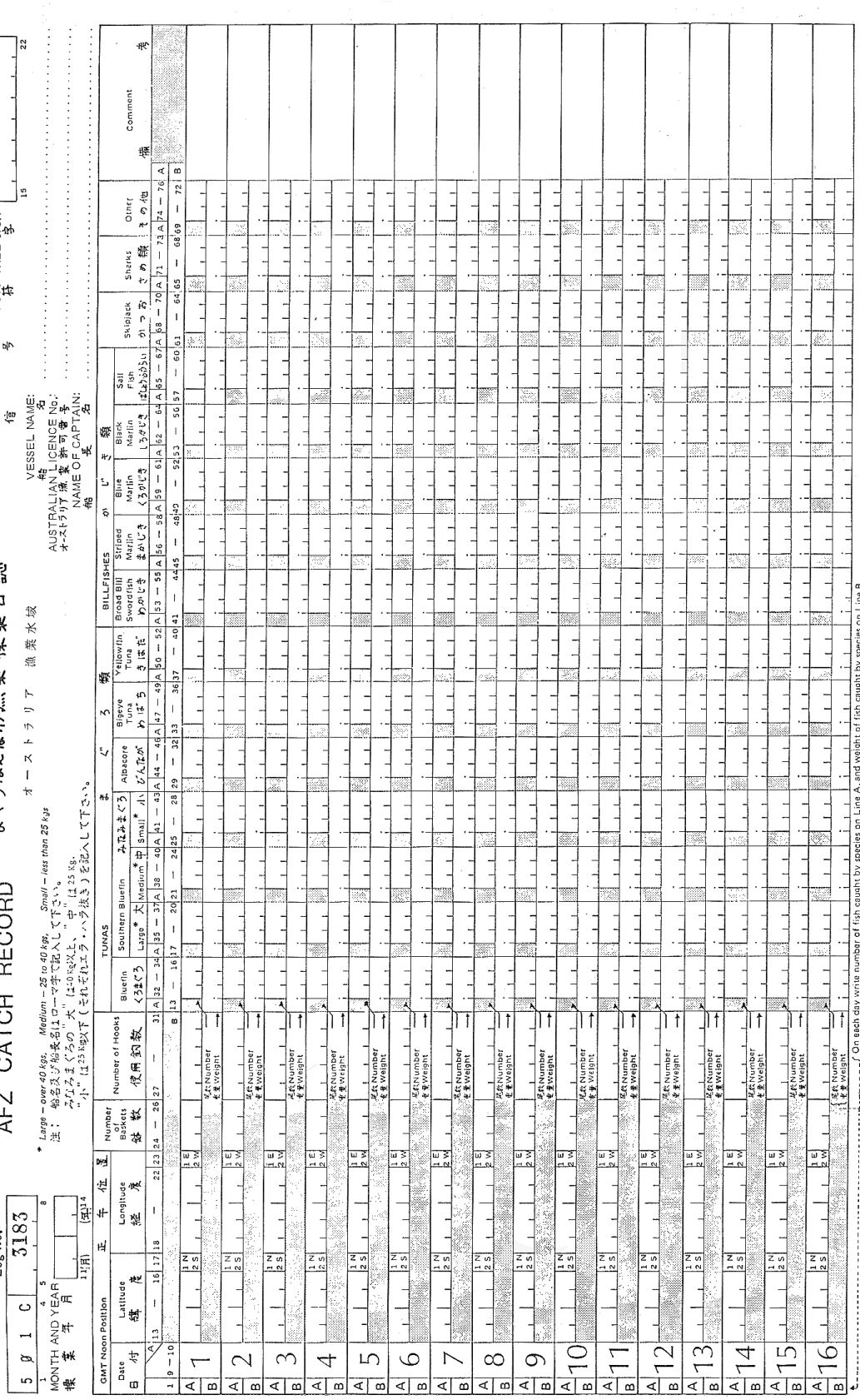
Tag Recoveries

Please also fill in a tag recapture form for each fish (in back of book).

Tag Numbers:

APPENDIX C. JAPANESE, JOINT-VENTURE AND CHARTER LOGSHEET

AFZ Catch Record logbook [code 'TL04']



APPENDIX D. CURRENT SOUTHERN BLUEFIN TUNA CATCH AGAINST QUOTA RECORDS

Record of Southern Bluefin Tuna Taken [code 'CR3']

AUSTRALIAN FISHERIES MANAGEMENT AUTHORITY No. 2003

CR3 - RECORD OF SOUTHERN BLUEFIN TUNA (SBT) TAKEN

Vessel Details

Name | Distinguishing No.

Catch & Disposal Details

Estimate of quantity disposed of (Kg)

Number of Fish

Area Fished

nsw tas sa wa vic

Fishing Method

Dates fish taken / / Date landed / /

Disposal Location

Processor's Details (or Tuna Farm)

Processor/Buyer or Tuna Farm

I..... as master of the vessel described above, certify that the vessel was used to take the quantity of SBT disposed of in accordance with the details described herein.

Signature | Printed Name | Date / /

Original (white) deliver to State Inspector

AUSTRALIAN FISHERIES MANAGEMENT AUTHORITY No. 2003

CR3 - RECORD OF SOUTHERN BLUEFIN TUNA (SBT) TAKEN

Vessel Details

Name | Distinguishing No.

Catch & Disposal Details

Estimate of quantity disposed of (Kg)

Number of Fish

Area Fished

nsw tas sa wa vic

Fishing Method

Dates fish taken / / Date landed / /

Disposal Location

Processor's Details (or Tuna Farm)

Processor/Buyer or Tuna Farm

Unprocessed Weight (Kg)

Processed Weight (Kg)

* I certify these details accurately describe fish received.

Signature

Date / /

I..... as master of the vessel described above, certify that the vessel was used to take the quantity of SBT disposed of in accordance with the details described herein.

Signature | Printed Name | Date / /

Duplicate (yellow) to accompany SBT disposed of and forwarded to Fisheries Office with verified weights entered

SBT Carrier and Tuna Sea Cage Towing Boat Data Sheet [code 'SBT02']