

# Separating TIB, TVH and Processor catch records from Docket-Book Data – 2017 Update

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## 1. Introduction

The Torres Strait Seafood Buyers and Processors Docket Book (TDB01) was used in the Torres Strait Tropical Rock Lobster Fishery (the fishery) principally to record the catch and effort for fishers operating in the TIB sector of the fishery. The Docket Book (TDB01) was replaced on 1 December 2017 by the mandatory Torres Strait Catch Disposal Record (TDB02). This report recommends data rules that should be applied to the historical Docket Book (TDB01) data to accurately determine the traditional inhabitant boat (TIB) sector catch.

In principle, the completed Docket Book form was a receipt given to the fisher landing the catch by the processor to which the lobsters are sold. Due to the receipt-like nature of the Docket-Book the reported catches can also be reported in other formats, including the Torres Strait Tropical Rock Lobster Fishery Daily Fishing Log (TRL04). Catches sold between processors can also sometimes be recorded in the Docket-Book. Reporting of TVH catches and catch sold between processors means that duplicate catch records are created resulting in some degree of uncertainty and difficulty in ascertaining the true total catch taken by the TIB sector of the fishery.

Several mechanisms have been introduced to help identify duplicate catch records included in the Docket-Book data. First, there is a specific field on the Docket-Book which asks whether the fisher (identified by the data label SELLER-NAME) has recorded their catch elsewhere. Where this has occurred, the seller is requested to identify where the catch has been recorded (the data label is called the RELATED-LOG). For example, TVH sellers would report that the catch has been recorded in the TRL04 logbook, while sellers identified as processors may indicate that the catch has been recorded in the TDB01 docket-book. In such instances these duplicate catch records can be separated from the TIB sector catch data. Where the RELATED-LOG field is null it is interpreted that the catch data has not been recorded elsewhere and the catch data is related to the TIB sector. However, there are a range of other entries in this field, for example the Torres Strait Hand Collectable Daily Fishing Log (HC01), the Torres Strait Hand Collectable Catch Disposal Record (HC02), Torres Strait Finfish Daily Fishing Log (TSF01), NSS BESI, etc..

Second, around 2006 an additional field (SELLER-TYPE) was added to the Docket-Book data to indicate whether the seller is a TIB or TVH sector licence holder or a processor. This field is used to identify and remove duplicate TVH catch records and duplicate records of catch sold between processors. It was based on linking the SELLER-NAME on the Docket-Book to the SELLER-TYPE (TIB, TVH or processor) in a Microsoft Excel look-up table. However, the list of SELLER-NAMES and SELLER-TYPES is now out of date, and together with the fact that the SELLER-NAMES are often misspelt or a nick-name is used, the SELLER-TYPE most often remains unknown. This reduces the utility of this data field to identify the SELLER-TYPE.

Using both the SELLER-TYPE and RELATED-LOG fields defined above, together with the vessel symbol (e.g. the symbol for most TVH vessels start with an 'F'), it should be possible to identify and remove non-TIB catch records and duplicate catch records from the Docket-Book data. Together with the two data fields identified above, the following fields are also used in this analysis:

1. LOG-TYPE: identifies where the data was originally recorded (for example; TDB01, TRL04, HC01, HC02, TSF01).

2. SELLER-TYPE (S-TYPE): identifies seller-type (TIB, TVH or processor).
3. RELATED-LOG: identifies the other logbook where the catch has been recorded
4. VESSEL-TYPE: identifies the type of vessel. This is a data field added by CSIRO to identify vessels with a symbol also listed in the TVH logbook data (denoted TVH-Vessel) and vessels with a symbol beginning in 'F' but not in the TVH logbook data (denoted F-Symbol).
5. CLIENT-NAME: identifies the business purchasing the catch being sold by the fisher.
6. RECORD-NUMBER: identifies the unique record number of the Docket-Book form relating to the landed catch sold by a fisher on a given day.

This document outlines the data analysis undertaken and the Data-Rules identified to assign a DATA-TYPE (TIB, TVH or Processor) to each Docket-Book record. In particular, the analysis proceeds by investigating the data utilizing the information in each of the data fields listed and defined above. A summary of all Docket-Book data currently held by CSIRO classified according to the combination of several of the data fields listed above is shown in Table 2.

## 2. Log-Type

The LOG-TYPE field identifies the source of the data and the five log-types listed in Table 1 relate to the data sources:

- DocketBook : based on catch recorded in the TDB01 Docket-Book and provided annually by AFMA as separate Operations and Catch data-sets.
- Combined : based on catch recorded in the TDB01 Docket-Book and provided by AFMA as a single combined Operations and Catch table prior to 2012.
- LogBook : based catch recorded in the TRL04 Log-Book but subsequently identified as TIB catch.
- PEARL : aggregate annual catch only data provided by Pearl Islands Seafood Pty Ltd for the years 2013 to 2016.
- TORRES : aggregate annual catch only data provided by Torres Straits Seafood Pty Ltd for 2016.

### *TIB vessels using TVH-logbook*

The data listed in Table 1 includes 713 records which are related to large TIB vessels which recorded their catch in the TRL04 logbook. This occurred for a period of time because some TIB operators believed the TRL04 logbook was mandatory, though they later became aware reporting for TIB is currently voluntary, until the *Torres Strait Fisheries Act 1984* is amended to require the TIB sector to report. A listing of these vessels is provided in Table 1. These records are assigned the DATA-TYPE='TIB' under Data-Rule #1.

Table 1. Listing of TIB vessels where catch has been recorded in the TRL04 logbook.

LOG-TYPE	VESSEL	N-RECORDS	MIN-YR	MAX-YR
LogBook	BI173	83	2011	2013
LogBook	FXAY	305	2000	2010
LogBook	TRAWQ348	57	2014	2015
LogBook	TRAWQ456	21	2012	2012
LogBook	TRAWQ458	179	2012	2013
LogBook	TRAWQ460	68	2012	2013
Total		713		

### *Data Not Recorded in Docket-Book*

Between 2013 and 2016 two processors reported aggregate annual catch data by a Microsoft Excel spreadsheet, as these catches were not being recorded in the TDB01 Docket-Book. Each client reported the catch for tailed and whole lobsters separately, so that for each year that this data was provided two data records were added to the Docket-Book data. These records are assigned the DATA-TYPE='TIB' under Data-Rule #2.

Table 2. Classification of Docket-Book data held by CSIRO classified according to several related data fields defined in the text. Note: N-RECORDS is the number of unique RECORD-NUMBERS associated with each set of data.

LOG-TYPE	SELLER-TYPE	RELATED-LOG	VESSEL-TYPE	N-RECORDS
Combined	PRC	TDB01		95
Combined	PRC	TRL04		3
Combined	PRC			39
Combined	TIB			115
Combined	TVH	TRL04	F_SYMBOL	13
Combined	TVH	TRL04	TVH VESSEL	204
Combined	TVH	TRL04		146
Combined	TVH		TVH VESSEL	6
Combined	TVH			166
Combined	U	OTHER	TVH VESSEL	1
Combined	U	OTHER		46
Combined	U	PEARL ISLAND		3
Combined	U	TDB01		44
Combined	U	TRL04	TVH VESSEL	1
Combined	U	TRL04		15
Combined	U		F_SYMBOL	360
Combined	U		TVH VESSEL	94
Combined	U			34,656
DocketBook	PRC	TDB01		61
DocketBook	PRC	TRL04	TVH VESSEL	25
DocketBook	PRC	TRL04		16
DocketBook	PRC		TVH VESSEL	1
DocketBook	PRC			11
DocketBook	TIB	TDB01		10
DocketBook	TIB	TRL04		6
DocketBook	TIB			3,886
DocketBook	TVH	TDB01 : TRL04	TVH VESSEL	1
DocketBook	TVH	TRL04	F_SYMBOL	10
DocketBook	TVH	TRL04	TVH VESSEL	90
DocketBook	TVH	TRL04		149
DocketBook	TVH		F_SYMBOL	1
DocketBook	TVH		TVH VESSEL	10
DocketBook	TVH			536
DocketBook	U	TDB01	TVH VESSEL	7
DocketBook	U	TDB01		233
DocketBook	U	TRL04	F_SYMBOL	15
DocketBook	U	TRL04	TVH VESSEL	505
DocketBook	U	TRL04		293
DocketBook	U		TVH VESSEL	41
DocketBook	U			8,483
DocketBook				1
LogBook	TIB	TRL04		713
PEARL	TIB			8
TORRES	TIB			2
TOTAL				51,121

### 3. Seller-Type

Of the data records not yet assigned a DATA-TYPE i.e. (Log-Type either Docket-Book or Combined in Table 1) there are four different SELLER-TYPES:

- PRC : Seller/catch associated with Processor
- TVH : Seller/catch associated with TVH sector
- TIB : Seller/catch associated with TIB sector
- U : Unknown (i.e. left blank)

#### *Processor, PRC*

Based on the information provided above, records where SELLER-TYPE is a processor (PRC) relate to catches sold between different processors and therefore should be considered to be duplicate catch records in the Docket-Book data. A summary of the 251 records where SELLER-TYPE = 'PRC' is provided in Table 3. A majority of these records (200, or 80%) indicate that the catch has been recorded in another format, which is to be expected if these are catches being sold between processors (and therefore duplicate records). However, if this is the case then why a vessel-name is listed against several of these records remains unclear. Furthermore, it can be noted that of the nine SELLER-NAMES listed three correspond to personal names (Joseph Dai, Miroslav Vaculka and Richard Wilfred Bowie). A check indicates that Joseph Dai is a TIB fisher, Richard Bowie is a processor (Argun Seafood Pty Ltd) based on Badu Island, while Miroslav Vaculka works on TVH vessel. As such all records in Table 3 were considered to be duplicate catch records (assigned to the DATA-TYPE='PRC' under Data-Rule #3 except for: i) those associated with Joseph Dai (n=1) which were assigned to the DATA-TYPE='TIB' under Data-Rule #3A, and ii) those associated with Miroslav Vaculka (n=6) which were assigned to the DATA-TYPE='TVH' under Data-Rule #3B. For the 244 records listed in Table 3 and designated as processor records, a listing of the associated Clients (c.f. Table 4) indicates that in all cases the catches were sold to another processor.

Table 3. Summary of Docket-Book data where SELLER-TYPE='PRC'. (Note, S-TYPE=SELLER-TYPE, MIN-YR=first year in data, MAX-YR=last year in data)

SELLER-NAME	LOG-TYPE	S-TYPE	RELATED-LOG	VESSEL	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
ARGUN SEAFOODS PTY LTD	DocketBook	PRC	TDB01			27	2015	2017
	DocketBook	PRC				6	2014	2014
CAPE YORK ICE AND TACKLE	Combined	PRC	TDB01			2	2010	2010
JOSEPH DAI	DocketBook	PRC				1	2014	2014
LENREX PTY LTD	Combined	PRC				3	2010	2010
	DocketBook	PRC	TDB01			5	2012	2016
M G KAILIS PTY LTD	DocketBook	PRC				1	2012	2012
	DocketBook	PRC	TRL04	FVWJ	TVH VESSEL	25	2013	2015
	DocketBook	PRC	TRL04			10	2013	2015
MIROSLAV VACULKA	DocketBook	PRC		FVWJ	TVH VESSEL	1	2013	2013
	DocketBook	PRC	TRL04			5	2015	2015
	DocketBook	PRC				1	2015	2015
PEARL ISLAND SEAFOODS PTY LTD	DocketBook	PRC	TDB01			29	2016	2017
	DocketBook	PRC	TRL04			1	2017	2017
RICHARD WILFRED BOWIE	Combined	PRC	TDB01	BI115		2	2007	2007
	Combined	PRC	TDB01			85	2007	2010
	Combined	PRC	TRL04			3	2007	2010
	Combined	PRC		BI115		4	2007	2008
	Combined	PRC				23	2007	2010
	DocketBook	PRC				2	2012	2016
TRADEWINDS SEAFOODS	Combined	PRC	TDB01			6	2010	2010
	Combined	PRC				9	2010	2010
TOTAL						251		

Table 4. Listing of the Clients associated with SELLER-TYPE='PRC' records listed in Table 3 and designated as processor records.

SELLER-NAME	CLIENT-NAME	N-RECORDS
ARGUN SEAFOODS PTY LTD	KAILIS BROS PTY LTD	6
	M G KAILIS PTY. LTD.	27
CAPE YORK ICE AND TACKLE	PEARL ISLAND SEAFOOD	2
LENREX PTY LTD	KAILIS BROS PTY LTD	1
	M G KAILIS PTY. LTD.	7
	PEARL ISLAND SEAFOOD	1
M G KAILIS PTY LTD	M G KAILIS PTY. LTD.	36
PEARL ISLAND SEAFOODS PTY LTD	KAILIS BROS PTY LTD	15
	M G KAILIS PTY. LTD.	15
RICHARD WILFRED BOWIE	ARGUN SEAFOODS PTY LTD	2
	PEARL ISLAND SEAFOOD	111
	RICHARD WILFRED BOWIE	2
	TANALA SEAFOODS	4
TRADEWINDS SEAFOODS	PEARL ISLAND SEAFOOD	15
TOTAL		244

### *Business Names*

A check of the list of all SELLER-NAMES in the Docket-Book data indicates the existence of nineteen other business-names which may be associated with a processor but where the SELLER-TYPE has not been recorded as a processor (i.e. has either been reported as TIB, TVH or left blank). A summary of the Docket-Book data related to the 823 records for these other businesses is provided in Table 5 (note, this is not a list of all businesses in the fishery). It is acknowledged that individual fishers may operate under a business name, in which case the data listed in Table 5 may relate to catches sold by fishers instead of catches on-sold by processors (as was the case with the data listed in Table 3). Indeed, if the former situation applies to these data then the SELLER-TYPE field should indicate which sector of the fishery each set of records belongs. However, unfortunately 95% of the records listed in Table 5 are associated with an unknown SELLER-TYPE, with the remaining 5% associated with a TVH SELLER-TYPE. On the other hand, the majority (61%) of related records (and 61% of the associated catch) summarized in Table 5 indicate that the catch has been recorded in the TRL04 logbook, while 38% of records (and 35% of the catch) is associated with a TVH vessel.

Some checks were first undertaken on the three businesses listed in Table 5 which were also listed in Table 3 (Argun Seafoods Pty Ltd, Pearl Islands Seafood Pty Ltd and Tradewinds Seafoods Pty Ltd). As the SELLER-TYPE associated with these three businesses in Table 5 is unknown, it remains uncertain as to whether the catch records are processor-to-processor trading and therefore should be treated as duplicate catch records.

First, for Argun Seafoods Pty Ltd, the associated SELLER-TYPE is listed as unknown (i.e. was left blank) for all records up until July 2014 while after this time the SELLER-TYPE is listed as PRC for all records. To be consistent with the data handling practices (as recorded in these latter years) all records associated with Argun Seafoods Pty Ltd data were considered duplicate records and were therefore assigned to the DATA-TYPE='PRC' under Data-Rule #3. This assumes that before June 2014 the SELLER-TYPE field was left blank instead of 'PRC' (c.f. Table 3). This assumption is supported by the fact that the client for all 26 records is MG Kailis Pty Ltd which indicates a processor-to-processor transaction (c.f. Table 6).

Second, for Pearl Islands Seafood Pty Ltd there is TDB01 data for the years 2012 to 2017. For the years 2012-15 the associated SELLER-TYPE was left blank while for the years 2016-17 the SELLER-TYPE is listed as PRC. Assuming that all records should have been labeled 'PRC' for all years (for consistency as above for the other processors), the 1,689 records associated with Pearl Islands Seafood Pty Ltd in Table 4 were assigned the DATA-TYPE='PRC' under Data-Rule #3. Again, this assumption is supported by the fact that the client for all 231 records is MG Kailis Pty Ltd which indicates a processor-to-processor transaction (c.f. Table 6).

Table 5. Summary of Docket-Book data where SELLER-NAME is identified as a business but SELLER-TYPE!='PRC'. (Note, S-TYPE= Seller-Type).

SELLER-NAME	LOG-TYPE	S-TYPE	RELATED-LOG	VESSEL	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
ARGUN SEAFOODS PTY LTD	DocketBook	U	TDB01			21	2012	2014
	DocketBook	U				5	2012	2014
BARRIER REEF LIVE CRAYS	DocketBook	TVH	TDB01 : TRLO4	FVWJ	TVH VESSEL	1	2012	2012
	DocketBook	TVH	TRLO4	FVWJ	TVH VESSEL	17	2012	2012
	DocketBook	TVH	TRLO4			6	2012	2013
CIEJAM PTY LTD	DocketBook	U	TDB01			2	2016	2016
	DocketBook	U	TRLO4	FRJP	TVH VESSEL	3	2015	2015
	DocketBook	U	TRLO4	FVFD	TVH VESSEL	11	2014	2015
DIAKEN PTY LTD	DocketBook	U	TRLO4			34	2014	2017
	DocketBook	TVH	TRLO4	FQNQ	TVH VESSEL	3	2012	2012
	DocketBook	TVH	TRLO4	FXHP	TVH VESSEL	7	2012	2012
	DocketBook	TVH		FQNQ	TVH VESSEL	1	2012	2012
	DocketBook	U	TDB01	FQNQ	TVH VESSEL	3	2012	2012
	DocketBook	U	TDB01	FXHP	TVH VESSEL	1	2014	2014
	DocketBook	U	TDB01			3	2016	2017
	DocketBook	U	TRLO4	FQNQ	TVH VESSEL	71	2012	2015
	DocketBook	U	TRLO4	FXHP	TVH VESSEL	66	2012	2017
	DocketBook	U	TRLO4			54	2012	2017
E-FISHIENT PTY LTD	DocketBook	U		FQNQ	TVH VESSEL	1	2012	2012
	DocketBook	U		FXHP	TVH VESSEL	1	2013	2013
	DocketBook	U				1	2014	2014
	DocketBook	U	TDB01			1	2016	2016
	DocketBook	U	TRLO4	FXYK	TVH VESSEL	30	2012	2017
	DocketBook	U	TRLO4	FYGN	TVH VESSEL	2	2015	2017
	DocketBook	U	TRLO4			32	2012	2017
	DocketBook	U		FXYK	TVH VESSEL	1	2012	2012
	DocketBook	U				1	2014	2014
	EPAR INVESTMENTS PTY LTD	Combined	U				2	2010
F N Q FISHERIES PTY LTD	DocketBook	U	TRLO4	FVWJ	TVH VESSEL	1	2017	2017
	DocketBook	U	TRLO4	FXYC	F_SYMBOL	13	2014	2015
	DocketBook	U	TRLO4			26	2014	2017
HENJONVAL PTY LTD	Combined	U		BI173		2	2011	2011
	Combined	U		BI179		1	2011	2011
	Combined	U				1	2011	2011
	DocketBook	U	TRLO4	BI173		2	2012	2012
	DocketBook	U	TRLO4			2	2012	2012
LUKEHURST LIVE LOBSTER PTY LTD	DocketBook	U	TRLO4			3	2012	2012
N. U. C. H PTY LTD	DocketBook	U	TRLO4			2	2016	2016
NATHAN STAN SEAFOODS	Combined	TVH	TRLO4			1	2004	2004
NATHAN STAN SEAFOODS	Combined	U				1	2006	2006
ORNATUS MARINE PRODUCTS PTY LTD	DocketBook	U	TRLO4	FRJP	TVH VESSEL	10	2012	2012
	DocketBook	U	TRLO4			2	2012	2012
PEARL ISLAND SEAFOODS PTY LTD	DocketBook	U	TDB01			144	2012	2015
	DocketBook	U	TRLO4			8	2013	2015
	DocketBook	U				79	2012	2014
RUFF N TUFF FISHING PTY LTD	DocketBook	U	TRLO4	FZAP	TVH VESSEL	12	2012	2013
	DocketBook	U	TRLO4			1	2012	2012
TK FISHERIES	DocketBook	U	TRLO4	TRAWQ460		3	2012	2012
	DocketBook	U	TRLO4			7	2013	2016
	DocketBook	U		TRAWQ460		8	2012	2013
	DocketBook	U				18	2012	2015
TORRES CRAYS PTY LTD	DocketBook	U	TRLO4	FVFD	TVH VESSEL	32	2012	2014
	DocketBook	U	TRLO4			8	2012	2013
	DocketBook	U		FVFD	TVH VESSEL	3	2012	2013
TRADEWINDS SEAFOODS	Combined	U	TDB01			3	2010	2010
	Combined	U				3	2010	2010
VANIKO MARINE PRODUCTS	DocketBook	U	TDB01	FWDZ	TVH VESSEL	3	2014	2014
	DocketBook	U	TRLO4	FRJP	TVH VESSEL	1	2012	2012
	DocketBook	U	TRLO4	FWDZ	TVH VESSEL	22	2012	2014
	DocketBook	U	TRLO4	FWED	F_SYMBOL	2	2012	2012
	DocketBook	U	TRLO4	FZAT	TVH VESSEL	5	2013	2013
	DocketBook	U	TRLO4			8	2012	2014
WAKAID CORAL SEAS CO PTY LTD	DocketBook	U		FWDZ	TVH VESSEL	2	2012	2012
	Combined	TVH				2	2010	2010
	Combined	U				1	2010	2010
TOTAL						823		

Table 6. Listing of the Clients associated with the Docket-Book records where SELLER-NAME is identified as a business but SELLER-TYPE!='PRC'. (c.f. Table 5).

SELLER-NAME	CLIENT-NAME	N-RECORDS	MIN-YR	MAX-YR
ARGUN SEAFOODS PTY LTD	M G KAILIS PTY. LTD.	26	2012	2014
BARRIER REEF LIVE CRAYS	M G KAILIS PTY. LTD.	24	2012	2013
CIEJAM PTY LTD	KAILIS BROS PTY LTD	10	2016	2017
	M G KAILIS PTY. LTD.	40	2014	2016
DAIKEN PTY LTD	KAILIS BROS PTY LTD	16	2016	2017
	M G KAILIS PTY. LTD.	196	2012	2016
E-FISHIENT PTY LTD	KAILIS BROS PTY LTD	11	2016	2017
	M G KAILIS PTY. LTD.	56	2012	2016
EPAR INVESTMENTS PTY LTD	PEARL ISLAND SEAFOOD	2	2010	2010
F N Q FISHERIES PTY LTD	KAILIS BROS PTY LTD	8	2016	2017
	M G KAILIS PTY. LTD.	32	2014	2016
HENJONVAL PTY LTD	TORRES STRAITS SEAFOOD	7	2012	2012
		4	2011	2011
LUKEHURST LIVE LOBSTER PTY LTD	TORRES STRAITS SEAFOOD	2	2016	2016
N.U.C.H PTY LTD	M G KAILIS PTY. LTD.	1	2004	2004
NATHAN STAN SEAFOODS	PEARL ISLAND SEAFOOD	1	2006	2006
ORNATUS MARINE PRODUCTS PTY LTD	M G KAILIS PTY. LTD.	12	2012	2012
PEARL ISLAND SEAFOODS PTY LTD	M G KAILIS PTY. LTD.	231	2012	2015
RUFF N TUFF FISHING PTY LTD	M G KAILIS PTY. LTD.	13	2012	2013
TK FISHERIES	TORRES STRAITS SEAFOOD	36	2012	2016
TORRES CRAYS PTY LTD	M G KAILIS PTY. LTD.	43	2012	2014
TRADEWINDS SEAFOODS	PEARL ISLAND SEAFOOD	6	2010	2010
VANIKO MARINE PRODUCTS	M G KAILIS PTY. LTD.	40	2012	2014
	TORRES STRAITS SEAFOOD	3	2012	2012
WAKAID CORAL SEAS CO PTY LTD	PEARL ISLAND SEAFOOD	3	2010	2010
TOTAL		823		

Third, for Tradewinds Seafoods Pty Ltd, there is data only for the year 2010. During this year, the associated SELLER-TYPE is listed as PRC for all records up until 8-July while after this time and until the end of October the SELLER-TYPE is listed as unknown (i.e. was left blank). The SELLER-TYPE is again listed as PRC for December. Again, for consistency throughout this year all records associated with Tradewinds Seafoods Pty Ltd data were seen as being duplicate processor records and were therefore assigned to the DATA-TYPE='PRC' under Data-Rule #3. Again, this assumes that Records with the SELLER-TYPE field that were left blank have been corrected to 'PRC' for several months in 2010 (c.f. Table 5). Again, this assumption is supported by the fact that the client for all 6 records is Pearl Islands Seafood Pty Ltd which indicates a processor-to-processor transaction (c.f. Table 6).

For the three processors listed above a total of 263 records (and 568,808 kg of associated catch) are attributed to processor trading (cf. Table 7).

For the other sixteen businesses listed in Table 5, a check of license information found that the records associated with the nine business names Barrier Reef Crays, Daiken, E-Fishient, EPAR Investments, FNQ Fisheries, Ornatus, Ruff-N-Tuff, Torres Crays and Vaniko Marine are associated with the TVH sector and as such the associated records for these businesses were assigned the DATA-TYPE='TVH' under Data-Rule #4A.

An additional check indicated that for the nine businesses listed above each had a least one set of records listed in Table 5 where either the SELLER-TYPE or VESSEL-TYPE was listed as TVH whilst for most records (98.9%) the CLIENT was either MG Kailis Pty Ltd or Kailis Bros Pty Ltd (c.f. Table 6). A check through the other seven business names listed in Table 5 indicated that such a co-association of SELLER\_TYPE, VESSEL\_TYPE or CLIENT was only associated with two other business names: CIEJAM Pty Ltd and N.U.C.H Pty Ltd. Accordingly, it was decided that all records associated with these two businesses should also be identified as TVH and accordingly were assigned the DATA-TYPE='TVH' under Data-Rule #4A.

Table 7. Allocation of Docket-Book data where Seller-Name is a Business but Seller-Type!=‘PRC’.

i) PROCESSOR

SELLER-NAME	LOG-TYPE	S-TYPE	RELATED-LOG	VESSEL	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
ARGUN SEAFOODS PTY LTD	DocketBook	U	TDB01			21	2012	2014
	DocketBook	U	TRL04			5	2012	2014
PEARL ISLAND SEAFOODS PTY LTD	DocketBook	U	TDB01			144	2012	2015
	DocketBook	U	TRL04			8	2013	2015
	DocketBook	U				79	2012	2014
TRADEWINDS SEAFOODS	Combined	U	TDB01			3	2010	2010
	Combined	U				3	2010	2010
TOTAL						263		

ii) TVH Sector

SELLER-NAME	LOG-TYPE	S-TYPE	RELATED-LOG	VESSEL	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
BARRIER REEF LIVE CRAYS	DocketBook	TVH	TDB01 : TRL04	FWWJ	TVH VESSEL	1	2012	2012
	DocketBook	TVH	TRL04	FWWJ	TVH VESSEL	17	2012	2012
	DocketBook	TVH	TRL04			6	2012	2013
CIEJAM PTY LTD	DocketBook	U	TDB01			2	2016	2016
	DocketBook	U	TRL04	FRJP	TVH VESSEL	3	2015	2015
	DocketBook	U	TRL04	FVFD	TVH VESSEL	11	2014	2015
DIAKEN PTY LTD	DocketBook	U	TRL04			34	2014	2017
	DocketBook	TVH	TRL04	FQNG	TVH VESSEL	3	2012	2012
	DocketBook	TVH	TRL04	FXHP	TVH VESSEL	7	2012	2012
	DocketBook	TVH		FQNG	TVH VESSEL	1	2012	2012
	DocketBook	U	TDB01	FQNG	TVH VESSEL	3	2012	2012
	DocketBook	U	TDB01	FXHP	TVH VESSEL	1	2014	2014
	DocketBook	U	TDB01			3	2016	2017
	DocketBook	U	TRL04	FQNG	TVH VESSEL	71	2012	2015
	DocketBook	U	TRL04	FXHP	TVH VESSEL	66	2012	2017
	DocketBook	U	TRL04			54	2012	2017
	DocketBook	U		FQNG	TVH VESSEL	1	2012	2012
	DocketBook	U		FXHP	TVH VESSEL	1	2013	2013
E-FISHIENT PTY LTD	DocketBook	U				1	2014	2014
	DocketBook	U	TDB01			1	2016	2016
	DocketBook	U	TRL04	FXYK	TVH VESSEL	30	2012	2017
	DocketBook	U	TRL04	FYGN	TVH VESSEL	2	2015	2017
	DocketBook	U	TRL04			32	2012	2017
EPAR INVESTMENTS PTY LTD	DocketBook	U		FXYK	TVH VESSEL	1	2012	2012
	DocketBook	U				1	2014	2014
	Combined	U				2	2010	2010
	DocketBook	U	TRL04	FWWJ	TVH VESSEL	1	2017	2017
F N Q FISHERIES PTY LTD	DocketBook	U	TRL04	FXYC	F_SYMBOL	13	2014	2015
	DocketBook	U	TRL04			26	2014	2017
	Combined	TVH	TRL04			1	2004	2004
ORNATUS MARINE PRODUCTS PTY LTD	DocketBook	U	TRL04	FRJP	TVH VESSEL	10	2012	2012
	DocketBook	U	TRL04			2	2012	2012
RUFF N TUFF FISHING PTY LTD	DocketBook	U	TRL04	FZAP	TVH VESSEL	12	2012	2013
	DocketBook	U	TRL04			1	2012	2012
TORRES CRAYS PTY LTD	DocketBook	U	TRL04	FVFD	TVH VESSEL	32	2012	2014
	DocketBook	U	TRL04			8	2012	2013
	DocketBook	U		FVFD	TVH VESSEL	3	2012	2013
VANIKO MARINE PRODUCTS	DocketBook	U	TDB01	FWDZ	TVH VESSEL	3	2014	2014
	DocketBook	U	TRL04	FRJP	TVH VESSEL	1	2012	2012
	DocketBook	U	TRL04	FWDZ	TVH VESSEL	22	2012	2014
	DocketBook	U	TRL04	FWED	F_SYMBOL	2	2012	2012
	DocketBook	U	TRL04	FZAT	TVH VESSEL	5	2013	2013
	DocketBook	U	TRL04			8	2012	2014
	DocketBook	U		FWDZ	TVH VESSEL	2	2012	2012
TOTAL						507		

iii) TIB Sector

SELLER-NAME	LOG-TYPE	S-TYPE	RELATED-LOG	VESSEL	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
HENJONVAL PTY LTD	Combined	U		BI173		2	2011	2011
	Combined	U		BI179		1	2011	2011
	Combined	U				1	2011	2011
	DocketBook	U	TRL04	BI173		2	2012	2012
	DocketBook	U	TRL04			2	2012	2012
	DocketBook	U				3	2012	2012
LUKEHURST LIVE LOBSTER PTY LTD	DocketBook	U	TRL04			2	2016	2016
NATHAN STAN SEAFOODS	Combined	U				1	2006	2006
TK FISHERIES	DocketBook	U	TRL04	TRAWQ460		3	2012	2012
	DocketBook	U	TRL04			7	2013	2016
	DocketBook	U		TRAWQ460		8	2012	2013
	DocketBook	U				18	2012	2015
WAKAID CORAL SEAS CO PTY LTD	Combined	TVH				2	2010	2010
	Combined	U				1	2010	2010
TOTAL						53		



For the eleven businesses identified as TVH a total of 507 records (and 1,009,847 kg of associated catch) were attributed to the TVH catch (cf. Table 7).

Of the remaining five business-names listed in Table 5, the records for Henjonval Pty Ltd and TK Fisheries were selected as being associated with the TIB sector as the vessels associated with these records are TIB vessels (c.f. Table 2). Until further checking can be undertaken the records associated with the businesses Lukehurst Live Lobster Pty Ltd, Nathan Stan Seafoods and Wakaid Coral Sea Pty Ltd were also associated with the TIB sector. As such the associated records for these businesses were assigned the DATA-TYPE='TIB' under Data-Rule #4B. Note, unlike the records associated with businesses identified previously as being TVH, for the five businesses identified as being TIB no records had a VESSEL-TYPE listed as TVH (all are blank) nor was the CLIENT listed as either MG Kailis Pty Ltd or Kailis Bros Pty Ltd (the CLIENT associated with all records was either Pearl Islands Seafood Pty Ltd or Torres Straits Seafood Pty Ltd). Furthermore except for two records, the SELLER-TYPE was also not listed as TVH.

For the five businesses identified as TIB a total of 53 records (and 30,240 kg of associated catch) were attributed to the TIB catch (cf. Table 7).

#### *Seller-Type=TVH*

Where SELLER-TYPE='TVH' it is understood that the related catch is from the TVH sector of the fishery and therefore the catch reported in the Docket-Book should be considered as duplicates of TRLO4 logbook reported catch. In such instances one would expect the RELATED-LOG field should indicate that the catch has been recorded in the TRLO4 logbook.

A summary of the 1,294 records (associated with a catch of 211,606 kg) where SELLER-TYPE='TVH' (and DATA-TYPE remains unassigned) is provided in Table 8. As there are a large number (99) of distinct SELLER-NAMEs associated with this data they are not shown. Several things can be noted. First, while the RELATED-LOG field indicates that the catch has also been recorded in the TRLO4 logbook for 45% of these records (and 78% of the corresponding catch), this field has been left blank for 55% of the records (and 22% of the corresponding catch). Second, not all the vessels listed are TVH-vessels (i.e. correspond to a vessel listed in the TVH logbook database). The non-TVH vessels represent 78% of the records (and 53% of the corresponding catch) listed in Table 8. Docket-Book records where the SELLER-TYPE is listed as TVH and the RELATED-LOG are listed as TRLO4, and the listed vessel is also a known TVH vessel should be interpreted as TVH catches (and therefore seen as duplicates to the catches recorded on the TRLO4 logbook). However, it remains less certain as to which sector the other catches should be associated where these fields are either left blank or provide contradictory information (e.g. the SELLER-TYPE is listed as TVH or the RELATED-LOG is listed as TRLO4 but the listed vessel is a TIB vessel). If it is reported as a TIB vessel, and this can be verified, then it should be TIB catch. Nevertheless, until this uncertainty can be clarified all records where the SELLER-TYPE is listed as TVH and the VESSEL-TYPE is identified as a TVH vessel were designated as TVH catches. As such the 282 associated records (and the 100,400 kg of associated catch) were assigned the DATA-TYPE='TVH' under Data-Rule #5A.

A further check was undertaken of all remaining records (i.e. where the DATA-TYPE remains unassigned) where the VESSEL-TYPE is designated as a TVH vessel. A summary of the 368 corresponding records is provided in Table 9. Apart from one record, the RELATED LOG is listed as TRLO4 or is blank. As above, all records (and the 90,670 kg of associated catch) were also assigned the DATA-TYPE='TVH' under Data-Rule #5A.

Table 8. Summary of Docket-Book data where Seller-Type='TVH' and DATA-TYPE is null.

LOG-TYPE	S-TYPE	RELATED-LOG	VESSEL	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
Combined	TVH	TRL04	FSKR	TVH VESSEL	16	2005	2008
Combined	TVH	TRL04	FUPJ	TVH VESSEL	2	2005	2005
Combined	TVH	TRL04	FVFD	TVH VESSEL	1	2004	2004
Combined	TVH	TRL04	FVGU	TVH VESSEL	6	2005	2007
Combined	TVH	TRL04	FVGX	TVH VESSEL	102	2006	2008
Combined	TVH	TRL04	FVGZ	F_SYMBOL	1	2005	2005
Combined	TVH	TRL04	FWAV	TVH VESSEL	1	2004	2004
Combined	TVH	TRL04	FWCB	TVH VESSEL	15	2004	2008
Combined	TVH	TRL04	FWDZ	TVH VESSEL	3	2007	2007
Combined	TVH	TRL04	FXAY	F_SYMBOL	12	2004	2007
Combined	TVH	TRL04	FXEV	TVH VESSEL	6	2004	2005
Combined	TVH	TRL04	FXHP	TVH VESSEL	1	2005	2005
Combined	TVH	TRL04	FXTN	TVH VESSEL	26	2004	2008
Combined	TVH	TRL04	FYFL	TVH VESSEL	23	2004	2007
Combined	TVH	TRL04	FYGN	TVH VESSEL	1	2004	2004
Combined	TVH	TRL04	HPF	TVH VESSEL	1	2005	2005
Combined	TVH	TRL04	TRAWQ117		1	2008	2008
Combined	TVH	TRL04	TRAWQ166		1	2007	2007
Combined	TVH	TRL04	TRAWQ259		5	2008	2008
Combined	TVH	TRL04	TRAWQ373		2	2010	2010
Combined	TVH	TRL04	TRAWQ432		1	2010	2010
Combined	TVH	TRL04			135	2004	2010
Combined	TVH		BI181		1	2010	2010
Combined	TVH		FWAV	TVH VESSEL	6	2004	2005
Combined	TVH		MAB038		2	2010	2010
Combined	TVH		TDU063		1	2010	2010
Combined	TVH		TRAWQ166		19	2010	2010
Combined	TVH		TRAWQ168		1	2009	2009
Combined	TVH		TRAWQ178		1	2010	2010
Combined	TVH		TRAWQ232		1	2010	2010
Combined	TVH		TRAWQ258		1	2010	2010
Combined	TVH		TRAWQ267		4	2010	2010
Combined	TVH		TRAWQ273		1	2010	2010
Combined	TVH		TRAWQ282		7	2010	2010
Combined	TVH		TRAWQ329		2	2010	2010
Combined	TVH		TRAWQ373		15	2010	2010
Combined	TVH		TRAWQ381		2	2010	2010
Combined	TVH		TRAWQ398		2	2010	2010
Combined	TVH		TRAWQ429		1	2010	2010
Combined	TVH		TRAWQ430		1	2010	2010
Combined	TVH		TRAWQ432		10	2010	2010
Combined	TVH				92	2006	2010
DocketBook	TVH	TRL04	FRJP	TVH VESSEL	1	2012	2012
DocketBook	TVH	TRL04	FSML	TVH VESSEL	2	2013	2013
DocketBook	TVH	TRL04	FXYC	F_SYMBOL	10	2012	2012
DocketBook	TVH	TRL04	FXYK	TVH VESSEL	14	2013	2013
DocketBook	TVH	TRL04	FYGN	TVH VESSEL	25	2012	2013
DocketBook	TVH	TRL04	FZAL	TVH VESSEL	16	2012	2017
DocketBook	TVH	TRL04	FZAM	TVH VESSEL	1	2014	2014
DocketBook	TVH	TRL04	FZAP	TVH VESSEL	3	2013	2017
DocketBook	TVH	TRL04	FZAP-3	TVH VESSEL	1	2017	2017
DocketBook	TVH	TRL04	TRAWQ258		1	2012	2012
DocketBook	TVH	TRL04	TRAWQ348		10	2013	2014
DocketBook	TVH	TRL04	TRAWQ458		4	2012	2013
DocketBook	TVH	TRL04			128	2012	2017
DocketBook	TVH		40215		1	2015	2015
DocketBook	TVH		6772		1	2014	2014
DocketBook	TVH		FSML	TVH VESSEL	2	2013	2013
DocketBook	TVH		FWCB	TVH VESSEL	1	2012	2012
DocketBook	TVH		FWED	F_SYMBOL	1	2012	2012
DocketBook	TVH		FXYK	TVH VESSEL	1	2013	2013
DocketBook	TVH		FZAL	TVH VESSEL	3	2013	2014
DocketBook	TVH		FZAP	TVH VESSEL	1	2017	2017
DocketBook	TVH		FZAT	TVH VESSEL	1	2013	2013
DocketBook	TVH		MDW109		5	2012	2012
DocketBook	TVH		TRAWQ		1	2012	2012
DocketBook	TVH		TRAWQ003		3	2012	2012
DocketBook	TVH		TRAWQ117		4	2012	2012
DocketBook	TVH		TRAWQ129		1	2012	2012
DocketBook	TVH		TRAWQ259		7	2012	2014
DocketBook	TVH		TRAWQ320		2	2012	2012
DocketBook	TVH		TRAWQ329		7	2012	2015
DocketBook	TVH		TRAWQ348		3	2013	2013
DocketBook	TVH		TRAWQ429		1	2012	2012
DocketBook	TVH		TRAWQ458		1	2013	2013
DocketBook	TVH		TRAWQ468		1	2013	2013
DocketBook	TVH				498	2012	2017
TOTAL					1294		

Table 9. Summary of Docket-Book data where VESSEL-TYPE='TVH vessel' and DATA-TYPE is null.

LOG-TYPE	S-TYPE	RELATED-LOG	VESSEL	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
Combined	U	OTHER	FXTN	TVH VESSEL	1	2004	2004
Combined	U	TRL04	FWCB	TVH VESSEL	1	2004	2004
Combined	U		FRJP	TVH VESSEL	1	2010	2010
Combined	U		FSKR	TVH VESSEL	7	2007	2007
Combined	U		FUPJ	TVH VESSEL	13	2004	2006
Combined	U		FVGU	TVH VESSEL	6	2006	2006
Combined	U		FVGX	TVH VESSEL	34	2007	2008
Combined	U		FWAV	TVH VESSEL	8	2004	2004
Combined	U		FWCB	TVH VESSEL	7	2004	2008
Combined	U		FWDZ	TVH VESSEL	1	2007	2007
Combined	U		FXEV	TVH VESSEL	6	2005	2007
Combined	U		FXTN	TVH VESSEL	10	2006	2008
Combined	U		FYFL	TVH VESSEL	1	2004	2004
DocketBook	U	TRL04	FQNQ	TVH VESSEL	5	2013	2013
DocketBook	U	TRL04	FSML	TVH VESSEL	1	2013	2013
DocketBook	U	TRL04	FWCB	TVH VESSEL	3	2012	2012
DocketBook	U	TRL04	FXTN	TVH VESSEL	16	2012	2013
DocketBook	U	TRL04	FYFL	TVH VESSEL	80	2012	2014
DocketBook	U	TRL04	FZAL	TVH VESSEL	15	2012	2014
DocketBook	U	TRL04	FZAM	TVH VESSEL	87	2012	2014
DocketBook	U	TRL04	FZAP	TVH VESSEL	27	2012	2014
DocketBook	U	TRL04	FZAP-3	TVH VESSEL	5	2017	2017
DocketBook	U		FQNQ	TVH VESSEL	1	2013	2013
DocketBook	U		FSML	TVH VESSEL	2	2013	2013
DocketBook	U		FXTN	TVH VESSEL	7	2013	2014
DocketBook	U		FYFL	TVH VESSEL	6	2014	2014
DocketBook	U		FZAL	TVH VESSEL	2	2013	2013
DocketBook	U		FZAM	TVH VESSEL	12	2012	2014
DocketBook	U		FZAP	TVH VESSEL	3	2013	2014
TOTAL					368		

*Seller-Type=TIB*

A summary of the 4,017 records where SELLER-TYPE = 'TIB' (and DATA-TYPE remains unassigned) is provided in Table 10. There are 140 distinct SELLER-NAMEs associated with this data. For 97% of the records (and 94% of the catch) there is no further information in the RELATED-LOG or other vessel fields. Where additional vessel information is available (101 records) all listed vessels are TIB vessels. However, there are 6 records where the RELATED-LOG is designated as TRL04 (though the vessel type remain unknown). As noted earlier, there are instances where TIB vessels have recorded catches in the TRL04 logbook (c.f. Table 2), and so it remains plausible that these 6 records may relate to the TIB sector. Given the available information, all 4,107 records (with an associated catch of 154,348 kg) listed in Table 9 were assigned the DATA-TYPE='TIB' under Data-Rule #5B.

Table 10. Summary of Docket-Book data where Seller-Type='TIB' and DATA-TYPE is null.

LOG-TYPE	S-TYPE	RELATED-LOG	VESSEL	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
Combined	TIB		TRAWQ127		1	2010	2010
Combined	TIB		TRAWQ166		71	2010	2010
Combined	TIB		TRAWQ258		24	2010	2010
Combined	TIB		TRAWQ259		3	2010	2010
Combined	TIB		TRAWQ358		1	2010	2010
Combined	TIB				15	2010	2010
DocketBook	TIB	TDB01			10	2016	2016
DocketBook	TIB	TRL04			6	2016	2017
DocketBook	TIB		TRAWQ488		1	2015	2015
DocketBook	TIB				3,885	2013	2017
TOTAL					4,017		

*Seller-Type=U, Unknown*

Finally, a summary of the 43,644 records (associated with a catch of 2,066,925 kg) where SELLER-TYPE = 'U' for unknown (and DATA-TYPE remains unassigned) is provided in Table 11. Unlike the previous summaries the vessel symbol field is not included due to the large number of distinct vessel symbols (644) in this data. As the SELLER-TYPE field does not allow a designation of these records, additional analyses and checks were undertaken as described below.

Table 11. Summary of Docket-Book data where Seller-Type='U' and DATA-TYPE is null.

LOG-TYPE	S-TYPE	RELATED-LOG	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
Combined	U	OTHER		46	2004	2007
Combined	U	PEARL ISLAND		3	2004	2004
Combined	U	TDB01		41	2004	2010
Combined	U	TRL04		15	2010	2011
Combined	U		F_SYMBOL	360	2004	2007
Combined	U			34,645	2004	2011
DocketBook	U	TDB01		62	2014	2016
DocketBook	U	TRL04		104	2012	2017
DocketBook	U			8,368	2012	2017
TOTAL				43,644		

**4. Related Log**

As noted earlier, when the RELATED-LOG field has been completed this indicates that the catch recorded in the Docket-Book has been recorded in another format, for example the TRL04 logbook, or another TDB01 docket book. Again, where this occurs one needs to check that a double-counting of the corresponding catch does not occur.

*TRL04*

A summary of the 430 records where the RELATED-LOG = 'TRL04' (and the DATA-TYPE remains unassigned) is provided in Table 12. Again, several things can be noted. First, 72% of all records

Table 12. Summary of Docket-Book data where Related-Log='TRL04' and DATA-TYPE is null. Vessels highlighted yellow are known TIB vessels which also recorded catch in the TRL04 Logbook..

LOG_TYPE	SELLER	RELATED_LOG	VESSEL	VES_TYPE	N-RECORDS	MIN_YR	MAX_YR
Combined	TVH	TRL04	FVGZ	F_SYMBOL	1	2005	2005
Combined	TVH	TRL04	FXAY	F_SYMBOL	12	2004	2007
Combined	TVH	TRL04	TRAWQ117		1	2008	2008
Combined	TVH	TRL04	TRAWQ166		1	2007	2007
Combined	TVH	TRL04	TRAWQ259		5	2008	2008
Combined	TVH	TRL04	TRAWQ373		2	2010	2010
Combined	TVH	TRL04	TRAWQ432		1	2010	2010
Combined	TVH	TRL04			135	2004	2010
Combined	U	TRL04	CN088		1	2011	2011
Combined	U	TRL04	CN123		1	2011	2011
Combined	U	TRL04	TRAWQ258		1	2010	2010
Combined	U	TRL04	TRAWQ326		1	2010	2010
Combined	U	TRL04	TRAWQ373		1	2010	2010
Combined	U	TRL04	TRAWQ432		1	2010	2010
Combined	U	TRL04	TRAWQ437		1	2010	2010
Combined	U	TRL04	WI068		1	2010	2010
Combined	U	TRL04	WI104		1	2011	2011
Combined	U	TRL04			6	2010	2011
DocketBook	TVH	TRL04	FXYC	F_SYMBOL	10	2012	2012
DocketBook	TVH	TRL04	TRAWQ258		1	2012	2012
DocketBook	TVH	TRL04	TRAWQ348		10	2013	2014
DocketBook	TVH	TRL04	TRAWQ458		4	2012	2013
DocketBook	TVH	TRL04			128	2012	2017
DocketBook	U	TRL04	130212		1	2012	2012
DocketBook	U	TRL04	BI173		3	2012	2013
DocketBook	U	TRL04	CN114		1	2012	2012
DocketBook	U	TRL04	TRAWQ258		4	2012	2012
DocketBook	U	TRL04	TRAWQ299		3	2012	2012
DocketBook	U	TRL04	TRAWQ348		1	2015	2015
DocketBook	U	TRL04	TRAWQ458		3	2013	2013
DocketBook	U	TRL04			88	2012	2017
TOTAL					430		

(and 71% of the corresponding catch) indicate that the SELLER-TYPE='TVH' (with the remainder being unknown). However, the vessel information associated with these records indicates that none of the records is associated with a known TVH vessel. Second, a number of vessels which are known to have active (or expired) TIB licenses are highlighted in yellow. As these vessels are also listed in Table 2 as being larger TIB vessels which recorded their catch in the TRL04 logbook, the associated data listed in Table 12 for these vessels was checked to ensure that the data is not a duplicate of what is recorded in the TRL04 logbook. A check indicates that there are no common dates between the two sets of data and so the catches included in the Docket-Book data are assumed to be in addition to those recorded in the TRL04 logbook. Third, apart from the 21 records associated these three TIB vessels an additional 28 records are also associated with known TIB vessels (as the vessel symbol begins with the letters TRAWQ, CN, WI). Finally, a check of the SELLER\_NAME associated with the vessel symbol '130212' indicates that this is a TIB catch record. As such the 50 records listed in Table 12 associated with known TIB vessels were assigned the DATA-TYPE='TIB' under Data-Rule #6A.

For the other 381 records listed in Table 12 while the RELATED-LOG field indicates that the catch was also reported in the TRL04 logbook (and for 75% of records that the Seller-Type was TVH), nevertheless there is little additional information on which to allocate these records. There is no information on the vessel for 357 of these records while the VESSEL-TYPE is listed as an F-vessel for 23 records. Further analysis is required.

*Other Entries*

A summary of the 152 records where Related-Log is either 'TDB01', 'Pearl Island' or some other non-null entry ('NSS BESI', 'TSF01', 'TSF01:TSSB', 'Yam Island', 'T.I.', '13', '9') is provided in Table 13. The following can be noted. First, the SELLER-TYPE for all records is Unknown. Second, 68% of all records (and 84% of the related catch) is associated with records where the RELATED-LOG='TDB01'. An examination of the SELLER-NAMES associated with these records indicates that they are associated with 34 individual personal names. Third, most records where the RELATED-LOG is shown as 'OTHER' occurred during 2004 (except for two records where RELATED-LOG='TSF01' in 2005 and 2007). In all instances these records are associated with a SELLER-NAME which is an individual personal name and the three listed vessels are TIB vessels. Finally, the vessels associated with the records where the RELATED-LOG is shown as 'Pearl Island' are also all TIB vessels. Given these findings, all 152 records listed in Table 13 were assigned the DATA-TYPE='TIB' under Data-Rule #6B.

Table 13. Summary of Docket-Book data where Related-Log='TDB01' or some other non-null entry. (Note S-TYPE=Seller-Type).

LOG-TYPE	S-TYPE	RELATED-LOG	VESSEL	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
Combined	U	OTHER	BI013		2	2004	2004
Combined	U	OTHER	CN050		1	2004	2004
Combined	U	OTHER	YKE106		1	2004	2004
Combined	U	OTHER			42	2004	2007
Combined	U	PEARL ISLAND	CN012		1	2004	2004
Combined	U	PEARL ISLAND	CN023		1	2004	2004
Combined	U	PEARL ISLAND	TRAWQ272		1	2004	2004
Combined	U	TDB01			41	2004	2010
DocketBook	U	TDB01	CN084		1	2014	2014
DocketBook	U	TDB01			61	2014	2016
TOTAL					152		

*Related-Log=Null*

Finally, a summary of the 44,074 records (with 2,046,320 kg of associated catch) where the RELATED-LOG is Null (and DATA-TYPE remains unassigned) is provided in Table 14. Again, as for Table 11 the vessel name field is not included due to the large number of distinct vessel symbols (648), though the vessel symbol remains unknown for 71% of these records. There is also a large number (1043) of distinct SELLER-NAMES associated with these records. It is noted that 1.6% of the records are

Table 14. Summary of Docket-Book data where Related-Log is Null (and the DATA-TYPE is null).

LOG-TYPE	S-TYPE	RELATED-LOG	VES_TYPE	N-RECORDS	MIN-YR	MAX-YR
Combined	TVH			164	2006	2010
Combined	U		F_SYMBOL	360	2004	2007
Combined	U			34,645	2004	2011
DocketBook	TVH		F_SYMBOL	1	2012	2012
DocketBook	TVH			536	2012	2017
DocketBook	U			8,368	2012	2017
TOTAL				44,074		

associated with a SELLER-TYPE which is TVH, while the SELLER-TYPE is not assigned to the remainder of records. Where the SELLER\_TYPE=TVH or the VESSEL-TYPE=F-Symbol the records were left unassigned. However, the 75,235 records (with 1,978,133 kg of related catch) where both the SELLER\_TYPE and the VESSEL-TYPE are null (the latter indicating either an unknown vessel symbol or a TIB vessel) were assigned a DATA-TYPE='TIB' under Data-Rule #6C.

### 5. Vessel-Type

VESSEL-TYPE is a field that has been added to indicate whether the vessel-symbol listed on the Docket-Book corresponds to a vessel listed in the TVH database (known as a TVH Vessel), and if not whether the vessel-symbol begins with the letter 'F' (as this usually indicates a TVH vessel). If neither of these is the case the VESSEL-TYPE is left blank.

#### *TVH Vessel*

There are 986 records (associated with 24 distinct vessel symbols and a catch of 791,443 kg) in the Docket-Book data where VESSEL-TYPE='TVH Vessel'. A summary for these data is not displayed, as all these records have already been assigned the DATA-TYPE='TVH' under Data-Rules #3, #4A and #5A. While all vessels have a symbol beginning with the letter 'F' (as this corresponds to most vessels in the TVH database, though some TVH vessel symbols are different, e.g. HPF) only 32% of the records (and 19% of the corresponding catch) indicate that the SELLER-TYPE is 'TVH'. Nevertheless, 84% of all records (and 93% of the corresponding catch) indicate that the Docket-Book data is also associated with the RELATED-LOG TRL04. Such an association is to be expected if the catch data relates to the TVH sector of the fishery.

#### *F-Symbol*

A summary of the 384 records where VESSEL-TYPE='F-Symbol' (and DATA-TYPE remained unassigned) is provided in Table 15. Again, several things can be noted. First, 6% of all records (and 42% of the corresponding catch) indicate that the Docket-Book data is also associated with the RELATED-LOG TRL04, while the same records (except for 1) also indicate that the SELLER-TYPE

Table 15. Summary of Docket-Book data where VES-Type='F-Symbol' and DATA-TYPE is Null. Vessels highlighted yellow are TIB and vessels highlighted in green are TVH.

LOG-TYPE	S-TYPE	RELATED-LOG	VESSEL	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
Combined	TVH	TRL04	FVGZ	F_SYMBOL	1	2005	2005
Combined	TVH	TRL04	FXAY	F_SYMBOL	12	2004	2007
Combined	U		FSYE	F_SYMBOL	1	2004	2004
Combined	U		FVHA	F_SYMBOL	6	2004	2004
Combined	U		FXAY	F_SYMBOL	43	2004	2007
Combined	U		FXJG	F_SYMBOL	1	2004	2004
Combined	U		FXZS	F_SYMBOL	281	2004	2007
Combined	U		FYSE	F_SYMBOL	25	2004	2006
Combined	U		FYTQ	F_SYMBOL	3	2004	2005
DocketBook	TVH	TRL04	FXYC	F_SYMBOL	10	2012	2012
DocketBook	TVH		FWED	F_SYMBOL	1	2012	2012
TOTAL					384		

is ‘TVH’. Second, vessels which are believed to be either TIB or TVH vessels are highlighted in yellow and green respectively. The two vessels FVGZ and FXAY are unknown TVH distinguishing symbols that reported a TVH SELLER-TYPE and TRL04 RELATED-LOG. It is possible that the data entry for these records was misspelt, or that the records were incorrectly coded to the TVH sector. However, a further check of the SELLER-NAMES associated with these records indicate that they are TIB. It is possible that they were working on a TVH vessel for a period of time and also worked on a TIB dinghy in between trips on the TVH vessel. Note, the vessels FXYC and FWED were designated as TVH under Data-Rule #4A (c.f. Table 7-ii). Given these results, all records associated in Table 15 (except for vessels FWED and FXYC) were assigned the DATA-TYPE=‘TIB’ under Data-Rule #7A and the records for vessels FWED and FXYC were assigned the DATA-TYPE=‘TVH’ under Data-Rule #7B.

## 6. Unassigned Records

As described in the previous sections, a number of Data-Rules have been constructed to designate the status of the various data records currently held in the Docket-Book data. These data rules have been constructed based on information in the following data fields: LOG-TYPE, SELLER-TYPE, RELATED-LOG and VESSEL-TYPE. However, where specific information in these fields is missing, it remains difficult to ascertain the status of the corresponding data.

A summary of the 357 records (with 68,402 kg of related catch) which have yet to be assigned a Data-Type is displayed in Table 16. All records indicate that the catch has also been reported on the RELATED-LOG TRL04, though as the VESSEL-NAME remains unknown there is little additional information on which to assign the DATA-TYPE. An additional analysis was therefore undertaken by utilizing the SELLER-NAME associated with each record. The assumption was that where the SELLER-NAME had previously only been aligned with a single DATA-TYPE, then any unassigned records for the same SELLER-NAME would also assigned the same DATA-TYPE. Where the DATA-TYPE assigned previously for a given SELLER-NAME was not unique (i.e. ‘PRC’, ‘TIB’, or ‘TVH’) then further checks would need to be undertaken.

Table 16. Summary of Docket-Book data remaining unassigned to a DATA- STATUS after application of the data rules listed in the document. (Note S-TYPE=Seller-Type).

LOG-TYPE	S-TYPE	RELATED-LOG	VESSEL	VES-TYPE	N-RECORDS	MIN-YR	MAX-YR
Combined	TVH	TRL04			135	2,004	2010
Combined	U	TRL04			6	2,010	2011
DocketBook	TVH	TRL04			128	2,012	2017
DocketBook	U	TRL04			88	2,012	2017
TOTAL					357		

After undertaking the above analysis the following four groups of records were identified:

- i) Sellers previously associated with only the Data-Type=‘TVH’ (25 records),
- ii) Sellers previously associated with only the Data-Type=‘TIB’ (99 records),
- iii) Sellers previously associated with both Data-Types (216 records),
- iv) Sellers not previously listed (17 records).

A summary listing of these records is given in Table 17. Those records where the SELLER-NAME was associated with a unique previous DATA-TYPE (i.e. groups i and ii above) were assigned the corresponding DATA-TYPE under Data-Rule #8A and #8B respectively (124 records in total).

For those records where the SELLER-NAME was not associated with a unique previous Data-Type (i.e. groups iii and iv above) a further check was undertaken using the public register of Torres Strait licenses. This register was used to identify fishers holding a license associated with a vessel listed in the TVH database. As a result of this and other checks, and the determination under Data-Rule #3B, those records where the SELLER-NAME was included in the following list (Michael Kingdon, Tom Kingdon, Ty Kingdon, Sharn C Duff, Geoffrey D McKenzie, Luke S Dillon, Matthew S Bruce, Phillip J Hughes, Ryan Hughes and Miroslav Vaculka) were assigned the DATA-TYPE=‘TVH’ under Data-Rule #8C and all remaining records were assigned the DATA-TYPE=‘TIB’ under Data-Rule #8D.

Table 17. Division of remaining unassigned records after checking previous assigned SELLER-NAMES. (Note S-Type= Seller-Type).

i) TVH Data-Type

SELLER-NAME	S-TYPE	RELATED-LOG	N-RECORDS
DOMENIKO KARL DROTINI	TVH	TRLO4	4
KARZY PHENGPRASEUTH	TVH	TRLO4	2
LEVI KRIS	TVH	TRLO4	1
LINDSAY DAVID PEARCE	U	TRLO4	5
TRENT S BUTCHER	TVH	TRLO4	9
WADE DUFF	TVH	TRLO4	4
TOTAL			25

ii) TIB Data-Type

SELLER-NAME	S-TYPE	RELATED-LOG	N-RECORDS
AUGUSTINUS A TITASEY	TVH	TRLO4	7
BENJAMIN CARLOS MOORE	TVH	TRLO4	3
	U	TRLO4	3
CAMERON PAUL BENJAMIN	TVH	TRLO4	2
COREY WARD	TVH	TRLO4	1
DARRYL FRANK	TVH	TRLO4	5
DEN GAGAI	TVH	TRLO4	1
DENNIS RICHARDS	U	TRLO4	1
EDDIE MURDE	U	TRLO4	1
FRANCIS ANTHONY HUGHES	TVH	TRLO4	3
FRED DANIEL MILLS	TVH	TRLO4	1
GAVIN FRANK LEROY MOSBY	U	TRLO4	1
GESA WILLIAM JOSEPH	TVH	TRLO4	2
GRAHAM KYOZO HIRAKAWA	TVH	TRLO4	8
GUYAI ECCLES NEWIE	TVH	TRLO4	1
HUNIG DARUA	TVH	TRLO4	2
JAMAHL TAMWOY	U	TRLO4	1
JAMES MILLS	U	TRLO4	1
JIM AHMATT	TVH	TRLO4	1
JOE HIRAKAWA	TVH	TRLO4	24
JOHN SAUB	U	TRLO4	1
JORDAN ASSAN	U	TRLO4	1
JORDAN SAMPSON	TVH	TRLO4	2
JOSEPH THOMAS KING	U	TRLO4	1
KEIJI BOWIE	U	TRLO4	1
KENNETH JAMES MCKENZIE	TVH	TRLO4	11
MICHAEL MASIE MOSBY	U	TRLO4	1
MICHAEL STEWART YAMASHITA	TVH	TRLO4	1
MORGAN JIM DANIEL	U	TRLO4	1
NGUKIS DIDIMESH ASSE	U	TRLO4	1
NICHOLAS SAMUKI PEARSON	U	TRLO4	1
OSKAR LEWANDROWSKI	U	TRLO4	2
PEO HENRY ZITHA	TVH	TRLO4	3
SIMON FREDRICK NAAWI	TVH	TRLO4	1
	U	TRLO4	1
YACOBA WENA	U	TRLO4	1
TOTAL			99

iii) No Previous Data-Types

SELLER-NAME	S-TYPE	RELATED-LOG	N-RECORDS
BANKS ROBINSON	TVH	TRLO4	1
CONAHARY HIKAKOWA	TVH	TRLO4	1
DANNY PRYCE	U	TRLO4	1
EDDIE BOWIE	U	TRLO4	1
JAMIE SINCLAIRE	U	TRLO4	1
JOHN BAKER	TVH	TRLO4	1
KINGSLEY JAMES TABUA	TVH	TRLO4	1
MITCHELL KINGDON	U	TRLO4	1
NELSON SOKI	TVH	TRLO4	3
PETER JOHN CHIARELLI	U	TRLO4	1
ROBERT MAST	TVH	TRLO4	1
SHARN COHN DUFF	TVH	TRLO4	1
TOM KINGDON	U	TRLO4	2
WESLEY HAMON MATENGA	TVH	TRLO4	1
TOTAL			17



iv) Mixed Data-Types

SELLER-NAME	S-TYPE	RELATED-LOG	N-RECORDS
ABDOULLA LENA PETROV	TVH	TRLO4	1
ANDREW DARUA	U	TRLO4	8
CHARLES MARTIN	TVH	TRLO4	10
CHRISTOPHER DARUA	TVH	TRLO4	3
DEREK WALTER JOHN BRANK	TVH	TRLO4	7
EDWIN JOHN CLARK	TVH	TRLO4	3
GEOFFREY DONALD MCKENZIE	U	TRLO4	14
	TVH	TRLO4	21
JACKSON DARRYL AHWANG	TVH	TRLO4	1
JIMMY ATZENI	U	TRLO4	9
JOSEPH PAUL BIN JUDA	TVH	TRLO4	4
JUSTIN GILLIES	U	TRLO4	1
KARA DAVE WARE	TVH	TRLO4	1
LUKE S DILLON	TVH	TRLO4	21
	U	TRLO4	6
MATTHEW STEWART BRUCE	U	TRLO4	10
	TVH	TRLO4	29
MICHAEL JAMES LLOYD	TVH	TRLO4	1
MICK GILLIS	U	TRLO4	1
MIROSLAV VACULKA	U	TRLO4	2
OMAR BIN DORAHO	TVH	TRLO4	1
OWEN DORANTE	U	TRLO4	1
PALA RUBU	TVH	TRLO4	8
PALCON SARPE SAMAI	TVH	TRLO4	1
PHILEMON ANSEY	TVH	TRLO4	2
PHILLIP J HUGHES	TVH	TRLO4	12
RICHARD EDGAR BILLY	TVH	TRLO4	3
ROBERT EDWARD NEWIE	U	TRLO4	1
ROBERT JOHN MAST	TVH	TRLO4	1
ROBERT LESLIE SLYNEY	U	TRLO4	2
RYAN A HUGHES	TVH	TRLO4	8
STANLEY LAWRENCE ANSEY	TVH	TRLO4	1
	U	TRLO4	1
THOMAS FRANCIS FUJII	TVH	TRLO4	14
TIBAU TOBY	TVH	TRLO4	1
TY KINGDON	U	TRLO4	6
<b>TOTAL</b>			<b>216</b>

**7. Seller-Name**

Application of Data-Rules #1-8D resulted in all 51,121 Docket-Book records being assigned one of the following three DATA-TYPES: 1. 'PRC', 2. 'TVH' or 3. 'TIB.' However, a final check was undertaken to check the uniqueness of the SELLER-NAME and DATA-TYPE.

First, a check was undertaken of those SELLER-NAMES identified as TVH license holders based on referral to the public register of Torres Strait licenses but currently assigned the DATA-TYPE='TIB'. Based on this check, 68 records (all previously assigned under Data-Rule #6C, #8B or #8D) associated with the following SELLER-NAMES (Kenneth J McKenzie, Like S Dillon, Matthew S Bruce, Phillip J Hughes, Ryan Hughes, Trent S Butcher and Wade Duff) were updated and re-assigned the DATA-TYPE='TVH' under Data-Rule #9A.

Second, a check was undertaken of those SELLER-NAMES identified as TVH license holders based on other information but currently assigned a DATA-TYPE='TIB'. Based on this check, an additional 24 records associated with the SELLER-NAMES (Michael G Bruce, Geoffrey D McKenzie, Ty Kingdon and Miroslav Vaculka) were updated and re-assigned the DATA-TYPE='TVH' under Data-Rule #9A.

Third, similar check of SELLER-NAMES identified as TIB license holders but currently assigned a DATA-TYPE='TVH' resulted in 3 records associated with the SELLER-NAME (Kris Levi) updated and re-assigned the DATA-TYPE='TIB' under Data-Rule 9B.

Finally, after completing the previous updates, a check was undertaken to ascertain whether each SELLER-NAME had been assigned to a unique DATA-TYPE. Of the 1,105 unique SELLER-NAMES listed in the Docket-Book data (note, this list may contain misspelt names), all records associated with the majority (1,056, 95.4%) of SELLER-NAMES were found to be associated with a unique DATA-

TYPE (i.e. 'PRC', 'TIB', or 'TVH), while 49 (4.4%) of SELLER-NAMES were associated with two DATA-TYPES. A summary listing of these latter dual-assigned records is given in Table 18. In total there are 4,422 Docket-Book records associated with these 49 SELLER-NAMES with a corresponding 181.0 tonnes of catch (with 27.2 tonnes assigned to the TVH and 153.9 tonnes assigned to the TIB respectively) covering all years from 2004 to 2017.

Whether or not each SELLER-NAME should only be assigned to a unique DATA-TYPE remains unknown as it may be possible for a fisher to participate in each sector of the fishery. It is noted that of the SELLER-NAMES with dual DATA-TYPES, all were assigned to the DATA-TYPE='TVH' by Data-Rule 5A (c.f. Tables 8 & 9) which is based on the information that the vessel listed on the Docket-

Table 18. Listing by Seller-Name, of the Data-Rule, number of records and whole weight associated with the 51 Seller-Names associated with dual DATA-TYPE.

SELLER-NAME	DATA-RULE AND DATA-TYPE							Number Records
	DR-5A	DR-5B	DR-6A	DR-6B	DR-6C	DR-7A	DR-8D	
	TVH	TIB	TIB	TIB	TIB	TIB	TIB	
ABDOULLA LENA PETROV	23	0	0	0	23	0	1	36
ALLAN MURPHY GARNIER	3	0	0	0	502	0	0	401
ANDREW DARUA	3	0	0	0	195	0	19	85
BILLY MOSES GULIGO	5	89	0	0	293	2	0	132
BRIAN NAMAI	8	0	0	0	8	0	0	7
CAIN ARTHUR DOYLE MAROU	4	0	0	0	61	0	0	35
CHARLES MARTIN	9	0	0	0	620	0	20	296
CHRISTOPHER DARUA	8	0	0	0	1	0	6	11
DAMAL BIN DORAHO	1	0	0	0	2	0	0	2
DEAN JUSTIN SALAM	13	0	0	0	365	0	0	216
DEREK WALTER JOHN BRANK	8	11	0	0	151	0	12	123
EDWIN JOHN CLARK	21	0	0	0	27	0	5	34
ENOCK CHARLIE	1	0	0	0	31	0	0	30
EVARDUS KAISE	5	0	0	1	502	0	0	183
FAAFETAI NONA	2	0	0	0	438	0	0	174
HALEY ARTHUR BAIRA	1	0	0	0	5	0	0	6
JACKSON DARRYL AHWANG	9	13	0	0	55	0	2	44
JERRY SONGORO	2	151	0	0	392	0	0	240
JIMMY ATZENI	31	0	0	0	22	0	22	35
JOEL KAITAP AUDA	1	0	0	0	3	0	0	4
JOHN JOSEPH SABATINO	2	0	0	0	79	0	0	50
JOSEPH PAUL BIN JUDA	8	0	0	0	59	0	8	51
JULIUS JACK SOROGO	3	0	0	3	29	0	0	27
JUSTIN GILLIES	16	0	0	0	2	0	2	9
KARA DAVE WARE	1	0	0	0	10	0	1	12
MICHAEL GUY BRUCE	23	0	0	0	3	0	0	12
MICHAEL JAMES KEANE	16	6	0	0	51	0	0	48
MICHAEL JAMES LLOYD	11	0	0	0	1	0	1	9
MICK GILLIS	6	0	0	0	5	0	3	5
OLLIE ROBERT DEWIS	10	5	0	0	291	6	0	164
OMAR BIN DORAHO	1	0	0	0	1	0	1	3
OWEN DORANTE	3	0	0	0	462	0	2	260
PALA RUBU	41	739	0	0	688	2	11	591
PALCON SARPE SAMAI	1	0	0	0	2	0	1	3
PAUL SAYLOR	3	0	0	0	11	0	0	13
PHILEMON ANSEY	2	0	0	0	0	1	2	5
RICHARD ALTON NEWIE	8	0	0	0	17	0	0	14
RICHARD EDGAR BILLY	3	0	0	0	30	0	7	21
ROBERT CHARLES PEDDELL	2	0	0	0	477	0	0	247
ROBERT EDWARD NEWIE	41	0	0	0	89	0	3	62
ROBERT JOHN MAST	1	12	0	0	2	0	1	6
ROBERT LESLIE SLYNEY	36	0	0	0	4	0	4	17
RON SAILOR	1	0	0	0	19	0	0	11
ROY KIRK PEARCE	17	0	0	0	77	0	0	56
SCOTTY G RONSON	2	0	0	0	2	0	0	2
STANLEY LAWRENCE ANSEY	138	0	9	0	306	0	5	230
THOMAS FRANCIS FUJII	136	410	4	0	325	7	27	394
THOMAS GAMIA	3	0	0	0	4	0	0	3
TIBAU TOBY	1	0	0	0	1	0	1	3
TOTAL	694	1,436	13	4	6,743	18	167	4,422

Book was a TVH vessel. If one assumes that the vessel listed on the Docket-Book is correct, then it would appear that all SELLER-NAMEs listed in Table 18 have at some time sold catch caught as part of a TVH operation. As noted previously, there are situations where a TIB seller will work on a TVH vessel for a number of weeks and then decide to leave and work on a TIB dinghy or work in between TVH trips. However, also associated with these same SELLER-NAMEs are 86 vessels listed on the Docket-Book which are assigned to the TIB component of the fishery. Note, only 25% of the records (and 32% of the associated catch) listed in Table 18 have a vessel symbol listed on the corresponding Docket-book record. Until this situation can be further clarified, the DATA-TYPE of each record was maintained.

### 8. Data for Processor ‘A’

As mentioned previously in Section 2, between 2013 and 2016 two processors provided aggregate annual data rather than recording the landed catch in the TDB01 Docket-Book. These records are assigned the DATA-TYPE=‘TIB’ under Data-Rule #2. However, for one of these processors (called processor ‘A’ in the following) a check of the Docket-Book data for these years indicated that there were records where the Client was listed as this processor (c.f. Table 19).

Before 2012 the annual catch estimated from the Docket-Book records where processor ‘A’ was listed as a Client and the assigned DATA-TYPE=‘TIB’ was generally between 89% and 147% of the average catch received during the period 2004-11. (Note, to avoid reporting the actual catch weight, all catches are represented as the percentage of the average catch during this period). However, Docket-Book receipts decreased substantially (averaging 13% of the catch received in 2004-11) during the period 2013-16 when Aggregate Catch data were provided by the processor directly to AFMA. Nevertheless, adding together the Docket-Book receipts and the Aggregate Catch during these four years indicates that the annual total catch was generally within the range (i.e. between 72% and 138%; average of 107%) of the average annual catch during period 2004-11. However, it remains unknown whether the Docket-Book data for the years 2013-16 are also contained in the Aggregate Data. If they are, then these catches should be removed as duplicates. Further work is required to clarify this.

Finally, it can also be noted that the total catch sold to processor ‘A’ and assigned to the TIB fishery in 2012 is very small: only 7% of the average during 2004-11. This suggests that the Docket-Book data is likely to be incomplete and that perhaps Aggregate Data for this year still needs to be obtained from this processor. Further work is also required to clarify this.

Table 19. Annual summary of total catch (expressed as a percentage of the average catch over the years 2004-11) assigned to processor ‘A’ as (i) the Client in the Docket-Book data where the DATA-TYPE=‘TIB’, or (ii) added as additional aggregate data provided by AFMA (and initially received from this processor).

YEAR	Docket-Book Data	Aggregate Data	TOTAL
2004	147%	0%	147%
2005	108%	0%	108%
2006	47%	0%	47%
2007	116%	0%	116%
2008	107%	0%	107%
2009	91%	0%	91%
2010	95%	0%	95%
2011	89%	0%	89%
2012	7%	0%	7%
2013	4%	68%	72%
2014	6%	82%	88%
2015	36%	95%	130%
2016	7%	131%	138%
2017	45%	0%	45%



## 9. Data-Rules for assigning Data-Type to Docket-Book data

As noted in the Introduction, use of the RELATED-LOG field on the Docket-Book and the creation of the SELLER-TYPE field by AFMA both have utility in helping to identify duplicate catch records in the Docket-Book data. For example, if a seller has been designated as a TVH SELLER-TYPE (and the corresponding vessel as a TVH-Vessel) and the catch has also been reported in the TRL04 logbook then the data listed in the Docket-Book can be interpreted as a duplicate of a catch record associated with the TVH sector. However, as detailed in the previous sections for a large number of records the information within these two fields (i.e. SELLER-TYPE and RELATED-LOG) is missing (unknown) or some of the information is contradictory (e.g. the vessel associated with a TVH seller is not listed in the TVH database).

Given this uncertainty, it is considered prudent to identify a number of data rules for classifying the data as either TIB sector, TVH sector or trading of catch between processors. Once these rules are established, and unless new information comes to hand, they can then be used consistently each year for this task so that new data rules are not created each year on an ‘ad-hoc’ basis. Based on the analysis outlined in this report, the annual allocation of Docket-Book records currently held by CSIRO, and the associated catch to either the TIB or TVH sectors of the fishery or between processors, is shown in Table 20.

The corresponding DATA-RULES identified in the analysis for allocating each Docket-Book record with a specified DATA\_TYPE are listed in Table 21, while a summary, by year, of the number of records and catch associated with each of the DATA-RULES are listed in Tables 22a&22b.

Table 20 Annual summary of (a) the number of records and (b) the corresponding catch associated with each of the DATA-TYPES identified in the data-rules listed in the text.

(a) Number of Records					(b) Whole Weight (tonnes)				
YEAR	TIB	TVH	PRC	TOTAL	YEAR	TIB	TVH	PRC	TOTAL
2004	4651	51	0	4702	2004	232	9	0	241.03
2005	6671	43	0	6714	2005	359	12	0	370.01
2006	4085	28	0	4113	2006	147	2	0	148.82
2007	5939	73	19	6031	2007	259	4	14	278.43
2008	4870	111	52	5033	2008	184	4	33	222.39
2009	3635	0	0	3635	2009	144	0	0	143.86
2010	3026	3	72	3101	2010	141	1	49	190.73
2011	2958	0	0	2958	2011	200	0	0	201.17
2012	1352	252	78	1682	2012	137	315	203	654.19
2013	938	262	92	1292	2013	91	296	150	536.24
2014	2523	245	85	2853	2014	137	225	168	530.76
2015	2475	124	64	2663	2015	121	110	125	355.91
2016	2806	60	30	2896	2016	118	172	162	452.67
2017	3228	160	15	3403	2017	107	127	64	296.92
Total				51,076	Total				4623.13

Table 21. Listing of the Data-Rules used in assigning a DATA-TYPE for each record within the Docket-Book data.

RULE	DATA-TYPE	DATA-RULE	N-RECORDS	WHOLE WEIGHT
1	TIB	Records where large TIB vessels recorded their catch in the TVH-TL04 logbook	713	92,800
2	TIB	Annual aggregate data provided by processors in lieu of data not recorded in TB01 Docket-book	10	346,357
3	Processor	Docket-Book records where is Seller-Type = 'PRC'. Also includes data for Pearl Island Seafoods, Argun Seafoods and Trdewinds Seaffods where Seller-Type is Unknown.	507	967,954
3A	TIB	Docket-Book records where is Seller-Type = 'PRC' and Seller-Name='Joseph Dai'	1	10
3B	TVH	Docket-Book records where is Seller-Type = 'PRC' and Seller-Name='Miroslav Vaculka'	6	454
4A	TVH-Business	Docket-Book records where is Seller-Name is a business name associated with the TVH fishery.	507	1,009,847
4B	TIB-Business	Docket-Book records where is Seller-Name is a business name associated with the TIB fishery.	53	30,240
5A	TVH	Unassigned Docket-Book records where is Seller-Type in ( 'TVH' , 'U') and the Vessel-Symbol is identified as a TVH vessel.	648	190,662
5B	TIB	Unassigned Docket-Book records where is Seller-Type = 'TIB'	4,017	154,348
6A	TIB	Unassigned Docket-Book records where is Related-Log = 'TRL04' and the Vessel-Symbol is a TIB vessel	50	14,079
6B	TIB	Unassigned Docket-Book records where is Related-Log != 'TRL04'	152	24,917
6C	TIB	Unassigned Docket-Book records where is Related-Log = 'U' and Vessel-Symbol is null (i.e. not TVH or F-Symbol)	43,642	2,003,964
7A	TIB	Unassigned Docket-Book records where is Vessel-Type = 'F-Symbol' and Vessel-Symbol not in ('FXYC', 'FWED').	373	38,909
7B	TVH	Unassigned Docket-Book records where is Vessel-Type = 'F-Symbol' and Vessel-Symbol in ('FXYC', 'FWED').	11	18,486
8A	TVH	Unassigned Docket-Book records where is Vessel-Symbol is not null and is considered a TIB vessel	24	20,890
8B	TIB	Unassigned Docket-Book records where is Seller-Name is uniquely associated with either the TIB or TVH fishery.	88	10603.38
8C	TVH	Unassigned Docket-Book records where is Seller-Name is not assigned under 8A or 8B and known TVH Seller	125	25659.17
8D	TIB	Unassigned Docket-Book records where is Seller-Name is not assigned under 8A, 8B or 8C	100	9700.61
9A	TVH	Re-assignment of Docket-Book records where Seller-Name associated with owner of a known TVH vessel	91	10888.87
9B	TIB	Re-assignment of Docket-Book records where Seller-Name associated with owner of a known TIB vessel	3	256
			51,121	4,971,025

Table 22a Annual summary of the number of records associated with each of the DATA-RULES identified in the data-rules listed in the text.

YEAR	DR_1	DR_2	DR_3	DR_3A	DR_3B	DR_4A	DR_4B	DR_5A	DR_5B	DR_6A	DR_6B	DR_6C	DR_7A	DR_7B	DR_8A	DR_8B	DR_8C	DR_8D	DR_9A	DR_9B	TOTAL	
Sector	TIB	TIB	PRC	TIB	TVH	TVH	TIB	TVH	TIB	TIB	TIB	TIB	TVH	TVH	TIB	TVH	TIB	TVH	TIB	TVH	TIB	
2004	0	0	0	0	0	1	0	50	0	0	46	4428	115	0	0	39	0	23	0	0	4,702	
2005	0	0	0	0	0	0	0	43	0	0	0	6513	151	0	0	0	0	7	0	0	6,714	
2006	0	0	0	0	0	0	1	26	0	0	1	3958	84	0	2	11	0	30	0	0	4,113	
2007	0	0	19	0	0	0	0	73	0	1	5	5894	23	0	0	5	0	10	0	1	6,031	
2008	114	0	52	0	0	0	0	111	0	6	0	4746	0	0	0	2	0	1	0	1	5,033	
2009	95	0	0	0	0	0	0	0	0	0	6	3534	0	0	0	0	0	0	0	0	3,635	
2010	62	0	72	0	0	2	3	1	115	9	32	2796	0	0	0	5	0	3	0	1	3,101	
2011	9	0	0	0	0	0	4	0	0	3	0	2940	0	0	0	1	0	1	0	0	2,958	
2012	167	0	78	0	0	164	15	50	0	13	0	1151	0	11	13	4	12	2	2	0	1,682	
2013	175	0	92	0	0	94	12	147	33	14	0	696	0	0	9	4	4	4	8	0	1,292	
2014	32	0	85	1	0	92	10	137	87	3	2	2378	0	0	0	4	6	6	10	0	2,853	
2015	25	0	64	0	6	69	5	0	338	1	28	2062	0	0	0	4	23	12	26	0	2,663	
2016	0	0	30	0	0	48	3	0	1497	0	32	1269	0	0	0	4	8	1	4	0	2,896	
2017	0	0	15	0	0	37	0	10	1947	0	0	1276	0	0	0	5	72	0	41	0	3,403	
Total																						51,076

Table 22b Annual summary of the corresponding catch (whole weight, tonnes) associated with each of the DATA-RULES identified in the data-rules listed in the text.

YEAR	DR_1	DR_2	DR_3	DR_3A	DR_3B	DR_4A	DR_4B	DR_5A	DR_5B	DR_6A	DR_6B	DR_6C	DR_7A	DR_7B	DR_8A	DR_8B	DR_8C	DR_8D	DR_9A	DR_9B	TOTAL	
Sector	TIB	TIB	PRC	TIB	TVH	TVH	TIB	TVH	TIB	TIB	TIB	TIB	TVH	TVH	TIB	TVH	TIB	TVH	TIB	TVH	TIB	
2004	0	0	0	0	0	3	0	6	0	0	3	207	19	0	0	1	0	2	0	0	241.03	
2005	0	0	0	0	0	0	0	12	0	0	0	345	12	0	0	0	0	2	0	0	370.01	
2006	0	0	0	0	0	0	1	1	0	0	0	138	5	0	1	1	0	2	0	0	148.82	
2007	0	0	14	0	0	0	0	4	0	0	2	251	3	0	0	2	0	1	0	0	278.43	
2008	10	0	33	0	0	0	0	4	0	0	0	174	0	0	0	0	0	0	0	0	222.39	
2009	8	0	0	0	0	0	0	0	0	0	2	134	0	0	0	0	0	0	0	0	143.86	
2010	6	0	49	0	0	1	3	0	6	0	17	108	0	0	0	1	0	0	0	0	190.73	
2011	1	0	0	0	0	0	2	0	0	0	0	197	0	0	0	0	0	0	0	0	201.17	
2012	29	0	203	0	0	258	5	22	0	5	0	97	0	18	12	1	4	0	1	0	654.19	
2013	34	0	150	0	0	174	8	109	2	7	0	40	0	0	9	0	3	0	1	0	536.24	
2014	2	0	168	0	0	186	6	31	3	2	0	124	0	0	0	4	0	4	0	0	530.76	
2015	1	0	125	0	0	103	5	0	11	0	1	101	0	0	0	1	5	1	2	0	355.91	
2016	0	0	162	0	0	170	1	0	67	0	1	48	0	0	0	1	2	0	0	0	452.67	
2017	0	0	64	0	0	115	0	1	66	0	0	40	0	0	0	1	8	0	3	0	296.92	
Total																						4,623.1