Ministry of Fisheries

WAREHOU Database Documentation
Base Views and Fields

(Adapted from CATCHEFF database documentation Part 2 - Base views and fields)

Version 3.0

Unclassified Sensitive

Author Kim Duckworth 15 May 1997
Adapted for Warehou by Bernadette McVey 03 Nov 1998
Updated by Merryn Jones 25 June 1999
Updated by Stephen Black 25 June 2001

Base views and Fields

Table of Contents

1.0 Document Information 2
2.0 The information provided by the fishers 2
3.0 The Catch Effort system 4
  3.1 The **Warehou** database 4
  3.2 The concept of an event 5
  3.3 Versions of forms 5
  3.4 The concept of a trip 6
  3.5 Trip Breakdown 6
4.0 Views within the **warehou** database 9
  4.1 External access to **warehou** 10
  4.2 The keys used to link views 12
  4.3 The indexes within the **warehou** database 12
  4.4 The fields in the **warehou** database 14
5.0 Relationship between forms and fields 36
6.0 Meanings of multiple use fields 42

List of diagrams

Relationship between events 7
Relationships between views in the **warehou** database 11
Indexes in the **warehou** database 13
Fields storing CELR information 37
Fields storing TCEPR information 38
Fields storing CLR information 39
Fields storing SJCER information 40
Fields storing TLCER information 41

List of tables

General Guide to linking between events and views 8
Structure of each of the core views in the **warehou** database 15
Contents of each of the non-core views in the **warehou** database 32
The contents of date/time fields in each of the views 42
The contents of the effort fields in the **fishing_event** view 43

1.0 Document Information

The **warehou** database has been constructed primarily to facilitate reporting from the Catch Effort System. This document describes **warehou's** base *fields* and *views*; the *event* concept; and the *keys* used to link views.

This document is adapted from part 2 in a series covering aspects of the Ministry of Fisheries Catch Effort system.

This document is not intended to be a comprehensive guide to the database but has been written as basic background material for report writers. A solid foundation in database concepts, and a basic understanding of the business of commercial fishing are assumed.

Caution: This is an early version of this document. It is possible that factual errors will exist within the document. Please report any such factual errors that you find to the Ministry of Fisheries Catch Effort group so that we may correct these in subsequent versions.

2.0 The information provided by the fishers

The Catch Effort system stores catch, effort, landings, production and environment information provided to the Ministry of Fisheries by commercial fishers.

- Catch data are rough estimates of the catch (kg of each species) made by fishers as they fish. For example, a fisher may haul a line onboard and visually estimate that they have caught 300 kg of Bluenose, 50 kg of Ling and 25 kg of Spiny Dogfish.

- Effort data summarise the amount of effort that a fisher/vessel put into catching fish; specify what method the fisher was using; and what species they were targeting. For example, a vessel mid-water trawling for Hoki towed a 50 metre wide net for 3 hours at a speed of 4 knots.

- Landings data summarise either the actual quantity of fish landed at a wharf or transferred to another vessel at sea. Landings data are considerably more accurate than estimated catch data.

- Production data summarises the estimated quantity of fish processed onboard a vessel during a day. This will usually be more accurate than estimated catch but less accurate than actual landings.

- Environment data summarises sea and fishing activity depth, wind speed, cloud conditions, and water temperature at the time of fishing.

The information received from fishers is recorded on one of five forms.

CELR - Catch Effort Landing Return (called CEL within the database)

Records estimated catch, effort and actual landings for approximately 30 different fishing methods. Because so many different methods of fishing are covered many parts of the form are labelled in a generic manner. The fishers superimpose one of seven cardboard templates over the form depending on the actual fishing method used. These templates specify what information a fisher should enter in each field on the form. Fishers that fill in a CELR do not fill in any other type of form. One form is used for each trip (unless multiple pages are needed).

TCEPR - Trawl Catch Effort Processing Return (called TCP within the database)

Records estimated catch, effort, processing and environment data for deep sea trawlers. Records these in more detail than on the CELR trawl forms. Because no landings data are recorded, any fisher that fills in a TCEPR must also fill in a CLR. One form is used for each day (unless multiple pages are needed).

TLCER - Tuna Longlining Catch Effort Return (called TUN within the database)

Records effort, processing and environment data for surface long liners targeting tuna. Records these in more detail than the CELR surface long lining forms. Estimated catch is not recorded because processing data may be used for this purpose. Because no landings data are recorded, any fisher that fills in a TLCER must also fill in a CLR. One form is used for each longline set (commonly 1 per day).

SJCER - Squid Jigging Catch Effort Return (called SJC within the database)

Records effort, processing and environment data for squid jiggers. Records these in more detail than CELR lining forms. Estimated catch is not recorded because processing data may be used for this purpose. Because no landings data are recorded, any fisher that fills in a SJCER must also fill in a CLR. One form is used for each day.

CLR - Catch Landing Return (called CLR within the database)

Records actual landings data for a vessel. Only filled in if a fisher also filled in TCEPR, TLCER or SJCER forms. One form is used for each trip (unless multiple pages are needed).

This document describes the situation for the current generation of forms filled in by fishers. These forms have been in use since 1990 or 1991. The earlier generations of forms stored similar but not identical information. Sometimes more information was stored, sometimes less. There are many fields in the **warehou** database which store information only covering a particular time period, (generation of forms), and outside this period contain NULL values.

3.0 The Catch Effort system

The Catch Effort system stores the information recorded on CELR, TCEPR, TLCER, SJCER and CLR forms and their predecessors. Approximately 200,000 forms are entered into the system each year. For reasons which are explained in section 3.3 multiple versions exist for many of these forms.

This information is used primarily for fisheries resource management and law enforcement purposes.

The Catch Effort system is made up of 4 databases :

- The **forms** database accepts data entry, checks for errors and passes all but fundamentally flawed records across to the **catcheff** database. Individual fields that are clearly incorrect may also be withheld.

- The **catcheff** database stores the data taken from the forms provided by fishers.

- The **ref** database stores relatively static reference information such as valid species codes (three letters), fishing methods (currently up to 3 letters but was a numeric code in the past), vessel names and characteristics, and details relating to each fisher.

- The **output** database provides a set of simply named ISQL views which allow users drawing information from the **catcheff** and **ref** databases to do so without needing to know the system names for tables, the specific database names, or having to link tables.

3.1 The Warehou database

The **warehou** database is essentially a copy, taken regularly, of the **catcheff** database, along with selected data from the **form**, **ref** and **corporat** databases.

Warehou is structured in a similar fashion to **catcheff**. One major difference being the processing and landing data, which is stored in the one table named **specprod_act** in **catcheff**, is broken down into four separate tables in **warehou**. These tables are;
processed_catch: containing on board processing data (TCEPRs, SJCERs and TLCERS),
landings: containing landing and transhipping data (CELRs and CLRs),
tuna_individual_catch: containing Southern Bluefin Tuna processed weights (TLCERs) and
squid_tally: containing squid tray tally data (SJCERs).

Warehou contains data from Nil returns, previously not available in **catcheff**.

Warehou incorporates person and vessel fields and tables from the **ref** and **corporat** databases.

[Future plans for **warehou** include implementing the capacity to approximate landed weights by estimated weights and effort data].

Warehou will also eventually contain all FSU, pre-FSU, and observer data, however at the time of writing no definite timelines had been set for the inclusion of this data.

3.2 The concept of an event

Central to the Catch Effort system is the concept of an event. An event is a specific temporal occurrence for a vessel or fisher. As such an event will always have an associated vessel and/or fisher identifier, and a start time, and will frequently have an end time and a location.

The Catch Effort system defines 4 types of events :

- **Fishing events** (operational event type = "F"). Are associated with estimated catch and effort data. For example, one *set* or *tow* and all its effort data constitutes a fishing event.

- **Processing events** (operational event type = "P"). Are associated with processing and actual landings data. Although landings and processing are different types of processing they are considered to be the same event type. One day of processing or landing constitutes an event, even if it is made up of several records[1].

- **Environmental events** (operational event type = "E"). Are associated with environmental and vessel activity data. Environmental records are made on a daily basis.

- **Trip events** (operational event type = "T"). Associate all of the fishing events from a single trip with its landing (processing event type) events. This means that a **trip event** is made up of all the **fishing events**, **processing events** and **environmental events** recorded by a vessel and fisher during a single fishing trip.

All of this data is stored in the **event** view. The **event** view is at the centre of all relationships within the **catcheff** and **warehou** databases.

Despite all event data being stored in the **event** view, it is considerably easier to understand the relationships between views within the database if the **event** view is conceptualised as being 4 separate views, one for each type of event.

This principal is illustrated in diagrams 1 and 2.

3.3 Versions of forms

For law enforcement purposes there is a business requirement that the Catch Effort system store exactly the data that was submitted to the Ministry by the fishers. If the fisher made an error then this must be retained in the data. A history of changes to the data are stored within the audit tables on the forms database.

For fisheries resource management purposes there is a business requirement that the Catch Effort system store the best information available. If the fisher makes an error, which FishServe is entitled to interpret, then the data should be corrected.

[1] However, if a new form is required to accommodate all the fish being processed or landed then the new form constitutes a new *processing event* within the *trip event.*

These requirements have resulted in multiple versions of a single form being stored on the system. Because fishers frequently make mistakes in the forms that they return to the Ministry it is very common for two versions of a single form to exist on the Catch Effort system.

The "literal" version of a form contains the latest version of the information that a fisher provided to the Ministry.

The "interpreted" version of a form should contain at least 1 field of data that has been changed from the literal version. A FishServe information Officer is entitled to make some interpretations without contacting the fisher.

Because scientists often disagree on how to interpret an erroneous item of data there was also a business requirement that different people be able to interpret data in different ways. To cope with this requirement provision was made for "Research" and "Personal" versions to be created (though they are rarely used).

3.4 The concept of a trip

Vessels frequently undertake fishing trips that last for more than 1 day. Where this is the case a mechanism for associating actual landings data with the processing, estimated catch, effort and environment data that occurred during the trip is needed. To achieve this a system generated number uniquely identifying all of the events that occurred during a single trip is stored in the **trip** field of the core views. All of the events occurring during a single trip have the same **trip** number.

A trip may be terminated by either landing or transhipping. At any given time a vessel can only be participating in 1 trip.

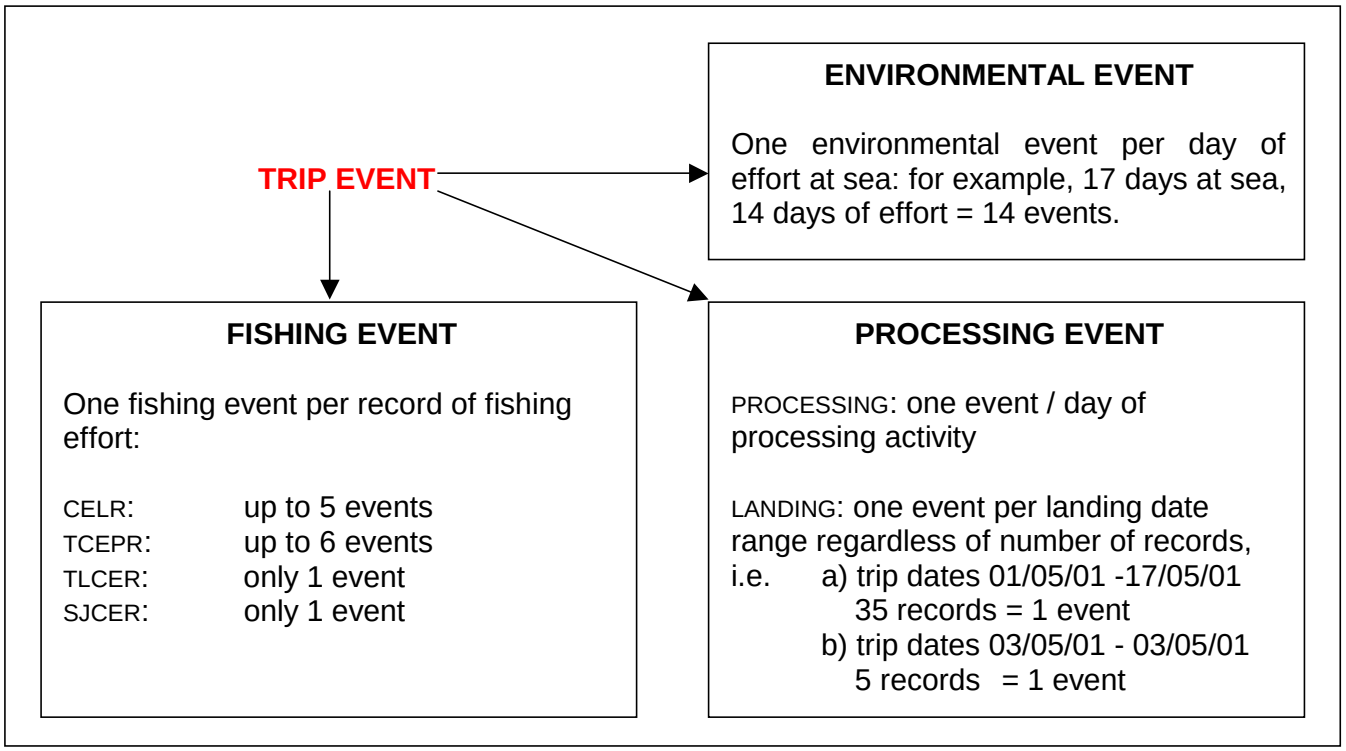
3.5 Trip Breakdown

Every event record has a unique identifier attached to it so that **events** can be linked together. For example, *fishing_event* can be linked to *estimated_subcatch* using the **event_key**.

Section 4.2 identifies the assorted keys used to link views in the warehou database. The following table gives a rough indication of which keys to use in relation to the link required.

A trip event identifies all the fishing, processing and environmental events that occur during a single trip (whether it's one day or several weeks). Below is a basic breakdown of what makes a trip event.

Diagram One - Relationship between events



For example:

CELR -
Trip Dates: 01/06/01 - 04/06/01
No. of days fishing: 4 effort days (3 sets/day)
Landing Date: 05/06/01
One trip: 12 fishing events; 1 landing event*; (no environmental data on CELRs)

TLCER -
No. of forms/trip: 3
Set/Haul Dates: 01/06 - 02/06 and 02/06 - 03/06 and 03/06 - 04/06
Environmental: 1 per form
No. of sets/form: 1
Processing: 1 processing event (several species processed)
Landing: 1 CLR per trip
One Trip: 3 fishing events; 3 days environmental data; 3 processing events; 1 landing event*

TCEPR -
No. of forms/trip: 15
No. of tows: 60 (4 tows / form)
Environmental: 1 per day of effort
Processing: 1 per day of effort
Landing: 1 CLR per trip
One Trip: 60 fishing events; 15 environmental; 15 processing; 1 landing event*

*Please see footnote 1 on p.7 re more than one form / processing event.

General Guide to linking between event types

Event View

Four Conceptual Divisions

	Fishing	Processing	Environment	Trip
LINK: event_key	fishing_event	squid_tally	environment_data	trip_event
	estimated_subcatch	tuna_individual_catch	vessel_log_data	
	bait	processed_catch		
	event_assoc_object	landing		
L	**LINK:** dcf_key (if forms are different e.g CLR linked to TCP then event_key or trip_key)			

Remember:

- These are general rules of application and there are some exceptions.
- Linking between 'conceptual' events with dcf_key will only work if the form number and type are the same. So if you have a CLR that you are trying to link to a TCP, SJC or TUN you would have to use event_key or trip_key.
- Confirm each link before entering code.
- All links must include version_seqno - or you'll get double counting through multiple versions of forms. This means you must also specify which version of the form you want to extract (literal, interpreted, legal, personal, research): normally interp_yn ="Y"

4.0 Views within the warehou database

There are 10 core views in the **warehou** database:

- **event** - Stores information on the timing and location of an event that occurred to a particular vessel or fisher.
- **fishing_event** - Stores effort and some environment data relating to a particular event of type fishing.
- **estimated_subcatch** - Stores estimated catch data relating to a particular event of type fishing.
- **landing** - Stores landings data and data on the location of landing or transhipping relating to a particular event of type production recorded on a CLR or CELR.
- **processed_catch** - Stores production data relating to a particular event of type production recorded on a TCEPR, TLCER or SJCER.
- **squid_tally** - Stores squid tray tally data relating to a particular event of type production recorded on a SJCER.
- **tuna_individual_catch** - Stores Southern Bluefin Tuna individual processed weight data relating to a particular event of type production recorded on a TLCER.
- **environment_data** - Stores environment data relating to a particular event of type environment.
- **vessel_log_data** - Stores vessel activity data relating to a particular event of type environment.
- **trip_event** - Stores trip duration data relating to a particular event of type trip.

There are 2 other seldom used views (**bait** and **event_assoc_object**) which store data on the bait used (old version of TLCER forms only) and the 2nd vessel in pair fishing (CELR, TCEPR & CLR forms only) respectively.

There are a further 13 views (**bait_type**, **fishing_event_type**, **event_assoc_object_type**, **specprod_dest_type**, **specprod_act_type**, **specprod_act_wgt_type**, **specprod_unit_type**, **trip_subtype**, **trip_type, nationality_type, species_class, vessel_reg_type** and **operational_event_type**) which store lists of valid values for various fields in the other views.

Each of the 10 core views has fields storing vessel and person/organisation identifiers. These fields have referential integrity checks imposed upon them and must have an equivalent identifier in the **vessel_specification** and **person_organisation** views, which reside in the **corporat** and **ref** databases respectively.

The tables **vessel_specification** and **person_organisation** are replicated in **warehou** and selected fields from these tables have been added to the core views. The replicated fields are detailed in the field descriptions in section 4.4.

4.1 External Access to warehou

Two further views replicated in **warehou**, useful in extracting vessel and client data, are **vessel**, which contains the most recent **specification** data for each vessel, and **address**, which contains client address data. These views along with **vessel_specification** and **person_organisation** will not be available to **warehou** users external to the Ministry.

Data is made available to clients external to the Ministry through the use of views that work as a filter on the core views. These views have the same name as the core views but are prefixed with "x_", e.g. the view **landing** when accessed by an external client is referred to as **x_landing**.

The external views do not allow access to any vessel or client identifying data and store latitude and longitude data truncated to $1/10^{th}$ of a degree only.

Diagram 1 illustrates the relationships between core views in the **warehou** database.

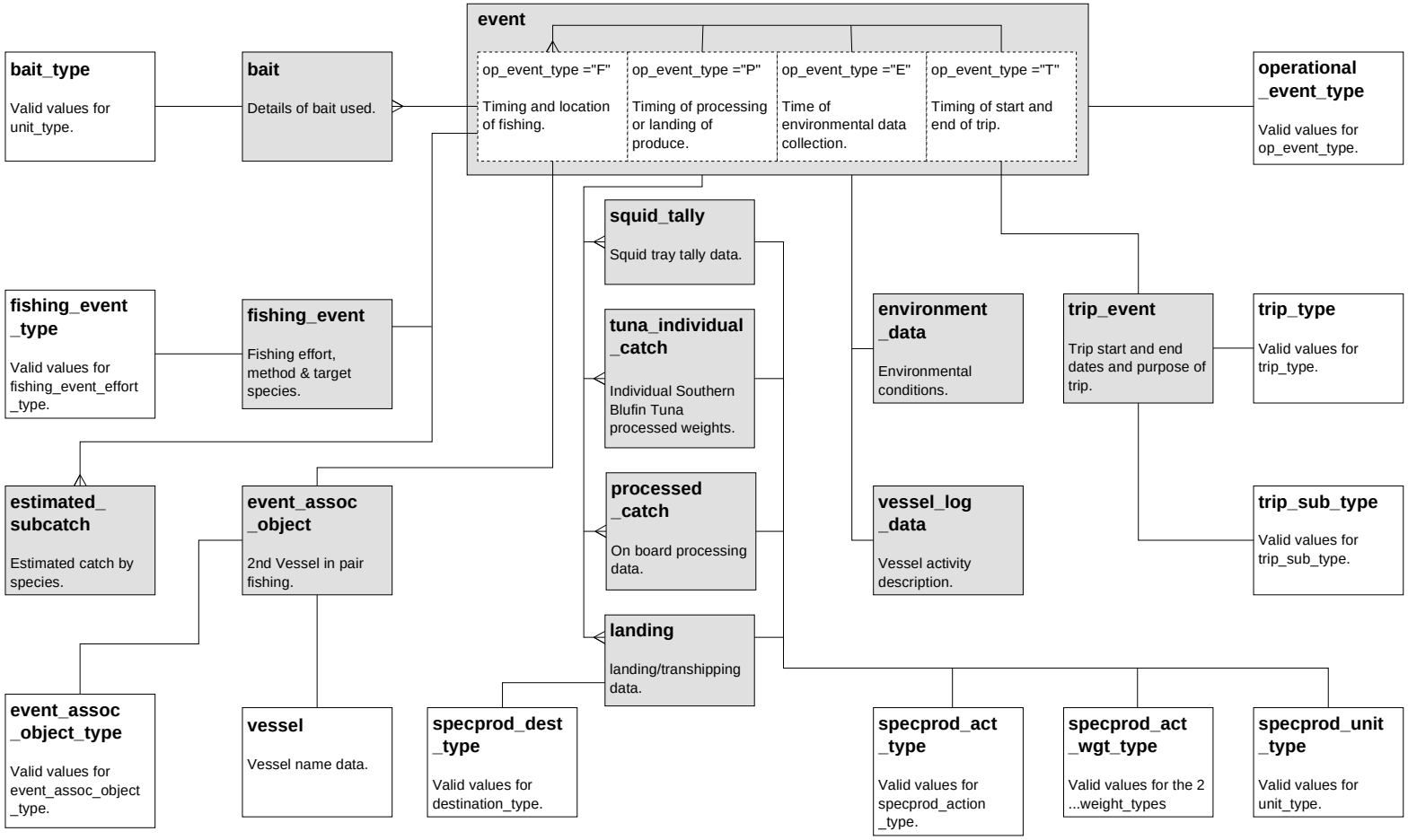


Diagram 1 - Relationships between views in the warehou database

4.2 The keys used to link views

The keys commonly used to link views in the **warehou** database are described below:

dcf_key + version_seqno - Dcf_key is a system generated number which uniquely identifies every form. Version_seqno identifies which version of a particular form a record on the database relates to. The "literal" version of a form always has a **version_seqno** of 1. Because multiple versions of a form can exist on the database **dcf_key** must be combined with **version_seqno** to provide a key uniquely identifying a particular version of a particular form.

Dcf_key + version_seqno should be used when retrieving information from a form that relates to more than 1 type of event.

event_key + version_seqno - Each form can have many events recorded on it. As an example a single TCEPR form can have 1 environment event, 1 processing event and up to 6 fishing events associated with it. Event_key is a system generated number used to identify a particular event, (of type fishing, production, environment or trip), recorded on a particular form. Because multiple versions of a form can exist on the database **event_key** must be combined with **version_seqno** to provide a key uniquely identifying a particular version of a particular event on a particular form.

Event_key + version_seqno should be used when retrieving information from a form that relates to 1 type of event.

vessel_key - A system generated number used to uniquely identify a particular vessel.

client_key - A system generated number used to uniquely identify a particular person or organisation.

Note that although each of the forms filled in by the fishers has a number identifying it printed in one corner, because there are 5 different types of forms, these numbers are not unique and are not used as a key.

4.3 The indexes within the warehou database

Diagram 2 shows the indexes on the 10 core views in the **warehou** database. Due to space constraints the diagram often only shows the first part of multi-part indexes.

This diagram also shows the keys that should be used to link views.

For example - The table **estimated_subcatch** can be linked to **fishing_event** or **event** using **event_key** and **version_seqno**. Events of different types belonging to the same form can be linked using **dcf_key** and **version_seqno**.

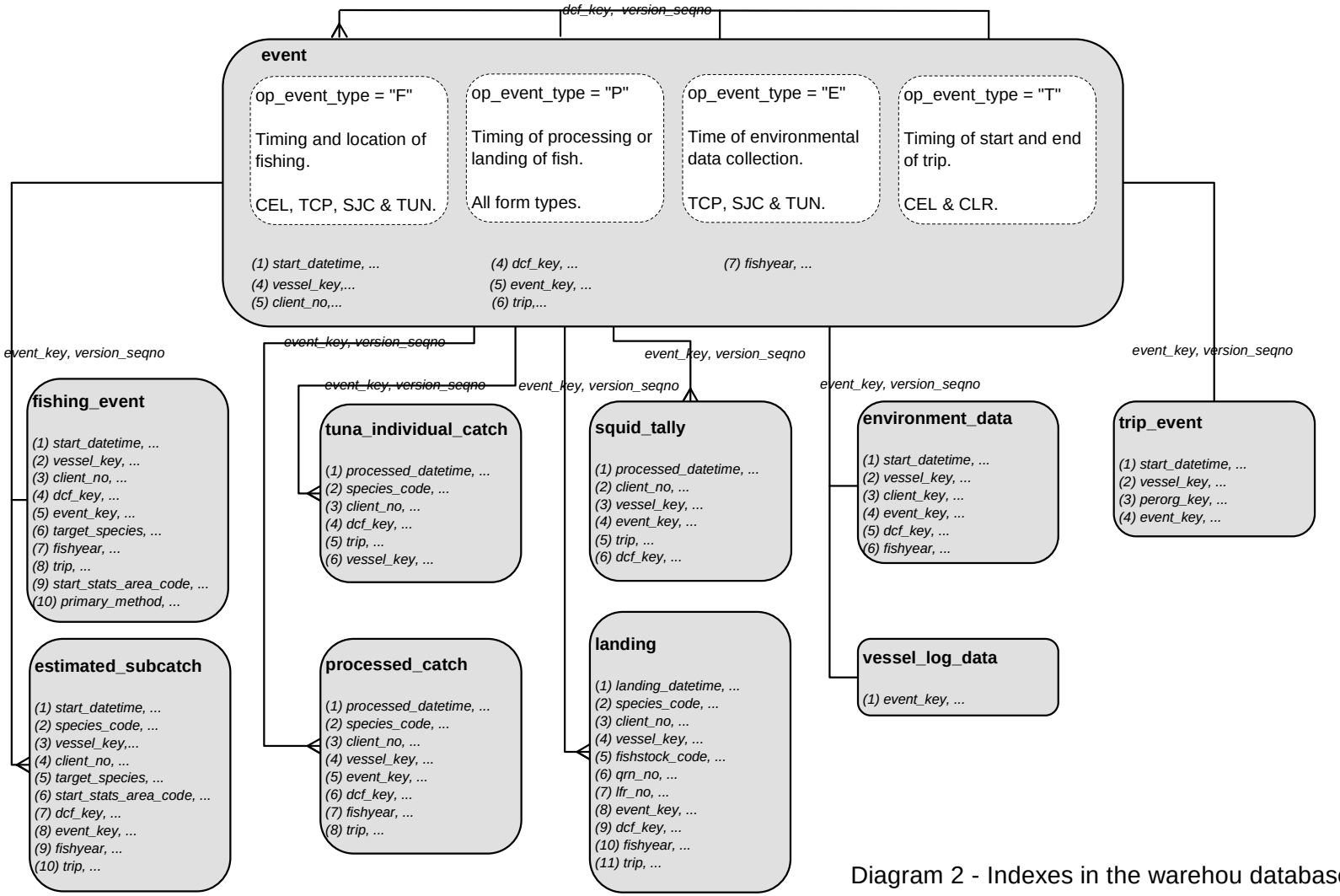


Diagram 2 - Indexes in the warehou database

4.4 The fields in the warehou database

Some fields that are available in the **catcheff** core views are not available in **warehou** as they were considered to be irrelevant to reporting.

To increase the performance of queries, many of the most frequently used fields are duplicated across the 10 core views.

Fields that have an historical reason for existing, but no longer store meaningful data, are marked as “Not used” in the comments column.

Fields which are the 1st part of an index are marked * in the field column.

Fields that are available in the external views are marked 4 in the Ext column.

A full description of the contents of each field in the 10 core views, plus **bait** and **event_assoc_object** follows :

Mfish View Name: **event**
External View Name: **x_event**

Field	Ext	Usage	Comments	Field Type
event_key *	4	System generated number identifying a single fishing, production, environmental or trip event.	Unique key when combined with version_seqno.	keys
version_seqno	4	System generated number identifying the version of a single fishing, production, environmental or trip event.	Unique key when combined with event_key.	seqno
start_datetime *	4	The start date & time for an event.		datetime
end_datetime	4	The end date & time for an event.		datetime
event_type	4	Used when linking catch effort data with that from external systems.	Not used in reporting.	type
confidence_scale	4	Confidence in forms data.		code
event_confidence _scale	4	Confidence in events data.		code
start_latitude	8	Decimalised latitude of start of event.		lat
start_longitude	8	Decimalised longitude of start of event.		long
end_latitude	8	Decimalised latitude of end of event.		lat
end_longitude	8	Decimalised longitude of end of event.		long
display_start_latitude	8	Latitude of start of event.		clat
display_start _longitude	8	Longitude of start of event.		clong
display_end_latitude	8	Latitude of end of event.		clat
display_end _longitude	8	Longitude of end of event.		clong
trunc_start_lat	4	Decimalised latitude of start of event truncated to $1/10^{th}$ of a degree.		numeric
trunc_start_long	4	Decimalised longitude of start of event truncated to $1/10^{th}$ of a degree.		numeric
trunc_end_lat	4	Decimalised latitude of end of event truncated to $1/10^{th}$ of a degree.		numeric
trunc_end_long	4	Decimalised longitude of end of event truncated to $1/10^{th}$ of a degree.		numeric
trunc_disp_start_lat	4	Latitude of start of event truncated to $1/10^{th}$ of a degree.		varchar
trunc_disp_start _long	4	Longitude of start of event truncated to $1/10^{th}$ of a degree.		varchar
trunc_disp_end_lat	4	Latitude of end of event truncated to $1/10^{th}$ of a degree.		varchar
trunc_disp_end _long	4	Longitude of end of event truncated to $1/10^{th}$ of a degree.		varchar
start_stats_area_code	4	Statistical area in which event started.		areacode
start_area_code	4	Whether event occurred inside 12 mile zone or EEZ	Derived only when a lat/long combination entered.	areacode
op_event_type	4	The type of event being stored (**F**ishing, **P**roduction, **E**nvironment or **T**rip)		type
pos_confidence _scale	4	Confidence in position data.		code
start_fma_code	4	The fisheries management area in which an event started.	Derived only when a lat/long combination entered.	areacode

***event** field descriptions continued...*

client_key	4	System generated number identifying the permit holder.		keys

client_no*	8	FIN of permit holder.		id
client_name	8	Legal name of permit holder.		perorgname
registry_code	4	An office or region code		code
vessel_key *	4	System generated number identifying the vessel fishing.		keys
vessel_id	8	Vessel registration number or call sign if foreign licensed.		id
vessel_no	8	Vessel registration number.		id
vessel_name	8	Registered vessel name.		name
vessel_reg_type	4	Vessel registration type, (**D**omestic, **C**harter, **F**oreign licensed or **U**nknown).		type
fishyear*	4	Fishing year, (1 Oct 1996 to 30 Sep 1997 = 1997).	Wont be correct for species which have a different fishing year e.g. Rock Lobsters.	smallint
display_fishyear	4	Formatted fishing year, (1 Oct 1996 to 30 Sep 1997 = 1996/97).	See fishyear.	varchar
dcf_key *	4	System generated number identifying a single CELR, TCEPR, CLR , SJCER or TLCER.	When combined with version_seqno will identify all of the events relating to a single form.	keys
form_number	4	The ID number printed on each form.	Not unique because there are 5 different types of forms. Referred to in **catcheff** views as dcf_id_number.	id_int
form_type	4	The type of the form. CELR is abbreviated to **CEL**, TCEPR to **TCP**, CLR to **CLR**, SJCER to **SJC** and TLCER to **TUN**.	Referred to in **catcheff** views as dcf_defn_group_type.	type
dcf_status	4	Validation status of this form.	Not used - Not currently implemented correctly	status
trip*	4	A system generated number allocated to each of the events that took place for one vessel between its trip start and end dates.		keys
literal_yn	4	Boolean - This record is the literal version of the data.		yn
interp_yn	4	Boolean - Either an interpreted version of the data does not exist, or it does exist and this is it.		yn
resrch_yn	4	Boolean - Either a research version of the data does not exist, or it does exist and this is it.		yn

Mfish View Name: **fishing_event**
External View Name: **x_fishing_event**

Field	Ext	Usage	Comments	Field Type
event_key *	4	System generated number identifying a single fishing event.	Unique key when combined with version_seqno.	keys
version_seqno	4	System generated number identifying the version of a single fishing event.	Unique key when combined with event_key.	seqno

fishing_event *field descriptions continued...*

group_key	4	System generated number used to link to tables in the form database.		keys
return_seqno	4	The page number of a multipage form.	Not used - Reserved	seqno

			for future use.	
start_datetime *	4	The start date & time for fishing.		datetime
end_datetime	4	The end date & time for fishing.		datetime
primary_method*	4	Code for fishing method used.		method
method_system_type	4	Always "**FIC**".	Not used.	type
target_species *	4	Target species.		species
target_species _weight	4	Estimated catch weight of the target species (kgs).	Not used - Yet to be fully implemented.	not in warehou
fishing_duration	4	# Usage varies - see contents of effort fields table .		duration
fishing_day_duration	4	Number of hours spent fishing during daylight. Early squid jigging forms only.	Historical - Stores data which is no longer collected.	duration
fishing_night _duration	4	Number of hours spent fishing at night. Early squid jigging forms only.	Historical - Stores data which is no longer collected.	duration
catch_weight	4	The total weight of catch for this fishing event as estimated at the time.		weight
fishing_event_effort_ type	4	Very general method code, (**S** = SQJ, **L** = TUN, **T** = others).		type
confidence_scale	4	Confidence in the method & target species data ?		code
effort_depth	4	TCP - Groundrope depth, SJC - Deepest lure.		depth
effort_height	4	# Usage varies - see contents of effort fields table.		height
effort_num	4	# Usage varies - see contents of effort fields table.		num
effort_total_num	4	# Usage varies - see contents of effort fields table.		num
effort_width	4	# Usage varies - see contents of effort fields table.		width
effort_length	4	?	Not used.	length
effort_speed	4	Estimated speed of trawl, (TCP forms only).		speed
surface_temp	4	Sea surface temperature, (CEL forms with method PS only).		temperat ure
effort_time	4	?	Not used.	duration
total_hook_num	4	# Usage varies - see contents of effort fields table.		num
total_basket_num	4	Number of baskets, (TUN forms only).		num
set_end_datetime	4	Date/time setting of longline finished, (TUN forms only).		datetime
haul_start_datetime	4	Date/time hauling of longline started, (TUN forms only).		datetime
haul_start_wind _speed	4	Wind speed (m/s) at time hauling of longline started, (TUN forms only).		speed
haul_end_wind _speed	4	Wind speed (m/s) at time hauling of longline ended, (TUN forms only).		speed
total_net_length	4	# Usage varies - see contents of effort fields table.		length
double_reel_num	4	Number of double reel jigging machines in use, (SQJ forms only).		num
pair_trawl_yn	4	Boolean - This was a pair trawl.		yn
bottom_depth	4	Depth below sea level of sea floor, (TCP & TUN forms only).		depth
effort_confidence _scale	4	Confidence in the effort data.		code
spotter_callsign	4	Call sign of spotter aircraft, (CEL forms with method PS only).		id
bottom_temp	4		Not used.	temperat ure
days_fished_num	4		Not used.	num

***fishing_event** field descriptions continued...*

effort_1_days_num	4		Not used.	Num
effort_2_days_num	4		Not used.	Num
column_a	4	The information recorded in the effort A column of a form type CEL	Repeats information stored in one of the	Descript

		a form type CEL.	fields marked #.	
column_b	4	The information recorded in the effort B column of a form type CEL.	Repeats information stored in one of the fields marked #.	descript
column_c	4	The information recorded in the effort C column of a form type CEL.	Repeats information stored in one of the fields marked #.	descript
column_d	4	The information recorded in the effort D column of a form type CEL.	Repeats information stored in one of the fields marked #.	descript
start_latitude	8	Decimalised latitude of start of event.		lat
start_longitude	8	Decimalised longitude of start of event.		long
end_latitude	8	Decimalised latitude of end of event.		lat
end_longitude	8	Decimalised longitude of end of event.		long
display_start_latitude	8	Latitude of start of event.		clat
display_start _longitude	8	Longitude of start of event.		clong
display_end_latitude	8	Latitude of end of event.		clat
display_end _longitude	8	Longitude of end of event.		clong
trunc_start_lat	4	Decimalised latitude of start of event truncated to $1/10^{th}$ of a degree.		numeric
trunc_start_long	4	Decimalised longitude of start of event truncated to $1/10^{th}$ of a degree.		numeric
trunc_end_lat	4	Decimalised latitude of end of event truncated to $1/10^{th}$ of a degree.		numeric
trunc_end_long	4	Decimalised longitude of end of event truncated to $1/10^{th}$ of a degree.		numeric
trunc_disp_start_lat	4	Latitude of start of event truncated to $1/10^{th}$ of a degree.		varchar
trunc_disp_start _long	4	Longitude of start of event truncated to $1/10^{th}$ of a degree.		varchar
trunc_disp_end_lat	4	Latitude of end of event truncated to $1/10^{th}$ of a degree.		varchar
trunc_disp_end _long	4	Longitude of end of event truncated to $1/10^{th}$ of a degree.		varchar
start_stats_area_code *	4	Statistical area in which event started.		areacode
vessel_key *	4	System generated number identifying the vessel fishing.		keys
vessel_id	8	Vessel registration number or call sign if foreign licensed.		id
vessel_no	8	Vessel registration number.		id
vessel_name	8	Registered vessel name.		name
vessel_reg_type	4	Vessel registration type, (**D**omestic, **C**harter, **F**oreign licensed or **U**nknown).		type
client_key	4	System generated number identifying the permit holder.		keys
client_no*	8	FIN of permit holder.		id
client_name	8	Legal name of permit holder.		perorgna me

fishing_event *field descriptions continued...*

fishyear*	4	Fishing year (1 Oct 1996 to 30 Sep 1997 = 1997).	Wont be correct for species which have a different fishing year e.g. Rock Lobsters.	smallint
display_fishyear	4	Formatted fishing year, (1 Oct 1996 to 30 Sep 1997	See fishyear.	varchar

		= 1996/97).		
dcf_key *	4	System generated number identifying a single CELR, TCEPR, CLR , SJCER or TLCER.	When combined with version_seqno will identify all of the events relating to a single form.	keys
form_number	4	The ID number printed on each form.	Not unique because there are 5 different types of forms. Referred to in **catcheff** views as dcf_id_number.	id_int
form_type	4	The type of the form. CELR is abbreviated to **CEL**, TCEPR to **TCP**, CLR to **CLR**, SJCER to **SJC** and TLCER to **TUN**.	Referred to in **catcheff** views as dcf_defn_group_type.	type
trip*	4	A system generated number allocated to each of the events that took place for one vessel between its trip start and end dates.		keys
literal_yn	4	Boolean - This record is the literal version of the data.		yn
interp_yn	4	Boolean - Either an interpreted version of the data does not exist, or it does exist and this is it.		yn
resrch_yn	4	Boolean - Either a research version of the data does not exist, or it does exist and this is it.		yn

Mfish View Name: **estimated_subcatch**
External View Name: **x_estimated_subcatch**

Field	Ext	Usage	Comments	Field Type
event_key*	4	System generated number identifying a single fishing event.	Because multiple catches can occur for 1 fishing event this is not a unique key even when combined with version_seqno.	keys
version_seqno	4	System generated number identifying the version of a single fishing event.		seqno
group_key	4	System generated number used to link to tables in the form database.		keys
start_datetime*	4	The start date & time for fishing.		datetime
species_code*	4	Three letter code for species caught.		species
catch_weight	4	Estimated weight (kg) caught of the species.		weight
catch_num	4	Number of fish caught for tuna species on CELR forms.	Not used - currently stored in catch_weight.	num
confidence_scale	4	Confidence in the data.		code
target_species*	4	Target species.		species
primary_method	4	Code for fishing method used.		method
start_latitude	8	Decimalised latitude of start of event.		lat
start_longitude	8	Decimalised longitude of start of event.		long
end_latitude	8	Decimalised latitude of end of event.		lat
end_longitude	8	Decimalised longitude of end of event.		long

estimated_subcatch *field descriptions continued...*

display_start_latitude	8	Latitude of start of event.		clat
display_start _longitude	8	Longitude of start of event.		clong
display_end_latitude	8	Latitude of end of event.		clat
display_end _longitude	8	Longitude of end of event.		clong

trunc_start_lat	4	Decimalised latitude of start of event truncated to 1/10th of a degree.		numeric
trunc_start_long	4	Decimalised longitude of start of event truncated to 1/10th of a degree.		numeric
trunc_end_lat	4	Decimalised latitude of end of event truncated to 1/10th of a degree.		numeric
trunc_end_long	4	Decimalised longitude of end of event truncated to 1/10th of a degree.		numeric
trunc_disp_start_lat	4	Latitude of start of event truncated to 1/10th of a degree.		varchar
trunc_disp_start _long	4	Longitude of start of event truncated to 1/10th of a degree.		varchar
trunc_disp_end_lat	4	Latitude of end of event truncated to 1/10th of a degree.		varchar
trunc_disp_end _long	4	Longitude of end of event truncated to 1/10th of a degree.		varchar
start_stats_area _code*	4	Statistical area in which the fish were caught.		areacode
vessel_key*	4	System generated number identifying the vessel fishing.		keys
vessel_id	8	Vessel registration number or call sign if foreign licensed.		id
vessel_no	8	Vessel registration number.		id
vessel_name	8	Registered vessel name.		name
vessel_reg_type	4	Vessel registration type, (**D**omestic, **C**harter, **F**oreign licensed or **U**nknown).		type
client_key	4	System generated number identifying the permit holder.		keys
client_no*	8	FIN of permit holder.		id
client_name	8	Legal name of permit holder.		perorgname
fishyear*	4	Fishing year (1 Oct 1996 to 30 Sep 1997 = 1997).	Wont be correct for species which have a different fishing year e.g. Rock Lobsters.	smallint
display_fishyear	4	Formatted fishing year, (1 Oct 1996 to 30 Sep 1997 = 1996/97).	See fishyear.	varchar
dcf_key *	4	System generated number identifying a single CELR, TCEPR, CLR , SJCER or TLCER.	When combined with version_seqno will identify all of the events relating to a single form.	keys
form_number	4	The ID number printed on each form.	Not unique because there are 5 different types of forms. Referred to in **catcheff** views as dcf_id_number.	id_int
form_type	4	The type of the form. CELR is abbreviated to **CEL**, TCEPR to **TCP**, CLR to **CLR**, SJCER to **SJC** and TLCER to **TUN**.	Referred to in **catcheff** views as dcf_defn_group_type.	type

estimated_subcatch *field descriptions continued...*

trip*	4	A system generated number allocated to each of the events that took place for one vessel between its trip start and end dates.		keys
literal_yn	4	Boolean - This record is the literal version of the data.		yn
interp_yn	4	Boolean - Either an interpreted version of the data does not exist, or it does exist and this is it.		yn

resrch_yn	4	Boolean - Either a research version of the data does not exist, or it does exist and this is it.		yn

Mfish View Name: **landing**
External View Name: **x_landing**

Field	Ext	Usage	Comments	Field Type
event_key*	4	System generated number identifying a single landing or transhipping event.	Because multiple species can occur for one landing or transhipping event this is not a unique key even when combined with version_seqno.	keys
version_seqno	4	System generated number identifying the version of a single landing or transhipping event.	Unique key when combined with event_key.	seqno
group_key	4	System generated number used to link to tables in the form database.		keys
specprod_seqno	4	System generated number used in conjunction with the above three fields to create a unique key.		seqno
return_seqno	4	Intended to be used to track landings across multiple forms.	Not used.	seqno
specprod_action _type	4	General Nature of event, will always be '**LAN**' = landing.		type
landing_datetime*	4	The start date for landing or transhipping.		datetime
landing_name	4	Point of landing or call sign of transhipment vessel (CEL and CLR only).		name
species_code*	4	Three letter code identifying the species being landed or transhipped.		species
species_name	4	Species common name.		name
species_class	4	Species class name.		code
fishstock_code*	4	Fishstock code.		areacode
state_code	4	Processed state of fish.		code
destination_type	4	Type of destination for fish e.g. landed, transhipped etc.		type
unit_type	4	Type of packaging e.g. container, box, sack, single fish etc.		type
unit_num	4	Number of containers.		number
unit_weight	4	Average weight of each container.		weight
conv_factor	4	Conversion factor.		factor
green_weight	4	Green weight of fish.		weight
green_weight_type	4	How green weight was calculated, (**ACT**ual, **F**isher **B**ack **C**alculated, **BAC**k calculated, calculated from **CON**tainers, **EST**imated).		type
processed_weight	4	Processed weight of fish, (processed weight X conversion factor = green weight).		weight

landing *field descriptions continued...*

processed_weight _type	4	How processed weight was calculated, (see green_weight_type).		type
qrn_key	4	System generated number identifying the Quota Registration Number of the person/organisation that the fish was caught against.		keys
qrn_no*	8	Quota Registration Number.		id
qrn_name	8	Legal name of the person/organisation the fish was caught against.		perorgname

lfr_key	4	System generated number identifying the Licensed Fish Receiver that received the fish.		keys
lfr_no*	8	Licensed Fish Receiver number.		id
lfr_name	8	Legal name of the Licensed Fish Receiver that received the fish.		perorgname
invoice_num	4	Purchase tax invoice number from LFR.		cinvoice
tranship_vessel_key	4	System generated number identifying the vessel receiving a transhipment.		keys
tranship_vessel_id	8	Vessel registration number, or call sign if foreign licensed, of vessel receiving a transhipment.		id
tranship_vessel_no	8	Vessel registration number of vessel receiving a transhipment.		id
tranship_vessel_name	8	Registered vessel name of vessel receiving a transhipment.		name
tranship_reg_type	4	Vessel registration type of vessel receiving a transhipment.		type
land_confidence_scale	4	Confidence in landing/transhipping data.		code
proc_confidence_scale	4	Confidence in processing data.		code
days_caught_num	4	Number of days of fishing which resulted in the catch now being landed/transhipped.	Not used.	num
vessel_key *	4	System generated number identifying the vessel landing/transhipping.		keys
vessel_id	8	Vessel registration number or call sign if foreign licensed.		vesid
vessel_no	8	Vessel registration number.		id
vessel_name	8	Registered vessel name.		name
vessel_reg_type	4	Vessel registration type, (**D**omestic, **C**harter, **F**oreign licensed or **U**nknown).		type
flag_nationality	4	Nationality code identifying flag state/original port of registry of vessel.		type
owner_nationality	4	Nationality code identifying nationality of vessel owner.		type
boat_nationality	4	Nationality code identifying nationality of vessel.		type
registered_owner_key	4	System generated number identifying the registered owner.		keys
client_key	4	System generated number identifying the permit holder.		keys
client_no*	8	FIN of permit holder.		id
client_name	8	Legal name of permit holder.		perorgname
fishyear*	4	Fishing year (1 Oct 1996 to 30 Sep 1997 = 1997).	Wont be correct for species which have a different fishing year e.g. Rock Lobsters.	year

landing *field descriptions continued...*

display_fishyear	4	Formatted fishing year, (1 Oct 1996 to 30 Sep 1997 = 1996/97).	See fishyear.	varchar
dcf_key *	4	System generated number identifying a single CELR, TCEPR, CLR , SJCER or TLCER.	When combined with version_seqno will identify all of the events relating to a single form.	keys
form_number	4	The ID number printed on each form.	Not unique because there are 5 different types of forms.	id_int

			Referred to in **catcheff** views as dcf_id_number.	
form_type	4	The type of the form. CELR is abbreviated to **CEL**, TCEPR to **TCP**, CLR to **CLR**, SJCER to **SJC** and TLCER to **TUN**.	Referred to in **catcheff** views as dcf_defn_group_type.	type
trip*	4	A system generated number allocated to each of the events that took place for 1 vessel between its trip start and end dates.		keys
trip_start_datetime	4	Start date for the trip that the landing relates to.		datetime
trip_end_datetime	4	End date for the trip the landing relates to.		datetime
literal_yn	4	Boolean - This record is the literal version of the data.		yn
interp_yn	4	Boolean - Either an interpreted version of the data does not exist, or it does exist and this is it.		yn
resrch_yn	4	Boolean - Either a research version of the data does not exist, or it does exist and this is it.		yn

Mfish View Name: **processed_catch**
External View Name: **x_processed_catch**

Field	Ext	Usage	Comments	Field Type
event_key*	4	System generated number identifying a single processing event.	Because multiple species can occur for one processing event this is not a unique key even when combined with version_seqno.	keys
version_seqno	4	System generated number identifying the version of a single processing event.		seqno
group_key	4	System generated number used to link to tables in the form database.		keys
specprod_seqno	4	System generated number used to in conjunction with the above 3 fields to create a unique key.		seqno
return_seqno	4	Intended to be used to track landings across multiple forms.	Not used.	seqno
specprod_action_type	4	General nature of event, will only contain events with specprod_action_type of **PRO** = processing or **OFF** = offal production.		type
processed_datetime*	4	The start date for processing.		datetime
species_code*	4	Three letter code identifying the species being landed or transhipped.		species
species_name	4	Species common name.		name
species_class	4	Species class name.		code
state_code	4	Processed state of fish.		code

processed_catch *field descriptions continued...*

unit_type	4	Type of packaging (Container, Box, Sack, Single fish etc).		type
unit_num	4	Number of containers or litres of oil produced where specprod_action_type = “OFF”.		number
unit_weight	4	Average weight of each container.		weight
conv_factor	4	Conversion factor.		factor
processed_weight	4	Processed weight of fish, (processed weight X conversion factor = green weight).		weight
processed_weight	4	How processed weight was calculated, (see		type

_type		green_weight_type).		
green_weight	4	Green weight of fish.		weight
green_weight_type	4	How green weight was calculated, (**ACT**ual, **F**isher **B**ack **C**alculated, **BAC**k calculated, calculated from **CON**tainers, **EST**imated).		type
proc_confidence _scale	4	Confidence in processing data.		code
days_caught_num	4	Number of days of fishing which resulted in the catch now being landed.	Not used.	num
vessel_key*	4	System generated number identifying the vessel fishing.		keys
vessel_id	8	Vessel registration number or call sign if foreign licensed.		vesid
vessel_no	8	Vessel registration number.		id
vessel_name	8	Registered vessel name.		name
vessel_reg_type	4	Vessel registration type, (**D**omestic, **C**harter, **F**oreign licensed or **U**nknown).		type
flag_nationality	4	Nationality code identifying flag state/original port of registry of vessel.		type
owner_nationality	4	Nationality code identifying nationality of vessel owner.		type
boat_nationality	4	Nationality code identifying nationality of vessel.		type
registered_owner _key	4	System generated number identifying the registered owner.		keys
client_key	4	System generated number identifying the permit holder.		keys
client_no*	8	FIN of permit holder.		id
client_name	8	Legal name of permit holder.		perorgna me
fishyear*	4	Fishing year (1 Oct 1996 to 30 Sep 1997 = 1997).	Wont be correct for species which have a different fishing year e.g. Rock Lobsters.	year
display_fishyear	4	Formatted fishing year, (1 Oct 1996 to 30 Sep 1997 = 1996/97).	See fishyear.	varchar
dcf_key *	4	System generated number identifying a single CELR, TCEPR, CLR , SJCER or TLCER.	When combined with version_seqno will identify all of the events relating to a single form.	keys
form_number	4	The ID number printed on each form.	Not unique because there are 5 different types of forms. Referred to in **catcheff** views as dcf_id_number.	id_int

processed_catch *field descriptions continued...*

form_type	4	The type of the form. CELR is abbreviated to **CEL**, TCEPR to **TCP**, CLR to **CLR**, SJCER to **SJC** and TLCER to **TUN**.	Referred to in **catcheff** views as dcf_defn_group_typ e.	type
trip*	4	A system generated number allocated to each of the events that took place for 1 vessel between its trip start and end dates.		keys
trip_start_datetime	4	Start date for the trip that the processing relates to.		datetime
trip_end_datetime	4	End date for the trip the processing relates to.		datetime
literal_yn	4	Boolean - This record is the literal version of the		yn

		data.		
interp_yn	4	Boolean - Either an interpreted version of the data does not exist, or it does exist and this is it.		yn
resrch_yn	4	Boolean - Either a research version of the data does not exist, or it does exist and this is it.		yny

Mfish View Name: **tuna_individual_catch**
External View Name: **x_tuna_individual_catch**

Field	Ext	Usage	Comments	Field Type
event_key*	4	System generated number identifying a single processing event.	Because multiple weights can occur for one event this is not a unique key even when combined with version_seqno.	keys
version_seqno	4	System generated number identifying the version of a single event.		seqno
group_key	4	System generated number used to link to tables in the form database.		keys
specprod_seqno	4	System generated number used to in conjunction with the above 3 fields to create a unique key.		seqno
return_seqno	4	Intended to be used to track landings across multiple forms.	Not used.	seqno
specprod_action _type	4	General nature of event, will only contain events with specproc_action_type of **SIN** = single fish count.		type
processed_datetime*	4	The start date for processing.		datetime
species_code*	4	Three letter code identifying the species being processed - will be STN.		species
species_name	4	Species common name.		name
species_class	4	Species class name.		code
processed_weight	4	Processed weight of each Southern Bluefin Tuna.		weight
proc_confidence _scale	4	Confidence in processing data.		code
vessel_key*	4	System generated number identifying the vessel fishing.		keys
vessel_id	8	Vessel registration number or call sign if foreign licensed.		vesid
vessel_no	8	Vessel registration number.		id
vessel_name	8	Registered vessel name.		name
vessel_reg_type	4	Vessel registration type, (**D**omestic, **C**harter, **F**oreign licensed or **U**nknown).		type

tuna_individual_catch *field descriptions continued...*

flag_nationality	4	Nationality code identifying flag state/original port of registry of vessel.		type
owner_nationality	4	Nationality code identifying nationality of vessel owner.		type
boat_nationality	4	Nationality code identifying nationality of vessel.		type
registered_owner _key	4	System generated number identifying the registered owner.		keys
client_key	4	System generated number identifying the permit holder.		keys

client_no*	8	FIN of permit holder.		id
client_name	8	Legal name of permit holder.		perorgname
fishyear	4	Fishing year (1 Oct 1996 to 30 Sep 1997 = 1997).	Wont be correct for species which have a different fishing year e.g. Rock Lobsters.	year
display_fishyear	4	Formatted fishing year, (1 Oct 1996 to 30 Sep 1997 = 1996/97).	See fishyear.	varchar
dcf_key*	4	System generated number identifying a single CELR, TCEPR, CLR , SJCER or TLCER.	When combined with version_seqno will identify all of the events relating to a single form.	keys
form_number	4	The ID number printed on each form.	Not unique because there are 5 different types of forms. Referred to in **catcheff** views as dcf_id_number.	id_int
form_type	4	The type of the form. CELR is abbreviated to **CEL**, TCEPR to **TCP**, CLR to **CLR**, SJCER to **SJC** and TLCER to **TUN**.	Referred to in **catcheff** views as dcf_defn_group_type.	type
trip*	4	A system generated number allocated to each of the events that took place for one vessel between its trip start and end dates.		keys
trip_start_datetime	4	Start date for the trip the processing relates to.		datetime
trip_end_datetime	4	End date for the trip the processing relates to.		datetime
literal_yn	4	Boolean - This record is the literal version of the data.		yn
interp_yn	4	Boolean - Either an interpreted version of the data does not exist, or it does exist and this is it.		yn
resrch_yn	4	Boolean - Either a research version of the data does not exist, or it does exist and this is it.		yn

Mfish View Name: **squid_tally**
External View Name: **x_squid_tally**

Field	Ext	Usage	Comments	Field Type
event_key*	4	System generated number identifying a single processing event.	Because multiple species can occur for one event this is not a unique key even when combined with version_seqno.	keys

squid_tally *field descriptions continued...*

version_seqno	4	System generated number identifying the version of a single event.		seqno
group_key	4	System generated number used to link to tables in the form database.		keys
specprod_seqno	4	System generated number used to in conjunction with the above 3 fields to create a unique key.		seqno
return_seqno	4	Intended to be used to track landings across multiple forms.	Not used.	seqnoo
specprod_action_type	4	General nature of event, will only contain events with specproc_action_type of **TTL** = tray tally or **TTT** = tray total.		type

processed_datetime*	4	The start date for processing.		datetime
species_code	4	Three letter code identifying the species.		species
species_name	4	Species common name.		name
species_class	4	Species class name.		code
state_code	4	Processed state of fish.		code
unit_type	4	Type of packaging (Container, Box, Sack, Single fish etc).		type
unit_num	4	Number of containers.		number
proc_confidence _scale	4	Confidence in processing data.		code
vessel_key*	4	System generated number identifying the vessel fishing.		keys
vessel_id	8	Vessel registration number or call sign if foreign licensed.		vesid
vessel_no	8	Vessel registration number.		id
vessel_name	8	Registered vessel name.		name
vessel_reg_type	4	Vessel registration type, (**D**omestic, **C**harter, **F**oreign licensed or **U**nknown).		type
flag_nationality	4	Nationality code identifying flag state/original port of registry of vessel.		type
owner_nationality	4	Nationality code identifying nationality of vessel owner.		type
boat_nationality	4	Nationality code identifying nationality of vessel.		type
registered_owner _key	4	System generated number identifying the registered owner.		keys
client_key	4	System generated number identifying the permit holder.		keys
client_no*	8	FIN of permit holder.		id
client_name	8	Legal name of permit holder.		perorgna me
fishyear	4	Fishing year (1 Oct 1996 to 30 Sep 1997 = 1997).	Wont be correct for species which have a different fishing year e.g. Rock Lobsters.	year
display_fishyear	4	Formatted fishing year, (1 Oct 1996 to 30 Sep 1997 = 1996/97).	See fishyear.	varchar
dcf_key*	4	System generated number identifying a single CELR, TCEPR, CLR , SJCER or TLCER.	When combined with version_seqno will identify all of the events relating to a single form.	keys

squid_tally *field descriptions continued...*

form_number	4	The ID number printed on each form.	Not unique because there are 5 different types of forms. Referred to in **catcheff** views as dcf_id_number.	id_int
form_type	4	The type of the form. CELR is abbreviated to **CEL**, TCEPR to **TCP**, CLR to **CLR**, SJCER to **SJC** and TLCER to **TUN**.	Referred to in **catcheff** views as dcf_defn_group_typ e.	type
trip*	4	A system generated number allocated to each of the events that took place for 1 vessel between its trip start and end dates.		keys
trip_start_datetime	4	Start date for the trip that the processing relates to.		datetime

trip_end_datetime	4	End date for the trip the processing relates to.		datetime
literal_yn	4	Boolean - This record is the literal version of the data.		yn
interp_yn	4	Boolean - Either an interpreted version of the data does not exist, or it does exist and this is it.		yn
resrch_yn	4	Boolean - Either a research version of the data does not exist, or it does exist and this is it.		yn

Mfish View Name: **environment_data**
External View Name: **x_environment_data**

Field	Ext	Usage	Comments	Field Type
event_key*	4	System generated number identifying a single environmental event.	Unique key when combined with version_seqno.	keys
version_seqno	4	System generated number identifying the version of a single environmental event.	Unique key when combined with event_key.	seqno
group_key	4	System generated number used to link to tables in the form database.		keys
surface_temp	4	Sea surface temperature, (TCP, SJC & TUN forms).		temperature
bottom_temp	4	Sea bottom temperature, (TCP forms only).		temperature
wind_speed	4	Wind speed metres/second, (SJC forms only).		speed
wind_direction	4	Wind direction, (SJC forms only).		direction
windforce _beaufortnum	4	?	Not used	beaufortnum
cloud_type	4	2 letter code for type of cloud, (TUN forms only).		type
cloud_cover_amount	4	Numeric code showing number of eighths cloud cover, (TUN forms only).		amount
bottom_depth	4	?	Not used	depth
confidence_scale	4	Confidence in environment data.		code
start_datetime*	4	The start date for the event.		datetime
vessel_key*	4	System generated number identifying the vessel fishing.		keys
vessel_reg_type	4	Vessel registration type, (**D**omestic, **C**harter, **F**oreign licensed or **U**nknown).		type
client_key*	4	System generated number identifying the permit holder.		keys

environment_data *field descriptions continued...*

fishyear*	4	Fishing year, (1 Oct 1996 to 30 Sep 1997 = 1997).	Wont be correct for species which have a different fishing year e.g. Rock Lobsters.	smallint
display_fishyear	4	Formatted fishing year, (1 Oct 1996 to 30 Sep 1997 = 1996/97).	See fishyear.	varchar
dcf_key*	4	System generated number identifying a single CELR, TCEPR, CLR , SJCER or TLCER.	When combined with version_seqno will identify all of the events relating to a single form.	keys
form_number	4	The ID number printed on each form.	Not unique because there are 5 different types of forms. Referred to in	id_int

			catcheff views as dcf_id_number.	
form_type	4	The type of the form. CELR is abbreviated to **CEL**, TCEPR to **TCP**, CLR to **CLR**, SJCER to **SJC** and TLCER to **TUN**.	Referred to in **catcheff** views as dcf_defn_group_type.	type
literal_yn	4	Boolean - This record is the literal version of the data.		yn
interp_yn	4	Boolean - Either an interpreted version of the data does not exist, or it does exist and this is it.		yn
resrch_yn	4	Boolean - Either a research version of the data does not exist, or it does exist and this is it.		yn

Mfish View Name: **vessel_log_data**
External View Name: **x_vessel_log_data**

Field	Ext	Usage	Comments	Field Type
event_key*	4	System generated number identifying a single vessel activity event.	Unique key when combined with version_seqno.	keys
version_seqno	4	System generated number identifying the version of a single vessel activity event.	Unique key when combined with event_key.	seqno
vessel_activity_type	4	Two letter code summarising the activity that the vessel was involved in e.g. **FI**shing, **S**tea**M**ing, **S**earc**H**ing (TCP & SJC forms only)		type
vessel_activity_name	4	What the fisherman actually wrote in the Activity field (TCP & SJC forms only)	Will need to report this and the above the field to get a representation of activity. In various cases either may be NULL.	name

Mfish View Name: **trip_event**
External View Name: **x_trip_event**

Field	Ext	Usage	Comments	Field Type
event_key*	4	System generated number identifying a single trip event.	Unique key when combined with version_seqno.	keys
version_seqno	4	System generated number identifying the version of a single trip event.	Unique key when combined with event_key.	seqno

trip_event *field descriptions continued...*

group_key	4	System generated number used to link to tables in the form database.		keys
trip_type	4	Type of trip, (**FIS**hing or **OBS**erver).		type
trip_sub_typ	4	Sub type of trip, (**CEL**r, **CLR** or **RES**earch).		type
confidence_scale	4	Confidence in trip data.		code
start_datetime*	4	The start date for a trip.		datetime
end_datetime	4	The end date for a trip.		datetime
vessel_key*	4	System generated number identifying the vessel fishing.		keys
vessel_reg_type	4	Vessel registration type, (**D**omestic, **C**harter, **F**oreign licensed or **U**nknown).		type
client_key*	4	System generated number identifying the permit holder.		keys

fishyear	4	Fishing year (1 Oct 1996 to 30 Sep 1997 = 1997).	Wont be correct for species which have a different fishing year e.g. Rock Lobsters.	smallint
display_fishyear	4	Formatted fishing year, (1 Oct 1996 to 30 Sep 1997 = 1996/97).	See fishyear.	varchar
dcf_key *	4	System generated number identifying a single CELR, TCEPR, CLR , SJCER or TLCER.	When combined with version_seqno will identify all of the events relating to a single form.	keys
form_number	4	The ID number printed on each form.	Not unique because there are 5 different types of forms. Referred to in **catcheff** views as dcf_id_number.	id_int
form_type	4	The type of the form. CELR is abbreviated to **CEL**, TCEPR to **TCP**, CLR to **CLR**, SJCER to **SJC** and TLCER to **TUN**.	Referred to in **catcheff** views as dcf_defn_group_type.	type
literal_yn	4	Boolean - This record is the literal version of the data.		yn
interp_yn	4	Boolean - Either an interpreted version of the data does not exist, or it does exist and this is it.		yn
resrch_yn	4	Boolean - Either a research version of the data does not exist, or it does exist and this is it.		yn

Mfish View Name: **bait**
External View Name: **x_bait**

Field	Ext	Usage	Comments	Field Type
event_key*	4	System generated number identifying a single fishing event.	Unique key when combined with version_seqno.	keys
version_seqno	4	System generated number identifying the version of a fishing event.	Unique key when combined with event_key.	seqno
group_key	4	System generated number used to link to tables in the form database.		keys
species_code*	4	Standard 3 letter code identifying the species used as bait.		species
equip_item_key	4	?	Not used.	keys

***bait** field descriptions continued…*

unit_type	4	A one letter code indicating the general nature of the bait used, (**S**pecies, **L**ure, **A**rtificial, **U**nspecified).		type
unit_num	4	The number of hooks baited with this type of bait.		num
confidence_scale	4	Confidence in the data.		code

Mfish View Name: **event_assoc_object**
External View Name: **x_event_assoc_object**

Field	Ext	Usage	Comments	Field Type
event_key*	4	System generated number identifying a single fishing event.	Unique key when combined with version_seqno.	keys

version_seqno	4	System generated number identifying the version of a fishing event.	Unique key when combined with event_key.	seqno
vessel_key*	4	The key identifying the other vessel in a pair fishing event	Referred to as object_key in the corresponding view in **catcheff**.	keys
event_assoc_object_type	4	?	Always has the value “PRV”	type

A description of the contents, (at the time of writing), of some of the useful non core views in the **warehou** database follows:

Mfish View Name: **bait_type**
External View Name: **x_bait_type**

unit_type	unit_type_description
A	Artificial
L	Lure
S	Species
U	Unspecified

Mfish View Name: **event_assoc_object_type**
External View Name: **x_event_assoc_object_type**

event_assoc_object_type	event_assoc_object_desc
CLI	NULL
PRV	NULL
SAC	NULL
VES	NULL

Mfish View Name: **fishing_event_type**
External View Name: **x_fishing_event_type**

fishing_event_effort_type	fishing_event_eff_type_desc
D	Dredge
G	Gathering
J	Squid Jigging
L	Lining
N	Passive Netting
O	Other Methods
P	Potting
S	Seine
T	Trawl

Mfish View Name: **nationality_type**
External View Name: **x_nationality_type**

nationality_type	nationality_type_desc
AUS	Australia
BZE	Belize
CHI	China (People's Republic of)
JAP	Japan
KOR	Korea
MLT	Malta

NOR	Norway
NZL	New Zealand
PAN	Panama (Republic of)
POL	Poland (Republic of)
RUS	Russian Federation
SNG	Singapore (Republic of)
TAI	Taiwan
UKR	Ukraine
USA	U.S.A
VAN	Vanuatu (Republic of) etc...

(166 further nationality types listed in the view)

Mfish View Name: **operational_event_type**
External View Name: **x_operational_event_type**

op_event_type	op_event_type_desc	dcf_convert_invokeid
E	Environment	convert_environment_event
F	Fishing Event	convert_fishing_event
L	Land or Transhipment	convert_landing_event
O	Observer Event	convert_observer_event
P	Log Processing	convert_landing_event
T	Trip	convert_trip_event

Mfish View Name: **species_class**
External View Name: **x_species_class**

species_class	species_class_name
A	Seaweed
B	Birds
C	Crustacea
E	Echinoderms
F	Fish
G	Rubbish and Garbage
H	Marine Mammals
M	Molluscs
O	Other
R	Reptiles
Z	Zoo and Phytoplankton

Mfish View Name: **specprod_dest_type**
External View Name: **x_specprod_dest_type**

destination_type	destination_type_desc	destination_indicator
A	Accidental loss	N
B	Stored as Bait	N
C	Disposed to crown	L
D	Discarded (NON-ITQ)	N
E	Eaten	N
H	Loss from Holding Pot	N

L	Landed in NZ (to LFR)	L
O	Conveyed outside NZ	O
R	Retained on board	N
S	Seized by crown	L
T	Transfer to another vessel	V
U	Used for Bait	N
W	Sold at wharf	O

Mfish View Name: **specprod_unit_type**
External View Name: **x_specprod_unit_type**

specprod_unit_type	specprod_unit_type_desc
BAG	Bag
BAS	Basket
BIN	Bin
BLO	BLO
BOX	Box
CAG	Cage
CAR	Carton
SAC	Sack
SIN	Single Fish
STR	String
T0	Tray containing 1-10
T1	Tray containing 11-20
T10	Tray containing 101-150
T15	Tray containing >150
T2	Tray containing 21-30
T3	Tray containing 31-40
T4	Tray containing 41-50
T5	Tray containing 51-60
T6	Tray containing 61-70
T7	Tray containing 71-80
T8	Tray containing 81-90
T9	Tray containing 91-100
TRA	Tray

*This view also has fields **specprod_unit_type_min** and **specprod_unit_type_max**

Mfish View Name: **specprod_act_type**
External View Name: **x_specprod_act_type**

specprod_action_type	specprod_action_type_desc
ECA	Estimated Catch (No Processed available)
GRE	Greenweight
LAN	Landed
MOV	Moved
OFF	Offal
PRO	Processed
PRT	Processed Total
SIN	Single Fish
SLD	Sold
TTL	Tray Tally
TTT	Tray Total

Mfish View Name: **specprod_act_wgt_type**
External View Name: **x_specprod_act_wgt_type**

weight_type	weight_type_desc
ACT	Actual
BAC	Back Calculated
CON	Calculated from Containers
EST	Estimated
FBA	Fisher Back Calculated

Mfish View Name: **trip_type**
External View Name: **x_trip_type**

trip_type	trip_type_desc
FIS	Fishing Trip
OBS	Observer Trip

Mfish View Name: **trip_subtype**
External View Name: **x_trip_subtype**

trip_type_type	trip_sub_type	trip_sub_type_desc
OBS	RES	Research Trip
FIS	CEL	CELR Trip
FIS	CLR	CLR Trip

Mfish View Name: **vessel_reg_type**
External View Name: **x_vessel_reg_type**

vessel_reg_type	vessel_reg_type_desc
C	Charter
D	Domestic
F	Foreign License
U	Unknown

5.0 Relationship between forms and fields

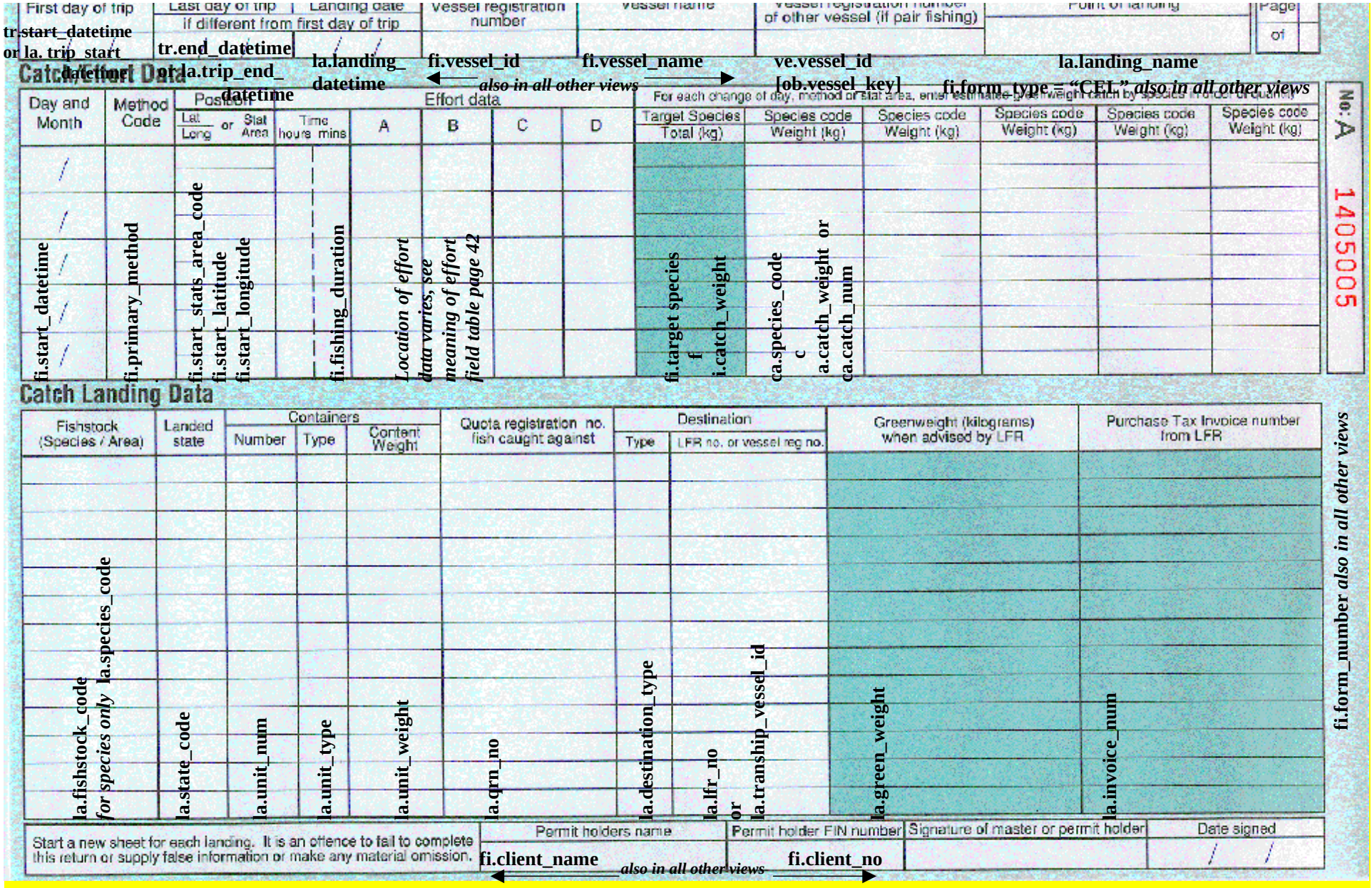
The diagrams on the following 5 pages illustrate the relationship between the information recorded by fishermen on the CELR, TCEPR, CLR, TLCER and SJCER forms, and where this data is stored on the **warehou** database.

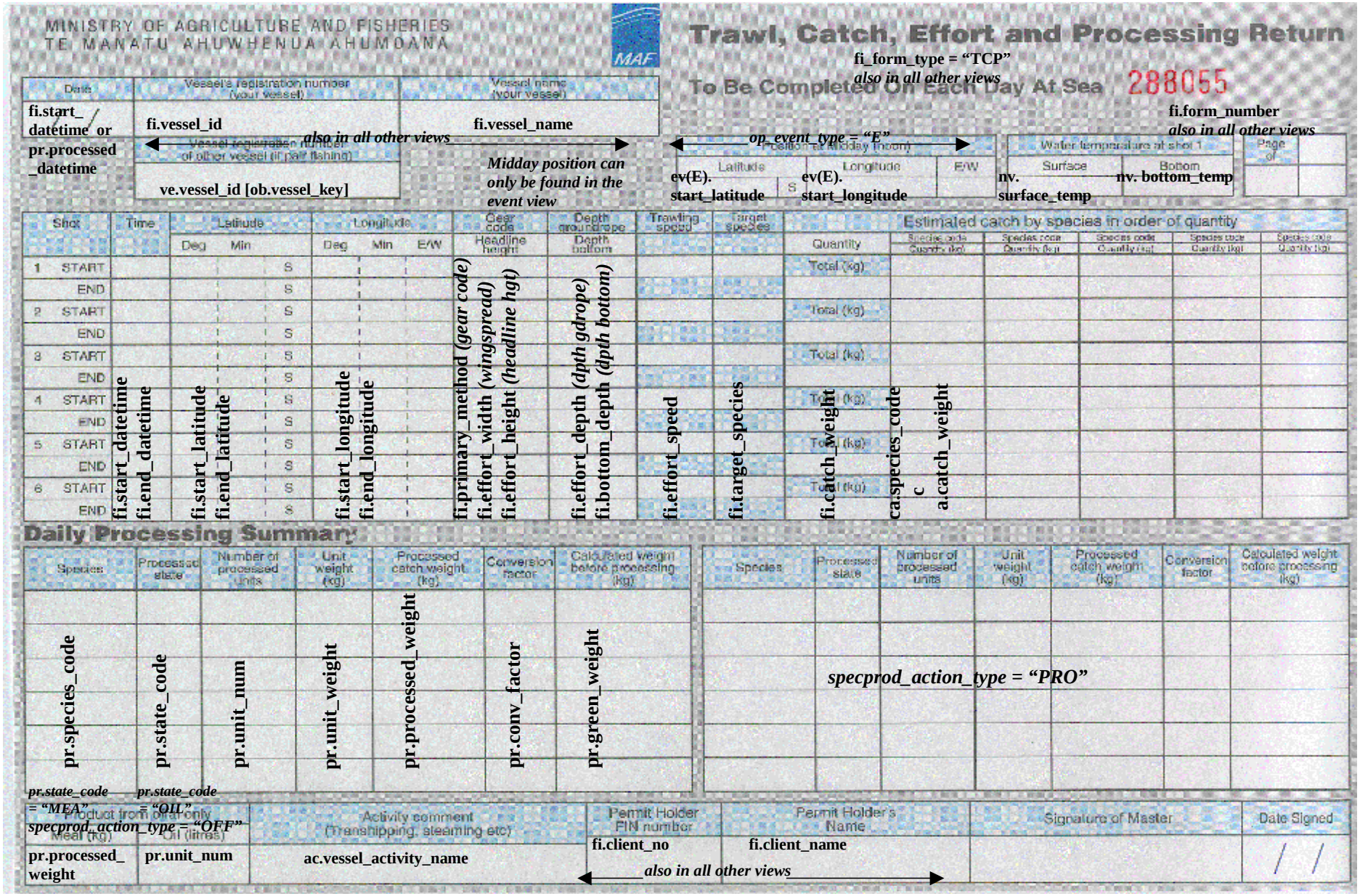
Much of the data is duplicated in several places on the database. This is especially true of dates and times. The diagrams show only 1 storage location for any item of information from a form. In each case an attempt has been made to guess the location that would be most commonly used to extract this item of information. It is this location that is shown on each diagram. Users should be aware that under some circumstances an easier option for extracting the date or time information that they require may exist. This information is available in the field descriptions given in section 4.4.

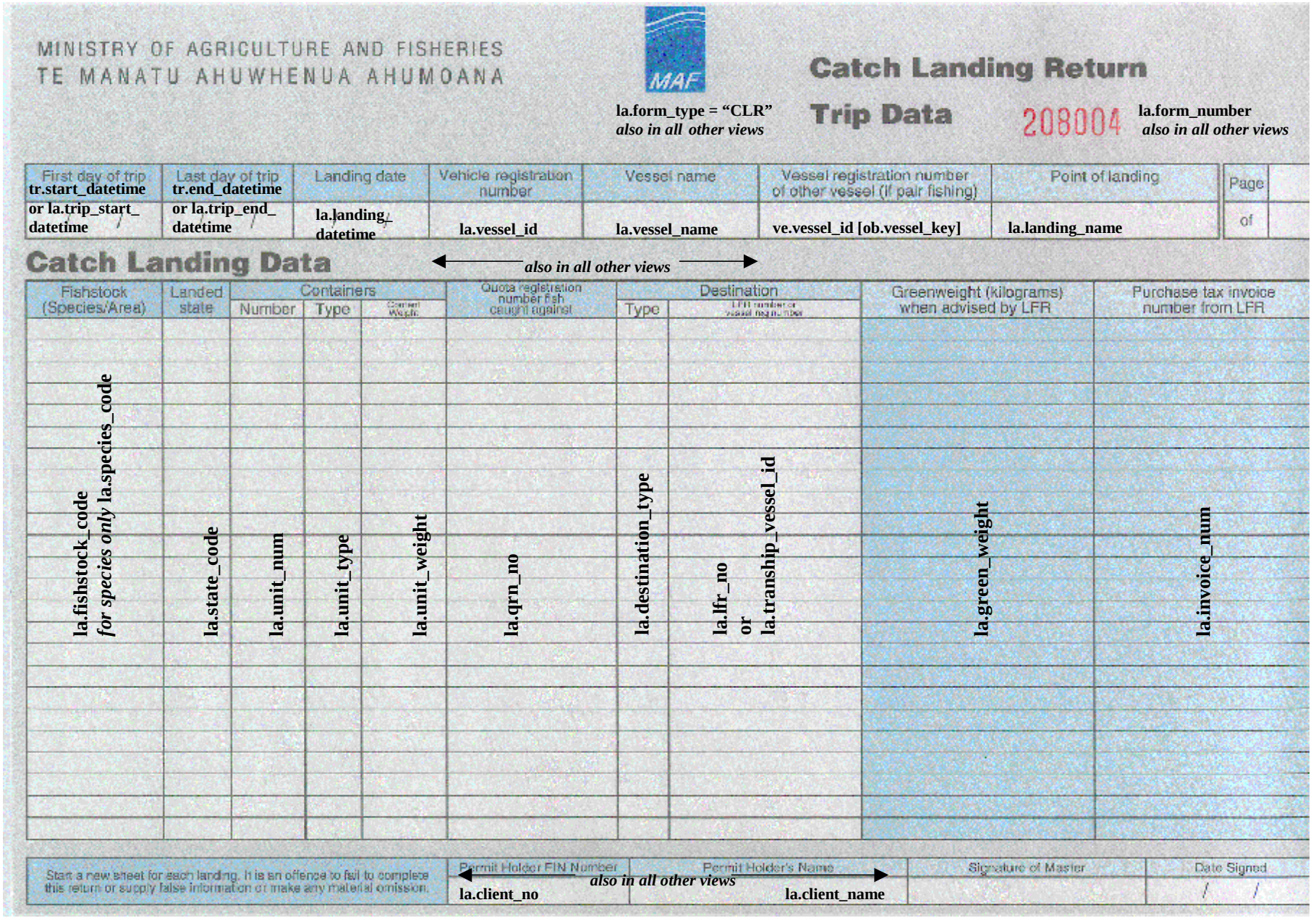
View names have been abbreviated as follows:

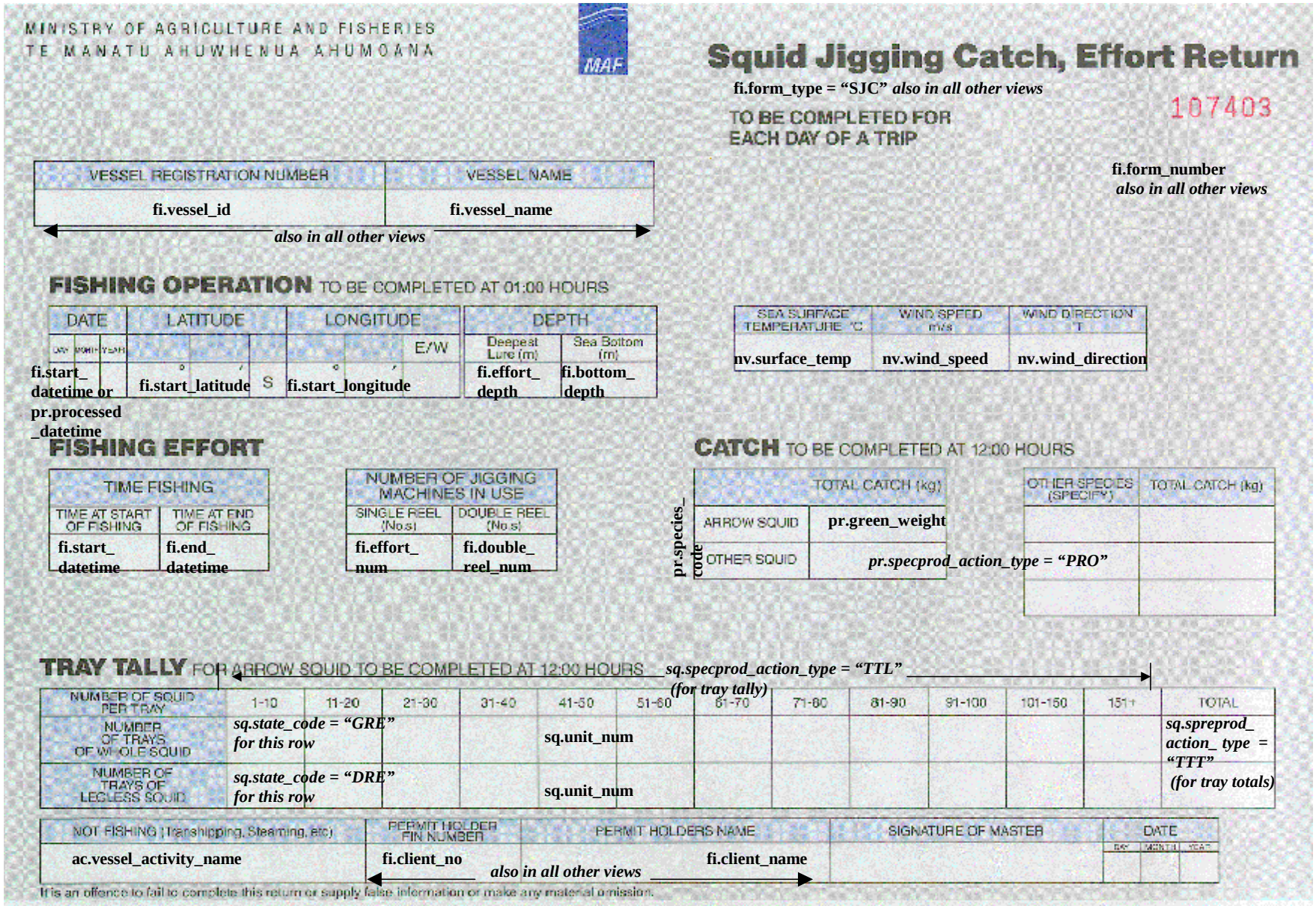
ev	**event**
ev(F)	**event** with **op_event_type** = "F" (fishing)
ev(P)	**event** with **op_event_type** = "P" (processing)
ev(E)	**event** with **op_event_type** = "E" (environment)
ev(T)	**event** with **op_event_type** = "T" (trip)
fi	**fishing_event**
ca	**estimated_subcatch**
la	**landing**
pr	**processed_catch**
tu	**tuna_individual_catch**
sq	**squid_tally**
nv	**environment_data**
ac	**vessel_log_data**
tr	**trip_event**
ba	**bait**
ob	**event_assoc_object**
ve	**vessel_specification**

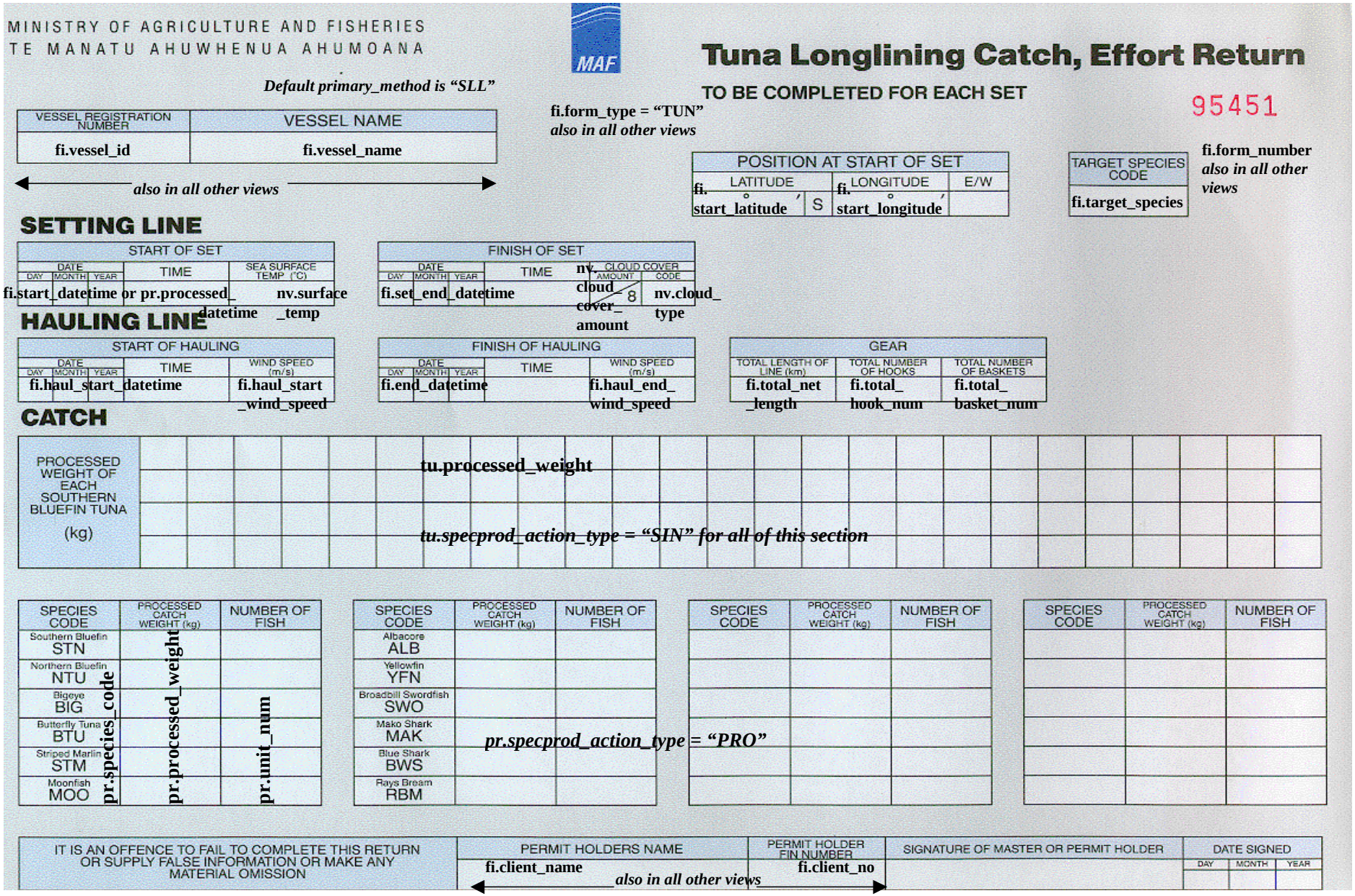
In the 5 diagrams that follow, notes are written in italics


First day of trip
Last day of trip if different from first day of trip
Landing date
Vessel registration number
Vessel name
Registration number of other vessel (if pair fishing)
Point of landing
Page of
tr.start_datetime or la. trip_start_datetime
tr.end_datetime or la.trip_end_datetime
la.landing_datetime
fi.vessel_id
fi.vessel_name
ve.vessel_id [ob.vessel_key]
la.landing_name
also in all other views
fi.form_type = "CEL" also in all other views
Catch/Effort Data
Day and Month
Method Code
Position
Lat Long or Stat Area
Time hours mins
Effort data
A
B
C
D
For each change of day, method or stat area, enter estimated greenweight catch by species in order of quantity
Target Species Total (kg)
Species code Weight (kg)
Species code Weight (kg)
Species code Weight (kg)
Species code Weight (kg)
Species code Weight (kg)
No: A 1405005
fi.start_datetime
fi.primary_method
fi.start_stats_area_code
fi.start_latitude
fi.start_longitude
fi.fishing_duration
Location of effort data varies, see meaning of effort field table page 42
fi.target species f i.catch_weight
ca.species_code c a.catch_weight or ca.catch_num
Catch Landing Data
Fishstock (Species / Area)
Landed state
Containers
Number
Type
Content Weight
Quota registration no. fish caught against
Destination
Type
LFR no. or vessel reg no.
Greenweight (kilograms) when advised by LFR
Purchase Tax Invoice number from LFR
la.fishstock_code for species only la.species_code
la.state_code
la.unit_num
la.unit_type
la.unit_weight
la.qrn_no
la.destination_type
la.lfr_no or la.tranship_vessel_id
la.green_weight
la.invoice_num
fi.form_number also in all other views
Start a new sheet for each landing. It is an offence to fail to complete this return or supply false information or make any material omission.
Permit holders name
Permit holder FIN number
Signature of master or permit holder
Date signed
fi.client_name
also in all other views
fi.client_no


MINISTRY OF AGRICULTURE AND FISHERIES
TE MANATU AHUWHENUA AHUMOANA
MAF
Trawl, Catch, Effort and Processing Return
fi_form_type = "TCP"
also in all other views
To Be Completed On Each Day At Sea
288055
fi.form_number
also in all other views
Date
Vessel's registration number (your vessel)
Vessel name (your vessel)
fi.start_ datetime or pr.processed _datetime
fi.vessel_id
fi.vessel_name
also in all other views
op_event_type = "E"
Vessel registration number of other vessel (if pair fishing)
ve.vessel_id [ob.vessel_key]
Midday position can only be found in the event view
Position at Midday (noon)
Latitude
Longitude
E/W
ev(E). start_latitude
S
ev(E). start_longitude
Water temperature at shot 1
Surface
Bottom
nv. surface_temp
nv. bottom_temp
Page of
Shot
Time
Latitude
Deg
Min
Longitude
Deg
Min
E/W
Gear code
Headline height
Depth groundrope
Depth bottom
Trawling speed
Target species
Estimated catch by species in order of quantity
Quantity
Species code
Quantity (kg)
1 START
END
2 START
END
3 START
END
4 START
END
5 START
END
6 START
END
Total (kg)
fi.start_datetime
fi.end_datetime
fi.start_latitude
fi.end_latitude
fi.start_longitude
fi.end_longitude
fi.primary_method (gear code)
fi.effort_width (wingspread)
fi.effort_height (headline hgt)
fi.effort_depth (dpth gdrope)
fi.bottom_depth (dpth bottom)
fi.effort_speed
fi.target_species
fi.catch_weight
ca.species_code
c
a.catch_weight
Daily Processing Summary
Species
Processed state
Number of processed units
Unit weight (kg)
Processed catch weight (kg)
Conversion factor
Calculated weight before processing (kg)
pr.species_code
pr.state_code
pr.unit_num
pr.unit_weight
pr.processed_weight
pr.conv_factor
pr.green_weight
specprod_action_type = "PRO"
pr.state_code = "MEA"
pr.state_code = "OIL"
specprod_action_type = "OFF"
Product from plant only
Meal (kg)
Oil (litres)
Activity comment (Transhipping, steaming etc)
Permit Holder FIN number
Permit Holder's Name
Signature of Master
Date Signed
pr.processed_ weight
pr.unit_num
ac.vessel_activity_name
fi.client_no
fi.client_name
also in all other views


MINISTRY OF AGRICULTURE AND FISHERIES
TE MANATU AHUWHENUA AHUMOANA
MAF
Catch Landing Return
Trip Data
208004
la.form_type = "CLR"
also in all other views
la.form_number
also in all other views
First day of trip
tr.start_datetime
or la.trip_start_datetime
Last day of trip
tr.end_datetime
or la.trip_end_datetime
Landing date
la.landing_datetime
Vehicle registration number
la.vessel_id
Vessel name
la.vessel_name
Vessel registration number of other vessel (if pair fishing)
ve.vessel_id [ob.vessel_key]
Point of landing
la.landing_name
Page
of
Catch Landing Data
also in all other views
Fishstock (Species/Area)
la.fishstock_code
for species only la.species_code
Landed state
la.state_code
Containers
Number
la.unit_num
Type
la.unit_type
Correct Weight
la.unit_weight
Quota registration number fish caught against
la.qrn_no
Destination
Type
la.destination_type
LFR number or vessel registration
la.lfr_no
or
la.tranship_vessel_id
Greenweight (kilograms) when advised by LFR
la.green_weight
Purchase tax invoice number from LFR
la.invoice_num
Start a new sheet for each landing. It is an offence to fail to complete this return or supply false information or make any material omission.
Permit Holder FIN Number
la.client_no
Permit Holder's Name
la.client_name
also in all other views
Signature of Master
Date Signed
/ /


MINISTRY OF AGRICULTURE AND FISHERIES
TE MANATU AHUWHENUA AHUMOANA
MAF
Squid Jigging Catch, Effort Return
fi.form_type = "SJC" also in all other views
TO BE COMPLETED FOR EACH DAY OF A TRIP
107403
fi.form_number also in all other views
VESSEL REGISTRATION NUMBER
VESSEL NAME
fi.vessel_id
fi.vessel_name
also in all other views
FISHING OPERATION TO BE COMPLETED AT 01:00 HOURS
DATE
LATITUDE
LONGITUDE
DEPTH
E/W
Deepest Lure (m)
Sea Bottom (m)
fi.start_ datetime or pr.processed _datetime
fi.start_latitude
S
fi.start_longitude
fi.effort_ depth
fi.bottom_ depth
SEA SURFACE TEMPERATURE °C
WIND SPEED m/s
WIND DIRECTION °T
nv.surface_temp
nv.wind_speed
nv.wind_direction
FISHING EFFORT
TIME FISHING
TIME AT START OF FISHING
TIME AT END OF FISHING
fi.start_ datetime
fi.end_ datetime
NUMBER OF JIGGING MACHINES IN USE
SINGLE REEL (Nos)
DOUBLE REEL (Nos)
fi.effort_ num
fi.double_ reel_num
CATCH TO BE COMPLETED AT 12:00 HOURS
pr.species_ code
TOTAL CATCH (kg)
ARROW SQUID
pr.green_weight
OTHER SQUID
pr.specprod_action_type = "PRO"
OTHER SPECIES (SPECIFY)
TOTAL CATCH (kg)
TRAY TALLY FOR ARROW SQUID TO BE COMPLETED AT 12:00 HOURS
sq.specprod_action_type = "TTL" (for tray tally)
NUMBER OF SQUID PER TRAY
1-10
11-20
21-30
31-40
41-50
51-60
61-70
71-80
81-90
91-100
101-150
151+
TOTAL
NUMBER OF TRAYS OF WHOLE SQUID
sq.state_code = "GRE" for this row
sq.unit_num
sq.spreprod_ action_ type = "TTT" (for tray totals)
NUMBER OF TRAYS OF LEGLESS SQUID
sq.state_code = "DRE" for this row
sq.unit_num
NOT FISHING (Transhipping, Steaming, etc)
PERMIT HOLDER FIN NUMBER
PERMIT HOLDERS NAME
SIGNATURE OF MASTER
DATE
DAY
MONTH
YEAR
ac.vessel_activity_name
fi.client_no
fi.client_name
also in all other views
It is an offence to fail to complete this return or supply false information or make any material omission.


MINISTRY OF AGRICULTURE AND FISHERIES
TE MANATU AHUWHENUA AHUMOANA
MAF
Tuna Longlining Catch, Effort Return
TO BE COMPLETED FOR EACH SET
95451
Default primary_method is "SLL"
fi.form_type = "TUN"
also in all other views
VESSEL REGISTRATION NUMBER
VESSEL NAME
fi.vessel_id
fi.vessel_name
also in all other views
POSITION AT START OF SET
LATITUDE
LONGITUDE
E/W
fi. start_latitude
S
fi. start_longitude
TARGET SPECIES CODE
fi.target_species
fi.form_number
also in all other views
SETTING LINE
START OF SET
DATE
DAY
MONTH
YEAR
TIME
SEA SURFACE TEMP (°C)
fi.start_datetime or pr.processed_ datetime
nv.surface _temp
FINISH OF SET
fi.set_end_datetime
nv. CLOUD COVER
AMOUNT
CODE
cloud cover_ amount
8
nv.cloud_ type
HAULING LINE
START OF HAULING
WIND SPEED (m/s)
fi.haul_start_datetime
fi.haul_start _wind_speed
FINISH OF HAULING
fi.end_datetime
fi.haul_end_ wind_speed
GEAR
TOTAL LENGTH OF LINE (km)
TOTAL NUMBER OF HOOKS
TOTAL NUMBER OF BASKETS
fi.total_net _length
fi.total_ hook_num
fi.total_ basket_num
CATCH
PROCESSED WEIGHT OF EACH SOUTHERN BLUEFIN TUNA (kg)
tu.processed_weight
tu.specprod_action_type = "SIN" for all of this section
SPECIES CODE
PROCESSED CATCH WEIGHT (kg)
NUMBER OF FISH
Southern Bluefin STN
Northern Bluefin NTU
Bigeye BIG
Butterfly Tuna BTU
Striped Marlin STM
Moonfish MOO
pr.species_code
pr.processed_weight
pr.unit_num
Albacore ALB
Yellowfin YFN
Broadbill Swordfish SWO
Mako Shark MAK
Blue Shark BWS
Rays Bream RBM
pr.specprod_action_type = "PRO"
IT IS AN OFFENCE TO FAIL TO COMPLETE THIS RETURN OR SUPPLY FALSE INFORMATION OR MAKE ANY MATERIAL OMISSION
PERMIT HOLDERS NAME
fi.client_name
also in all other views
PERMIT HOLDER FIN NUMBER
fi.client_no
SIGNATURE OF MASTER OR PERMIT HOLDER
DATE SIGNED
DAY
MONTH
YEAR

6.0 Meanings of multiple use fields

The meaning of the date stored in the **start_datetime** and **end_datetime** fields will change depending on the type of event being considered.

For example - A CELR form can have fishing, processing and trip events associated with it. The field start_datetime within the event view could store the date of fishing for CELR fishing events, the date of landing for CELR processing events, or the date of the first day of the trip for CELR trip events.

The contents of the **start_datetime** and **end_datetime** fields, for each type of event, is given in the following table :

Form type	Event type	start_datetime	end_datetime
CELR (CEL)	Fishing	Date of catch/effort data.	
	Processing	Landing date.	
	Trip	First day of trip.	Last day of trip.
TCEPR (TCP)	Fishing	Date and time trawl started.	Date and time trawl finished.
	Processing	Date, (top left of form).	
	Environment	Date, (top left of form).	
CLR (CLR)	Processing	Landing date.	
	Trip	First day of trip.	Last day of trip.
SJCER (SJC)	Fishing	Date and time fishing started.	Date and time fishing finished.
	Processing	Date fishing started, (middle left of form).	
	Environment	Date fishing started, (middle left of form).	
TLCER (TUN)	Fishing	Date and time line setting started.	Date and time line hauling finished.
	Processing	Date line setting started, (middle left of form).	
	Environment	Date line setting started, (middle left of form).	

The meaning of the data stored in the various effort related fields in the **fishing_event** view also change depending on the form type and fishing method used.

The contents of these fields for each form type and fishing method is given in the following table:

Form type and method		fishing_ duration	effort_ height	effort_ num	effort_ total_ num	effort_ width	total_ hook_ num	total_ net_ length
CEL	BT, BPT, MW & MPT	Time that gear was at target depth.	Headline height (m)	Number of tows in the day		Wing spread (m)		
	D	Time between start of first shoot and finish of last.		Number of shots in the day		Dredge width (m)		
	SN & DN	Time from start of setting first net until end of hauling last.				Mesh size (mm)		Total length of nets hauled that day (m)
	RLP, CP, EP, FP & FN			Number of pots/traps/nets in water at midnight	Number of pot/trap lifts in the day			
	SLL, BLL, DL & TL			Number of sets hauled in the day.			Number of hooks hauled in the day	
	HL, T & PL	Total catching time		Maximum number of lines used at 1 time			Maximum number of hooks used at 1 time	
	PS, DS, L, BS & RN			Number sets/shots in the day				Total length of net used (m)
	H, DI	Total person hours spent gathering/ diving		Number of people gathering or diving				
TCP			Headline height (m)			Wing spread (m)		
SJC				Number of single reels in use				
TUN							Number of hooks	Length of longline (Km)