

PREPARATION OF AUSTRALIA'S CATCH AND EFFORT DATA SUBMISSION TO THE CCSBT STOCK ASSESSMENT GROUP AND MANAGEMENT PROCEDURES WORKSHOP, 2004

by

P.I. Hobsbawn
P.C. Sahlqvist
and
K.J. McLoughlin

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1. Introduction

Data submissions supplied to CCSBT from Australia follow the format of the templates provided by the CCSBT Database Manager, Mr Bob Kennedy on 1 November 2002. The Bureau of Rural Sciences provides the following five reports for the Stock assessment Group data exchange:

- 1. Aggregated Catch and Effort
- 2. Catch and Effort Supplement (Raised Catch)
- 3. Total Catch by Fleet Quota Year
- 4. Total Catch by Fleet Calendar Year
- 5. Catch at Size

Flow diagrams of data sources and tables used to produce these reports are presented in Appendix 1. CSIRO provide Catch at Age data, the preparation of which is covered in a separate working paper. Additional data sets are provided for the CCSBT Operating Model according to Attachment G of the Eighth Scientific Committee Report.

2. Data Sources

There are four sources of data required to produce the five reports. These are: Daily Logs Database; Catch Disposal Database; Tow Cage Size Monitoring Reports and the Longline Fishery Size Monitoring Reports.

2.1. Daily Logs Database

The Daily Logs Database is maintained by the Australian Fisheries Management Authority (AFMA) and contains data collected from scientific logbooks that fishers are required to complete. The logbooks of relevance to SBT catch for the 2004 submission were the AL05 (longline and minor line), OT03 (minor line), PS01 (purse seine), TPB02 and TPB03 (purse seine and pole). See Appendix 2 for samples of these logbooks. Each operation is given a unique identifier in the Daily Logs Database and tables are linked using this identifier. The following tables are required from this database:

- 1. **Operations** contains information on each operation, including start latitude, start longitude and vessel identifier.
- 2. **Catch** contains a separate record for each species caught, together with the number of fish caught and estimated weight of the catch.
- 3. **Fishing_Effort** contains fishing method used and fishing effort information, eg number of hooks for longline operations; search hours for purse seine operations.
- 4. **Operation_Longline** contains other information on longlining operations, eg length of mainline.
- 5. **Operation_Pole** contains other information on poling operations, eg number of poles used.
- 6. **Vessel** contains information on each licensed vessel; vessel name is used to identify individual vessels when determining number of boats operated.
- 7. **Tow_Cage_Transfer** contains information on each transfer of fish from the capture vessel to the tow cage in each purse seine operation. Provides the

link between the Daily Logs Database and the OtherInfo table produced from the Tow Cage Size Monitoring Reports.

2.2. Catch Disposal Database

This is the database AFMA uses for quota monitoring and contains data collected from the SBT03 (SBT Farm Transit Log; purse seining for farms), CR4 (SBT Catch Disposal Record; all methods except purse seining for farms) and SBT04 (SBT Farm Catch Disposal Record; purse seining for farms). See Appendix 3 for samples of these forms. The following tables are required from this database:

- 1. **Catch Disposal** contains information on trip start and end dates.
- 2. **Landing** contains information on species caught, numbers of fish caught and weight of catch.
- 3. **Fishing_Method** provides the fishing method information.
- 4. **Tow_Catch_Transfer** contains identification of capture vessel for purse seine operations.

2.3. Tow Cage Size Monitoring Reports

Tow cage size monitoring data is provided by Protec Marine Pty Ltd, a company contracted to AFMA. Data collected for each tow cage include the length and weight of forty fish in the tow that weigh over 10 kg and the number of fish in the tow. A sample of one of these reports is given in Appendix 4. Data from these reports are collated to produce a table called OtherInfo. These data can then be used in conjunction with the Daily Logs data in the preparation of various reports, in particular the Catch at Size report.

2.4. Longline Fishery Size Monitoring Reports

These data are provided by WW Fisheries Pty Ltd, a company contracted to AFMA. Data collected for these reports include the length and weight information on nonfarm fish, all caught by longline in 2002 and 2003. This report is used to determine the catch at size data for longline operations.

3. Data Preparation

Standard queries and procedures have been established to produce the five reports that BRS submits each year, namely Aggregated Catch and Effort, Raised Catch, Total Catch by Fleet – Calendar Year, Total Catch by Fleet – Quota Year and Catch at Size. These queries may require minor modification each year as changes are made to the databases.

See Appendix 1 for flow diagrams of data sources and tables used to produce the various reports.

3.1. Definition of Seasons

For quota monitoring purposes, AFMA uses end tow date (farm purse seining) or trip end date (other methods) to define whether a catch falls within a particular season/fishing period. In past years, this rule has been followed for both the Total Catch by Fleet – Quota Year and Total Catch by Fleet – Calendar Year reports. Since the Tow Cage Size Monitoring Reports contain capture date information, Catch at Size reports have been based on capture date. The 2004 submission used the historical definitions for the Catch at Size and Total Catch by Fleet – Quota Year reports, however, the definition was changed for Total Catch by Fleet – Calendar Year report,

where capture date was used and hence matched the total produced by the Catch at Size report. The raised catch report is a new requirement and capture date was used to define catches for each month in that report also. Since logbook data is recorded by capture date, the Aggregated Catch and Effort report is based on capture date.

3.2. Spatial Definitions

The 2003 submission was the first time that data were provided by latitude/longitude grid (1x1 degrees for purse seine and 5x5 degrees for longline). The 2004 submission was also provided by latitude/longitude grid. This has been made possible because of the introduction of the SBT03 forms. This enables the linking of Tow Cage Size Monitoring Reports to the Daily Logs Database, thus providing capture location information. This method was used to prepare both the Raised Catch and the Catch at Size Reports in 2004. The Aggregated Catch and Effort Report also provides spatial information, all data for this report coming from the Daily Logs Database.

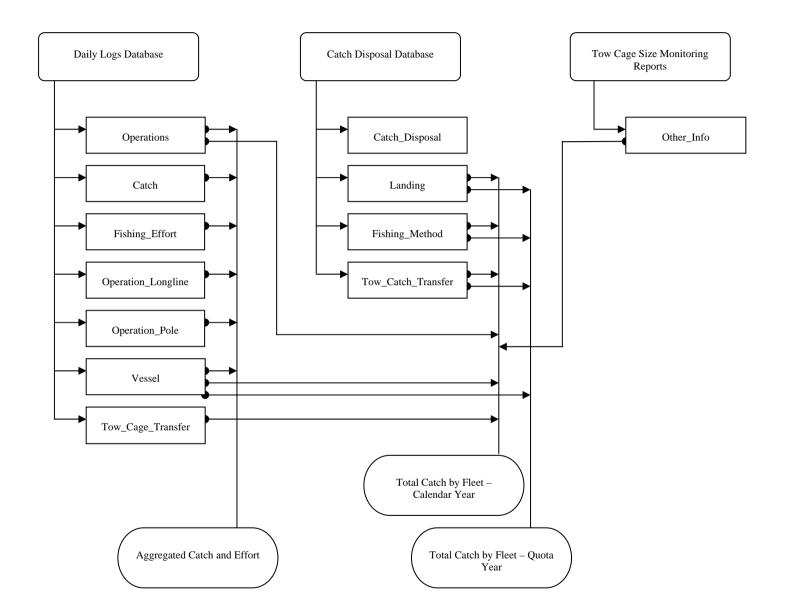
3.3. Adjustment Due to Tow Cage Spill

In 2003 there was a tow cage spill. AFMA deducted 15 t from this quota holder. This amount of 15 t was included in the Total Catch by Fleet – Quota Year, Total Catch by Fleet – Calendar Year, Raised Catch and Catch at Size reports. For the Catch at Size report, length and weight samples from a tow by the same company at a similar time in a similar location were used and then raised to the 15 t.

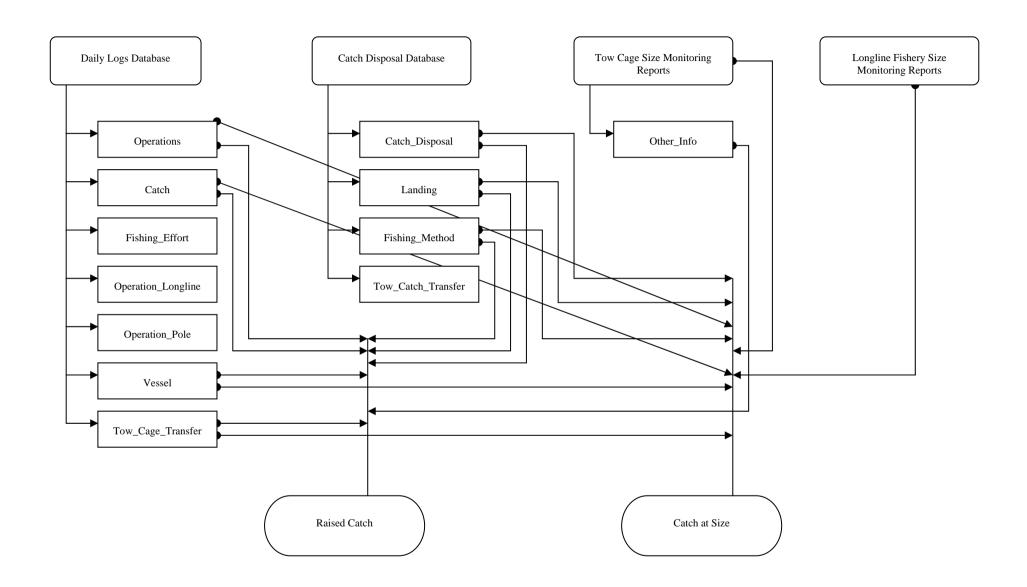
4. Closing Remarks

The description of data preparation and submission in this report applies to the 2002 and 2003 data supplied to CCSBT. A more detailed description of the fields within the data sources can be obtained

Appendix 1: Flow Charts Showing Flow of Data from Data Sources to Reports



Longline Fishery Size Monitoring Reports



Appendix 2: Scientific Logbook Forms (AL05, OT03, PSP01, TPB02 and TPB03)

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Appendix 3: Catch Disposal Forms (CR4, SBT03, SBT04)

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Signature A. McNally

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Southern	Bluefin Tuna Fishery	İ
	th Disposal Record	

Book No. Page No.

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Appendix 4: Tow Cage Size Monitoring Report

Southern Bluefin Tuna Fishery Farm Catch per Tow Cage

ow No		SE	3T04 Book &	Page No.	
		-		nformation	
dcher Ve	essel				OWNER
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		into Tow Cage into Tow cage	-	T/Cage	Book & Page
te Tow		mas tom dage		- Indage	
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		ng Catching	_		red in this Tow Cage
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of Mort	alties betw	een end of Tow		Total I	Mortalities
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		Av	erage Weight	Sample Informat	ion
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			Fish Cour	t Information	confirm
Transf	er Date	Video Count	Tonnage	Static Cage ID	Name of Cage Owner
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