



CCSBT-ESC/0409/10

10. Data Exchange

Purpose

To review that 2004 data exchange and to determine the data exchange requirements for 2005.

(1) Review of Data Exchange in 2004

Two data exchanges were specified (Attachment G of the SC8 report) for 2004, these being:

- Standard data exchange (due 30 April 2004)
- Information for updating the operating model (due 31 May 2004)

Unfortunately, a number of problems occurred during the data exchange and the resultant delays meant that some important data was not available till 5 July 2004. This significantly reduced the time available for updating the operating model and for conducting assessments. The problems included:

- Late submission of data, in particular
 - Initial catch effort and size data (2003 data and revised 2002 data) had not been received from all members till approximately 4 weeks after the due date. In one case, only partial coverage catch effort data and no size data has been provided and we are still waiting for more complete data.
- Submission of incorrect data
 - Incorrect data (for catch effort, catch at size, and raised catch) was submitted by three members during the data exchange. In most cases, the member's discovered the errors themselves and submitted revised data. In one case, the revised data was also flawed and a third submission of data was required. These multiple submissions of data resulted in further problems, including: further delays in provision of data (up to 6 weeks after the due date); wasted effort by other members and the Secretariat as these data had to be loaded up to three times; and causing confusion in trying to determine which were the latest versions of the different datasets.
- The delay in determining which historical data to use for the assessment and update of the operating model
 - During the data exchange, it became apparent that the original decision concerning which historical data to use for the assessment and operating model update was not appropriate (see paper CCSBT-ESC/0409/41 for details). The time taken to resolve this was the most serious problem in the data exchange and as a result, final catch effort and size data were not provided till 9 weeks after the due date.
- Incomplete data being provided
 - In some cases, the catch effort or size data provided did not contain all the fields of information required. This was described in paper CCSBT-ESC/0409/07 (Characterisation of SBT catch), so it is not considered further here.

- Raised catch at age data was not provided or not provided to the required resolution by two of the members. This was due to uncertainty regarding the calculation methods to be used.

Recommendations towards addressing the above problems:

- To re-enforce the data exchange timeframes, the Secretariat can place an Excel file on the private area of the web site that contains a list of due dates for each member and data item. This spreadsheet would also contain the dates when each item of data was provided and this date would be updated whenever new data is received.
- To reduce confusion in locating data (particularly the latest versions of re-submitted data) amongst the mass of data exchange e-mails, the Secretariat can load all the data received to the private area of the web site and ensure that only the latest versions of data are on the web site¹. This proposal would also overcome difficulties that people are starting to have with “.zip” files (and other types of files) being removed/rejected by their e-mail systems.
- To help overcome problems of revised historic data, any data provided for future data exchanges should include a detailed description of any changes made to any historical data. If changes are more than a routine update of the most recently provided year of data or very minor corrections to older data, then the changed data would not be used until discussed at the next SAG/SC meeting (unless there was specific agreement to the contrary).
- All data provision requirements (including calculation methods where this is uncertain) need to be specified so that there is no uncertainty in the data provision requirements or about how the data needs to be generated.

(2) Requirements for Data Exchange in 2005

A set of draft data exchange requirements for 2005 is provided in Attachment A. These requirements are based on the 2004 data exchange requirements, with the additional of a few items that were required during last year's exchange. These requirements are divided into three components:

1. Standard fishery data that is recommended to be exchanged every year.
2. Data that would be required for an update of the management procedure operating model if another update was required.
3. Data that will be needed for driving the catch-control rule of the selected management procedure. The details of the data required for this work will need to be defined at the meeting.

Attachments B and C specify the catch effort and catch at size information that should be provided.

Prepared by the Secretariat

¹ It is envisaged that the data would be sent only to the Secretariat rather than the entire data exchange e-mail list. The Secretariat would then update the web site and advise members of the update by forwarding the text content of e-mails where appropriate. If a member had concerns about the confidentiality of a particular data file being placed on the private area of the web site, then that data file could be placed in a password protected zip file (using a common password that the Secretariat would provide to all members of the data exchange e-mail list) before placing it on the web site.

(1) Standard Fishery Data for the 2004 calendar year

Most of these data are due by 30 April 2005, but some other due dates have also been suggested. Data items in italics were not specified for the 2004 data exchange, but were provided in that exchange.

Data listed in the following table should be provided for the complete 2004 calendar year plus any other year for which the data has changed. If changes to historic data are more than a routine update of the 2003 data or very minor corrections to older data, then the changed data will not be used until discussed at the next SAG/SC meeting (unless there was specific agreement to the contrary). Changes to past data (apart from a routine update of 2003 data) must be accompanied by a detailed description of the changes.

The catch effort and size data should be provided in the identical format as it was provided in last year. If the format of the data provided by a member is changed, then the new format and some test data in that format must be provided to the Secretariat by 31 January 2004 to allow development of the necessary data loading routines.

Type of Data to provide	Data Provider(s)	Due Date	Description of data to provide ²
<i>CCSBT Data CD</i>	<i>Secretariat</i>	<i>31 Jan 05</i>	<i>An update of the data (catch effort, catch at size, raised catch and tag-recapture) on the data CD to incorporate data provided in the 2004 data exchange and any additional data (e.g. tag/recapture) received since that time.</i>
Catch and Effort	all members	30 Apr 05	Catch (in numbers and weight) and effort data is to be provided as either shot by shot or as aggregated data. The maximum level of aggregation is by year, month, fleet, gear, and 5x5 degree (longline fishery) or 1x1 degree for surface fishery. A template showing the required information is provided in Attachment B.
RTMP catch and effort data	Japan	30 Apr 05	The catch and effort data from the real time monitoring program should be provided in the same format as the standard logbook data is provided.
<i>NZ joint venture catch and effort data to 1*1.</i>	<i>Secretariat³</i>	<i>14 May 05</i>	<i>Aggregated New Zealand catch and effort data, to 1*1 degrees of resolution instead of 5*5 degrees. These data are required for the one of the CPUE indices produced by Japan. Unless otherwise approved by New Zealand, these data will only be provided to New Zealand and Japan.</i>
Raised catch data for AU, NZ and KR catches	Australia Secretariat ⁴	14 May 05	Aggregated raised catch data should be provided at a similar resolution as the catch and effort data. This can be provided either as raised data (Australia), or by providing a "rule" by which the Secretariat can calculate raised catches from catch and effort data (New Zealand and Korea). Japan and Taiwan do not need to provide anything here because they provide raised catch and effort data.

² It is accepted that there may be cases where specific items information cannot be provided because it has not been collected in the specified manner or because it is not readily available in the format required.

³ This data will be calculated by the Secretariat on the assumption that New Zealand provides its catch and effort data in its usual high resolution, shot by shot form.

⁴ The Secretariat will produce raised catch data for New Zealand and Korea in the same manner as conducted in 2004.

Size Data	all members	30 Apr 05	Raised size composition data should be provided using the CCSBT agreed method at an aggregation of year, month, fleet, gear, and 5x5 degree. Data should be provided in the finest possible size classes (1 cm). It is expected that raised data will be provided by Australia, Japan, New Zealand and Taiwan. Australia and Japan will provide advisory support for members who are providing raised size data for the first time. Members who cannot raise their size data in accordance with CCSBT agreed procedures, should provide raw size data (individual length/weight measurement data) at the same level of resolution. A template showing the required information was provided in Attachment C.
<i>RTMP size data</i>	<i>Japan</i>	<i>30 Apr 05</i>	<i>The size data from the real time monitoring program should be provided in the same format as the standard size data is provided.</i>
Total catch by Fleet	all members	30 Apr 05	Raised total catch (weight and number) and number of boats fishing by fleet and gear. These data need to be provided for both the calendar year and the quota year.
<i>Mortality allowance (RMA and SRP) usage</i>	<i>all members</i>	<i>30 Apr 05</i>	<i>The mortality allowance (kilograms) that was used in the 2004 calendar year. Data is to be separated by RMA and SRP mortality allowance. If possible, data should also be separated by month and location.</i>
SBT import statistics	Japan	30 Apr 05	Weight of SBT imported into Japan by country, fresh/frozen and month. These import statistics are used in estimating the catches of non-member countries.
Total Indonesian catch by month and % of Indonesian LL catch that is SBT	IOTC/ Secretariat	30 Apr 05	The Secretariat is to liaise with the IOTC to obtain the required data for 2004.
Indonesian LL SBT age and size composition	Australia	30 Apr 05	Annual estimates of both the age and size composition is to be generated by spawning season (July to June) rather than calendar year. Estimates will be shown for the seasons from 1994/95 to 2003/04.
Acoustic estimates of age 1 SBT off Western Australia	Japan	30 Apr 05	Estimates from the 2004/05 season sampling.
Tag returns	Secretariat	30 Apr 05	<i>Updated summary of the number tagged and recaptured per month and season. [In the 2004 data exchange, the raw tag/recapture data was specified. However, this will be provided on the data CD on 31 Jan 05, so a summary update is probably sufficient especially given that data collection for the season will only be commencing in April]</i>
Catch at age data	all members	14 May 05	Catch at age (from catch at size) data by 5*5 degree, and month to be provided by each member for their longline fisheries. Korea and Taiwan should liaise with Japan and the Secretariat (since theirs is mainly an issue of substitution of Japanese/other length frequency data). New Zealand will be assisted by CSIRO to provide data separately for the charter and domestic fleets.
<i>CPUE input data</i>	<i>Australia Japan</i>	<i>31 May 05</i>	<i>Catch (number of SBT and number of SBT in each age class using proportional aging) and effort (sets and hooks) data⁵ by year, month, and 5*5 lat/long for use in CPUE analysis</i>

⁵ Data restricted to months April to September, SBT statistical areas 4-9, and the Japanese, Australian joint venture and New Zealand joint venture fleets.

(2) Data for updating the operating model

It does not seem likely that data will be required for another full update of the operating model in 2005. However, the 2004 data requirements table has been updated and provided below in case of such an eventuality. Some of the items listed in this table may also be considered important for standard data exchanges, in which case these items should be identified and moved to the previous table.

Type of Data to provide	Data Provider(s)	Description of data to provide
Total catch per fishery each year from 1952 to 2004	Secretariat / Australia / Japan / Taiwan	<ul style="list-style-type: none"> • Secretariat will do necessary calculations to obtain most totals • Australia will provide surface fishery update for 2003/04 and any previous seasons that it wishes to update • Taiwan to update the rule of thumb (2004) for separating the target and non-target SBT fisheries.
Catch-at-length (2 cm bins) for LL1, LL2, LL3, and Japan spawning ground fisheries	Secretariat / Taiwan	<ul style="list-style-type: none"> • Secretariat to do necessary calculations from data provided for data exchange • Taiwan to provide an update of length frequency data for the LL2 fishery.
Catch-at-age (ages 0 – 30) for Australia surface and Indonesia spawning ground fisheries	Australia	<ul style="list-style-type: none"> • These data will be provided to June 2004 in the same format as provided for the initial management procedure data exchange.
CPUE series	Australia / Japan	<p>5 CPUE series are to be provided for ages 4+, as specified below:</p> <ul style="list-style-type: none"> • Nominal (Australia) • Laslett Core Area (Australia) • B-Ratio proxy (W0.5) (Japan) • Geostat proxy (W0.8) (Japan) • ST Windows (Japan) <p>The operating model will then use the median of these series.</p>
Tag releases/recoveries and reporting rates	Australia	The RMP tag/recapture data for the period 1991-1997 will be updated for any changed/new data in the database.
Mean length-at-age by year and season, and CV of length-at-age	Australia	CSIRO will consider the need for updating these data and advise other Members of its recommendation by 29 February 2004. CSIRO will then provide updated information if members considered it appropriate [This is now out of date, what do members wish to do with respect to updating these data?].

(3) Data for the Management Procedure

If the CCSBT moves into implementation of a specific management procedure, that management procedure will require current data for driving the catch-control rule (as opposed to conditioning or estimating parameters). The data used to set catches would include the actual catches, CPUE and possibly age-composition information.

Further discussion of the MP data requirements, timeframes and responsibilities will need to be held during the SAG/SC to better define the associated data exchange requirements for 2005.

Template for Aggregated catch and effort data.

Notes: (1) This information should be recorded for all commercial fishing that targeted SBT, or that caught SBT while targeting other species

- (2) Contact the Secretariat for details of the required codes
- (3) You can provide catch data for multiple species by placing the catch of each species on a separate line and duplicating the "effort" information (the gray shaded columns) for each line. Alternatively, you may wish to add the catch of extra species as extra columns across this spreadsheet. If you choose this option, you will need to duplicate the last 6 columns (shaded in blue) for each species you add.
- (4) If aggregating DATE to the month, you should enter the first day of the month as the date (e.g. enter Jan-02 as 01-Jan-02)
- (5) If you do not record the SBT STAT_AREA_CODE, but are providing latitude and longitude, then you can leave the statistical area blank because the Secretariat can easily calculate this.
- (6) The LATITUDE should be in decimal degrees with S<0 and N>0. The position you supply should be the northern border of the grid
- (7) The LONGITUDE should be in decimal degrees with W<0 and E>0. The position you supply should be the western border of the grid
- (8) The field "N_DAYS_SEARCHED" should be considered optional until we agree on a standard method for estimating this.
- (9) Certain fields are only required for certain gear types. When a field is only required for a few gear types, the codes of the required gear types are listed in red
- (10) GEAR_LENGTH should be provided in metres, as total length of net set for PS and GILL, and as total length of line for LL.
- (11) GEAR_DEPTH should be provided in metres, as net depth for PS and GILL, and line depth for LL. However, this should only be provided if all shots used the same depth. In this case, provide the single depth of the net/line, NOT the sum of the depths for all shots.
- (12) SPOTTER_TYPE_CODE should only be provided if a single code applied to all shots in the record.
- (13) **Important:** If fishing was conducted in the aggregated strata, but nothing was caught (or if no "relevant" species were caught), then you must record the fishing effort information, and specify the CATCH_SPECIES as "NIL". In this case, all the other catch fields would be left empty.
- (14) WEIGHT_RETAINED is the whole weight of fish (of the relevant species) retained in kilograms.
- (15) CONVERSION_FACTOR is the value by which processed weights were multiplied to estimate the whole weight.
- (16) SCALING_FACTOR is the amount by which a sample weight was multiplied to calculate the weight retained. This is "1" if no scaling was required.

																			Details of the catch of a species					
DATE	COUNTRY_CODE	FLEET_CODE	GEAR_CODE	TARGET_SPECIES	STAT_AREA_CODE	LATITUDE	LONGITUDE	N_BOATS	N_DAYS_SEARCHED Optional - see point "8"	N_DAYS_FISHED	N_SETS_SHOTS (GILL,LL, MWT,PS, TRAP)	N_HOOKS (LL,TROL, HAND)	N_BASKETS (LL)	N_HOURS (TROL & desirable for all methods)	GEAR_LENGTH see point "10" (PS,GILL, optional for LL)	GEAR_DEPTH see point "11" (PS,GILL, optional for LL)	SPOTTER_TYPE_CODE (PS,BB)	NUMBER_OF_POLES (BB)	CATCH_SPECIES	WEIGHT_RETAINED	CONVERSION_FACTOR	SCALING_FACTOR	NUMBER_RETAINED	NUMBER_DISCARDED

Template for Shot by Shot catch and effort data.

Notes: (1) This information should be recorded for all commercial fishing that targeted SBT, or that caught SBT while targeting other species

- (2) Contact the Secretariat for details of the required codes
- (3) You can provide catch data for multiple species by placing the catch of each species on a separate line and duplicating the "effort" information (the gray shaded columns) for each line. Alternatively, you may wish to add the catch of extra species as extra columns across this spreadsheet. If you choose this option, you will need to duplicate the last 6 columns (shaded in blue) for each species you add.
- (4) For DATETIME, provide either the date & time at the start of the shot, or just the date. The date/time should be provided in the format DD-MON-YY:HH:MI (e.g 15-Jan-01:16:05)
- (5) If you do not record the SBT STAT_AREA_CODE, but are providing latitude and longitude, then you can leave the statistical area blank because the Secretariat can easily calculate this.
- (6) The LATITUDE can be noon position, start of shot, end position, and should be in decimal degrees with S<0 and N>0. The position you supply should be the northern border of the grid
- (7) The LONGITUDE can be noon position, start of shot, end position, and should be in decimal degrees with W<0 and E>0. The position you supply should be the western border of the grid
- (8) The field "N_DAYS_SEARCHED" should be considered optional until we agree on a standard method for estimating this.
- (9) VESSEL_ID should be a unique identifier for the vessel. This can be a registration number, or a unique vessel key that hides the true identity of the vessel etc.
- (10) Certain fields are only required for certain gear types. When a field is only required for a few gear types, the codes of the required gear types are listed in red
- (11) GEAR_LENGTH should be provided in metres, as total length of net set for PS and GILL, and as total length of line for LL.
- (12) GEAR_DEPTH should be provided in metres, as net depth for PS and GILL, and line depth for LL.
- (13) **Important:** If fishing was conducted, but nothing was caught (or if no "relevant" species were caught), then you must record the fishing effort information, and specify the CATCH_SPECIES as "NIL". In this case, all the other catch fields would be left empty.
- (14) WEIGHT_RETAINED is the whole weight of fish (of the relevant species) retained in kilograms.
- (15) CONVERSION_FACTOR is the value by which processed weights were multiplied to estimate the whole weight.
- (16) SCALING_FACTOR is the amount by which a sample weight was multiplied to calculate the weight retained. This is "1" if no scaling was required.

															Details of the catch of a species							
DATETIME	COUNTRY_CODE	FLEET_CODE	GEAR_CODE	TARGET_SPECIES	STAT_AREA_CODE	LATITUDE	LONGITUDE	N_DAYS_SEARCHED Optional - see point "8"	VESSEL_ID	N_HOOKS (LL,TROL,HAND)	N_BASKETS (LL)	N_HOURS (TROL & desirable for all methods)	GEAR_LENGTH see point "11" (PS,GILL, optional for LL)	GEAR_DEPTH see point "12" (PS,GILL, optional for LL)	SPOTTER_TYPE_CODE (PS,BB)	NUMBER_OF_POLES (BB)	CATCH_SPECIES	WEIGHT_RETAINED	CONVERSION_FACTOR	SCALING_FACTOR	NUMBER_RETAINED	NUMBER_DISCARDED

Template for Catch at Size data.

- Notes:** (1) **You should provide adjusted (raised and substituted according to agreed CCSBT protocols) catch at size data. If you are not able to adjust your raw data, then you should provide the raw (individual) length (and weight) data. Notes below in blue relate specifically to the provision of raw measurement data.**
- (2) Contact the Secretariat for details of the required codes
- (3) If aggregating CAPTURE_DATE to the month, you should enter the first day of the month as the date (e.g. enter Jan-02 as 01-Jan-02). If aggregating to the half month, you should enter the first half month with a day of "1" and the second half month with a day of "16".
- (4) If you do not record the SBT STAT_AREA_CODE, but are providing latitude and longitude, then you can leave the statistical area blank because the Secretariat can easily calculate this.
- (5) The field "OTHER_AREA_CODE" should be completed where appropriate (e.g. Australia should record the State where these fish were captured)
- (6) The LATITUDE should be in decimal degrees with S<0 and N>0. The position you supply should be the northern border of the grid
- (7) The LONGITUDE should be in decimal degrees with W<0 and E>0. The position you supply should be the western border of the grid
- (8) LENGTH_CLASS is the lower end of the length class in centimetres. **For raw measurement data, simply record the length of the particular fish.**
- (9) **WEIGHT is only relevant when raw (individual measurements) size data is provided, in which case, it is the weight of the fish in kilograms.** When length frequency data is provided, the weight should be left empty.
- (9) CLASS_PRECISION is the size of the length class in millimetres. **This is not relevant (so leave empty) for raw measurement data.**
- (10) FREQUENCY_RAW. **For raw measurement data, this should be "1".** Otherwise, this is the number of SBT in this length class that were actually measured including any SBT that were measured in other units (e.g. weight) and placed in this length class after a conversion to length (i.e. this includes numbers reported in the next field).
- (11) FREQUENCY_RAW_CONVERTED. In most cases, this will be zero. It is the number of SBT that have been placed in this length class after a conversion from different units (such as weight).
- (12) FREQUENCY_ADJUSTED is the actual adjusted (raised and substituted) number of SBT in this length class. Because this is a calculated value, often involving small fractions of fish, this should be reported as a real number with up to six decimal places. **Naturally, this field should be left empty for raw measurement data.**

CAPTURE_ DATE	COUNTRY_ CODE	FLEET_ CODE	GEAR_ CODE	STAT_ AREA_ CODE	OTHER_ AREA_ CODE	LATITUDE	LONGITUDE	LENGTH_ CLASS	WEIGHT	CLASS_ PRECISION (=class size)	FREQUENCY_ RAW	FREQUENCY_ RAW_ CONVERTED	FREQUENCY_ ADJUSTED
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