みなみまぐろ保存委員会

CCSBT-ESC/1708/05-Rev1

Data Exchange (ESC agenda item 14)

Introduction

Draft data exchange requirements for 2018 are provided in **Attachment A**. The attachment shows the proposed data that are to be provided during 2018 and the dates and responsibilities for the data provision.

These requirements are based on the 2017 data exchange requirements with all items rolled over and with the dates incremented. There were no additional changes requested by ESC participants.

Catch effort and size data should be provided in the identical format as were provided in 2017. If the format of the data provided by a member is changed, then the new format and some test data in that format should be provided to the Secretariat by 31 January 2018 to allow development of the necessary data loading routines.

Data listed in Attachment A should be provided for the complete 2017 calendar year plus any other year for which the data have changed. If changes to historic data are more than a routine update of the 2016 data or very minor corrections to older data, then the changed data will not be used until discussed at the next ESC meeting (unless there was specific agreement to the contrary). Changes to past data (apart from a routine update of 2016 data) must be accompanied by a detailed description of the changes.

During the 2017 Data Exchange South Africa revised its catch and effort and its total catch by fleet data for 2005-2015. Under the rules of the Data Exchange, these data are not to be used until they are discussed at an ESC meeting. Attachment B provides a summary of the changes to the data and the reasons for the revision. Members are invited to consider the revised data and decide whether they are to be used in the future.

Prepared by the Secretariat

Type of Data to provide[1]	Data Provider(s)	Due Date	Description of data to provide
CCSBT Data CD	Secretariat	31 Jan 18	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 2017 data exchange and any additional data received since that time, including: • Tag/recapture data (*The Secretariat will provided additional updates of the tag-recapture data during 2018 on request from individual members*); • Update the unreported catch estimates using the revised scenario (S1L1) produced at SAG9,
Total catch by Fleet	all Members and Cooperating Non-Members	30 Apr 18	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.
Recreational catch	all Members and Cooperating Non-Members that have recreational catches	30 April 18	Raised total catch (weight and number) of any recreationally caught SBT if data are available. A complete historic time series of recreation catch estimates should be provided (unless this has previously been provided). Where there is uncertainty in the recreational catch estimates, a description or estimate of the uncertainty should be provided.
SBT import statistics	Japan	30 Apr 18	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.
Mortality allowance (RMA and SRP) usage	all Members (& Secretariat)	30 Apr 18	The mortality allowance (kilograms) that was used in the 2017 calendar year. Data is to be separated by RMA and SRP mortality allowance. If possible, data should also be separated by month and location.
Catch and Effort	all Members (& Secretariat)	23 Apr 18 (New Zealand)[2] 30 Apr 18 (other members & Secretariat) 31 July 18 (Indonesia)	Catch (in numbers and weight) and effort data is to be provided as either shot by shot or as aggregated data (New Zealand provides fine scale shot by shot data which is aggregated and distributed by the Secretariat). The maximum level of aggregation is by year, month, fleet, gear, and 5x5 degree (longline fishery) or 1x1 degree for surface fishery. Indonesia will provide estimates based on either shot by shot or as aggregated data from the trial Scientific Observer Program.

[1] The text "**For MP/OM**" means that this data is used for both the Management Procedure and the Operating Model. If only one of these items appears (e.g. **For OM**), then the data is only required for the specified item.

[2] The earlier date specified for New Zealand is so that the Secretariat will be able to process the fine scale New Zealand data in time to provide aggregated and raised data to members by 30 April.

Type of Data to provide[1]	Data Provider(s)	Due Date	Description of data to provide
Non-retained catches	All Members	30 Apr 18 (all Members except Indonesia) 31 July 18 (Indonesia)	The following data concerning non retained catches will be provided by year, month, and 5*5 degree for each fishery: - Number of SBT reported (or observed) as being non-retained; - Raised number of non-retained SBT taking into consideration vessels and periods in which there was no reporting of non-retained SBT; - Estimated size frequency of non-retained SBT after raising; - Details of the fate and/or life status of non-retained fish. Indonesia will provide estimates based on either shot by shot or as aggregated data from the trial Scientific Observer Program.
RTMP catch and effort data	Japan	30 Apr 18	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.
Raised catch data for AU, NZ catches	Australia, Secretariat	30 Apr 18	Aggregated raised catch data should be provided at a similar resolution as the catch and effort data. Japan, Korea and Taiwan do not need to provide anything here because they provide raised catch and effort data. New Zealand does not need to provide anything here because the Secretariat produces New Zealand's raised catch data from the fine scale data provided by New Zealand.
Raised number of hooks data for NZ catches	Secretariat	30 Apr 18	Raised New Zealand number of hooks data, to be provided to NZ only, generated from NZ fine scale data by the Secretariat.
Observer length frequency data	New Zealand	30 Apr 18	Raw observer length frequency data as provided in previous years.
Raised Length Data	Australia, Taiwan, Japan, New Zealand, Korea	30 Apr 18 (Australia, Taiwan, Japan, Korea) 7 May 18 (New Zealand)[3]	Raised length composition data should be provided[4] at an aggregation of year, month, fleet, gear, and 5x5 degree for longline and 1x1 degree for other fisheries. Data should be provided in the finest possible size classes (1 cm). A template showing the required information is provided in Attachment C of CCSBT-ESC/0609/08.
Raw Length Frequencies	South Africa	30 Apr 18	Raw Length Frequency data from the South African Observer Program.
RTMP Length data	Japan	30 Apr 18	The length data from the real time monitoring program should be provided in the same format as the standard length data is provided.

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[3] The additional week provided for New Zealand is because New Zealand requires the raised catch data that the Secretariat is scheduled to provide on 30 April.

[4] The data should be prepared using the agreed CCSBT substitution principles where practicable. It is important that the complete method used for preparing the raised length data be fully documented.

Type of Data to provide[1]	Data Provider(s)	Due Date	Description of data to provide
Indonesian LL SBT age and size composition	Australia Indonesia	30 Apr 18	Estimates of both the age and size composition (in percent) is to be generated for the spawning season July 2016 to June 2017. Length frequency for the 2016 calendar year and age frequency for the 2016 calendar year is also to be provided. Indonesia will provide size composition in length and weight based on the Port-based Tuna Monitoring Program. Australia will provide age composition data according to current data exchange protocols.
Direct ageing data	All Members except the EU	30 Apr 18	Updated direct age estimates (and in some cases revised series due to a need to re-interpret the otoliths) from otolith collections. Data must be provided for at least the 2015 calendar year (see paragraph 95 of the 2003 ESC report). Members will provide more recent data if these are available. The format for each otolith is: Flag, Year, Month, Gear Code, Lat, Long, Location Resolution Code[5], Stat Area, Length, Otolith ID, Age estimate, Age Readability Code[6], Sex Code, Comments. It is planned that the Secretariat will provide the direct age estimates for Indonesia through a contract with CSIRO.
Trolling survey index	Japan	30 Apr 18	Estimates of the different trolling indices (piston-line index and grid-type trolling index (GTI)) for the 2017/18 season (ending 2018), including any estimates of uncertainty (e.g. CV).
Tag return summary data	Secretariat	30 Apr 18	Updated summary of the number tagged and recaptured per month and season.
Gene tagging data	Secretariat	30 Apr 18	An estimate of juvenile abundance and mark-recapture data from the pilot gene-tagging study through a contract with CSIRO. The mark-recapture data will include the tagging release data (e.g. date of tagging, length of fish), tag recapture data (e.g. recapture sample date, length) and whether or not a genetic match with a release tissue was found.
Catch at age data	Australia, Taiwan, Japan, Secretariat	14 May 18	Catch at age (from catch at size) data by fleet, 5*5 degree, and month to be provided by each member for their longline fisheries. The Secretariat will produce the catch at age for New Zealand and Korea using the same routines it uses for the CPUE input data and the catch at age for the MP.
Global SBT catch by flag and by gear	Secretariat	22 May 18	Global SBT catch by flag and gear as provided in recent reports of the Scientific Committee.

[5] M1=1 minute, D1=1 degree, D5=5 degree.
[6] Scales (0-5) of readability and confidence for otolith sections as defined in the CCSBT age determination manual.

Type of Data to provide[1]	Data Provider(s)	Due Date	Description of data to provide
Raised catch-at-age for the Australia surface fishery. **For OM**	Australia	24 May 18[7]	These data will be provided for July 2016 to June 2017 in the same format as previously provided.
Raised catch-at-age for Indonesia spawning ground fisheries. **For OM**	Secretariat	24 May 18	These data will be provided for July 2016 to June 2017 in the same format as on the CCSBT Data CD.
Total catch per fishery and sub-fishery each year from 1952 to 2017. **For OM**	Secretariat	31 May 18	The Secretariat will use the various data sets provided above together with previously agreed calculation methods to produce the necessary total catch by fishery and total catch by sub-fishery data required by the Operating Model.
Catch-at-length (2 cm bins) and catch-at-age proportions. **For OM**	Secretariat	31 May 18	The Secretariat will use the various catch at length and catch at age data sets provided above to produce the necessary length and age proportion data required by the operating model (for LL1, LL2, LL3, LL4 – separated by Japan and Indonesia, and the surface fishery). The Secretariat will also provide these catch at length data subdivided by sub fishery (e.g. the fisheries within LL1).
Global catch at age	Secretariat	31 May 18	Calculate the total catch-at-age in 2017 according to Attachment 7 of the MPWS4 report except that catch-at-age for Japan in areas 1 & 2 (LL4 and LL3) is to be prepared by fishing season instead of calendar year to better match the inputs to the operating model.
CPUE input data	Secretariat	31 May 18	Catch (number of SBT and number of SBT in each age class from 0-20+ using proportional aging) and effort (sets and hooks) data[8] by year, month, and 5*5 lat/long for use in CPUE analysis.
CPUE monitoring and quality assurance series.	Australia, Japan, Taiwan, Korea	15 Jun 18 (earlier if possible)[9]	8 CPUE series are to be provided for ages 4+, as specified below: • Nominal (Australia) • B-Ratio proxy (W0.5)[10] (Japan) • Geostat proxy (W0.8) (Japan) • GAM (Australia) • Shot x shot Base Model (Japan) • Reduced Base Model (Japan) • Taiwan Standardised CPUE (Taiwan) • Korean Standardised CPUE (Korea)

[7] The date is set 1 week before 1 June to provide sufficient time for the Secretariat to incorporate these data in the data set it provides for the OM on 1 June.

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

[9] When there are no complications, it is possible to calculate the CPUE series less than two weeks after the CPUE input data is provided. Therefore, if there are no complications, Members should attempt to provide the CPUE series earlier than 15 June.

[10] This series is based on the standardisation model by Nishida and Tsuji (1998) using all vessel data.

Type of Data to provide[1]	Data Provider(s)	Due Date	Description of data to provide
Core vessel CPUE series **for OM/MP**	Japan	15 Jun 18 (earlier if possible)	Provide both the w0.5 and w0.8 Core Vessel CPUE Series. The OM & MP use the average of these series.
~~Aerial survey index **for OM/MP**~~	~~Secretariat~~	~~31 Jul 17 (every attempt will be made to provide this at least 4 weeks earlier)~~	~~Estimate of the aerial survey index from the 2016/17 fishing season, including any estimates of uncertainty (e.g. CV), if the aerial survey is conducted. The Secretariat will undertake a contract with CSIRO who will conduct the aerial survey and calculate the index.~~

Revision to South Africa's catch data from 2005-2015

In the 2017 CCSBT Scientific Data Exchange South Africa provided a revision to both its catch and effort data and its total catch by fleet data for 2005-2015. The revisions were due to a thorough review of the data with South Africa providing the following explanation:

> The reasons for differences between the revised and old data are due to:
> 1) Previous vessel misspecifications, which caused double-counting or missing records in some instances
> 2) Revised weight conversions using vessel specific conversion factors (1.15 vs 1.8), which is now consistently applied for the period 2005-2015
> 3) Corrected spatial referencing
> 4) The revised catch and effort, catch per fleet, and catch per vessel extracts have been successfully validated against the raw data where previous catch statistics had revealed mismatches in terms SBT numbers.

The tables below show summaries of the originally submitted data (Table 1), revised data (Table 2) and a comparison of the two sets of data (Table 3). The figures are taken from the total catch by fleet data but equally represent the catch and effort dataset since the totals are the same. The revised dataset results in an increase in South Africa's catch of 118.9t over the 10 year period with the average weight of each fish rising from 69.8kg to 87.9.2kg.

Table 1 – Original catch data summary

	Domestic			Foreign			Total		
Year	N Boats	SBT Numbers	SBT (kg)	N Boats	SBT Numbers	SBT (kg)	N Boats	SBT Numbers	SBT (t)
2005	3	36	2.5	11	303	21.4	14	339	23.9
2006	2	141	9.4				2	141	9.4
2007	9	227	15.2	11	532	26.2	20	759	41.4
2008	1	3	0.3	9	806	45.2	10	809	45.5
2009	4	204	17.0	8	204	15.2	12	408	32.2
2010	8	568	31.5	3	34	2.9	11	602	34.4
2011	9	362	26.7	11	349	21.9	20	711	48.6
2012	9	865	54.9	8	393	21.7	17	1258	76.6
2013	11	450	43.4	9	250	23.3	20	700	66.7
2014	11	588	47.6	4	35	2.9	15	623	50.5
2015	10	613	47.7	4	66	5.4	14	679	53.1
Totals	**77**	**4057**	**296.2**	**78**	**2972**	**186.1**	**155**	**7029**	**482.3**

Table 2 – Revised catch data summary

Revised submission									
	Domestic			Foreign			Total		
Year	N Boats	SBT Numbers	SBT (t)	N Boats	SBT Numbers	SBT (t)	N Boats	SBT Numbers	SBT (t)
2005	3	36	4.5	10	303	24.7	13	339	29.2
2006	2	141	15.2			0.0	2	141	15.2
2007	9	227	24.2	12	663	33.6	21	890	57.8
2008	1	3	0.4	9	787	43.9	10	790	44.3
2009	4	204	26.6	8	188	13.6	12	392	40.1
2010	9	568	54.3	2	3	0.1	11	571	54.4
2011	9	362	41.8	11	349	21.9	20	711	63.7
2012	9	865	85.9	9	418	23.9	18	1283	109.8
2013	11	450	45.1	9	250	22.3	20	700	67.3
2014	11	588	53.6	4	35	2.9	15	623	56.5
2015	10	613	57.5	4	66	5.4	14	679	62.9
Totals	**78**	**4057**	**409.0**	**78**	**3062**	**192.1**	**156**	**7119**	**601.2**

Table 3 – Differences between revised and original data

Year	Domestic			Foreign			Total		
	N Boats	SBT Numbers	SBT (t)	N Boats	SBT Numbers	SBT (t)	N Boats	SBT Numbers	SBT (t)
2005	0	0	2.0	-1	0	3	-1	0	5
2006	0	0	5.8	0	0	0	0	0	6
2007	0	0	9.0	1	131	7	1	131	16
2008	0	0	0.1	0	-19	-1	0	-19	-1
2009	0	0	9.6	0	-16	-2	0	-16	8
2010	1	0	22.8	-1	-31	-3	0	-31	20
2011	0	0	15.1	0	0	0	0	0	15
2012	0	0	31.0	1	25	2	1	25	33
2013	0	0	1.7	0	0	-1	0	0	1
2014	0	0	6.0	0	0	0	0	0	6
2015	0	0	9.8	0	0	0	0	0	10
Totals	**1**	**0**	**112.8**	**0**	**90**	**6.0**	**1**	**90**	**118.9**