CCSBT-ESC/0409/07

8.1. Characterisation of SBT Catch

Purpose

To consider criteria which might underpin the setting of standards for data provision to the CCSBT scientific process and to review catch reporting by members and non-members.

Background

(1) Standards for Data Provision

The ESC meeting of SC8 noted that there were only two issues in respect of data reporting standards on which final agreement had not been reached, these being: reporting of data on species other than SBT, and the geographical resolution of reported data. The ESC report stated that:

- "CPUE analysis incorporating 1x1^{o} longline data have formed a critical part of past assessments and the current management procedure development efforts". However, the ESC was unable to agree on the appropriate level of spatial resolution for a CCSBT reporting standard.
- It recognised "the scientific value of information on the catch of other tuna and tuna-like species for the interpretation of CPUE trends and the analysis of targeting practises that may affect them". The ESC encouraged members to provide further information on the issue for the next ESC meeting.
- "Further consideration should be given at the next ESC meeting to the criteria which might underpin the setting standards for data provision to the CCSBT scientific process."

For consideration.

(2) Catch reporting by members

Members have provided a fairly comprehensive historic set of catch effort, raised catch and catch at size data to the CCSBT. Members updated these data to the end of 2003 as part of the 2004 data exchange, although Korea's size data and complete catch effort data are still outstanding.

Attachment A summarises the types of catch effort and size data that have been provided. Examination of this attachment indicates that there may still be room for improvement in the provision of some early historical data, although earlier data may not be available for some members.

Attachment B compares the compliance of the data provided with the fields of information that are required to be provided. There are a number of cases where required fields of

information (e.g. target species, number of boats, number of days fished, number of sets, number retained, weight retained, number discarded) are not provided by one or members, so members should address these issues where possible.

(3) Catch reporting by non-members

The CCSBT has received estimates of Indonesia's catch from the IOTC and the Philippines catch from the Philippines. The combination of Indonesia's estimated catch, the catch of CCSBT members and the catch of the Philippines accounted for 99.7% of the 2003 catch reported in the global catch table.

The Secretariat has written to both China and South Africa (who account for the other 0.3% of the known catch) to seek catch and/or TIS information from them. Some information has been provided by South Africa, but no response has been received from China.

Prepared by the Secretariat

Summary of the types of catch effort and size data that have been provided for the CCSBT database

Summaries of the types of catch effort and size data provided by members are shown in tables 1 and 2 below.

Table 1: Summary of the type of Catch Effort Data provided

This table summarises the type of catch and effort data that has been provided for the CCSBT database. The information in this table refers to the majority of the data provided by a member (not necessarily all the data). For example, the spatial precision of New Zealand's data is recorded as "Minute". This is true for the vast majority of New Zealand's data, but there is a small subset of the data in which the resolution is to the statistical area level.

	Australia	**Taiwan**	**Japan**	**New Zealand**	**Korea**
First year of catch record in the global catch table	1952	1969	1952	1980	1991
First year of data provided.	1975	1981	1965	1989	1991
Awaits error correction by Member before historical data is to be used (Y/N).	N	N	N	N	N
Type of Raising (R=catch effort data is raised, F=data is not raised, but the Secretariat has been informed how to raise the data, D=a separate raised catch dataset has been provided).	D (only provided for 2002 and 2003)	R	R	F	F
Gear types in the data (the gear codes listed here are those defined for the TIS with the exception of 'ML' which stands for 'Minor Line').	BB, HAND, LL, ML, PS, RR, TROL	LL	LL	HAND, LL, TROL	LL
Aggregated (A) or Shot by Shot (SS)	A	A	A	SS - *LL* A - *Others*	A
Catches of species other than SBT is provided (Y/N).	Y	Y[1]	N	Y	N
Spatial precision of data.	5*5 - *LL* 1*1 - *Others*	5*5	5*5	Minute	5*5
Temporal precision of data (M=month, D=day, MI=minute).	M	M	M	MI - *LL* D - *Others*	M

[1] However, catch of species other than SBT is not available when the most recent year of data is first provided to the CCSBT.

Table 2: Summary of the type of Size Data provided

This table summarises the type of size data that has been provided for the CCSBT database. Please read the footnotes for additional explanation of some of the information in this table.

	Australia[2]	**Taiwan**	**Japan**	**New Zealand**[3]	**Korea**
First year of catch record in the global catch table	1952	1969	1952	1980	1991
First year of data provided.	1951	1993	1965	1979 - *com* 1987 - *obs*	1996
Type of data provided (RL=raised catch at length, IL=individual length data, IW= individual weight data, ILW=individual length and weight data	RL	IL	RL	IW - *com* IL - *obs*	ILW
Number of measurements obtained for 2003 (not shown for the raised data sets)	-	29,772	-	1,668 - *obs*	0[4]
Gear types in the data.	LL, PS	LL	LL	LL	LL
Spatial precision of data.	5*5 - *LL* 1*1 - *PS*	5*5	5*5	Minute	Minute
Temporal precision of data (M=Month, D=Day).	M	M	M	D	M

[2] The underlined information shown for Australia relates to the size data provided for 2002 and 2003 only. For earlier years, the spatial and temporal resolution was State and half month respectively and there was no breakdown by gear type.

[3] "com" refers to weight measurements by commercial fishers (these measurements ceased at the end of 2002), "obs" refers to length measurements by scientific observers.

[4] Data for 2004 has yet to be provided. Measurements for 2003 totalled 414 fish.

Comparisons of data items provided by members against data items that are required to be provided

Comparisons of the data items provided by members against the required data items have been provided for the two main data sets, these being:

(1) Catch and effort data
(2) Size data

Table 1: Comparisons for catch and effort data

The table below lists the required fields of catch and effort information and whether or not members have provided the required information[5]. For simplicity, this table has been restricted to the major SBT fishing gears (LL and PS) and the results shown are for recent years of data. It should be noted that despite being labelled as required fields, it is accepted that there are cases where the information cannot be provided because it has not been collected.

Required Fields	Australia	Taiwan	Japan	New Zealand	Korea
Longline and Purse Seine					
Year	√	√	√	√	√
Month	√	√	√	√	√
Country	√	√	√	√	√
Fleet	√	√	√	√	√
Gear	√	√	√	√	√
Target species	×	×	×	√	×
SBT Statistical area	√	√	√	√	√
Latitude	√	√	√	√	√
Longitude	√	√	√	√	√
Number of boats	√	×	√	√	×
Number of days fished	√	×	√	√	×
Number of Sets/Shots	√	×	√	√	×
Catch species	√	√	√	√	√
Weight retained	√	√	×	√	√
Number retained	√ - *LL* × - *PS*	√	√	√	√
Number discarded	√	×	×	×	×
Conversion factor[6]	×	×	√	√	×
Scaling factor[7]	√	√	√	√	√
Longline specific					
Number of hooks	√	√	√	√	√
Number of baskets	×	×	√	√	×
Purse Seine Specific					
Gear length	√	-	-	-	-
Gear depth	×	-	-	-	-
Spotter type	×	-	-	-	-

[5] In cases where the required information has not been physically provided in the data, but the Secretariat was able to infer the required information, then the information is marked as having been provided. For example, the SBT statistical area can be calculated from the latitude and longitude.
[6] Conversion factors are only relevant where weights originate from processed fish.
[7] Scaling factors are only relevant where the catch is estimated from a sub sample of fish. Where this has not been explicitly provided, the scaling factor is assumed to be one (no scaling).

Table 2: Comparisons for size data

The table below lists the required fields of size information and whether or not members have provided the required information[8].

Required Fields	Australia	Taiwan	Japan	New Zealand[9]	Korea
Year	√	√	√	√	√
Month	√	√	√	√	√
Country	√	√	√	√	√
Fleet	√	√	√	√	√
Gear	√	√	√	√	√
SBT Statistical area	√	√	√	√	√
Latitude	√	√	√	√	√
Longitude	√	√	√	√	√
Length Class	√	√	√	√ - *obs*	√
Weight	-	-	-	√ - *com*	√
Class Size	√	√	√	-	-
Raw frequency[10]	× - *LL* √ - *PS*	√	√	√	√
Raw converted frequency	×	×	√	√	√
Adjusted frequency[11]	√	-	√	-	-
Substitution code[12]	×	-	√	-	-

[8] In cases where the required information has not been physically provided in the data, but the Secretariat was able to infer the required information, then the information is marked as having been provided.

[9] "com" refers to weight measurements by commercial fishers, "obs" refers to length measurements by scientific observers.

[10] There is some confusion over the meaning of this field for raised data. It was intended that this field would always contain the actual number of fish measured in a strata. However, for both Japan and Australia, this is often presented as a non-integer number, so something different appears to have been provided by these countries.

[11] Only relevant when the size data is substituted and/or raised.

[12] Only relevant when the size data is substituted and/or raised.