

MoP-04-13

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Chair: Mr Kristofer Du Rietz

MoP-04-13

Vessel Catch, Effort and Scientific Data - a summary of reports
submitted to the Secretariat

Relates to agenda item: 9

Proposal Other Document Info Paper

SIOFA Secretariat

Abstract

SIOFA developed standards for the “Collection, Reporting, Verification and Exchange of Data relating to fishing activities in the Agreement Area” (CMM 2016/2) in 2016. The conservation management measure provides Contracting Parties, CNCs and PFEs with a schedule and format for the submission of data to the Secretariat.

This paper provides and a summary and assessment of data submitted to date.

Vessel Catch, Effort and Scientific Data - a summary of reports submitted to the Secretariat

INTRODUCTION

SIOFA developed standards for the “*Collection, Reporting, Verification and Exchange of Data relating to fishing activities in the Agreement Area*” (CMM 2016/2) in 2016. The conservation management measure provided Contracting Parties, CNCPs and PFEs with a schedule and format for the submission of data to the Secretariat. The CMM 2016/2, Annex A and B, provides Parties with a detailed summary of the format for data submissions. The format presented in Annex B (Voluntary Observer Data) is assumed to be voluntary.

CMM 2016/2, Annex A (Vessel Catch and Effort Data) assumes that parties will submit set-by-set/haul-by-haul data, as well as detailed gear specification, and catch data.

The following excerpts from CMM 2016/2 provides Parties with an overview of expected data submissions:

Historical Data (2000-2015)

9. To assist with the development of a bottom fishing footprint and stock assessments, Contracting Parties, CNCPs and PFEs shall provide to the Secretariat, by 31 January 2017, historical catch, effort and, if available, observer data from vessels flying their flag that were fishing in the Agreement Area at any time during the period 2000 to 2015, and any previous years where available, in a format as close as is possible to the annexes to this CMM.

Data collection and submission (2016 - and future)

Set-by-set/haul-by-haul Data

6. Contracting Parties, CNCPs and PFEs shall report to the Secretariat, by 31 May each year, the data collected under paragraphs 4 and 5 for the previous calendar year, in accordance with the format prescribed in the corresponding annexes.

Aggregate Catch Summaries

7. Contracting Parties, CNCPs and PFEs shall provide to the Secretariat, by 31 May each year, annual catch summaries for all species/groups caught in the Agreement Area during the previous calendar year. The catch summaries shall include the following information:

- a. Calendar year (eg 2015)*
- b. FAO statistical area (eg FAO87)*
- c. Species/group name (common name and scientific name)*
- d. Species/group code (FAO3-alpha code 19, EG ORY) (if available)*
- e. Annual catch total – tonnes raised to ‘live’ weight.*

SUBMISSIONS

In general, the data submitted to the Secretariat were provided in a variety of temporal, and spatial resolutions (Table 1, Annex A), and not specifically in the format prescribed in CMM 2016/02 Annex A and B.

All Contracting Parties provided data to the Secretariat except for Republic of Korea, Mauritius and Seychelles. The European Union was the only Contracting Party to provided Vessel Monitoring System (VMS) information (maps), and data (pdf with coordinates). Australia was the only Contracting Party to provide scientific observer data.

Catch and Effort Data

Contracting Party	Years	Data Type	Catch/Effort	Notes
AUSTRALIA	1999-2016	Log book	Set-by-set / haul-by-haul	
COOK ISLANDS	2003-2016	Aggregate Catch	Daily	processed weight only, shots per day provided
EUROPEAN UNION	2000-2016	Aggregate Catch (ESP)	Monthly	
	2004-2016	Aggregate Catch (ESP)	Daily	
	2005-2016	Aggregate Catch (FRA)	Daily	
FRANCE (OT)	2010-2016	Log book	Set-by-set	
JAPAN	1977-2015	Aggregate Catch	Monthly	effort was provided e.g. hooks per month etc.
	2016	Log book	Haul-by-haul	
	2016	Aggregate catch	Annual	
KOREA			NONE	
MAURITIUS			NONE	
SEYCHELLES			NONE	

Table 1. Catch and Effort data provided to the Secretariat

Voluntary Scientific Observer Data

Contracting Party	Years	Notes
AUSTRALIA	2016	Individual length, maturity, sex, tissue, otoliths, stomach contents samples provided. Weight provided as aggregate.
COOK ISLANDS		NONE
EUROPEAN UNION		NONE
FRANCE (OT)		NONE
JAPAN		NONE
KOREA		NONE
MAURITIUS		NONE
SEYCHELLES		NONE

Table 2. Voluntary Scientific Observer data provided to the Secretariat

Vessel Monitoring Date

Contracting Party	Years	Notes
AUSTRALIA		NONE
COOK ISLANDS		NONE
EUROPEAN UNION	2000-2016	The data includes date time, location, speed, and course. Data provided in pdf form.
FRANCE (OT)		NONE
JAPAN		NONE
KOREA		NONE
MAURITIUS		NONE
SEYCHELLES		NONE

Table 3. Vessel Monitoring System data provided to the Secretariat

DATABASE

During the inaugural SIOFA Scientific Committee meeting (SC1), in 2016, the SIOFA scientists recommended the Meeting of Parties (MoP) direct the Secretariat to establish a database as soon as possible. The SIOFA Meeting of Parties, in 2016, allocated funds for the development of database, and noted (Report of the 3rd MoP, Annex H) the critical need for progressing database development and data consolidation to perform stock assessments, developing a SIOFA wide fishing footprint and mapping and understanding VME location. Subsequently, in 2017, a database consultant was employed to develop SIOFAs databases. The consultant developed Vessel Registry, Catch and Effort, and Scientific Observer databases based on data standards described in CMM 2016/07 and CMM 2016/02. The database development adhered to confidentiality requirements outlined in CMM 2016/03.

Contracting Party	Data Type	fishing days	sets/hauls	records	SIOFA Database
AUSTRALIA	Log book	1171	3436	5523	Catch and Effort
	Log book	22	32	68	Catch and Effort
	Log book	225	1032	2638	Catch and Effort
FRANCE (OT)	Log book	156	514	514	Catch and Effort

Table 4. Data contained in the SIOFA Catch and Effort Database

SUBMITTED INFORMATION

Set-by-set and haul-by-haul data were provided by Australia, France (Overseas Territories), and Japan (Table 5). Cook Islands provided aggregate daily catch (product weight) and included the number of 'shots' per day. Australia provided set/tow data for six vessels fishing 1999-2016. Cook Islands provided data for four vessels for the period 2003-2016, and Japan provided tow data for two vessels fishing in 2016. France (Overseas Territories), provided data for six vessels (anonymized) for the period 2006-2016.

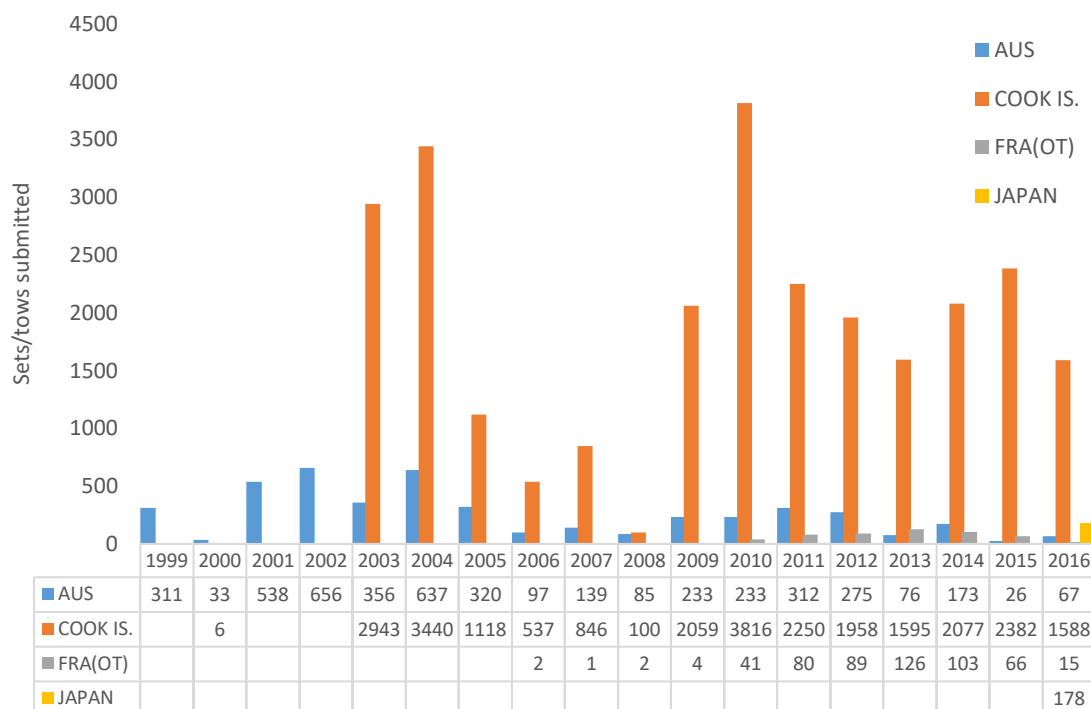


Table 5. Set-by-set and haul-by-haul data provided to the Secretariat

The majority of set/tow data submitted to the Secretariat, by Australia, Cook Islands, France (Overseas Territories), and Japan, identified alfonsino and orange roughy as the main target species (Table 6). The data submitted by Cook Islands contained 3-alpha codes not present in the FAO ASFIS database, and more than one target species identified for a given tow – these values are included in Table 6 as ‘Undefined’. Similarly, some set/tow data provided by Australia did not contain target species, for these data, an attempt was made to derive the target species based on catch; however, this was not possible for all sets/tows, so the target species was identified as ‘Undefined’ for these anomalous data.

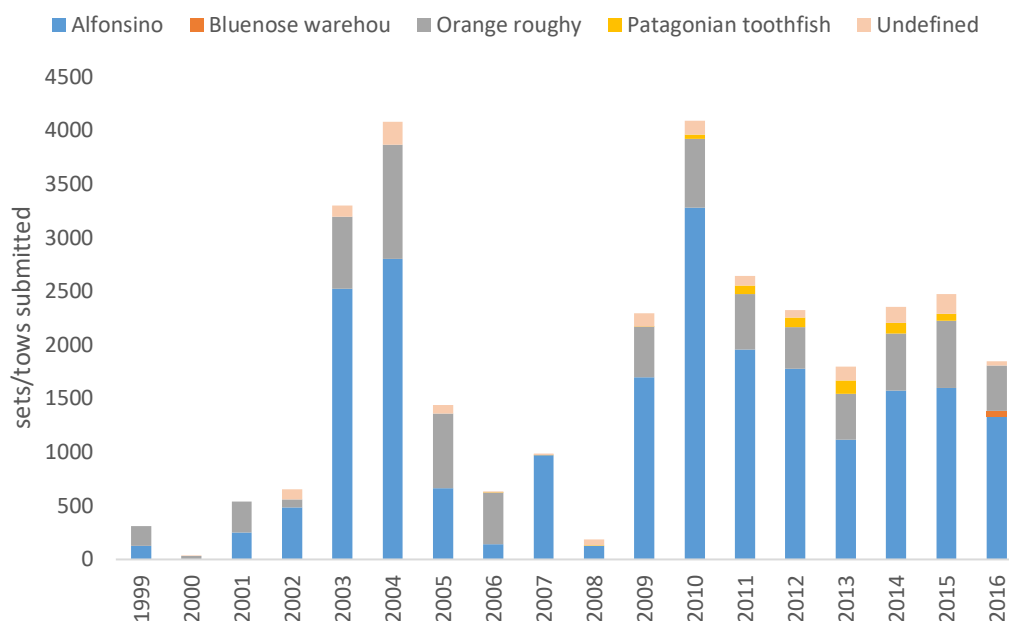


Table 6. Set-by-set and haul-by-haul data provided to the Secretariat, by target species

CONCLUSIONS/RECOMMENDATIONS

Not all historical catch-and-effort data submitted by Contracting Parties is of sufficient detail for modelling area closures, creating SIOFAs fishing footprint, or to undertake rigorous stock assessment methods. To achieve these aims appropriately detailed data need to be submitted. To date, only Australia, France (Overseas Territories), and Japan have provided data at a resolution loosely commensurate with the expectation contained in CMM 2016/02 Annex A.

There appear to be concerns regarding the provision of detailed-data to the Secretariat due to, *inter alia*: breaching national legislation; exposing the location of commercial fishing grounds; or that data is simply not collected at the necessary detail.

It should be noted that almost all RFB/RFMOs collect and store sensitive data (VMS, logbook, observer data etc.), and confidentiality requirements are in place and respected by Secretariats charged with the responsibility to manage the data. Conservation and Management Measure 2016/3, relating to data confidentiality and procedures for access and use of data, developed by the MoPs in 2016, provides sufficient detail and clarity to ensure the safeguarding of the data submitted to the Secretariat. SIOFA Secretariat must adhere to these strict protocols when storing and disseminating data provided by Contracting Parties.

Data needs to be submitted to the Secretariat in the format described in the annexes of CMM 2016/02, and, going forward, it is imperative that data submission templates (logbook, scientific observer) be developed to ensure that data are collected at the prerequisite spatial and temporal scale to conduct meaningful science and effective fisheries management. The data provided to the Secretariat must be verified, consistent and comparable. This will ensure that the SIOFA Scientific Committee can provide the best possible scientific advice to the MoP. To facilitate this, it is requested by the Secretariat that each Contracting Party provide a contact person to act as a focal point to coordinate the data collection process with the Executive Secretary and Data Manager.

Given that historical data were provided in several aggregated resolutions (daily, monthly, and annually), it is necessary to create an aggregated catch-and-effort database to handle the various additional forms of data being provided to the Secretariat. The Secretariat is seeking approval from the MoPs to proceed with the task of creating an additional database to house historical catch-and-effort data which were provided in aggregate form.

Annex A – Composite List of Data Submissions

Contracting Party	Data Type	Date Submitted	Years	Spatial Resolution	Temporal Resolution	fishing days	sets/hauls	Records	File Names	Imported	SIOFA Database	Short Data Description
AUSTRALIA	Log book	1-Feb-2017	2002-2015	start end trawl DMS	DDMMYY hh:nn	1171	3436	5523	SIOFA - Historical Logbook - Trawl.xlsx	Yes	Catch and Effort	haul-by-haul data, including retained, and discarded catch
	Log book	1-Feb-2017	2002-2015	start end set DMS	DDMMYY hh:nn	22	32	68	SIOFA - Historical Logbook - Non-trawl.xlsx	Yes	Catch and Effort	set-by-set data, included number of hooks for longlines, and retained, and discarded catch
	Log book	1-Feb-2017	1999-2002	start end trawl DMS	DDMMYY hh:nn	225	1032	2638	SIOFA - Historical Logbook - Trawl - CCAMLR.xlsx	Yes	Catch and Effort	haul-by-haul data, and retained catch provided. Discard column included but none reported
	Log book	30-May-2017	2016	start end set DMS	DDMMYY hh:nn	13	40	207	AUS 2017 Submission - Non-trawl.xlsx			set-by-set data, included number of hooks for longlines, and retained, and discarded catch
	Log book	30-May-2017	2016	start end trawl DMS	DDMMYY hh:nn	17	27	62	AUS 2017 Submission - Trawl.xlsx			haul-by-haul data, including retained, and discarded catch
	Observer	30-May-2017	2016	start end set DMS	DDMMYY hh:nn	24	9	295 (wt), 321 (len)	AUS 2017 Observer - Non-trawl.xlsx			Individual length, maturity, sex, tissue, otoliths, stomach contents samples provided. Weight provided as aggregate.
	Observer	30-May-2017	2016	start end trawl DMS	DDMMYY hh:nn	24	47	183 (wt), 613 (len)	AUS 2017 Observer - Trawl.xls			Individual length, maturity, sex, tissue, otoliths, stomach contents samples provided. Weight provided as aggregate.
COOK ISLANDS	Aggregate Catch and Effort	15-Mar-2017	2009-2016	Degrees Minutes	Daily	1384	6091	1978	Nikko Maru - ALL TRIPS.xlsx			catch data aggregated by day, product/processed weight provided only
	Aggregate Catch and Effort	15-Mar-2017	2005-2011	Degrees Minutes	Daily	565	2549	874	Ocean Explorer all trips SIODFA.xlsx			catch data aggregated by day
	Aggregate Catch and Effort	15-Mar-2017	2006-2010	Degrees Minutes	Daily	392	1859	529	Oyang 97 - ALL TRIPS.xlsx			catch data aggregated by day
	Aggregate Catch and Effort	15-Mar-2017	2003-2016	Degrees Minutes	Daily	2281	16216	2938	Will Watch - ALL TRIPS..xlsx			catch data aggregated by day; no catch data 29Jan05-04Apr05
EUROPEAN UNION	VMS, log-book catches (prior to 2004 only the summary), summary of	1-Feb-2017	2000-2016	SIOFA Division	Monthly catch (2000-2003), Daily catch (2004-2016)	2204	none	5879	SIOFA 2000-2016.zip			VMS data as pdf, daily catch, monthly catch

	catches by month (ESP)											
	Log book catches (FRA)	1-Feb-2017	2005-2015	SIOFA AREA only	Daily catch	597	none	3183	FR_DONNES_APSOI_IFREMER_SACAPT-20170127_ANONYME.XLS			daily catch
	Aggregate Catch	30-May-2017	2016	SIOFA AREA only	Daily	68	none	335	EU.FR-DATA APSOI 2016_ANONYME.xls			daily catch
FRANCE (OT)	Log book	1-Feb-2017	2010-2015	Decimal Degrees	DDMMYY hh:nn	156	514	514	SIOFA_historical_data_FRA_2000-2015.xlsx	Yes	Catch and Effort	LL number of hooks provided. Vessel names anonymized
	Log book	31-May-2017	2016	Decimal Degrees	DDMMYY hh:nn	2	15	15	siofa_fra_annual_data_2016.xlsx			Catch was only provided for one set. More information on the submitted data is required.
JAPAN	Aggregate Catch	31-Jan-2017	1977-2015 (Trawl) 2004-2013 (LL)	Degrees	Monthly	none	none	710	170131_hist_data_Japan.xlsx 170131_Submission of historical data (Japan).docx			LL Effort measure provided (Number of hooks per month). Trawl Effort measure (trawls/month, Hours trawled, Ave. hours/set) provided
	Log book	30-May-2017	2016	Decimal Degrees	DDMMYY hh:nn	28	55	129	SIOFA2016Fishing Log Book-1(Kaiyo-maru No.51).xlsx			haul-by-haul data, including retained, and discarded catch
	Log book	30-May-2017	2016	Decimal Degrees	DDMMYY hh:nn	38	72	256	SIOFA2016Fishing Log Book-1(Tomi-maru No.58).xlsx			haul-by-haul data, including retained, and discarded catch
	Log book	30-May-2017	2016	Decimal Degrees	DDMMYY hh:nn	13	24	45	SIOFA2016Fishing Log Book-2(Kaiyo-maru No.51).xlsx			haul-by-haul data, including retained, and discarded catch
	Log book	30-May-2017	2016	Decimal Degrees	DDMMYY hh:nn	17	27	90	SIOFA2016Fishing Log Book-2(Tomi-maru No.58).xlsx			haul-by-haul data, including retained, and discarded catch
	Aggregate Catch	31-May-2017 updated 12-June-2017	2016	SIOFA Area	Annual	none	none	none	Annual Catch Summary (Japan) (2016)-rev.1 .xlsx			annual catch
KOREA	NONE											
MAURITIUS	NONE											
SEYCHELLES	NONE											