SC-04-INFO-02

4th Meeting of the Southern Indian Ocean Fisheries Agreement (SIOFA) Scientific Committee
25-29 March 2019, Yokohama, Japan

SIOFA Databases and data submission status

Please note that National Reports and SC Working Group reports shall be classified as working papers

Relates to agenda item: 5.1 – 5.4 – 5.6 Working paper ☐ Info paper ☒

SIOFA Secretariat

Abstract

This paper is divided into two parts. The first part presents the current structure of the SIOFA Secretariat databases. The second part summarizes the catch and effort data stored in the SIOFA database. It includes the historical catch and effort of each CPs and the last fisheries data submission provided to the Secretariat (31 May 2018).
SIOFA DATABASES AND DATA INVENTORIES

UPDATED STATUS ON SIOFA DATA INVENTORIES AND DATABASES

SIOFA 4th Scientific Committee Meeting, March 2019
Part 1: SIOFA data flow and databases structures

**DATA FLOW**

**DATASETS SUBMISSION**
*By May 31st every year*
- Annual catches summary data
  *(CMM 2018/02 para 7)*
- Vessel catch and effort data
  *(or tow-by-tow, set-by-set data)*
  *(CMM 2018/02 para 6)*
- Observers reports data
  *(CMM 2018/02 para 13)*

**PROCESSING**

**SIOFA DATABASES**

**STORAGE**

**DATA REQUEST**
SIOFA DATABASES

- Annual catches summaries (aggregated data)
- Catch and effort (raw data)
- Observers data
- Codes lists (flags, species, etc.)
- Vessels information

Datasets database
DATASETS DATABASE

• Records all datasets received by the Secretariat
• Additional information (metadata) are added to each dataset:
  • Sender identity, recipient identity
  • Date sent
  • Filename
  • Content description
  • Etc.
• Each datasets is assessed against to its related CMM requirements
ANNUAL CATCH SUMMARIES DATABASE
Ref. CMM 2018/02 para 7

• Contains national annual catches summaries

• Various level of aggregations
  • Month, year, species, vessels, area, etc.
  • Minimum data requirement from CMM: year, FAO area, species, live weight

• Can handle optional effort description
  • Hours trawled, number of sets/tows, number of days at sea, etc.
VEssel catch and effort data

Ref. CMM 2018/02 para 6

- Contains vessel catches and effort data
- Fishing operations details and catches
  - Fishing operation: vessel, date, coordinate, depth, gear used, species targeted
  - Catches retained and discarded per species (weight and/or pieces), incidental bycatch
- Gear details per fishing operation
  - Longline characteristics (hooks, length, etc.)
  - Trawl characteristics (mesh size, opening, etc.)
  - Other gears technical characteristics (nets, traps, etc.)
OBSERVERS DATA
Ref. CMM 2018/02 para 13

• Contains data collected by on-board observers
• Fishing operations, efforts and catches
• Biological information from samples
  • Species length frequency, sex ratio, maturity stages, etc.
OBSERVERS DATA
Ref. CMM 2018/02 para 13

• Database under development

• Development may consider other RFMO observers systems to benefit from already developed tools (data collection templates, automated observer data processing)
  • CCAMLR SISO (Scheme of International Scientific Observation)
  • IOTC ROS (Regional Observer Scheme)

• Observer database to be ready (structure and content) before next SC meeting (should contain all observer reports submitted by all CPs in May 2019)
VESSELS AND CONTACTS REGISTRY

- Contains all data associated to F/V
  - Information collected from various datasets
  - Identities and characteristics of the vessels
  - Each vessel has a SIOFA unique identifier

- People and organizations contacts tables
  - Not only contacts from the fishing industry.
CODES LISTS DATABASE

• Contains codes lists used in every database
  • Several codes lists tables: species, gears, countries/flags, etc.
  • Each code as a unique number

• Codes lists enable:
  • Data integrity/consistency
  • Faster querying and reporting
  • Setup of user interface (UI) dropdown lists
DATABASES PHYSICAL SECURITY

- PHYSICAL SECURITY
  - At DAAF, B Building, “Local Technique” room. The building has restricted access beyond office hours, plus the room is always locked.

- SOFTWARE SECURITY
  - The Windows server is password protected
  - The database requires also a different password.
  - The database is not online

- BACKUP
  - A backup of the database is kept on a disk in the SIOFA safe.
DATA TRANSFER SECURITY

Ref. SC-04-26 Protocols for the secure transfer of confidential data

Procedures for the secure transfer of datasets from Contracting Parties to the Secretariat are proposed.

- Password encryption of files
- Files and password must not be communicated by the same method
Part 2: Database content and submission summaries

DATABASE CONTENT

The current contents of the SIOFA database have been updated with 31 May 2018 data submission (data of 2017 fisheries activities)
# Databases Content Summary

<table>
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</tbody>
</table>

- **Blue**: tow-by-tow data
- **Light Blue**: summary data only
- **Yellow**: statement of no fishing received
- **Orange**: no data
2017 OBSERVERS DATA

In 2017 observer data submission was voluntary. Since MoP5, Observers data submission to the Secretariat has become mandatory.

Table below summarizes observer data received at the Secretariat:

<table>
<thead>
<tr>
<th>CP</th>
<th>Gear</th>
<th>Format</th>
<th>Coverage period</th>
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<tr>
<td>Japan</td>
<td>Trawl</td>
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