

SC-04-09

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

Templates for data submission

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

Relates to agenda item: 5.2

Working paper Info paper

SIOFA Secretariat

Abstract

CMM 2018/02 for Data Standards provides the CCPs with a framework for the fisheries data collection and submission. The Secretariat has the responsibility to centralize and manage submitted data.

Since 2017, CCPs provided the data to the Secretariat under various formats (datasets) coming from each CCPs statistical system. The tasks to process the datasets into structured databases is therefore time consuming and increase the risks of errors.

The data manager has prepared several worksheets templates (under Microsoft Excel) for review by the SC. The templates match the CMM 2018/02 data submission requirements and would improve the processing into databases. Those templates will also help the CCPs to clearly identify what data is required for submission to the Secretariat. It will be also the opportunity for the SC to review the reporting relevance of each of the observer's data fields.

Recommendations *(working papers only)*

The Secretariat recommend the SC to review the template and its data fields to check for any inconsistencies versus CMM 2018/02. It is also proposed that the SC reviews the reporting relevance of the observers reports data fields as – from the data manager point of view - many fields seems challenging to collect and report. Categorizing the submission relevance of those fields into 3 levels (Mandatory, Desirable and Optional- M, D, O) would help CPs not to fall into a NON-COMPLIANT status for not having submitted an information which might not be so crucial to achieve the SC objectives.

The Secretariat would also like the SC to support/promote the use of such templates starting in 2019 for data to be submitted by May 31st (catch summaries, vessels catch and effort and observers reports performed in 2018).

Introduction

CMM 2018/02 for Data Standards provides the framework for the data submission to the Secretariat by the Contracting Parties, Cooperating non-contracting parties and fishing entity (CCPs). The framework lists the information that must be provided for historical and yearly data.

Each information item is a field, and these are provided in annex A (vessels catch and effort) and B (observers reports). Annex C gives some guidance for the standards to be used for certain fields.

Data formats are rarely respected (especially for coordinates, dates and quantitative units) and very few submissions contain all the required fields. As a result, the data manager has to deal with as many submission formats as the number of CCPs. The consequence of this is that the data manager work is increased and the risk of generating errors is higher.

The data manager also considered that many fields in the observer data mandatory submission could be assessed into categories of importance in regard of the SC objectives. It is proposed that the CPs rate each of these fields with a letter according to its importance (3 categories are suggested: (M)andatory, (D)esirable, (O)ptional) in Annex III. This was quickly discussed during the 5th Meeting of the Parties and a more accurate review by CP's scientific participants is desirable.

Templates

Three reporting templates are proposed in the annexes below. Each of these templates contains all the fields collected from CMM 2018/02.

[Annex 1. Template for annual catch summary](#)

[Annex 2. Template for vessels catch and effort](#)

[Annex 3. Templates for observers' data](#)

[Annex 3.1. Template for observer's data for longline fishing](#)

[Annex 3.2. Template for observer's data for trawl fishing](#)

[Annex 3.3. Template for observer's data for dahn/dropline fishing](#)

[Annex 3.4. Template for observer's data for trap/pots fishing](#)

The fields of the observer data have a space to input the importance of each field (M, D, O).

Note that the actual templates that use Excel sheets are provided as a zip file that contains 6 files (annual summary: 1 file, vessel catch and effort: 1 file, observers reports: 4 files, one for each main gear). The zip file can be downloaded from SIOFA website in the SC4 meeting section.

Note: field content examples are sometime provided, they are fake and serve only for illustration.

Conclusion and recommendations

The regular revision of CMM 2018/02 on Data Standards (and especially the items that are requested from the observer reports) is recommended for at least 2 reasons:

- to improve the data field information and clarification for non-fisheries users (e.g. people from the statistics that could deal with data formatting and submission)
- to assess the utility of each field and the abilities for each CCPs to collect it. The qualification of each item (mandatory, desirable, optional) would be useful as long as data of crucial importance for the SC are kept mandatory. This would also prevent some CCPs to fall into a non-compliant status because of its inability to provide an information of minor importance (e.g. the make of the hooks used in a line).

Using a template is the first step for the setup of an automated process from data collection to integration into databases. Some RFMOs are moving toward adopting such processes (IOTC Regional Observers' Scheme) and other seems to be using it with some success (CCAMLR).

Cooperation and experiences sharing with such RFMO is desirable even if it is expected that the setup of a data automation process would be challenging because of the diversity of SIOFA fisheries.

Annex 1. Annual catch summaries template

(Ref. CMM 2018/02 para 7)

| Flag | Year | FAO area | Species/Group scientific name | Species/Group FAO code | Total catch (tonnes, live weight) |
|------------|-------------|-----------|----------------------------------|---------------------------|--------------------------------------|
| <i>MUS</i> | <i>2017</i> | <i>51</i> | <i>Coryphaena hippurus</i> | <i>DOL</i> | <i>198.53</i> |
| <i>MUS</i> | <i>2017</i> | <i>51</i> | <i>Epinephelus spp</i> | <i>GPX</i> | <i>541.3</i> |
| <i>MUS</i> | <i>2017</i> | <i>51</i> | <i>Dissostichus eleginoides</i> | <i>TOP</i> | <i>84</i> |
| <i>MUS</i> | <i>2017</i> | <i>51</i> | <i>Elasmobranchii</i> | <i>DWS</i> | <i>1458.71</i> |
| | | | | | |
| | | | | | |
| | | | | | |

Annex 2. Vessel catch and efforts template

(Ref. CMM 2018/02 para 6)

| Vessels information | | | | | | | | | |
|---------------------|---------------|------|-----------|-----------|--------|--------|-----|-----|-------------|
| FLAG | NAME | IRCS | REG_NO | LLOYDS_NO | IMO_NO | IHS_NO | GT | GRT | PERSON_NAME |
| FRA | BEROKA | FGHJ | CC0123456 | | | | 600 | | |
| JPN | SASHIMI NO.05 | JUSK | 1234567 | | | | 800 | | |
| ESP | JARRAMAS | EFGH | V987654 | | | | 500 | | |
| | | | | | | | | | |
| | | | | | | | | | |

| Fishing activities details (for Longline, Traps/pots, Dahn/Drop line) | | | | | | | |
|---|--------|----------------|-----------------|--------------------|---------------|---------------|-----------------|
| VESSEL | SET_ID | TARGET_SPECIES | TYPE_OF_FISHING | SET_START_DATETIME | SET_START_LAT | SET_START_LON | SET_START_DEPTH |
| BEROKA | 187 | TOP | C | 2017-02-22 12:48 | -40.81 | 44.058 | 800 |
| JARRAMAS | 502 | LBE | C | 2015-10-05 08:06 | -40.81 | 44.058 | 150 |
| BEROKA | 748 | EEP | C | 2015-03-20 12:51 | -40.81 | 44.058 | 320 |
| | | | | | | | |
| | | | | | | | |

| Fishing activities details (for Longline, Traps/pots, Dahn/Drop line) <i>continued</i> | | | | | | |
|--|-------------|-------------|---------------|---------------------|-------------------|--|
| SET_END_DATETIME | SET_END_LAT | SET_END_LON | SET_END_DEPTH | HAUL_START_DATETIME | HAUL_END_DATETIME | |
| 2017-02-22 15:25 | -40.81 | 44.051 | 950 | 2017-02-23 05:14 | 2017-02-23 07:02 | |
| 2015-10-05 09:22 | -40.81 | 44.058 | 150 | 2015-10-05 18:22 | 2015-10-05 18:47 | |
| 2015-03-20 13:36 | -40.81 | 44.058 | 320 | 2015-03-21 04:16 | 2015-03-21 04:39 | |
| | | | | | | |
| | | | | | | |

| Longline gear details | | | | | | | | | |
|------------------------------|----------------------|------------------|------------------|---------------------|--------------------------|--------------------|---------------------|-----------------------------|----------------------|
| SET_ID | LONGLINE_TYPE | BAIT_TYPE | HOOK SIZE | HOOK SPACING | HOOK CODE_OR_MAKE | LINE_LENGTH | HOOKS_SET_NB | HOOKS_NB_PER_CLUSTER | HOOKS_LOST_NB |
| 187 | Autoline | Fish | 50 | 2 | MUSTAD | 8000 | 4000 | | 120 |
| | | | | | | | | | |
| | | | | | | | | | |

| Traps/pots gear details | | | | | | | |
|--------------------------------|-----------------|------------------|--------------------|--------------------|---------------------|---------------------|---------------------|
| SET_ID | POT_TYPE | LINE_TYPE | LINE_LENGTH | POT_SPACING | NB_POTS_SETS | NB_POTS_LOST | TYPE_OF_BAIT |
| 502 | | Dropline | 400 | 5 | 80 | 0 | Fish |
| | | | | | | | |
| | | | | | | | |

| Dahn/Drop line gear details | | | | | | |
|------------------------------------|---------------------|----------------------|--------------------------|--------------------|-------------------------------|------------------|
| SET_ID | HOOKS_SET_NB | HOOKS_LOST_NB | HOOK_CODE_OR_MAKE | LEADER_TYPE | TOTAL_NB_OF_LINE_LIFTS | BAIT_TYPE |
| 748 | 300 | 15 | MUSTAD | BOULDER | 10 | Fish |
| | | | | | | |
| | | | | | | |

| Fishing activities details (Trawl) | | | | | | | |
|------------------------------------|---------|----------------|-----------------|--------------------|---------------|---------------|-----------------|
| VESSEL | HAUL_ID | TARGET_SPECIES | TYPE_OF_FISHING | TOW_START_DATETIME | TOW_START_LAT | TOW_START_LON | TOW_START_DEPTH |
| SASHIMI NO.05 | 81 | ORY | C | 2017-02-22 12:48 | -40.81 | 44.058 | 800 |
| | | | | | | | |
| | | | | | | | |

| Fishing activities details (Trawl) <i>continued</i> | | | |
|---|-------------|-------------|---------------|
| TOW_END_DATETIME | TOW_END_LAT | TOW_END_LON | TOW_END_DEPTH |
| 2017-02-22 13:25 | -40.81 | 44.051 | 840 |
| | | | |
| | | | |

| Trawl gear details | | | |
|--------------------|-----------|-----------------|---------------|
| HAUL_ID | MESH_SIZE | TRAWL_TECHNIQUE | TYPE_OF_TRAWL |
| 81 | 120 | BOTTOM | S |
| | | | |
| | | | |

| Catch (and discards) | | | |
|-----------------------------|---------------------|-----------------------------|------------------------------|
| HAUL OR SET ID | SPECIES_CODE | LIVE_WEIGHT_RETAINED | LIVE_WEIGHT_DISCARDED |
| 187 | TOP | 51 | 0 |
| 187 | CYO | 84 | 0 |
| 187 | DCA | 2.6 | 0 |
| 502 | LBE | 5 | 0 |
| 748 | EEP | 11 | 0 |
| 748 | APO | 14 | 3 |
| 748 | SKC | 60 | 0 |
| 81 | ORY | 240 | 0 |
| 81 | EDR | 180 | 99 |
| 81 | BXD | 415 | 0 |
| 81 | CYO | 50 | 0 |
| | | | |
| | | | |

| Weight conversion factors | | |
|----------------------------------|------------------------|--------------------------|
| SPECIES_CODE | PROCESSING_TYPE | CONVERSION_FACTOR |
| TOP | Headed Frozen | 0.75 |
| LBE | Gutted iced | 0.7 |
| ORY | Entire Frozen | 1.05 |
| | | |
| | | |

Annex 3. Observers data reports

(Ref. CMM 2018/02 para 12)

Annex 3.1. Longline fishing trips

| This template file serves for a single vessel, to report data for other vessel trips, please use an other file | | | | | | | |
|--|-------------------|-------------------|-------------------|----------------------|--------------------|--------------------|------------------|
| <i>Sample data in grey italic serve as examples and can be removed</i> | | | | | | | |
| Vessel, trips and observers' details | | | | | | | |
| Vessel details | | | | | | | |
| Vessel Name | <i>BALAKRAN</i> | | | | | | |
| Vessel Flag | <i>FRA</i> | | | | | | |
| Trips details | | | | | | | |
| Trip Number | Cruise start date | Cruise end date | | | | | |
| <i>1</i> | <i>2017-01-07</i> | <i>2017-02-24</i> | | | | | |
| <i>2</i> | <i>2017-02-27</i> | <i>2017-03-19</i> | | | | | |
| <i>3</i> | <i>2017-03-26</i> | <i>2017-05-04</i> | | | | | |
| Observers details | | | | | | | |
| Observer name | Nationality | ID | Organization Name | Organization address | Organization email | Organization phone | Organization fax |
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| <i>DUPONT</i> | <i>FRA</i> | <i>18021454</i> | <i>SAFESEE</i> | | | | |
| <i>DUPOND</i> | <i>FRA</i> | <i>17723980</i> | <i>EFREMER 42</i> | | | | |
| <i>DUPONT</i> | <i>FRA</i> | <i>18021454</i> | <i>SAFESEE</i> | | | | |

| | | | | | | | |
|--|--|--|--|--|--|--|--|
| | | | | | | | |
| | | | | | | | |

| Observers details (cont.) | | | |
|--------------------------------------|--------------------------|-------------------------|--------------------------------|
| Boarding location | Boarding date/time (UTC) | Disembarkation location | Disembarkation date/time (UTC) |
| <i>rate relevance here (M, D, O)</i> | | | |
| <i>Le Port, REUNION</i> | <i>2017-01-07 03:30</i> | <i>Le Port, REUNION</i> | <i>2017-02-24 15:00</i> |
| <i>Le Port, REUNION</i> | <i>2017-02-27 04:30</i> | <i>Le Port, REUNION</i> | <i>2017-03-19 20:00</i> |
| <i>Le Port, REUNION</i> | <i>2017-03-26 11:00</i> | <i>Le Port, REUNION</i> | <i>2017-05-04 02:00</i> |
| | | | |
| | | | |

Line fishing operations details

| <u>Set number</u> | Set_type | Observed? | Date_observed | Cetacean Exclusion device used |
|--------------------------------------|----------|-----------|---------------|--------------------------------|
| <i>rate relevance here (M, D, O)</i> | | | | |
| | | | | |
| | | | | |

| Start setting details | | | |
|--------------------------------------|------------------------|-------------------------|----------------------------|
| Start_setting date_time | Start_setting Latitude | Start_setting Longitude | Start_setting Bottom_depth |
| <i>rate relevance here (M, D, O)</i> | | | |
| | | | |
| | | | |

| End setting details | | | |
|--------------------------------------|----------------------|-----------------------|--------------------------|
| End_setting datetime | End_setting Latitude | End_setting Longitude | End_setting Bottom_depth |
| <i>rate relevance here (M, D, O)</i> | | | |
| | | | |
| | | | |

| Other setting details | | | | | | | | | | | |
|--------------------------------------|---------------------------|-----------------------|----------------------|------------------------|-----------------------|--------------------------------|---------------------|---------------------|------------------------------|------------------------|------------------------------|
| Setting speed | Longline setting position | Longline total length | Longline total hooks | Longline %hooks baited | Longline bait species | Deck light used during setting | Streamer line used? | Bait entry position | Offal dumping during setting | Offal dumping position | Propeller rotation direction |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| Hauling details | | | | | | | |
|--------------------------------------|---|-------------------------|--|----------------------------|------------------------------|------------------------|------------------------------------|
| Hauling datetime | Nb of hooks observed for seabird and fish bycatches | Number of sections lost | Number of hooks attached to lost section | Number of other hooks lost | Offal dumping during hauling | Offal dumping position | Offal propeller rotation direction |
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Longline gear characteristics and details

| | | Line details | | | | | | |
|--|----------------------------|--------------------------|-----------------------|-----------------------|--------------------------------|-------------------------|-------------------------|----------------------------------|
| Longline_type | Usage_period start_date | Usage_period end_date | Main_line material | Main_line diameter | Main_line integrated_weight | Branch_line material | Branch_line diameter | Branch_line integrated_weight |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Hooks details | | | | | | | | | | |
|--|--------------|----------------------|---------------|--------------|----------------|----------------------|--------------------------------|--------------------------|---------------------|-------------------------|
| Hook type | Hook make | Hook total_length | Hook shank | Hook gape | Hook throat | Hook front_length | Hook usual_setting_position | Hooks line_off_bottom | Hooks off_bottom | Hooks baiting_method |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

| Hook sinkers details | | |
|--|------------------------------------|---------------------------------|
| Hook_sinkers size | Hook_sinkers position_from_hook | Propeller rotation direction |
| <i>rate relevance here (M, D, O)</i> | | |
| | | |
| | | |

Streamer details

| Streamer_line equipped? | Streamer_line regularly set number | Streamer_line position | Streamer_line length min | Streamer_line length max | Streamer_line height above water attached | Streamer_line distance between streamers | Streamer_line number of streamers | Streamer_line streamer_design |
|--------------------------------------|------------------------------------|------------------------|--------------------------|--------------------------|---|--|-----------------------------------|-------------------------------|
| <i>rate relevance here (M, D, O)</i> | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Streamer_line aerial extent of line | Streamer_line method used to assess extent | Streamer_line streamer_material | Streamer_line streamer_diameter | Streamer_line streamer_colours | Streamer_line position over bait entry point | Distance from stern to bait entry point | Towed object | Horizontal distance from bait entry point to streamer line |
|-------------------------------------|--|---------------------------------|---------------------------------|--------------------------------|--|---|--------------|--|
| | | | | | | | | |
| | | | | | | | | |

Catch details

| <i>please use one row for every species/set combination</i> | | | | | | | |
|---|---------------------|----------------------------|-----------------|-----------------|------------------|------------------|----------------------------------|
| Set number | species FAO_code | species scientific_name | weight_retained | number_retained | weight_discarded | number_discarded | Nb of fish lost at surface |
| <i>rate relevance here (M, D, O)</i> | M | M | M | | M | | |
| 1 | TOP | <i>D. elegendoides</i> | 342 | | 25 | | 4 (unknown species) |
| 1 | CYS | C. | 177 | | 0 | | |
| | | | | | | | |
| | | | | | | | |

Incidental bycatch of seabird, mammals, turtles

| <i>Even if no incident occurred, please record it for each operation/set</i> | | | | | | | | | | | | | |
|--|-----------------------------|------------------|--------------------|----------------------|-------------|-----------------|---------------|------------|-------------------|--------------|------------|---------------|---|
| Set number | species | Number caught | Number released | Released life status | | | | | Number sampled | sex ratio | | | Circumstances of bycatch description |
| | | | | Nb vigorous | Nb alive | Nb lethargic | Nb injured | Nb dead | | Nb female | Nb male | Nb unknown | |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | | | | | | |
| 1 | <i>none</i> | | | | | | | | | | | | |
| 2 | <i>none</i> | | | | | | | | | | | | |
| 3 | <i>White Chinned Petrel</i> | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> | <i>Entanglement</i> |
| 4 | <i>none</i> | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Biological sampling

| <u>Set number</u> | species FAO_code | length | weight | sex | maturity | otolith collected? | tag collected? |
|--------------------------------------|---------------------|--------|--------|-----|----------|-----------------------|-------------------|
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| 1 | TOP | 70 | 7 | | | | |
| 1 | TOP | 94 | 8.8 | | | | |
| 1 | TOP | 62 | 6.5 | | | | |
| 1 | TOP | 77 | 7.3 | | | | |
| 1 | CYS | 62 | 5 | | | | |
| 1 | CYS | 81 | 6.2 | | | | |
| | | | | | | | |
| | | | | | | | |

VME organisms' interactions

| <u>Set number</u> | species scientific_name | species FAO code | photo_reference | quantity estimate | sample taken for ID? |
|--------------------------------------|----------------------------|---------------------|-----------------|-------------------|-------------------------|
| <i>rate relevance here (M, D, O)</i> | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Seabirds abundance estimation

| <u>Set number</u> | Seabird_species | Estimated_number |
|--|----------------------|------------------|
| <i>rate relevance here (M, D, O)</i> | | |
| 1 | Albatross | 3 |
| 1 | White chinned petrel | 20 |
| 3 | White chinned petrel | 30 |
| | | |
| | | |

Tags recoveries details

| | | tag details | | | animal details | | |
|--|---------|-------------|----------|------------|----------------|-------------|-----|
| <u>Set number</u> | species | tag colour | tag type | tag number | length | length type | sex |
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Annex 3.2. Trawl fishing trips

| This template file serves for a single vessel, to report data for other vessel trips, please use an other file | | | | | | | |
|--|-------------------|-------------------|-------------------|----------------------|--------------------|--------------------|------------------|
| <i>Sample data in grey italic serve as examples and can be removed</i> | | | | | | | |
| Vessel, trips and observers' details | | | | | | | |
| Vessel details | | | | | | | |
| Vessel Name | <i>BALAKRAN</i> | | | | | | |
| Vessel Flag | <i>FRA</i> | | | | | | |
| Trips details | | | | | | | |
| Trip Number | Cruise start date | Cruise end date | | | | | |
| <i>1</i> | <i>2017-01-07</i> | <i>2017-02-24</i> | | | | | |
| <i>2</i> | <i>2017-02-27</i> | <i>2017-03-19</i> | | | | | |
| <i>3</i> | <i>2017-03-26</i> | <i>2017-05-04</i> | | | | | |
| Observers details | | | | | | | |
| Observer name | Nationality | ID | Organization Name | Organization address | Organization email | Organization phone | Organization fax |
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| <i>DUPONT</i> | <i>FRA</i> | <i>18021454</i> | <i>SAFESEE</i> | | | | |
| <i>DUPOND</i> | <i>FRA</i> | <i>17723980</i> | <i>EFREMER 42</i> | | | | |
| <i>DUPONT</i> | <i>FRA</i> | <i>18021454</i> | <i>SAFESEE</i> | | | | |

| Observers details (cont.) | | | |
|--------------------------------------|--------------------------|-------------------------|--------------------------------|
| Boarding location | Boarding date/time (UTC) | Disembarkation location | Disembarkation date/time (UTC) |
| <i>rate relevance here (M, D, O)</i> | | | |
| Le Port, REUNION | 2017-01-07 03:30 | Le Port, REUNION | 2017-02-24 15:00 |
| Le Port, REUNION | 2017-02-27 04:30 | Le Port, REUNION | 2017-03-19 20:00 |
| Le Port, REUNION | 2017-03-26 11:00 | Le Port, REUNION | 2017-05-04 02:00 |
| | | | |
| | | | |

Trawl fishing operations details

| Trawl number | Trawl type | Observed? | Target species | Operation Start_datetime | Operation End_datetime | Bottom depth | Trawl start details | | | | Trawl end details | | | |
|--------------------------------------|------------|-----------|----------------|--------------------------|------------------------|--------------|---------------------|------|-------|-------|-------------------|------|-------|-------|
| | | | | | | | Fishing start_time | Lat. | Long. | Depth | Fishing end_time | Lat. | Long. | Depth |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

| Offal_discharged during_shooting | Offal_discharged during_hauling | Trawl_speed | Total catch | Observer name | ByCatch Observation? | SubSamples total_weight | Bird_scaring tori_line_used? | Bird_bafflers used? |
|--------------------------------------|---------------------------------|-------------|-------------|---------------|----------------------|-------------------------|------------------------------|---------------------|
| <i>rate relevance here (M, D, O)</i> | | | | | | | | |

| | | | | | | | | |
|--|--|--|--|--|--|--|--|--|
| | | | | | | | | |
| | | | | | | | | |

| Bird strikes | | | | | |
|--------------------------------------|------------------------|----------------------|-------------------|---------------------|---------------------|
| Trawl warp strike monitored? | Strikes_obs start_time | Strikes_obs end_time | AirStrikes number | WaterStrikes number | SinkerStrike number |
| <i>rate relevance here (M, D, O)</i> | | | | | |
| | | | | | |
| | | | | | |

Trawl gear characteristics and details

| Net_ID | Trawl_type | Headrope_length | Groundrope_length | Bobbin_diameter | Otterboard_to_wing_length | Horizontal_opening | Vertical_opening |
|--------------------------------------|------------|-----------------|-------------------|-----------------|---------------------------|--------------------|------------------|
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| Mesh_size | Mesh_condend_circumference | Mesh_type | Otterboard_type | Otterboard_weight | Net_design |
|--------------------------------------|----------------------------|-----------|-----------------|-------------------|------------|
| <i>rate relevance here (M, D, O)</i> | | | | | |
| | | | | | |
| | | | | | |

Catch details

| <i>please use one row for every species/tow combination</i> | | | | | | |
|---|---------------------|------------------------------------|-----------------|-----------------|------------------|------------------|
| Trawl number | species FAO_code | species scientific_name | weight_retained | number_retained | weight_discarded | number_discarded |
| <i>rate relevance here (M, D, O)</i> | M | M | M | | M | |
| 1 | ORY | <i>Hoplostethus atlanticus</i> | 197 | | 0 | 0 |
| 1 | ALF | <i>Beryx sp</i> | 81 | | 0 | 0 |
| | | | | | | |
| | | | | | | |

Incidental bycatch of seabird, mammals, turtles

| <i>Even if no incident occurred, please record it for each operation/tow</i> | | | | | | | | | | | | | |
|--|----------------|------------------|--------------------|----------------------|-------------|-----------------|---------------|------------|-------------------|--------------|------------|---------------|---|
| Trawl number | species | Number caught | Number released | Released life status | | | | | Number sampled | sex ratio | | | Circumstances of bycatch description |
| | | | | Nb vigorous | Nb alive | Nb lethargic | Nb injured | Nb dead | | Nb female | Nb male | Nb unknown | |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | | | | | | |
| 1 | <i>none</i> | | | | | | | | | | | | |
| 2 | <i>none</i> | | | | | | | | | | | | |
| 3 | <i>Dolphin</i> | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | <i>Drowned into the net</i> |
| 4 | <i>none</i> | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Seabirds abundance estimation

| <u>Trawl number</u> | Seabird_species | Estimated_number |
|--|-----------------------------|------------------|
| <i>rate relevance here (M, D, O)</i> | | |
| 1 | <i>Albatross</i> | 3 |
| 1 | <i>White chinned petrel</i> | 8 |
| | | |
| | | |

Biological sampling

| <u>Trawl number</u> | species FAO_code | length | weight | sex | maturity | otolith collected? | stomach sampled? | tag collected? |
|--|---------------------|--------|--------|-----|----------|-----------------------|---------------------|-------------------|
| <i>rate relevance here (M, D, O)</i> | | | | | | | | |
| 1 | <i>ORY</i> | 32 | 1.4 | | | | | |
| 1 | <i>ORY</i> | 40 | 1.5 | | | | | |
| 1 | <i>ORY</i> | 22 | 0.2 | | | | | |
| 1 | <i>ORY</i> | 37 | 2.1 | | | | | |
| 1 | <i>ALF</i> | 50 | 3.6 | | | | | |
| 1 | <i>ALF</i> | 45 | 3.02 | | | | | |
| | | | | | | | | |
| | | | | | | | | |

VME organisms' interactions

| Trawl number | species scientific name | species FAO code | photo_reference | quantity estimate | sample taken for ID | | | overall quantity estimate of all species in the set/tow |
|--------------------------------------|-------------------------|------------------|-----------------|-------------------|---------------------|--|--|---|
| <i>rate relevance here (M, D, O)</i> | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Tags recoveries details

| Trawl number | species | tag details | | | animal details | | |
|--------------------------------------|---------|-------------|----------|------------|----------------|-------------|-----|
| | | tag colour | tag type | tag number | length | length type | sex |
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Annex 3.3. Dahn/Drop line fishing trips

| Use this template file for a single vessel, to report data for other vessel trips, please use another file | | | | | | | |
|--|-------------------|-------------------|-------------------|-----------------------------|------------------------|--------------------|------------------|
| <i>Sample data in grey italic serve as examples and can be removed</i> | | | | | | | |
| Vessel, trips and observers' details | | | | | | | |
| Vessel details | | | | | | | |
| Vessel Name | <i>MORNE BLEU</i> | | | | | | |
| Vessel Flag | <i>SYC</i> | | | | | | |
| Trips details | | | | | | | |
| Trip Number | Cruise start date | Cruise end date | | | | | |
| <i>1</i> | <i>2017-05-21</i> | <i>2017-06-08</i> | | | | | |
| Observers details | | | | | | | |
| Observer name | Nationality | ID | Organization Name | Organization address | Organization email | Organization phone | Organization fax |
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| <i>HIRUDO Araki</i> | <i>JPN</i> | <i>J16002594</i> | <i>JFMO</i> | <i>45 C - Kyoto - Japan</i> | <i>info@jfmo.co.jp</i> | | |

| Observers details (continued) | | | |
|-------------------------------|--------------------------|-------------------------|--------------------------------|
| Boarding location | Boarding date/time (UTC) | Disembarkation location | Disembarkation date/time (UTC) |

| | | | |
|--------------------------------------|------------------|------------|-------|
| <i>rate relevance here (M, D, O)</i> | | | |
| PORT LOUIS | 2017-05-21 17:00 | PORT LOUIS | ##### |
| | | | |

Line fishing operations details (dahn/drop line)

| Line setting details | | | | | | | | | | | | | | | | | |
|--------------------------------------|----------|------------------|---------------------|----------------|---------------------------------|-----------------------------|--------------|-----------|-----------------|---------------------------------|---------------------|-------------------------------|---------------------|---------------|------------------------------|------------------------|------------------------------|
| Set number | Set type | Main_line length | Number of hooks set | %_hooks baited | distance between branches snood | distance of hooks of bottom | Bait species | Bait size | Bait proportion | Deck light used during setting? | Streamer line used? | Number of streamer lines used | Bait entry position | Setting speed | Offal dumping during setting | Offal dumping position | Propeller rotation direction |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | | | | | | | | | | |
| 1 | C | 1500 | 30 | 100 | | 0 | squid/fish | | 60/40 | N | Y | 1 | Stern | 3 | N | | |
| 2 | C | 1500 | 30 | 100 | | 0 | squid/fish | | 60/40 | N | Y | 1 | Stern | 3 | N | | |
| 3 | C | 1500 | 30 | 100 | | 0 | fish | | 100 | N | Y | 1 | Stern | 3 | N | | |
| | | | | | | | | | | | | | | | | | |

| Start setting details | | | | End setting details | | | |
|--------------------------------------|------------------------|-------------------------|----------------------------|----------------------|----------------------|-----------------------|--------------------------|
| Start_setting date_time | Start_setting Latitude | Start_setting Longitude | Start_setting Bottom_depth | End_setting datetime | End_setting Latitude | End_setting Longitude | End_setting Bottom_depth |
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| 2018-05-23 15:00 | -36.154 | 40.31 | 1400 | 2018-05-23 15:30 | -36.154 | 40.31 | 1400 |
| 2018-05-23 16:00 | -36.154 | 40.31 | 900 | 2018-05-23 16:30 | -36.152 | 40.321 | 900 |
| 2018-05-23 17:00 | -36.154 | 40.31 | 1200 | 2018-05-23 17:30 | -36.157 | 40.29 | 1200 |
| | | | | | | | |

| Hauling details | | | | | | | | |
|--------------------------------------|-------------------------|--|----------------------------|------------------------------|------------------------|------------------------------|---|--|
| Hauling datetime | Number of sections lost | Number of hooks attached to lost section | Number of other hooks lost | Offal dumping during hauling | Offal dumping position | Propeller rotation direction | haul observed for fish/inverts bycatches? | Estimated percentage of the haul observed for fish/inverts bycatches |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | |
| 2018-05-24 05:10 | 0 | n/a | 1 | never | | | Y | 100 |
| 2018-05-24 05:10 | 0 | n/a | 0 | never | | | Y | 100 |
| 2018-05-24 05:10 | 0 | n/a | 4 | never | | | Y | 100 |
| | | | | | | | | |

Line gear characteristics and details

| Line_type | Usage_period start_date | Usage_period end_date | Line details | | | Hooks details | | | | | | | | | | | Automatic baiting equipment detail | |
|--------------------------------------|-------------------------|-----------------------|--------------------|--------------------|-----------------------------|---------------|-----------|-------------------|------------|-----------|-------------|-------------------|-----------------------------|-----------------------|------------------|----------------------|------------------------------------|--|
| | | | Main_line material | Main_line diameter | Main_line integrated weight | Hook type | Hook make | Hook total length | Hook shank | Hook gape | Hook throat | Hook front length | Hook usual setting position | Hooks line off bottom | Hooks off bottom | Hooks baiting method | | |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

Streamer details

| Streamer_line equipped? | Streamer_line regularly set number | Streamer_line position | Streamer_line length min | Streamer_line length max | Streamer_line height above water attached | Streamer_line distance between streamers | Streamer_line number of streamers | Streamer_line streamer_design |
|--------------------------------------|------------------------------------|------------------------|--------------------------|--------------------------|---|--|-----------------------------------|-------------------------------|
| <i>rate relevance here (M, D, O)</i> | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

| Streamer_line aerial extent of line | Streamer_line method used to assess extent | Streamer_line streamer_material | Streamer_line streamer_diameter | Streamer_line streamer_colours | Streamer_line position over bait entry point | Distance from stern to bait entry point | Towed object | Horizontal distance from bait entry point to streamer line |
|--------------------------------------|--|---------------------------------|---------------------------------|--------------------------------|--|---|--------------|--|
| <i>rate relevance here (M, D, O)</i> | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Catch details

please use one row for every species/set combination

| <u>Set number</u> | species FAO_code | species scientific_name | weight_retained | number_retained | weight_discarded | number_discarded | Nb of fish lost at surface |
|--|---------------------|----------------------------|-----------------|-----------------|------------------|------------------|-------------------------------|
| <i>rate relevance here (M, D, O)</i> | M | M | M | | M | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Incidental bycatch of seabird, mammals, turtles

Even if no incident occurred, please record it for each operation/set

| <u>Set number</u> | species | Number caught | Number released | Released life status | | | | | Number sampled | sex ratio | | | Circumstances of bycatch description |
|--|---------------------------------|------------------|--------------------|----------------------|-------------|-----------------|---------------|------------|-------------------|--------------|------------|---------------|--|
| | | | | Nb vigorous | Nb alive | Nb lethargic | Nb injured | Nb dead | | Nb female | Nb male | Nb unknown | |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | | | | | | |
| 1 | <i>none</i> | | | | | | | | | | | | |
| 2 | <i>none</i> | | | | | | | | | | | | |
| 3 | <i>White Chinned Petrel</i> | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | <i>n/a</i> | <i>n/a</i> | <i>n/a</i> | <i>Entanglement</i> |
| 4 | <i>none</i> | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Biological sampling

| <u>Set number</u> | species_FAO_code | length | weight | sex | maturity | otolith_collected | tag_collected |
|--------------------------------------|------------------|--------|--------|-----|----------|-------------------|---------------|
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| 1 | GRP | 70 | 7 | | | | |
| 1 | GRP | 94 | 8.8 | | | | |
| 1 | GRP | 62 | 6.5 | | | | |
| 1 | GRP | 77 | 7.3 | | | | |
| 1 | SNP | 62 | 5 | | | | |
| 1 | SNP | 81 | 6.2 | | | | |
| | | | | | | | |
| | | | | | | | |

VME organisms' interactions

| <u>Set number</u> | species scientific name | species FAO code | photo_reference | quantity estimate | sample taken for ID? | | | overall quantity estimate of all species in the set/tow |
|--------------------------------------|-------------------------|------------------|-----------------|-------------------|----------------------|--|--|---|
| <i>rate relevance here (M, D, O)</i> | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Seabirds abundance estimation

| <u>Set_number</u> | Seabird_species | Estimated_number |
|--|----------------------|------------------|
| <i>rate relevance here (M, D, O)</i> | | |
| 1 | Albatross | 3 |
| 1 | White chinned petrel | 8 |
| | | |
| | | |

Tags recoveries details

| | | tag details | | | animal details | | |
|--|---------|-------------|----------|------------|----------------|-------------|-----|
| <u>Set_number</u> | species | tag colour | tag type | tag number | length | length type | sex |
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Annex 3.4. Traps/Pots fishing trips

| Use this template file for a single vessel, to report data for other vessel trips, please use another file | | | | | | | |
|--|-------------------|-------------------|-------------------|----------------------|--------------------|--------------------|------------------|
| <i>Sample data in grey italic serve as examples and can be removed</i> | | | | | | | |
| Vessel, trips and observers' details | | | | | | | |
| Vessel details | | | | | | | |
| Vessel Name | <i>MAS CASA</i> | | | | | | |
| Vessel Flag | <i>ESP</i> | | | | | | |
| Trips details | | | | | | | |
| Trip Number | Cruise start date | Cruise end date | | | | | |
| <i>1</i> | <i>2017-01-07</i> | <i>2017-02-24</i> | | | | | |
| <i>2</i> | <i>2017-02-27</i> | <i>2017-03-19</i> | | | | | |
| <i>3</i> | <i>2017-03-26</i> | <i>2017-05-04</i> | | | | | |
| Observers details | | | | | | | |
| Observer name | Nationality | ID | Organization Name | Organization address | Organization email | Organization phone | Organization fax |
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| <i>GARCIA</i> | <i>ESP</i> | <i>2564DS</i> | <i>MARINO LTD</i> | | | | |
| <i>SANCHEZ</i> | <i>POR</i> | <i>44423EU1</i> | <i>CRM</i> | | | | |
| <i>SANCHEZ</i> | <i>POR</i> | <i>44423EU1</i> | <i>CRM</i> | | | | |

| Observers details (continued) | | | |
|--------------------------------------|--------------------------|-------------------------|--------------------------------|
| Boarding location | Boarding date/time (UTC) | Disembarkation location | Disembarkation date/time (UTC) |
| <i>rate relevance here (M, D, O)</i> | | | |
| Le Port, REUNION | 2017-01-07 03:30 | Le Port, REUNION | 2017-02-24 15:00 |
| Le Port, REUNION | 2017-02-27 04:30 | Le Port, REUNION | 2017-03-19 20:00 |
| Le Port, REUNION | 2017-03-26 11:00 | Le Port, REUNION | 2017-05-04 02:00 |
| | | | |

Traps/pots fishing operations details

| Set number | Set_type | Observed? | Date observed | Target species | Start setting details | | | | End setting details | | | |
|--------------------------------------|----------|-----------|---------------|----------------|-------------------------|------------------------|-------------------------|----------------------------|----------------------|----------------------|-----------------------|--------------------------|
| | | | | | Start_setting date_time | Start_setting Latitude | Start_setting Longitude | Start_setting Bottom_depth | End_setting datetime | End_setting Latitude | End_setting Longitude | End_setting Bottom_depth |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

Continuing...

| Length of line | Number of traps/pots set | Trap-pot spacing | Bait type | Hauling | | | | |
|--------------------------------------|--------------------------|------------------|-----------|-------------------|----------------------------|------------------------------|--|--|
| | | | | Hauling date_time | Number of trap-pots hauled | Number of trap-pots observed | Haul observed for Fish/inverts. Bycatch? | % Haul observed for Fish/inverts bycatch |
| <i>rate relevance here (M, D, O)</i> | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Traps/Pots gear details

| | Funnel details | | | | | | |
|--------------------------------------|----------------|-------------|----------|----------------|--------------|------------------------|--------------|
| gear_type | mesh size | Orientation | Aperture | Nb of chambers | Escape port? | Escape port dimensions | Type of line |
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| | | | | | | | |
| | | | | | | | |

Catch details

| <i>please use one row for every species/set combination</i> | | | | | | | | |
|---|---------------------|----------------------------|-----------------|-----------------|------------------|-------------------------|--------------------------|---------------------------|
| Set_number | species FAO_code | species scientific_name | weight_retained | number_retained | weight_discarded | Nb discarded dead | Nb discarded alive | Number lost at surface |
| <i>rate relevance here (M, D, O)</i> | M | M | M | | M | | | |
| | | | | | | | | |
| | | | | | | | | |

Seabirds abundance estimation

| Set_number | Seabird_species | Estimated_number |
|--------------------------------------|-----------------------------|------------------|
| <i>rate relevance here (M, D, O)</i> | | |
| 1 | <i>Albatross</i> | 3 |
| 1 | <i>White chinned petrel</i> | 8 |
| | | |
| | | |

Biological sampling

| <u>Set_number</u> | species_FAO_code | length | weight | sex | maturity | otolith collected? | tag collected? |
|--------------------------------------|------------------|--------|--------|-----|----------|--------------------|----------------|
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| 1 | TOP | 70 | 7 | | | | |
| 1 | TOP | 94 | 8.8 | | | | |
| 1 | TOP | 62 | 6.5 | | | | |
| 1 | TOP | 77 | 7.3 | | | | |
| 1 | CYS | 62 | 5 | | | | |
| 1 | CYS | 81 | 6.2 | | | | |
| | | | | | | | |
| | | | | | | | |

Tags recoveries details

| <u>Set_number</u> | species | tag details | | | animal details | | |
|--------------------------------------|---------|-------------|----------|------------|----------------|-------------|-----|
| | | tag colour | tag type | tag number | length | length type | sex |
| <i>rate relevance here (M, D, O)</i> | | | | | | | |
| | | | | | | | |
| | | | | | | | |

