

10TH MEETING OF THE COMPLIANCE AND TECHNICAL COMMITTEE (CTC)

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CTC 10 – Doc 04

Implementation Report: SPRFMO Fisheries

Secretariat

1. Background

In years past, the Secretariat has prepared an implementation report for the *Trachurus murphyi* fishery (e.g., [CTC9-Doc06_rev1](#)). However, there has been increasing interest in developing implementation reports for other SPRFMO fisheries, such as squid (with respect to CMM 18-2020) with implications for the transshipment CMM (CMM 12-202). To address the implementation of SPRFMO CMMs with respect to all fisheries in a concise paper, we have expanded this report to extend beyond jack mackerel.

Specifically, this report focuses on fishing activities, data validation, SC advice and requests, and challenges related to implementation of the jack mackerel, squid, bottom fishing, exploratory fisheries, and transshipment CMMs.

2. *Trachurus murphyi*

2.1. Effort management (Paragraph 4)

Effort in the *Trachurus murphyi* fishery has been constrained by gross tonnage (GT). These limits are detailed in Table of CMM 1.01 (and shown in Table 1 of this paper).

Table 1. Gross tonnage effort constraint in the *Trachurus murphyi* fishery and the total GT of all vessels, by flag, participating in the fishery during 2021

Member/CNCP	GT effort limit	2021 GT
European Union	78 600	32 636
Russian Federation	74 470	7 731

2.2. Threshold (70%) and date of closure (Paragraph 7)

During 2022, three Members reached 70% of their catch limit. Chile was informed by letter on 17 June (G81-2022), the European Union on 27 September (G146-2022)¹, and the Russian Federation on 11 November (G163-2022). No Member has formally closed their fishery, although some fleets have decided not to conduct fishing during 2022.

¹ A formal email was not sent, as the Scientific Committee was in session; however, the notice of the 70% threshold was indicated in the 15-day jack mackerel catch report contained within letter G146-2022.



2.3. Entitlement transfers (Paragraph 9)

The Secretariat is responsible for notifying Members and CNCs when each transfer occurs and circulating the approval of the receiving Member. During 2022 there were 14 transfers involving 9 Members, as summarised in Table 2.

Table 2: 2022 Transfers (tonnes) of jack mackerel catch entitlement (rounded to nearest whole number)

Member	2022 catch entitlement	Transfers received	Transfers given	Current Limit
Chile (total)	581 074	150 218	0	731 292
China	57 129	0	45 000	12 129
Cook Islands	0	0	0	0
Cuba	2 008	0	2 008	0
Ecuador (total)	11 374	0	11 174	200
European Union	54 977	13 548	23 779	44 746
Faroe Islands	9 978	0	9 978	0
Korea	11 540	0	11 540	0
Peru (high seas)	18 256	0	18 256	0
Russian Federation	29 543	0	0	29 543
Vanuatu	42 064	0	42 031	33
Total	817 943	163 766	163 776	817 943

2.4. Notification of catches against catch limits (Paragraphs 11 and 13)

By way of letter G92-2022 on 30 June 2022, the Executive Secretary informed Members and CNCs that catches of *Trachurus murphyi* in the range of its distribution had reached 70% of the amount referred to in paragraph 10 (at that stage 648,950 t had been caught, which was 72.1% of 900,000 t).

Paragraph 13 states that when total catches have reached 70% of the amount indicated in paragraph 10, Members and CNCs agree to implement a 15-day reporting period. Fifteen-day reporting for the jack mackerel fishery was implemented in July 2022.

The Executive Secretary shall inform Members and CNCs when the amount referred to in paragraph 10 has been reached. Letter G182-2022 informed Members that total catches in the *T. murphyi* fishery were estimated at 917,189 t, which was 101.9% of the amount specified in paragraph 10 of CMM 01-2021 (i.e., 900,000 t) as of 22 December 2022.

2.5. Monthly and 15-day catch reports (Paragraphs 14 and 15)

Monthly and 15-day catch reports were circulated by the Secretariat throughout the year in a timely manner.

2.6. Verification of 2021 annual catch reports (Paragraph 16)

Each year, the Executive Secretary shall verify the annual catch reports and inform the Members and CNCs of the outcome of the verification exercise and any possible discrepancies encountered. The outcome of this exercise is shown in Table 3.

**Table 3:** 2021 Verification of annual catch (tonnes) from the *Trachurus murphyi* fishery in SPRFMO Area

Member	2021 annual catch	Monthly reports ²	Fishing activities ³	Transhipments ⁴	Landings ⁵
European Union	43 167	43 168	42 990	4 813	40 389
Russian Federation		12 198	12 151		

Referring to Table 3, the discrepancies between the different types of catch data received by the Secretariat for the *Trachurus murphyi* fishery range from 0.4% (annual catch compared with fishing activity data) to 4.5% (annual catch data compared with the sum of transhipments and landings).

2.7. List of vessels having actively fished or engaged in transhipment (Paragraph 19)

The SPRFMO [Record of Vessels](#) details the list of authorised vessels and is available via the Organisation’s website. Vessels that have actively fished or engaged in transhipment for *Trachurus murphyi*, by month, in the 2022 calendar year are also shown on the SPRFMO website ([T. murphyi 2022 Fishery](#)). A summary of this information is presented in Table 4. In addition, a report on the vessels active in the Convention Area during 2021 is included in the annual Record of Vessels Implementation report (CTC10-Doc05).

Table 4: List of vessels having actively fished or engaged in transhipment (*T. murphyi*) during 2022

Member/CNCP	Vessel	Vessel type
European Union	Annelies Ilena	Trawler
	Margiris	Trawler
Russian Federation	Admiral Shabalin	Trawler
	Komandor	Trawler
Curaçao	Orange Stream	Fish Carrier

2.8. Domestic measures (Paragraph 27)

Paragraph 27 of CMM 01-2022 states that where, due to exceptional and unforeseen circumstances in the stock biomass in the inter-sessional period, coastal States that have not given their express consent under Article 20 paragraph 4 (a) (ii) establish domestic measures concerning catches of *Trachurus murphyi* in areas under their national jurisdiction that may result in catches exceeding 82,057 tonnes, they agree to submit to the Secretariat a report explaining to the Commission how the national measures are compatible with those adopted by the Commission and how they have taken into account the requirements of Article 4 paragraph 2(a), (b) and (c) of the Convention. The catch amount of 82,057 tonnes is the difference between the maximum catch recommended by the Scientific Committee (i.e., 900,000 t) and the total catch allocation for the high seas and for areas under national jurisdiction, with express consent (i.e., 817,943 t).

Letter G72-2022 (2 June 2022) contained Peru’s 2022 report on compatibility of its national jack mackerel measures.

² As per paragraph 12 of CMM 01-2022 (*Trachurus murphyi*)

³ As per paragraph 1b of CMM 02-2022 (Data standards)

⁴ As per paragraph 1c of CMM 02-2022 (Data standards) and paragraph 8 of CMM 12-2020 (Transhipment)

⁵ As per paragraph 1c of CMM 02-2022 (Data standards)



2.9. SC10 advice and specific requests

The 10th meeting of the SPRFMO Scientific Committee was held in Seoul, Republic of Korea from 26 to 30 September 2022. Paragraph 91 of the SC10-Report records that “... **the SC recommended a precautionary 15% increase in 2023 catches throughout the range of jack mackerel - at or below 1,035 kt. This advice for catch limits in 2023 does not depend on the stock structure hypothesis that is used.**”

Table 2 of CMM 01-2022 contains percentages that were used by the Commission as a basis for the allocation of Member and CNCP catch limits from 2018 to 2022 inclusive. The allocation scheme is due to be reviewed at the 11th Commission meeting in 2023.

In Paragraph 28 of CMM 01-2022 (*Trachurus murphyi*) the Commission requests advice from the SC regarding the possible impact of national measures adopted on the *Trachurus murphyi* fishery. The sum of realised catch of jack mackerel in 2021 was approximately 4% above the catch limit recommended by the SC and preliminary estimates of the catch in 2022 suggest that the catch limit will have been exceeded by approximately 2%.

The SC9-Report notes that *it is necessary to evaluate the potential structural impacts of national measures on the T. murphyi fishery. This would best be carried out as part of the management strategy evaluation. This requires a precise specification of the type of national measures that should be considered.* SC10 did not update this advice.

3. Squid

3.1. Verification of 2021 annual catch reports (Paragraph 4)

Each year, the Executive Secretary shall verify the annual catch reports and inform the Members and CNCPs of the outcome of the verification exercise and any possible discrepancies encountered.

It should be noted that due to the relatively long fishing trips that are typical of vessels targeting squid, landings data can be hard to interpret with respect to annual catch and fishing activity data. For example, a single landing event may comprise squid from fishing activities that occurred over several years. Disaggregating these catches to apportion them to the respective year in which they were harvested may not be possible. In addition, there are challenges associated with collating and analysing transshipment data (discussed further in Section 6.3) which means that currently annual catches are only verified using fishing activity data.

Table 5: 2021 Verification of Annual catch (tonnes)⁶ from the squid fishery in SPRFMO Area

Member	2021 annual catch	Fishing activities ⁷	Transshipments ⁸	Landings ⁹
China	421 971	393 933	387 716	34 025
Chinese Taipei	665	674	114	1 705

Referring to Table 5, the discrepancies between the annual catch compared with fishing activity data range from 1.3% to 6.6%.

⁶ Catch records are rounded to the nearest whole number

⁷ As per paragraph 1b of CMM 02-2022 (Data standards)

⁸ As per paragraph 1c of CMM 02-2022 (Data standards) and paragraph 8 of CMM 12-2020 (Transshipment)

⁹ As per paragraph 1c of CMM 02-2022 (Data standards). It should be noted, however, landings may reflect catches from multiple years.



3.1. List of vessels having actively fished or engaged in transshipment (Paragraph 6)

The SPRFMO [Record of Vessels](#) shows the list of vessels that are authorised and is available via the Organisation’s website. On the Member’s section of the SPRFMO website, there are summary tables detailing the transshipment notifications received on a weekly basis (as well as the carrier vessels involved with the transshipments), and a summary of the transshipment details reported, following transshipment events. A report on the vessels active in the Convention Area during 2021 is included in the annual Record of Vessels Implementation report (CTC10-Doc05).

3.2. SC10 advice and specific requests

At SC10, the SC **recommended**:

- *to develop a Jumbo Flying Squid Genetics and Connectivity Task Group (para 154, SC10-Report);*
- *that [Peru’s alternative observer] programme was suitable and met the requirements for data collection obligations as detailed in paragraph 4 of CMM 16-2022 (Observer programme) (Para 165, SC10-Report);*
- *that in the interim, [squid] CMM development should monitor CPUE trends and constrain fishing effort as a precautionary approach (para 181e, SC10-Report);*
- and **reconfirms** *the recommendations about the need for fishing effort limitations (para 183, SC10-Report).*

4. Bottom fishing

4.1. Notification of catches against catch limits (Paragraphs 17 and 18)

In 2022, neither Australia nor New Zealand achieved the catch thresholds, relating to orange roughy, to trigger a notification from the Secretariat. In addition, the Secretariat did not receive any notifications (by the 10 December deadline) from Members indicating that they would like to carry forward orange roughy quota for their 2023 total allowable catch (TAC).

4.2. Monthly catch reporting

Monthly catch reports were circulated to Members/CNCPs throughout the year in a timely manner.

4.3. Catch validation

There is no explicit provision in the CMM for the Executive Secretary to verify the catch reports, but for consistency and transparency, catch reports from the various bottom fishing data submissions were cross validated to identify any potential inaccuracies.

Table 6: 2021 Verification of annual catch (tonnes) from the bottom fishery in SPRFMO Area

Member	2021 annual catch	Monthly reports	Fishing activities	Landings
Australia	105	95.2	105	105
New Zealand	68.6	63.5	62.5	68

Referring to Table 6, the discrepancies between the different types of catch data received by the Secretariat for the bottom fishery range from 0% (annual catch compared with fishing activity data) to 10.3% for the comparison between annual catch and the monthly catch reports.



4.1. SC10 advice and specific requests

At SC10, the SC:

- **requested** that the Commission provides clear guidance to the SC on the spatial scale at which significant adverse impacts should be evaluated, and other matters related to operationalising the objective of preventing significant adverse impacts on VMEs, at the conclusion of the work of the SPRFMO Intersessional Working Group on Bottom Fishing (Para 138a, SC10-report);
- **requested** that the Commission develop specific objectives for VME management and provide clarity on the choice of an operational / quantitative threshold defining what level of impact would constitute a significant adverse impact (Para 138b, SC10-report); and
- **requested** further clarification on the acceptable severity (significance of the damage) and extent (spatial proportion of the VME habitat impacted) of the impact, if these differ from the guidelines provided by the FAO (Para 138d, SC10-report).

5. Exploratory fisheries

5.1. Toothfish

In 2021, both New Zealand (CMM 14a-2019) and the European Union (CMM 14e-2021) participated in exploratory toothfish fisheries in the SPRFMO Convention Area. Table 7 compares the reported toothfish catches from the different data submissions. It should be noted that monthly catches are reported on a voluntary basis for the exploratory fisheries. The comparison between annual catches and fishing activity were negligible.

Table 7: 2021 Verification of annual catch (tonnes) from the exploratory toothfish fisheries in SPRFMO Area

Member	2021 annual catch	Monthly reports	Fishing Activities	Landings
European Union	74.9		74.9	75.4 ¹⁰
New Zealand	24.1	23.6	24	24

All data submissions were well aligned with each other, with a maximum observed difference of about 8%, amounting to a 0.5 tonne difference in reported weight. Reporting of monthly catch data for exploratory fisheries is voluntary.

5.2. Potting

In 2021, there were no potting activities under CMM 14b-2021.

¹⁰ The toothfish harvested in 2021 were landed in 2022.



5.3. SC10 advice and specific requests

At SC10, the SC *recommended*:

- that CMM14b be extended by 1 year to 2024 (Para 235, SC10-Report).
- that, as specified in CMM 02-2022, all Members and CNCPs comply with catch reporting of all species, as the report [from the Species Composition Task Group] noted all (by)catch species are required to be reported in the fisheries activity data (Para 246c, SC10-Report);
- the development of a working definition of the existing fisheries in SPRFMO covered by existing CMMs (Para 246d, SC10-Report);
- in line with the tier-based assessment approach adopted by the SC in 2018 (SC6-DW06), the development of assessments for species in the SPRFMO Convention Area that are subject to targeted fishing operations. For example, targeting redbait with catch of alfonsino in the eastern part of the SPRFMO Convention Area should be evaluated to ensure exploitation of these species is consistent with a precautionary approach (Para 252c, SC10-Report).

6. Transhipments

Transhipment activities are primarily associated with the jumbo flying squid fishery (Figure 1); however, each year there are generally a few transhipment events associated with the *Trachurus murphyi* fishery. This section summarises the trends in transhipment activities, for reference, as this information is not reported elsewhere.

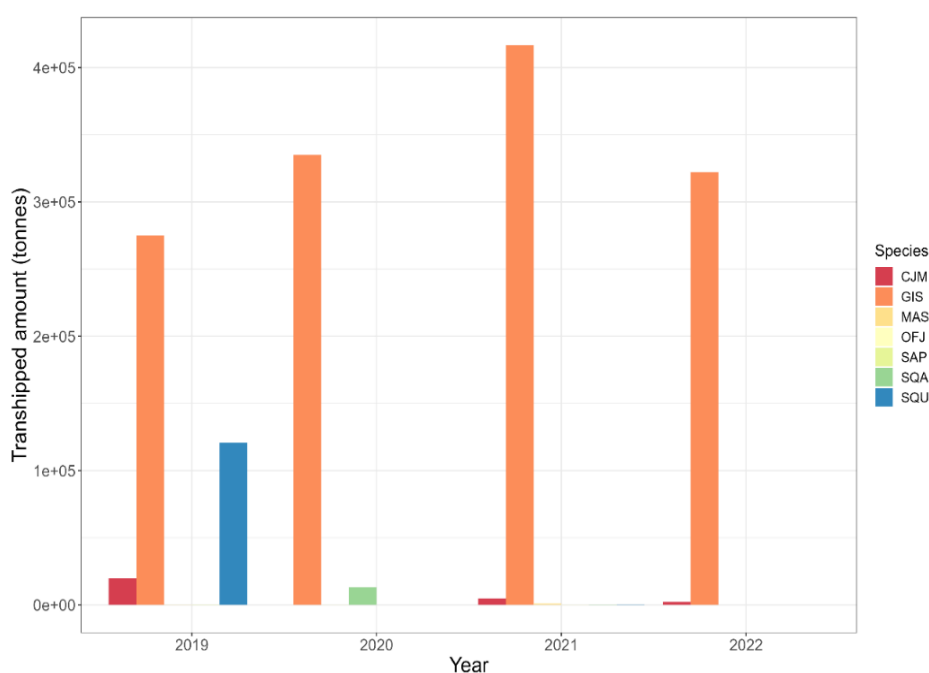


Figure 1. Illustration of the amount of SPRFMO resources transhipped, by species and year (2019-2022). It should be noted that the 2022 data are preliminary as the fourth quarter transhipment details have not yet been received.

In 2021, the Secretariat received 2,996 transhipment notifications and reports for approximately 3,725 transhipment events. In 2022, the number of notifications received increased to 5,263, with 3,561 transhipment events reported through the third quarter of 2022 (the fourth quarter transhipment details from 2022 are still outstanding as of 3 January 2023).

The differences between the number of transhipment notifications and transhipments reported could be due to several factors. The Secretariat aims to maintain a single file of transhipment notifications, with each individual transhipment identified only once (ideally). However, at times a transhipment can be



cancelled or delayed, and it is sometimes difficult to track all these modifications without error. It is also worth noting that often transshipment notifications come from directly from the individual vessels.

In addition, the transshipment details are also reported by the flag-State of both the fishing and receiving vessels. So, in effect, each transshipment event often has a minimum of two transshipment detail records, instead of one (this is in addition to the 2 notifications).

When the Secretariat summarise (or analyse) these data, we attempt to select unique transshipment events; however, this can be challenging when the dates, locations, and catch amounts vary. Therefore, summary values should be interpreted as best approximations.

6.1. Transshipment notifications and details (Paragraphs 4 and 9)

The Secretariat is required to make the transshipment notifications and transshipment details received, available on the Member’s section of the website. The notifications and transshipment details were updated regularly and in a timely manner and are available on the SPRFMO website.

6.2. Vessels undertaking transshipments

Table 8. Summary of the number of vessels involved with transshipments in the SPRFMO Area during 2021, by flag-State.

	China	Curacao	European Union	Liberia	Panama	Chinese Taipei
Reefer vessels	17	1		2	20	1
Fishing vessels	457		2			1

6.3. Data quality and compliance

The challenges associated with managing and precisely assessing data quality and compliance associated CMM 12-2020 are briefly detailed here as well as in FAC10-Doc06.2, with respect to data management.

Transshipments represent a high-volume data stream. It is also generally a ‘paired’ data stream such that notifications of upcoming transshipments and details of transshipments that have been completed are submitted by both the reefer vessel (and/or flag-state) and the fishing vessel (and/or flag state). To fully assess these data, it is necessary to match the two data submissions for each transshipment event. That is not currently possible as there is no unique transshipment event identifier reported on each submission. The matching of the two, based on shared data elements (e.g., vessel id, date and time, location, and species and amounts transhipped) is not always possible due to precision, time zone issues, and potential reporting errors.

Over the past year the Secretariat has been developing scripts to verify the quality/accuracy of transshipment data, but also to analyse these data with respect to the compliance. However, until a better system to manage these data is developed, this will remain a challenge and the utility of these data will continue to be hampered.