

7th MEETING OF THE SCIENTIFIC COMMITTEE

La Havana, Cuba, 7 to 12 October 2019

SC7-JM01_rev1

Trachurus murphyi catch history

Secretariat

1. Summary Paragraph

The Secretariat has provided an updated historical catch data series to 2019 as Annex 1. There are no notable changes to the historical catch history. As final catch figures are not due until September 30th, in many cases the 2018 data remain catch estimates.

Initial 2019 catch estimates have been provided by applying the mean observed ratio, by fleet, of the provisional 2010-2018 figures and the final 2010-2018 figures, to the available 2019 monthly catches. Members are asked to either accept these initial estimates or provide adjustments based upon their knowledge of the current fishing season. Previous estimates for total current catches have been within about 10% of the final figures.

Box-plots showing historical monthly catches for each of the major fleets are presented and compared with the monthly catches in the first half of 2019.

This paper also provides a short explanation of the *Trachurus murphyi* (CJM) catch history as used in the SPRFMO CJM stock assessment.

2. Annual Catch Totals

Historical catch data for the years prior to 2007 were originally provided to the (Interim) SPRFMO Secretariat under the 2007 interim data standards. Thus, the SPRFMO Secretariat holds catch data for all major fish species (including CJM) caught in the SPRFMO Area, in many cases back to the 1970s. The 2007 interim data standards were revised and the term “annual catch total” introduced in the 2012 interim data standards. This term persists in the current Conservation and Management Measure 02-2018 (Data standards). Members and CNCPs provide annual catch totals raised to ‘live’ weight for all species caught during the previous calendar year.

A summary of this information was first published in 2008 (SPRFMO-V-SWG-10) and it is updated annually. In this paper these annual catch totals are used to create the historic catch data series for the CJM stock assessment up to and including 2017. The 2018 annual catch totals are due on 30 September 2019 (after this paper is being drafted); and so monthly catch reports are used to provide the 2018 estimates. The 2019 (current year) estimates will be developed during the meeting.



3. Monthly Catch Reports

CMM 01-2019 (*Trachurus murphyi*) requires Members and CNCs to report monthly catches to the Secretariat within 20 days of the end of the calendar month. At the time of SC7 the Secretariat expects to have access to catch reports for the first 8 months of 2019 (Jan – August).

4. Fleets used in the assessment

The Joint Jack Mackerel model (JJM) used by the SC to assess Jack mackerel stocks, recognises four distinct fleets. Fleet 1 is a coastal purse seine fishery in northern Chile. Fleet 2 is a purse seine fishery in central-south Chile that extends into the high seas. Fleet 3 combines the far-north coastal purse seine fisheries occurring in the EEZs and Territorial waters of Ecuador and Peru. Finally, Fleet 4 corresponds to the offshore trawl fleet operating solely in the SPRFMO Area.

In most cases, data submitted to the Secretariat can be assigned to the correct Fleet. However, while the Secretariat has an estimate for the total Chilean catch it can only be split into the High seas and EEZ portions and not into northern and central-south portions, so the Secretariat is not able to split the Chile catch between Fleets 1 and 2 (northern and central-south Chile). In previous years, Chile has provided these estimates at the SC meeting.

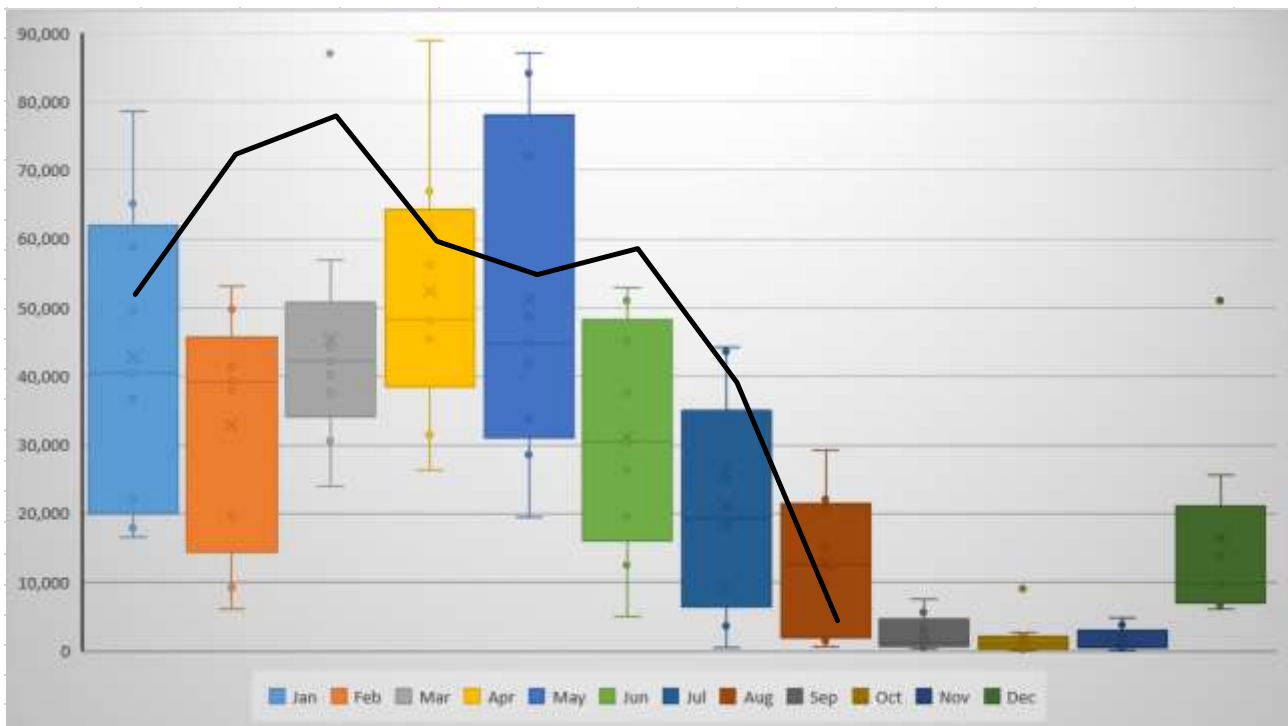


Figure 1: Box plots for 2010-2018 monthly catch reports of *Trachurus murphyi* from Fleets 1 & 2 combined (Northern and Central Chile). The Black line shows the 2019 monthly catch reports.

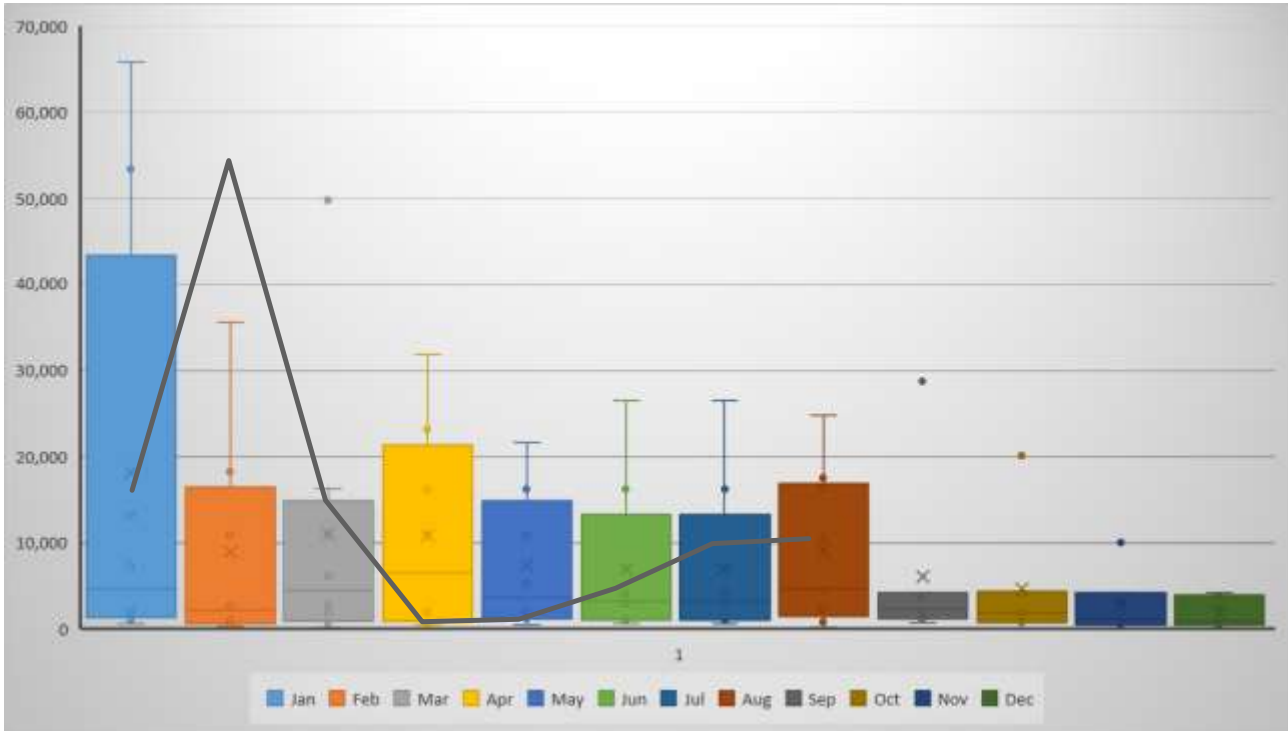


Figure 2: Box plots for 2011-2018¹ monthly catch reports of *Trachurus murphyi* from Fleet 3 (Far-North). The Black line shows the current 2019 monthly catch reports.

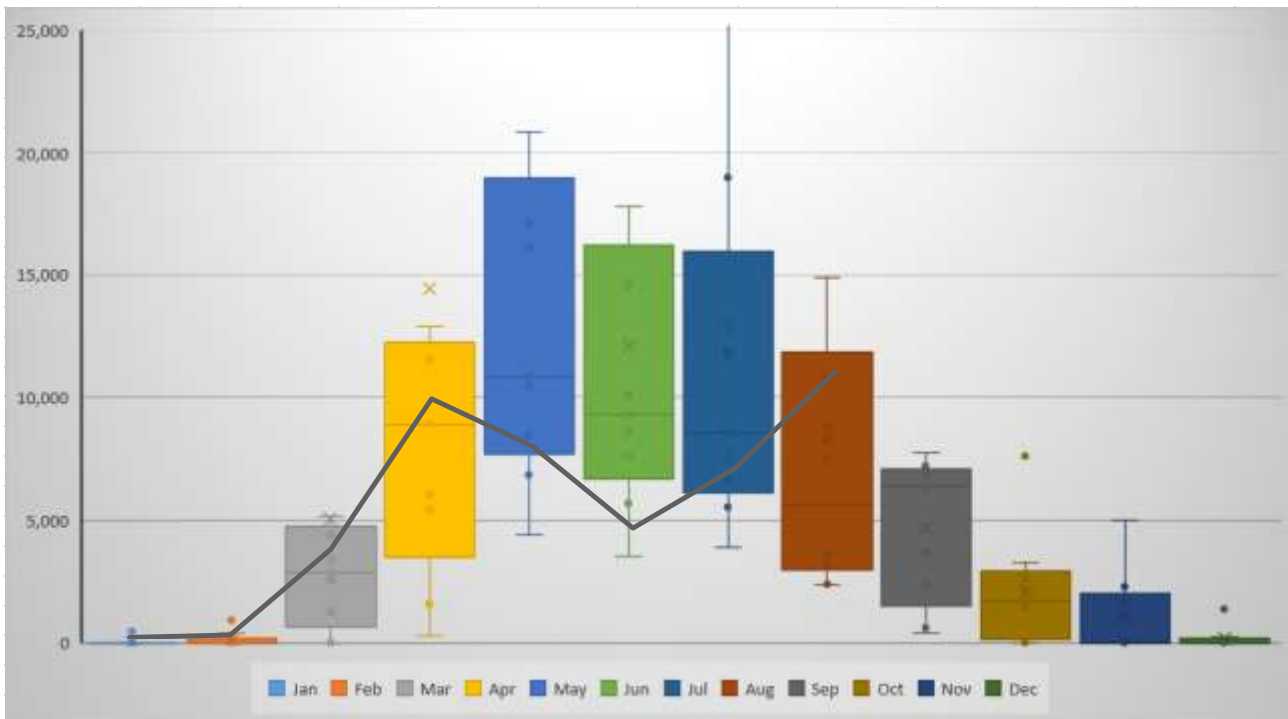


Figure 3: Box plots for 2010-2018 monthly catch reports of *Trachurus murphyi* from Fleet 4 (Offshore Trawl). The Black line shows the current 2019 monthly catch reports.

¹ Fleet 3 Monthly catches for 2010 are not available.



5. Excel attachment

An Excel workbook is annexed to this paper (Annex 1_rev1).

- Tab 1 (CJM Stock Assess input) contains the Jack mackerel annual catch totals by Member and CNCP and is structured by Fleet. There are various notes that reflect previous decisions taken by the SC about this data series. Underlined figures have been updated since last assessment (refer to table A7.1 of [SC6 Report Annex 7](#)).
- Tab 2 (2019 Catch projections) contains the initial catch estimates for 2019 and also shows the underlying calculations.
- Tab 3 (Previous accuracy) shows the variance associated with each of the current year catch estimates used in previous SC meetings.