

4th Meeting of the Scientific Committee

The Hague, Kingdom of the Netherlands
10 – 15 October 2016

SC-04-JM-01

***Trachurus murphyi* catch history and predicted 2016 catches Secretariat**

Summary paragraph

The Secretariat has provided an updated historical catch data series to 2015 and intends to provide an initial estimate of 2016 catches for use in the assessment (Annex 1). Changes to previous versions for this data series are generally limited to the 2015 final figures as advised by Members and CNCPs.

2016 initial estimates will be created by:

- calculating the mean observed ratios (by fleet) between the provisional 2010-15 catches and the final 2010-15 catches and;
- applying those observed ratios to the latest available 2016 monthly catches.

The initial 2016 estimates may be adjusted during SC-04 based *inter alia* on participant's knowledge of current fishing conditions and/or catch entitlement availability.

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

Annual catch totals

Historic catch data for the years prior to 2007 were initially provided to the (Interim) SPRFMO Secretariat under the [2007 interim data standards](#). As a result, the SPRFMO Secretariat holds catch data for all major fish species (including CJM) caught in the SPRFMO Area, in many cases reaching back to the 1970's¹. The 2007 interim data standards were revised and the term "annual catch total" was introduced in the [2012 interim data standards](#). This term persists in the current [Conservation and Management Measure 4.02](#) (Data standards; 2016).

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 is [updated annually](#).

Annual catch totals are used to create the historic catch data series for the CJM stock assessment up to and including 2014. The 2015 annual catch totals are due 30 September

¹ The earliest CJM catch record is from 1939.

2016 (Just prior to the SC-04 meeting); thus, where needed preliminary 2015 catches from monthly reports are used as a placeholder in Annex 1.

As previously mentioned most updates to the historic catch series relate to the replacement of last year's 2015 preliminary figures with the latest annual catch totals. The size of the 2015 changes are discussed below as part of the section on accuracy of previous predictions. However, both the EU and Peru also updated their 2014 figures during 2016. The EU annual catch total for 2014 was updated from 20 509 (t) to 20 539 (t) while Peru's annual catch total for the high seas was updated from 2 223 (t) to 2 557 (t).

Monthly catch reports

[CMM 4.01 \(Trachurus murphyi; 2016\)](#) requires Members and CNCPs to report monthly catches to the Secretariat within 20 days. At the time of the SC-04 meeting the Secretariat expects to have access to catch reports for the first 9 months of 2015 (Jan – Sept). This is similar to previous years where information for the first 8 or 9 months was available. Annex 1 currently shows data up to, and including, July and will be updated during SC-03.

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 EEZ's and Territorial waters of Ecuador and Peru. Finally, Fleet 4 corresponds to the offshore trawl fleet operating solely in the SPRFMO Area.

Data submitted to the Secretariat can be assigned to the correct Fleet in most cases. A notable exception occurs in Fleets 1 and 2 (northern and central-south Chile). This is because 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. At previous SC meetings Chile has provided those estimates.

Annex 1

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

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 with regard to this data series. Underlined figures have been updated since last assessment (refer to table A8.1 of the [SC-03 report, Annex 8](#)).

Tab 2 (2016 Catch projections) shows the how the initial 2016 catch estimates will be calculated. *As this calculation relies upon August catches it will be updated prior to, and also during, the meeting*).

Tab 3 (Previous prediction accuracy) shows how accurate past catch projections have been. It can be seen that for the whole fishery initial catch projections have been within 10% of the final annual catch totals. Fleets 1 and 3 have generally exhibited the highest variation.