Chilean jack mackerel
SE Pacific

**IDENTIFICATION**

**SCIENTIFIC NAME**
*Tetrachthus murphyi*

**SPECIES NAME(S)**
Chilean jack mackerel

**COMMON NAMES**
Jurel (Spanish)

**SPECIES NAME(S)**
Chilean jack mackerel

**STOCK IDENTIFICATION**

The Chilean jack mackerel is widespread throughout the South Pacific. Stock structure in the SE Pacific is not clear. Research based on genetic and otolith analysis supports the existence of a single trans-zonal population (SPRFMO, 2015a). A recent analysis using a biophysical model indicates high dispersion range and spatial overlap of modelled recruitments, which support the hypothesis of a single transboundary population in the SE Pacific. There are numerous and competing hypotheses considered with no definitive structure. Five stocks were already described but research and analysis are still being conducted. The SPRFMO considers 2 working hypotheses until further conclusions are agreed and both are used for assessment purposes:

1. A single shared stock that straddles the high seas. Peru and Chile constitute a single shared stock that straddles the high seas.
2. Five stocks were already described but research and analysis are still being conducted. The SPRFMO considers 2 working hypotheses until further conclusions are agreed and both are used for assessment purposes.

Five management units are considered within the SPRFMO (2016), a multinational fishery managed entirely within the context of the South Pacific Regional Fisheries Management Organisation (SPRFMO). The member countries and non-contracting parties.

**Fishery**

- **Chilean jack mackerel**
- **Purse seine**

**RELATED LINKS**
- *Chilean jack mackerel* (SUBPESCA)
- *South Pacific Regional Fisheries Management Organisation (SPRFMO)*

**ASSESSMENT**

**Strengths**

- Since 2017, the South Pacific Regional Fisheries Management Organization is conducting a print jack mackerel assessment and since 2019, global catch limits are agreed for the high seas in accordance with scientific recommendations.
- A recovery plan has been adopted in 2019.
- The stock assessment model continues to be reviewed and improved. Data, information and decisions from all fishing countries are integrated in the assessment process.
- Fishing mortality has been decreasing and is well below the target level.
- The spawning stock increased around 25% comparing to last years and is now above the MSY level.
- The project is underway to advance toward an Ecosystem-Based Approach.
- Joint efforts aim in place to control illegal, unreported and unregulated fishing – list of EU vessels, a Commission Vessel Monitoring System is being implemented and work is in progress to set up an SPRFMO observer program.
- Bycatch rates of commercial species appear to be low in most fleets, but comprehensive lists of bycatch species are not known to be produced.
- For interactions of the fishery with protected species are reported but it is unclear if reporting is adequate.
- A Chilean management plan was recently published for the fishery but does not include a harvest control, which is pointed out to the SPRFMO.

**Weaknesses**

- Although efforts have continued to elucidate the stock structure, conclusive evidence is not available and further research is required, e.g. tagging experiments. Uncertainties on stock assessment are as well related to data ageing and recruitment estimates.
- The Ecuadorian TAC (for national waters) summed up to the Convention Area TAC slightly overpasses what was agreed as a limit under the SPRFMO for the sprm.
- The Ecuadorian scientific recommendation or defined TAC for the national fishery could not be located.
- Reference points are provisional and a harvest control rule is not yet in place.
- Important environmental events, such as the strong 2015-2016 ENSO event, influence the spatial distribution of Jack mackerel, but effects on the overall population productivity is unclear.

**Scores**

<table>
<thead>
<tr>
<th>Management Quality</th>
<th>Management Strategy</th>
<th>Managers Compliance</th>
<th>Fishers Compliance</th>
</tr>
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<tbody>
<tr>
<td>R &amp; F</td>
<td>≥ 8</td>
<td>10</td>
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**Stock Health**

- **Current Health**: B.1
- **Future Health**: 10

**FIPS**

- for related FPs

**MSC**

- Chile Purse seine jack mackerel: MSC Certified

**RECOMMENDATIONS**

**Retailers & Supply Chain**

- Work with scientists to support the continuous improvements underway in stock assessment and research on stock structure and especially the effects of environmental variability on the population.
- Encourage the South Pacific Regional Fisheries Management Organisation (SPRFMO) to set biological reference points and harvest control rules that consider the species role in the ecosystem.
- Encourage SPRFMO members and cooperating non-members to fully implement and comply with SPRFMO’s Conservation and Management Measures.
- Push the Government of Peru to set their domestic TAC within the agreed catch limit for coastal countries.
- Encourage the Government of Ecuador to publish their scientific advice.