Chilean jack mackerel SE Pacific

Fishery: SE Pacific, Central-southern Chile EEZ and high seas, Chile, Peru

Identification

**Scientific Name**

*Tetracauda murphyi*

**Common Names**

Chilean jack mackerel

**Fishery:**

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-oceanal population (SPRFMO, 2013a,b). A recent analysis using a biophysical model indicates high dispersion range and spatial overlap of modelled recruitments, which support the hypothesis of a single panmictic population in the SE Pacific. There are numerous and competing hypothesis considered with no definitive structure; five stock were already described but research and analysis are still being conducted. The SPRFMO consider 2 working hypothesis until further research is conducted. The SPRFMO 2013 consider 2 working hypothesis until further research is conducted. The SPRFMO considers 2 working hypothesis until further research is conducted. The SPRFMO considers 2 working hypothesis until further research is conducted. The SPRFMO considers 2 working hypothesis until further research is conducted.

- **1) Peruvian fishery:**
  - The Peruvian fishery, which is managed as part of a jack mackerel, mackerel and sardine fishery directed exclusively for direct human consumption taking place almost entirely within the Peruvian EEZ.
- **2) Chilean fishery:**
  - The Chilean fishery, managed as part of a more general pelagic fishery with the Ecuadorian EEZ directed exclusively for direct human consumption (Quiroz 2017).
- **3) Ecuadorian fishery:**
  - Managed as part of a general pelagic fishery within the Ecuadorian EEZ.
- **4) the central-southern Chilean EEZ fishery:**
  - Managed as part of an inshore fishery.
- **5) the high seas fishery:**
  - Managed as part of a more general pelagic fishery.

**SCORING**

- Score: 8

**Strengths**

- Since 2010, the South Pacific Regional Fisheries Management Organization (SPRFMO) has conducted a jack mackerel assessment and since 2013, global catch limits are agreed for the high seas in accordance with scientific recommendations.
- A recovery plan has been adopted in 2014.
- The stock assessment model continues to be revised 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.
- A project is underway to advance toward an Ecosystem-Based Approach.
- Joint efforts are in place to control illegal, unreported and unregulated fishing – list of IUU 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.
- No interactions of the fishery with protected species are reported but it is unclear if reporting is adequate.

**Weaknesses**

- Although efforts have continued to elucidate the stock structure, conclusive evidence is not available and further research is required, eg. tagging experiments. Uncertainties on stock assessment are well related to data ageing and recruitment estimates.
- The Peruvian TAC (for national waters) summed up to the Convention Area TAC slightly overpassed what was agreed as a limit under the SPRFMO for the high seas assessment unit.
- 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 El Niño, influences the spatial distribution of jack mackerel, but effects on the overall population productivity is unclear.

**RECOMMENDATIONS**

- The spawning stock increased around 25% comparing to last years and is now above the MSY level.
- A recovery plan has been adopted in 2014.
- A project is underway to advance toward an Ecosystem-Based Approach.
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**SCORES**

- **Stock Health:**
  - Current Health: B.1
  - Future Health: 10
  - Score: 10
- **Management Quality:**
  - Managers Compliance: 8
  - Fishers Compliance: 10
  - Score: 10
- **MSC:**
  - Chilean Jack Mackerel: MSC Certified

**RELATED LINKS**

- Chilean Undersecretary of Fisheries and Aquaculture (SUBPESCA)
- South Pacific Regional Fisheries Management Organization (SPRFMO)