



South Pacific Regional Fisheries Management Organisation

**1st Meeting of the Eastern Sub-regional Management Committee
Manta, Ecuador, 27 - 31 January 2014**

ESRC-01-02

Proposal for a SPRFMO Jack Mackerel Rebuilding Plan

European Union

EU Proposal

South Pacific Regional Fisheries Management Organisation (SPRFMO)

Jack mackerel rebuilding plan

Background

Between 2008 and 2012 the Science Working Group (SWG) supporting international meetings and preparatory conferences for the establishment of a South Pacific Regional Fisheries Management Organisation (SPRFMO) made an important progress in estimating the stock status of jack mackerel (*Trachurus murphyi*) over the whole south east Pacific Ocean.

Results showed that the jack mackerel stock experienced high fishing mortalities in the 1990s when catches peaked at more than four million tonnes and also in the 2000s with almost two million tonnes of catch. Biological reference points were not defined for this stock but fishing mortalities were far above any reasonable level of F_{MSY} . The spawning stock biomass (SSB) reached the lowest level of the time series in 2010 and management advice from the SWG was essentially based on how to revert the decreasing trend of SSB. Interim measures were taken for 2011 and the following years, constraining catches.

In 2013, the Scientific Committee provided for the first time preliminary values of F_{MSY} and B_{MSY} . Fishing mortalities decreased since 2009 and the current (2013) level is estimated below the preliminary value of F_{MSY} . The spawning stock biomass is slowly rebuilding but the current level is still low and estimated at around 51% of B_{MSY} . Projections are very uncertain regarding when B_{MSY} could be reached. The recruitment and productivity regime is considered low since year 2000 and has characterised the population dynamics in most recent years.

A rebuilding and conservation plan is therefore essential to constrain fishing mortality to levels allowing continued stock rebuilding under the current low productivity regime. The current proposed rebuilding plan specifies a set of conditions to fix future TACs for the stock of jack mackerel, taking into account the current low biomass level and considering also that reference points are still preliminary.

Rebuilding and Conservation plan

Geographical scope

The current rebuilding and conservation plan shall apply to jack mackerel (*Trachurus murphyi*) over the whole south east Pacific Ocean.

There are important uncertainties regarding the stock structure of jack mackerel and the definition of management areas should be based on biological criteria. Therefore and until more scientific information is available regarding the most likely stock structure, this plan shall cover the whole geographical distribution of jack mackerel over the South East Pacific Ocean.

Objectives

Long term objectives

The long term objective of this rebuilding plan is to maintain the harvesting of jack mackerel within safe biological limits within which the stock can produce maximum sustainable yield.

Interim objective

The interim objective for this rebuilding plan is to assure a continued growth of the jack mackerel spawning stock biomass (SSB) up to levels above 80% of B_{MSY} .

Reference points

- Target reference point for SSB - B_{MSY}
- Interim target reference point for SSB – 80% of B_{MSY}
- Interim target reference point of fishing mortality- 0.15

Harvest Control Rule – Conditions to set future fishing opportunities

(a) When SSB is at or below 80% of B_{MSY}

Annual TACs should be set at a level:

- Allowing future continued growth in SSB, and

- Corresponding to a fishing mortality at or below 0.15

(b) When SSB is between 80% of B_{MSY} and B_{msy}

Annual TACs should be set at a level:

- Allowing future continued growth in SSB, and
- Corresponding to a fishing mortality at or below F_{MSY} .

(c) When SSB is at or above B_{MSY}

Annual TACs should be set at a level:

- Resulting in a low probability (risk of 20%) of SSB declining below 80% of B_{MSY} in the near future, and
- Corresponding to a fishing mortality at or below F_{MSY} .