

**CEDEPESCA's CONSIDERATIONS ABOUT THE MANAGEMENT
OF THE CHILEAN JACK MACKEREL (*Trachurus murphyi*) FISHERY IN 2013:
Efforts to ensure recovery in 10 years must continue**

- 1) The Scientific Working Group's technical report shows the exploration of several hypotheses regarding the structure of the stock, i.e. a single-stock structure and another that supposes a sub-stock in waters north of the known distribution of the species in the South Pacific (Ecuador-Peru) and a sub-stock in waters south of the known distribution (Chile). These hypotheses were used to estimate the status of the stock using different scenarios.
- 2) The explored scenarios show that, although the fishing mortality has been significantly reduced during the last three years, it is not on its desirable level yet and the reproductive biomass is still under its limit reference point ($RB_{lim}=20\% RB_0$, where RB_0 stands for the reproductive biomass possible in the absence of fishing). In fact, figure 8 in the SWG report (see **Figure A** below) shows that according to model 6 (single stock) this ratio would be 16%; using model 7 (single stock) it would be at 8%, and using model 8 which is the addition of models N3 (Northern sub-stock) and S2 (Southern sub-stock) it would be at 12%.

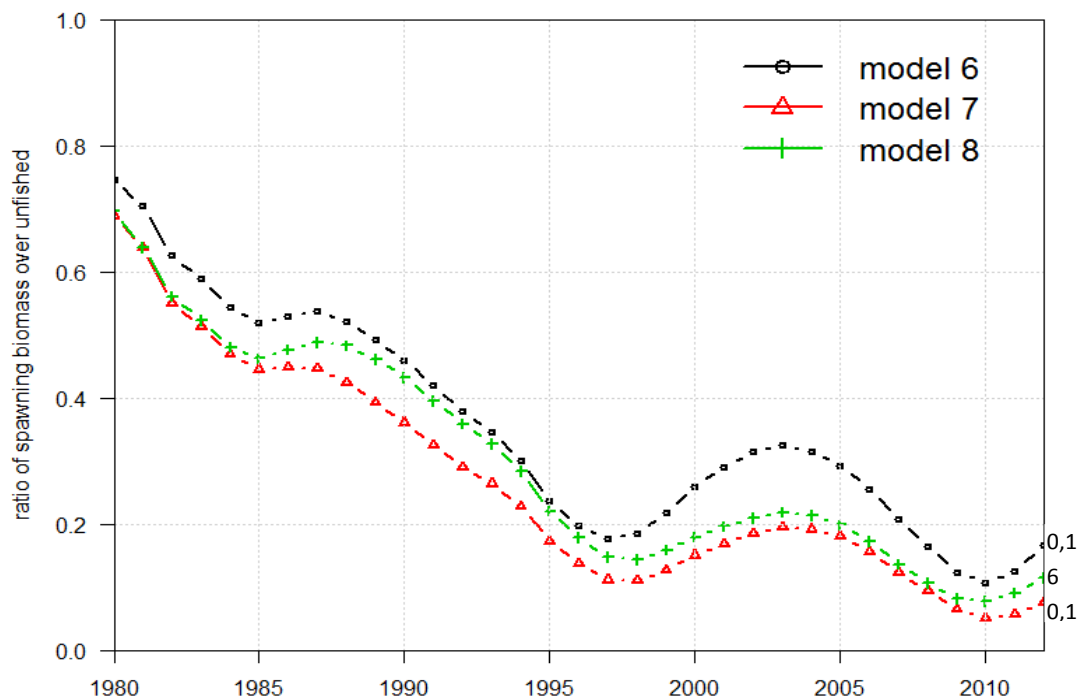


Figure A. Jack mackerel reproductive biomass expressed as the ratio between the estimated biomass and the biomass possible in the absence of fishing for models 6, 7 and 8. Taken from the SPRFMO Scientific Working Group report (Annex SWG-03).

- 3) Fishing mortality has been reduced substantially as of 2009, but it wouldn't have reached its target reference point yet ($F_{trp}=0,15$). In particular:

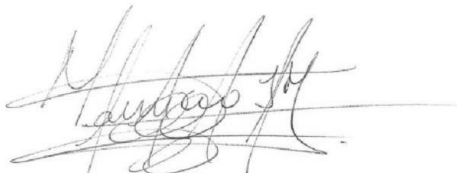
- a. Model 6 (single stock) shows the current fishing mortality at levels near target, but keeping it at this level would not be enough to recover the stock to its target level ($RB_{trp}=40\% RB_0$) in 10 years.
 - b. Model 7 (single stock) shows the current fishing mortality at 0,27; still above the fishing mortality limit reference point ($F_{lim}=0,25$).
 - c. In the case of model 8 (addition of sub-stocks), the fishing mortality series is not provided because this is a combined model.
 - d. For last year's model and its derivatives, in none is the current fishing mortality less than 0,23, still over the target and slightly under the limit.
- 4) In relation to the level of catches that the stock could withstand in 2013 with the goal of recovering it to its target level ($RB_{trp}=40\% RB_0$) in 10 years, from the analysis of the data and figures presented in the report, it follows that these would be **between 120 thousand and 360 thousand tons**:
- a. According to **model 6** (single stock), to reach RB_{trp} in 10 years, fishing mortality would have to be reduced in 75%, with resultant catches of 120 thousand tons in 2013.
 - b. In a similar way, **model 7** (single stock) would indicate that a 75% reduction in fishing mortality is necessary to reach RB_{trp} in 10 years; this would mean catches of 130 thousand tons in 2013.
 - c. According to **model 8** (sub-stocks addition), we can observe that RB_{trp} could be reached in 10 years by reducing 2012's fishing mortality by 25%; this would represent catches of 360 thousand tons in 2013.
- 5) From the previous recount, it follows that the jack mackerel stock is still in a high-risk status and that even when considering the most optimistic case provided by **model 8** (sub-stocks addition), the level of landings in 2012 (434 thousand tons) would have to be reduced by 17% to continue with this stock's recovery and for it to reach its target level in 10 years.
- 6) From the jack mackerel catch reports presented by Member States to the SPRFMO in 2012, it can be noted that just adding Chile's and Peru's catches in their respective Exclusive Economic Zones exceeds 360 thousand tons by 9%; and that this amount is exceeded by 17% if we consider all jack mackerel catches taken by Member States participating from the SPRFMO's last preparatory conference in 2012.
- 7) Due to all of the above, we consider that although a small advance can be noticed in the recovery of the estimated reproductive biomass levels (which went from 5-10% RB_0 in 2011 to 8-16% RB_0 in 2012), it still has not reached its limit reference point and overexploitation and overfishing conditions remain at a level that we consider require a stronger measure such as a **moratorium for jack mackerel fishing in international waters for three years**. It is important to note that at age 3 more than 70% of the specimens of a cohort are mature, while almost 100% is mature at age 4.

- 8) We also note that, during its latest Congress celebrated in September 2012, the International Union for the Conservation of Nature's Assembly approved a motion in which it makes a call to the Members of the SPRFMO to approve a moratorium for jack mackerel fishing in international waters in case no significant improvement of the stock status is observed. This motion was submitted by CeDePesca with the support from other Latin American organizations -some of which have headquarters in Chile, Ecuador and Peru- and obtained a strong majority support from governments and member organizations.
- 9) It should be highlighted that **in the scientific report from the SPRFMO there is no advice on the catch level for 2013**; although in the report's figure 11 a catch figure of 475 thousand tons is highlighted, representing a status quo in relation to fishing mortality and a 12% increment on 2012 catches (approx. 423 thousand tons). If this was a recommendation --which we repeat is not made explicit anywhere in the report's text-- we consider, taking into account all of the above, that **it is not consistent neither with the set of information available nor with the precautionary approach**. In fact, a general increase in the level of catches could put in danger the small advance that has been achieved after a lot of effort in the last few years.
- 10) Taking into account the importance of the Chilean jack mackerel fishery for the job and food security in the coastal countries, CeDePesca considers that the fishery **must continue to be open for Chile, Peru and Ecuador**, but these countries **must accompany the conservation measures without exception, with the goal of ensuring that their joint levels of catch do not surpass 360 thousand tons under any circumstance** (that is, 9% less than the level fished by the three countries in 2012 and a 32% less than what they fished in 2010). To determine their catch level, according to the SPRFMO's Scientific Working Group, and with the goal of attaining the recovery of the reproductive biomass in 10 years, the exploitation rate should not surpass 16% of the vulnerable biomass of each sub-population.
- 11) In the case of Chile, according to some available documents, **there seems to be some confusion regarding the agreement reached by the SPRFMO in its January 2012 meeting**, when among the interim measures it was approved that *"the Participants agree that catch from 2011 onwards will not be considered in future allocation decisions taken by the Commission"*, **and not only those of 2011 and 2012**. Therefore, **2013 catches will not be part of such discussions either**.
- 12) In order to determine the catch quota for the Northern sub-stock, Peru would have to take into account the landings of Ecuador during the first trimester of the year, or reach an agreement and/or coordination with that country.
- 13) It should be noted that:
- In Chile, the Institute for Fishing Development (*Instituto de Fomento Pesquero*, IFOP) recommended a quota of only 130 thousand tons of jack mackerel for the year 2012; while the Under-Secretariat of Fisheries advised a quota of 186 thousand tons, although, due to the rejection of the advice in the National Council of Fishing (*Consejo Nacional de Pesca*, CNP) in

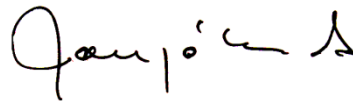
the end 252 thousand tons were approved, from which little more than 222 thousand tons were fished in 2012; that is 71% more than what was advised by IFOP to attain recovery of the stock to its RB_{trp} in 10 years. We do not know yet IFOP's advice for 2013.

- In Peru, the Peruvian Sea Institute (*Instituto del Mar del Peru*, IMARPE) recommended not to surpass 120 thousand tons in 2012 (an exploitation rate of around 30%); however, the Ministry of Production applied this limit only to the industrial sector, so in the end Peruvian catches amounted to almost 172 thousand tons; that is 43% more than what was advised by IMARPE and a final exploitation rate of 45%. We do not know yet IMARPE's advice for 2013.

14) Considering the effort demanded in international waters by the suggested moratorium, it will be crucial that coastal countries accompany in a serious way such effort to recover the jack mackerel population in a reasonable time frame to ensure the sustainability of this fishery in the long term, and their responsibility is greater because thousands of jobs in each country depend on this fishery.



Mauricio Ibarra
CeDePesca-Chile



Arturo González
CeDePesca-Perú