



**COMMISSION
FOURTEENTH REGULAR SESSION**
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**REFERENCE DOCUMENT FOR REVIEW OF CMM 2015-02
(South Pacific Albacore Tuna)**

**WCPFC14-2017-13
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Paper prepared by the Secretariat

A. Introduction

1. The purpose of this paper is to provide a quick reference guide to the recommendations of the Scientific Committee (SC) of relevance to the discussions in support of the review of the CMM for South Pacific Albacore (CMM 2015-02). It lists the recommendations drawn from the summary reports of SC11 and SC13. The Summary Reports of those meetings are part of the meeting documentation and readily available for access, and they provide the context and discussion in support of the recommendations.

B. Scientific Committee Recommendations

B.1 Provision of scientific information from SC13 (*SC13 paragraphs 318 - 327*)

2. SC13 noted that the preliminary estimate of total catch of south Pacific albacore (within the WCPF Convention Area south of the equator) for 2016 was 58,033 mt which was an 8% decrease from 2015 and a 13% decrease over 2011-2015 (see SC13-SA-WP-02).

- Preliminary longline catch in 2016 (55,635 mt) was 8% lower compared with 2015 and a 13% decrease over 2011-2015. Preliminary troll catch in 2016 (2,372 mt) was 17% lower compared with 2015 and a 24% decrease over 2011-2015.

Stock status and trends

3. SC13 noted that no stock assessment was conducted for South Pacific albacore tuna in 2017. Therefore, the stock status description from SC11 is still current.

4. SC13 considered an update of trends in South Pacific albacore fisheries (SC13-SA-WP-08) and noted that there had been reductions in longline effort in the WCPF Convention Area south of 10°S through 2014-2016 (declining from about 300 million hooks in 2013 to around 254 million in 2015, and 200 million hooks in 2016 – with the 2016 value being provisional) and that effort distributions vary a little and show an area of highly concentrated fishing effort.

Management advice and implications

5. SC13 noted that no stock assessment was conducted for South Pacific albacore tuna in 2017. Therefore, the advice from SC11 should be maintained.

6. SC13 considered an update of trends in South Pacific albacore fisheries (SC13-SA-WP-08) and noted that there had been reductions in longline effort in the WCPF Convention Area south of 10°S through 2014-2016 (by approximately 15%) and that effort distributions vary a little and show an area of highly concentrated fishing effort. SC13 noted an issue of transshipment that needs to be clarified at TCC13.

7. Status quo projections were calculated, assuming current southern longline and troll fishery effort would continue into the future at levels equal to those seen in 2015 (Figure SPA-1). If 2015 fishing effort levels continue into the future, the stock is predicted to continue to decline on average, falling to $SB_{current}/SB_{F=0} = 0.35$ in 2033 with a 7% predicted probability of being below the LRP. Overall vulnerable biomass (a CPUE proxy) in longline fisheries is estimated to decrease by 7% from 2013-2033.

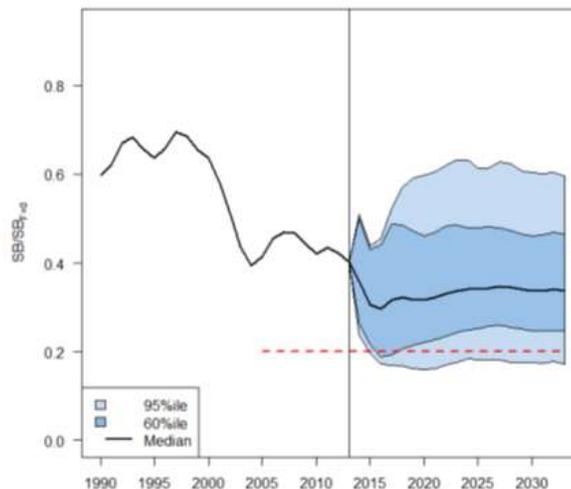


Figure SPA-1. Stochastic projections of adult stock status under 2014 longline and troll effort levels. The limit reference point ($20\% SB_{F=0}$) is indicated by the horizontal dashed red line. Note: from 1960 up to 2013 inclusive the line represents the median across the 9 assessment model runs (structural uncertainty only); uncertainty after 2013 represents both structural uncertainty and stochastic recruitment (1800 simulation runs).

8. Pending a new assessment in 2018, SC13 recalls its previous advice from SC11 and SC12 that longline fishing mortality and longline catch be reduced to avoid further decline in the vulnerable biomass so that economically viable catch rates can be maintained, especially for longline catches of adult albacore. SC13 recommends that this advice be taken into consideration when the TRP for South Pacific albacore is discussed at WCPFC14.

B2. Provision of scientific information (from SC11)

Stock status and trends

9. SC11 reviewed the 2015 stock assessment and descriptions on the stock status are listed below (SC11 Paras 316-320):

- a) The estimated MSY of 76,800 mt is lower than in the 2012 assessment (2012 MSY = 99,085 mt). Aside from general improvements to the stock assessment, this was also influenced by 1) exclusion of catches from outside the southern part of the WCPFC Convention area; and 2) a reduction in the assumed value of natural mortality. Based on the range of MSY estimates (range: 62,260-129,814 mt), current catch is likely at or slightly less than the MSY.
- b) Fishing mortality has generally been increasing through time, with F_{current} (2009-2012 average) is estimated to be 0.39 times the fishing mortality that will support the MSY ($F_{\text{current}}/F_{\text{MSY}} = 0.39$). Across the grid $F_{\text{current}}/F_{\text{MSY}}$ ranged from 0.13 – 0.62. This indicates that overfishing is not occurring, but fishing mortality on adults is approaching the assumed level of natural mortality.
- c) The fishery impact by sub-tropical longline fisheries has increased continuously since 2000.
- d) The latest (2013) estimates of spawning biomass are above both the level that will support the MSY ($SB_{\text{latest}}/SB_{\text{MSY}} = 2.86$ for the base case and range 1.74 – 7.03 across the grid) and the adopted LRP of $0.2SB_{F=0}$ ($SB_{\text{latest}}/SB_{F=0} = 0.40$ for the base case and range 0.30-0.60 across the grid). It is important to note that SB_{MSY} is lower than the LRP ($0.14 SB_{F=0}$) due to the combination of the selectivity of the fisheries and maturity of the species.
- e) For the first time SC considered an index of economic conditions in the south Pacific albacore fishery (SC11-MI-WP-03: *Trends in economic conditions in the southern longline fishery*). This index, which integrates fish prices, catch rates, and fishing prices, estimates a strong declining trend in economic conditions, reaching an historical low in 2013. While there was a slight recovery in 2014, conditions are still well below the average primarily due to high fishing costs and continued low catch rates. Domestic vessels from some longline fleets have reduced their fishing effort (i.e., tied up for periods of time) in response to these conditions.

Management advice and implications

10. SC11 provided the following management advice and implications (SC11 Paras 321-325):

- a) The South Pacific albacore spawning stock is currently above both the level that will support the MSY and the adopted spawning biomass LRP, and overfishing is not occurring (F less than F_{MSY}).
- b) While overfishing is not occurring, further increases in effort will yield little or no increase in long-term catches and result in further reduced catch rates.
- c) Decline in abundance of albacore is a key driver in the reduced economic conditions experienced by many PICT domestic longline fleets. Further, reductions in prices are also impacting some distant water fleets.
- d) For several years, SC has noted that any increases in catch or effort in sub-tropical longline fisheries are likely to lead to declines in catch rates in some regions (10°S-30°S), especially for longline catches of adult albacore, with associated impacts on vessel profitability.
- e) Despite the fact that the stock is not overfished and overfishing is not occurring, SC11 reiterates the advice that longline fishing mortality and longline catch be reduced to avoid

further decline in the vulnerable biomass so that economically viable catch rates can be maintained.