



PARTIES TO THE PALAU ARRANGEMENT 22nd ANNUAL MEETING

5-7 April 2017

Majuro, Marshall Islands

Purse Seine VDS TAE for 2018-2020

TAE Setting

1. Article 12.2 of the VDS Scheme text sets out the issues to be taken into account in setting the TAE as follows:
 - i) The best available scientific, economic, management and other relevant advice and information;
 - ii) The provisions of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean;
 - iii) The objectives of the Management Scheme; and
 - iv) Any submission on this issue from any party, individual or organisation.

Current Status

2. At PA21, 44,605 days was adopted as the PNA TAE for 2017 and the provisional PNA TAE for 2018, and 45,590 days was adopted as the VDS TAE (including PNA and Tokelau) for 2017 and the provisional VDS TAE for 2018 as follows:

Table 1: TAEs for 2016 – 2017; provisional TAE for 2018

	Determining the TAE (days)		
	TAE 2016	TAE 2017	Provisional TAE for 2018
Estimated 2010 Logsheets effort	44,033	44,033	44,033
Length Adjustment factor	1.95%	1.30%	1.30%
PNA TAE	44,890	44,605	44,605
Tokelau TAE	991	985	985
Total VDS TAE (PNA + Tokelau)	45,881	45,590	45,590

Scientific Information and Advice

3. As shown below, WCPO purse seine catches of bigeye, skipjack and yellowfin tuna are provisionally estimated¹ to have declined in 2015 by 13% from 2014 to around 1.8m tonnes from the record level of 2 million tonnes in 2014. SPC has advised the WCPFC that *“the main reason for this decline in catch appears to be reduced effort more than any other factor.”*² Annual purse seine catches in PNA waters have fluctuated since 2010 at around 1.5 million tonnes while annual purse seine catches in other areas of the WCPO outside PNA waters have grown rapidly in recent years. The increase outside PNA waters has come largely from Indonesian waters and the high seas. 2016 catch data is not yet available but VMS data indicates an increase of around 8% in purse seine effort in PNA EEZs in 2016 with lower catch rates.

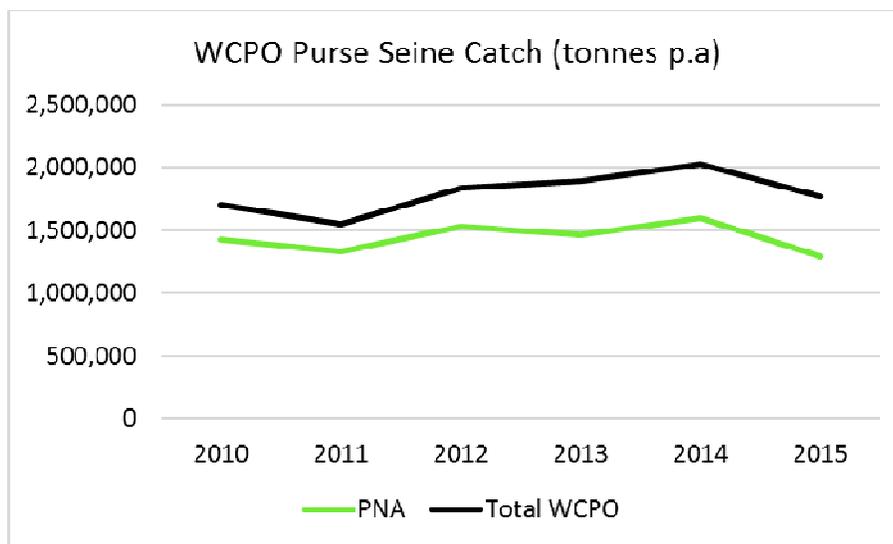


Figure 1: WCPO Purse Seine Catch (tonnes p.a)

4. The WCPFC Scientific Committee has provided the following advice:

a) on the status of the skipjack stock:

A new assessment of the skipjack stock was conducted in 2016. In response to this assessment, the SC has advised as follows:

“SC12 noted that fishing is having a significant impact on stock size and can be expected to affect catch rates. The stock distribution is also influenced by changes in oceanographic conditions associated with El Niño and La Niña events, which impact on catch rates and stock size. Additional purse-seine effort will yield only modest gains in long-term skipjack tuna catches and may result in a corresponding increase in fishing mortality for bigeye and yellowfin tunas. The management of total effort in the WCPO should recognize this.

SC12 noted that skipjack spawning biomass is now around the adopted TRP and SC12 recommends that the Commission take action to keep the spawning biomass near the TRP

¹ Data provided by SPC in November 2016

² SPC, Overview of Tuna Fisheries in the Western and Central Pacific Ocean, Including Economic Conditions – 2016.

and also advocates for the adoption of harvest control rules based on the information provided”.

b) on the status of the yellowfin stock:

There was no new assessment of the yellowfin stock in 2016, and The SC has maintained its advice as follows:

“The SC recommend that the catch of WCPO yellowfin should not be increased from 2012 levels which exceeded MSY and measures should be implemented to maintain current spawning biomass levels until the Commission can agree an appropriate TRP.”

5. There has been continuing progress in the development of a harvest strategy for skipjack. Building on the adoption of a target reference point for skipjack proposed initially by PNA at its 2016 session, the WCPFC has adopted a harvest strategy workplan that reflects faster progress on skipjack than other stocks. At WCPFC13, the Commission also accepted a list of performance indicators for tropical purse seine fisheries for the purpose of the evaluation of HCRs. Meanwhile, PNA work is proceeding with SPC on the development of a PNA HCR for skipjack.
6. As described below, the 2010 base level for the WCPFC PNA EEZ effort limit has been maintained in CMM 2016-01 in response to the scientific advice *to maintain current spawning biomass levels*. There is no room to increase fishing mortality if the spawning biomass is to be maintained at this level.

Economic Information and Advice

Market for Tuna for Canning

7. As discussed in the PA22 Working Paper on Purse Seine Economics, average prices in 2016 were slightly higher than 2015 at around \$1400/tonne for skipjack, having fallen to around US\$1,000 per tonne³ in late 2015, down from a peak of \$2,350 per tonne in April 2013. More recently, prices have risen to around \$1500-1600 in early 2017, which is around the long term average trend level.
8. With current prices around the long term average trend level, and projected to cycle upwards by FFA, there is no indication of any systematic over-supply of material for tuna canning. In this circumstance, and taking into account the relatively weak effect of changes in WCPO catches on global tuna prices, there is no reason to consider reducing the TAE below the level agreed at the WCPFC in order to tighten tuna supply and promote an increase in tuna prices which can be extracted as increased vessel day prices.

Market for Days

9. In 2016, the demand for days and the price of days generally flattened after strong growth in recent years. However, the number of days used reported in FIMS for the last 2 years has been below previous levels and below the TAE, although almost all days were sold.

	2013	2014	2015	2016
No. of Days Used	43,186	42,749	35,833	38,774

10. For 2017, there has been a mixed pattern of demand for days. Some prices have risen and others have fallen, to a degree reflecting the shift in fishing patterns since El Nino conditions ended. Prices for tendered days have generally been higher than last year, and most Parties are

³ Average Thai monthly import value

known to have sold all days available. Effort in PNA EEZs for the early part of 2017 has returned to near the levels of 2013 and 2014. Some fleets are understood to have held off from buying all the days they need for 2017 for various reasons, and so day prices are expected to increase through 2017.

11. Other factors contributing to strengthening of the demand for days in 2017 include:
 - a) tightening of arrangements for non-fishing days;
 - b) tighter controls on fishing in archipelagic waters;
 - c) reduction in number of days available for foreign vessels due to increases in days allocated to domestic vessels and FSMA;
 - d) improved economic conditions for the fishery; and
 - e) increasing use of tenders and other more competitive processes for selling days.
12. From this analysis, there is no reason to consider reducing the TAE at this point to take into account the market for days. If vessel day prices do begin to ease at some point, Parties have the option available of limiting or ending access to the eastern high seas by vessels while licensed by PNA, which should increase demand for days by around 3-4,000 days, based on the increase in effort in the eastern high seas since the PNA ban on fishing in that area was dropped.

WCPFC Considerations

13. In WCPFC Tropical Tuna CMMs since 2011, PNA Members have agreed to limit purse seine effort in PNA EEZs to 2010 levels through the PNA Vessel Days Scheme. In response, the PNA TAEs adopted since 2012 and the provisional PNA TAE for 2017 have been based on the 2010 effort level in PNA EEZs. Two additional considerations related to the WCPFC are:
 - a) The Commission has adopted a Target Reference Point (TRP) for skipjack. The next step in the Commission workplan on skipjack is to develop a Harvest control Rule for skipjack which will in time provide the framework for adjustment of measures such as the VDS TAE in coordination with limits applying in other waters to maintain the skipjack stock around its TRP;
 - b) In the interim, as discussed below, Parties have agreed to consider how to adjust the VDS for effort creep, including adjusting the TAE, if that becomes necessary.

MSC Considerations

14. With respect to decision-making on the PNA skipjack fishery and the VDS in particular, PNA commitments for MSC certification include:
 - i) Establishment of a short term objective: at PA17, the Parties adopted the short term objective of limiting purse seine effort in PNA EEZs at the 2010 level.
 - ii) The link between the VDS TAEs and WCPFC requirements and the scientific advice needs to be clearly established by the PNA. Decisions taken on adjustment to the VDS scheme have to be based on the best available information. This will be derived largely from SPC scientific advice, SPC logsheet data, information compiled by the PNA Office and FFA as well as any additional work commissioned through PNA or other management organisation. Explanations on recommendations made and decisions taken, or lack of action, will be clearly documented by the PNA Office, through minutes of meetings. These minutes will be publically available on the PNA Office website.

Starting in 2012, this paper was modified from previous years to reflect these requirements. This includes clearly recording the link between the TAE and the relevant WCPFC measure and the scientific advice.

Effort creep

15. The VDS Scheme text at Article 2.4 ii) requires the Administrator to provide information on any observed or potential increase in average effective fishing effort for each fishing day since the introduction of the Management Scheme. Successive Administrator's reports have reported on trends in vessel size classes and catch rates per day. There was a marked increase in overall catch per fishing day in 2014 and 2015, which was likely due in part at least to El Nino conditions.
16. Last year, Parties considered an analysis of effort creep, and requested the PNAO and SPC to build on that analysis to report to Parties annually on effort creep. That analysis was not available for this paper, and Parties will want to review that analysis in deciding on the TAE.

Management Information and advice

17. The starting point for the determination of the TAE is the estimated logsheet effort in PNA EEZs for 2010 to reflect the PNA obligation under the tropical tuna CMM referred to in para 12 above. The estimated effort level for 2010 continues to be revised by SPC, largely reflecting the failure of fishing states to provide accurate and timely operational data. In order to maintain the effectiveness of the VDS, Parties agreed at PA20 to adopt the 2010 level of effort in PNA EEZs advised to WCPFC10 in 2013 by SPC⁴ of 44,033 days as the appropriate limit to be used in future. This limit is advised to WCPFC consistent with para 24 of CMM 2014-01 which says:

24. PNA shall report to the Commission against its collective annual limit by 1 July for the previous 12-month calendar period.
18. The VDS TAE also needs to take into account the projected effect on effort levels resulting from the length adjustments applied in the VDS. This adjustment has declined from 3.34% initially to 1.30% for 2017 as a result of the decline in the proportion of days fished by larger vessels. In 2016, the number of fishing days was the same with and without the length adjustments indicating that there has been a significant further decline in the proportion of days fished by larger vessels over 80 metres. Fishing conditions in 2016 were unusual with a relatively low level of effort, and it is possible that some larger vessels could return to PNA EEZs. However, the number of fishing days has remained same with and without the length adjustments in early 2017. As a result, the adjustment is proposed to be reduced to 0.0, effectively removing it. This would reduce the provisional PNA TAE for 2018 by 562 days. This can be seen as an initial response to the effect of effort creep.
19. At PA20, Parties decided to confirm, at their Annual Meetings, the TAE for the next year (in this case 2018) and adopt a provisional TAE for the following year (in this case 2019).
20. Taking into account the considerations set out above, it is proposed that the provisional 2018 PNA TAE set last year be changed to 44,033 days and that this be adopted as the provisional PNA TAE for 2019 as set out in the Table below.
21. Parties have previously agreed in principle to set the TAE for a longer term. This would be a good time to start that process because the skipjack assessment last year indicated that the stock is around the TRP, and in preliminary discussion on the tropical Tuna CMM there were no proposals to change the purse seine effort limits. As the next step, it is suggested that a

⁴ from WCPFC10: Table 1 of Paper "WCPFC10-2013-12- Data Summaries in Support of Discussions on the CMM on Tropical Tunas"

provisional TAE could be set for 2019 and 2020. The 2019 and 2020 TAEs would still be subject to an annual review before being confirmed.

Table 2: TAE for 2018 and Provisional TAE for 2019 and 2020

Determining the TAE (days)					
	TAE 2016	TAE 2017	Provisional TAE 2018	Proposed Revised TAE 2018	Provisional TAE for 2019 & 2020
Estimated 2010 Logsheet effort	44,033	44,033	44,033	44,033	44,033
Length Adjustment factor	1.95%	1.30%	1.30%	0.0%	0.0%
PNA TAE	44,890	44,605	44,605	44,033	44,033
Tokelau TAE	991	985	985	972	972
Total VDS TAE (PNA + Tokelau)	45,881	45,590	45,590	45,005	45,005

Tokelau as part of the VDS

22. Tokelau is now part of the VDS although it is not part of the PNA TAE. It has its own TAE, which it brings to the VDS and which is transferable with PNA members. This was initially established at 1,000 days when the PNA VDS TAE was 45,284 days, and is adjusted proportionately with changes in the PNA TAE. With the proposed PNA TAE for 2018 of 44,033 days, the Tokelau TAE will be adjusted to 972 days, and the total VDS TAE for 2018 will be 45,005 days as shown in Table 23 above.

Conclusions and Recommendations

23. On the basis of the considerations above, there is no reason for the Parties to change their decision at PA17 to apply a PNA TAE based on the revised 2010 effort level, subject to consideration of the analysis on effort creep referred to in para 16 above.
24. It is recommended that
- i) The 2018 PNA TAE be set at 44,033 days;
 - ii) The TAE of 44,033 days be adopted as the provisional PNA TAE for 2019 and 2020.