



**Ministry of Marine Resources**  
GOVERNMENT OF THE COOK ISLANDS

File Reference: 16-08-121

Hon. Mark Brown  
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Purse Seine Select Committee  
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31<sup>th</sup> August 2016

**Re: Questions raised by Hon. Tamaiva Tuavera**

Kia Orana Minister,

I refer to the letter from the above committee member addressed to yourself dated 25<sup>th</sup> August and my letter to you dated 30<sup>th</sup> August 2016, file ref: **16-08-120**

A question was asked of Hon. Tuavera (our interpretation in italics) "*Has the 4 month FAD ban for purse seining under the WCPFC conservation and management measure actually resulted in a decrease of bigeye catches?*"

We have queried the Secretariat of the Pacific Community (SPC) chief scientist Dr John Hampton and he has kindly provided slides from a presentation recently delivered.

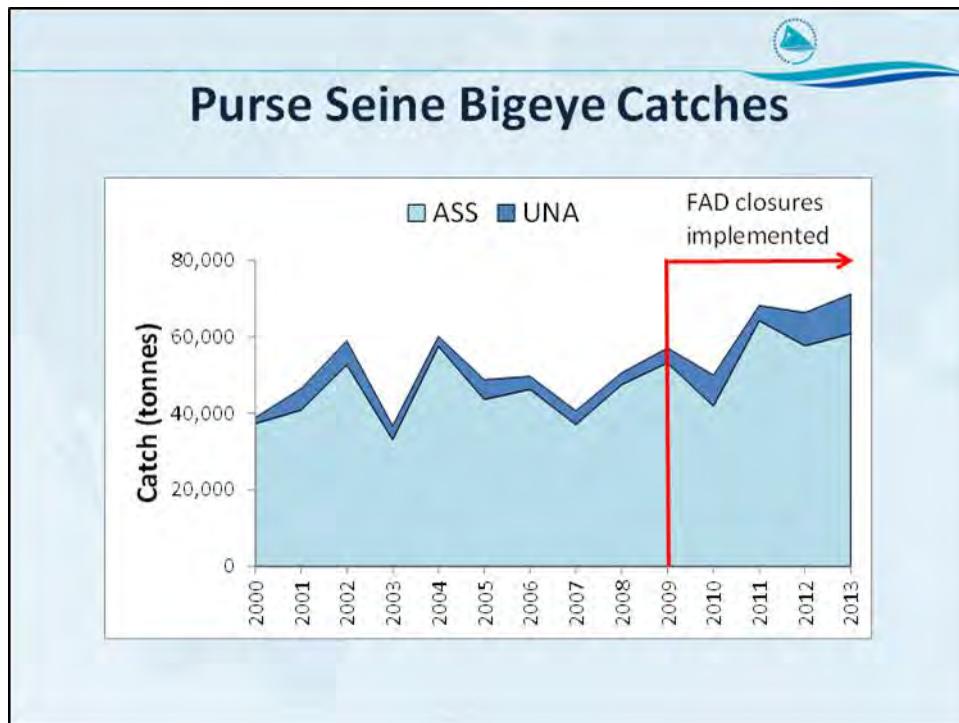
His summary response is quote: "**the results show that had there been no FAD closures, bigeye catches could have been between 14% and 38% higher annually, and 27% higher on average over the 2009-2014 period**".

I append a copy of the power point presentation provided to us by Dr Hampton.

Yours Faithfully,

**Ben Ponia**  
Secretary, Marine Resources

**Appendix 1. Summary slides from Dr. Hampton on effectiveness of the FAD closure**



Overall PS catches of bigeye are dominated by ASS sets  
Since the FAD closures began in 2009, bigeye catches have increased, apart from the low year in 2010

This leads to the comment often heard that the FAD closures have been ineffective because catches of bigeye have increased



## Purse Seine Catches

However, plotting the catch by species by month shows that bigeye catch as expected is far less during the FAD closure months.

Catches of skipjack and yellowfin also tend to be a bit lower during the FAD closures, but not to the same extent as bigeye.



## Impact of FAD Closures



Year	Potential increase in BET catch without FAD closures
2009	+14%
2010	+24%
2011	+24%
2012	+21%
2013	+38%
2014	+36%
Av.	+27%

We can attempt then to estimate what the catches of bigeye might have been in the absence of FAD closures. And then compare these hypothetical catches with the observed to determine the impact of the closures.

Hypothetical bigeye catches were estimated for the FAD closure months assuming that average purse seine catch rates from 2 months before and 2 months after the FAD closure periods would have applied had there been no closures. These catch rates are then applied to the total observed effort in the FAD closure months. This therefore assumes that in the absence of the closures, the mix of ASS and UNA effort would have been as per the average of the adjacent 2 month periods.

Under these assumptions, the results show that had there been no FAD closures, bigeye catches could have been between 14% and 38% higher annually, and 27% higher on average over the 2009-2014 period.