JAPAN REPORT: Preliminary report on the implementation of FAD sets limitation by
Japanese Purse seine vessels as of 2 November
WCPFC10-2013-DP29
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# Preliminary report on the implementation of FAD sets limitation by Japanese Purse seine vessels as of 2 November (under Paragraph 11 (ii), CMM2012-01) <br> (update version of WCPFC-TCC9-2013-DP06 ) 

Japan has taken an alternative measure, FAD sets limitation (no more than 1,477 sets), instead of FADs closure in October 2013 under paragraph 11(ii), CMM 2012-01, and reported required information such as number of FAD sets and estimated bigeye catch every two weeks. Japan hereby submits preliminary report of the implementation of the FAD sets limitation as of 2 November based on the data reported.

1. FAD sets conducted and bigeye catch by Japanese purse seine vessels
(1) As of 2 November 2013, Japanese Purse Seine vessels made 765 FAD sets ( $51.8 \%$ of FAD sets limit, 1,477), and their Bigeye catch is estimated 1, 639.7 MT which include catch from free school.
(2) Figure 1 shows the number of FAD sets by month and its accumulation. Figure 2 shows the reported Bigeye catch by month and its accumulation.
(3) By comparing with the number of FAD sets and the reported Bigeye catch by month (Figure 3), these two show similar trend and their correlation coefficient $\left(\mathrm{R}^{2}\right)$ is 0.7074 (Figure 4) which indicate a positive correlation between the number of FAD sets and the reported Bigeye catch.
(4) Table 1 and 2 show the current status of the number of FAD sets and the reported Bigeye catch by each vessel. While, ratio between the number of FAD sets and the reported Bigeye catch (Figure 5) differs by vessels, it looks apparent that, the more they use FADs, the more their Bigeye catch.
2. Conclusion

This data analysis indicates a positive correlation between the number of FADs and the reported Bigeye catch more clearly. It can be concluded that limitation of FADs is an effective measure to reduce Bigeye catch by Purse Seine vessels.





Table 1. Number of FADs (individual / accumulated) *Covers Drifting FAD and Log

|  |  |  |  | April | May | June | July | August | September | Octber | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Vessel Name | January | February | March | 31/03~27/04 | 28/04~25/05 | 26/05~30/06 | 01/07~27/07 | 28/07~31/08 | 01/09~30/09 | 01/10~02/11 |  |
| Vessel No. 1 | 2 | 1 | 0 | 7 | 1 | 1 | 0 | 0 | 0 | 5 | 17 |
| Vessel No. 2 | 7 | 8 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 4 | 24 |
| Vessel No. 3 | 8 | 0 | 1 | 2 | 2 | 8 | 0 | 0 | 0 | 9 | 30 |
| Vessel No. 4 | 2 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 5 | 12 |
| Vessel No. 5 | 1 | 4 | 0 | 3 | 4 | 2 | 0 | 0 | 0 | 9 | 23 |
| Vessel No. 6 | 5 | 4 | 4 | 1 | 2 | 6 | 0 | 0 | 0 | 9 | 31 |
| Vessel No. 7 | 1 | 1 | 2 | 1 | 1 | 3 | 0 | 0 | 0 | 7 | 16 |
| Vessel No. 8 | 4 | 1 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 11 |
| Vessel No. 9 | 4 | 1 | 0 | 0 | 5 | 4 | 0 | 0 | 0 | 7 | 21 |
| Vessel No. 10 | 9 | 1 | 2 | 0 | 0 | 6 | 0 | 0 | 0 | 8 | 26 |
| Vessel No. 11 | 2 | 2 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 9 | 21 |
| Vessel No. 12 | 3 | 0 | 6 | 6 | 3 | 0 | 0 | 0 | 0 | 2 | 20 |
| Vessel No. 13 | 2 | 1 | 3 | 3 | 0 | 2 | 0 | 0 | 0 | 3 | 14 |
| Vessel No. 14 | 5 | 3 | 2 | 3 | 3 | 1 | 0 | 0 | 0 | 7 | 24 |
| Vessel No. 15 | 4 | 12 | 2 | 0 | 2 | 9 | 0 | 0 | 0 | 7 | 36 |
| Vessel No. 16 | 10 | 6 | 3 | 4 | 1 | 5 | 0 | 0 | 0 | 9 | 38 |
| Vessel No. 17 | 1 | 0 | 0 | 5 | 4 | 9 | 0 | 0 | 0 | 0 | 19 |
| Vessel No. 18 | 3 | 6 | 5 | 6 | 7 | 1 | 0 | 0 | 0 | 1 | 29 |
| Vessel No. 19 | 2 | 4 | 1 | 5 | 7 | 8 | 0 | 0 | 0 | 1 | 28 |
| Vessel No. 20 | 3 | 9 | 0 | 5 | 4 | 0 | 0 | 0 | 0 | 6 | 27 |
| Vessel No. 21 | 4 | 3 | 1 | 5 | 4 | 2 | 0 | 0 | 0 | 5 | 24 |
| Vessel No. 22 | 4 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 6 | 15 |
| Vessel No. 23 | 3 | 5 | 1 | 2 | 2 | 9 | 0 | 0 | 0 | 6 | 28 |
| Vessel No. 24 | 8 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Vessel No. 25 | 2 | 1 | 1 | 1 | 4 | 4 | 0 | 0 | 0 | 4 | 17 |
| Vessel No. 26 | 6 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 2 | 13 |
| Vessel No. 27 | 7 | 5 | 2 | 5 | 1 | 7 | 0 | 0 | 0 | 0 | 27 |
| Vessel No. 28 | 7 | 4 | 0 | 2 | 2 | 4 | 0 | 0 | 0 | 3 | 22 |
| Vessel No. 29 | 6 | 1 | 9 | 10 | 2 | 2 | 0 | 0 | 0 | 0 | 30 |
| Vessel No. 30 | 6 | 1 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 3 | 18 |
| Vessel No. 31 | 3 | 2 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 10 | 20 |
| Vessel No. 32 | 2 | 1 | 1 | 4 | 8 | 0 | 0 | 0 | 0 | 9 | 25 |
| Vessel No. 33 | - | - | 1 | 3 | 2 | 5 | 0 | 0 | 0 | 4 | 15 |
| Total | 136 | 93 | 59 | 92 | 74 | 121 | 0 | 0 | 0 | 161 | 736 |

Table 2. Reported Bigeye Catch (individual / accumulated)

| Vessel Name | January | February | March | April | May | June | July | August | September | Octber | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 31/03~27/04 | 28/04~25/05 | 26/05~30/06 | 01/07~13/07 | 28/07~31/08 | 01/09~30/09 | 01/10~02/11 |  |
| Vessel No. 1 | 8.0 | 1.0 | 0.0 | 8.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 20.0 | 37.1 |
| Vessel No. 2 | 1.1 | 8.3 | 5.0 | 0.0 | 0.0 | 8.5 | 5.8 | 1.5 | 0.0 | 9.0 | 39.2 |
| Vessel No. 3 | 4.0 | 0.0 | 0.5 | 0.0 | 0.0 | 2.0 | 2.0 | 0.0 | 1.0 | 14.0 | 23.5 |
| Vessel №. 4 | 12.0 | 13.0 | 0.0 | 0.0 | 0.0 | 0.0 | 20.0 | 0.0 | 0.0 | 10.0 | 55.0 |
| Vessel No. 5 | 0.0 | 15.0 | 0.0 | 15.0 | 10.0 | 3.0 | 0.0 | 0.0 | 0.0 | 25.0 | 68.0 |
| Vessel No. 6 | 25.0 | 3.0 | 13.0 | 2.0 | 4.0 | 8.0 | 0.0 | 0.0 | 0.0 | 43.0 | 98.0 |
| Vessel No. 7 | 1.0 | 0.0 | 14.0 | 2.0 | 5.0 | 2.0 | 0.0 | 1.0 | 0.0 | 0.0 | 25.0 |
| Vessel No. 8 | 12.0 | 7.0 | 6.0 | 0.0 | 2.0 | 0.0 | 5.0 | 10.0 | 6.0 | 1.0 | 49.0 |
| Vessel No. 9 | 15.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 2.0 | 2.0 | 0.0 | 5.0 | 25.0 |
| Vessel No. 10 | 7.0 | 0.0 | 5.0 | 0.0 | 0.0 | 6.0 | 1.0 | 12.0 | 2.0 | 51.0 | 84.0 |
| Vessel No. 11 | 2.0 | 12.0 | 17.0 | 28.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 24.0 | 83.0 |
| Vessel No. 12 | 2.0 | 0.0 | 11.0 | 19.0 | 45.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 80.0 |
| Vessel No. 13 | 12.0 | 0.0 | 4.0 | 3.0 | 0.0 | 16.0 | 0.0 | 0.0 | 0.0 | 1.0 | 36.0 |
| Vessel No. 14 | 43.9 | 84.0 | 0.4 | 0.3 | 0.6 | 0.1 | 0.0 | 0.7 | 0.3 | 1.0 | 131.3 |
| Vessel No. 15 | 4.0 | 6.0 | 10.0 | 0.0 | 1.0 | 1.0 | 7.0 | 1.0 | 0.0 | 34.0 | 64.0 |
| Vessel No. 16 | 8.0 | 15.0 | 2.0 | 5.0 | 2.0 | 5.0 | 11.0 | 0.0 | 0.0 | 15.0 | 63.0 |
| Vessel No. 17 | 2.0 | 1.0 | 0.0 | 1.8 | 2.0 | 3.3 | 0.0 | 0.0 | 0.0 | 0.0 | 10.1 |
| Vessel No. 18 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 3.0 | 0.0 | 2.0 | 0.0 | 15.0 | 22.0 |
| Vessel No. 19 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 6.0 | 1.0 | 0.0 | 1.0 | 18.0 |
| Vessel No. 20 | 5.0 | 9.0 | 0.0 | 3.0 | 12.0 | 0.0 | 0.0 | 0.0 | 0.0 | 54.0 | 83.0 |
| Vessel No. 21 | 10.0 | 25.0 | 3.0 | 3.0 | 1.0 | 0.0 | 3.0 | 1.0 | 20.0 | 9.0 | 75.0 |
| Vessel No. 22 | 14.0 | 6.0 | 1.0 | 2.0 | 1.0 | 13.5 | 6.0 | 0.0 | 1.0 | 20.0 | 64.5 |
| Vessel No. 23 | 6.0 | 20.0 | 0.0 | 12.0 | 5.0 | 26.0 | 0.0 | 6.0 | 6.0 | 36.0 | 117.0 |
| Vessel No. 24 | 0.0 | 10.0 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 15.0 |
| Vessel No. 25 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 |
| Vessel No. 26 | 10.0 | 2.0 | 0.0 | 5.0 | 0.0 | 6.0 | 0.0 | 0.0 | 7.0 | 2.0 | 32.0 |
| Vessel No. 27 | 5.0 | 5.0 | 5.0 | 20.0 | 0.0 | 10.0 | 5.0 | 0.0 | 0.0 | 0.0 | 50.0 |
| Vessel No. 28 | 25.0 | 5.0 | 0.0 | 15.0 | 5.0 | 10.0 | 0.0 | 0.0 | 5.0 | 5.0 | 70.0 |
| Vessel No. 29 | 7.0 | 2.0 | 3.0 | 4.0 | 0.0 | 1.0 | 8.0 | 17.0 | 0.0 | 0.0 | 42.0 |
| Vessel No. 30 | 18.0 | 1.0 | 0.0 | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 | 0.0 | 21.0 | 43.0 |
| Vessel No. 31 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Vessel No. 32 | 0.0 | 8.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.0 | 14.0 |
| Vessel No. 33 | - |  | 0.0 | 3.0 | 2.0 | 8.0 | 1.0 | 2.0 | 1.0 | 5.0 | 22.0 |
| Total | 259.0 | 258.3 | 104.9 | 151.2 | 99.6 | 146.4 | 82.8 | 58.2 | 49.3 | 430.0 | 1,639.7 |

Fig 5. Correlation between Number of FAD sets and Reported Bigeye Catch as of 2 November (Each Vessel; No. 1 ~ No. 33)


