TECHNICAL AND COMPLIANCE COMMITTEE
Sixth Regular Session
30 September - 5 October 2010
Pohnpei, Federated States of Micronesia

SUPPLEMENTARY INFORMATION ON THE 2009 FAD CLOSURE FROM AVAILABLE OBSERVER DATA

WCPFC-TCC6-2010/09a Rev 1
20 September 2010

Paper prepared by SPC OFP

Introduction

This paper provides some preliminary information from available Regional Observer Programme (ROP) and logsheet data on some of the strategies employed in the WCPO purse-seine fishery during the CMM 2008-01 FAD closure (1 August – 30 September 2009). The data are preliminary and many more ROP trips are yet to be processed. This early summary has been produced to provide TCC with an indication of some of the behaviours observed and their potential implications.

Set times

The start time of sets can be used as an indicator of the types of purse seine operation being carried out (Harley et al. 2009, WCPFC-SC5-2009-ST-WP-07). Typically, sets on floating objects begin in the early hours of the morning, before sunrise, while unassociated sets occur throughout the day. Figure 1 compares the distribution of set times of unassociated sets during August – September from 2002 to 2009 as reported on logsheets. There is a trend towards earlier set times throughout this time series; however in 2009 (i.e. during the FAD closure), there was a higher proportion of unassociated sets beginning at 0400-0600 hrs than in any previous year. This might be an indication of changed behaviour with respect to what were reported as unassociated sets during the 2009 FAD closure.

Evidence of use of FADs and aggregation lights

Table 1 presents the occurrence of various behaviours reported by observers in ROP data available to date for the 2009 FAD closure. There were numerous instances of vessels conducting some sort of activities with FADs (239 of 1,330 observed days), including specific fishing activities (57 days). There were also 19 days where vessels were reported as drifting at night with fish aggregation lights on. In a number of cases, declared unassociated sets were made the following morning.

Observed species composition of unassociated sets during the 2009 FAD closure

Figure 2 presents information on the estimated species composition of unassociated sets in August – September of 2002-2007, 2008 and 2009, based on observer sampling. For 2002-2007 and 2008, a large proportion of the total catch was estimated to comprise large (>80 cm) yellowfin tuna, with bigeye tuna comprising around 1% of the total catch. In 2009, the catch was dominated by skipjack rather than large yellowfin. However, in 2009 bigeye tuna comprised an estimated 3.3% of the catch, considerably higher than in earlier years.

Conclusions

The data presented in this paper represent an early glimpse at fishing behaviour during the 2009 FAD closure. A final evaluation will be required once all observer data have been received and processed.

Based on these early data, there is some evidence of FAD involvement and the use of lights to aggregate fish to the vessel during the 2009 FAD closure, along with a greater proportion of unassociated sets beginning in the 0400-0600 hrs time period. There is also some evidence of a higher than normal percentage of bigeye in unassociated sets during the FAD closure, perhaps as a result of the use of lights, drifting overnight with FADs and subsequent early morning sets.

References

Harley, S., P. Williams, and J. Hampton. 2009. Analysis of Purse seine set times for different school associations: A further tool to assist in compliance with FAD closures. WCPFC-SC5-2009-ST-WP-07.

Table 1. Descriptive statistics on vessel strategies used during the CMM 2008-01 FAD Closure period (Aug-Sep, 2009), according to observer reports.

Number of observer trips	108
Number of fishing days	1,330
Number of nights drifting with fish aggregation lights (activity =14)	19
Number of days setting or investigating Drifting FADs (SCH_ID = 4)	57
Number of days reported with any activity related to a drifting FAD (Activity=9,10,12,23,24,25,26)	239
Number of days reported as "No fishing, drifting with floating object" (Activity = 12)	134

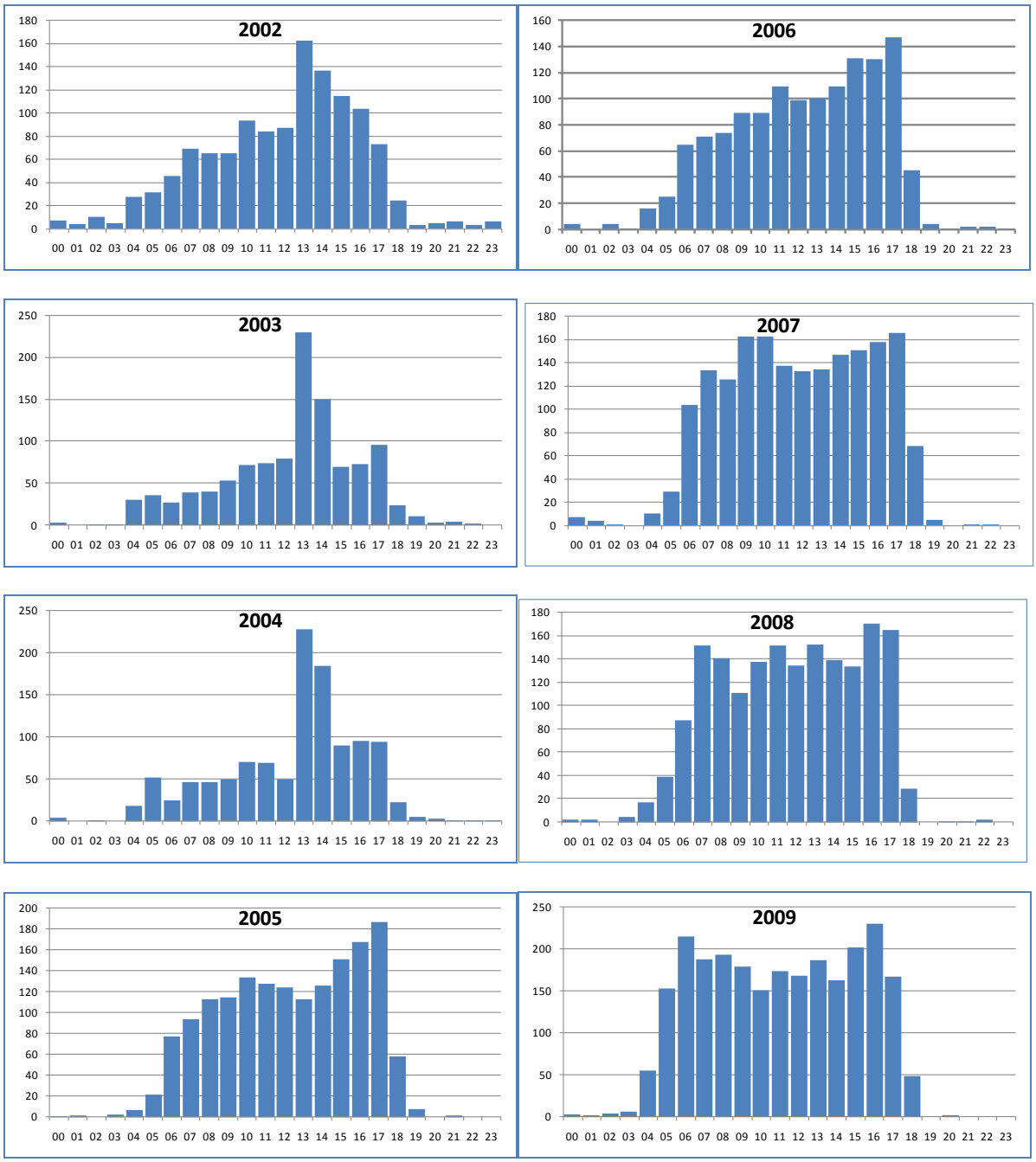

Figure 1. Annual distributions of start of set time for unassociated sets in August – September 2002-2009.

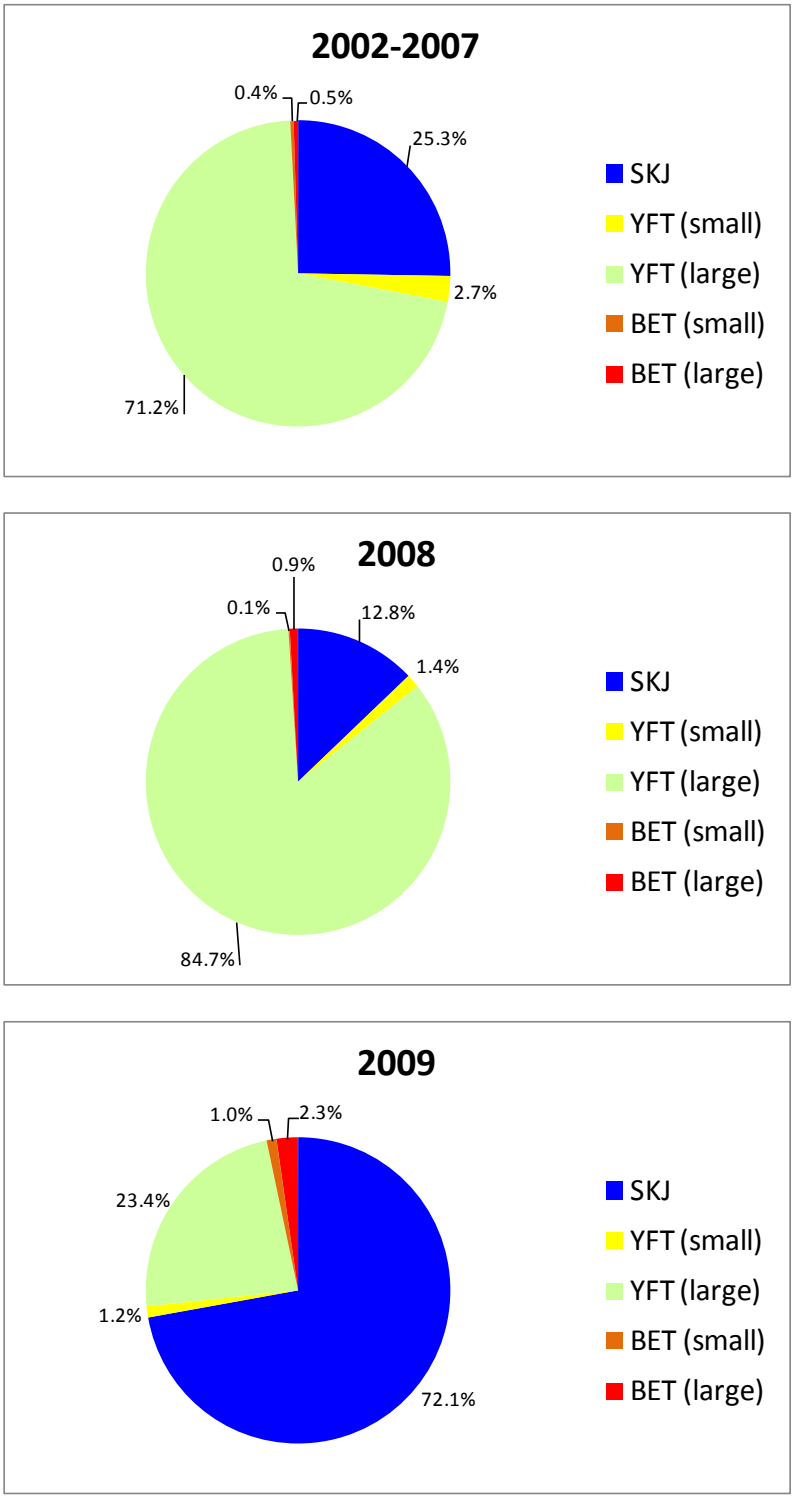

Figure 2. A comparison of tuna species composition from unassociated sets during the CMM 2008-01 FAD closure period (1 August – 30 September 2009) (BOTTOM: N=118 sets), with the same period in previous years: 2008 (MIDDLE; 223 sets) and 2002-2007 (TOP; N=698 sets). The definition of 'large' yellowfin and bigeye is fish > 80cm.