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Purse Seine Fishing Activity in PNA Waters

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PURSE SEINE FISHING ACTIVITY IN PNA² WATERS

Introduction

This paper provides information on purse seine activity in the waters of the Parties to the Nauru Agreement (PNA), and in the Western and Central Pacific Ocean (WCPO) outside PNA waters, for the period 2010 to 2016, including 2017 for vessel numbers.

The purposes of the information are:

- a) to improve understanding of the purse seine fishery in PNA waters, and the tropical WCPO more generally; and
- b) to provide indicators of the performance of the PNA purse seine Vessel Day Scheme (VDS) and other purse seine management processes in the WCPO.

The period for the analysis is from 2010. An overall hard limit on fishing effort under the VDS was applied from 2012 in accordance with CMM 2011-01, limiting effort in PNA EEZs to the 2010 level.

The purse seine fishery in PNA waters has accounted for around 80% of the WCPO purse seine catch from 2010-2016, the balance being taken in the waters of other Commission Members, especially Indonesia and the Philippines, and the high seas.

Vessel Numbers in PNA Waters

Figure 1 and Table 1 show the number of vessels on the PNA purse seine VDS register since 2010. The fleet has been quite stable around 275 vessels from 2010 to 2015, with a significant drop to 259 vessels in 2016 which appears to be continuing into 2017. The domestic fleets, including foreign flagged vessels operating under the FSM Arrangement are growing, and now make up more than 40% of the fleet.

² Parties to the Nauru Agreement plus Tokelau

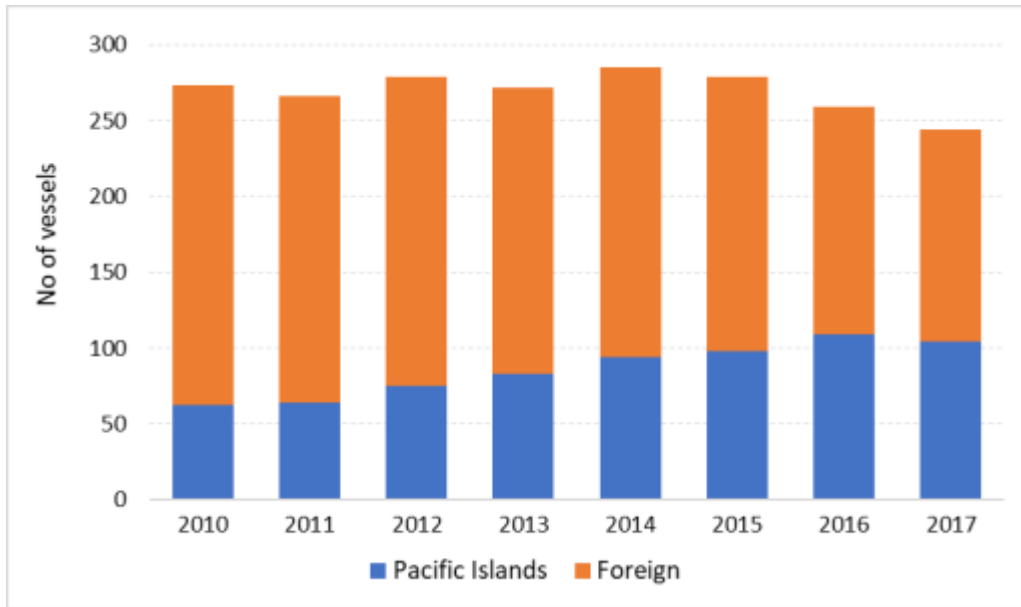


Figure 1: Annual number of vessels operating in PNA waters.

(Pacific Islands include foreign flag vessels operating under the FSM Arrangement; the 2017 figure represent the number of vessels operating as at July 2017. Source: PNA VDS Register)

Purse Seine Fishing Effort in PNA Waters

Figure 2 below and Table 2 show the estimated purse seine fishing effort in PNA waters since 2010, based on logsheets. This data indicates the effectiveness of the VDS in controlling effort since hard limits at the 2010 effort level were applied in 2012. As illustrated by the graph, the logsheet data indicates that effort increased in 2016 after the substantial decline in 2015. The decrease in effort over the last 3 years is reflective of the effect of tuna market conditions and increasing vessel day prices.

PNA Members are working on improved implementation of electronic catch and effort reporting to improve the timeliness and accuracy of logsheet data.

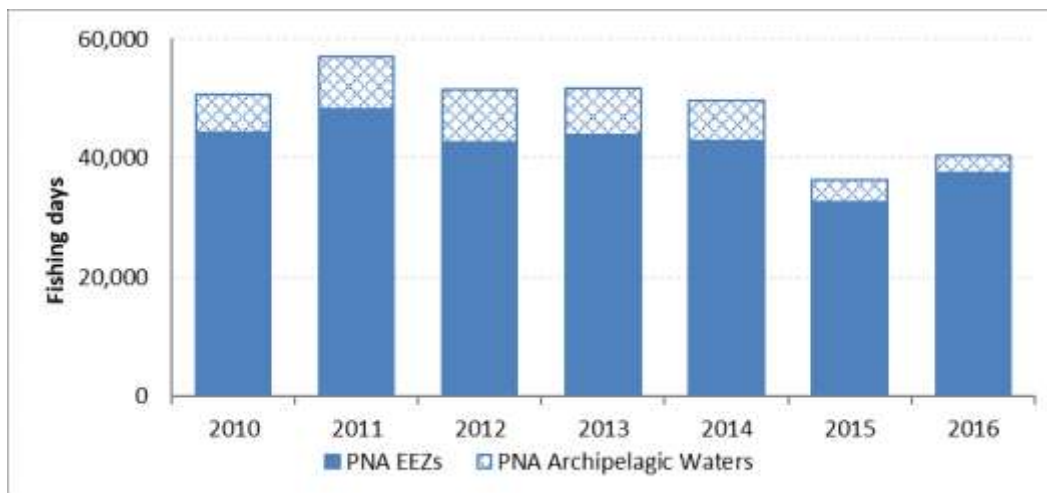


Figure 2: Purse seine effort (fishing days) in PNA waters. (Source: SPC data as at 3 July 2017)

Purse Seine Catch in PNA Waters

Figure 3 below and Table 3 show the estimated purse seine fishing catch in PNA waters since 2010, based on logsheets. The catch has been relatively stable since 2010. The previous year's data is usually provisional but implementation of electronic catch and effort reporting by PNA Members has improved the timeliness of catch data such that the 2016 catch data is mostly complete.

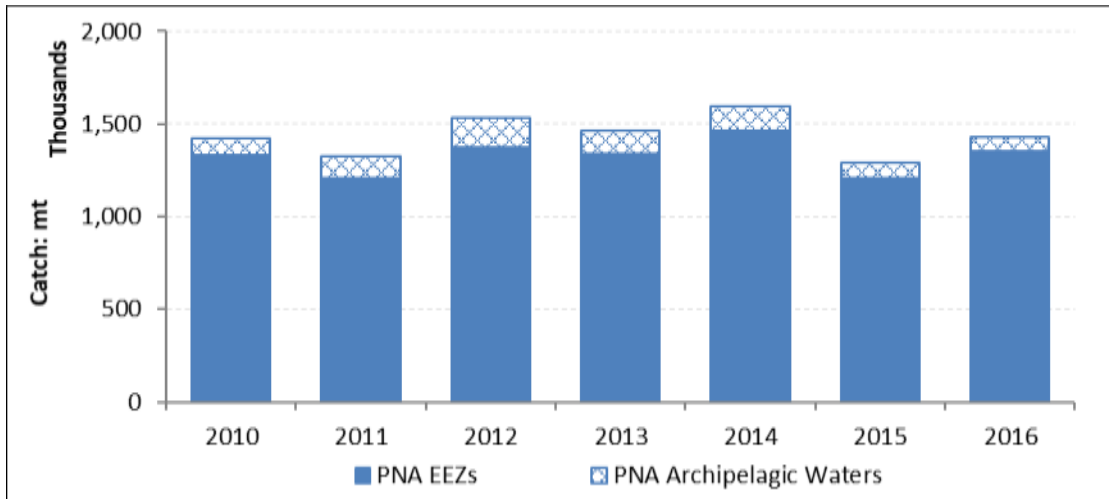


Figure 3: Purse seine catch (mt) in PNA waters. (Source: SPC data as at 3 July 2017)

Purse Seine Catch Rate in PNA Waters

Figure 4 shows the nominal purse seine catch rate per fishing day in PNA waters from the previous effort and catch data. In general, the average catch rate has been around 30 tonnes per day over this period with a dip in 2011, and increases in 2014 and especially in the past two years 2015 & 16. These could be due to various reasons such as favourable oceanographic conditions, improved stock and vessel efficiency. Catch rates in archipelagic waters (AWs) have been lower than catch rates in PNA EEZs.

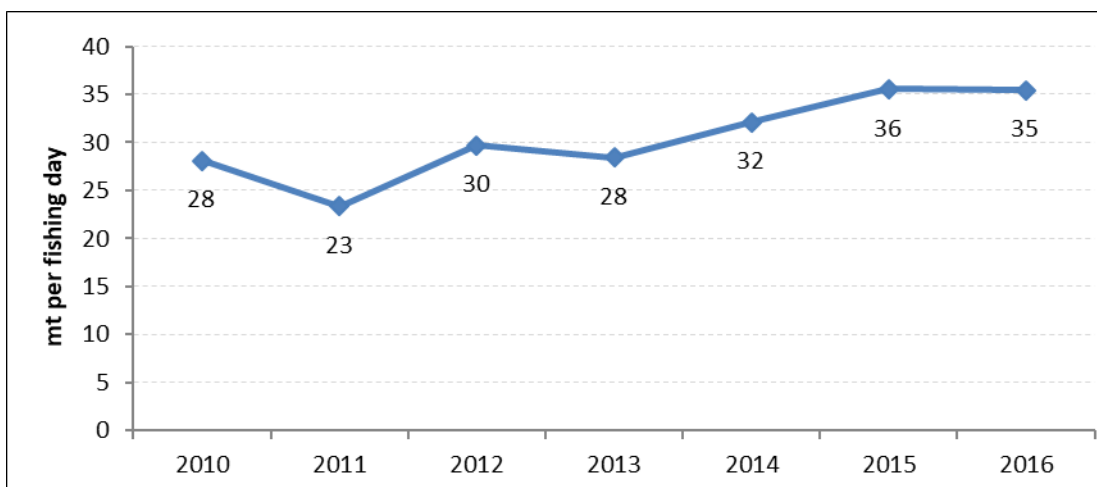


Figure 4: Catch rate (mt per fishing day) in PNA waters. (Source: SPC data as at 3 July 2017)

WCPO Purse Seine Effort³ and Catch, Outside PNA Waters

Figure 5 below and Table 4 show the estimated purse seine fishing effort and catch in the WCPO outside PNA waters since 2010, although the effort data does not include effort in Indonesia and Philippines and Philippine vessels in HSP-1 while the catch data does.

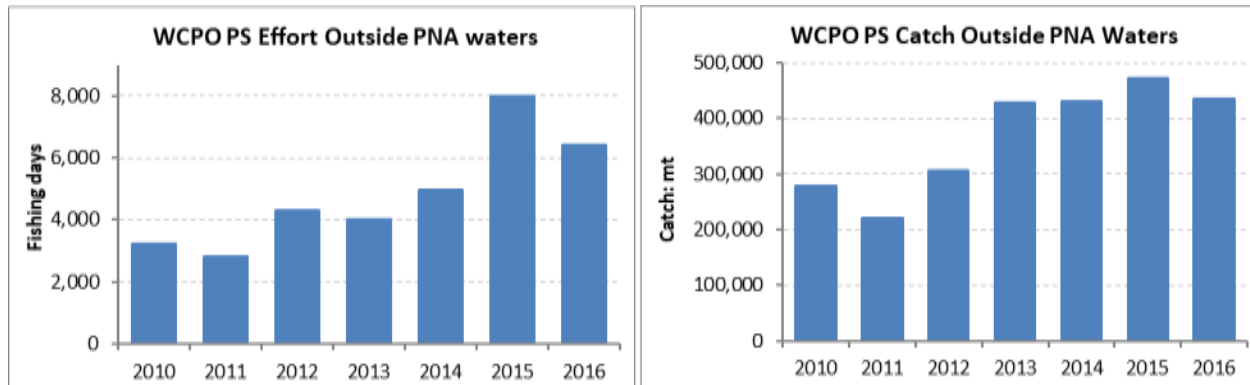


Figure 5: WCPO purse seine effort and catch, outside PNA waters.

(Effort excludes fishing in waters of Indonesia and Philippines, and by Philippine vessels under the Special Arrangement in HSP-1. Source: SPC data as at 3 July 2017)

Purse Seine Bigeye Catch in PNA Waters

The purse seine bigeye catches shown in Figure 6 below and in Table 5, constitute, on average, 3% of the total purse seine bigeye catches in PNA waters. It has been declining since 2011, largely due to the FAD closure, the effect of the VDS in displacing fleets with a high dependence on FADs and the lower overall effort in 2015 and 2016.

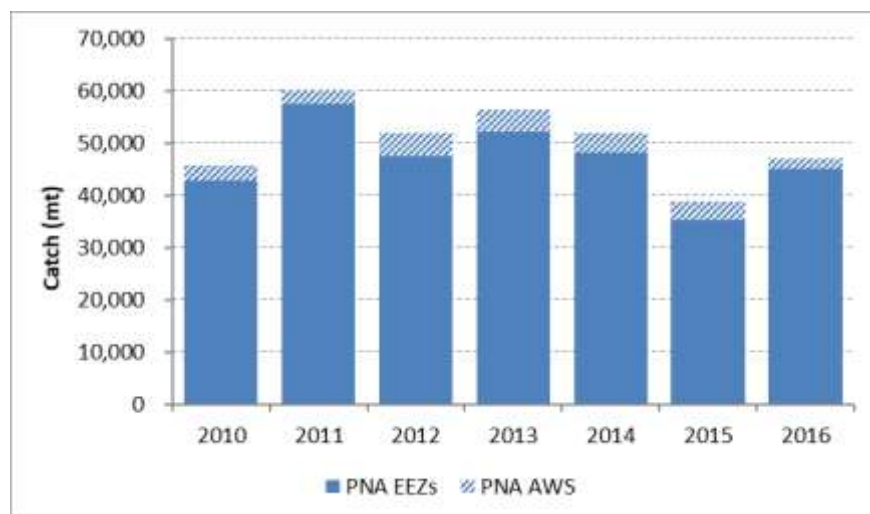


Figure 6: Purse seine bigeye catch (mt) in PNA waters (Source: SPC data as at 3 July 2017)

³Excludes fishing in Indonesia and Philippines

Purse Seine Bigeye Catch outside PNA waters

The purse seine bigeye catches outside PNA waters, shown in Figure 7 below and in Table 5, include catches in the high seas and in other national waters. The catch in the high seas constituted around 50% of the bigeye catch outside PNA waters in 2016.

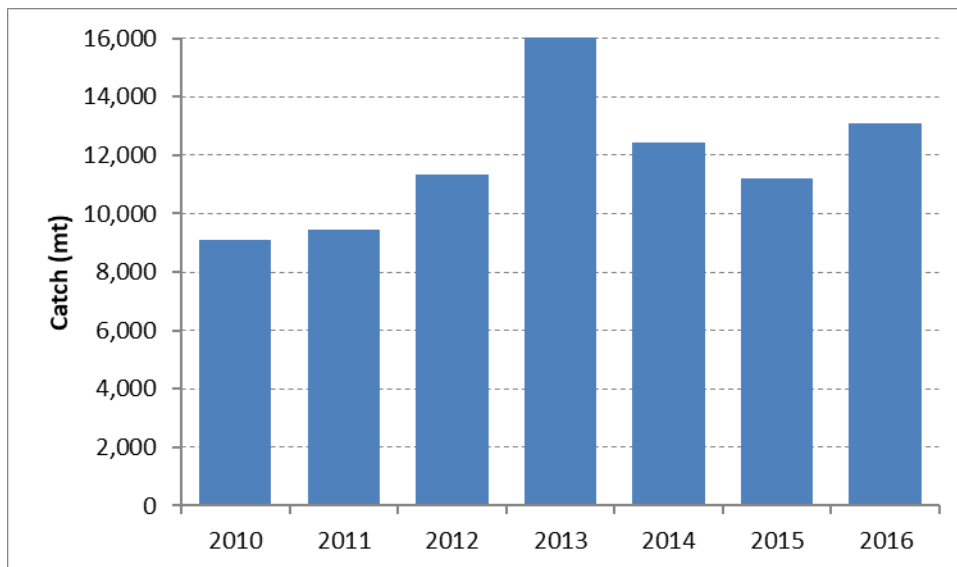


Figure 7: Purse seine bigeye catch (mt) outside PNA waters (Source: SPC data as at 3 July 2017)

Table 1: No of vessels operating in PNA EEZs for the period 2010 to 2017

The Pacific Islands fleet includes foreign flag vessels operating under the FSM Arrangement. The 2017 figures are for vessels operating in PNA EEZs as at July 2017. (Source: PNA VDS Register).

Fleet	2010	2011	2012	2013	2014	2015	2016	2017
Pacific Islands	62	64	75	83	94	98	109	104
Foreign	211	202	204	189	191	181	150	140
Total	273	266	279	272	285	279	259	244

Table 2: Purse seine effort (logsheet days) in PNA waters. (Source: SPC data as at 3 July 2017)

	2010	2011	2012	2013	2014	2015	2016
PNA EEZs	44,354	48,240	42,723	43,962	42,895	32,536	37,531
PNA AWS	6,268	8,671	8,822	7,631	6,784	3,829	2,817
Total	50,622	56,911	51,545	51,593	49,679	36,365	40,349

Table 3: Purse seine catch (mt) in PNA waters. (Source: SPC data as at 3 July 2017)

	2010	2011	2012	2013	2014	2015	2016
PNA EEZs	1,334,106	1,210,043	1,373,049	1,337,547	1,462,128	1,210,389	1,350,717
PNA AWS	88,837	117,409	158,499	127,894	133,904	81,760	80,190
Total	1,422,943	1,327,452	1,531,548	1,465,440	1,596,032	1,292,149	1,430,906

Table 4: WCPO purse seine effort (logsheet days) and catch (mt), outside PNA waters

Note: Effort excludes fishing in waters of Indonesia and Philippines, and by Philippine vessels under the Special Arrangement in HSP-1. (Source: Same as Tables 2 & 3)

	2010	2011	2012	2013	2014	2015	2016
PS Effort (fishing days)	3,246	2,810	4,317	3,998	4,960	7,972	6,411
PS Catch (mt)	279,829	221,774	306,874	429,835	430,541	472,901	435,194

Table 5: Purse seine bigeye catch (mt) in, and outside, PNA waters (Source: Same as Tables 2 - 4)

	2010	2011	2012	2013	2014	2015	2016
PNA EEZs	42,929	57,540	47,600	52,215	48,213	35,375	44,942
PNA AWS	2,896	2,546	4,259	4,168	3,694	3,420	2,174
Total PNA	45,825	60,086	51,859	56,382	51,907	38,795	47,116
Outside PNA	9,087	9,433	11,320	16,036	12,431	11,192	13,096