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ANNUAL REPORT TO THE COMMISSION
PART 1: INFORMATION ON FISHERIES, RESEARCH, AND STATISTICS

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PAPUA NEW GUINEA

Western and Central Pacific Fisheries Commission
10th Regular Session of the Scientific Committee

Majuro, Republic of Marshall Islands
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ANNUAL REPORT TO THE COMMISSION

PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS, 2013.

PAPUA NEW GUINEA

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Scientific data was provided to the Commission in accordance with the decision relating to the provision of scientific data to the commission by the 30th April 2011	**YES**

Summary

The Papua New Guinea (PNG) tuna fishery is made up of both the purse-seine and longline sectors with a small handline sector. The longline and handline sector is a citizen - only activity and all vessels fish exclusively in the waters under PNG national jurisdiction. The purse-seine sector is a mix of both domestic and foreign access vessels. The domestic sector comprises the PNG flag vessels and PNG chartered vessels (locally-based foreign) which support processing facilities onshore in PNG. While the PNG flagged vessels fish primarily in PNG waters, the chartered vessels fish both in PNG waters and waters outside of PNG. Foreign vessels under access arrangements fish in PNG EEZ whenever there is fish to catch.

Total provisional catch estimate in 2013 within PNG waters was 470,836 mt, a decrease from the 2012 estimate of 521,497 mt. Most of the fish were caught by purse seiners with a catch contribution of 339,690.48 mt by foreign vessels that fish under access arrangements, 100,653.62 mt by PNG chartered vessels (locally based foreign) and 100,653.62 mt by the PNG flag vessels. Only a total estimate of 3,034.17 mt was from the longline sector. Catches by PNG Flag vessels were caught mostly inside PNG waters. The catch by PNG chartered vessels outside of PNG waters was 78,591.11 mt and was taken mainly in the waters of the other PNA member countries.

A total of 258 vessels were active in the PNG waters in 2013. Twenty three (23) were longline (including shark longline vessels) and 235 were purse-seine vessels. Nine (9) of the 235 purse seiners were PNG flagged with an estimated effort of 1,686 days; 39 were PNG chartered with 5,308 days; and 187 were foreign access vessels with 12,944 days fishing and searching in PNG waters. Estimated effort by tuna longline vessels in 2013 was 30,913 hundred hooks.

PNG still continues to improve its catch and effort data coverage for all fleets. Introduction of electronic reporting systems will help enhance this endeavor. For size and species composition data, a port sampling program conducted annually as well as an observer program that covers the vessels based out of PNG and foreign vessels fishing the PNG waters. The growing national observer program aims to improve observer coverage on all vessels.

PNG is striving towards building its fishing industry; therefore fishing licenses are linked to onshore investment. At full capacity PNG is looking to processing all fish caught in PNG waters, back in PNG. The rights to fish in PNG are also linked to onshore investment.

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1. Background

Tuna in the areas under Papua New Guinea (PNG) jurisdiction are caught by two main fishing methods, namely purse-seine and longline. Most of the catch (99%) is attributed to the purse-seine fishery. Purse-seining started in PNG waters in the early 1980s and has since intensified, with the 2010 catch being the highest on record (702,969 mt). The longline fishery started even earlier than the purse-seine fishery, originally only as access by foreign fleets. But in the mid-1990s a policy on domestication enabled the fishery to be a national activity only, hence doing away with access by foreign fleets.

The tuna fishery in PNG represents a balance of both domestic industry development and foreign distant water fishing nations (DWFN) access agreements. Domestic industry development is pursued by using a model whereby a fishing licence is granted on the condition that the vessels catch fish for processing facilities in-country. Vessels under this scheme are either re-flagged to PNG or are given incentives by way of reduced licence fees and allowing them to fish within archipelagic waters or sponsoring them to fish under the Federated States of Micronesia Arrangement (FSMA). So far only the Philippine and Vanuatu flagged vessels are under this scheme apart from the PNG flagged vessels. The mode of operation by the Philippine and Vanuatu flagged vessels differ in that the Philippine flagged vessels fish exclusively in PNG waters, including the archipelagic waters whilst the Vanuatu flag vessels fish widely including the waters of the other Parties to the Nauru Agreement (PNA).

The fishery is guided by the National Tuna Fishery Management Plan which establishes an overall management structure, and an application framework for all tuna fisheries, including licence limits and total allowable catches (TAC), gear restrictions and the use, deployment and limits to the number of Fish Aggregating Devices (FAD).

The purse-seine fishery operates within the guidelines of important regional and sub-regional arrangements such as the Parties to the Nauru Agreement (PNA), whose requirements are incorporated in the National Tuna Management Plan**.**

2. Flag State Reporting

This section reports activities by the national fleet in waters of the Western and Central Pacific Fisheries Commission (WCPFC) convention area including PNG's Exclusive Economic Zone (EEZ). The national fleet comprises domestic longline and purse seine vessels as well as purse seine vessels under charter arrangements.

2.1 Purse Seine

PNG manages a purse seine fleet made up of two categories; domestic vessels which are PNG flagged vessels and Locally-Based Foreign (LBF) vessels which are foreign flagged and whose activities is governed by charter arrangements with locally based companies. These vessels also support onshore processing plants in the country.

2.1.1 Domestic - PNG Flag Vessels

The total estimated catch by PNG flag vessels in 2013 was 28,843.49 mt which was lower than 2012 (46,085 mt, the highest since 2009) and the five year average of 32,891.93 mt (Table 1). In 2013 an estimated 27,458.49 mt of fish was caught inside PNG waters and 1385.00 mt was caught outside of PNG waters. Skipjack tuna (SKJ) is the dominant species with an average catch of 19,819.95 mt followed by yellowfin tuna (YFT) with 12,699 mt, while bigeye tuna (BET) and other species (non-primary species associated with purse seine gear) average to about 1% of catches.

Fishing activities by these vessels occur mostly in PNG waters with only one vessel that also fish in other countries' waters under the FSM Arrangement. The number of active vessels has been steadily increasing from 6 vessels in 2006 (Figure1). Nine vessels were active in 2013 with a total effort of 1,716 days spent fishing and searching. Effort by these vessels has also been increasing since 2006 from 642 estimated fishing days. Figure 2 shows the distribution of catch and effort by the domestic purse seine vessels in the WCPFC convention area.

Table 1: Annual catch estimates (mt) for domestic purse seine vessels (PNG Flag) inside and outside of the PNG waters. Estimate for 2013 is provisional.

Species	Fishing Area	Catch (mt) / Year					
		2009	2010	2011	2012	2013	Average
SKJ	PNG	20,755.17	15,305.38	18,365.10	27,933.51	14,780.80	*19,427.99*
	Outside PNG	483.21	0.57		79.04	1,005.00	*391.96*
YFT	PNG	13,123.97	12,498.85	8,311.98	16,774.67	12,199.20	*12,581.73*
	Outside PNG	56.37	0.21		33.60	380.00	*117.55*
BET	PNG	212.52	97.32	37.50	752.02	370.30	*293.93*
	Outside PNG						
OTH	PNG	56.77	69.91	155.25	512.94	108.20	*180.61*
	Outside PNG	0.24	0.06				*0.15*
TOTAL	**PNG**	**34,148.43**	**27,971.46**	**26,869.82**	**45,973.14**	**27,458.49**	***32,484.27***
	Outside PNG	**539.82**	**0.84**	**-**	**112.64**	**1,385.00**	***407.66***
WCPFC CA Total		**34,688.25**	**27,972.30**	**26,869.82**	**46,085.78**	**28,843.49**	***32,891.93***

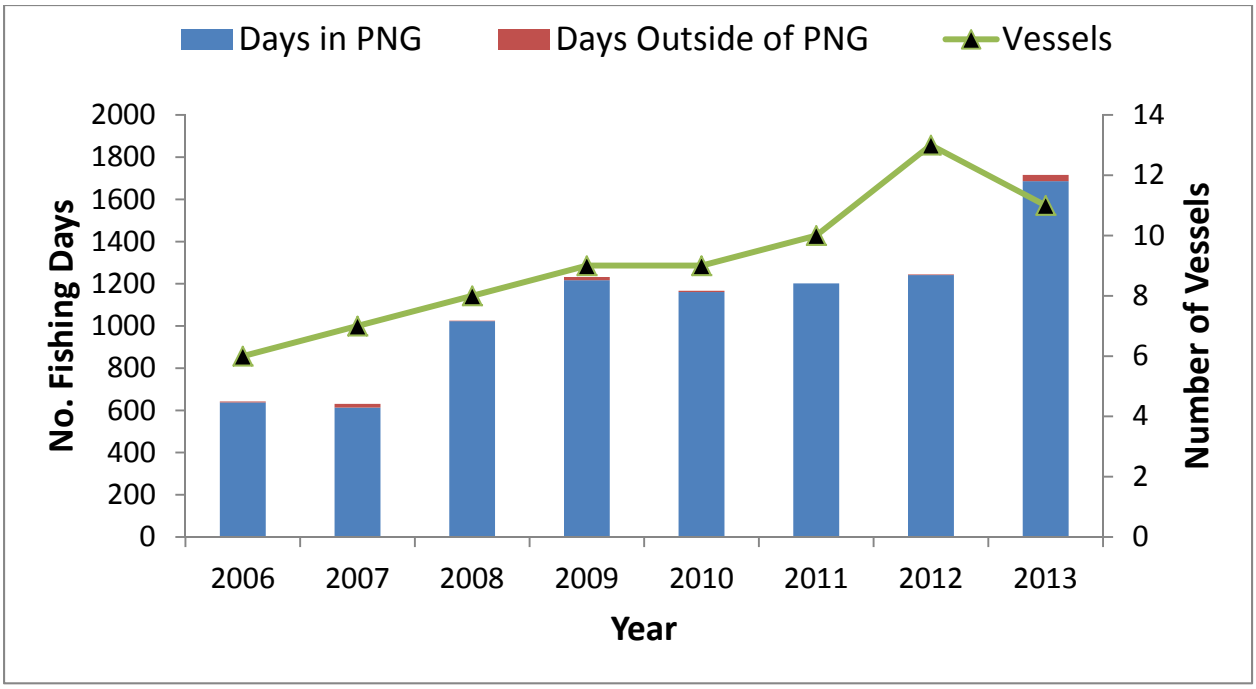

Figure 1: Distribution of fishing effort (number of fishing days) inside and outside of PNG EEZ by domestic purse seine vessels (PNG Flag) and the number of active vessels from 2006 – 2013. Estimates for 2013 are provisional.

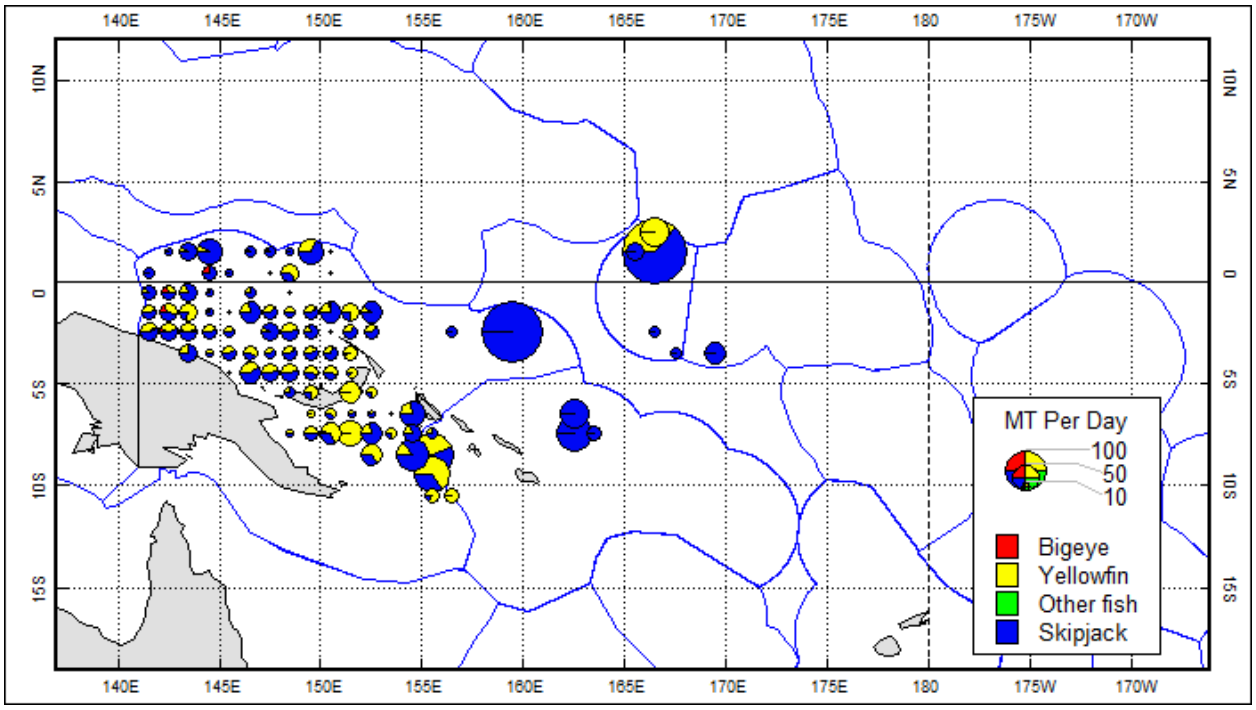

Figure 2: Catch and effort distribution (mt per day) by domestic purse seine vessels in the WCPFC convention area in 2013. Data source: SPC.

2.1.2 Locally-Based Foreign Vessels – Foreign Flag

The 2013 overall catch estimates by locally-based foreign vessels in the WCPFC convention area was 170,192.18 mt which 100,653.62 mt was caught in PNG waters while 69,538.57 mt was caught in other waters (Table 2). The average total catch in the last five years was 176,198.69 mt with highest of 193,124.12 mt recorded in 2012. SKJ dominates the species composition of catches both inside and outside PNG waters with a combined average of 18,950.11 mt followed by YFT with 35,364.19 mt.

Locally-based foreign vessels are owned or chartered by locally based companies and fish in PNG waters and about half of the vessels also fish in waters of other PNA member countries under the FSM Arrangement. A total of 39 vessels were actively fishing in 2013 under this category with a total of 7,284 days fishing and searching (Figure 3). Most of the fishing days were spent in PNG waters. Figure 4 shows the distribution of catch and effort by these purse seine vessels in the WCPFC convention area.

Table 2: Annual catch estimates (mt) for locally based foreign vessels (Foreign Flag) inside and outside of the PNG EEZ. Estimates for 2013 are provisional.

Species	Fishing Area	Catch (mt)					
		2009	2010	2011	2012	2013	*Average*
SKJ	PNG	69,606.64	84,198.79	97,387.41	80,601.81	73,557.70	*81,070.47*
	Outside PNG	64,467.80	52,793.80	44,888.10	65,418.00	61,830.50	*57,879.64*
YFT	PNG	25,432.53	29,337.94	23,406.18	28,638.16	26,816.50	*26,726.26*
	Outside PNG	8,045.00	10,414.40	4,400.70	12,910.55	7,419.00	*8,637.93*
BET	PNG	200.26	351.64	188.97	274.95	241.10	*251.38*
	Outside PNG	67.00	185.20	279.10	223.81	288.20	*208.66*
OTH	PNG	71.34	579.77	1,333.02	5,018.09	38.32	*1,408.11*
	Outside PNG	32.56	3.63	5.38	38.75	0.87	*16.24*
TOTAL	PNG	**95,310.77**	**114,468.14**	**122,315.58**	**114,533.01**	**100,653.62**	***109,456.22***
	Outside PNG	**72,612.36**	**63,397.03**	**49,573.28**	**78,591.11**	**69,538.57**	***66,742.47***
WCPFC CA Total		**167,923.13**	**177,865.17**	**171,888.86**	**193,124.12**	**170,192.18**	***176,198.69***

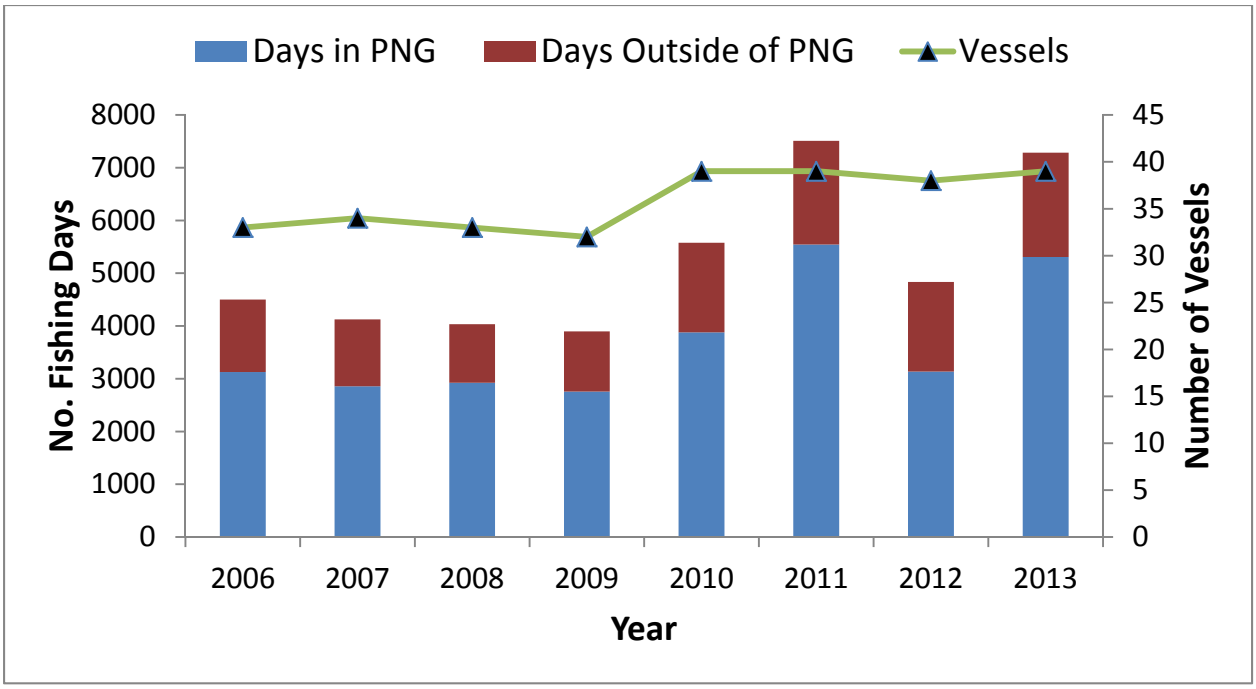

Figure 3: Distribution of fishing effort inside and outside the PNG EEZ by locally-based foreign vessels from 2006-2013. Estimate for 2013 is provisional.

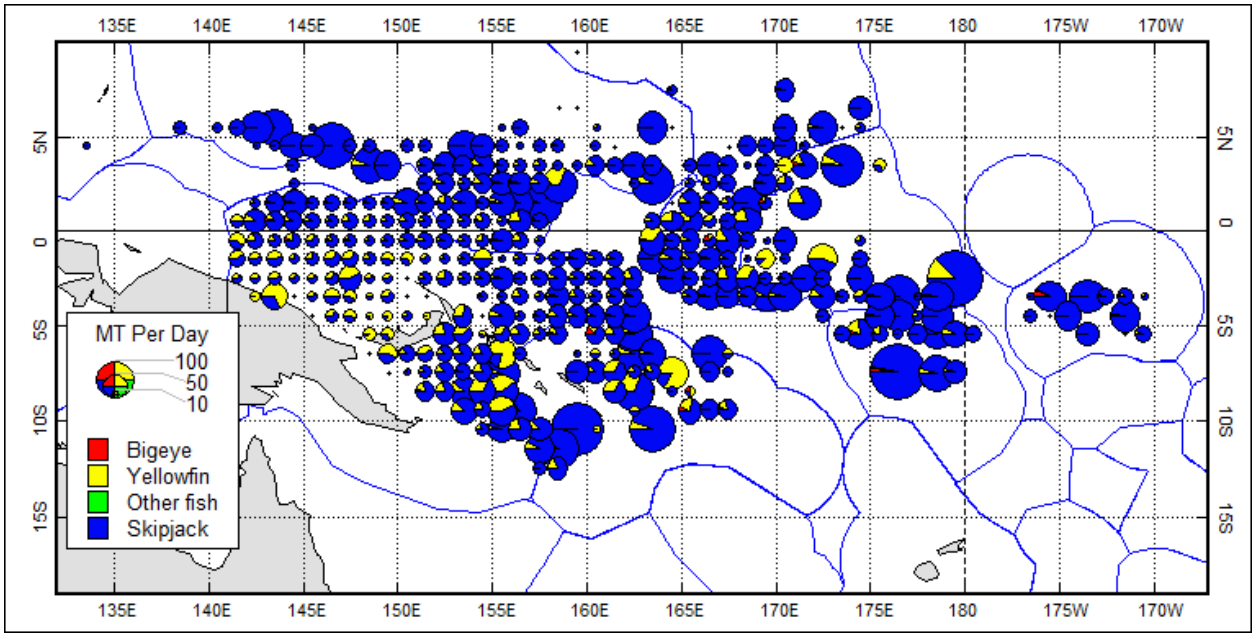

Figure 4: Catch and effort distribution (mt per day) by locally-based foreign vessels in the WCPFC Convention area in 2013. Data source: SPC

2.2 Domestic Tuna Longline

PNG still manages an exclusive domestic tuna longline fleet under the current management plan which limits effort to 100 vessels setting 1200 hooks per set per day and catch to 10,000 mt per year based on the combined catch of yellowfin and bigeye tuna. All vessels fish entirely in PNG waters. All catch by these vessels is unloaded in the PNG and exported as frozen products. The domestic shark longline fishery is managed under a separate management plan and the very small handline is managed under set of guidelines.

The target catches by tuna longline vessels in PNG waters are dominated by yellowfin tuna with an average of 1640 mt in the last five years, followed by albacore (470 mt) and bigeye (44 mt). Billfishes that are caught by this fishery as bycatch are mainly black marlin, blue marlin, striped marlin and swordfish. The overall estimated catch in 2013 was 1,629 mt which is below the five year average of 2,608 mt with an estimated effort of 30,913 hundred hooks which is also below the five year average of 52,938 hundred hooks.

The low catch and effort is due to a reduced number of tuna longline vessels (15 vessels) that were active in 2013 which was the lowest since 2006 and after a gradual increase of 19 vessels in 2008 to 27 vessels in 2012. The high cost of goods and services such as fuel and shipping still proves to be a challenge in longline operations. Moreover, 7 vessels lost their license to fish in PNG waters after the first quarter of 2013 as a result of their company's failure to meet licensing conditions. Figure 6 shows the distribution of catch and effort by domestic tuna longline vessels in the WCPFC convention area. The main fishing area stretches from the Solomon Sea down to the Coral Sea and east of the Gulf of Papua, inside national waters. These areas have been exempted from FAD deployment mainly to avoid gear conflicts between longliners and purse seiners.

Table 3: Annual catch estimates (mt) of primary species and effort estimate (hundred hooks) for PNG domestic tuna longline fleet in PNG waters. Estimates for 2013 is provisional.

Year		2009	2010	2011	2012	2013	Average
Effort HHooks		*36,574*	*62,605*	*63,261*	*71,337*	*30,913*	*52,938*
Catch (mt) / Species	**Albacore**	432	881	252	525	261	*470*
	Bigeye	62	35	50	67	7	*44*
	Yellowfin	1466	2006	1767	2010	952	*1640*
	Black Marlin	14	25	10	26	24	*20*
	Blue Marlin	43	97	123	118	77	*92*
	Striped Marlin	6	10	8	6	1	*6*
	Swordfish	24	44	44	60	38	*42*
	Others	170	329	364	336	270	*294*
	Total Catch	**2217**	**3427**	**2618**	**3148**	**1629**	***2608***

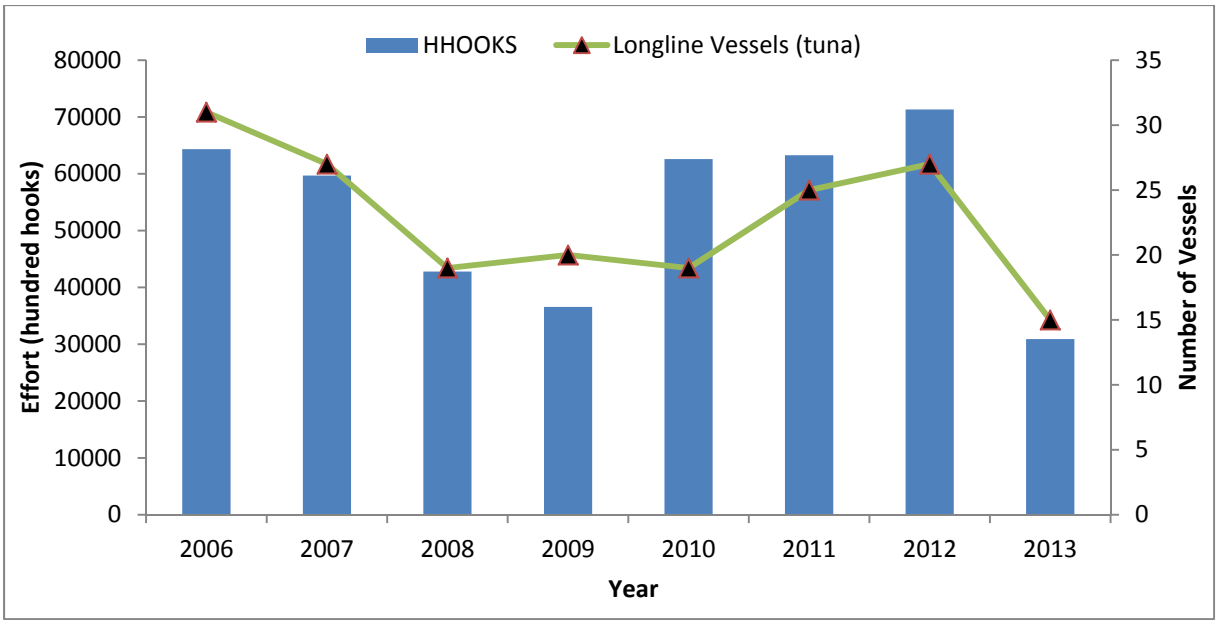

Figure 5: Shows the number of hooks deployed by domestic tuna longline vessels and the number of active vessels fishing in PNG waters from 2006-2013. Estimates for 2013 are provisional.

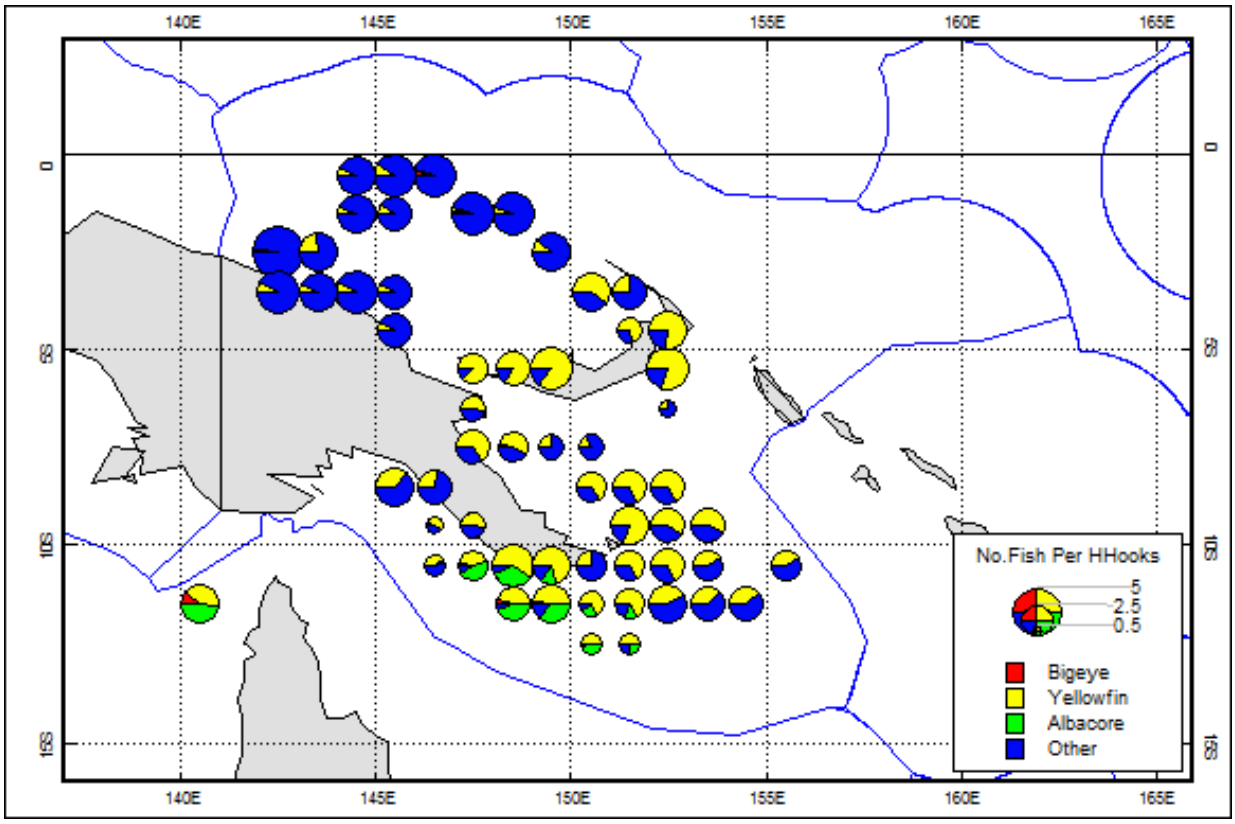

Figure 6: Catch and effort distribution (number of fish per hundred hooks) by domestic tuna longline vessels in the WCPFC convention area in 2013. Data Source: SPC (provisional)

3. Coastal State Reporting

This section reports activities in national waters by foreign fleets which comprise of tuna purse seine vessels. Activities of a domestic shark longline and a very small handline fishery are also reported in this section since all their activities are inside PNG waters.

3.1 Purse Seine - Foreign Vessels

Foreign vessels that fish in PNG waters are mainly purse-seiners and are licensed under the conditions of access agreements between PNG and their company, fishing association or home party state and also include foreign vessels fishing under the terms of the US Treaty and FSM Arrangement. In the last five years, catches by foreign vessels fishing in PNG waters has averaged around 389,690.48mt. As shown in table 4 below, the estimated total catch continues to decrease from the 2010 high of 560,530.39 mt. Estimated catch in 2013 was 339,958 mt which was slightly lower than 2012 estimates and even lower than the five year average. Catch composition is typical of all purse seine fleet fishing in PNG waters with SKJ and YFT making up most of the catch.

There is also a gradual decline in fishing effort from 15,796 days in 2010 to 12,944 days in 2013. The number of active foreign vessels has been fairly consistent since 2010 with slight differences in most fleets except for vessels fishing under the FSM Arrangement which have been increasing since 2008 (Figure 7). In 2013 a total of 187 foreign vessels were actively fishing in PNG waters.

Table 4: Catch and effort (fishing days) estimates for foreign purse seiners fishing in PNG waters from 2009-2013. Estimates for 2013 are provisional.

Year	*Fishing Days*	Catch (mt) / Species				
		SKJ	YFT	BET	OTH	Total
2009	*9,373*	213,817.67	44,936.72	3,374.79	321.11	**262,450.29**
2010	*15,796*	417,035.90	135,979.36	7,365.61	149.52	**560,530.39**
2011	*14,648*	340,949.81	83,235.98	3,044.20	439.67	**427,669.66**
2012	*14,498*	286,641.98	66,979.76	3,392.88	829.04	**357,843.66**
2013	*12,944*	277,409.50	59,549.50	2,874.60	124.78	**339,958.38**
Average	***13,452***	***307,170.97***	***78,136.26***	***4,010.42***	***372.82***	***389,690.48***

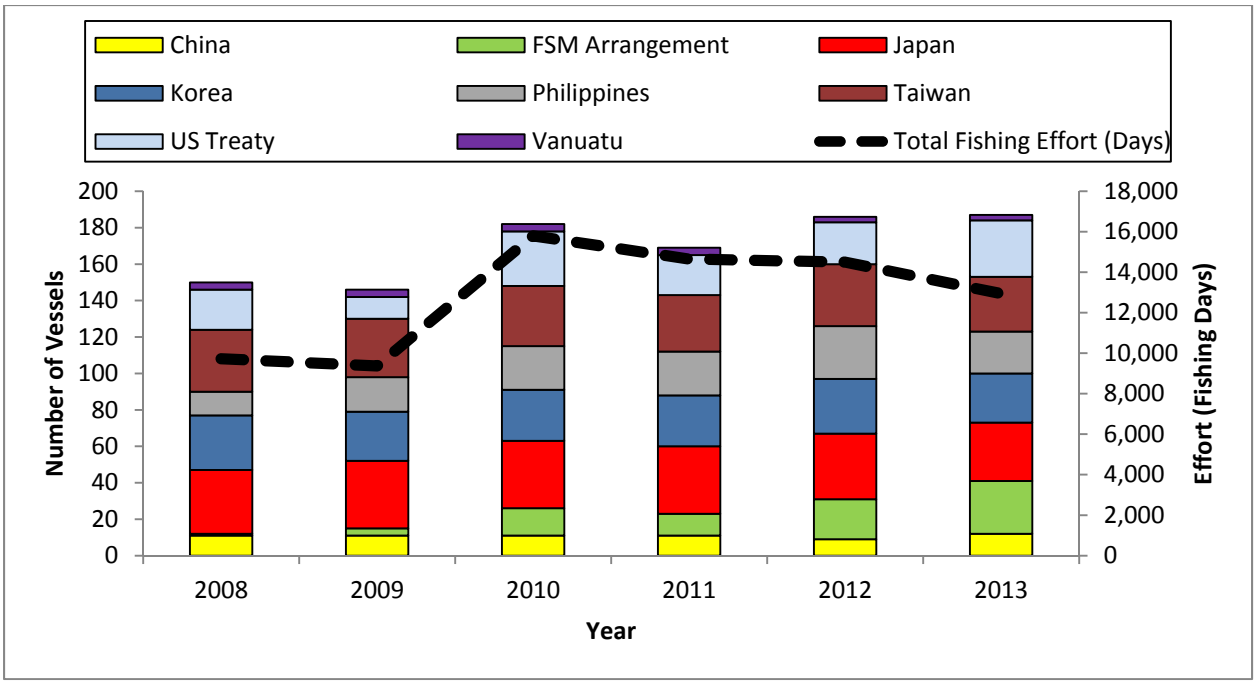

Figure 7: Number of fishing days and vessels for foreign purse seine fleet actively fishing in PNG waters in 2008-2013. Estimates for 2013 are provisional.

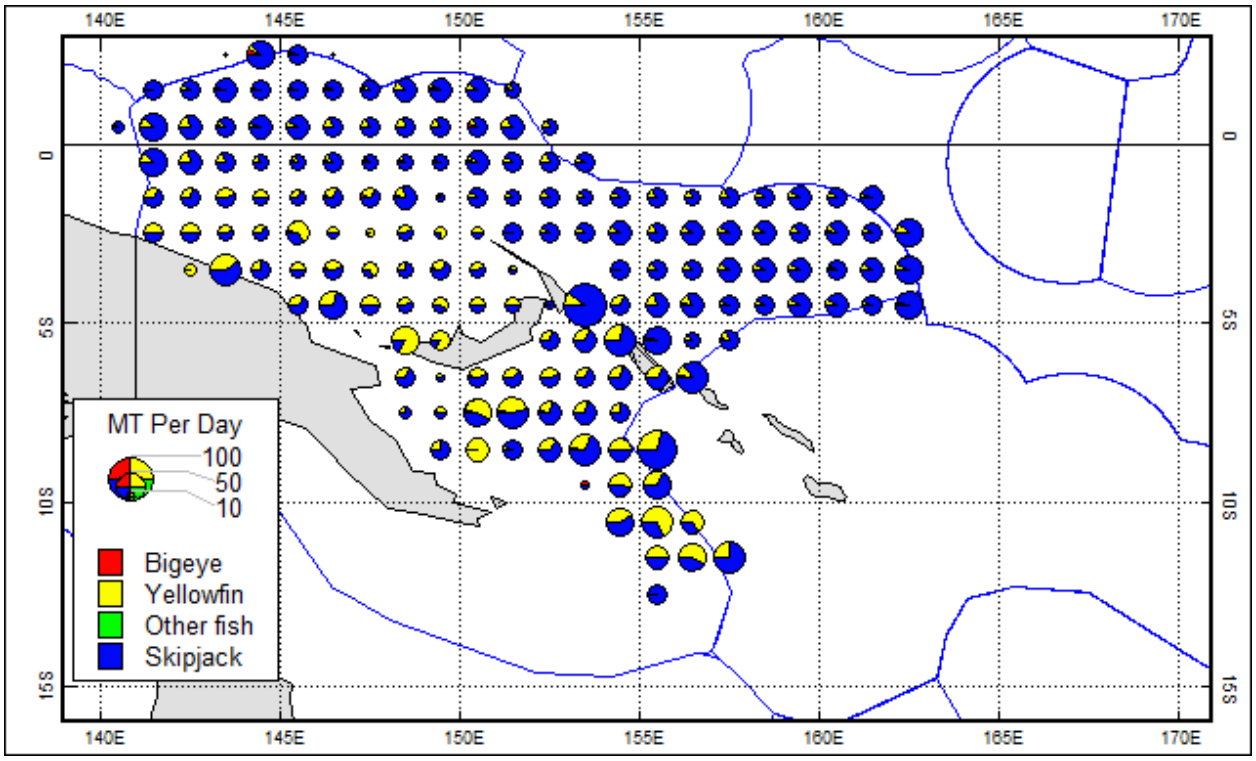

Figure 8: Catch and effort distribution (mt per day) by foreign vessels in PNG waters in 2013. Data source: SPC.

3.2 Shark Longline

The shark longline fishery is managed under a separate management plan from the tuna longline fishery. The fishery is limited to 9 vessels, setting 1,200 hooks per day with a total allowable catch of 2,000 mt dressed weight per year. All vessels in this fishery fish only in PNG waters. The number of shark longline vessels increased from 1 active vessel in 2000 to 9 active vessels in 2003. These were mainly tuna targeting boats that were converted into shark targeting boats. The number of sharks caught also increased from 154 (2000) to 50,229 (2009) respectively. Between 2007 an 2011, an average of 7 vessels was actively fishing with an average catch of 56,528 sharks.

A total of 9 shark longline vessels were active in 2012 and 8 vessels in 2013. However, catch and effort estimates for these recent two years were not ready when this report was produced. A total of 9 shark longline vessels were active in 2011 with a high overall effort of 27,963 hundred hooks. The total catch estimate in 2011 was 1,947.22 mt of which shark species alone was a high of 1,479.66 mt (76%). Silky shark was the dominant species in this fishery with a catch of 1,292.90 mt (92%). Catches of blue sharks although increased in 2011 (18.93 mt) by 85% from 2010, the catch declined dramatically from 256.45 mt in 2007 to 10.21 mt in 2010. Catch estimates of Blacktipped Reef Shark have been increasing from 6.89 mt in 2008 to 43.98 mt in 2011 while Hammerheads, Grey Reef, and Oceanic White Tip sharks decreased by 43%, 65% and 45% respectively from 2010. Blacktip shark was very low with 2.81 mt compared to 70.80 mt caught in 2007.

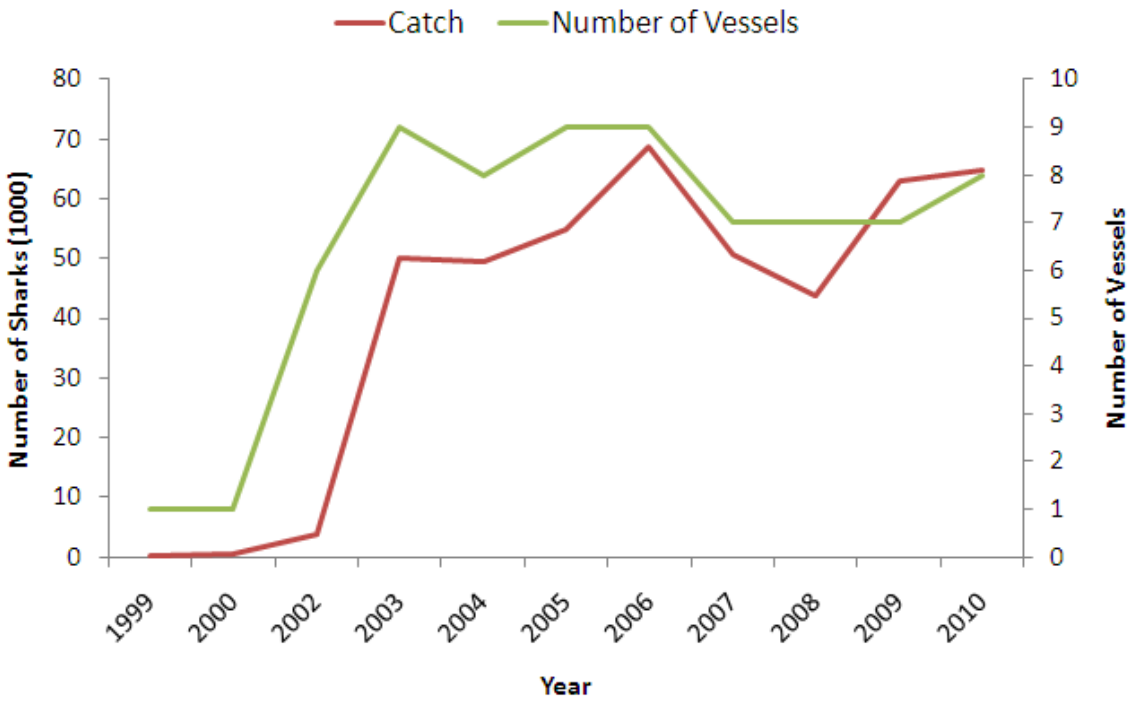

Figure 9: Catch estimate of sharks and the number of shark longline vessels from 1999 – 2010. Data source: NFA

Table 5: Annual catch estimates (mt) of shark species and effort estimate (hundred hooks) for PNG domestic shark longline fleet in waters under national jurisdiction. Data source: NFA.

Year		2007	2008	2009	2010	2011
Effort (HHooks)		*15,605*	*14,232*	*21,560*	*22,790*	*27,934*
Catch (mt) / Species	Silky Shark	838.77	832.32	949.17	907.26	1,292.90
	Blue Shark	256.45	61.69	14.46	10.21	18.93
	Hammerhead Shark	32.93	18.69	36.60	39.15	22.34
	Blacktip Shark	70.80	7.62	28.44	18.93	2.81
	Blacktipped Reef Shark	21.31	6.89	13.62	19.75	43.98
	Grey Reef Shark	24.35	16.96	7.26	23.87	8.42
	Oceanic White Tip	15.72	3.43	12.22	12.90	7.15
	Tiger Shark	3.47	3.62	9.05	8.76	2.15
	Silvertip Shark	4.29	1.23	2.85	6.37	0.45
	Galapagos Shark	1.21	0.20	1.23	0.99	0.29
	Shark Unidentified	94.94	99.11	68.25	71.72	80.25
	SHARK TOTAL	**1,364.22**	**1,051.74**	**1,143.14**	**1,119.90**	**1,479.66**
	Tuna Total	50.47	118.39	127.83	145.15	183.67
	Billfish Total	136.33	129.47	112.93	115.06	196.22
	Others Fish Species	44.43	31.17	45.33	80.60	87.69
	OVERALL TOTAL	**1,595.44**	**1,330.77**	**1,429.23**	**1,460.71**	**1,947.22**

Around 24% of the overall catch estimate by shark longliners in 2011 were species other than sharks which include tuna (183.67 mt) especially yellowfin, bigeye and albacore: billfishes (196.22 mt), primarily blue marlin and swordfish; and other fish species (87.69 mt) (Figure 10).

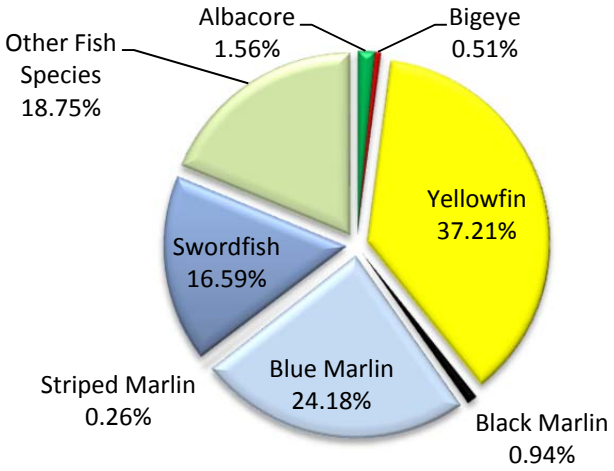

Figure 10: Species composition of species other than sharks from 2011 shark longline catch estimates (n = 467.58 mt). Data source: NFA

3.3 Handline

Since the trial of handline fishery in 2005, the number of pumpboats reduced from 10 to 5 vessels in 2009 (Kumoru, 2010). Although there is some growth potential for this fishery, most of the vessels failed to continue fishing mainly due to lack of proper business management, and the high operational cost for artisanal operators during its inception. Currently, the small handline fleet of about 5 vessels is operating in waters around Madang and Morobe provinces. The vessels are solely owned and operated by local fishermen. Catch by these vessels, which do not normally exceed 10 mt (estimate) per year, is sold to processing companies as well as local supermarkets.

4. Socio – Economic Factors

Papua New Guinea is focused on building its domestic tuna industry to an extent where the generated revenue can offset that currently obtained from bilateral access fees. The government's main objective is to maximize the benefits from tuna resource to citizens and promote the involvement of nationals in the industry. A growth in the industry would provide an increase in employment opportunities, increased foreign exchange earnings for the country and direct and indirect spin-off benefits among other benefits of value-adding the tuna resources. Currently, the industry supports almost 7,000 people in direct employment and almost 2,000 indirect employments in the country of over 6 million people. New commitments and investments would triple these figures (See Section 7 on onshore developments).

5. Exports

Estimates for export quantities and value in 2012 and 2013 were not available when this report was produced. The value of tuna exports have steadily been increasing together with quantity between 2004 and 2009 peaking at USD 149 million in 2008 (Kumoru, 2010). The total value estimated in 2011 was higher at USD164.47 million. This growth is in line with the country's industry development aspirations.

Table 6 shows the value and quantity of each processed product by species associated with catches in the tuna fishery in 2011. The highest value was from frozen products, at USD 93 million of mainly skipjack tuna (30,832mt,) and high priced yellowfin (22,870 mt). Exports of canned products were valued at a total of over USD 64 million which was mostly skipjack (15,390.63 mt). Substantial earnings were also generated from frozen albacore, and billfishes. Fresh chilled exports were basically yellowfin, bigeye and billfishes products while cooked and dried products were from mainly from unspecified sources.

Table 6: Export products by species in 2011. Data source: NFA

Product	Quantity/ Value	Species								Grand Total
		ALB	BET	SKJ	YFT	YFT/BET	Billfishes	Others	Unspec.	
Canned	Thousand MT	-	-	15.39	0.21	-	-	0.02	-	**15.62**
	Million USD			63.20	0.81			0.08		**$ 64.09**
Dried	Thousand MT	-	-	0.06	-	-	-	-	4.98	**5.04**
	Million USD			0.04					3.83	**$ 3.86**
Fresh chilled	Thousand MT	-	0.07	-	0.54	-	0.02	-	-	**0.64**
	Million USD		0.38		2.85		0.11			**$ 3.33**
Frozen	Thousand MT	0.47	0.03	30.83	22.87	0.02	0.76	0.11	0.27	**55.37**
	Million USD	0.75	0.04	39.84	51.77	0.03	0.62	0.09	0.05	**$ 93.18**
Total	**Thousand MT**	**0.47**	**0.10**	**46.28**	**23.63**	**0.02**	**0.78**	**0.13**	**5.26**	**76.67**
	Million USD	**0.75**	**0.43**	**103.08**	**55.42**	**0.03**	**0.72**	**0.17**	**3.87**	**$ 164.47**

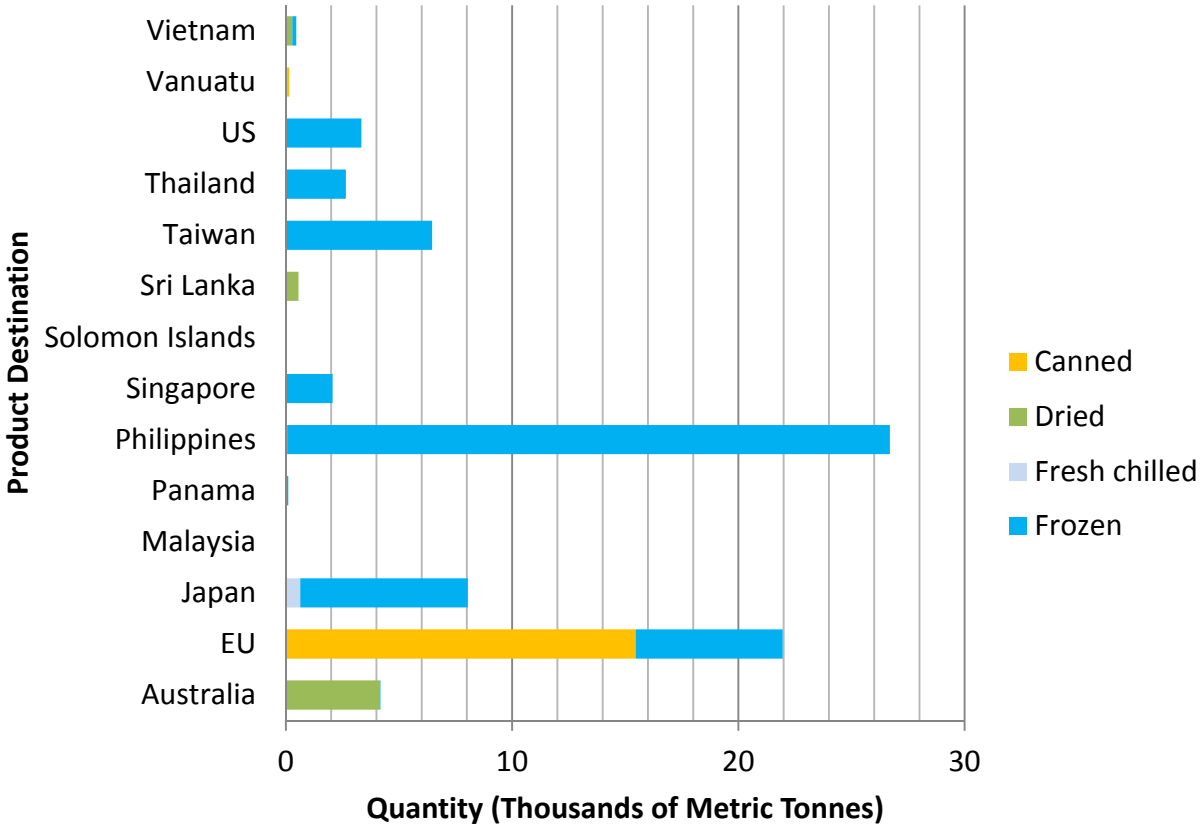

Figure 11: Amount of exported products (mt) to countries of destination in 2011. Source: NFA Database.

A huge majority (98%) of canned products was exported to markets in the countries of the European Union in 2011. The remaining 2% went to Solomon Islands and Vanuatu. Most of the frozen exports (44%), mainly SKJ and YFT, supported canneries in the Philippines, Thailand, Taiwan, Singapore, and the US. Frozen products together with fresh chilled products to Japan were mainly to satisfy the sashimi market demand. Dried products in 2011 were mostly imported by Australian markets with small portion by Sri Lanka and Vietnam (Figure 7).

6. Onshore Developments

In 2013 another major tuna canning facility commenced operations in Lae with estimated capacity of producing 350 metric tonnes per day. Majestic Seafood is a joint venture between Frabelle (who also has its own canning facility in Lae as well) and two other new companies. The current number of major existing onshore tuna processing facilities is now five with an estimated total production capacity of 930 metric tonnes per day of canned, cooked loins and raw tuna (Table 7a). The other major companies include RD Tuna Canners, South Sea Tuna Corporation (SSTC) and International Food Corporation (IFC). All these existing facilities provide approximately 11,200 and 3,300 in direct and indirectly employment respectively.

There are still plans to increase downstream processing in the country. Two other investment projects are currently in progress (Table 7b) to produce canned tuna and loins. These investments are in line with the country's development aspirations and aiming at processing all catches in PNG waters onshore.

Table 7a: Existing onshore facilities

Investors	Product type	Production Capacity (mt/day)	Employment (est.)	
			Direct	Indirect
RD Tuna Canners	Canned tuna	200	3,500	500
Frabelle(PNG) Ltd	Canned tuna	140	1,000	500
Frabelle Frescomar	Raw tuna	40	200	100
South Seas Tuna Corporation	Cooked loins,canned tuna	100	1,000	200
International Food Corporation	Canned tuna	100	1,000	500
Majestic Seafood	Canned tuna	350	4,500	1500
	Total	**930**	**11,200**	**3,300**

Table7b: Future onshore facilities

Investors	Product Type	Production Capacity (mt/day)	Est. Investment Value (USD'm)	Local Employment (est.)	
				Direct	Indirect
RD/Fairwell	Canned tuna	200	27.5	2,000	500
Chinese Investments	Canned tuna/cooked loins	-	-	-	-
	Total	**200**	**28**	**2,000**	**500**

7. Future Prospects of the Fishery

7.1 Longline

Longline fishery has declined over the years and is not likely to expand in the near future unless there some major change in the current policy controlling this particular fishery. The main reason for the decline is the high operational cost.

7.2 Handline

Although very minimal at this stage, this fishery has some potential for expansion in the not too distant future. The processing plants are supporting this sector through the supply of ice and buying of the fish.

7.3 Purse-seine

Effort in terms of fishing days is capped as per the commission measure 2008-01. However in PNG there would be a re-alignment or shift in the vessels fishing as those vessels not associated with any onshore facility are given less priority over those associated with onshore development. This may mean new vessels into PNG waters provided they are associated with onshore development. If this happens than, some vessels currently licensed but not associated with onshore facilities will no longer be licensed to fish within the waters of PNG.

8. Tuna Fishery Data Collection System and Research Activities

8.1 Log sheet data collection and verification

8.1.1 Catch, Effort and Size Data Coverage

Fleets have been very cooperative in submitting catch and effort data as per the catch logsheet. As a result there has been very high coverage of the catch and effort data. For size data, PNG runs a port sampling programme through which size data by species are collected in addition to those data collected by observers at sea. However the port sampling covers mostly vessels fishing in PNG waters and unloading or transhipping through PNG ports. For vessels not unloading or transhipping through PNG ports, size data is collected through the observer programme. For coverage explanations see attachment A.

8.1.2 Electronic Data Reporting

PNG is currently in the process of completing its electronic data reporting system. This system is a web-based application that allows vessels to send their logsheets and other catch information electronically. As soon as the data are received, the database is updated automatically. This system will help data reporting to be on time and enables us to work with real time data for management and scientific purposes.

8.2 Observer program

The number of observers in PNG was over 250 in 2013. The program aims to train up to 400 observers by the next 3-4 years. The observer training is now a component of the training run by the PNG National Fisheries College. The training courses run four times a year for two months each session.

8.3 Port Sampling Program

PNG port sampling program on purse seine catches is still being conducted in the main unloading and transhipment ports around the county. With the aim of covering an estimated 20-25% of the catch weight unloaded or transhipped, a well is stratified into layers and a number of nets are being sampled based on the gross weight of the catch in the well. Fork lengths of all fish in the net are measured and fish indentified to species level by trained port samplers. Various reports of the program were presented in SC 6 session in 2010. During 2013, port sampling was conducted in three major tuna ports, Lae, Madang and Wewak. A total 1,120,148 SKJ, 369,982

BET, and 53,723 Bycatch species were sampled from a total of 73 purse seine and carriers that either landed or transhipped their catch in the ports.

8.4 PNG Tuna Tagging Project

The PNG Tuna Tagging Project was conducted in the PNG waters in collaboration with the Secretariat of the Pacific Community (SPC) under the umbrella of SPC's Pacific Tuna Tagging Program (PTTP). This initiative is aimed to improve monitoring of tuna stocks and their exploitation, and obtaining additional data over a longer time frame to be used in regular tuna stock assessments in which specific estimates for PNG EEZ can be obtained. The project was planned for three years from 2011 to 2013 in which 3 months of tag release cruise in PNG waters was conducted in the first year and 2 month cruises in 2012 and 2013. An overall total of 110,501 conventional tags were released with an estimated recovery rate of approximately 20%.

Other key areas of the project includes the implementation of tag recovery procedures in major PNG and other unloading sites; data quality checking and integration of the data into the SPC tagging database; analysis of the data to generate scientific advice for the management of tuna fisheries in PNG; and capacity building within the NFA in the above areas.

9. References

Kumoru, L.2010. Annual Report to the Commission, Part 1: Information of Fisheries, Research and Statistics, WCPFC-SC6-AR/CCM18.

10. Attachments