Economic Indicators Update

October 2011

Table of Contents

List of Tables

Introduction

This report is a sixth in the series that attempt to provide economic indicators with the objective of developing and implementing a system to monitor key parameters of the WCPO tuna fishery and its impact on FFA members. The project commenced in early 2006 with the FFA Secretariat restructure, establishment of the Fisheries Economics Advisor position, the commencement of sourcing and collating data, and the development of a process to enable collection of domestic development indicators data from FFA member countries on an on-going basis. A more recent contribution to improve this report by way of providing more in-depth analysis was commissioned by the Secretariat in the past year or so. The study has only been recently published.

The indicators reported on in this report come under two broad headings of 'economic conditions in the fisheries' and 'domestic development indicators'.

With respect to domestic development indicators, the data collection process has been facilitated through appointment of individuals at the national level during 2008/09. These appointments were made on contractual arrangements with the contract terms covering regular quarterly data submission of selected indicators and remunerations. There is expectation of further improvement in the process, however, including provision of the full range of data required on a timely basis. Where there has been apparent shortfall in the process, other data sources have been used.

All catch and effort data in this report for WCPO/WCP-CA and FFA member waters are based on SPC-OFP provisions, noting that the data for 2010 may change further.

2. Global tuna production

Global tuna catch of the four major tuna species (albacore, bigeye, skipjack and yellowfin) came to 4.2Mt million in 2010, a decline of 3% from the previous year driven by reductions of 4% in the WCPO and Indian Ocean that more than offset the increase of 4% in the Atlantic. The Eastern Pacific registered no growth in 2010. Global production in 2010 is consistent with what appears to be a broadly stable level of more than 4.0Mt million annually that has prevailed since 2002.

The distribution of catches by ocean area since peak production at 4.4Mt million in 2005 has changed significantly for the WCPO and Indian Oceans but little for the Atlantic and Eastern Pacific Oceans. The 2010 distribution saw WCPO share of total catch at 56% (49% in 2005), Indian Ocean 20% (27%), and Atlantic and Eastern Pacific Oceans respectively at 10% (9%) and 14% (15%). The rise in proportional share of WCPO corresponded with significant increases catches because of increase in purse seine vessels while the decline in the proportional share of Indian Ocean corresponded with the decline in purse seine activity there in part because of piracy in the area.

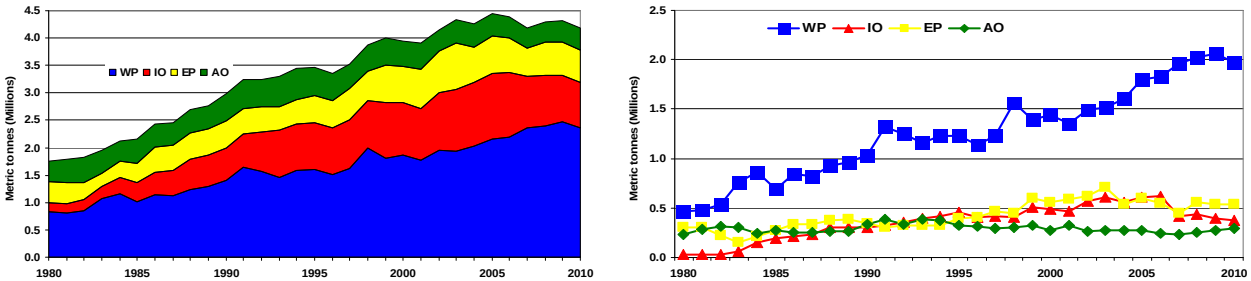

Figure 1 Tuna production trends by ocean area

Sources: WCPO and EPO from SPC (2011), Atlantic Ocean from ICCAT www.iccat.int/atl.asp; Indian Ocean from ww/w.iotc.org/English/data.php

3. Purse seine fishery

3.1 Economic conditions in the fishery

3.1.1 Lightmeat canning grade tuna supply

Global purse seine as well as most of the pole and line productions (skipjack, yellowfin and bigeye) is targeted for lightmeat canned tuna.

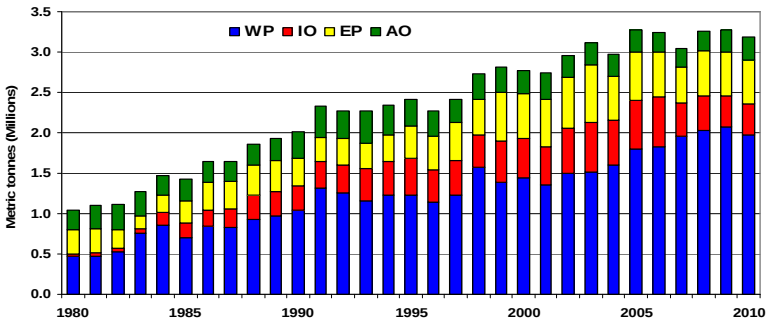

Figure 2 Global supply of raw material for lightmeat canned tuna
Sources: WCPO and EPO from SPC (2011), Atlantic Ocean from ICCAT www.iccat.int/atl.asp; Indian Ocean from ww/w.iotc.org/English/data.php

The global production trends for lightmeat by ocean area since 1980 are provided in Figure 2. Against the overall doubling in supplies from below 1.5Mt million prior 1986 to more than 3Mt million since 2003, there have been stagnancies over several periods (e.g. 1991 to 1997, 1998 to 2000 and 2005 to 2010 where, in the latter period, broad stability has been at between 3Mt and 3.5Mt million. The long-term uptrend of lightmeat production at the global level has been underpinned by purse seine production increases in the WCPO.

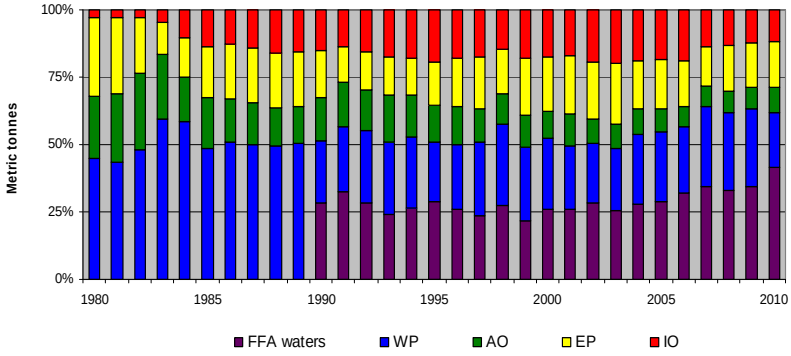

Figure 3 Proportion of global supply of raw material for lightmeat from given ocean area
Sources: WCPO and EPO from SPC (2011), Atlantic Ocean from ICCAT www.iccat.int/atl.asp; Indian Ocean from ww/w.iotc.org/English/data.php

Catches of purse seine and pole and line caught tunas from the WCPO, EPO and Indian Ocean have all trended up over the period since 1980 with the trend in the Atlantic being broadly flat (Figure 2). The WCPO has seen the greatest increase in catches in absolute terms and the proportion of global supplies coming from the region in 2010 at around 62% is consistent with the proportions in the preceding three years (Figure 3).

Catches of purse seine and pole and line caught tunas from the national waters of FFA members accounted for between 25% and 30% of global supplies between 1990 and 2005. This has risen to more than 30% since 2006 and even higher in 2010 at 41%.

3.1.2 Prices

The major market for WCPO purse seine caught tuna is Bangkok. Bangkok prices for skipjack (4-7.5lbs, cif) have continued to experience significant fluctuations over the years but with relatively strong uptrend in recent years resulting in the 12-month running average price lying below the long term average price (that is, since January 1984) of around $914/Mt until the period 2007-2011 when it rose above the long term average price (Figure 4).

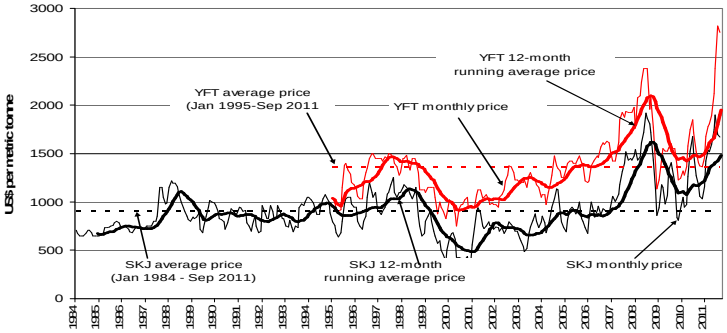

Figure 4 Bangkok skipjack (4-7.5lbs, cif) and yellowfin (20lbs and up, cif) prices
Source: FFA (2011)

As with skipjack, the 12-month running average price for yellowfin (20lbs and up, cif) has been below the long-term average price of around $1,367/Mt but has been above this since 2007.

Lightmeat prices, in addition to variations in fishing conditions, have been particularly driven in the recent years by trends in fuel / food costs and the management measures especially in the WCP-CA that has constrained supplies through high seas pocket closures and time closures of FAD fishing. Increasing consumer preference for sustainably harvested and processed tuna products is also having an impact such as through increasing demand for certification under IUU Regulations, Competent Authority requirements, eco-labelling, non-FAD and pole and line caught fish, etc.

3.1.3 Delivered value of the fishery

Trends in the "delivered" value of the WCPO purse seine fishery are provided in Figures 5 and 6 by fishery, area (aggregated by national waters of FFA members, other national waters and international waters) and vessel flag (aggregated by vessels flagged to FFA members and other flags) respectively. Tables 1 and 2 provide a breakdown of the data by national waters and flag[1] respectively. "Delivered" value represents the value of the catch at the point at which it is unloaded at its final market destination whether it is delivered by the fishing vessel or transhipped[2].

The estimated WCPO purse seine fishery taken from individual FFA member waters in the last five years is provided in Table 1. Annually in the last four years the value of the purse seine fishery taken from FFA waters is more than $1 billion. In 2008 when prices for purse seine products were at record levels, the value was close to $2 billion. In 2010, despite the relatively low prices, the value was also almost US$2 billion. This was because of the shift in purse seine effort to FFA waters following closure of two high seas pockets.

Reflective of the shift in effort to FFA waters, of the total purse seine delivered value of close to US$2.5 billion in 2010, the FFA waters accounted for 76% (US$1.9 billion) as against around 60% in the preceding years.

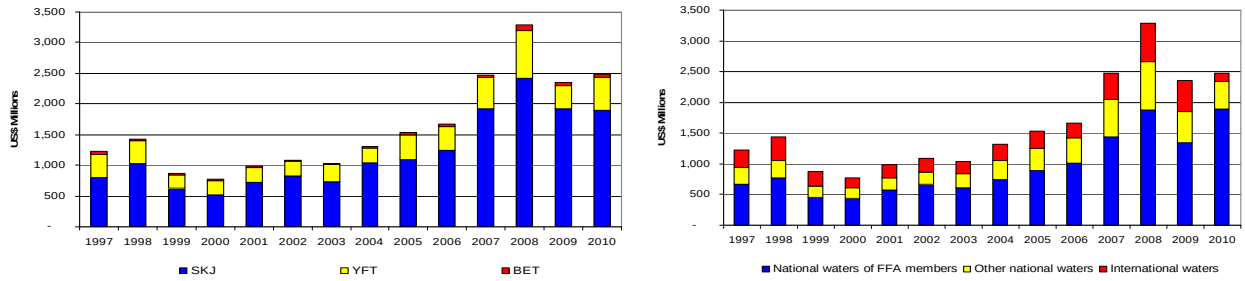

Figure 5 Delivered value of the WCPO purse seine fishery by fisheries (Left) and waters (Right)

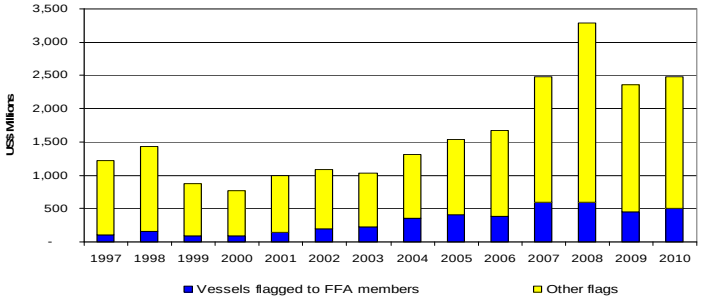

Figure 6 Delivered value of the purse seine fishery by flag

[1] For the estimates of national waters it is important to note that these are derived using estimates of catch by national waters which in turn are based on raised 1 x 1 logbook data summed across an area approximately the particular area of national waters.

[2] Examples of each of these exist in the WCPO tuna fishery with some US and Japanese purse seine vessels unloading directly to canneries in Pago Pago and yaizu respectively, and Taiwanese and other vessels unloading to a transhipment vessel in say, Majuro, and the fish then transhipped to Bangkok.

Table 1 Delivered value of WCPO purse seine fishery catch by area ($M)					
	2006	2007	2008	2009	2010
FFA members					
Cook Islands	0.0	-	1.6	0.9	0.4
Fiji	0.0	0.2	0.8	0.4	2.2
FSM	200.6	210.2	155.4	137.2	201.8
Kiribati	164.9	235.0	403.7	374.8	304.9
Marshall Islands	15.3	15.8	42.3	16.0	22.7
Nauru	57.7	90.6	103.5	70.2	136.5
New Zealand	5.3	14.0	14.9	5.1	10.2
PNG	440.0	667.1	873.2	534.9	949.6
Palau	4.9	0.7	6.7	1.1	0.5
Samoa	0.0	0.0	0.2	0.1	0.1
Solomon Islands	106.7	140.1	199.8	114.5	180.0
Tokelau	1.1	1.2	6.9	8.2	4.4
Tuvalu	14.7	58.2	68.9	80.5	74.7
Vanuatu	-	-	0.3	-	-
Sub-Total	*1,011.1*	*1,433.1*	*1,878.1*	*1,344.0*	*1,888.2*
Others					
American Samoa	0.0	-	0.2	0.2	0.2
Indonesia	208.3	298.7	361.8	247.6	263.2
Japan	23.2	39.3	36.5	32.7	26.6
Philippines	178.0	274.4	384.4	220.1	162.1
US + territories (ex Am Sam)	6.2	3.0	1.4	3.1	1.3
Wallis and Futuna	-	-	0.1	0.2	0.0
Sub-Total	*415.7*	*615.3*	*784.4*	*503.9*	*453.3*
International waters					
I1	39.9	34.0	64.3	27.2	5.5
I2	94.2	285.5	334.2	312.9	4.8
Other	105.9	109.8	222.0	166.9	127.3
Sub-Total	*240.0*	*429.3*	*620.5*	*507.0*	*137.5*
GRAND TOTAL	1,666.9	2,477.7	3,283.0	2,354.9	2,479.1

Table 2. Delivered value of WCPO purse seine fishery catch by vessel flag ($M)					
	2006	2007	2008	2009	2010
FFA members					
FSM	9.9	18.3	31.2	22.5	28.7
Kiribati	4.8	7.6	10.1	24.8	40.5
Marshall Islands	39.5	79.6	55.5	50.5	71.6
New Zealand	23.6	49.2	51.6	32.7	30.7
PNG	228.2	314.6	353.9	250.7	266.1
Solomon Islands	24.7	25.2	28.3	22.4	17.4
Tuvalu	-	-	-	5.2	13.7
Vanuatu	59.6	97	67.2	44.1	30.2
Sub-Total	390.4	591.5	597.8	452.9	498.9
Others					
China	50.6	74.5	96.4	89.5	69.9
Eastern Pacific fleet	0.7	0.9	1.2	0.8	0.9
Ecuador	9.4	12.4	43.7	5.2	10.8
El Salvador	-	8.4	18.7	10.3	9.4
Indonesia	208.1	296.6	361.2	246.7	263
Japan	265	345.5	477.8	335.6	396.3
Korea	251	356.2	433.7	332.1	362.2
Philippines	212.5	324	472.8	295.7	261.2
Spain	10.4	31.9	62.4	31.3	37.8
Taiwan	202	314.7	353.2	225.2	255.9
US	66.7	121	364.1	329.6	312.8
Sub-Total	1,276.50	1,886.20	2,685.30	1,902.00	1,980.20
GRAND TOTAL	1,666.90	2,477.70	3,283.00	2,354.90	2,479.10

3.1.4 Catch rates and revenue per effort day

Figures 7 and 8 provide comparisons of average annual catch rates and revenue per effort day in waters of the Parties to the Nauru Agreement (PNA) and in international waters for all of the major DWFNs (Korea, Taiwan, Japan and US) over the period 1997 to 2010.

Catch rates appear to have improved in recent years for most of the fleets, both in PNA waters (from between 20-25Mt/day in 1997 to between 25-40Mt/day in 2009) and in international waters (15-30Mt/day to 25-40Mt/day) but with noted declines in international waters during 2010 (Figure 7).

Similar trends have broadly occurred with day values (Figure 8).

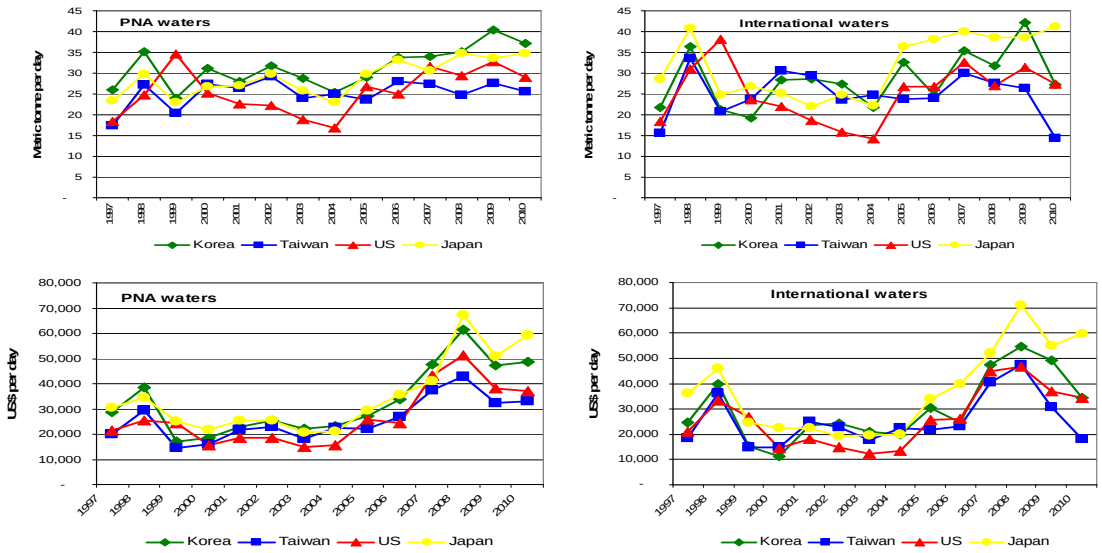

Figure 7 Comparative catch rates and day values among fleets in PNA waters and international waters, 1997-2010

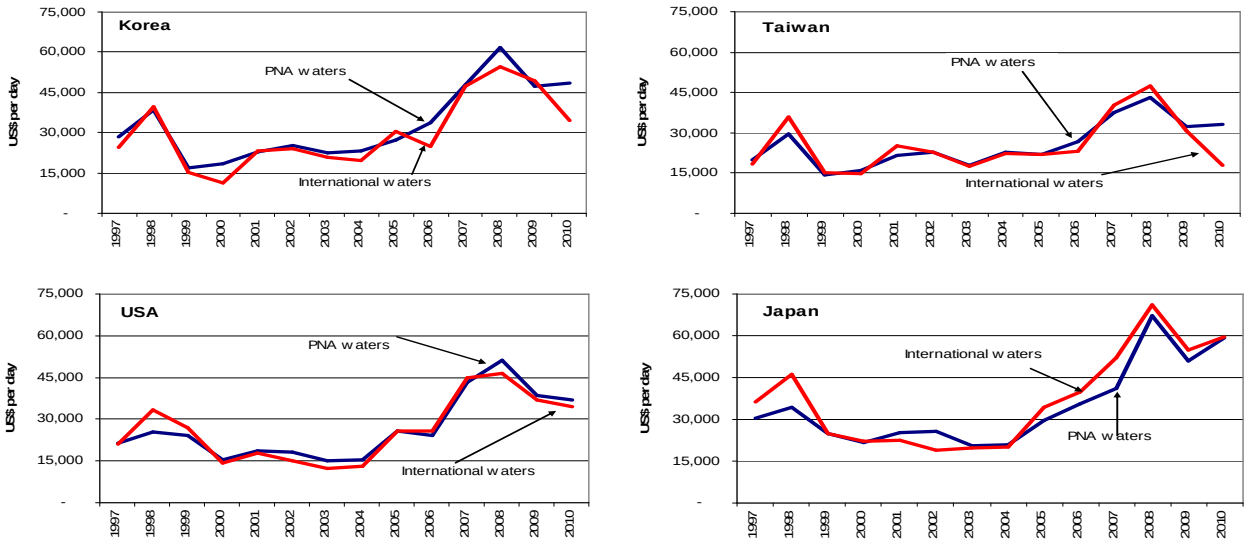

Figure 8 Comparison of day values in PNA and international waters by the respective fleets

3.1.5 Costs

Vessel operating costs vary between fleets and within fleets. The primary drivers of differences between fleets include differing levels of skipper skill, vessel size and age, crew, bunkering and insurance costs. Differing levels of skipper skill and the size and age of vessels also drive differences in the cost structure of vessels within a fleet.

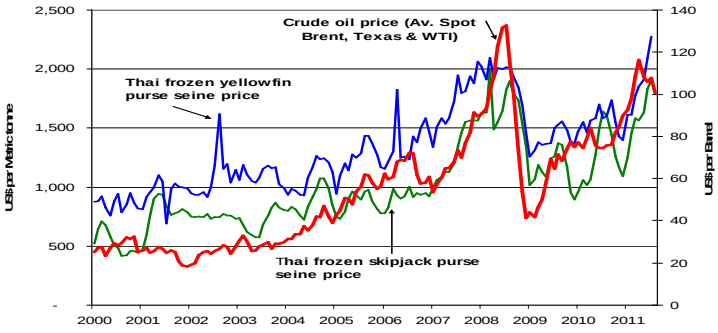

Figure 9 Fuel price vs skipjack price
Source: FFA (2011)

Fuel costs comprise a significant component of total operating costs (15-40% depending on the fuel price). As fuel prices vary significantly over time operating costs also vary significantly over time. While fuel costs do drive up operating costs raw material for canning prices are correlated with fuel prices and rises in fuel costs are likely to be offset by increases in fish prices (Figure 9).

4. Longline fishery

Longline vessels target both albacore, predominantly destined for the whitemeat canning market, and yellowfin and bigeye, predominantly destined for the sashimi markets.

In this section of the report we examine conditions relating to South Pacific albacore and the whitemeat tuna market and for sashimi longline caught bigeye and yellowfin in the WCP-CA.

4.1 Economic conditions in the fishery

4.1.1 Supply

4.1.1.1 Albacore

Global catch levels of albacore rose rapidly through the 1990s rising from 153,400 MT in 1991 to around 258,600Mt in 1999, an increase of 69%. This increase was driven primarily by a large increase in catch from the North Pacific Ocean where catch increased more than three-fold from 35,300 to 118,400Mt (Figure 10). Since 2002, global catches have been on a downward trend with catches in 2010 of under 224,000Mt about 16% below the record 2002 level, driven by substantial declines in the North Pacific (down by 31% to 73,000Mt) and Atlantic Ocean (down by 32% to 40,700Mt).

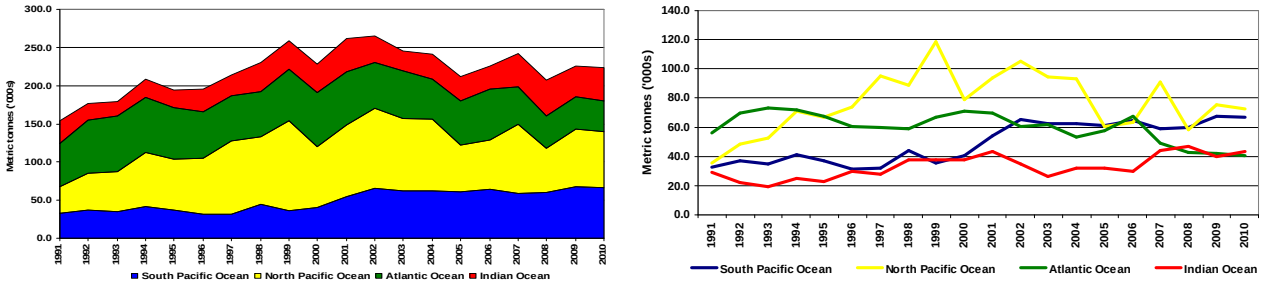

Figure 10. Annual trends of global albacore production by ocean area
Sources: South Pacific and North Pacific Oceans from SPC (2011), Estimates of Annual Catches in the WCPFC Statistical Area (2011); Atlantic Ocean from ICCAT www.iccat.int/atl.asp; Indian Ocean from ww/w.iotc.org/English/data.php

Albacore catches in the South Pacific Ocean have followed a different trend with catch ranging between 32,700 and 40,500Mt between 1991 and 2000, before increasing dramatically in 2002 and 2010 to reach more than 67,000Mt. Catches broadly maintained at around 60,000Mt between 2002 and 2008 but have been more than 67,000Mt in 2009 and 2010.

The decline in catch from the North Pacific in recent years and the corresponding increase in catch from the South Pacific Ocean has resulted in a significant change in the composition of global catches since 1999. The proportion of the global albacore catch taken in the North Pacific declined from 46% in 1999 to 32% in 2010, while the proportion of the global catch taken in the South Pacific rose from 14% to 30% over

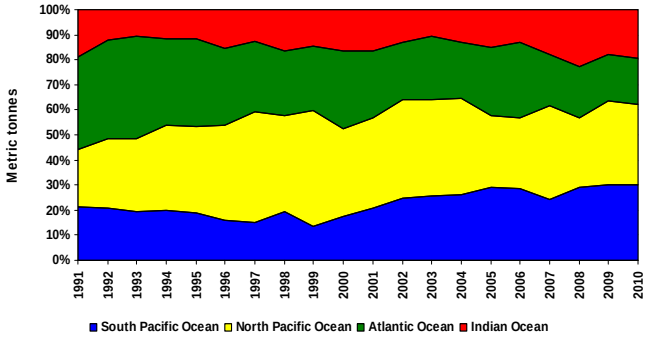

Figure 11. Proportional shares of albacore production by ocean
Sources: South and North Pacific Oceans from SPC (2011), Estimates of Annual Catches in the WCPFC Statistical Area (2011); Atlantic Ocean from ICCAT www.iccat.int/atl.asp; Indian Ocean fr

the same period. The proportion of the global albacore catch taken from the Atlantic has decreased from 26% to 18% over this period while the Indian Ocean component of the catch rose from 15% to 18% (Figure 11).

4.1.1.2 Longline caught Bigeye

Figures 12 and 13 provide a breakdown on global longline caught bigeye catches by ocean area over the period 1997-2010. Over this period the annual catches broadly levelled at around 300,000Mt between 1991 and 2004 but have since declined steadily to less than 200,000Mt by 2010. The Indian Ocean traditionally has been the major source of longline caught bigeye tuna, accounting for between 30-40% of annual global productions. The steady decline as of 2005 occurred because of the declines in catches from almost all ocean areas, including from the Indian Ocean. As such, the Indian Ocean proportional share of catches has remained broadly unchanged except for 2010. In 2010 the catches from the WCPO (which has been the next most important source since 2002) exceeded those from the Indian Ocean. The WCPO and Indian oceans presently provide the main sources of bigeye tuna fishing and broadly account for similar proportions of total production.

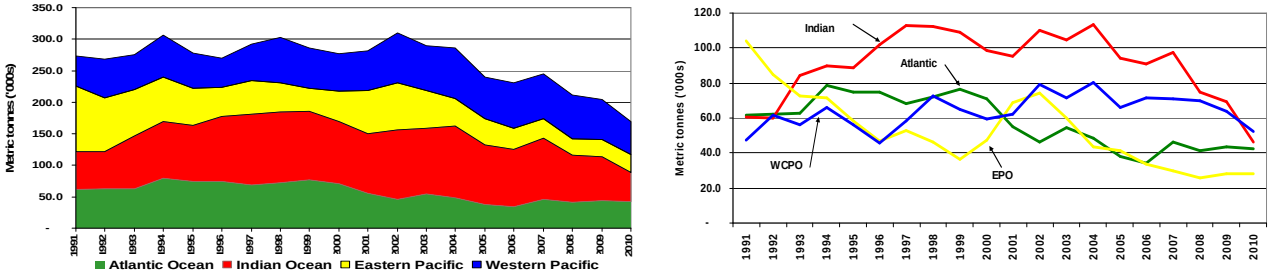

Figure 12 Global trends of bigeye production by ocean area
Sources: WCPO and EPO from SPC (2011), Atlantic Ocean from ICCAT www.iccat.int/atl.asp; Indian Ocean from ww/w.iotc.org/English/data.php

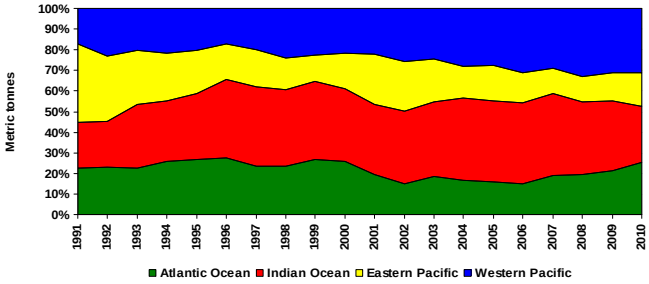

Figure 13 Proportional shares of bigeye production by ocean area

4.1.1.3 Longline caught Yellowfin

Figures 14 and 15 provide a breakdown on global longline caught yellowfin catches by ocean area over the period 1991-2010. Over this period the annual catches declined from a peak of 300,000Mt

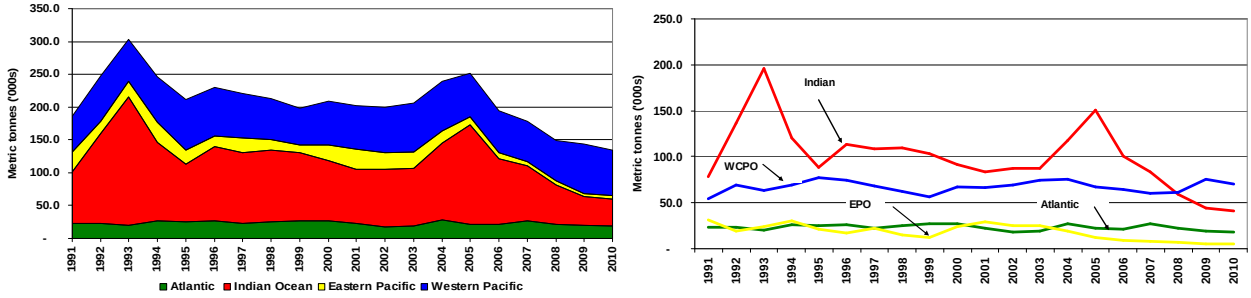

Figure 14 Annual global trends of yellowfin production by ocean area
Sources: WCPO and EPO from SPC (2011), Atlantic Ocean from ICCAT www.iccat.int/atl.asp; Indian Ocean from ww/w.iotc.org/English/data.php

in 1993 to less than 150,000Mt by 2010. As for the longline bigeye tuna, the Indian Ocean

traditionally has been the major source of longline caught yellowfin tuna, but accounting for a greater proportion of catches between 40-60%. Yellowfin catches in the WCPO for the most part have been steady at between 55-75,000Mt annually and the WCPO has been the next major source of longline yellowfin. The overall global steady decline over the years occurred because of the declines in catches mainly from the Indian Ocean and to a lesser extent the declines in the Eastern Pacific Ocean while catches in the Atlantic have broadly remained stable. As of 2009, catches in the Indian Ocean fell below those in the WCPO. The WCPO and Indian oceans presently provide the main sources of yellowfin tuna fishing but with the WCPO accounting for more than half global production as of 2009 whereas the Indian Ocean accounts for just more than 30%.

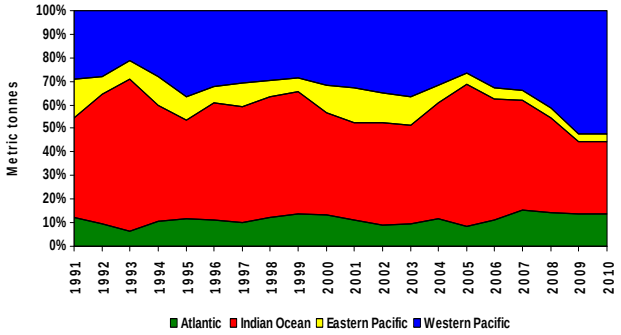

Figure 15 Proportional shares yellowfin production by ocean area
Sources: WCPO and EPO from SPC (2011), Atlantic Ocean from ICCAT www.iccat.int/atl.asp; Indian Ocean from ww/w.iotc.org/English/data.php

4.1.2 Price trends

The price indicators for longline caught fish are as follows: For fresh longline prices, the Japanese fresh yellowfin and bigeye import prices from Oceania are used. For yellowfin caught by frozen longline vessels Yaizu market prices (in Japan) for longline caught yellowfin are used. For bigeye caught by frozen longline vessels frozen bigeye price at selected major Japanese ports are used. For albacore caught by fresh and frozen longline vessels Thai import prices are used.

4.1.2.1 Albacore

The trends in Thailand frozen import prices (cif) for albacore are shown in Figure 16. The trends show that prices have fluctuated widely over the years with lows of less than $2000/Mt and highs exceeding $2,600/Mt. Relatively high prices at more than US$2,600 have been witnessed in more recent years largely against the backdrop of poor catches as 2006 and in 2008 through to 2010.

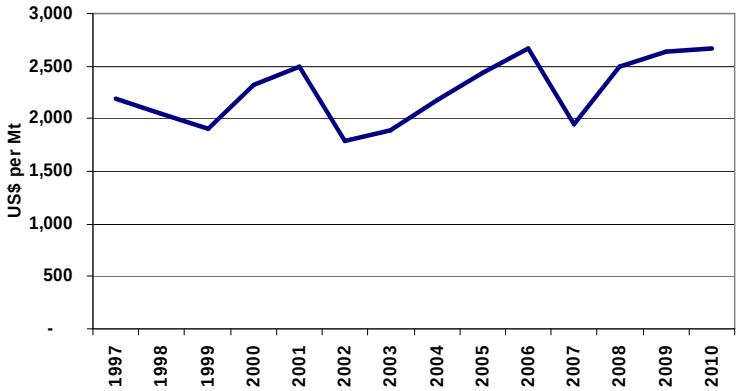

Figure 16 Thai import frozen albacore prices

4.1.2.2 Longline caught bigeye and yellowfin prices

Figure 17 illustrates movements in average annual prices of selected indicator prices. Over the period 1997-2010, the Japanese longline prices broadly showed stagnations (1997-2007) but there have been significant improvements in recent years (2008-2010).

Fresh yellowfin longline prices averaged $7.10/Kg during the period 1997-2007 but averaged higher at $9.60/Kg during the period 2008-2010, an improvement of almost 30%. On similar trends, frozen

longline yellowfin prices averaged $4.10/Kg during the period 1997-2007 but improved significantly by 60% to an average of $6.64/Kg during the period 2008-2010 (Figure 17, Left).

Fresh bigeye longline prices averaged $8.36/Kg during the period 1997-2007 but averaged higher at $10.85/Kg during the period 2008-2010, an improvement of almost 30%. On similar trends, frozen longline bigeye prices averaged $6.67/Kg during the period 1997-2007 but improved significantly by 44% to an average of $9.62/Kg during the period 2008-2010 (Figure 17, Right).

The US market prices for fresh longline sashimi and non-canned tuna products also showed improvement trends over the years but were relatively stagnant in recent years (Figure 17).

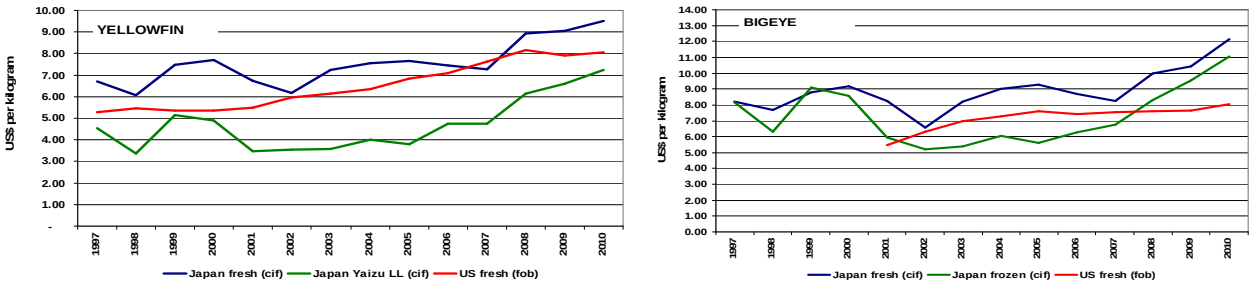

Figure 17 Longline caught yellowfin prices (Left) and bigeye prices (Right) on Japanese and US markets

4.1.3 Value of the fishery

Trends in the "delivered value of the longline fishery within the WCPFC Statistical Area are provided in Figures 18 to 20 by species, area ((aggregated by national waters of FFA members, other national waters and international waters) and vessel flag (aggregated by vessels flagged to FFA members and other flags) respectively. Tables 3 and 4 provide information by national waters and flag. For the estimates of national waters it is important to note that these are derived using estimates of catch by national waters which in turn are based on raised 1x1 logbook data summed across an area approximately the particular a of national waters. "Delivered" value represents the value of the catch at that point at which it is unloaded at its final destination whether it is delivered by the fishing vessel, transhipped or air-freighted.

Total estimated delivered value of the WCP-CA longline fishery in 2010 was $1.5 billion ($1.5 billion in 2009), 32% (33%) of total estimated delivered value of US$4.5 billion ($4.3 billion) of WCPO values.

4.1.3.1 Values by species

Bigeye tuna catch in the WCP-CA by far has the highest value compared to other longline target species of yellowfin and albacore (Figure 18). For 2010, of the total estimated longline value of $1.5 billion, 42% was the value of bigeye, 40% yellowfin and 18% albacore.

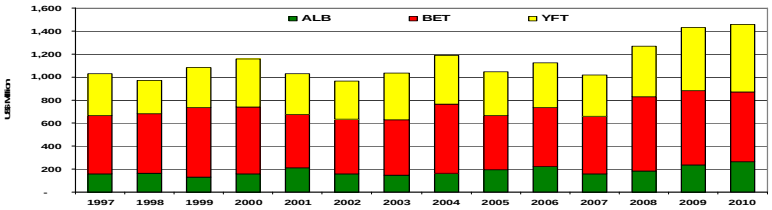

Figure 18 Delivered values of longline fishery within the WCP-CA by species

4.1.3.2 Values by water

The highest proportion of between 40% and 50% of longline catch values is from international water waters. In 2010 the proportion of longline catch value from

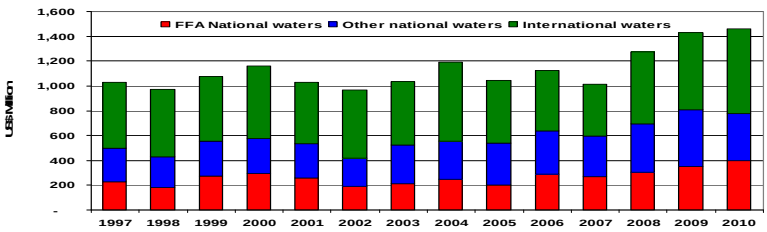

Figure 19 Delivered values of longline fishery within the WCP-CA by area

international waters was 47% while from other national waters 26% and FFA waters 27% (Figure 19 and Table 3).

4.1.3.3 Values by fleet

The longline fleets with considerable importance in WCP-CA include Taiwan, Japan, Korea and China. The combined annual values by these fleets represent 70% of total longline catch values. In the last two years the combined value has exceeded $1 billion (Figure 20 and Table 4). The value of catch by the FFA flagged vessels has steadily risen over the years to reflect increasing member country participation in the fishery especially through domestic fleet expansion and/or domestic basing of foreign fleets.

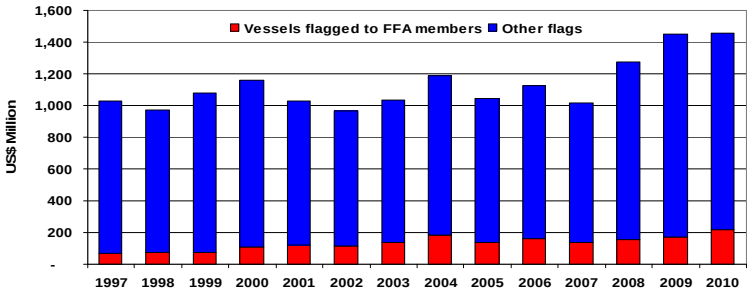

Figure 20 Delivered value of the longline fishery within the WCP_CA by flag

Table 3. Delivered value of the longline fishery catch within the WCP-CA by area ($M)

National waters of FFA members

	2006	2007	2008	2009	2010
Australia	21.0	18.5	23.7	20.3	16.7
Cook Islands	7.7	8.0	8.4	17.4	19.2
Fiji	23.9	15.2	16.4	21.3	14.6
FSM	37.5	33.6	14.1	17.6	25.9
Kiribati	34.5	51.3	47.9	53.5	42.1
Marshall Islands	19.0	24.4	22.5	28.8	25.3
Nauru	-	-	-	-	0.8
New Zealand	2.6	2.1	2.1	3.4	2.6
Niue	1.2	0.5	0.0	0.5	0.9
PNG	20.7	16.0	22.9	25.4	20.6
Palau	30.9	20.9	28.6	10.0	19.6
Samoa	8.2	8.6	9.1	11.6	10.0
Solomon Islands	45.5	42.1	79.6	109.6	174.4
Tokelau	-	-	-	-	0.0
Tonga	3.3	3.6	3.4	1.5	1.2
Tuvalu	0.4	8.2	3.6	5.8	6.2
Vanuatu	32.2	17.8	25.7	26.9	17.6
Sub-Total	**288.7**	**270.9**	**308.0**	**353.4**	**397.5**
Other national waters					
American Samoa	15.5	15.5	12.4	15.5	19.7
French Polynesia	15.3	14.1	14.9	21.0	16.5
Indonesia	84.8	82.9	129.8	173.1	124.3
Japan	167.1	151.2	150.7	164.0	136.1
Mathew and Hunter	0.0	0.0	0.1	0.3	0.1
New Caledonia	6.4	5.3	7.4	8.6	9.6
Philippines	13.2	13.3	17.1	19.2	21.0
Pitcairn	-	-	-	-	-
Taiwan	24.9	25.2	33.0	38.3	42.2
US + territories	18.7	17.7	17.9	13.1	11.2
Wallis and Futuna	-	-	-	-	0.1
Sub-Total	**345.9**	**325.4**	**383.4**	**453.0**	**381.0**
International waters	**487.1**	**420.5**	**581.6**	**622.3**	**681.0**
TOTAL	**1,121.7**	**1,016.7**	**1,273.0**	**1,428.7**	**1,459.5**

Table 4. Delivered value of the longline fishery catch within the WCP-CA by flag					
Vessels flagged to FFA members					
	2006	2007	2008	2009	2010
Australia	22.0	19.2	24.0	20.8	17.3
Cook Islands	8.8	8.6	9.8	7.5	7.1
Fiji	51.1	28.3	45.2	44.2	30.4
FSM	2.9	13.0	10.5	16.6	12.3
Marshall Islands	-	0.0	3.8	4.2	3.5
New Zealand	2.6	2.3	2.1	3.3	2.6
Niue	1.0	0.6	0.1	0.6	0.4
PNG	19.8	13.3	19.6	23.9	19.7
Samoa	8.2	8.6	9.1	11.6	10.9
Solomon Islands	-	-	-	-	50.7
Tonga	3.4	3.7	3.4	1.5	0.9
Vanuatu	40.5	36.9	25.0	36.2	59.7
Sub-Total	**160.5**	**134.6**	**152.9**	**170.4**	**215.7**
Other flags					
Belize	3.2	3.1	1.7	1.4	3.1
China	115.4	74.4	144.0	204.5	152.6
French Polynesia	15.7	14.2	15.0	21.0	17.0
Indonesia	81.3	77.2	126.7	171.8	123.4
Japan	319.4	312.7	305.7	321.7	317.4
Korea	126.3	112.4	192.6	209.7	213.9
New Caledonia	6.5	5.4	7.4	8.5	9.6
Philippines	3.5	3.4	4.1	4.2	4.4
Spain	1.2	1.2	0.9	0.6	0.7
Taiwan	237.0	219.9	264.1	286.3	342.2
US (ex Am Sam)	53.8	58.3	57.8	51.5	59.5
Sub-Total	**963.5**	**882.2**	**1,120.0**	**1,281.0**	**1,243.8**
GRAND TOTAL	**1,124.0**	**1,016.7**	**1,273.0**	**1,451.4**	**1,459.5**

4.1.4 WCP-CA Longline CPUE values

Values per unit of effort of major longline fleets in PNA and international waters in terms of per hundred hooks and per day basis are provided below. As shown, all fleets have experienced overall declining and stagnant per unit of effort values until recently (Figure 21).

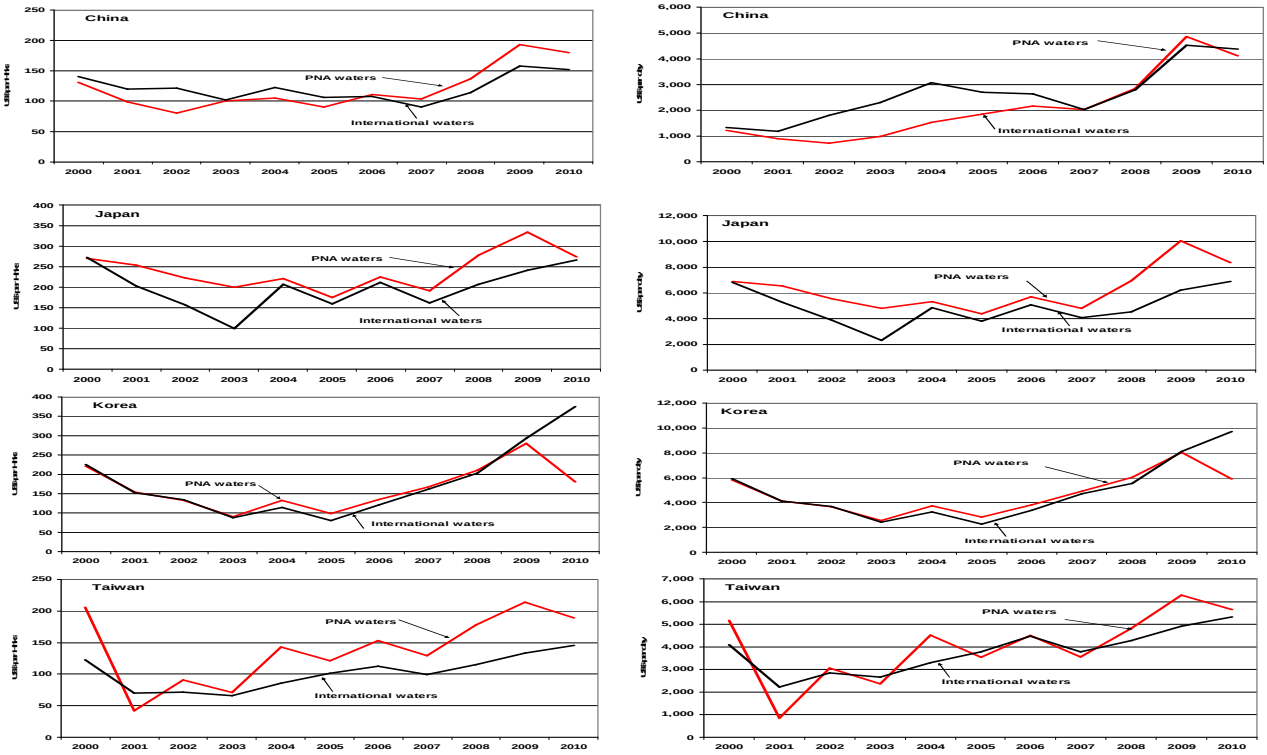

Figure 21 Annual average values per unit of effort (US$/Hhks, Left; US$/day, Right) for selected DWFN fleets, 2000-2010

4.1.5 Fuel costs and fish prices

Diesel oil price is the single most important operational cost for fleets. Given that different fleets access different supply sources for their fuel, crude oil price (average spot Brent, Dubai and West Texas crude) is used as proxy to generalise about fuel cost trends.

The trends at which fuel cost has escalated over the years, relative to fish prices, has been a continuing threat to the viability of longline fleets. Figure 22 below illustrates the trends of frozen sashimi prices and albacore prices relative to that of fuel cost trends.

For the sashimi product prices it is evident that the decline and stagnancy between 2000 and 2006 is contrasted by the escalation in fuel costs as of 2004 and even more through to 2008. Despite some upturn in fish prices in 2008, the rate at which fuel costs escalated would probably more than wipe out any gains from fish price increases. In 2009, the fuel price escalation reversed sharply while fish prices were at 2008 level or improved. In 2010 to the present, the fuel price trends have been broadly tracked by fish price trends.

For the frozen albacore prices, the trends relative to fuel price trends indicate that probably the worst years were in 2002 when albacore prices plummeted against relatively stable fuel prices and more recently in 2007 and 2008. In 2007 albacore prices once again plunged while fuel costs increased sharply, continuing into 2008. In 2009 and 2010 albacore prices have sustained at relatively high levels against significantly lower fuel prices.

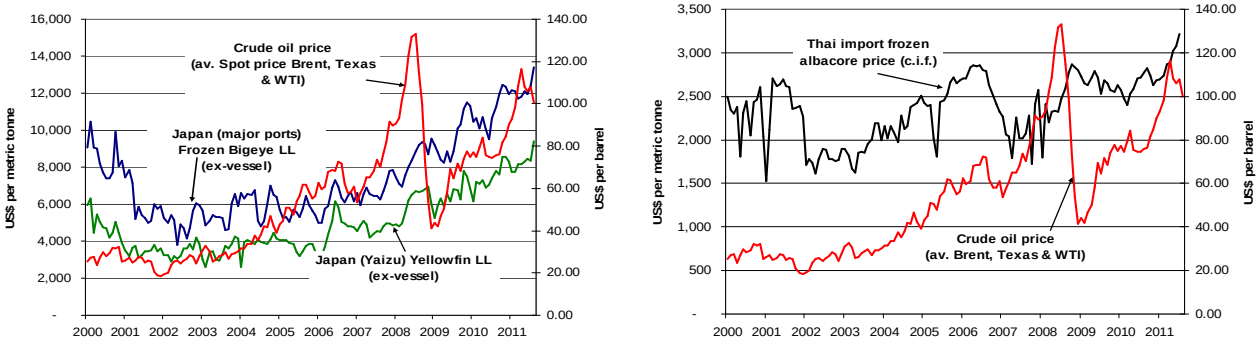

Figure 22 Monthly price trends (Jan 2000-August 2011): Japan frozen sashimi grade fish vs. crude oil prices (Left) and Thai import frozen albacore vs. crude oil prices (Right)

5. Domestic tuna industry development indicators

This section of the report focuses on FFA member countries (excluding Australia and New Zealand) development indicators. These indicators include trends in: access fees, tuna fishing contribution to GDP, employment in the tuna sector and tuna product exports. The following indicators have been compiled from SPC catch and effort data, Scientific Committee Country Reports from SC5, FFA market and industry data, and publicly available import data from importing countries. The established process of collecting economic data through appointed agents at national levels is expected to continue to improve over time.

5.1 Access fees

Bilateral access agreements have been generally framed in terms of a rate of return of 5-7%. The actual rate of return however may vary from this for several reasons.

One of the reasons is that catches and prices used in the calculation of access fees are historical figures and their actual values may vary significantly from those used in determining the access fee. This would be expected to cause the access fees to be both higher and lower than target rate as current prices and catch may be below or above historical levels.

The other factor that gives rise to the variance between the actual access fee and the 5-7% rate of return is the fact that current bilateral agreements are usually structured so that an access licence is required to be paid for all vessels from the DWFN in question. That is, for example, under an agreement between say Japan and a PNA member, all the 35 Japanese vessels that can be licensed under the arrangement will be required to take out a license to operate in the respective PNA member's waters. Many of these vessel will not land fish of a value for which, for example, 5% is greater than the access fee they pay.

Additionally, any vessels that do land fish of a value for which 5% is less then the access fee they pay are required to pay an additional amount such that their fee is equal 5% of the value of their catch. In effect at a vessel level the 5-6% value cited is a minimum rate of return and often a significant proportion of a DWFN fleet is paying a significantly higher rate.

Access fees have not been possible to collect the extent desired. This is understandable given the sensitivity around this data, specifically fees under bilateral arrangements, although the Secretariat would only publish aggregated data to reduce this sensitivity.

For purposes of highlighting the possible trends and magnitude of what may have been received in access fees over the years, what follows is aggregation of multilateral fees under the US Treaty and FSMA with 6% of value of catch by fleets under bilateral arrangements.

5.1.1 Purse seine fees

The estimated access fees values from the purse seine fishery from bilateral and multilateral arrangements are shown in Figure 23. Over the years 2000 to 2010 the trend has been increasing with the major component from bilateral sources. The relatively high estimates in 2008 and 2010 follows from the rise in catch value in FFA zones from increased effort and substantially improved fish prices. The drop off in 2009 from 2008 is attributed to fish price declines.

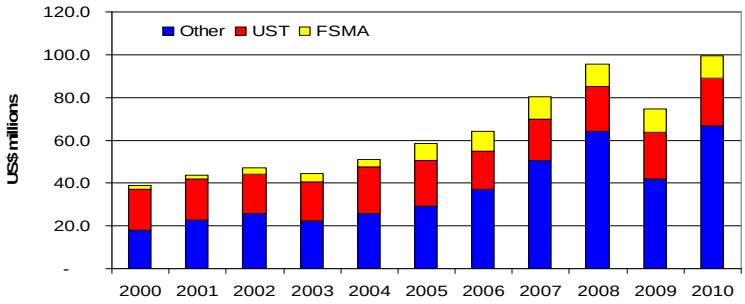

Figure 23 Estimated access fees under multilaterals and 6% of catch value of bilateral partners

The total estimated fees from the purse seine fleets in 2010 was about $100 million compared to $96 million in 2008 when prices were at peak (Figure 23).

5.1.2 Longline fees

Access fees from longline fishery is based on 5% of landed catch values of major fleets including China, Japan, Korea and Taiwan. The apparent decline in the earlier years between 2000 and 2005 has been reversed as from 2006 reflecting both catch and price increases. In 2010, an estimated 5% of selected longline fleets catch value was more than $11 million as against the lowest year of more than $4 million in 2003 (Figure 24).

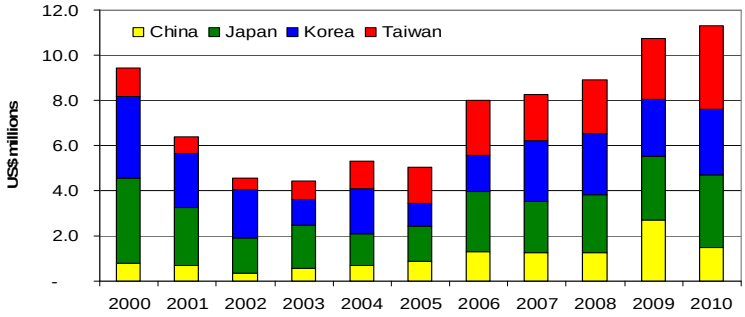

Figure 24 Estimated 5% of longline catch values of bilateral fishing partners

5.1.3 Potential future returns under the Vessel Day Scheme

Under the Vessel Day Scheme, PNA members as of mid 2011 have agreed to collectively impose fees on a per vessel day basis. The initial minimum rate that has been agreed upon and now being

sought by individual PNA members from DWFN as fees in 2012 is $5,000 a day. Since VDS implementation, most PNA members have made day allocations but without directly linking these with fees as previous structures were maintained by most. Trading of days therefore will be a major change to occur in the coming years.

What value traded days would be for PNA members will depend on the perceptions of fishing operators on what future rents[3] they can earn through obtaining an allocation of VDS fishing days. These rents will depend on future prices, production costs and catch rates.

Based on previous work at FFA, Figure 25 provides estimated rents per VDS fishing day based on a catch rate of 30Mt per VDS fishing day under a number of scenarios with prices range from US$1000/Mt to US$2000/Mt and production costs (including a sufficient return to vessel owners to justify long term participation in the fishery) ranging from US$800/Mt to US$1,250/Mt. With prices at US$1,750/Mt a vessel with production costs of US$1,100/Mt would be making rents (super profits) of U$19,500 per VDS fishing day while for vessels with a production cost of US$800/Mt rents would be US$28,500 per VDS fishing day. A vessel with a high cost structure of US$1,250/Mt would be making rents of US$15,000 per day under current price levels. Under a conservative scenario of prices averaging US$1,250/Mt an operator with production costs of US$950/mt rents would still make US$9,000 per VDS fishing day in rents while a higher cost operator with cost of US$1,150/Mt would still make US$4,500 per VDS fishing day.

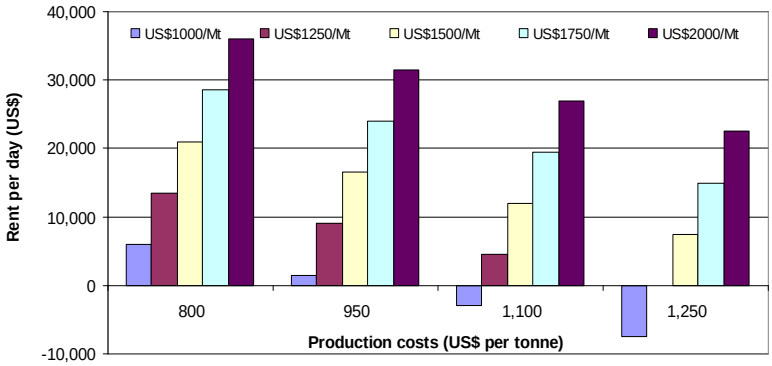

Figure 25 Rents per VDS day

It is shown that the majority of potential bilateral fishing partners could reasonably expect to make rents in excess of US$10,000 per VDS fishing day and would therefore be expected to be willing to pay anything towards this amount for the privilege of being allowed to do so under increasingly limited fishing opportunities.

5.2 FFA fleets – Local and Locally-based foreign

The FFA fleet has grown substantially in the last decade or so, facilitated by domestication policies that have resulted in growth of both domestic and domestically based foreign purse seine and longline vessels. The trends in the growth of the purse seine and longline fleets are shown in Figures 26 and 27. In more recent years there have been some trending down in the fleet size however. In the case of purse seine fleet, this is more a

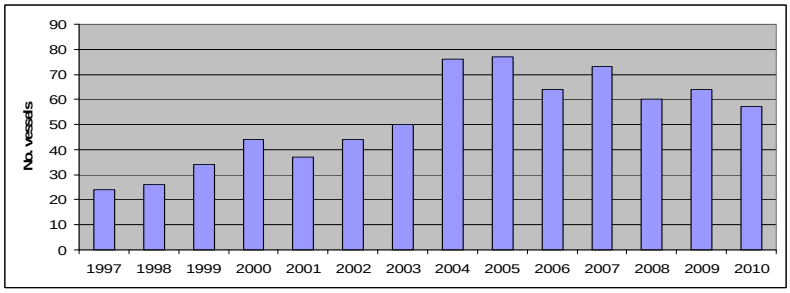

Figure 26 FFA number of purse seine vessels

[3] Rents (or super profits) are the profits that a vessel makes over and above the profit required for them to undertake fishing activity. For example, if a vessel operator expects revenues of US$45,000 per day but requires revenues of US$25,000 per day to cover all costs, including a return sufficient to justify remaining in the fishery over the long term, a rent of US$20,000 per day is made. As this rent is beyond what is required to undertake the activity the operator if left with no alternative and acting rationally will be prepared to pay US$20,000 per day to gain access to the fishery as under this payment the return required to justify remaining in the fishery is still obtained. This is not to say that all rents in this situation can be captured by the seller of the right as other factors, such as, the strength of the seller's bargaining position and their ability to sell the days to others will influence the outcome.

consequence of reflagging while for the longline fleet, it relates more to economic conditions particularly for 2008/2009 periods. In 2010, there has been substantial growth in the longline fleet.

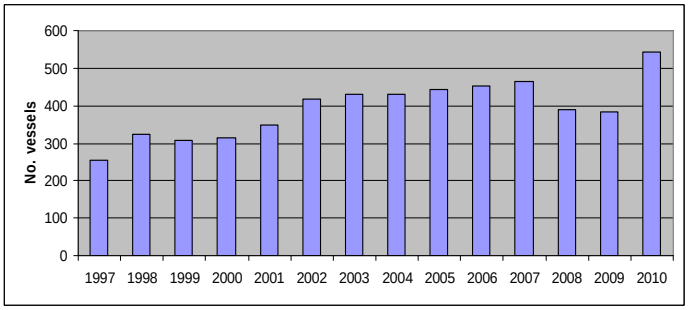

Figure 27 Trends in No. of longline vessels

5.3 Tuna fishing contribution[4] to GDP

The significance of the growth in domestic fleet size is in the contribution to the additional flow of economic benefits to national economies in various forms. Measurements of the contributions of fishing by the local and locally based foreign fleets facilitated through use value added ratios is presented below in Figure 28 and country-specific data in Table 5.

As Figure 28 shows, the overall contribution of tuna fishing to GDP in nominal terms has markedly increased over the years parallel with the trends of increases in fleet capacity and value of catch. Estimated tuna fishing contribution (by domestic and locally based fleets) in 2010 was $258 million, a rise of 20% from the previous year on account of substantial increase in catch value but a decrease of 10% from the 2008 level when purse seine fish prices were at their peak. The overall trend of contribution is largely determined by the contribution from the purse seine fleet because of the magnitude of the value of output from purse seine fishing relative to other fishing. The contribution by the pole and line fishery is negligible.

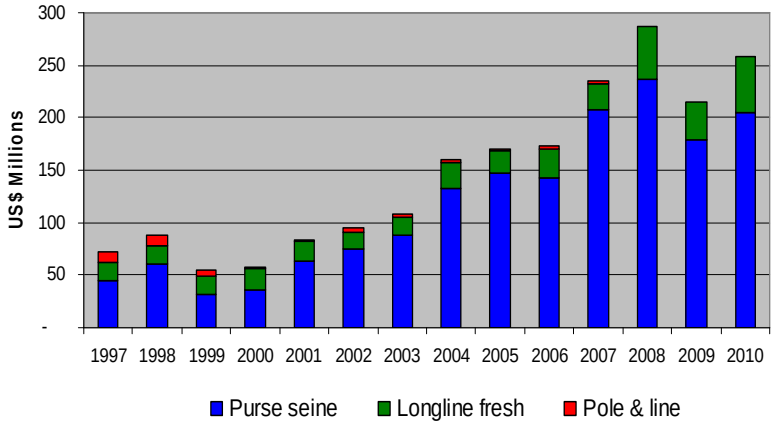

Figure 28 Tuna fishing contribution to GDP by gear type, 1997-2010

By country, the contribution from the PNG purse seine fleet has been the major contributing factor to this uptrend. Since 2002, more than 50 percent of the total tuna contributions to GDP came from PNG – Table 5.

[4] Values for the annual tuna fishing contribution to GDP were derived by obtaining the gross values of fleet production and applying the estimated country and fleet-specific value-added-ratios to the respective catch values and then aggregating these figures. The prices applied to obtain catch values are those used as the main price indicators, but with adjustments made to exclude estimated freight costs. The value added ratios were obtained from recent studies conducted under DEVFISH to estimate the economic contributions of domestic longline and purse seine fleets to FFA members.

Table 5. Estimated tuna fishing contribution to GDP by country ($M)														
FFA Country	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cook Islands	-	-	-	-	0.0	0.2	0.8	1.7	1.7	1.5	1.4	1.6	1.2	1.2
Fiji	2.0	1.9	2.0	5.8	6.0	4.9	5.6	10.0	6.2	8.5	4.7	7.5	7.3	5.0
FSM	4.5	6.9	4.1	6.9	7.0	7.7	10.8	11.6	11.4	4.7	9.9	15.0	12.3	14.2
Marshall Is	-	-	-	1.8	12.2	12.6	11.6	17.9	22.2	16.8	33.8	24.2	22.1	31.0
Niue	-	-	-	-	-	-	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1
PNG	10.4	24.4	13.6	19.0	34.4	46.1	54.8	88.8	96.6	100.2	137.6	153.7	110.5	116.4
Palau	-	0.2	0.1	0.0	0.0	0.0	-	-	-	-	-	-	-	-
Samoa	4.8	5.9	5.4	3.4	2.3	2.1	1.6	2.7	2.9	3.0	3.8	3.6	3.8	3.6
Solomon Is	27.1	24.8	14.8	5.1	8.1	8.6	9.0	10.1	8.9	13.9	13.5	35.4	9.9	29.6
Tonga	0.6	0.7	1.0	0.8	0.6	0.3	0.5	0.6	0.6	0.6	0.2	0.2	0.2	0.2
Sub-total	49.5	64.8	41.0	43.0	70.6	82.7	94.9	143.6	150.5	149.1	205.2	241.3	167.6	201.3
Locally-based foreign fleets contributions														
Longline														
China	2.8	1.8	2.2	2.6	2.4	1.1	1.9	2.2	2.9	4.3	4.1	4.1	8.9	4.8
Taiwan	3.2	1.8	2.7	2.9	1.9	1.0	2.4	2.5	4.1	6.5	4.8	5.1	5.9	10.0
Purse seine														
Philippines	17.1	19.8	9.3	9.0	9.3	9.9	9.0	11.2	12.8	13.6	21.0	37.0	32.0	42.0
Grand total	**72.6**	**88.2**	**55.1**	**57.4**	**84.1**	**94.7**	**108.2**	**159.5**	**170.3**	**173.4**	**235.0**	**287.5**	**214.4**	**258.1**

5.4 Employment

Presently about 14,000 people are engaged in the tuna industry, either on vessels or onshore facilities. Of the total, more than 4,000 are on vessels (including observers) and the rest in onshore facilities (Figure 29 and Table 6). Over the five year period 2006-2010, employment in on-shore facilities has grown by more than 30% while employment on vessels in the three year period 2008-2010 has almost doubled.

Figure 29 Tuna industry employment trends in FFA member countries between selected years

Table 6. Employment on vessels and on-shore facilities											
	Local Jobs on Vessels						Local Jobs in Shore Facilities				
	2002	2006	2008	2009	2010		2002	2006	2008	2009	2010
Cook Is.	50	15	12	8	10		15	15	10	10	48
Fiji	893	330	150	590	386		1496	2200	1250	990	762
FSM	89	36	323	98	187		131	24	140	199	210
Kiribati	39	15	157	479	536		47	80	70	0	120
Marshall	5	0	547	539	640		457	100	414	626	629
Nauru	5	0	2	0	2		10	2	0	0	0
Niue	5	0	4	0	0		0	14	18	0	0
Palau	1	0	4	0	1		11	5	20	8	11
PNG	460	110	944	905	1,337		2,707	4,000	6,715	6,000	6,700
Samoa	674	110	277	177	276		108	90	60	65	78
Solomon	464	66	107	90	324		422	330	827	732	743
Tokelau	0	0	1	0	8		0	0	0	0	0
Tonga	161	75	57	30	21		85	35	35	20	71
Tuvalu	59	20	65	218	287		36	10	10	0	34
Vanuatu	54	20	175	258	311		30	30	30	22	71
TOTAL	2,959	797	2,825	3,392	4,326		5,555	6,935	9,599	8,672	9,477

Sources: Gillet (2002,Gillet 2008, FFA 2008, FFA 2009, FFA 2011)

5.5 Comparison of national cost factors

National cost factors reviewed under this section are: Labour costs (hourly rates), Cost of 1 KW Hr of Electricity - Industrial User, Diesel fuel (average US$ per litre) and Air Freight Cost (US$ per kg commodity) to destinations in Australia, Japan and USA.

Data presented shows a disparity in costs among FFA member countries. Labour costs, for example, on a per hour rate varies significantly from one country to another with the Cook Islands at the upper end at more than $6.00 and Solomon Islands at the lower end at only $0.55 an hour (Table 7 and Figure 30). Comparative costs among FFA member countries - electricity, diesel and airfreight – are shown in Tables 8 to 10 and Figures 31 and 32 below.

In Table 11, comparison of productivity and costs are made in the context of tuna canning processing between the Philippines and an FFA member country. The differences highlight the crucial challenges facing the FFA member countries of low productivity and high production and freight costs.

Table 7. Unskilled labour costs in FFA member countries, 2008-2010

	2008	2009	2010
Cook Islands	5.20	5.50	6.08
Tonga	1.67	1.67	3.30
Palau	2.50	2.50	2.50
Tuvalu	2.28	2.28	2.40
RMI	2.34	2.21	2.24
FSM	1.85	2.50	2.21
Fiji	1.12	1.14	1.20
Kiribati	0.64	0.89	1.20
Vanuatu	1.00	1.00	1.00
PNG	0.60	0.89	0.89
Samoa	0.87	0.87	0.85
SI	0.55	0.55	0.55

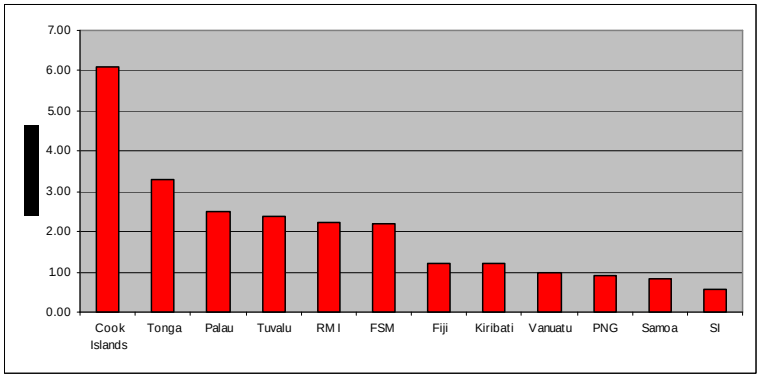

Figure 30 Tuna industry employment trends in FFA member countries between selected years

Table 8. Cost of 1Kw electricity – industrial use 2008-2010 (US$)

	2008	2009	2010
Cook Is	0.53	0.47	0.52
Tonga	0.36	0.48	0.45
Palau	0.34	n/a	0.78
Tuvalu	0.24	0.26	0.30
RMI	0.42	0.32	0.39
FSM	0.42	0.47	0.39
Fiji	0.11	0.12	0.16
Kiribati	0.35	0.49	0.40
Vanuatu	0.40	0.41	0.45
PNG	0.17	0.30	0.30
Samoa	0.30	0.30	0.30
SI	0.51	0.62	0.59

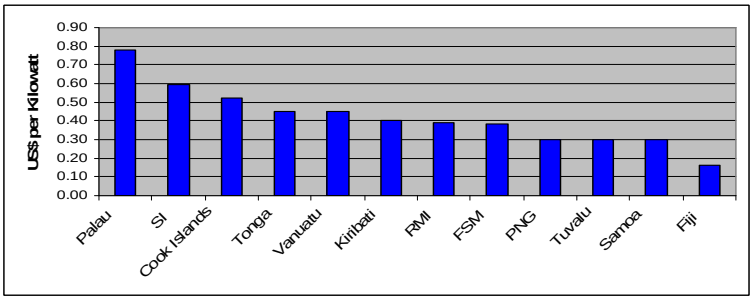

Figure 31. Tuna industry employment trends in FFA member countries between selected year

Table 9. Diesel fuel costs (US$ per litre) in FFA member countries

	2008	2009	2010
Cook Is	1.05	1.07	1.22
Tonga	0.87	0.87	0.87
Palau	0.75	n/a	1.65
Tuvalu	1.52	1.60	1.55
RMI	0.84	0.70	0.77
FSM	0.69	0.69	0.69
Fiji	0.37	0.39	0.40
Kiribati	0.96	1.18	n/a
Vanuatu	1.41	2.04	1.45
PNG	0.97	0.90	0.90
Samoa	1.10	1.10	1.05
SI	0.96	1.07	1.20

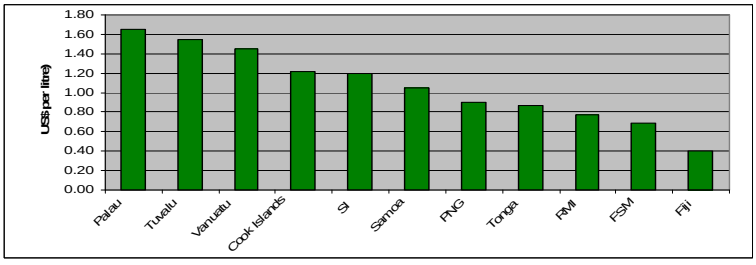

Figure 32 Diesel fuel costs in FFA member countries

Table 10. Air freight cost ($US / Kg) for fish to selected destination									
	2008			2009			2010		
	US (LA)	Japan	Australia (SYD)	US (LA)	Japan	Australia (SYD)	US (LA)	Japan	Australia (SYD)
Cook Islands	4.58	2.60	n/a	6.85	2.76	6.24	8.01	n/a	n/a
Tonga	2.19	2.02	2.21	2.67	2.84	2.63	3.21	2.98	2.63
Palau	3.05	2.71	n/a	n/a	n/a	n/a	3.50	2.50	n/a
Tuvalu	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
RMI	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FSM	4.25	2.90	n/a	n/a	2.95	n/a	3.97	2.70	n/a
Fiji	1.63	2.10	1.40	1.64	2.12	1.42	1.64	2.12	1.42
Kiribati	7.65	8.28	7.01	7.09	7.09	9.05	5.00	6.50	3.00
Vanuatu	3.84	4.49	1.02	3.84	6.06	1.08	5.34	7.03	1.10
PNG	4.78	2.79	1.20	n/a	2.75	n/a	n/a	2.75	n/a
Samoa	n/a	n/a	n/a	n/a	n/a	n/a	4.17	7.72	3.82
SI	5.60	5.50	2.60	6.40	6.40	2.20	19.16	10.59	3.5

Table 11. Comparative Costs of cannery operations between Asian and FFA member country			
ITEM	**GEN SAN**	**PNG**	**DIFFERENCE**
Productivity (Kg/man hour)	9.98	5.46	(4.52)
Labor rate/Forthnight (USD)	71.72	88.78	(17.06)
Labor cost (USD per case)	1.03	2.53	(1.50)
Yield from fish or recovery	40% -42%	38% -40%	-2%
Fish cost per case at $1,600/ton of tuna (USD per case)	22.48	21.92	(0.56)
Utilities (USD per case)	0.539	0.800	(0.26)
Finished Products Freight (USD per FCL)	1,200	2,745	(1,545)
Freight cost per case			-0.13
Lower Freight for fish delivery			1.1
Penalty in producing in PNG (USD per case)			(3.00)

Source: Palau Tuna Forum, 2011

5.6 Tuna volume processed in FFA countries

Table 12 shows the quarterly volume of landed and processed tuna in FFA member countries. As shown, the major processing currently occurs in Papua New Guinea, Solomon Islands and Fiji. In 2009 a total of 119,000Mt was processed. Production however appears to have dropped significantly in 2010 to only 76,000Mt. (It is most likely the figures for 2010 understate the actual volume processed).

Table 12. Quarterly volume of raw tuna material processed in FFA member countries										
	2009					2010				
	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Total
Fiji	10,100	10,000	12,000	11,500	43,600	2,000	2,500	2,300	2,500	9,300
RMI	322	367	1,290	0	1,979	1,344	1,411	2,510	2,510	7,775
PNG	12,531	13,811	16,867	18,000	61,209	7,611	12,222	12,222	12,222	44,277
SI	1,560	1,829	3,920	4,235	11,544	1,405	4,938	4,938	3,080	14,361
FSM	180	200	0	300	680	146	184	238	168	736
Total	24,693	26,207	34,077	34,035	119,012	12,506	21,255	22,208	20,480	76,449

5.7 Exports

Export data from FFA member states are not available through collecting agents. The alternative source is from export destinations and the import trends presented below are from these sources[5]. Focus is on import trends by three major export destinations - EU, US and Japan markets.

Figure 33 shows the annual trends of tuna imports by the major markets. The overall annual import values by the EU, US and Japan grew more than three times between 2000 and 2010, from $77 million to $256 million.

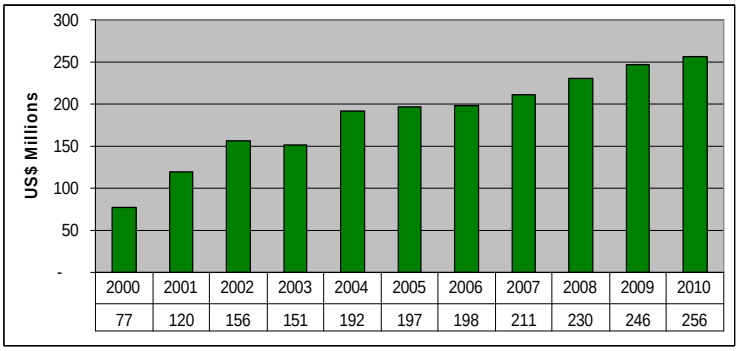

Figure 33 US, EU and Japan tuna import trends

Figure 34 shows the breakdown of the imports by products and major markets.

Tuna loin imports presently commands the greatest share of total tuna imports by major markets at $100-125 million annually. The US as the major market imports around $80-105M (40-55% of US global imports) from FFA member countries. Whitemeat tuna loins from Fiji ($70-85M) comprises the major share of loin imports into the US market with the rest made of lightmeat loin imports from PNG ($15-20M) and Marshall Islands ($2-3 million). There has been an uptrend to the US market from these sources in recent years. The EU market imports around $18-22M (relatively small compared to EU global imports but rising) (Figure 34). Tuna loin trade to EU market ($18-22M) is mostly of lightmeat loin (small relative to global value but rising). Only Papua New Guinea and Solomon Islands are the current suppliers - $12M and $11M respectively in 2010.

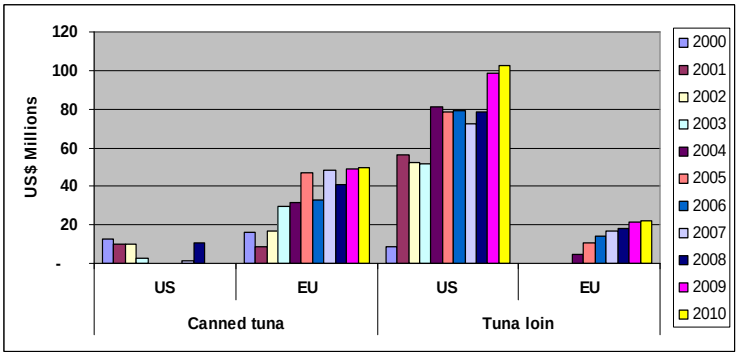

Figure 34 US and EU import trends by products from FFA member countries, 2000-2010

Sources: http://www.st.nmfs.gov/st1/trade/index.htm; http://www.customs.go.jp/toukei/download/index_d011_e.htm; http://epp.eurostat.ec.europa.eu/portal/pa

Canned tuna trade by FFA member countries is almost exclusively to EU market, valued at around $50 million annually. The US domestic canned tuna processors are highly protected through very high tariffs on canned tuna imports – in brine 6-12.5% and albacore in oil 35%. As such, the US market for FFA loins is only relevant as long as this protection is on.

The sashimi and non-canned imports from FFA member countries shows Japan being the key market. This reflects the global significance of Japan commanding around 80% (300-400,000Mt) of global tuna sashimi consumption. The US as the next principal sashimi market consumes

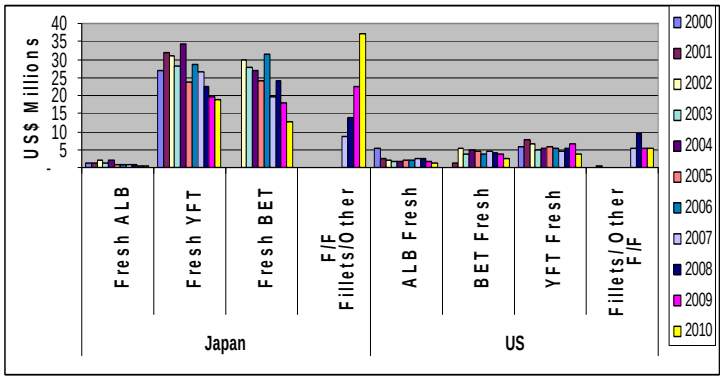

Figure 35 Japan and US import trends of sashimi and non-canned tuna products from FFA member countries, 2000-2010

[5] Adjustment was made to US import values expressed in f.a.s. (free alongside ship) terms to c.i.f. values by raising the values by a factor of 25% to allow consistency with Japan and EU import values that were obtained in c.i.f. terms.

around 30-50,000Mt annually. Other markets include Korea (15-20,000Mt), China (6-10,000Mt, Taiwan 5-8,000Mt and EU (4-8,000Mt).

The value of sashimi and non-canned tuna trade with Japan and the US markets has been broadly steady at around $70 million between 2002 & 2007 but has risen to around $80 million in the last 3 years, notably through increases in fresh and frozen tuna fillet imports that appears to have more than offset the declines in unprocessed fresh imports. Fresh yellowfin and bigeye tuna are the key tuna species traded by FFA member countries to both Japan and US markets (Figure 35).

5.7.1 EU market imports

The EU principal tuna import from FFA member countries is canned tuna with Fiji, Papua New Guinea and Solomon Islands. The EU also imports from these sources tuna loins and minimal fresh and frozen tuna products. Total value of imports into the EU market in 2010 was $72 million, $49 million (70%) of which was value for canned tuna. Figure 36 shows the annual trends of imports from the respective sources.

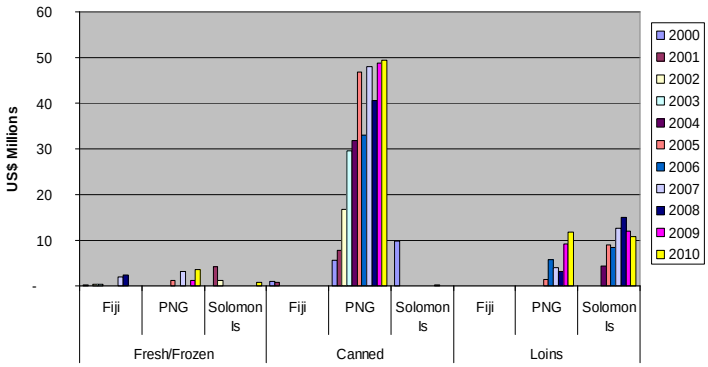

Figure 36 EU import trends by product from FFA country source, 2000-2010

The EU imports from current FFA member sources presently enjoy duty free access either under the Interim Economic Partnership Arrangement (IEPA - Fiji/PNG) or Everything But Arms (EBA – Solomon Islands). Nonetheless, complexity of RoO requirements under different tariff regimes, IUU Regulations, Competent Authorities, Free Trade Agreements, WTO rules, Doha conclusion and competitiveness issues for PICs point to many challenges & imminent preferential tariff erosion.

5.7.2 US market imports

The value of tuna and tuna products from the FFA member states to the US market over the past decade or so has risen, from only $32 million in 2000 to $115 million in 2010.

Tuna trade with the US is presently dominated by tuna loins with Fiji as the principal supplier. Tuna loin trade to the US market is valued at $100-125 million annually. Imports from Fiji ($70-85 million) is principally whitemeat, while imports from Papua New Guinea ($15-20M) and Marshall Islands ($2-3 million) are principally lightmeat.

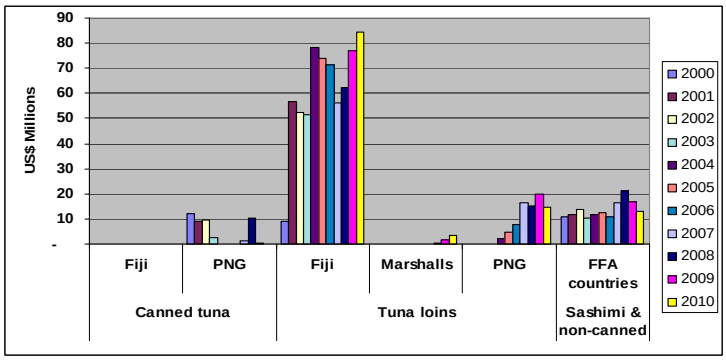

Figure 37 US import trends by product and FFA

The canned tuna exports comprise only of albacore (not in oil) but these have been minimal and not consistent with PNG the sole supplier. This is because of prohibitive tariffs. Prospects of expanding canned tuna trade to US market is limited under present tariff protections accorded to domestic processors. And even for Compact States with preferential access to this market, developmental internal constraints would not favour canned tuna processing.

The fresh exports to the US consist of albacore, bigeye and yellowfin. Fiji is the main supplier (Figure 37).

5.7.3 Japan market imports

The Japanese market as the major destination for tuna sashimi grade products is of great importance to countries with longline fleets targeting sashimi grade products. (The available data from Japanese sources shows that bigeye was not included in the import list until 2002). Exports from FFA member countries to Japan trended up from $30 to $70 million over the period 2000-2010. Exports in 2010 totalled US$70 million. Exports of fresh sashimi products (unprocessed) from FFA countries have been on the decline in recent years but the rise in fresh and frozen tuna fillets have more than offset these declines (Figure 38).

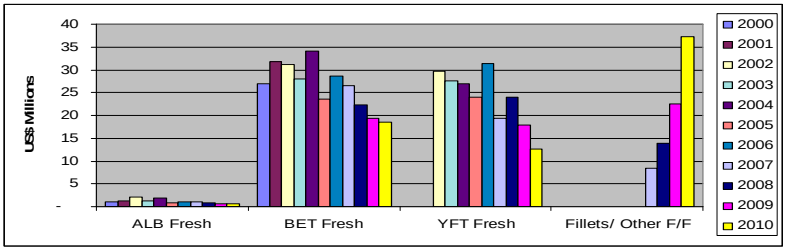

Figure 38 Japan fresh tuna import trends from FFA countries, 2000-2010
Source: http://www.customs.go.jp/toukei/download/index_d011_e.htm

Palau and Fiji account for the greater supply of fresh products to Japan. This is on account of the locally-based foreign longline fleet in these countries (Figure 39).

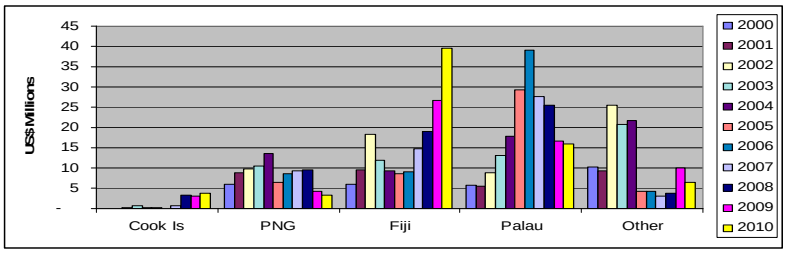

Figure 39 Japan fresh tuna import trends from FFA countries, 2000-2010
Source: http://www.customs.go.jp/toukei/

6. Summary and conclusions

The economic conditions for the fleets in the WCPO in recent years though continually threatened by high fuel costs and the severity of the global financial crisis as of late 2008, are a substantial improvement on previous years with the offset coming from significantly improved market prices supported by the impact of management measures in the forms of capacity reductions for the distant water longline fleets and area and seasonal closures for the purse seine fleets. Generally improved catching performances by fleets from more favourable fishing conditions and/or increased efficiencies were major contributing factors also.

The economic conditions for both the purse seine and longline fleets in the WCPO in recent years varied across the fleets, but the overall trends of the key parameters broadly indicate important improvements. On the basis of the considerations in this report, it is most likely that the fleets would have significantly improved profitability.

Against the relatively favourable recent developments the FFA member countries have benefitted in several respects at least in nominal terms. The increases in the value of catches in the EEZs of PNA members because of price increases and the transfer in purse seine effort from closed high seas pockets has translated to significantly increased access fees and opportunities to improve on this under the purse seine VDS (and later the longline VDS), are improving. At the same time those with domestication policies in place through development of own fleets and/or accommodating foreign locally based fleets and/or onshore processing have benefitted from increased monetary contributions to their GDPs, increased employment, exports and related spinoff effects.

Nonetheless the member countries are not without challenges and indeed these challenges are intensifying. With respect to the state of the resource, controlling the increasing trend of fishing capacity for both the purse seine and longline fleets must be realised at this time when licence concessions by distant water fleets are being sought intensively at unprecedented levels because of increasingly stringent but appropriate management measures are being put in place. The comparative advantages and competitiveness at the processing and international trade levels are continually being undermined by lower cost producing centres in Asia and elsewhere as well as increasingly stringent

market access measures specifically to the EU market. It is critical that collective efforts and common stance on common issues to benefit from the comparative advantages and to prevent erosion of competitiveness be in place. Preferential access especially to the EU market must be maintained or improved (such as through harnessing of the IEPA and extension of global sourcing to unprocessed tuna products). Relatively very low labour productivity from differences in work ethics (than those especially in Asia) and relatively very high production and freight costs from lack of economy of scale at the national levels are the key obstacles to improvement of competitiveness and also provide real challenges for FFA member states.