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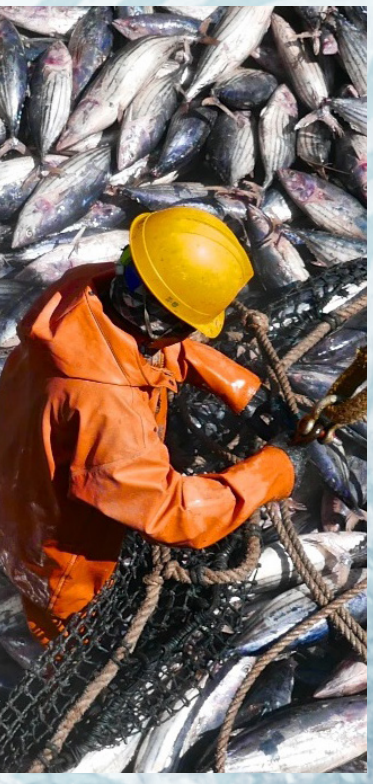
# Economic and Development Indicators and Statistics: Tuna Fisheries of the Western and Central Pacific Ocean 2016

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# Foreword

FFA has produced an annual *Economic Indicators Report* since 2006 providing information on a range of economic indicators for the WCPO tuna fisheries and the contribution that these fisheries and associated industries make to the economies of FFA member countries.

In 2015 FFA Fisheries Ministers endorsed the *Regional Roadmap for Sustainable Pacific Fisheries* (*The Roadmap*). The goals and strategies in *The Roadmap* can be broadly divided into two key components, taking control of the WCPO tuna fisheries and leveraging that control to maximise the economic benefits generated to national economies from these fisheries.

To better assist decision-makers to assess and monitor progress in implementing the strategies and achieving the goals outlined in *The Roadmap* the *Economic Indicators Report* has been replaced with a new report series, ***Economic and Development Indicators and Statistics: Tuna Fisheries of the Western and Central Pacific Ocean***. This report is the first edition of this new series and is structured as follows.

- The first section, ***Economic and Development Indicators Report,*** provides commentary and indicators for three broad areas:
    - **Control of the major fisheries** covering catch and catch value data for the WCPO fishery and within FFA members EEZs. Data is presented for each of these areas on catch and catch values in aggregated form and by fishery. Also presented is data on the proportion of catch taken by vessels flagged to FFA members.
    - **Economic conditions in the major fisheries** providing information on trends in economic conditions in the major WCPO tuna fisheries. The purpose of this section is to provide decision-makers with indicators of the economic performance of these fisheries over time and the drivers of any evident trends.
    - **Contribution to national economies:** The contribution of tuna fisheries and related industries to the national economies of FFA member countries. The purpose of this section is to provide decision-makers with a range of information on the economic benefits generated to national economies from the fishery and associated industries.
- The second section, ***Compendium of Economic and Development Statistics***, provides a wide range of economic statistics of relevance to FFA members relating to global, regional and national tuna fisheries and associated domestic industries. The purpose of this section is to provide a reference database of economic statistics for FFA members. These statistics are also available in *Excel* at the FFA website here. Another spreadsheet providing detailed statistics on catch and catch values by national waters and fleets is available here.

It is envisaged that the data provided in this report series will be refined and increase in scope over time in order to better inform decision-makers on the economic performance of the WCPO tuna fisheries, the control they exercise over it and the contribution that it makes to the national economies of FFA members. While all due care is taken in the compilation of the information presented in this report they are of necessity sometimes based on anecdotal evidence or the judgement of FFA staff. Feedback on, or corrections to, the data presented is welcomed. Please send these to Peter Terawasi (peter.terawasi@ffa.int).

James T. Movick
Director General
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# Economic and Development Indicators Report

## Control of the major fisheries

The WCPO share of the global catch of albacore, bigeye, skipjack and yellowfin tunas increased from 50% in 2006 to 58% in 2014. In 2015 the total WCPO catch of these species was 2.7 million tonnes, 57% of global production of 4.7 million tonnes. Total WCPO catch in 2015 was down 7% on the 2014 record catch of 2.9 million tonnes driven by a decline in the catch from the purse seine fishery as intense El Nino conditions prevailed over most of the year.

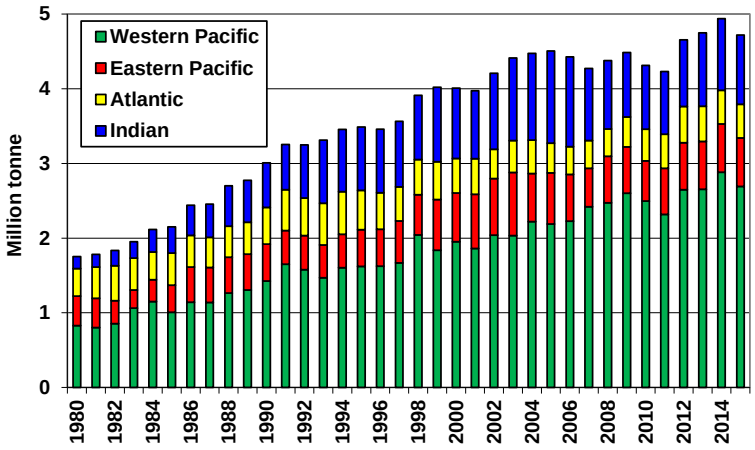


**Figure 1. Global tuna production by Ocean**

*Source*: WCPO and EPO from SPC (2015), Atlantic Ocean from ICCAT www.iccat.int/atl.asp; Indian Ocean from www.iotc.org/English/data.php

### Purse seine

The WCPO purse seine fishery produces the majority of the global tuna purse seine catch, contributing between 58% and 71% over the period 2006-15. The purse seine fishery is also the dominant WCPO fishery accounting for between 67% and 73% of total catch in this ocean between 2006 and 2015. In 2015 the WCPO purse seine catch was around 1.8 million tonnes, just over 67% of the total catch from this ocean. In value terms, however, the proportion associated with the purse seine fishery is lower due to the lower unit value of the catch. The value of the WCPO purse seine fishery in 2015 was around $2.3 billion around 49% of the total value of the WCPO tuna catch of $4.7 billion and significantly lower than that seen in 2012 and 2013 when the value of the purse seine fishery catch was over $4 billion due to the high prices prevailing over this period.[1]

The WCPO purse seine fishery catch is predominately based in the waters of FFA member countries. Between 2006 and 2015 the purse seine catch in the waters of FFA member countries represented between 63% and 85% of the WCPO purse seine catch (Figure 2). The proportion of the WCPO purse seine catch increased dramatically from 2009 to 2010 rising from 65% to 82% as a result of the closure of the western high seas pockets. This

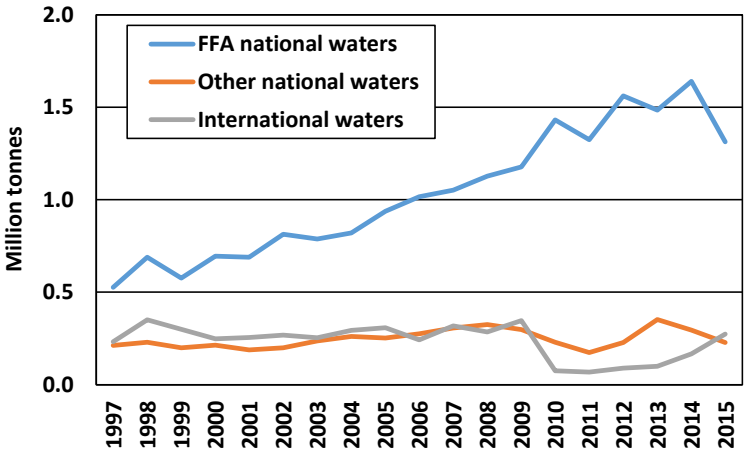


**Figure 2. WCPO purse seine catch by area**

*Source*: SPC (2015)

[1] Catch values reflect "delivered" values, that is, the value of the product when it enters the country it is to be processed or consumed in. For example, in the purse seine fishery the values are based on Thai import prices (c&f) and Japanese (Yaizu) ex-vessel prices.

high proportion was maintained through to 2012 but has declined since with increasing catch from other national waters and high seas areas and, in 2015, a decline in the catch from the waters of FFA member countries. Catch in the high seas in 2015 was almost double that in 2014 and more than treble that between 2010 and 2013 as some fleets increased their high seas fishing likely, at least in part, in response to the increasing cost of access to PNA EEZs. In 2015 the purse seine catch from the waters of FFA member countries was around 1.3 million tonnes, 72% of the total purse seine catch, and valued at around $1.7 billion.

The number of purse seine vessels flagged or chartered to a FFA member country fleet (referred to as the FFA national purse seine fleet) was 109 in 2015 up from 99 in 2014. Despite the rise the number remains below the 2012 peak of 115 due to reductions in the number of Solomon Island charter vessels and Vanuatu flagged vessels. (Figure 3) The FFA national fleet's share of the WCPO purse seine catch in 2015 was 540,000 tonnes valued at $681 million. This catch represents 30% of the total WCPO purse seine catch up from 26% in 2014 and 23% in 2013. At 30% the share of the WCPO purse seine catch taken by the FFA national fleet is at its highest since 2005.

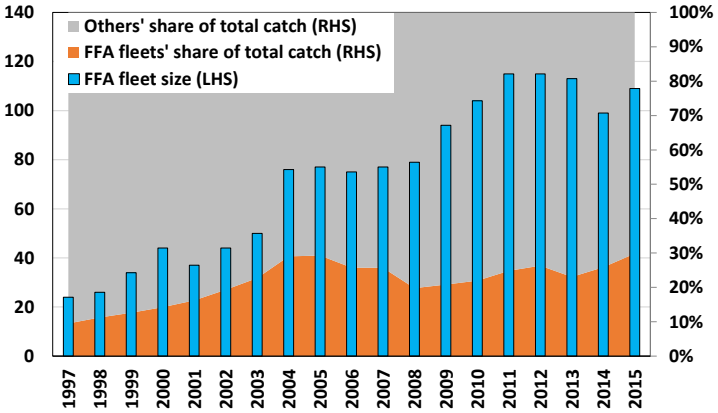


**Figure 3: FFA national purse seine fleet and relative catch share**

*Source: WCPFC Science Committee Counrty Annual Reports (various)*

## Longline

The WCPO longline fishery produced between 40% and 48% of the global longline catch of albacore, bigeye and yellowfin over the period 2006-15. The longline fishery accounted for around 11% of the total WCPO catch 10 years ago with this share continuing its slow but steady long term decline to its current level of around 9%. While the proportion of the WCPO tuna catch taken in the longline fishery declined over the past decade the level of catch has remained flat, fluctuating between 240,000 and 280,000 tonnes. The proportion of the total tuna longline catch taken from the waters of FFA member countries, however, increased from under 30% prior to 2010 to be over 38% since 2014. This growth in the longline tuna catch in FFA member EEZ occurred despite total catch remaining flat as vessels shifted activity from international waters to the waters of FFA members (Figure 5A). While the longline catch has remained reasonably steady over time the species mix has changed (Figure 4) and while the shift in catch from international waters to the waters of FFA members is evident across all species the extent to which this has occurred varies (Figure 5B to D).

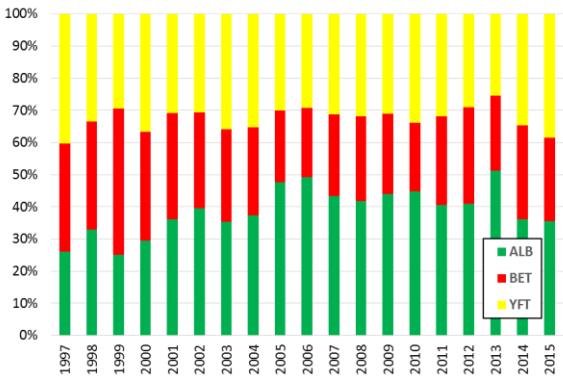


**Figure 4: Composition of longline tuna catch in national waters of FFA members**

*Source*: SPC (2015)

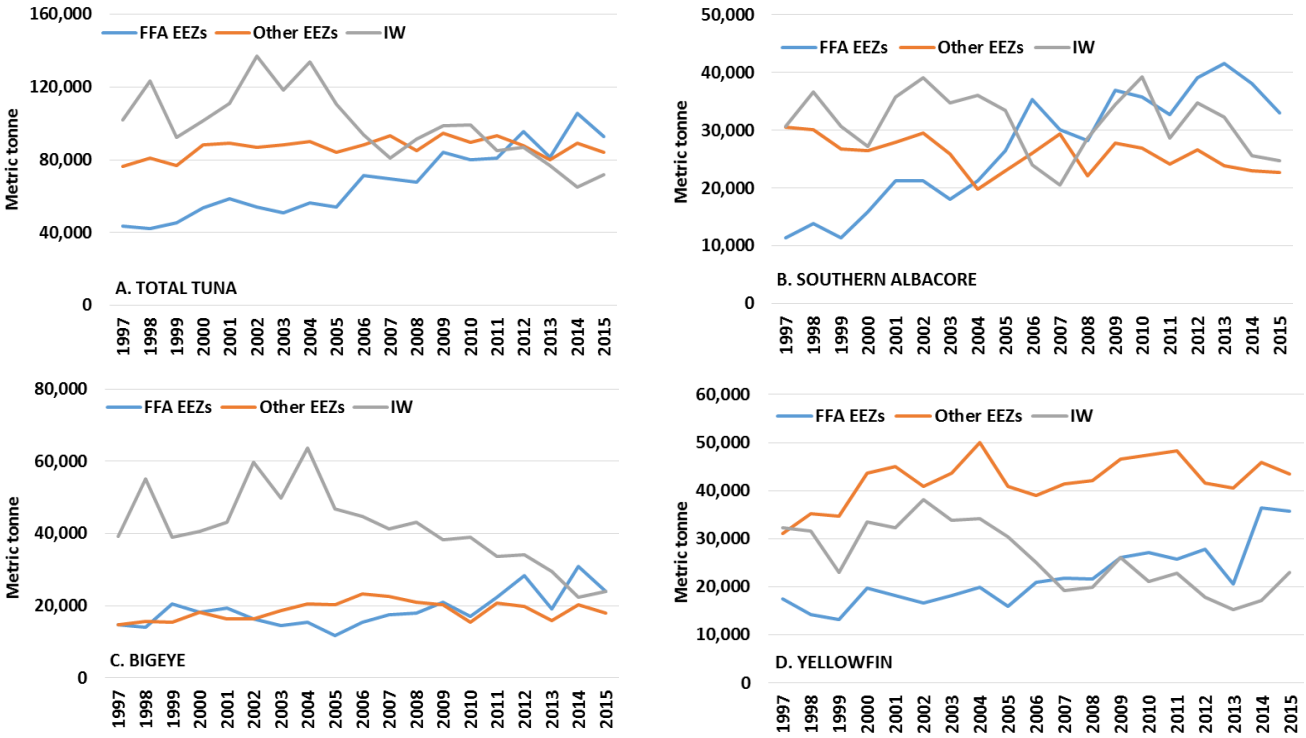


**Figure 5: WCPO Longline tuna catch by species and area**

The number of longline vessels flagged or chartered to an FFA member country fleet (referred to as the FFA national longline fleet) fell significantly in 2012 and 2013. In 2011 vessels numbers were 502. Since then the size of the fleet has been reasonably steady at between 441 and 461 vessels. The FFA national longline fleet's catch in the WCPO in 2015 was around 77,000 tonnes with a value of $436 million. This catch represents 31% of the total WCPO just below the highest recorded share seen in 2012 (Figure 6).

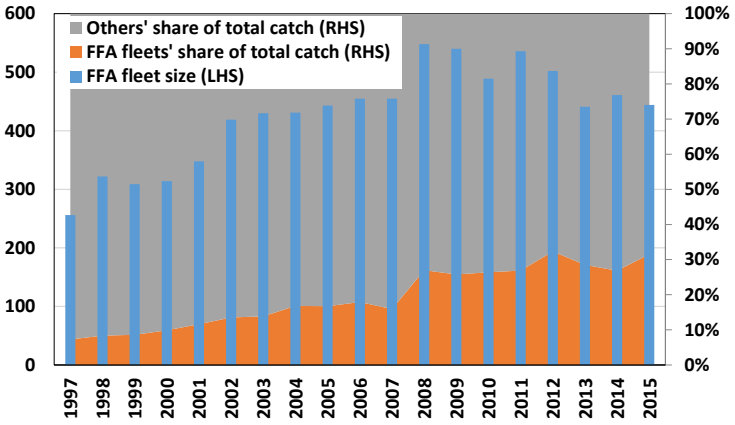


**Figure 6: FFA national longline fleet and relative catch share**

*Source: WCPFC Science Committee Counrty Annual Reports (various)*

## Economic conditions in the major fisheries

In this section information is presented on trends in fish prices, fishing costs and catch rates. These factors are the major determinants of the economic conditions prevailing in a fishery. In addition, indices are presented that provide a measure of relative economic conditions over time for the purse seine, tropical longline and southern longline fisheries.[2] The indices are based on relative fish prices, fishing costs and catch rates and do not provide an absolute measure of economic conditions in the

[2] The southern longline fishery is defined as the longline fishery south of 10°S in the WPCFC-CA and the tropical longline fishery is defined as the longline fishery between 10°N and 10°S in the WPCFC-CA excluding the waters of Indonesia, Philippines and Vietnam and.

fishery in a given year but rather a relative measure between years, that is, for example, how do economic conditions in 2015 compare with those in 2014, are they the same, better or worse? It is important to note that the indices provide a measure of relative profitability of the fishery and not that of the fleet, as access fees are not included. Access fees represent a transfer of the profits generated in the fishery from the fleet to the coastal states that provide access to their EEZs.

The components of the economic conditions indices (that is, costs, fish prices and CPUE), their trends and relative importance in defining the overall trends in each fishery's index are outlined below.[3] The cost and fish price component of the indices are based on changes in their real USD value. As such, all prices that are not specified in US dollars (USD) are converted using the exchange rate prevailing during the relevant time period.[4] In addition, to account for inflation, which results in the real value of a USD changing over time, nominal USD prices (that is, the price at a given point of time) are adjusted using US CPI data to obtain real prices which are expressed in 2015$s.[5]

## Fish prices

Prices received by operators (that is, ex-vessel prices) vary depending on the market that the product is destined for and the costs of transporting the product to market, particularly in the longline fisheries. As such, there is no single price that will provide a perfect reflection of trends in the price received by operators for the various species caught. In this report, prices on certain specific markets are used as indicators of the trends in the price received by operators. These are: for the purse seine fishery Thai frozen import prices for skipjack and yellowfin; for the tropical and southern longline fisheries Japanese fresh import prices from Oceania for bigeye and yellowfin and Thai frozen import prices for albacore. The nominal and real price trends for selected major species in each fishery are presented in Figures 27 and 29. Real prices are presented in 2015 USD obtained by adjusting nominal USD prices with US CPI data as previously outlined.

### *Purse seine prices*

Thai frozen skipjack import price is used as the main indicator of market conditions and trends for the purse seine fishery as almost 90% of WCPO catch goes to Thailand for processing into loins and/or canned products. Yellowfin also plays an important contribution to the value of the fishery given its higher unit value although comprising a significantly lower proportion of the catch.

After declining significantly between 1997 and 2000, prices were relatively stable through the period 2001-2006, albeit at relatively low levels. Nominal annual skipjack prices between 2001 and 2006 ranged between $700/mt and $918/mt and real annual skipjack prices (2015$s) between $901/mt and $1,115/mt. Since 2006 prices have shown greater volatility with nominal annual skipjack prices ranging between $1,154/mt and $2,117/mt and real annual skipjack prices (2015$s) between $1,195/mt and $2,185/mt. While prices have been more volatile in recent years they have generally been above that averaged since 1997 reflecting the trend of increasing prices over the period. Prices in 2015 for both skipjack and yellowfin were down significantly from the record levels seen in 2012 (for skipjack by 56% in nominal terms) and below average (1997-2015) real prices for the first time

[3] The indices are calculated as follows:

$$EC_{f,y} = ComPI_{f,y} \times CPUEI_{f,y} - CI_{f,y}\ ^{3} \qquad (1)$$

Where $E_{f,y}$ represents the index for economic conditions in fishery $f$ in year $y$, $C_{f,y}$ represents the composite fish price index in fishery $f$ in year $y$ , $CPUEI_{f,y}$ represents the catch rate index in fishery $f$ in year $y$ and $CI_{f,y}$ represents the fishing cost index in in fishery $f$ in year $y$.

[4] Currency conversions are based on the interbank exchange rates from www.oanda.com/currency/historical-rates.

[5] The CPI measure used is for All Urban Consumers from www.bls.gov/cpi/data.htm

since 2010. Over the period to the end of October 2016 skipjack prices were around 24% higher than over the same period in 2015 to be marginally above average levels but still below trend levels.

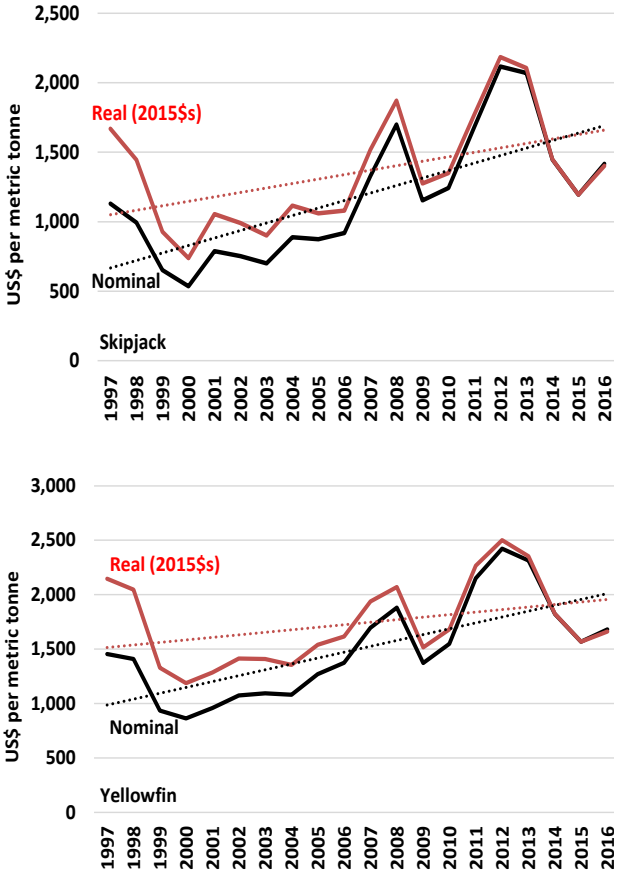


**Figure 7. Nominal and real USD prices for Thai imports of frozen whole round skipjack and yellowfin**

***Note***: 2016 prices for period to October 31.

Source: http://www.customs.go.th/

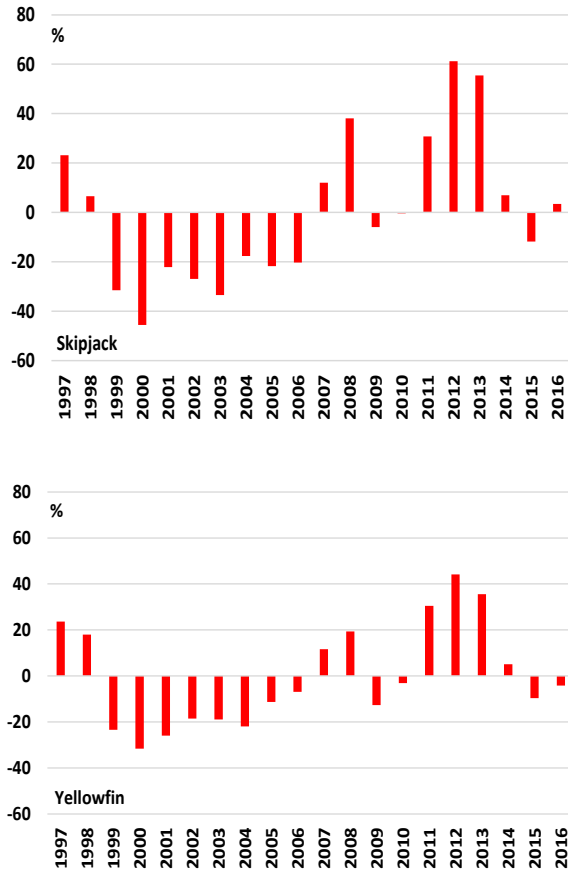


**Figure 8. Variation in real USD prices for Thai imports compared with long-term average**

***Note***: 2016 prices for period to August 31.

## *Southern and Tropical longline prices*

For albacore, Thailand import prices are as used as the indicator series as the main use of longline caught albacore is for canning. Thailand is a significant producer of canned albacore and this series is the longest continuous data series available. While nominal prices have fluctuated considerably the level around which they fluctuate has increased with the peaks and troughs tending to occur at higher levels resulting in nominal prices trending upwards (Figure 9). In contrast, while prices in real terms also see significant fluctuations the level that they fluctuate around has remained relatively stable over time at around $2,900/mt. Real prices were at their highest in 2012 (26% above the level average over the period 1997-2014) and lowest in 2007 (23% below). Since 2008, only in 2013 was the price significantly lower (12%) than the long term average. Real prices in the last 3 years have been relatively stable at around their long term average.

For yellowfin and bigeye the price of fresh imports from Oceania into Japan was used as the indicator series. Real USD prices for both products follow a similarly steady trend over time as for albacore although trend real yellowfin USD prices increased marginally and trend real USD bigeye prices fell marginally (Figure 9). While the trend was similar to that for albacore the pattern of variation from the average price over the period differed, in that real USD yellowfin and bigeye prices spent significant periods at lower/higher than average levels while albacore prices fluctuated between levels lower and higher than average more frequently (Figure 10).

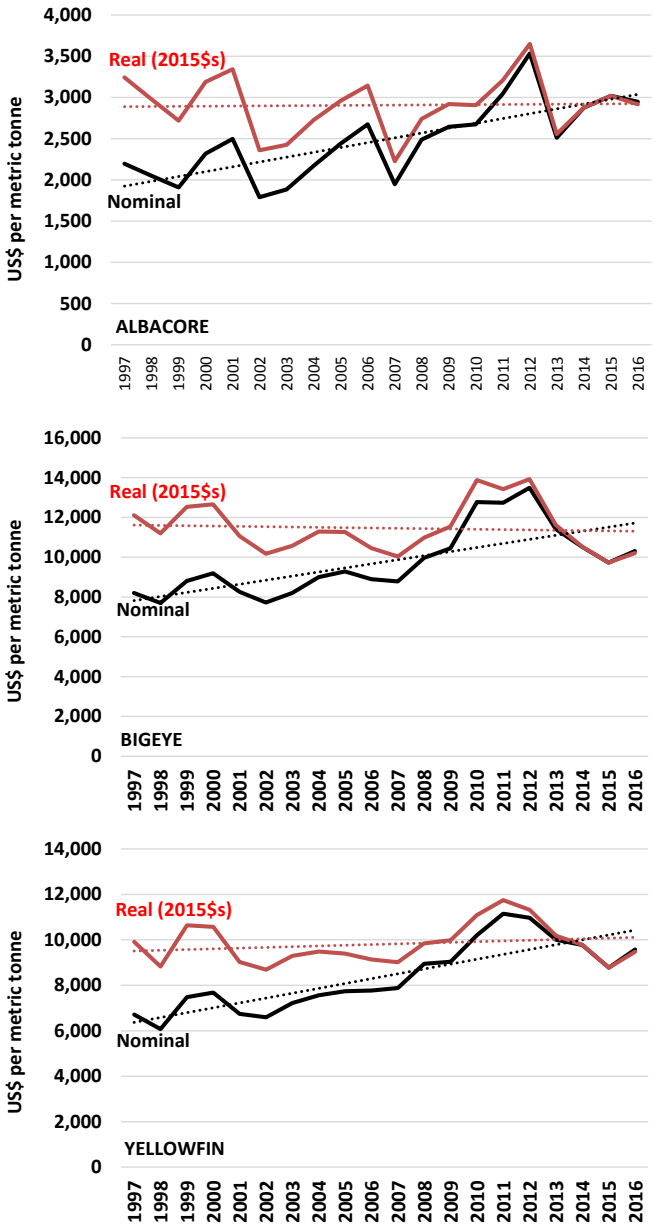


**Figure 9: USD real and nominal prices by species for selected market**

***Note***: 2016 for period to October 31

***Source***: www.customs.go.th and www.customs.go.jp/toukei/info/tsdl_e.htm

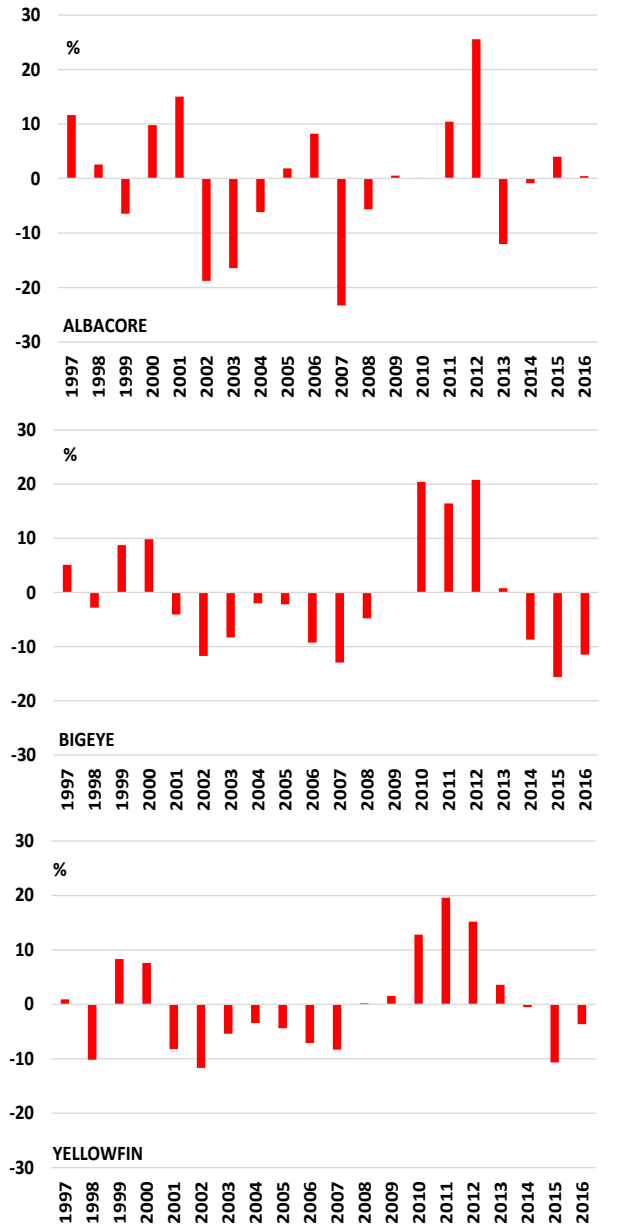


**Figure 10: Variations in annual USD real prices by species for selected market**

***Note***: 2016 prices for period to October 31

### *Composite price indices*

The real USD price series outlined above are used to construct a composite fish price index for the each fishery as shown in Figure 11.[6]

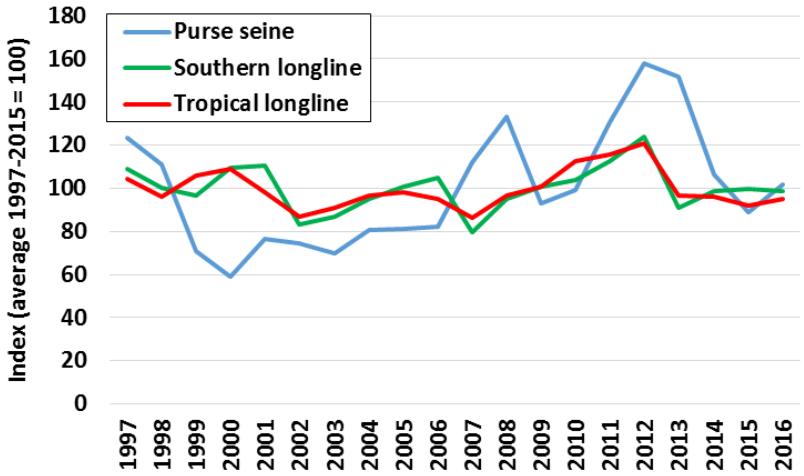


**Figure 11. Composite price indices**

***Note:*** 2016 price indices are based on data to October 31 and assume the same catch composition as that for 2015.

## Catch rates

Catch rates by species for all three fisheries are shown in Figure 32 with the purse seine CPUE expressed in terms of catch per fishing day and the longline fishery in kilograms per hundred hooks. As can be seen purse seine total catch rates are on an upward trend driven by an increase in skipjack catch rates. Catch rates in the southern longline fishery are on a downward trend and are currently at the lower end of their historical range where they have been since 2011. For the tropical longline fishery catch rates have been on a slight downward trend since 2000. This decline is driven primarily by a decline in bigeye catch rates which has also resulted in a change in the composition of the catch. Since 2013 bigeye has been less than 39% of the total catch whereas prior to 2009 it made up no less than 45% and as much as 51% of the catch. Given that bigeye is the highest value species this change in catch composition also reduces the average unit value of the catch.

[6] The composite fish price index for each fishery is calculated by first obtaining species specific price indices as follows:

$$PI_{s,y} = \frac{Pr_{s,y}}{AvPr_{s,1997-2014}} \qquad (2)$$

where *PI* is the price index for species *s* in year y, *Pr* is the real price of species *s* in year *y* and *AvPr* the average real price of species *s* over the period 1997 to 2014. The prices index for other species was assumed to be the same as that for albacore and the composite price index specified as:

$$ComPI_{f,y} = 100 + \sum_s \left[ \left( PI_{f,s,y} - 100 \right) \times \frac{C_{f,s,y}}{TC_{f,y}} \right] \qquad (3)$$

where *ComPI* is the composite price index for fishery *f* in year y, *PI* is price index for fishery *f* of species *s* in year y, *C* is the catch in fishery *f* of species *s* in year *y* and $TC_y$ the total catch in fishery *f* in year *y*.

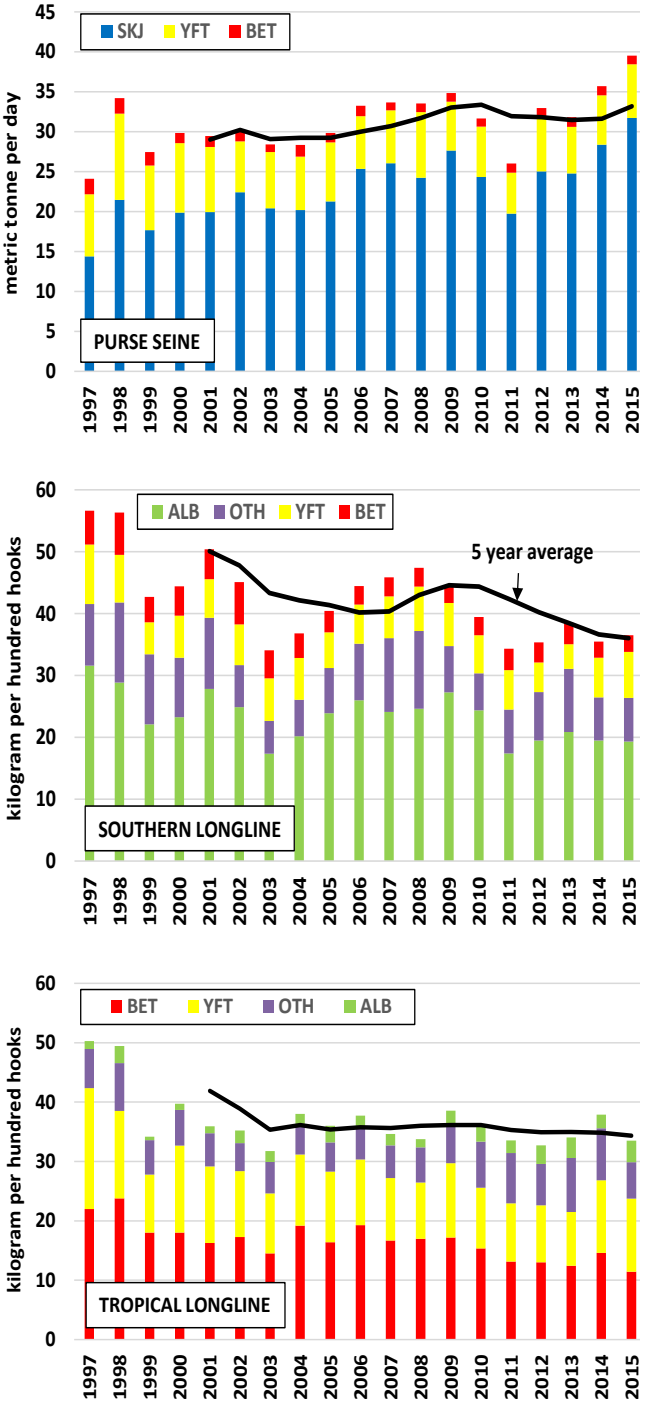


**Figure 12: Annual catch rates by species by fishery**

*Source:* SPC

*Note:* 2015 provisional

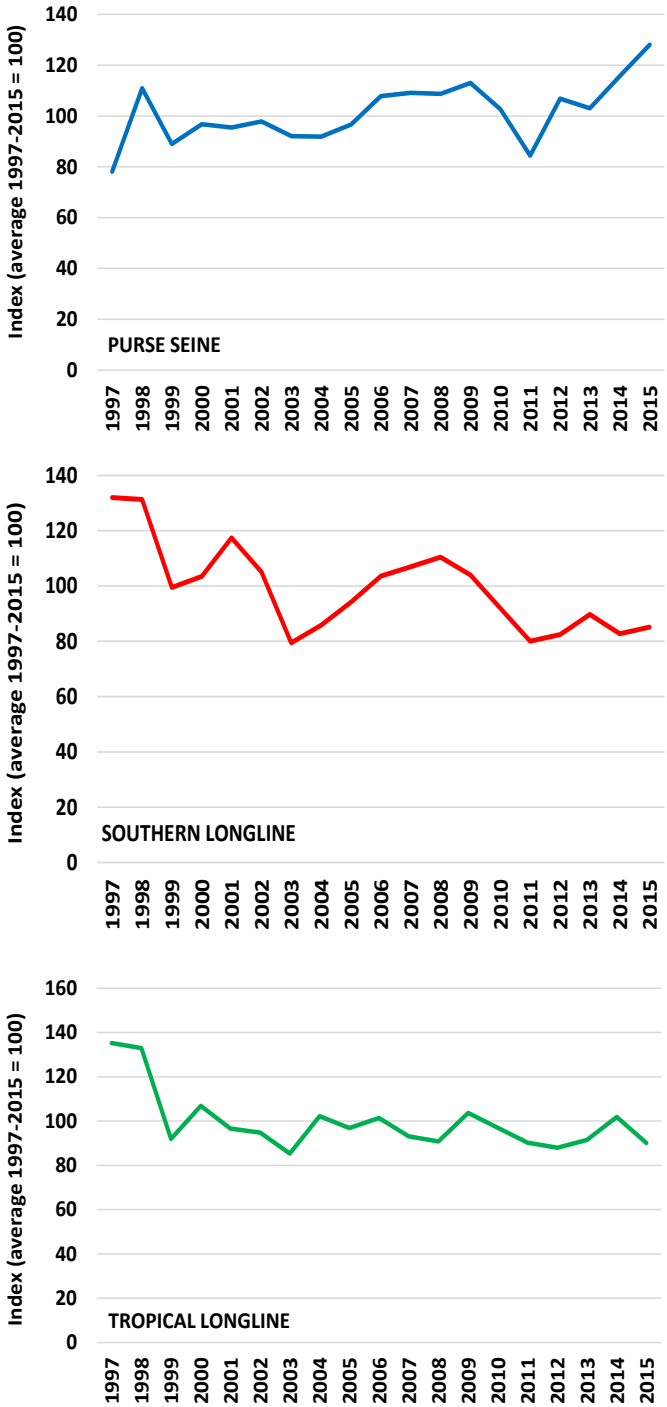


**Figure 13: Catch rate indices**

## Fishing costs

The only available time series in relation to fishing costs is for fuel. This restricts the ability to estimate a fishing cost index as fishing costs are determined by a number of factors besides fuel including wages, provisions and, in longline fisheries, bait. However, fuel is the single most important operational cost across all fleets, subject to the largest fluctuations across all cost categories and, hence, a major determinant in the change in fishing costs over time. Given these factors the approach used in this study is to assume that nominal fishing costs, aside from fuel, have increased at the same rate as the US CPI, that is, that real non-fuel fishing costs have remained constant over time. If this is not the case and real non-fuel costs have risen faster (slower) than the CPI rate the economic conditions index will be lower (higher) in more recent years than would actually be the case.

### *Fuel costs*

The Singapore marine diesel oil (MDO) price is a good indicator of prices paid for fuel by purse seine and longline vessels operating in the region and is used to examine fuel cost trends. Fuel prices from March 2011 to June 2014 were consistently between $900 and $1,000 per metric tonne before beginning a sharp decline. Prices in 2015 averaged $485/mt and have declined further in 2016 to average around $430/mt for the year to the end of October.

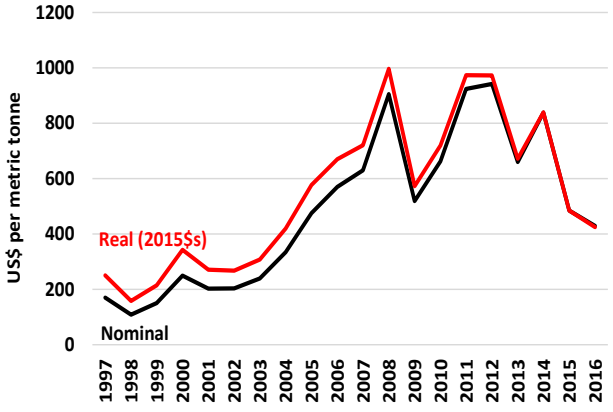


**Figure 14: Singapore marine diesel oil (MDO) nominal and real price series**

***Note***: 2016 for period to October 31

***Source***: www.bunkerworld.com/prices/port/sg/sin/

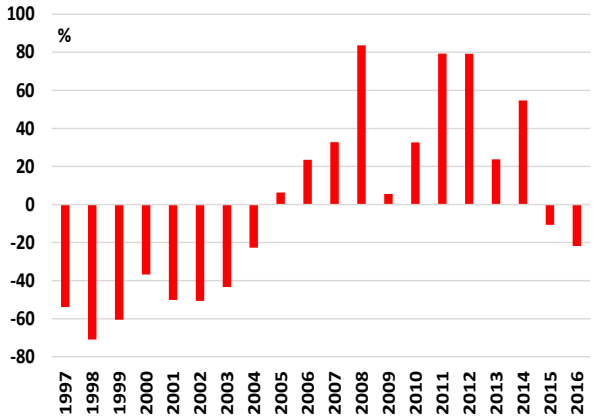


**Figure 15: Difference in real USD of Singapore marine diesel oil (MDO) with average price since 1997**

As previously outlined the fishing cost index uses information on the proportion of total production cost that relate to fuel to develop a constant factor to represent real non-fuel costs (which as previously outlined are assumed to remain constant over time) and then combined with the Singapore MDO real price index series to determine a total real cost index.

Information on fuel cost relative to total production cost over the period were obtained from several sources[7]. For the purse seine fishery the information obtained had 15% during 1997, 52% in 2006, and 33% in 2009. For the southern albacore fishery 15% in 2001, 40% in 2006 and 27% in 2013. Based on this information a constant factor of 200 was derived for the purse seine fishing cost index while for the southern albacore longline fishery 225. The latter was assumed to be similar to that for the tropical longline fishery. Figure 16 shows the cost indices obtained.

[7] Including Krampe, P. (2006), Rising fuel prices and its impact on the tuna industry, Paper presented to Bangkok Tuna 2006; [7] Arita, S. and Pan, M. (2013), Cost-earnings Study of the American Samoa longline fishery: based on Vessel Operations in 2009, WCPFC-SC9-2013/MI-WP-06, http://www.wcpfc.int/node/4734

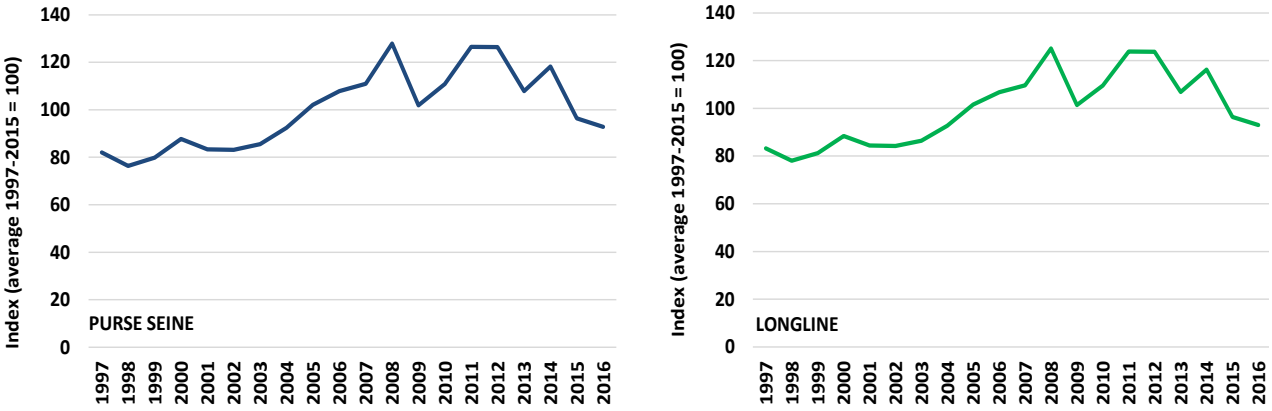


**Figure 16: Cost indices**

## Economic conditions indices

The economic conditions index (ECI) for each fishery and the variance against the average for each component indices outlined above are shown in Figure 17. An illustration of the influence of each of the component indices on each ECI in a given year is provided in Figure 17. Taking the southern longline fishery, for example, from Figure 17 it can be seen that in 2012 the economic index was at 80, 20% below that averaged over the period 1997-2015. As also shown this decline occurred despite prices being 24% higher than average as fishing costs were 22% higher and catch rates 20% lower than average.

For the southern longline fishery it can be seen that economic conditions in 2011 and 2012 were relatively poor as a result of low catch rates and high real fuel prices despite the fact that real fish prices were, respectively, at the second highest and highest levels over the period. In 2013 and 2014 with fish prices around or below average levels economic conditions deteriorated to period lows. While there is significant variability in economic conditions in the fishery the reductions in catch rates seen since 2011, if sustained, are likely to see future relatively good economic conditions occurring at levels around that averaged between 1997 and 2014 at best and economic conditions in future relatively poor years at levels around or below that seen in 2013 and 2014. With recent significant declines in fuel prices, which has returned fishing costs to around their period average, and fish prices also being around the period average significant improvements in economic conditions occurred in 2015. With further falls in fuel cost economic conditions may have continued to improve in 2016. However, there is no sign that the persistent low catch rates seen since 2011 have improved and if this continues into the future relatively good economic conditions will likely occur at levels that to date would have been deemed average and future relatively poor economic conditions at levels around or below that seen in 2013 and 2014. If good economic conditions are what used to be average economic conditions and poor economic conditions occur more frequently, as is likely if relatively low catch rates continue, many fleets from PICTs will likely struggle to be economically viable in all but times of good prices and low fuel costs.

Economic conditions in the tropical longline fishery have also consistently been below average since 2011. While different factors have driven this result in different years it is predominantly caused by relatively low catch rates and relatively low unit prices for the catch due, at least in part, to the decline in the proportion of the catch made up by bigeye, the highest per unit value species.

The purse seine fishery, however, displays a different picture to that of the longline fisheries with movement in fish prices appearing to be the greatest determinant of changes to economic conditions in the fishery and catch rates having the least impact and, unlike the longline fishery, not displaying a

consistent downward trend that drives down economic conditions over time. The purse seine index also illustrates the exceptionally good economic conditions that existed in the fishery between 2012 and 2013 which was driven by high prices which more than offset higher costs due to the elevated price of fuel. The index also shows the return to more average conditions in 2014 as fish prices declined. While prices declined further in 2015 to be below average levels, falling costs and higher catch rates more than offset this and economic conditions rose.

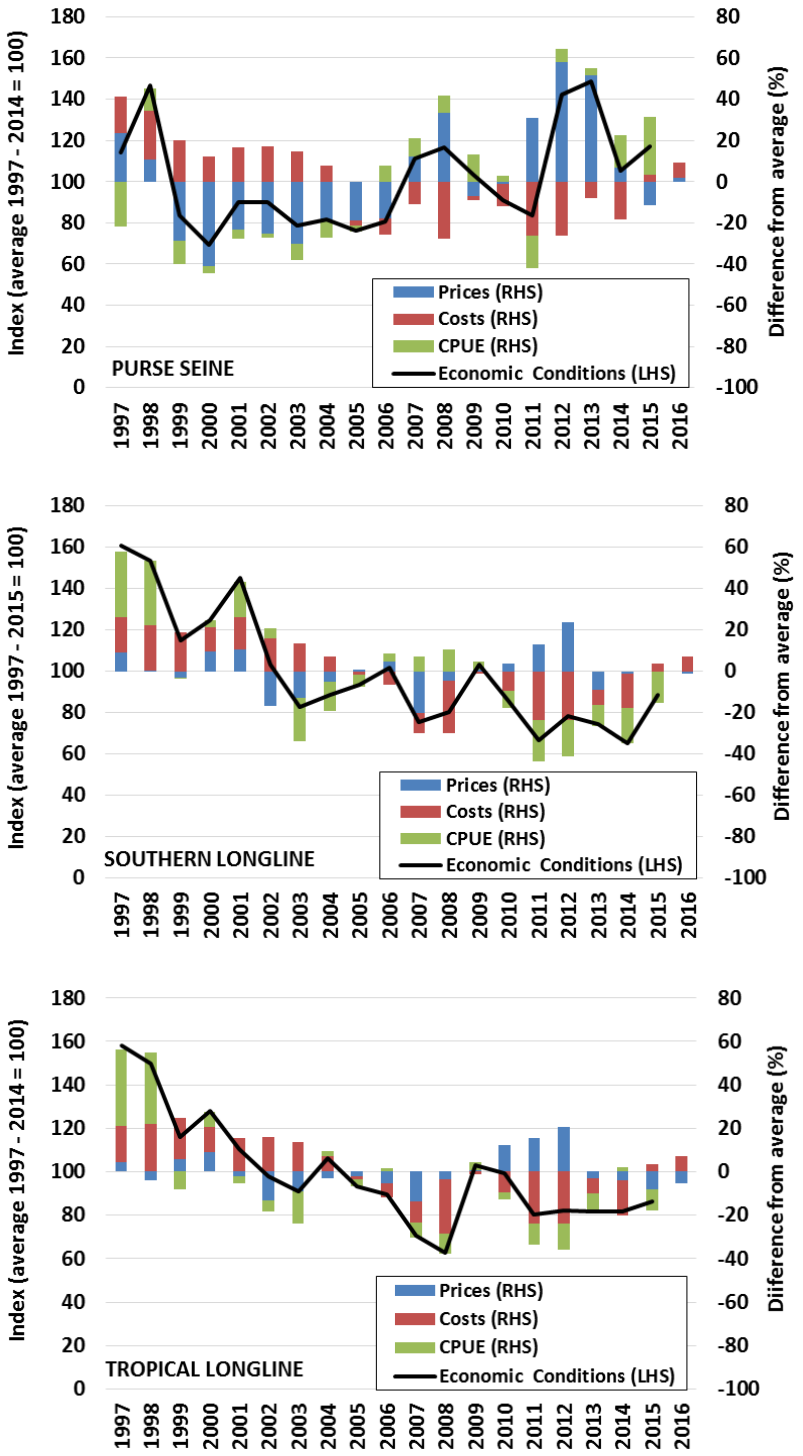


**Figure 17: Fishery economic conditions indices (LHS) and variance of component indices against average (1997-2015) conditions**

## Contributions to the economies of FFA members

The tuna fisheries of the WCPO and associated industries make significant contributions to the economies of FFA member countries through, for example, government revenue, employment and exports. In this section a range of indicators and estimates of these contributions are presented. Before presenting this data, however, comparative costs between processors based in FFA member countries and competitors based in Asia are presented to illustrate some of the constraints faced in the development of this sector or in progressing the strategies of "fisheries hub" development and "value-adding" of the new Roadmap. [8]

### Processing cost factor comparisons

Proximity to the raw material, the major comparative advantage over processors based outside of the region has not proven to be a sufficient advantage in itself to generate an expansion of domestic processing. Country specific and regional impediments include, but are not limited to: a lack of raw material supplies, logistical issues, small domestic markets, lack of appropriate infrastructure resulting in market access issues, the lack of economies of scale and higher utility and other production costs.

The cost of labour (measured as the cost per unit of product processed which takes into consideration both the wage rate and labour productivity), utilities, transportation and other services in the FFA member countries is generally higher, and in some cases significantly higher, than in competitor countries. Figure 18 provides a relative comparison of costs and usage rates for various production inputs between FFA and Asian tuna loin processing with FFA levels shown as a multiple of that seen in Asia (the Asian average is based on Thailand, 2 centres in China, Vietnam and Indonesia while the average for FFA processing is based on Solomon Is, Wewak PNG, Fiji, Marshalls and Pohnpei). For example, the costs of labour, electricity, fresh water and boiler fuel per tonne processed in FFA member countries respectively are 3.1, 7.1, 4.8 and 2.8 times those in Asia. Further, labour efficiency (measured as the number of fish cleaned per 8 hour shift per cleaner) is 10% lower in FFA member countries compared with Asia (represented as a multiple of 0.9 in Figure 18) and the total cost per tonne processed in FFA member countries is 3.7 times that in Asia.

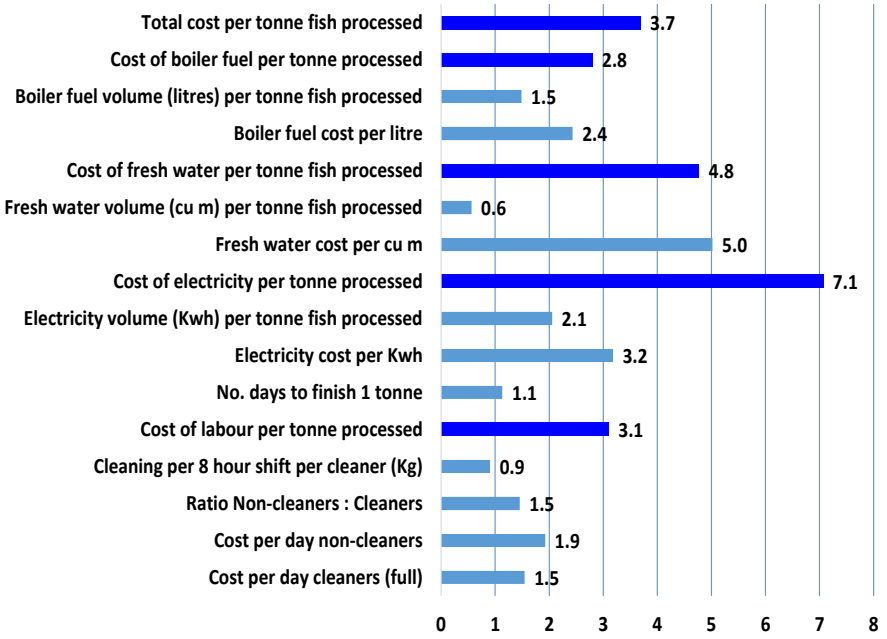


**Figure 18: FFA multiples of average Asian processing cost and efficiency rates**

*Source:* Pacific Tuna Forum, Nadi, Fiji, September 2015

[8] It is important to note that in a number of instances data was not provided by industry or government departments/authorities as part of the data collection process associated with the compilation of this report and were not available through alternative sources and in such cases estimates have been made by FFA based on institutional knowledge and anecdotal information.

## Processing volumes

The estimated annual volume of tuna processed in the FFA member countries was around 160,000 tonnes in 2015, a slight decline from the 163,000 tonnes in 2014 but significantly above that seen before 2013.[9] The volume processed in FFA countries in 2015 represents 34% of FFA fleet catch within FFA waters and 11% of total fleet catches within FFA waters.

Purse seine catch is usually canned or loined while longline catch is processed into fresh/frozen and value-added products mostly for sashimi and non-canned use. Processing of the purse seine catch is undertaken in PNG, Solomon Islands and Marshall Islands. Processing of longline catch occurs largely in Fiji including loining and fresh/frozen sashimi and non-canned use value adding.

**Table 1. Estimated onshore processed volume in FFA states, 2009-2015 in thousands of tonnes**

| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|
| Cook Is | 0.4 | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 | 0.2 |
| FSM | 0.7 | 0.7 | 0.2 | 0.1 | 1.9 | 2.8 | 2.8 |
| Fiji | 44 | 9.3 | 8.7 | 14 | 34 | 35 | 35 |
| Kiribati | 9.0 | 1.0 | 3.0 | 31 | 0.2 | 0.2 | 0.8 |
| Marshall Is | 2.0 | 7.2 | 9.5 | 5.4 | 12 | 13 | 10 |
| Palau | 0.3 | 0.6 | 2.2 | 2.2 | 3.1 | 2.5 | 1.2 |
| PNG | 57 | 50 | 52 | 63 | 67 | 67 | 67 |
| Samoa | 2.3 | 4.3 | 1.9 | 2.7 | 2.2 | 1.3 | 1.2 |
| Solomon Is | 12 | 16 | 20 | 13 | 25 | 41 | 39 |
| Tonga | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.3 | 0.4 |
| Vanuatu | 0.3 | 0.2 | 0.6 | 0.7 | 0.2 | 0.2 | 0 |
| **Total** | **73** | **78** | **86** | **87** | **146** | **163** | **157** |

## Employment

Total employment related to tuna fisheries in FFA member countries for 2015 is estimated at 23,000 a slight increase on 2014 (Figure 19). Growth in local crew and the onshore processing sector employment has driven a trend of increasing employment levels. In 2015, however, declines in these areas were seen although these were more than offset by a more than doubling in offshore crew. These trends were driven by changes in reported employment from PNG where crew employed on local vessels almost trebled from 727 in 2014 to 2,077 in 2015; crew on foreign vessels increased 23% to 2,093 from 1,707 while employment in the processing/packing sectors declined by 16% to 6,342. The processing sector workforce is comprised of between 70% and 90% of female workers and accounts for more than 50% of total tuna related employment. Of the 10,500 employed in the processing sector PNG accounts for 60%, Fiji 18% and Solomon Islands 13%.

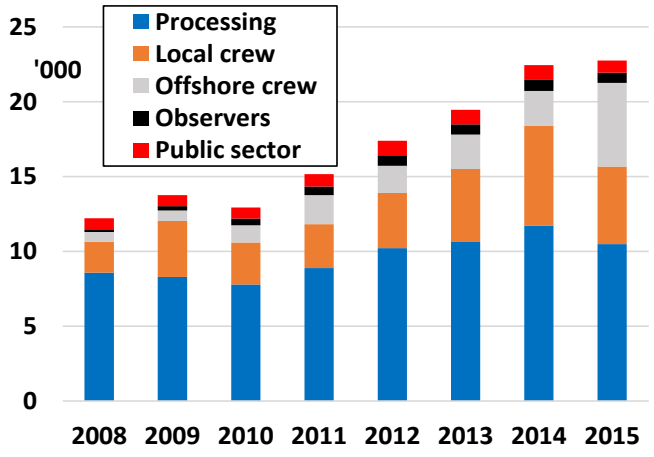


**Figure 19: Tuna fisheries related employment**

[9] A significant downward revision has been made to the 2013 and 2014 estimates based on newly available data.

## Exports

Estimates of export performance of FFA member countries are based on import data from the three major export destinations for tuna from the region, that is, the EU, US and Japan markets. The value of exports from FFA member countries to these markets deteriorated further in 2015 down 26% to $246 million from $331 million in 2014 and down 36% from the peak of $383 million in 2012. Loin and canned tuna products dominate the trade between FFA member countries and the three major partners. All products registered declines in 2015 as in 2014; loins by 35%, canned tuna products 14% and non-canned tuna products 19% (Figure 20) as a result of declines in unit prices following declines in raw material prices.

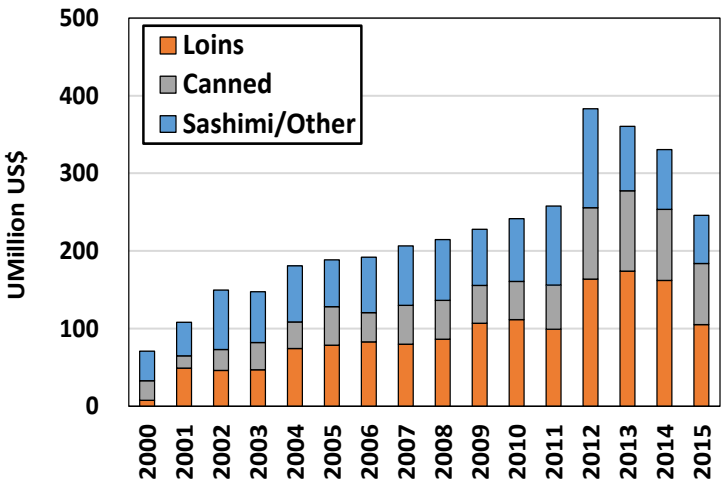


**Figure 20: Import trends into major markets by product group**

*Sources: Eurostat; Personal communication, NMFS; http://www.customs.go.jp/toukei/download/index_d011_e.htm*

The value of EU imports (c.i.f.) declined 37% to $123 million reflecting the substantial drops in the value of loin imports and canned tuna imports, 62% and 14% respectively. The principal EU imports from FFA member countries are canned tuna and increasingly loins. There have been minimal imports of fresh and frozen tuna products. Fiji, Papua New Guinea and Solomon Islands currently are the only suppliers with preferential access under IEPA[10] (Fiji and PNG) and EBA[11] (Solomon Islands).

The value of US imports (f.a.s.) increased moderately, up 5%, to $85 million in 2015 as tuna loin imports rose 4% to $69 million and fresh/frozen non-canned products rose 8% to more than $16 million. Tuna trade with the US is presently dominated by tuna loins with Fiji as the principal supplier. Solomon Islands and Marshall Islands are also important suppliers. Prospects for canned tuna trade to the US market is limited under present tariff protections accorded to domestic processors. The sashimi/non-canned exports to the US consist mainly of fresh/frozen albacore, bigeye and yellowfin

[10] Interim Economic Partnership Agreement: In view of the expiry of the trade provisions set out in the Cotonou Agreement on 31 December 2007, the two Pacific ACP countries with any significant exports to the EU - Papua New Guinea (PNG) and Fiji - agreed an interim EPA with the EU in late 2007. Pending the conclusion of a comprehensive EPA between the Pacific States and the EU, the agreement maintains and improves PNG's and Fiji's preferences in the EU market for their main exports and ensures that they benefit from improved Rules of Origin for key products like canned tuna. The agreement was signed by the Parties in the latter half of 2009. Provisional application of the agreement for PNG started on 20 December 2009. Fiji notified provisional application of the agreement in July 2014. The European Parliament approved the agreement on 19 February 2011, while the National Parliament of Papua New Guinea ratified it on 25 May 2011 (http://trade.ec.europa.eu/).

[11] Everything But Arms: an initiative of the European Union under which all imports to the EU from the Least Developed Countries (LDCs) are duty-free and quota-free, with the exception of armaments. The aim of the scheme is to encourage the development of the world's poorest countries. EBA entered into force on 5 March 2001 and is part of the EU Generalized System of Preferences (GSP). Kiribati, Samoa, Solomon Islands, Tuvalu and Vanuatu all benefit from the EBA. The non-LDCs that did not join the interim EPA (Cook Islands, Tonga, Marshall Islands, Micronesia, Niue, Palau and Nauru) have benefited from the EU's regular Generalised System of Preferences since 1 January 2008 (http://trade.ec.europa.eu/).

and value added tuna products. There has been noticeable growth in the value of these imports over the years, with Fiji the main supplier.

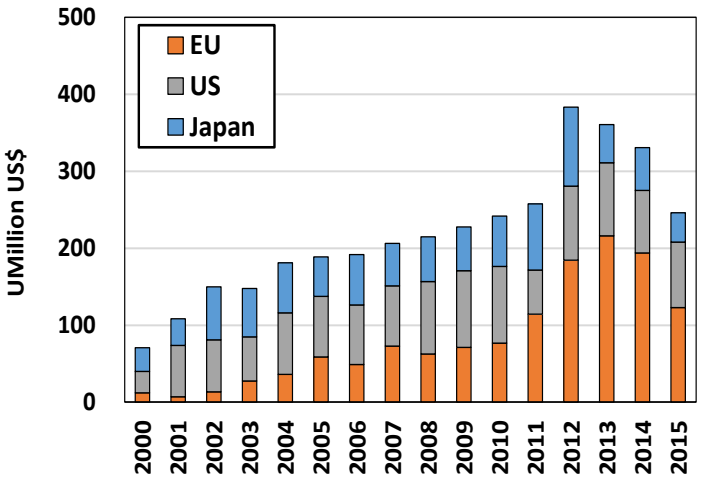


**Figure 21: Import trends of FFA tuna products by major markets**

*Sources: Eurostat; Personal communication, NMFS; http://www.customs.go.jp/toukei/download/index_d011_e.htm*

The value of Japanese imports (c.i.f.) from FFA member countries declined to $38 million in 2015, its lowest level in recent years, representing a drop of 32% from 2014 and 63% from the peak of $102 million in 2012. While this is in part attributable to the long-term declining trend of sashimi consumption in Japan, the recent weakening of the Japanese Yen against the US dollar has also significantly contributed to the decline in the US dollar value. The Japanese market, as the major destination for tuna sashimi grade products, is of great importance to countries with longline fleets targeting sashimi grade product. Fiji and Palau traditionally have been main suppliers to this market but other FFA countries have recently entered and increased their trade of fresh/frozen value-added products.

In addition to the three major markets addressed above Thailand, the world's largest canning raw material importer, also has significant imports from the region which totalled $212,400 million (c.i.f) in 2015 (170,000 tonnes with unit value at $1,247 per tonne). This is 11% up on the $191 million (127,200 tonnes at $1,500 per tonne) in 2014 but 44% down on the $382 million (181,444 tonnes at $2,104) in 2013. The increase over 2014 came from the increase in import volume, primarily from the substantial increases in imports from the PNG and Kiribati fleets. The significant decline against 2013 on the other hand was primarily driven by a sharp decline in prices.

## Access fees paid by foreign vessels

Foreign vessels are defined as vessels that are based outside of the country in question, whether they are based in a DWFN or another FFA member. Access fees includes payment by FSMA vessels to countries that are not the vessel's Home Party but not the fees paid to the Home Party itself. Government revenues generated by locally based and domestic vessels are examined in addressing the economic contributions of the harvesting and processing sectors.

Access to data on government revenues from fees paid for fishery access has improved in recent years, allowing estimation at country level. However, gaps remain in some of the data sets and best estimates based on institutional knowledge and anecdotal information have been made. For example, whereas the estimates for the bilateral purse seine fleets is relatively robust under the VDS, estimates for the longline fleets remain relatively weak and are simply based on 5% of the landed catch value. Foreign access fee revenue has been estimated as follows:

- Foreign longline vessels: 5% of the value of the catch taken by these vessels in an FFA member's EEZ.
- US Treaty access fee revenue: based on the disbursed amount paid with two non-calendar licensing period payments averaged to estimate a calendar period payment. Prior to 2012 this was in the vicinity $18-24 million per year, rising to $45 million in 2012/2013, $63 million in 2013/2014 and $90 million for 2015.

- FSMA fees: based on disbursed payments to operate in the EEZs of FSMA Parties (which does not include payments to Home Parties) by FSMA administrator, adjusted to calendar periods by averaging non-calendar period payments.
- Foreign bilateral purse seine vessels: Before 2012, 6% of the value of the catch taken in an FFA member's EEZ. From 2012 onwards for some countries it was the multiple of allocated PAEs and the minimum benchmark price set by the PNA. For some countries for which total access fees are available recently, the bilateral purse seine fee is estimated as the remainder of total access after deductions of US Treaty access, FSMA access and the longline access estimates. For reference the purse seine VDS minimum benchmark price was initially set at $5,000 per day rate for 2012, then increased to $6,000 for 2014 and increased again to $8,000 for 2015 where it remains.

Access fee revenue collected by FFA member governments from foreign purse seine fleets in 2015 is estimated at over $450 million. This represents an increase of $76 million or 20% from 2014 and an 800% increase on a decade ago. The total amount collected from foreign purse seine vessels 10 years prior (in 2005) was around $55 million. Estimated fees from foreign longline fleets for 2015 came at $15 million, broadly comparable to the fees in 2010 but significantly below 2011 to 2014 levels despite the noted shift in longline catches in the waters of FFA members as outlined previously in this report. This was driven by a reduction in the USD value of the catch taken by foreign longline vessels in FFA members' national waters which in turn was driven by declines in catch (resulting from both an increase in the proportion of the longline fleet basing in FFA countries and declines in catch rates) and average USD prices.

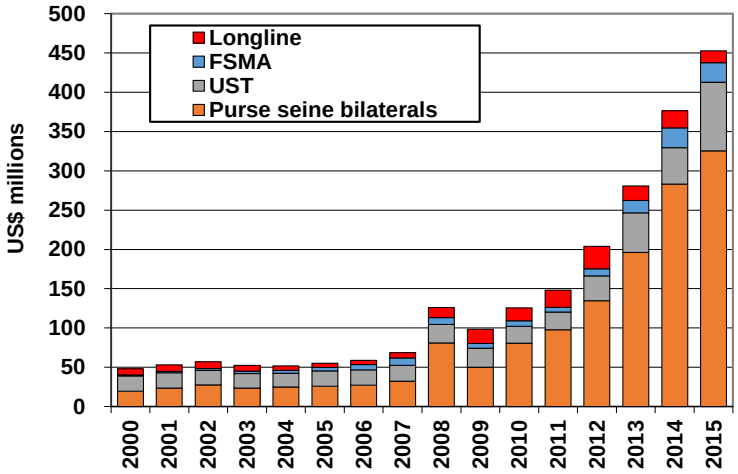


**Figure 22: Access fees paid by foreign vessels**

## Contribution to GDP of the harvest sector

In this section estimates are provided of the contribution of domestic and locally-based fleets to the GDP of the country they are flagged to or are based in. The approach used to estimate this value is referred to as the value added approach under the System of National Accounts (SNA) production approach. As noted in Gillett and Lightfoot (2002)

> *"The production approach to estimating fishing contribution to GDP requires two basic sets of data: (i) value of gross output of fishing, and (ii) intermediate costs. It is usually convenient to express intermediate costs as a proportion of the gross output. For example, in the case of small-scale fishing, using motorized boats, the fuel, bait, provisions, and maintenance are all intermediate costs. If total value of the catch is $1,000 and the sum of the intermediate costs is $400, then the proportion of the gross output attributable to intermediate costs is 40%. Therefore, the value added by small-scale fishing using motorized boats is $1,000*(1-0.40) = $600. In this example, the intermediate cost ratio is 0.40 and its reciprocal, 0.60, is the VAR. It should be noted that intermediate costs refer to*

*operating expenses. Expenditures on large capital items, such as engines, are capital expenditures and are thus not counted as intermediate costs.*

*In practice, each operator is likely to have a different VAR. However, in the preparation of national accounts, it is usually not possible to individually measure each operation. The normal practice is to estimate an average VAR for each type of activity for each country."*[12]

Contributions to GDP were derived by obtaining the estimated delivered values of fleet production by local and locally-based fleets, reducing these by 15% and 25% for purse seine and longline values respectively to get dockside values, inflating the same by 5% and 10% respectively to account for by-catch value, and applying the estimated country and fleet-specific value-added-ratios to the respective catch values following the approach used by Gillett (2008). The value added ratios were obtained from FFA studies[13] conducted under DEVFISH to estimate the economic contributions of domestic longline and purse seine fleets to FFA members. Flag of convenience vessels and some joint-venture vessels known to operate and base outside of flag state port have VARs of zero and, therefore, make no contribution to the respective country's GDP. The contributions presented in this section reflect those of the harvesting sector alone and do not include any contributions from processing, vessels support or other sectors.

Recent revisions have been made to the estimated harvest sector contribution to GDP. While these in part stem from revisions to catch estimates for the respective national fleets, the three main changes were for the PNG, Solomon Islands and Marshall Islands national fleet contributions due respectively to changes in the data source used, an adjustment to the longline value added ratio and adjustments to longline catches used in the estimations.

The overall contribution of the harvest sector of the tuna fishery to GDP declined to $267 million in 2015 from $308 million in 2014, a reduction of 13% and the third consecutive annual decline. This decline from the peak of $465 million in 2012 is driven by reductions in the value of sector's production which in turn has been driven by falls in fish prices. In real terms (that is, adjusting for inflation), the harvest sector's contribution to GDP in 2015 is now at a level similar to that seen between 2007 and 2010 (Figure 23).

Purse seine vessels account for about 80 per cent of the contributions to GDP while longline vessels make up the bulk of the remainder.

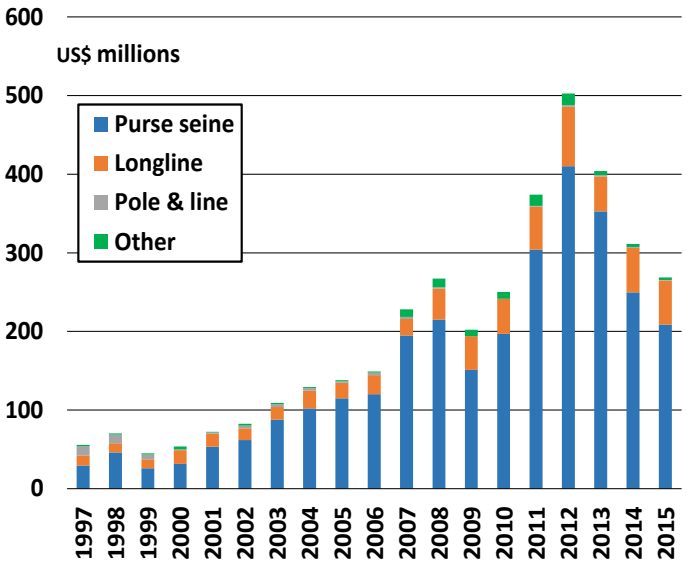


**Figure 23: Harvest Sector Contribution to GDP by gear type**

[12] Gillett, R. and C. Lightfoot (2002). *The Contribution of Fisheries to the Economies of Pacific Island Countries*. Pacific Studies Series, Asian Development Bank, World Bank, Forum Fisheries Agency, Secretariat of the Pacific Community

[13] (1) Philipson. P. (2007), *An assessment of the economic benefits of tuna purse seine fishing and onshore processing of catches*, Forum Fisheries Agency, Pacific Island Forum Secretariat and Secretariat of the Pacific Community; (2) Philipson, P. (2006), *An assessment of development options in the longline fishery*, Forum Fisheries Agency, Pacific Island Forum Secretariat and Secretariat of the Pacific Community.

## Economic benefits from tuna harvesting and on-shore processing sectors

This section presents a range of measures of the economic benefits generated by distinct or combined harvesting and/or onshore processing entities in the longline fishery for fresh or frozen exporting, and in the purse seine fishery for transhipment, exporting, loining or combined activities. The measures of economic benefit provided are:

- **Contribution to GDP (**also referred to as Value-added**)** – the difference between the value of goods and the cost of materials or supplies used in producing them [intermediate costs];
- **Balance of payments –** export sales less the imported content of local purchases (for example fuel) and direct imports and off shore services, any local sales are treated as import substitution;
- **Employment earnings** - includes expatriates resident in the country and employed by the enterprise;
- **Government revenue -** all **government revenue** streams that result from the operations - indirect government revenue and foreign access fee payments are excluded, and;
- **Net local purchases** – local purchases reduced by an amount representing an estimate of the off-shore content of the products or services purchased.

The approached used is based on updated estimated rates of economic benefit per tonne from different operational models, including, transhipping at a domestic port, catch brought ashore for simple fresh round exporting and value-added processing obtained from previous FFA studies[14] and estimated levels of throughput under the different operational models.

An estimated 524,000 tonnes of catch by FFA national fleets (excluding catch by fleets known to have their centre of economic interests offshore) reportedly occurred during 2015. Of this 157,000 tonnes was processed in some form onshore in FFA member countries - down slightly from the estimated 163,000 tonnes processed in 2014. The estimated economic benefits generated by domestic harvesting and on-shore processing activities over the period 2013 to 2015 are s summarised in Table 2 below. As can be seen it is estimated that in 2015 the domestic harvest and processing sectors in the region:

- Made a contribution to GDP of $453 million**;**
- Generated a $571 million benefit to the balance of payments in the form of net exports;
- Paid $46 million to national employees;
- Contributed $54 million to government revenue in the form of license revenue and other payments, and;
- Spent $120 million on the purchase of locally produced goods and services.

[14] The per tonne benefit rates were obtained primarily from *ibid*. However, where more recent country specific studies providing this information are available these are used. Given the length of time since the studies were conducted, adjustments were made to account for the changes in prices over time for fuel, other operational costs and fish prices. In the case of fuel costs the adjustment factor was the relative change in the Singapore marine diesel oil price (MDO) between 2006 and 2014, other operational costs were adjusted using the change in US CPI over the same period while on the revenue side the relative changes in the relevant composite prices series for the respective gear type catches were used. In addition adjustments were also made to the government revenue rate to account for the revenue obtained from the allocation of VDS days by Home Parties to their sponsored vessels as the estimates of government revenues obtained in the earlier studies were made before the introduction of the VDS.

**Table 2: Economic contributions of the domestic harvest and processing sectors (US$ millions)**

| Year | Contribution to GDP | Balance of payments | Employment earnings | Government revenue | Net local purchases |
|---|---|---|---|---|---|
| 2013 | 431 | 531 | 39 | 49 | 110 |
| 2014 | 451 | 569 | 52 | 54 | 125 |
| 2015 | 453 | 571 | 46 | 54 | 120 |

# Compendium of Economic and Development Statistics

This section provides a selection of statistics in relation to the tuna fisheries of the Western and Central Pacific Ocean. These data are also available in excel spreadsheets here.

The first set of tables provide information of global catch and WCPO catch and catch value by area, species and gear type. Additional information on the breakdown of the WCPO catch and catch value can be found in excel spreadsheet format here.

The second set of tables provide prices from a number of markets for albacore, bigeye, skipjack, yellowfin and swordfish. Also provided are the Singapore Marine Diesel fuel price, the exchange rate between the US dollar (USD) and Japanese Yen (JPY) and the all-city US consumer prices index (CPI) used in deriving the economic indications presented previously.

The final set of tables provide country level data of the catch and value of the catch taken in each member's EEZ and by their national fleet and the contribution that the tuna harvest and related sectors make to the economies of FFA member countries. These contributions are:

- **Contribution to GDP (**also referred to as Value-added**) –**
    - **Harvest sector**, that is, the contribution of domestic and locally-based fleets to the GDP of the country they are flagged to or are based in.[15] The approach used to estimate this value is referred to as the value added approach under the System of National Accounts (SNA) production approach as outlined previously.
    - **Harvest and on-shore processing combined.** Based on value added per tonne by operational model and throughput by operational model as previously outlined.[16]
- **Government revenue –**
    - From access arrangements with foreign vessels broken down by payments from the US Treaty, FSM arrangement, purse seine bilateral and other agreements and longline vessels.

[15] Core concepts in defining what is included in the GDP of a country include the concepts of "residency" and "centre of economic interest". An enterprise, for example, a fleet under joint venture or charter arrangements, is said to have a centre of economic interest and to be a resident unit of a country (economic territory) when the enterprise is engaged in a significant amount of production of goods and/or services there or when the enterprise owns and maintains at least one production unit there and plans to operate the establishment indefinitely or over a long period of time (at least a year). If these criteria apply, according to the 1993 SNA, production undertaken by a resident unit outside its economic territory (for example, catch taken elsewhere other than within EEZ), is to be treated as production of the host country in so far as the enterprise is resident of that country which would usually involve maintenance of a complete and separate set of accounts of local activities (i.e., financial statements and transactions with parent enterprise), pays income taxes to the host country, has a significant physical presence, etc. (*Report of the UNSD/FAO Joint Workshop on Integrated Environmental and Economic Accounting for Fisheries, New York, June 1999*)).
These concepts are especially important in several FFA member countries because of the presence of locally based foreign longliners or purse seiners and the fact that these, especially in the case of purse seiners, fish in the zones of other countries (and vice versa where FFA domestically flagged vessels are based abroad).
Consistent with the above, the catch of locally based foreign fleets are treated as part of national production of the FFA host countries and conversely, production of FFA fleets that are deemed offshore-based are excluded, for example, the purse seine fleets of Kiribati, Tuvalu and Vanuatu.

[16] In so omitting the national fleet's production with centres of economic interests deemed abroad, it follows that the approach taken to value the combined economic benefits from harvesting and onshore processing are also omitted which calls for estimates differently based.

    - From domestic vessel licensing and direct payments to government by both the harvest sector and on-shore processing sectors.

- **Employment** – number employed by sector and total employment earnings (which includes earnings of expatriates resident in the country);
- **Balance of payments –** export sales less the imported content of local purchases (for example fuel) and direct imports and off shore services, any local sales are treated as import substitution;
- **Net local purchases** – local purchases reduced by an amount representing an estimate of the off-shore content of the products or services purchased.

# A Catch ('000 metric tonnes) and catch values (US$ millions)

## A1 Global catch by Ocean

| | Western Pacific | Eastern Pacific | Atlantic | Indian | Total |
|---|---|---|---|---|---|
| 1970 | 633 | 293 | 237 | 122 | 1286 |
| 1971 | 623 | 305 | 291 | 116 | 1335 |
| 1972 | 515 | 311 | 302 | 109 | 1237 |
| 1973 | 633 | 339 | 305 | 127 | 1404 |
| 1974 | 649 | 371 | 358 | 151 | 1529 |
| 1975 | 578 | 413 | 302 | 128 | 1421 |
| 1976 | 719 | 466 | 317 | 137 | 1639 |
| 1977 | 743 | 403 | 373 | 153 | 1671 |
| 1978 | 791 | 474 | 369 | 167 | 1801 |
| 1979 | 760 | 410 | 338 | 152 | 1659 |
| 1980 | 828 | 395 | 368 | 161 | 1,752 |
| 1981 | 802 | 393 | 417 | 171 | 1,782 |
| 1982 | 856 | 305 | 469 | 206 | 1,835 |
| 1983 | 1,062 | 242 | 429 | 219 | 1,952 |
| 1984 | 1,152 | 290 | 372 | 300 | 2,115 |
| 1985 | 1,006 | 365 | 430 | 349 | 2,150 |
| 1986 | 1,142 | 470 | 423 | 404 | 2,439 |
| 1987 | 1,139 | 467 | 405 | 445 | 2,455 |
| 1988 | 1,266 | 479 | 415 | 542 | 2,701 |
| 1989 | 1,304 | 481 | 426 | 562 | 2,773 |
| 1990 | 1,425 | 494 | 491 | 596 | 3,007 |
| 1991 | 1,650 | 452 | 545 | 606 | 3,253 |
| 1992 | 1,578 | 455 | 505 | 709 | 3,247 |
| 1993 | 1,468 | 439 | 560 | 845 | 3,312 |
| 1994 | 1,605 | 445 | 572 | 834 | 3,457 |
| 1995 | 1,621 | 493 | 525 | 850 | 3,487 |
| 1996 | 1,625 | 494 | 487 | 853 | 3,459 |
| 1997 | 1,668 | 563 | 456 | 876 | 3,563 |
| 1998 | 2,044 | 536 | 473 | 858 | 3,911 |
| 1999 | 1,839 | 678 | 506 | 997 | 4,019 |
| 2000 | 1,951 | 653 | 462 | 943 | 4,008 |
| 2001 | 1,860 | 725 | 478 | 908 | 3,972 |
| 2002 | 2,040 | 756 | 393 | 1,017 | 4,206 |
| 2003 | 2,033 | 846 | 427 | 1,106 | 4,412 |
| 2004 | 2,222 | 644 | 445 | 1,162 | 4,473 |
| 2005 | 2,188 | 684 | 400 | 1,233 | 4,504 |
| 2006 | 2,226 | 626 | 371 | 1,203 | 4,427 |
| 2007 | 2,420 | 514 | 370 | 967 | 4,271 |
| 2008 | 2,472 | 624 | 363 | 918 | 4,378 |
| 2009 | 2,601 | 622 | 400 | 861 | 4,484 |
| 2010 | 2,495 | 540 | 423 | 855 | 4,312 |
| 2011 | 2,318 | 616 | 458 | 838 | 4,230 |
| 2012 | 2,649 | 627 | 486 | 893 | 4,655 |
| 2013 | 2,653 | 641 | 472 | 983 | 4,748 |
| 2014 | 2,881 | 649 | 449 | 960 | 4,938 |
| 2015 | 2,692 | 649 | 449 | 929 | 4,719 |

## A2 Global catch by species

| | Albacore | Bigeye | Skipjack | Yellowfin | Total |
|---|---|---|---|---|---|
| 1997 | 216 | 537 | 1,548 | 1,261 | 3,563 |
| 1998 | 233 | 517 | 1,819 | 1,342 | 3,911 |
| 1999 | 261 | 520 | 1,924 | 1,315 | 4,019 |
| 2000 | 230 | 519 | 1,945 | 1,314 | 4,008 |
| 2001 | 264 | 485 | 1,807 | 1,416 | 3,972 |
| 2002 | 267 | 514 | 2,024 | 1,400 | 4,206 |
| 2003 | 246 | 468 | 2,175 | 1,523 | 4,412 |
| 2004 | 238 | 527 | 2,195 | 1,512 | 4,473 |
| 2005 | 212 | 455 | 2,398 | 1,440 | 4,504 |
| 2006 | 228 | 461 | 2,556 | 1,182 | 4,427 |
| 2007 | 240 | 442 | 2,483 | 1,108 | 4,271 |
| 2008 | 204 | 437 | 2,512 | 1,224 | 4,378 |
| 2009 | 240 | 452 | 2,628 | 1,164 | 4,484 |
| 2010 | 236 | 391 | 2,462 | 1,224 | 4,312 |
| 2011 | 225 | 418 | 2,424 | 1,163 | 4,230 |
| 2012 | 265 | 453 | 2,634 | 1,303 | 4,655 |
| 2013 | 253 | 412 | 2,802 | 1,280 | 4,748 |
| 2014 | 254 | 423 | 2,918 | 1,343 | 4,938 |
| 2015 | 244 | 401 | 2,716 | 1,358 | 4,719 |

## A3 Global catch by gear type

| | Purse seine | Longline | Pole & line | Other | Total |
|---|---|---|---|---|---|
| 1997 | 1,953 | 675 | 516 | 418 | 3,563 |
| 1998 | 2,196 | 708 | 561 | 446 | 3,911 |
| 1999 | 2,271 | 673 | 591 | 486 | 4,019 |
| 2000 | 2,286 | 690 | 530 | 502 | 4,008 |
| 2001 | 2,272 | 718 | 516 | 467 | 3,972 |
| 2002 | 2,500 | 728 | 519 | 459 | 4,206 |
| 2003 | 2,647 | 704 | 534 | 526 | 4,412 |
| 2004 | 2,510 | 743 | 588 | 632 | 4,473 |
| 2005 | 2,716 | 688 | 544 | 557 | 4,504 |
| 2006 | 2,658 | 642 | 540 | 587 | 4,427 |
| 2007 | 2,559 | 636 | 499 | 578 | 4,271 |
| 2008 | 2,777 | 564 | 472 | 564 | 4,378 |
| 2009 | 2,853 | 589 | 451 | 591 | 4,484 |
| 2010 | 2,720 | 564 | 455 | 574 | 4,312 |
| 2011 | 2,655 | 539 | 464 | 572 | 4,230 |
| 2012 | 2,926 | 621 | 439 | 669 | 4,655 |
| 2013 | 3,057 | 576 | 428 | 686 | 4,748 |
| 2014 | 3,262 | 605 | 394 | 678 | 4,938 |
| 2015 | 2,989 | 562 | 410 | 758 | 4,719 |

## A4 WPCO catch by area

| | FFA member's national waters | Other national waters | International waters | Total |
|---|---|---|---|---|
| 1997 | 606 | 641 | 434 | 1,681 |
| 1998 | 782 | 720 | 562 | 2,064 |
| 1999 | 656 | 696 | 493 | 1,845 |
| 2000 | 777 | 758 | 437 | 1,972 |
| 2001 | 774 | 664 | 447 | 1,885 |
| 2002 | 896 | 656 | 512 | 2,064 |
| 2003 | 874 | 722 | 471 | 2,066 |
| 2004 | 893 | 836 | 514 | 2,244 |
| 2005 | 1,013 | 676 | 515 | 2,204 |
| 2006 | 1,111 | 724 | 413 | 2,248 |
| 2007 | 1,146 | 809 | 478 | 2,433 |
| 2008 | 1,216 | 822 | 450 | 2,487 |
| 2009 | 1,281 | 836 | 495 | 2,612 |
| 2010 | 1,534 | 733 | 246 | 2,514 |
| 2011 | 1,429 | 670 | 220 | 2,320 |
| 2012 | 1,683 | 742 | 248 | 2,673 |
| 2013 | 1,581 | 866 | 240 | 2,687 |
| 2014 | 1,759 | 833 | 289 | 2,881 |
| 2015 | 1,417 | 868 | 408 | 2,692 |

## A5 WCPO catch value by area

| | FFA member's national waters | Other national waters | International waters | Total |
|---|---|---|---|---|
| 1997 | 938 | 1,083 | 1,019 | 3,040 |
| 1998 | 1,051 | 1,103 | 1,115 | 3,269 |
| 1999 | 774 | 944 | 973 | 2,692 |
| 2000 | 798 | 988 | 921 | 2,707 |
| 2001 | 889 | 948 | 860 | 2,697 |
| 2002 | 923 | 891 | 949 | 2,763 |
| 2003 | 901 | 988 | 860 | 2,749 |
| 2004 | 1,048 | 1,237 | 1,043 | 3,329 |
| 2005 | 1,181 | 1,080 | 948 | 3,209 |
| 2006 | 1,394 | 1,192 | 905 | 3,492 |
| 2007 | 1,810 | 1,527 | 1,008 | 4,345 |
| 2008 | 2,407 | 1,858 | 1,244 | 5,509 |
| 2009 | 1,953 | 1,570 | 1,188 | 4,711 |
| 2010 | 2,483 | 1,525 | 957 | 4,965 |
| 2011 | 3,052 | 1,819 | 991 | 5,863 |
| 2012 | 4,190 | 2,174 | 1,108 | 7,472 |
| 2013 | 3,559 | 2,221 | 814 | 6,593 |
| 2014 | 3,199 | 1,795 | 796 | 5,790 |
| 2015 | 2,247 | 1,597 | 904 | 4,748 |

## A6 WPCO catch by species

| | Albacore | Bigeye | Skipjack | Yellowfin | Total |
|---|---|---|---|---|---|
| 1997 | 113 | 160 | 909 | 499 | 1,681 |
| 1998 | 112 | 173 | 1,170 | 610 | 2,064 |
| 1999 | 124 | 155 | 1,050 | 515 | 1,845 |
| 2000 | 101 | 142 | 1,160 | 569 | 1,972 |
| 2001 | 122 | 146 | 1,086 | 531 | 1,885 |
| 2002 | 148 | 166 | 1,260 | 490 | 2,064 |
| 2003 | 123 | 140 | 1,263 | 540 | 2,066 |
| 2004 | 122 | 189 | 1,357 | 576 | 2,244 |
| 2005 | 104 | 148 | 1,403 | 549 | 2,204 |
| 2006 | 105 | 157 | 1,504 | 482 | 2,248 |
| 2007 | 121 | 143 | 1,656 | 513 | 2,433 |
| 2008 | 104 | 151 | 1,628 | 604 | 2,487 |
| 2009 | 133 | 149 | 1,790 | 540 | 2,612 |
| 2010 | 125 | 137 | 1,696 | 555 | 2,514 |
| 2011 | 116 | 157 | 1,526 | 522 | 2,320 |
| 2012 | 139 | 163 | 1,762 | 610 | 2,673 |
| 2013 | 136 | 153 | 1,842 | 556 | 2,687 |
| 2014 | 124 | 159 | 2,003 | 595 | 2,881 |
| 2015 | 118 | 135 | 1,828 | 611 | 2,692 |

## A7 WCPO catch value by species

| | Albacore | Bigeye | Skipjack | Yellowfin | Total |
|---|---|---|---|---|---|
| 1997 | 248 | 630 | 1,137 | 1,025 | 3,040 |
| 1998 | 228 | 629 | 1,303 | 1,108 | 3,269 |
| 1999 | 237 | 686 | 906 | 862 | 2,692 |
| 2000 | 234 | 669 | 799 | 1,005 | 2,707 |
| 2001 | 303 | 553 | 931 | 909 | 2,697 |
| 2002 | 265 | 577 | 1,024 | 897 | 2,763 |
| 2003 | 232 | 547 | 960 | 1,010 | 2,749 |
| 2004 | 266 | 747 | 1,206 | 1,110 | 3,329 |
| 2005 | 254 | 585 | 1,278 | 1,091 | 3,209 |
| 2006 | 281 | 651 | 1,487 | 1,073 | 3,492 |
| 2007 | 236 | 657 | 2,210 | 1,242 | 4,345 |
| 2008 | 259 | 798 | 2,848 | 1,604 | 5,509 |
| 2009 | 353 | 802 | 2,194 | 1,362 | 4,711 |
| 2010 | 333 | 853 | 2,230 | 1,548 | 4,965 |
| 2011 | 352 | 1,013 | 2,639 | 1,859 | 5,863 |
| 2012 | 490 | 1,114 | 3,806 | 2,061 | 7,472 |
| 2013 | 341 | 762 | 3,774 | 1,716 | 6,593 |
| 2014 | 356 | 748 | 2,972 | 1,715 | 5,790 |
| 2015 | 357 | 598 | 2,269 | 1,525 | 4,748 |

## A8 WPCO catch by gear type

| | Longline | Pole and line | Purse seine | Other | Total |
|---|---|---|---|---|---|
| 1997 | 226 | 299 | 971 | 185 | 1,681 |
| 1998 | 252 | 324 | 1,269 | 220 | 2,064 |
| 1999 | 219 | 338 | 1,075 | 212 | 1,845 |
| 2000 | 248 | 320 | 1,157 | 248 | 1,972 |
| 2001 | 264 | 272 | 1,132 | 216 | 1,885 |
| 2002 | 281 | 286 | 1,280 | 216 | 2,064 |
| 2003 | 261 | 304 | 1,278 | 223 | 2,066 |
| 2004 | 285 | 322 | 1,374 | 263 | 2,244 |
| 2005 | 250 | 267 | 1,497 | 190 | 2,204 |
| 2006 | 255 | 258 | 1,534 | 201 | 2,248 |
| 2007 | 245 | 285 | 1,676 | 227 | 2,433 |
| 2008 | 245 | 270 | 1,737 | 235 | 2,487 |
| 2009 | 279 | 264 | 1,822 | 247 | 2,612 |
| 2010 | 270 | 270 | 1,737 | 236 | 2,514 |
| 2011 | 260 | 275 | 1,565 | 219 | 2,320 |
| 2012 | 272 | 243 | 1,879 | 279 | 2,673 |
| 2013 | 240 | 230 | 1,936 | 282 | 2,687 |
| 2014 | 261 | 211 | 2,100 | 308 | 2,881 |
| 2015 | 250 | 228 | 1,814 | 400 | 2,692 |

## A9 WCPO catch value by gear type

| | Longline | Pole and line | Purse seine | Other | Total |
|---|---|---|---|---|---|
| 1997 | 1,111 | 468 | 1,217 | 244 | 3,040 |
| 1998 | 1,072 | 478 | 1,449 | 269 | 3,269 |
| 1999 | 1,188 | 468 | 862 | 173 | 2,692 |
| 2000 | 1,365 | 376 | 784 | 182 | 2,707 |
| 2001 | 1,197 | 334 | 968 | 197 | 2,697 |
| 2002 | 1,151 | 338 | 1,072 | 202 | 2,763 |
| 2003 | 1,170 | 343 | 1,030 | 207 | 2,749 |
| 2004 | 1,430 | 342 | 1,293 | 264 | 3,329 |
| 2005 | 1,218 | 322 | 1,470 | 199 | 3,209 |
| 2006 | 1,323 | 376 | 1,572 | 222 | 3,492 |
| 2007 | 1,238 | 451 | 2,327 | 329 | 4,345 |
| 2008 | 1,476 | 545 | 3,071 | 418 | 5,509 |
| 2009 | 1,706 | 459 | 2,236 | 311 | 4,711 |
| 2010 | 1,821 | 468 | 2,349 | 327 | 4,965 |
| 2011 | 2,015 | 584 | 2,851 | 413 | 5,863 |
| 2012 | 2,067 | 659 | 4,117 | 629 | 7,472 |
| 2013 | 1,422 | 525 | 4,035 | 611 | 6,593 |
| 2014 | 1,643 | 440 | 3,215 | 493 | 5,790 |
| 2015 | 1,466 | 412 | 2,323 | 547 | 4,748 |

## A10 National waters of FFA members catch by species

| | Albacore | Bigeye | Skipjack | Yellowfin | Total |
|---|---|---|---|---|---|
| 1997 | 14 | 64 | 316 | 212 | 606 |
| 1998 | 18 | 59 | 433 | 271 | 782 |
| 1999 | 13 | 60 | 375 | 208 | 656 |
| 2000 | 19 | 44 | 472 | 242 | 777 |
| 2001 | 24 | 53 | 462 | 234 | 774 |
| 2002 | 24 | 59 | 610 | 203 | 896 |
| 2003 | 22 | 42 | 570 | 241 | 874 |
| 2004 | 24 | 61 | 577 | 231 | 893 |
| 2005 | 29 | 46 | 672 | 265 | 1,013 |
| 2006 | 37 | 52 | 794 | 228 | 1,111 |
| 2007 | 32 | 47 | 821 | 246 | 1,146 |
| 2008 | 32 | 54 | 797 | 333 | 1,216 |
| 2009 | 39 | 59 | 928 | 255 | 1,281 |
| 2010 | 38 | 62 | 1,096 | 338 | 1,534 |
| 2011 | 35 | 81 | 1,016 | 296 | 1,429 |
| 2012 | 42 | 82 | 1,207 | 353 | 1,683 |
| 2013 | 44 | 76 | 1,162 | 299 | 1,581 |
| 2014 | 40 | 85 | 1,305 | 329 | 1,759 |
| 2015 | 35 | 62 | 1,036 | 283 | 1,417 |

## A11 National waters of FFA members catch value by species

| | Albacore | Bigeye | Skipjack | Yellowfin | Total |
|---|---|---|---|---|---|
| 1997 | 31 | 169 | 369 | 369 | 938 |
| 1998 | 38 | 135 | 454 | 424 | 1,051 |
| 1999 | 25 | 203 | 276 | 269 | 774 |
| 2000 | 45 | 163 | 276 | 313 | 798 |
| 2001 | 60 | 150 | 380 | 300 | 889 |
| 2002 | 43 | 125 | 473 | 282 | 923 |
| 2003 | 41 | 107 | 410 | 342 | 901 |
| 2004 | 53 | 143 | 511 | 341 | 1,048 |
| 2005 | 72 | 107 | 593 | 409 | 1,181 |
| 2006 | 100 | 139 | 745 | 411 | 1,394 |
| 2007 | 62 | 162 | 1,079 | 507 | 1,810 |
| 2008 | 79 | 209 | 1,367 | 752 | 2,407 |
| 2009 | 102 | 235 | 1,095 | 520 | 1,953 |
| 2010 | 100 | 240 | 1,397 | 746 | 2,483 |
| 2011 | 108 | 354 | 1,726 | 864 | 3,052 |
| 2012 | 148 | 436 | 2,561 | 1,046 | 4,190 |
| 2013 | 111 | 288 | 2,352 | 807 | 3,559 |
| 2014 | 115 | 341 | 1,896 | 847 | 3,199 |
| 2015 | 107 | 233 | 1,257 | 650 | 2,247 |

## A12 National waters of FFA members catch by gear type

| | Longline | Pole and line | Purse seine | Other | Total |
|---|---|---|---|---|---|
| 1997 | 44 | 31 | 526 | 5 | 606 |
| 1998 | 43 | 43 | 689 | 6 | 782 |
| 1999 | 46 | 28 | 577 | 6 | 656 |
| 2000 | 54 | 15 | 695 | 13 | 777 |
| 2001 | 59 | 21 | 689 | 4 | 774 |
| 2002 | 54 | 20 | 813 | 8 | 896 |
| 2003 | 51 | 29 | 788 | 6 | 874 |
| 2004 | 57 | 11 | 820 | 6 | 893 |
| 2005 | 54 | 16 | 937 | 5 | 1,013 |
| 2006 | 72 | 18 | 1,017 | 4 | 1,111 |
| 2007 | 70 | 11 | 1,051 | 15 | 1,146 |
| 2008 | 68 | 5 | 1,127 | 16 | 1,216 |
| 2009 | 85 | 4 | 1,178 | 15 | 1,281 |
| 2010 | 80 | 8 | 1,432 | 15 | 1,534 |
| 2011 | 81 | 6 | 1,324 | 18 | 1,429 |
| 2012 | 96 | 9 | 1,561 | 16 | 1,683 |
| 2013 | 82 | 7 | 1,485 | 7 | 1,581 |
| 2014 | 106 | 7 | 1,639 | 7 | 1,759 |
| 2015 | 94 | 3 | 1,312 | 7 | 1,417 |

## A13 National waters of FFA members catch value by gear type

| | Longline | Pole and line | Purse seine | Other | Total |
|---|---|---|---|---|---|
| 1997 | 228 | 41 | 660 | 9 | 938 |
| 1998 | 181 | 61 | 798 | 12 | 1,051 |
| 1999 | 275 | 28 | 465 | 6 | 774 |
| 2000 | 298 | 21 | 465 | 14 | 798 |
| 2001 | 263 | 27 | 591 | 8 | 889 |
| 2002 | 210 | 22 | 682 | 10 | 923 |
| 2003 | 217 | 31 | 643 | 9 | 901 |
| 2004 | 259 | 10 | 770 | 9 | 1,048 |
| 2005 | 228 | 19 | 925 | 9 | 1,181 |
| 2006 | 320 | 28 | 1,038 | 8 | 1,394 |
| 2007 | 304 | 17 | 1,467 | 22 | 1,810 |
| 2008 | 366 | 11 | 1,999 | 31 | 2,407 |
| 2009 | 476 | 9 | 1,447 | 21 | 1,953 |
| 2010 | 495 | 17 | 1,948 | 22 | 2,483 |
| 2011 | 586 | 13 | 2,417 | 37 | 3,052 |
| 2012 | 702 | 29 | 3,420 | 39 | 4,190 |
| 2013 | 433 | 16 | 3,092 | 17 | 3,559 |
| 2014 | 651 | 15 | 2,520 | 13 | 3,199 |
| 2015 | 534 | 5 | 1,694 | 14 | 2,247 |

## A14 National fleets of FFA members (excluding Australia and New Zealand): Vessel numbers, catch and catch value by gear type[a]

| | *Units* | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Number of vessels** | *number* | **627** | **634** | **594** | **651** | **617** | **554** | **560** | **553** |
| *Longline* | | *548* | *540* | *490* | *536* | *502* | *441* | *461* | *444* |
| *Purse seine* | | *79* | *94* | *104* | *115* | *115* | *113* | *99* | *109* |
| **Catch** | *tonnes* | **398,847** | **425,577** | **439,798** | **484,394** | **575,067** | **522,152** | **577,039** | **600,970** |
| *Longline* | | *63,609* | *68,230* | *69,967* | *66,070* | *84,985* | *66,391* | *68,750* | *76,805* |
| *Pole and line* | | *1,815* | *160* | *160* | *906* | *2,378* | *2,051* | *1,772* | *1,150* |
| *Purse seine* | | *320,823* | *344,172* | *356,668* | *402,022* | *474,363* | *449,078* | *501,815* | *518,350* |
| *Other* | | *12,600* | *13,015* | *13,003* | *15,396* | *13,341* | *4,632* | *4,702* | *4,665* |
| **Value of catch** | *US$ mill* | **836** | **702** | **779** | **1,144** | **1,610** | **1,274.78** | **1,142** | **1,099** |
| *Longline* | | *249* | *273* | *294* | *400* | *537* | *307* | *369* | *436* |
| *Pole and line* | | *3.1* | *0.19* | *0.20* | *1.6* | *5.1* | *4.3* | *2.7* | *1.5* |
| *Purse seine* | | *562* | *412* | *468* | *714* | *1,038* | *953* | *763* | *655* |
| *Other* | | *22* | *16* | *18* | *28* | *29* | *10* | *7.7* | *6.5* |

***Notes:*** **a.** Domestically flagged and locally-based foreign charters, obtained from SC annual reports. Vessel numbers only available for purse seine and longline vessels.

# B Prices (US$/mt)

## B1 Albacore

| | Thailand[a] | Japan – Fresh[b] | Japan – Frozen[c] | US – Fresh[d] | US – Frozen[e] |
|---|---|---|---|---|---|
| 1997 | 2,196 | 4,487 | 2,858 | 3,039 | 2,442 |
| 1998 | 2,049 | 4,362 | 2,514 | 2,692 | 2,252 |
| 1999 | 1,910 | 5,477 | 2,847 | 2,847 | 2,204 |
| 2000 | 2,317 | 5,491 | 3,152 | 3,182 | 2,497 |
| 2001 | 2,496 | 5,194 | 4,171 | 3,435 | 2,611 |
| 2002 | 1,790 | 4,946 | 2,206 | 3,405 | 2,058 |
| 2003 | 1,884 | 5,320 | 2,661 | 3,565 | 2,060 |
| 2004 | 2,173 | 5,310 | 2,061 | 3,071 | 2,362 |
| 2005 | 2,430 | 5,224 | 3,360 | 3,314 | 2,910 |
| 2006 | 2,674 | 5,698 | 2,804 | 3,408 | 2,565 |
| 2007 | 1,948 | 5,958 | 2,475 | 3,761 | 2,760 |
| 2008 | 2,488 | 7,515 | 3,826 | 3,960 | 2,900 |
| 2009 | 2,643 | 7,019 | 2,983 | 4,196 | 2,319 |
| 2010 | 2,675 | 8,377 | 3,362 | 3,773 | 2,780 |
| 2011 | 3,044 | 8,344 | 2,976 | 4,134 | 1,889 |
| 2012 | 3,534 | 9,203 | 3,641 | 4,638 | 2,214 |
| 2013 | 2,512 | 7,267 | 2,655 | 4,121 | 1,942 |
| 2014 | 2,876 | 7,284 | 2,983 | 4,006 | 2,307 |
| 2015 | 3,020 | 5,915 | 3,289 | 4,193 | 2,211 |
| 2016[p] | 2,951 | 7,253 | 3,248 | 4,871 | 1,912 |

***Notes***: **a**. Thai imports of frozen whole round albacore (c&f). **b**. Japanese fresh albacore imports from Oceania (c.i.f). **c**. Frozen albacore at selected Japanese ports (ex-vessel). **d**. US Imports of fresh albacore from Oceania (f.a.s). **e**. US Imports of frozen albacore from all sources (f.a.s). **p**. for period to 31 October.

## B2 Bigeye

| | Japan – Fresh[a] | Japan – Frozen[b] | US – Fresh[c] | US – Frozen[d] |
|---|---|---|---|---|
| 1997 | 8,204 | 8,169 | **na** | **na** |
| 1998 | 7,703 | 6,324 | **na** | **na** |
| 1999 | 8,809 | 9,098 | **na** | **na** |
| 2000 | 9,198 | 8,558 | **na** | **na** |
| 2001 | 8,260 | 5,982 | 5,904 | 2,383 |
| 2002 | 7,722 | 5,183 | 6,250 | 2,220 |
| 2003 | 8,205 | 5,369 | 4,929 | 2,643 |
| 2004 | 9,002 | 6,030 | 5,703 | 2,234 |
| 2005 | 9,288 | 5,608 | 5,154 | 2,161 |
| 2006 | 8,897 | 6,259 | 3,486 | 2,070 |
| 2007 | 8,781 | 6,783 | 2,545 | 2,111 |
| 2008 | 9,970 | 8,285 | 2,259 | 2,044 |
| 2009 | 10,444 | 9,793 | 2,376 | 2,098 |
| 2010 | 12,767 | 11,130 | 2,447 | 2,310 |
| 2011 | 12,736 | 13,044 | 3,596 | 2,075 |
| 2012 | 13,484 | 12,003 | 3,993 | 2,100 |
| 2013 | 11,418 | 8,815 | 4,883 | 2,041 |
| 2014 | 10,510 | 9,028 | 5,020 | 2,025 |
| 2015 | 9,724 | 7,738 | 5,914 | 3,434 |
| 2016[p] | 10,312 | 9,170 | 6,369 | 2,545 |

***Notes***: **a**. Japanese fresh imports of bigeye from Oceania (c.i.f). **b**. Frozen bigeye at selected Japanese ports (ex-vessel). **c**. US Imports of fresh bigeye from Oceania, excl. Aust & NZ (f.a.s). **d**. US Imports of frozen bigeye from all sources (f.a.s). **p**. for period to 31 October.

## B3 Skipjack

| | Purse seine | | | Pole and line | |
|---|---|---|---|---|---|
| | Thailand[a] | Japan[b] | Philippines[c] | Japan - 'South'[d] | Japan - All[e] |
| 1997 | 1,130 | 1,268 | na | 1,532 | 1,818 |
| 1998 | 993 | 1,083 | na | 1,963 | 1,910 |
| 1999 | 652 | 971 | na | 1,837 | 1,995 |
| 2000 | 536 | 683 | 425 | 1,502 | 1,567 |
| 2001 | 788 | 861 | 754 | 1,250 | 1,399 |
| 2002 | 751 | 831 | 717 | 1,268 | 1,398 |
| 2003 | 700 | 708 | 685 | 1,208 | 1,311 |
| 2004 | 889 | 862 | na | 1,419 | 943 |
| 2005 | 873 | 890 | 850 | 1,326 | 1,244 |
| 2006 | 918 | 963 | 855 | 1,822 | 1,882 |
| 2007 | 1,328 | 1,256 | 1,219 | 1,613 | 1,765 |
| 2008 | 1,700 | 1,778 | 1,597 | 2,416 | 2,397 |
| 2009 | 1,154 | 1,325 | 1,131 | 2,704 | 2,596 |
| 2010 | 1,242 | 1,410 | 1,225 | 2,124 | 2,243 |
| 2011 | 1,681 | 1,791 | 1,703 | 2,323 | 2,371 |
| 2012 | 2,117 | 2,101 | 2,092 | 3,243 | 3,310 |
| 2013 | 2,070 | 1,891 | 1,941 | 2,386 | 2,388 |
| 2014 | 1,447 | 1,393 | 1,357 | 2,243 | 2,495 |
| 2015 | 1,195 | 1,346 | 1,194 | 2,192 | 2,054 |
| 2016[p] | 1,417 | 1,647 | 1,405 | 2,443 | 2,352 |

***Notes:*** **a**. Thai imports of frozen whole round skipjack (c&f). **b**. Purse seine caught skipjack landed at Yaizu port (ex-vessel). c. Philippines purse seine caught skipjack landed at General Santos port (f.o.b.). **d**. 'South' Pole and line caught skipjack landed at Yaizu (ex-vessel). **e**. Average ('South' & 'Other') Pole and line caught skipjack landed at Yaizu (ex-vessel). **p**. for period to 31 October.

## B4 Yellowfin

| | Purse seine | | Longline | | |
|---|---|---|---|---|---|
| | Thailand[a] | Japan[b] | Japan – Fresh[c] | Japan – Frozen[d] | US – Fresh[e] |
| 1997 | 1,454 | 1,354 | 6,717 | 4,551 | 3,938 |
| 1998 | 1,408 | 1,457 | 6,074 | 3,357 | 4,225 |
| 1999 | 935 | 1,452 | 7,483 | 5,142 | 5,364 |
| 2000 | 863 | 1,528 | 7,683 | 4,914 | 3,659 |
| 2001 | 960 | 1,202 | 6,739 | 3,497 | 4,420 |
| 2002 | 1,074 | 1,337 | 6,590 | 3,530 | 4,060 |
| 2003 | 1,093 | 1,422 | 7,220 | 3,571 | 3,983 |
| 2004 | 1,080 | 1,313 | 7,564 | 3,986 | 3,833 |
| 2005 | 1,269 | 1,598 | 7,741 | 3,787 | 3,625 |
| 2006 | 1,375 | 1,805 | 7,766 | 4,754 | 3,043 |
| 2007 | 1,696 | 1,935 | 7,884 | 4,763 | 3,598 |
| 2008 | 1,881 | 2,553 | 8,945 | 6,141 | 3,692 |
| 2009 | 1,373 | 2,275 | 9,037 | 6,581 | 3,719 |
| 2010 | 1,547 | 2,867 | 10,203 | 7,221 | 3,444 |
| 2011 | 2,150 | 3,838 | 11,152 | 8,428 | 4,300 |
| 2012 | 2,423 | 3,304 | 10,967 | 7,605 | 5,096 |
| 2013 | 2,313 | 2,442 | 10,008 | 6,197 | 5,472 |
| 2014 | 1,822 | 2,392 | 9,769 | 6,480 | 5,770 |
| 2015 | 1,568 | 2,076 | 8,779 | 5,313 | 6,108 |
| 2016[p] | 1,681 | 2,334 | 9,571 | 5,706 | 6,459 |

***Notes:*** **a**. Thai imports of frozen whole round yellowfin (c&f). **b**. Purse seine caught yellowfin landed at Yaizu port (ex-vessel). **c**. Japanese fresh imports of yellowfin from Oceania (c.i.f). **d**. Longline caught yellowfin landed at Yaizu port (ex-vessel). **e**. US Imports of fresh yellowfin (f.a.s). **p**. for period to 31 October.

## B5 Swordfish

| Year | Japan - Frozen[a] | Japan - Fresh[b] | US - Frozen[c] | US - Fresh[d] |
|---|---|---|---|---|
| 1997 | 6,385 | 7,533 | 4,964 | 5,873 |
| 1998 | 4,864 | 6,737 | 4,649 | 5,182 |
| 1999 | 5,968 | 6,839 | 4,443 | 4,888 |
| 2000 | 6,657 | 7,213 | 5,710 | 5,529 |
| 2001 | 5,497 | 6,994 | 7,148 | 5,836 |
| 2002 | 4,680 | 6,716 | 3,432 | 5,973 |
| 2003 | 4,355 | 6,382 | 4,041 | 6,209 |
| 2004 | 5,521 | 7,056 | 4,758 | 6,898 |
| 2005 | na | 7,437 | 6,295 | 7,375 |
| 2006 | 2,613 | 6,782 | 5,386 | 7,406 |
| 2007 | 6,291 | 7,293 | 6,296 | 8,031 |
| 2008 | 7,156 | 8,684 | 7,409 | 7,812 |
| 2009 | 7,810 | 8,953 | 6,725 | 7,677 |
| 2010 | 8,588 | 10,023 | 4,961 | 8,887 |
| 2011 | 10,009 | 10,761 | 7,124 | 8,345 |
| 2012 | 9,697 | 10,511 | 9,056 | 8,540 |
| 2013 | 6,331 | 8,656 | 9,736 | 8,824 |
| 2014 | 6,838 | 8,633 | 3,690 | 8,624 |
| 2015 | 6,031 | 7,882 | 9,125 | 7,894 |
| 2016[p] | 6,736 | 9,179 | na | 8,315 |

***Notes***: **a**. Frozen swordfish landed at Japan selected ports (ex-vessel). **b**. Japanese fresh swordfish landed at Japan selected ports (ex-vessel). **c**. US imports of frozen swordfish (f.a.s.). **d**. US Imports of fresh swordfish (f.a.s).

## B6 Fuel, exchange rate and US CPI

| | Singapore Marine Diesel Oil MDO (USD per tonne)[a] | USD:JPY[b] | US CPI Index (1997=100)[c] |
|---|---|---|---|
| 1997 | 169 | 121 | 100.0 |
| 1998 | 108 | 131 | 101.5 |
| 1999 | 151 | 114 | 103.8 |
| 2000 | 249 | 108 | 107.3 |
| 2001 | 202 | 122 | 110.3 |
| 2002 | 203 | 125 | 112.0 |
| 2003 | 239 | 116 | 114.6 |
| 2004 | 334 | 108 | 117.7 |
| 2005 | 475 | 110 | 121.6 |
| 2006 | 569 | 116 | 125.6 |
| 2007 | 630 | 118 | 129.2 |
| 2008 | 905 | 103 | 134.1 |
| 2009 | 518 | 94 | 133.7 |
| 2010 | 662 | 88 | 135.9 |
| 2011 | 923 | 80 | 140.1 |
| 2012 | 942 | 80 | 143.0 |
| 2013 | 660 | 98 | 145.1 |
| 2014 | 838 | 106 | 147.5 |
| 2015 | 485 | 121 | 147.6 |
| 2016 | 429 | 104 | 149.2 |

***Notes***: **a.** BunkerWorld (1997 to 2015) and Ship & Bunker (2016). **b.** IMF (https://www.imf.org/external/np/fin/ert/GUI/Pages/CountryDataBase.aspx). **c.** Bureau of Labor Statistics, United Sates Department of Labor (https://www.bls.gov/data/) **–** data adjusted so 1997 = 100**.**

# C Country level data

## C1 Cook Islands - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **3,877** | **7,206** | **7,618** | **10,934** | **30,830** | **16,287** | **19,896** | **21,905** |
| *Longline* | | *2,980* | *6,437* | *7,355* | *9,550* | *18,025* | *7,952* | *7,710* | *4,813* |
| *Purse seine* | | *897* | *769* | *263* | *1,385* | *12,805* | *8,335* | *12,186* | *17,092* |
| **Value of catch** | *US$ mill* | **11** | **23** | **28** | **56** | **134** | **47** | **53** | **42** |
| *Longline* | | *9.8* | *22* | *28* | *53* | *107* | *29* | *35* | *21* |
| *Purse seine* | | *1.6* | *0.90* | *0.34* | *2.4* | *28* | *17* | *18* | *21* |
| **National fleet**[a] | | | | | | | | | |
| **Number of vessels** | *number* | **23** | **24** | **41** | **24** | **24** | **24** | **14** | **15** |
| *Longline* | | *23* | *24* | *41* | *24* | *24* | *24* | *14* | *15* |
| **Catch** | *tonnes* | **2,817** | **2,054** | **3,058** | **3,636** | **5,382** | **1,948** | **2,181** | **1,764** |
| *Longline* | | *2,817* | *2,054* | *3,058* | *3,636* | *5,382* | *1,948* | *2,160* | *1,743* |
| *Other* | | *0* | *0* | *0* | *0* | *0* | *0* | *21* | *21* |
| **Value of catch** | *US$ mill* | **10** | **8** | **12** | **20** | **35** | **8** | **10** | **7** |
| *Longline* | | *10* | *8* | *12* | *20* | *35* | *8* | *10* | *7* |
| *Other* | | *0* | *0* | *0* | *0* | *0* | *0* | *0.06* | *0.06* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C2 Cook Islands – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **0.7** | **0.5** | **0.8** | **1.4** | **2.4** | **0.6** | **0.7** | **0.5** |
| **Combined harvest and onshore processing[b]** | | **na** | **na** | **na** | **na** | **na** | **0.9** | **1.0** | **0.8** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments[c]** | | **1.0** | **1.7** | **2.6** | **4.1** | **7.2** | **4.5** | **11** | **10** |
| *US Treaty[d]* | | *0.6* | *0.7* | *0.6* | *1.0* | *1.2* | *1.9* | *1.8* | *2.7* |
| *Purse seine bilateral and other agreements[e]* | | *0.3* | *0.2* | *1.1* | *1.4* | *2.4* | *1.5* | *7.4* | *6.0* |
| *Longline[f]* | | *0.1* | *0.8* | *0.9* | *1.7* | *3.6* | *1.1* | *1.3* | *0.8* |
| **Domestic vessels licensing and other payments[g]** | | **na** | **na** | **na** | **na** | **na** | **0.4** | **0.5** | **0.04** |
| **Onshore processing volumes[h]** | *tonnes* | **na** | **409** | **92** | **71** | **103** | **200** | **200** | **205** |
| **Employment[i]** | *number* | **na** | **22** | **26** | **31** | **29** | **24** | **77** | **65** |
| *Processing & ancillary* | | ***na*** | *12* | *16* | *18* | *20* | *15* | *7* | *7* |
| *Crew* | | ***na*** | *10* | *9* | *13* | *9* | *9* | *9* | *4* |
| *Observers* | | ***na*** | ***na*** | *1* | ***na*** | ***na*** | ***na*** | *9* | *5* |
| *Public sector* | | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | *52* | *49* |
| **Exports** | *US$ mill* | | | | | | | | |
| **Japan[j]** | | **0.1** | **0.1** | **0.0** | **0.1** | **0.4** | **0.2** | **0.2** | **0.2** |
| **US[k]** | | **0.002** | **0.004** | **0** | **0.006** | **0.26** | **0.059** | **0.0** | **0.0** |
| **Balance of payments[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **3.9** | **3.0** | **0.72** |
| **Employment earnings[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **1.3** | **1.8** | **0.05** |
| **Net local purchases[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **1.4** | **1.7** | **0.05** |

*Notes:* **na** not available..**a.** Derived using value added ratios **b.** Derived using per tonne contribution. **c**. Based on data collected as part of FFA data collection project; payments understood to exclude observer and MCS fees. **d.** As distributed by FFA. **e.** FFA estimate. **f.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **g.** Includes licences, transhipment, port and agency fees and derived using the per tonne contribution. **h.** The volume processed refers only to the purse seine and longline catch processed to some form domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. Data sourced primarily from CES but adjusted using SC annual reports where necessary and also from data collector. **i.** Based on data collected as part of FFA data collection project; aggregate ignores the non-available. **j.** Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **k.** NMFS http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html.

## C3 Federated States of Micronesia - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **141,532** | **132,115** | **159,238** | **161,772** | **188,842** | **214,776** | **141,495** | **166,163** |
| *Longline* | | *5,014* | *4,799* | *3,713* | *5,001* | *4,966* | *3,083* | *6,790* | *3,949* |
| *Pole and line* | | *5* | *2,138* | *2,824* | *4,375* | *2,500* | *2,348* | *1,300* | *1,205* |
| *Purse seine* | | *136,513* | *125,179* | *152,702* | *152,396* | *181,377* | *209,345* | *133,406* | *161,009* |
| **Value of catch** | *US$ mill* | **283** | **204** | **250** | **353** | **454** | **452** | **269** | **256** |
| *Longline* | | *38* | *39* | *35* | *53* | *51* | *24* | *54* | *28* |
| *Pole and line* | | *0* | *5.5* | *6.3* | *10* | *8.3* | *5.6* | *3.2* | *2.5* |
| *Purse seine* | | *245* | *159* | *209* | *290* | *395* | *422* | *212* | *226* |
| **National fleet[a]** | | | | | | | | | |
| **Number of vessels** | *number* | **26** | **27** | **28** | **28** | **29** | **13** | **27** | **31** |
| *Longline* | | *21* | *21* | *21* | *21* | *22* | *3* | *18* | *19* |
| *Purse seine* | | *5* | *6* | *7* | *7* | *7* | *10* | *9* | *12* |
| **Catch** | *tonnes* | **19,329** | **21,154** | **23,157** | **28,785** | **38,983** | **27,053** | **40,870** | **55,648** |
| *Longline* | | *1,298* | *2,018* | *1,354* | *2,280* | *2,750* | *2,871* | *2,795* | *2,721* |
| *Purse seine* | | *18,031* | *19,136* | *21,803* | *26,505* | *36,233* | *24,182* | *38,075* | *52,927* |
| **Value of catch** | *US$ mill* | **42** | **40** | **41** | **70** | **105** | **71** | **78** | **86** |
| *Longline* | | *10* | *17* | *13* | *23* | *27* | *20* | *20* | *20* |
| *Purse seine* | | *31* | *23* | *28* | *48* | *79* | *51* | *58* | *67* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C4 Federated States of Micronesia – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **15** | **12** | **15** | **25** | **39** | **26** | **29** | **32** |
| **Combined harvest and onshore processing[b]** | | **na** | **na** | **na** | **na** | **na** | **20** | **31** | **42** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments[c]** | | **17** | **20** | **18** | **19** | **27** | **35** | **47** | **50** |
| *US Treaty[d]* | | *1.8* | *2.1* | *1.1* | *1.0* | *3.3* | *5.6* | *4.4* | *10.5* |
| *FSM Arrangement[e]* | | *1.8* | *0.9* | *0.9* | *0.8* | *1.2* | *3.9* | *2.3* | *2.2* |
| *Purse seine bilateral and other agreements[f]* | | *12* | *15* | *14* | *15* | *20* | *24* | *38* | *36* |
| *Longline[g]* | | *1.6* | *1.6* | *1.5* | *2.1* | *2.2* | *1.1* | *2.5* | *1.2* |
| **Domestic vessels licensing and other payments[h]** | | **na** | **na** | **na** | **na** | **na** | **2.7** | **4.2** | **5.6** |
| **Onshore processing volumes[i]** | *tonnes* | **628** | **680** | **736** | **246** | **75** | **1,936** | **2,763** | **2,790** |
| **Employment[j]** | *number* | **512** | **293** | **373** | **245** | **198** | **166** | **245** | **245** |
| *Processing & ancillary* | | *134* | *198* | *182* | *151* | *97* | *65* | *65* | *65* |
| *Crew* | | *313* | *40* | *47* | *44* | *49* | *49* | *49* | *49* |
| *Observers* | | *10* | *5* | *94* | ***na*** | ***na*** | ***na*** | *80* | *80* |
| *Public sector* | | *55* | *50* | *50* | *50* | *52* | *52* | *51* | *51* |
| **Exports** | *US$ mill* | | | | | | | | |
| **Japan[k]** | | **3.1** | **5.5** | **2.5** | **4.1** | **2.8** | **0.4** | **2.2** | **1.8** |
| **Thailand[l]** | | **17** | **28** | **22** | **29** | **45** | **17** | **14** | **12** |
| **US[m]** | | **2.4** | **1.5** | **2.3** | **0.71** | **0.03** | **0.54** | **0.0** | **0.0** |
| **Balance of payments[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **25** | **39** | **52** |
| **Employment earnings[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **1.5** | **2.2** | **2.4** |
| **Local purchases[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **4.0** | **6.2** | **7.8** |

*Notes:* **na** not available. **a.** Derived using value added ratios **b.** Derived using per tonne contribution. **c**. Statistics division, Office of Statistics, Budget & Econ Management, Overseas Dev Assistance & Compact Development; NORMA; pers. comm. Bob Gillet (2016). **d.** As distributed by FFA. **e.** As distributed by PNA and previous to 2013 by FFA**. f**. Calculated as the difference between the aggregate figure sourced provided by Bureau of Statistics and the total of foreign access fees from other sources. **g.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **h.** Includes licences, transhipment, port and agency fees and derived using the per tonne contribution. **i.** The volume processed refers only to the purse seine and longline catch processed to some form domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. Data sourced primarily from CES but adjusted using SC annual reports where necessary and also from data collector. **j.** Based on data collected as part of FFA data collection project; aggregate ignores the non-available. **k.** Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **l**. Thai customs (http://en.customs.go.th/index.php?view=normal). **m.** US NMFS (http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html).

## C5 Fiji - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **7,539** | **8,376** | **9,805** | **7,173** | **6,757** | **5,971** | **6,184** | **7,608** |
| *Longline* | | *6,599* | *7,993* | *8,613* | *6,723* | *6,239* | *5,810* | *6,184* | *5,494* |
| *Pole and line* | | *475* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *Purse seine* | | *466* | *383* | *1192* | *450* | *518* | *161* | *0* | *2,114* |
| **Value of catch** | *US$ mill* | **27** | **31** | **37** | **35** | **32** | **22** | **30** | **30** |
| *Longline* | | *25* | *31* | *36* | *34* | *31* | *22* | *30* | *27* |
| *Pole and line* | | *0.82* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *Purse seine* | | *0.80* | *0.46* | *1.5* | *0.79* | *1.1* | *0.34* | *0* | *2.6* |
| **National fleet**[a] | | | | | | | | | |
| Number of vessels | *number* | **96** | **92** | **92** | **121** | **113** | **107** | **105** | **102** |
| *Longline* | | *96* | *92* | *92* | *121* | *113* | *107* | *105* | *102* |
| **Catch** | *tonnes* | **13,627** | **16,828** | **12,545** | **16,307** | **14,978** | **12,782** | **13,663** | **13,085** |
| *Longline* | | *13,152* | *16,828* | *12,545* | *16,307* | *14,978* | *12,782* | *13,663* | *13,085* |
| *Pole and line* | | *475* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| **Value of catch** | *US$ mill* | **51** | **66** | **53** | **87** | **83** | **51** | **70** | **60** |
| *Longline* | | *50* | *66* | *53* | *87* | *83* | *51* | *70* | *60* |
| *Pole and line* | | *0.82* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C6 Fiji – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **8.3** | **11** | **8.5** | **8.5** | **9.6** | **5.4** | **10** | **10** |
| **Combined harvest and onshore processing[b]** | | **na** | **na** | **na** | **na** | **na** | **23** | **23** | **21** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments** | | **0.53** | **0.56** | **0.61** | **0.51** | **0.40** | **0.59** | **0.54** | **1.0** |
| *US Treaty[c]* | | *0.53* | *0.56* | *0.61* | *0.51* | *0.40* | *0.59* | *0.54* | *1.0* |
| **Domestic vessels licensing and other payments[e]** | | **0.03** | **0.07** | **0.08** | **0.11** | **1.0** | **4.5** | **4.6** | **4.5** |
| **Onshore processing volumes[f]** | *tonnes* | **10,000** | **43,600** | **9,300** | **8,700** | **14,189** | **33,803** | **34,980** | **34,851** |
| **Employment[g]** | *number* | **1,359** | **2,478** | **991** | **1,493** | **1,724** | **2,850** | **4,587** | **3,658** |
| *Processing & ancillary* | | *1,225* | *1,054* | *630* | *1,018* | *1,063* | *1,452* | *1,841* | *1,726* |
| *Crew* | | ***na*** | *1,290* | *228* | *353* | *531* | *1,227* | *2,491* | *1,686* |
| *Observers* | | *12* | *12* | *11* | ***na*** | ***na*** | ***na*** | *44* | *35* |
| *Public sector* | | *122* | *122* | *122* | *122* | *130* | *171* | *211* | *211* |
| **Exports** | *US$ mill* | | | | | | | | |
| **EU[h]** | | **3.4** | **0.06** | **0.06** | **0.28** | **0.38** | **1.6** | **3.5** | **2.5** |
| **Japan[i]** | | **19** | **26** | **40** | **47** | **52** | **20** | **21** | **17** |
| **US[j]** | | **64** | **74** | **79** | **33** | **76** | **71** | **65** | **74** |
| **Balance of payments[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **22** | **22** | **21** |
| **Employment earnings[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **15** | **15** | **15** |
| **Local purchases[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **17** | **18** | **17** |

**Notes**: na not available. **a**. Derived using value added ratios **b**. Derived using per tonne contribution. **c**. As distributed by FFA. **d.** estimated 5% of foreign catch value. **e**. The 2008 to 2012 figures are sourced from Fiji Budget Estimates 2014 and comprises of $196 (FJD350) levy charged on transhipment of fish without any domestic value addition and revenue from fishing licences; the 2013-2015 figures are based on the per tonne contribution and includes licences, transhipment, port and agency fees but understood to exclude observer and MCS fees. **f**. The volume processed refers only to the longline catch processed to some form domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. Data sourced primarily from CES, adjusted using SC annual reports where necessary and data collected as part of FFA data collection project**. g**. Data collected as part of FFA data collection project; aggregate ignores the non-available. **h**. EuroStats (http://ec.europa.eu/eurostat/data/database). **i**. Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **j**. US NMFS (http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html).

## C7 Kiribati - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **249,204** | **334,000** | **210,000** | **212,123** | **561,799** | **301,392** | **736,600** | **641,119** |
| *Longline* | | *8,074* | *16,206* | *11,694* | *12,335* | *16,964* | *12,106* | *24,691* | *19,646* |
| *Pole and line* | | *623* | *610* | *192* | *35* | *295* | *1,066* | *273* | *240* |
| *Purse seine* | | *227,940* | *304,217* | *185,147* | *187,186* | *534,558* | *283,861* | *707,278* | *616,874* |
| *Troll* | | *12,567* | *12,967* | *12,967* | *12,567* | *9,982* | *4,359* | *4,359* | *4,359* |
| **Value of catch** | *US$ mill* | **488** | **507** | **365** | **484** | **1365** | **706** | **1265** | **911** |
| *Longline* | | *60* | *130* | *106* | *128* | *169* | *97* | *191* | *132* |
| *Pole and line* | | *1.5* | *1.3* | *0.28* | *0.060* | *0.70* | *2.4* | *0.43* | *0.29* |
| *Purse seine* | | *404* | *359* | *241* | *333* | *1172* | *597* | *1067* | *773* |
| *Troll* | | *22* | *16* | *17* | *23* | *22* | *10* | *7.1* | *6* |
| **National fleet**[a] | | | | | | | | | |
| **Number of vessels** | *number* | **4** | **4** | **7** | **8** | **13** | **20** | **20** | **35** |
| *Longline* | | *3* | *0* | *1* | *1* | *4* | *7* | *6* | *14* |
| *Purse seine* | | *1* | *4* | *6* | *7* | *9* | *13* | *14* | *21* |
| **Catch** | *tonnes* | **17,913** | **32,100** | **38,947** | **59,700** | **74,053** | **77,782** | **114,156** | **149,314** |
| *Longline* | | *51* | *0* | *73* | *584* | *1,450* | *797* | *383* | *8,018* |
| *Pole and line* | | *0* | *160* | *160* | *35* | *243* | *385* | *240* | *240* |
| *Purse seine* | | *5,295* | *18,973* | *25,747* | *46,514* | *62,378* | *72,241* | *109,174* | *136,697* |
| *Troll* | | *12,567* | *12,967* | *12,967* | *12,567* | *9,982* | *4,359* | *4,359* | *4,359* |
| **Value of catch** | *US$ mill* | **32** | **39** | **51** | **110** | **171** | **170** | **176** | **233** |
| *Longline* | | *0.42* | *0* | *0.24* | *3.8* | *13* | *6.8* | *3.1* | *57* |
| *Pole and line* | | *0* | *0.19* | *0.20* | *0.060* | *0.53* | *0.81* | *0.35* | *0.29* |
| *Purse seine* | | *9.3* | *23* | *33* | *83* | *136* | *153* | *165* | *170* |
| *Troll* | | *22* | *16* | *17* | *23* | *22* | *10* | *7.1* | *6.0* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C8 Kiribati – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **11** | **8.1** | **8.9** | **12** | **11** | **5.1** | **4.0** | **5.4** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments[c]** | | **27** | **22** | **39** | **31** | **60** | **84** | **127** | **146** |
| *US Treaty[d]* | | *4.6* | *7.3* | *6.5* | *3.9* | *10.0* | *19.0* | *19.0* | *3.8* |
| *FSM Arrangement[e]* | | *2.8* | *2.6* | *2.0* | *1.6* | *4.2* | *2.7* | *13.0* | *15.0* |
| *Purse seine bilateral and other agreements[f]* | | *17.0* | *5.6* | *25.0* | *19.0* | *38.0* | *58.0* | *85.0* | *121.0* |
| *Longline[g]* | | *3.0* | *6.5* | *5.3* | *6.3* | *8.1* | *4.6* | *9.5* | *6.6* |
| **Domestic vessels licensing and other payments[h]** | | **na** | **na** | **na** | **na** | **na** | **1.0** | **1.6** | **2.7** |
| **Onshore processing volumes[i]** | *tonnes* | **0** | **0** | **0** | **0** | **31** | **200** | **200** | **761** |
| **Employment[j]** | *number* | **181** | **245** | **256** | **296** | **405** | **558** | **1,094** | **1,094** |
| *Processing & ancillary* | | *10* | *3* | *7* | *15* | *57* | *75* | *150* | *150* |
| *Crew* | | *66* | *106* | *126* | *158* | *223* | *355* | *720* | *720* |
| *Observers* | | *5* | *5* | *36* | ***na*** | ***na*** | ***na*** | *93* | *93* |
| *Public sector* | | *100* | *131* | *87* | *123* | *125* | *128* | *131* | *131* |
| **Exports** | *US$ mill* | | | | | | | | |
| **Japan[k]** | | **0** | **0** | **0** | **0** | **0** | **0.1** | **0.8** | **2.4** |
| **Thailand[l]** | | **6.4** | **8.8** | **10** | **26** | **36** | **57** | **40** | **85** |
| **US[m]** | | **0** | **0** | **0** | **0** | **0** | **0.025** | **0.47** | **1.0** |
| **Balance of payments[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **0.25** | **0.25** | **0.93** |
| **Employment earnings[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **0.18** | **0.18** | **0.68** |
| **Local purchases[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **0.16** | **0.16** | **0.62** |

*Notes:* **na** not available..**a.** Derived using value added ratios and based only on the troll fishery with the other fleets excluded as their centre of economic interest is outside of Kiribati. **b.** Derived using per tonne contribution. **c**. Fishing Licence Revenues in Kiribati, 2015 Report, Ministry of Finance & Economic Development and Ministry of Fisheries and Marine Resource Development. **d.** As distributed by FFA. **e.** As distributed by PNA and previous to 2013 by FFA**. f**. Calculated as the difference between the aggregate figure provided by the Ministry of Finance and the total of foreign access fees from other sources to 2014; 2015 FFA estimates. **g.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **h.** Includes only licence fees for joint venture fleets estimated as allocated days times benchmark VDS. **i.** The volume processed refers only to the purse seine and longline catch processed to some form domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. Data sourced primarily from CES but adjusted using SC annual reports where necessary and as part of data collected under FFA's data collection project. **j.** Based on data collected as part of FFA data collection project; aggregate ignores the non-available. **k.** Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **l**. Thai customs (http://en.customs.go.th/index.php?view=normal) **m.** US NMFS (http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html).

## C9 Marshall Islands - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **29,278** | **16,777** | **26,190** | **25,344** | **34,478** | **46,502** | **86,596** | **35,481** |
| *Longline* | | *2,825* | *3,399* | *4,086* | *4,228* | *5,109* | *4,800* | *5,914* | *4,496* |
| *Pole and line* | | *1,184* | *421* | *4,735* | *262* | *4,533* | *2,047* | *3,434* | *633* |
| *Purse seine* | | *25,268* | *12,956* | *17,369* | *20,853* | *24,836* | *39,655* | *77,248* | *30,352* |
| **Value of catch** | *US$ mill* | **70** | **44** | **72** | **81** | **121** | **128** | **171** | **74** |
| *Longline* | | *23* | *28* | *38* | *44* | *52* | *40* | *46* | *33* |
| *Pole and line* | | *2.8* | *1.1* | *11* | *0.62* | *15* | *4.9* | *8.6* | *1.3* |
| *Purse seine* | | *44* | *16* | *23* | *37* | *54* | *83* | *116* | *40* |
| **National fleet[a]** | | | | | | | | | |
| **Number of vessels** | *number* | **9** | **9** | **14** | **14** | **14** | **13** | **10** | **10** |
| *Longline* | | *4* | *4* | *4* | *4* | *4* | *3* | *0* | *0* |
| *Purse seine* | | *5* | *5* | *10* | *10* | *10* | *10* | *10* | *10* |
| **Catch** | *tonnes* | **33,013** | **43,973** | **57,225** | **75,581** | **79,045** | **75,775** | **83,361** | **88,430** |
| *Longline* | | *481* | *511* | *391* | *362* | *465* | *134* | *0* | *0* |
| *Purse seine* | | *32,532* | *43,462* | *56,834* | *75,219* | *78,580* | *75,641* | *83,361* | *88,430* |
| **Value of catch** | *US$ mill* | **60** | **55** | **78** | **137** | **176** | **161** | **125** | **109** |
| *Longline* | | *3.8* | *4.2* | *3.7* | *3.6* | *4.8* | *1.1* | *0* | *0* |
| *Purse seine* | | *56* | *51* | *74* | *133* | *171* | *160* | *125* | *109* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C10 Marshall Islands – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **28** | **27** | **38** | **64** | **84** | **78** | **63** | **52** |
| **Combined harvest and onshore processing[b]** | | **na** | **na** | **na** | **na** | **na** | **65** | **66** | **65** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments[c]** | | **3.6** | **2.2** | **2.9** | **7.2** | **7.3** | **11** | **17** | **20** |
| *US Treaty[d]* | | *0.70* | *0.83* | *0.49* | *0.63* | *1.0* | *2.6* | *2.9* | *7.1* |
| *FSM Arrangement[e]* | | *0.30* | *0.40* | *0.15* | *0.07* | *0.30* | *0.44* | *1.7* | *1.3* |
| *Purse seine bilateral and other agreements[f]* | | *2.3* | *0.65* | *1.0* | *4.5* | *3.7* | *6.4* | *10.0* | *10.0* |
| *Longline[g]* | | *0.94* | *1.2* | *1.7* | *2.0* | *2.4* | *1.9* | *2.3* | *1.6* |
| **Domestic vessels licensing and other payments[h]** | | **na** | **na** | **na** | **na** | **na** | **9.1** | **9.3** | **8.9** |
| **Onshore processing volumes[i]** | *tonnes* | **1,696** | **1,979** | **7,177** | **9,543** | **5,398** | **11,960** | **13,390** | **10,420** |
| **Employment[j]** | *number* | **971** | **985** | **1,259** | **1,155** | **1,181** | **1,123** | **1,329** | **2,674** |
| *Processing & ancillary* | | *414* | *443* | *587* | *566* | *560* | *503* | *588* | *731* |
| *Crew* | | *537* | *516* | *608* | *581* | *612* | *610* | *678* | *1,734* |
| *Observers* | | *10* | *13* | *29* | ***na*** | ***na*** | ***na*** | *52* | *62* |
| *Public sector* | | *10* | *13* | *35* | *8* | *9* | *10* | *11* | *147* |
| **Exports** | *US$ mill* | | | | | | | | |
| **Japan[k]** | | **0** | **1.6** | **1.5** | **4.5** | **4.0** | **2.5** | **9.9** | **3.4** |
| **Thailand[l]** | | **32** | **16** | **38** | **92** | **82** | **74** | **39** | **23** |
| **US[m]** | | **4.2** | **4.0** | **5.0** | **10** | **12** | **9.9** | **8.4** | **7.1** |
| **Balance of payments[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **75** | **76** | **76** |
| **Employment earnings[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **6.4** | **7.8** | **5.2** |
| **Local purchases[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **15** | **16** | **14** |

***Notes:*** **na** not available..**a.** Derived using value added ratios **b.** Derived using per tonne contribution. **c**. Aggregate foreign access fees is sum of fees from all fleets (2008-2010), the 2015 aggregate is an estimate. **d.** As distributed by FFA. **e.** As distributed by PNA and previous to 2013 by FFA**. f**. Calculated as 6% of foreign purse seine landed value (2008-2010), PAE times VDS benchmarks 2011-2014, the difference between the estimated aggregate figure and the total of foreign access fees from other sources for 2015. **g.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **h.** Includes licences, transhipment, port and agency fees and derived using the per tonne contribution. **i.** The volume processed refers only to the purse seine and longline catch processed to some form domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. Data sourced primarily from CES but adjusted using SC annual reports where necessary. **j.** Based on data collected as part of FFA data collection project; aggregate ignores the non-available. **k.** Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **l**. Thai customs (http://en.customs.go.th/index.php?view=normal). **m.** US NMFS (http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html).

## C11 Nauru - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **62,758** | **61,288** | **108,670** | **97,917** | **52,363** | **163,586** | **179,565** | **66,546** |
| *Longline* | | *0* | *0* | *86* | *163* | *214* | *163* | *277* | *0* |
| *Purse seine* | | *62,755* | *61,280* | *108,580* | *97,743* | *52,138* | *163,404* | *179,269* | *66,527* |
| *Troll* | | *3* | *8* | *4* | *11* | *11* | *19* | *19* | *19* |
| **Value of catch** | *US$ mill* | **110** | **74** | **145** | **174** | **116** | **345** | **273** | **86** |
| *Longline* | | *0* | *0* | *0.78* | *1.7* | *1.9* | *1.2* | *2.2* | *0.0* |
| *Purse seine* | | *110* | *74* | *144* | *172* | *114* | *344* | *271* | *86* |
| *Troll* | | *0.01* | *0.01* | *0.01* | *0.02* | *0.03* | *0.04* | *0.03* | *0.03* |
| **National fleet**[a] | | | | | | | | | |
| **Catch** | *tonnes* | **3** | **8** | **4** | **11** | **11** | **19** | **19** | **19** |
| *Troll* | | *3* | *8* | *4* | *11* | *11* | *19* | *19* | *19* |
| **Value of catch** | | **0.005** | **0.011** | **0.006** | **0.021** | **0.026** | **0.043** | **0.033** | **0.029** |
| *Troll* | | *0.005* | *0.011* | *0.006* | *0.021* | *0.026* | *0.043* | *0.033* | *0.029* |

***Notes:*** **a**. Domestic small troll commercial/artisanal boats

## C12 Nauru – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only**[a] | | **0.003** | **0.005** | **0.003** | **0.01** | **0.01** | **0.02** | **0.02** | **0.02** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments** | | **10** | **6.7** | **12** | **13** | **11** | **13** | **21** | **35** |
| *US Treatb*[d] | | *1.8* | *1.7* | *2.2* | *2.1* | *3.1* | *5.0* | *3.5* | *11* |
| *FSM Arrangement*[c] | | *1.8* | *0.6* | *1.2* | *1.2* | *1.1* | *3.5* | *4.2* | *2.3* |
| *Purse seine bilateral and other agreements*[d] | | *6.6* | *4.4* | *8.6* | *10* | *6.8* | *4.1* | *13* | *22* |
| *Longline*[e] | | *0* | *0* | *0.04* | *0.08* | *0.09* | *0.06* | *0.11* | *0* |
| **Employment**[f] | *number* | **2** | **11** | **5** | **na** | **na** | **na** | **47** | **47** |
| *Crew* | | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | *2* | *2* |
| *Observers* | | *2* | *11* | *5* | ***na*** | ***na*** | ***na*** | *3* | *3* |
| *Public sector* | | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | *42* | *42* |

*Notes:* **na** not available..**a.** Derived using value added ratios and value of troll fishery. **b.** As distributed by FFA includes equal share but not PDF payment. **c.** As distributed by PNA and previous to 2013 by FFA**. d**. Purse seine bilateral payments 2008-2011 6% of landed catch value, 2012-2015 PAE allocations times VDS benchmarks; payments understood to exclude observer and MCS fees. **e.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **f.** Nauru Fisheries Authority and others; aggregate ignores the non-available.

## C13 Niue - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **435** | **290** | **217** | **0** | **0** | **432** | **439** | **330** |
| *Longline* | | *435* | *290* | *217* | *0* | *0* | *432* | *439* | *330* |
| **Value of catch** | *US$ mill* | **1.6** | **1.0** | **0.72** | **0** | **0** | **1.4** | **1.8** | **1.5** |
| *Longline* | | *1.6* | *1.0* | *0.72* | *0* | *0* | *1.4* | *1.8* | *1.5* |
| **National fleet**[a] | | | | | | | | | |
| **Number of vessels** | *number* | *1* | *1* | *1* | *0* | *0* | *0* | *0* | *0* |
| *Longline* | | *1* | *1* | *1* | *0* | *0* | *0* | *0* | *0* |
| **Catch** | *tonnes* | **435** | **189** | **110** | **0** | **0** | **0** | **0** | **0** |
| *Longline* | | *435* | *189* | *110* | *0* | *0* | *0* | *0* | *0* |
| **Value of catch** | | **1.6** | **0.65** | **0.37** | **0** | **0** | **0** | **0** | **0** |
| *Longline* | | *1.6* | *0.65* | *0.37* | *0* | *0* | *0* | *0* | *0* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C14 Niue – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only**[a] | | **0.26** | **0.11** | **0.06** | **0** | **0** | **0** | **0** | **0** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments** | | **0.35** | **0.38** | **0.37** | **0.34** | **0.35** | **0.60** | **0.62** | **0.78** |
| *US Treatb*[b] | | *0.35* | *0.36* | *0.35* | *0.34* | *0.35* | *0.53* | *0.53* | *0.71* |
| *Longline*[c] | | *0.0* | *0.02* | *0.02* | *0.0* | *0.0* | *0.07* | *0.09* | *0.07* |
| **Employment**[f] | *number* | **6** | **6** | **na** | **na** | **na** | **na** | **4** | **4** |
| *Processing & ancillary* | | *2* | *1* | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** |
| *Crew* | | *3* | *5* | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** |
| *Observers* | | *1* | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** |
| *Public sector* | | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | ***na*** | *4* | *4* |

***Notes:*** **na** not available..**a.** Derived using value added ratios. **b.** As distributed by FFA. **c.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **f.** Various sources including pers. comm James Tafatu, Niue Principal Fisheries Officer (Feb 2016); aggregate ignores the non-available.

## C15 Palau - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **7,756** | **2,180** | **2,929** | **2,900** | **3,903** | **3,414** | **5,127** | **1,430** |
| *Longline* | | *3,708* | *1,230* | *2,582* | *2,900* | *3,165* | *3,104* | *2,458* | *1,245* |
| *Pole and line* | | *7.0* | *0* | *0* | *0* | *2.0* | *0* | *0* | *0* |
| *Purse seine* | | *4,040* | *950* | *347* | *0* | *737* | *310* | *2,670* | *185* |
| **Value of catch** | *US$ mill* | **37** | **12** | **24** | **30** | **35** | **27** | **26** | **9.4** |
| *Longline* | | *29* | *11* | *24* | *30* | *33* | *26* | *20* | *9.1* |
| *Pole and line* | | *0.02* | *0* | *0* | *0* | *0.01* | *0* | *0* | *0* |
| *Purse seine* | | *8.0* | *1.5* | *0.53* | *0* | *1.8* | *0.54* | *6.4* | *0.25* |
| **National fleet[a]** | | | | | | | | | |
| **Number of vessels** | *number* | **104** | **96** | **59** | **79** | **50** | **54** | **41** | **31** |
| *Longline* | | *104* | *96* | *59* | *79* | *50* | *54* | *41* | *31* |
| **Catch** | *tonnes* | **1,938** | **611** | **1,893** | **1,966** | **2,124** | **2,083** | **1,792** | **910** |
| *Longline* | | *1,938* | *611* | *1,893* | *1,966* | *2,124* | *2,083* | *1,792* | *910* |
| **Value of catch** | *US$ mill* | **15** | **5.0** | **14** | **19** | **22** | **18** | **14** | **6.8** |
| *Longline* | | *15* | *5.0* | *14* | *19* | *22* | *18* | *14* | *6.8* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C16 Palau – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **2.5** | **0.8** | **2.4** | **3.2** | **3.6** | **3.0** | **2.4** | **1.1** |
| **Combined harvest and onshore processing[b]** | | **na** | **na** | **na** | **na** | **na** | **2.5** | **2.0** | **1.0** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments** | | **2.3** | **0.97** | **1.6** | **1.8** | **4.7** | **5.4** | **5.8** | **8.4** |
| *US Treaty[c]* | | *0.35* | *0.35* | *0.34* | *0.34* | *0.35* | *1.2* | *1.2* | *0.7* |
| *FSM Arrangement[d]* | | *0.001* | *0.001* | *0.004* | *0.004* | *0.015* | *0.10* | *0.037* | *0.055* |
| *Purse seine bilateral and other agreements[e]* | | *0.48* | *0.091* | *0.03* | *0* | *2.6* | *2.8* | *3.6* | *7.1* |
| *Longline[f]* | | *1.5* | *0.53* | *1.2* | *1.5* | *1.7* | *1.3* | *1.0* | *0.5* |
| **Domestic vessels licensing and other payments[g]** | | **na** | **na** | **na** | **na** | **na** | *0.40* | *0.40* | *0.20* |
| **Onshore processing volumes[h]** | *tonnes* | **124** | **261** | **628** | **2,226** | **2,170** | **2,083** | **1,792** | **910** |
| **Employment[i]** | *number* | **45** | **49** | **42** | **118** | **104** | **44** | **46** | **46** |
| *Processing & ancillary* | | *7* | *8* | *7* | *84* | *70* | *36* | *36* | *36* |
| *Crew* | | ***na*** | *3* | *0* | *0* | *0* | *0* | *0* | *0* |
| *Observers* | | *4* | *4* | *1* | ***na*** | ***na*** | ***na*** | *2* | *2* |
| *Public sector* | | *34* | *34* | *34* | *34* | *34* | *8* | *8* | *8* |
| **Exports** | *US$ mill* | | | | | | | | |
| **Japan[j]** | | **26** | **17** | **16** | **18** | **23** | **16** | **14** | **8.0** |
| **US[k]** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0.02** |
| **Balance of payments[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **4.2** | **3.6** | **1.8** |
| **Employment earnings[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **1.4** | **1.2** | **0.60** |
| **Local purchases[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **1.5** | **1.3** | **0.60** |

***Notes:*** **na** not available..**a.** Derived using value added ratios **b.** Derived using per tonne contribution. **c**. As distributed by FFA. **d.** As distributed by PNA and previous to 2013 by FFA**. e**. Calculated as 6 per cent of landed value for 2008 to 2011, thereafter the allocated PAE times VDS benchmark; payments exclude observer and MCS fees. **f.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **g.** Includes licences, transhipment, port and agency fees and derived using the per tonne contribution. **h.** The volume processed refers only to the longline catch processed to some form domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. Data sourced primarily from CES but adjusted using SC annual reports where necessary. **i.** Based on data collected as part of FFA data collection project. **j.** Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **k.** US NMFS (http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html).

## C17 Papua New Guinea - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **496,338** | **484,563** | **729,749** | **622,708** | **584,894** | **587,201** | **338,687** | **187,597** |
| *Longline* | | *3,298* | *4,043* | *3,097* | *2,945* | *4,301* | *1,323* | *1,977* | *1,350* |
| *Purse seine* | | *493,040* | *480,520* | *726,652* | *619,763* | *580,593* | *585,877* | *336,709* | *186,247* |
| **Value of catch** | *US$ mill* | **899** | **629** | **1,040** | **1,183** | **1,316** | **1,236** | **562** | **268** |
| *Longline* | | *21* | *26* | *21* | *25* | *34* | *9.2* | *14* | *8.0* |
| *Purse seine* | | *878* | *604* | *1,018* | *1,159* | *1,282* | *1,227* | *548* | *260* |
| **National fleet**[a] | | | | | | | | | |
| **Number of vessels** | *number* | **61** | **60** | **67** | **74** | **78** | **66** | **65** | **65** |
| *Longline* | | *19* | *20* | *19* | *25* | *27* | *15* | *10* | *10* |
| *Purse seine* | | *42* | *40* | *48* | *49* | *51* | *51* | *55* | *55* |
| **Catch** | *tonnes* | **213,110** | **206,198** | **208,129** | **199,612** | **237,600** | **221,806** | **215,069** | **200,358** |
| *Longline* | | *2,901* | *3,748* | *3,084* | *2,188* | *2,615* | *1,076* | *746* | *1,785* |
| *Purse seine* | | *210,209* | *202,450* | *205,045* | *197,424* | *234,985* | *220,730* | *214,323* | *198,573* |
| **Value of catch** | *US$ mill* | **387** | **268** | **292** | **367** | **536** | **477** | **331** | **266** |
| *Longline* | | *19* | *24* | *21* | *19* | *21* | *7.5* | *5.0* | *11* |
| *Purse seine* | | *368* | *244* | *271* | *349* | *515* | *469* | *326* | *255* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C18 Papua New Guinea – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **167** | **113** | **124** | **159** | **233** | **211** | **146** | **116** |
| **Combined harvest and onshore processing[b]** | | **na** | **na** | **na** | **na** | **na** | **258** | **259** | **258** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments** | | **46** | **31** | **55** | **62** | **71** | **77** | **93** | **94** |
| *US Treaty[c]* | | *5.6* | *4.2* | *3.1* | *5.1* | *4.0* | *1.9* | *1.3* | *15* |
| *FSM Arrangement[d]* | | *0.9* | *0.81* | *1.0* | *0.89* | *1.2* | *3.4* | *1.4* | *0.6* |
| *Purse seine bilateral and other agreements[d]* | | *39* | *26* | *51* | *56* | *66* | *72* | *90* | *78* |
| *Longline[f]* | | *0.16* | *0.088* | *0.010* | *0.10* | *0.14* | *0.005* | *0.011* | *0.025* |
| **Domestic vessels licensing and other payments[g]** | | **na** | **na** | **na** | **na** | **na** | **28** | **28** | **28** |
| **Onshore processing volumes[h]** | *tonnes* | **45,000** | **56,709** | **49,879** | **51,545** | **63,214** | **66,673** | **67,181** | **66,490** |
| **Employment[i]** | *number* | **7,808** | **7,269** | **7,086** | **7,295** | **8,329** | **8,964** | **10,124** | **11,440** |
| *Processing & ancillary* | | *6,715* | *5,783* | *5,600* | *5,962* | *6,640* | *7,000* | *7,536* | *6,342* |
| *Crew* | | *819* | *1,102* | *1,102* | *1,153* | *1,509* | *1,776* | *1,776* | *4,170* |
| *Observers* | | *125* | *235* | *235* | ***na*** | ***na*** | ***na*** | *250* | *366* |
| *Public sector* | | *149* | *149* | *149* | *180* | *180* | *188* | *562* | *562* |
| **Exports** | *US$ mill* | | | | | | | | |
| **EU[jj]** | | **44** | **59** | **65** | **87** | **151** | **181** | **141** | **120** |
| **Japan[k]** | | **10** | **4.4** | **3.3** | **7.0** | **10** | **4.1** | **5.4** | **4.0** |
| **Thailand[l]** | | **10** | **25** | **18** | **20** | **32** | **8.5** | **18** | **64** |
| **US[m]** | | **23** | **19** | **13** | **13** | **5.7** | **5.6** | **0.21** | **0** |
| **Balance of payments[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **319** | **321** | **319** |
| **Employment earnings[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **9.0** | **9.0** | **9.0** |
| **Local purchases[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **56** | **56** | **56** |

***Notes:*** **na** not available..**a.** Derived using value added ratios **b.** Derived using per tonne contribution. **c**. As distributed by FFA. **d.** As distributed by PNA and previous to 2012 by FFA**. e**. Calculated as 6 per cent of landed value for 2008 to 2011, thereafter the allocated PAE less days by national fleet times VDS benchmark; payments exclude observer and MCS fees. **f.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **g.** Includes licences, transhipment, port and agency fees and derived using the per tonne contribution. **h.** The volume processed refers only to the purse seine and longline catch processed to some form domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. Data sourced primarily from CES but adjusted using SC annual reports where necessary. **i.** Based on data collected as part of FFA data collection project; the public sector number includes 369 reported employees for "Other, artisenal" category for 2014 and 2015; aggregate ignores the non-available. **j.** EuroStats (http://ec.europa.eu/eurostat/data/database). **k.** Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **l**. Thai customs (http://en.customs.go.th/index.php?view=normal). **m.** US NMFS (http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html).

## C19 Samoa - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **2,924** | **3,544** | **3,350** | **2,736** | **3,246** | **2,051** | **1,364** | **2,383** |
| *Longline* | | *2,796* | *3,422* | *3,090* | *1,932* | *2,352* | *2,020* | *1,093* | *1,178* |
| *Purse seine* | | *128* | *122* | *260* | *804* | *894* | *31* | *271* | *1,205* |
| **Value of catch** | *US$ mill* | **9.3** | **12** | **12** | **10** | **12** | **7.2** | **4.9** | **6.3** |
| *Longline* | | *9.1* | *11.6* | *11.2* | *8.8* | *10.0* | *7.2* | *4.5* | *4.8* |
| *Purse seine* | | *0.22* | *0.14* | *0.36* | *1.4* | *1.9* | *0.07* | *0.40* | *1.5* |
| **National fleet**[a] | | | | | | | | | |
| **Number of vessels** | *number* | **44** | **42** | **50** | **46** | **36** | **39** | **42** | **53** |
| *Longline* | | *44* | *42* | *50* | *46* | *36* | *39* | *42* | *53* |
| **Catch** | *tonnes* | **2,796** | **3,422** | **3,090** | **1,932** | **2,353** | **2,022** | **1,102** | **1,178** |
| *Longline* | | *2,796* | *3,422* | *3,090* | *1,932* | *2,353* | *2,022* | *1,102* | *1,178* |
| **Value of catch** | *US$ mill* | **9.1** | **12** | **11** | **8.8** | **10** | **7.2** | **4.6** | **4.8** |
| *Longline* | | *9.1* | *12* | *11* | *8.8* | *10* | *7.2* | *4.6* | *4.8* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C20 Samoa – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **9.1** | **12.0** | **11.0** | **8.8** | **10.0** | **7.2** | **4.6** | **4.8** |
| **Combined harvest and onshore processing[b]** | | **na** | **na** | **na** | **na** | **na** | **1.8** | **1.1** | **1.0** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments** | | **0.50** | **0.57** | **0.61** | **0.53** | **0.40** | **0.70** | **0.78** | **0.90** |
| *US Treaty[c]* | | *0.50* | *0.57* | *0.61* | *0.53* | *0.40* | *0.70* | *0.78* | *0.90* |
| **Domestic vessels licensing and other payments[d]** | | **na** | **na** | **na** | **na** | **na** | **0.40** | **0.30** | **0.20** |
| **Onshore processing volumes[e]** | *tonnes* | **na** | **2,259** | **4,261** | **1,873** | **2,725** | **2,209** | **1,344** | **1,178** |
| **Employment[f]** | *number* | **387** | **293** | **414** | **395** | **415** | **325** | **327** | **327** |
| *Processing & ancillary* | | *60* | *64* | *52* | *46* | *71* | *33* | *20* | *20* |
| *Crew* | | *275* | *177* | *307* | *271* | *266* | *220* | *237* | *237* |
| *Observers* | | *2* | *2* | *5* | ***na*** | ***na*** | ***na*** | *5* | *5* |
| *Public sector* | | *50* | *50* | *50* | *78* | *78* | *72* | *65* | *65* |
| **Exports** | *US$ mill* | | | | | | | | |
| **Japan[g]** | | **0.014** | **0.003** | **0.021** | **0.014** | **0.023** | **0.005** | **0** | **0.76** |
| **US[h]** | | **0.50** | **0.65** | **0.34** | **0.34** | **0.18** | **0.012** | **0** | **0.52** |
| **Balance of payments[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **2.4** | **1.4** | **1.3** |
| **Employment earnings[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **0.70** | **0.40** | **0.40** |
| **Local purchases[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **0.50** | **0.30** | **0.30** |

*Notes:* **na** not available..**a.** Derived using value added ratios **b.** Derived using per tonne contribution. **c**. As distributed by FFA. **d.** Includes licences, transhipment, port and agency fees and derived using the per tonne contribution. **e.** The volume processed refers only to the purse seine and longline catch processed to some form domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. Data sourced primarily from CES but adjusted using SC annual reports where necessary. **f.** Based on data collected as part of FFA data collection project; aggregate ignores the non-available. **g.** Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **h.** US NMFS (http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html).

## C21 Solomon Islands - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **143,743** | **140,647** | **186,510** | **178,101** | **100,484** | **134,799** | **93,362** | **136,365** |
| *Longline* | | *17,637* | *23,067* | *23,521* | *19,033* | *20,986* | *21,677* | *34,815* | *32,661* |
| *Pole and line* | | *2,672* | *345* | *0* | *871* | *2,135* | *1,666* | *1,532* | *910* |
| *Purse seine* | | *123,434* | *117,235* | *162,989* | *158,197* | *77,363* | *111,456* | *57,015* | *102,794* |
| **Value of catch** | *US$ mill* | **305** | **259** | **347** | **400** | **302** | **335** | **280** | **318** |
| *Longline* | | *83* | *112* | *134* | *116* | *128* | *97* | *186* | *183* |
| *Pole and line* | | *5.5* | *0.89* | *0* | *1.5* | *4.6* | *3.5* | *2.3* | *1.2* |
| *Purse seine* | | *217* | *147* | *214* | *283* | *170* | *235* | *91* | *134* |
| **National fleet[a]** | | | | | | | | | |
| **Number of vessels** | *number* | **171** | **193** | **146** | **144** | **143** | **134** | **143** | **127** |
| *Longline* | | *163* | *174* | *132* | *130* | *128* | *122* | *137* | *120* |
| *Purse seine* | | *8* | *19* | *14* | *14* | *15* | *12* | *6* | *7* |
| **Catch** | *tonnes* | **45,352** | **44,734** | **42,061** | **51,038** | **66,016** | **54,519** | **65,792** | **61,670** |
| *Longline* | | *27,974* | *26,851* | *29,096* | *24,606* | *37,411* | *28,084* | *33,835* | *31,967* |
| *Pole and line* | | *1,340* | *0* | *0* | *871* | *2,135* | *1,666* | *1,532* | *910* |
| *Purse seine* | | *16,038* | *17,883* | *12,965* | *25,561* | *26,470* | *24,769* | *30,425* | *28,793* |
| **Value of catch** | *US$ mill* | **123** | **115** | **121** | **201** | **290** | **184** | **229** | **223** |
| *Longline* | | 92 | 93 | 104 | 152 | 226 | 127 | 178 | 183 |
| *Pole and line* | | *2.3* | *0* | *0* | *1.5* | *4.6* | *3.5* | *2.3* | *1.2* |
| *Purse seine* | | *29* | *22* | *17* | *47* | *59* | *53* | *49* | *39* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C22 Solomon Islands – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **29** | **26** | **48** | **94** | **108** | **72** | **53** | **49** |
| **Combined harvest and onshore processing[b]** | | **na** | **na** | **na** | **na** | **na** | **59** | **66** | **63** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments** | | **18** | **15** | **19** | **24** | **23** | **25** | **27** | **41** |
| *US Treaty[c]* | | *1.9* | *1.6* | *2.2* | *2.7* | *1.7* | *2.8* | *3.2* | *11* |
| *FSM Arrangement[c]* | | *0.85* | *0.71* | *1.5* | *1.4* | *0.60* | *1.4* | *1.1* | *2.0* |
| *Purse seine bilateral and other agreements[e]* | | *11.4* | *7.4* | *11.8* | *14.1* | *13.9* | *15.9* | *20.4* | *26.5* |
| *Longline[f]* | | *4.1* | *5.6* | *3.6* | *5.3* | *6.4* | *4.8* | *2.3* | *1.1* |
| **Domestic vessels licensing and other payments[g]** | | **na** | **na** | **na** | **na** | **na** | **3.1** | **6.4** | **6.0** |
| **Onshore processing volumes[h]** | *tonnes* | **11,000** | **11,544** | **15,558** | **19,700** | **12,796** | **24,789** | **40,487** | **38,501** |
| **Employment[i]** | *number* | **84** | **918** | **976** | **1,190** | **1,922** | **1,715** | **2,293** | **2,356** |
| *Processing & ancillary* | | **na** | *697* | *687* | *987* | *1,602* | *1,361* | *1,470* | *1,394* |
| *Crew* | | **na** | *120* | *115* | *120* | *239* | *274* | *274* | *282* |
| *Observers* | | *14* | *31* | *104* | **na** | **na** | **na** | *21* | *108* |
| *Public sector* | | *70* | *70* | *70* | *83* | *81* | *80* | *528* | *572* |
| **Exports** | *US$ mill* | | | | | | | | |
| **EU[j]** | | **15** | **12** | **12** | **27** | **33** | **33** | **49** | **na** |
| **Japan[k]** | | **0** | **0** | **0** | **0** | **2.7** | **3.3** | **1.3** | **0** |
| **Thailand[l]** | | **27** | **12** | **16** | **26** | **22** | **20** | **10** | **12** |
| **US[m]** | | **0** | **0** | **0** | **0** | **0.9** | **8.0** | **6.9** | **2.5** |
| **Balance of payments[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **75** | **101** | **96** |
| **Employment earnings[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **2.0** | **13** | **12** |
| **Local purchases[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **13** | **25** | **23** |

***Notes:*** **na** not available..**a.** Derived using value added ratios **b.** Derived using per tonne contribution. **c.** As distributed by FFA. **d.** As distributed by PNA and previous to 2013 by FFA**. e**. Calculated as 6 per cent of landed value for 2008 to 2011, thereafter the allocated PAE less days by national fleet times VDS benchmark; payments exclude observer and MCS fees. **f.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **g.** Includes licences, transhipment, port and agency fees and derived using the per tonne contribution. **h.** The volume processed refers only to the purse seine and longline catch processed to some form domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. Data sourced primarily from CES but adjusted using SC annual reports where necessary. **i.** Based on data collected as part of FFA data collection project; the public sector number includes 477 reported employees for "Other, artisenal" category for 2015 and 448 for 2014; aggregate ignores the non-available. **j.** EuroStats (http://ec.europa.eu/eurostat/data/database). **k.** Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **l**. Thai customs (http://en.customs.go.th/index.php?view=normal). **m.** US NMFS (http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html).

## C23 Tokelau - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **4,065** | **7,190** | **4,001** | **19,469** | **21,043** | **15,924** | **26,811** | **48,858** |
| *Longline* | | *169* | *0* | *0* | *476* | *758* | *1* | *169* | *3798* |
| *Purse seine* | | *3,888* | *7,178* | *3,997* | *18,989* | *20,056* | *15,746* | *26,556* | *44,881* |
| *Other* | | *8* | *12* | *4* | *4* | *229* | *177* | *86* | *179* |
| **Value of catch** | *US$ mill* | **7** | **9** | **5** | **36** | **50** | **33** | **40** | **71** |
| *Longline* | | *1* | *0* | *0* | *4.1* | *6.2* | *0.011* | *1.3* | *17* |
| *Purse seine* | | *7* | *9* | *5* | *32* | *43* | *33* | *39* | *54* |
| *Other* | | *0.014* | *0.015* | *0.005* | *0.007* | *0.52* | *0.39* | *0.13* | *0.25* |
| **National fleet**[a] | | | | | | | | | |
| **Catch** | *tonnes* | **8** | **12** | **4** | **4** | **229** | **177** | **86** | **179** |
| *Other* | | *8* | *12* | *4* | *4* | *229* | *177* | *86* | *179* |
| **Value of catch** | *US$ mill* | **0.014** | **0.015** | **0.005** | **0.007** | **0.52** | **0.39** | **0.13** | **0.25** |
| *Other* | | *0.014* | *0.015* | *0.005* | *0.007* | *0.52* | *0.39* | *0.13* | *0.25* |

*Notes:* **a**. Domestic fleet consists solely of inshore troll vessels as Tokelau is not a flag state.

## C24 Tokelau – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only**[a] | | **0.007** | **0.007** | **0.003** | **0.003** | **0.26** | **0.20** | **0.07** | **0.13** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments**[b] | | **1.0** | **1.0** | **1.0** | **1.2** | **3.1** | **6.4** | **9.1** | **10** |
| *US Treatb*[c] | | *0.7* | *0.6* | *0.4* | *1.1* | *1.5* | *2.7* | *2.9* | *8.2* |
| *Purse seine bilateral and other agreements*[d] | | *0.2* | *0.4* | *0.6* | *0.1* | *1.3* | *3.7* | *6.1* | *0.93* |
| *Longline*[e] | | *0.031* | *0* | *0* | *0.041* | *0.31* | *0.001* | *0.066* | *0.87* |
| **Employment**[f] | *number* | **1** | **na** | **8** | **na** | **na** | **na** | **6** | **6** |
| *Observers* | | *1* | *0* | *8* | *0* | *0* | *0* | *2* | *2* |
| *Public sector* | | *na* | *na* | *na* | *na* | *na* | *na* | *4* | *4* |

*Notes:* **na** not available..**a.** Derived other contributions using value added ratios for inshore troll. **b.** Per. Comm. Feleti Tulafono, Dept of Econ development Natural Resources & Environment (Feb 2016) **c**. As distributed by FFA. **d.** Calculated as the difference between the aggregate figure and the total of foreign access fees from other sources. **e.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **f.** Pers. comm. Feleti Tulafono, Dept of Econ development Natural Resources & Environment (Feb 2016).

## C25 Tonga - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **592** | **271** | **128** | **246** | **2,167** | **4,092** | **1,545** | **5,424** |
| *Longline* | | *592* | *271* | *128* | *246* | *2,167* | *4,092* | *1,545* | *5,326* |
| *Purse seine* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *98* |
| **Value of catch** | *US$ mill* | **3.4** | **1.5** | **0.80** | **2.0** | **11** | **15** | **6.8** | **20** |
| *Longline* | | *3.4* | *1.5* | *0.80* | *2.0* | *11* | *15* | *6.8* | *20* |
| *Purse seine* | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0.12* |
| **National fleet**[a] | | | | | | | | | |
| **Number of vessels** | *number* | **9** | **7** | **5** | **4** | **4** | **4** | **4** | **4** |
| *Longline* | | *9* | *7* | *5* | *4* | *4* | *4* | *4* | *4* |
| **Catch** | *tonnes* | **592** | **271** | **128** | **224** | **171** | **147** | **250** | **357** |
| *Longline* | | *592* | *271* | *128* | *224* | *171* | *147* | *250* | *357* |
| **Value of catch** | *US$ mill* | **3.4** | **1.5** | **0.8** | **1.9** | **1.5** | **1.1** | **1.8** | **2.4** |
| *Longline* | | *3.4* | *1.5* | *0.8* | *1.9* | *1.5* | *1.1* | *1.8* | *2.4* |

***Notes:*** **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C26 Tonga – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **0.56** | **0.24** | **0.13** | **0.31** | **0.24** | **0.18** | **0.30** | **0.40** |
| **Combined harvest and onshore processing[b]** | | **na** | **na** | **na** | **na** | **na** | **0.99** | **0.51** | **0.56** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Access fee payments** | | **0.35** | **0.35** | **0.34** | **0.35** | **0.8** | **1.2** | **0.80** | **1.6** |
| *US Treaty[c]* | | *0.35* | *0.35* | *0.34* | *0.34* | *0.36* | *0.54* | *0.55* | *0.73* |
| *Longline[d]* | | *0* | *0* | *0* | *0.009* | *0.48* | *0.70* | *0.25* | *0.88* |
| **Domestic vessels licensing and other payments[e]** | | **na** | **na** | **na** | **na** | **na** | **0.51** | **0.22** | **0.22** |
| **Onshore processing volumes[f]** | *tonnes* | **72** | **60** | **66** | **207** | **123** | **147** | **250** | **357** |
| **Employment[g]** | *number* | **57** | **61** | **66** | **54** | **45** | **45** | **148** | **142** |
| *Processing & ancillary* | | *na* | *na* | *na* | *na* | *na* | *na* | *12* | *12* |
| *Crew* | | *na* | *na* | *na* | *na* | *na* | *na* | *77* | *77* |
| *Observers* | | *3* | *7* | *12* | *na* | *na* | *na* | *10* | *10* |
| *Public sector* | | *54* | *54* | *54* | *54* | *45* | *45* | *49* | *43* |
| **Exports** | *US$ mill* | | | | | | | | |
| **Japan[h]** | | **0.72** | **0.38** | **0.15** | **0.54** | **0.26** | **0.41** | **1.1** | **0.88** |
| **US[i]** | | **0.21** | **0.16** | **0.080** | **0.11** | **0.014** | **0.009** | **0.038** | **0.19** |
| **Balance of payments[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **5.1** | **2.2** | **2.2** |
| **Employment earnings[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **1.7** | **0.70** | **0.70** |
| **Local purchases[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **1.8** | **0.80** | **0.80** |

*Notes:* **na** not available..**a.** Derived using value added ratios **b.** Derived using per tonne contribution. **c.** As distributed by FFA.. **d.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **e.** Includes licences, transhipment, port and agency fees and derived using the per tonne contribution. **f.** The volume processed refers only to the longline catch processed to some form domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. Data sourced primarily from CES but adjusted using SC annual reports where necessary and data collector. **g.** Based on data collected as part of FFA data collection project; aggregate ignores the non-available. **h** Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **i.** US NMFS (http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html).

## C27 Tuvalu - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **40,907** | **63,993** | **67,738** | **60,494** | **71,824** | **56,696** | **98,048** | **80,205** |
| *Longline* | | *694* | *1,106* | *2,919* | *1,697* | *2,268* | *2,464* | *1,639* | *1,119* |
| *Pole and line* | | *181* | *1* | *0* | *0* | *0* | *0* | *273* | *0* |
| *Purse seine* | | *40,010* | *62,858* | *64,791* | *55,983* | *66,437* | *54,155* | *95,919* | *78,999* |
| *Troll* | | *22* | *28* | *28* | *2,814* | *3,119* | *77* | *217* | *87* |
| **Value of catch** | *US$ mill* | **74** | **81** | **104** | **116** | **167** | **125** | **154** | **103** |
| *Longline* | | *4.1* | *6.9* | *21* | *13* | *17* | *12* | *11* | *7* |
| *Pole and line* | | *0.40* | *0.002* | *0* | *0* | *0* | *0* | *0.68* | *0* |
| *Purse seine* | | *69* | *74* | *83* | *98* | *143* | *113* | *142* | *96* |
| *Troll* | | *0.04* | *0.04* | *0.04* | *5.1* | *6.9* | *0.2* | *0.3* | *0.1* |
| **National fleet**[a] | | | | | | | | | |
| **Number of vessels** | *number* | **0** | **1** | **1** | **7** | **7** | **3** | **3** | **3** |
| *Longline* | | *0* | *0* | *0* | *6* | *6* | *2* | *2* | *2* |
| *Purse seine* | | *0* | *1* | *1* | *1* | *1* | *1* | *1* | *1* |
| **Catch** | *tonnes* | **22** | **4,456** | **10,582** | **10,806** | **16,469** | **11,702** | **6,355** | **5,175** |
| *Longline* | | *0* | *0* | *0* | *575* | *2,296* | *209* | *195* | *502* |
| *Purse seine* | | *0* | *4,428* | *10,554* | *7,417* | *11,054* | *11,416* | *5,943* | *4,586* |
| *Troll* | | *22* | *28* | *28* | *2,814* | *3,119* | *77* | *217* | *87* |
| **Value of catch** | *US$ mill* | **0.039** | **5.2** | **14** | **23** | **53** | **25** | **10** | **9** |
| *Longline* | | *0* | *0* | *0* | *4.3* | *21* | *1.3* | *1.2* | *3.3* |
| *Purse seine* | | *0* | *5.2* | *14* | *13* | *24* | *24* | *8.9* | *5.6* |
| *Troll* | | *0.039* | *0.035* | *0.038* | *5.1* | *6.9* | *0.16* | *0.33* | *0.12* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C28 Tuvalu – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **0.020** | **0.018** | **0.020** | **2.6** | **3.5** | **0.082** | **0.17** | **0.059** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments** | | **7.9** | **7.5** | **9.0** | **9.1** | **9.6** | **12** | **14** | **27** |
| *US Treaty[d]* | | 3.3 | 2.6 | 2.7 | 2.4 | 3.2 | 4.5 | 3.5 | 14 |
| *FSM Arrangement[c]* | | 0.14 | 0.18 | 0.22 | 0.19 | 0.55 | 0.44 | 1.8 | 1.4 |
| *Purse seine bilateral and other agreements[d]* | | 4.2 | 4.4 | 5.0 | 5.9 | 5.3 | 6.1 | 8.4 | 11.2 |
| *Longline[e]* | | 0.21 | 0.34 | 1.10 | 0.56 | 0.59 | 0.54 | 0.50 | 0.19 |
| **Employment[f]** | *number* | **36** | **251** | **242** | **239** | **283** | **408** | **449** | **185** |
| *Processing & ancillary* | | *0* | *0* | *0* | *0* | *2* | *2* | *2* | *0* |
| *Crew* | | ***na*** | *213* | *203* | *205* | *246* | *363* | *363* | *61* |
| *Observers* | | *2* | *2* | *2* | ***na*** | ***na*** | ***na*** | *34* | *75* |
| *Public sector* | | *34* | *36* | *37* | *34* | *35* | *43* | *50* | *49* |
| **Exports** | *US$ mill* | | | | | | | | |
| **Japan[g]** | | **0** | **0** | **0** | **0** | **2.1** | **0.9** | **0.03** | **0** |
| **Thailand[h]** | | **0** | **2.4** | **12** | **7.6** | **7.2** | **18** | **1.8** | **3.3** |

*Notes:* **na** not available..**a.** Derived using value added ratios based only on the troll fishery with the other fleets excluded as their centre of economic interest is outside of Tuvalu. **b.** As distributed by FFA. **c.** As distributed by PNA and previous to 2013 by FFA**. d**. Calculated as 6 per cent of landed value for 2008 to 2011, thereafter the allocated PAE less days by national fleet times VDS benchmark; payments associated with the Joint Venture vessel are included here; payments exclude observer and MCS fees. **e.** Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **f.** Based on data collected as part of FFA data collection project; employment in the artisanal sector of which there were reported 400 during 2014 and 3 in 2015 are not included; aggregate ignores the non-available. **g.** Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **h**. Thai customs (http://en.customs.go.th/index.php?view=normal).

## C29 Vanuatu - Catch and catch values

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **National waters** | | | | | | | | | |
| **Catch** | *tonnes* | **8,911** | **8,186** | **6,212** | **10,673** | **6,638** | **10,124** | **7,696** | **4,854** |
| *Longline* | | *8,760* | *8,186* | *6,212* | *10,611* | *6,433* | *10,124* | *7,696* | *4,799* |
| *Purse seine* | | *151* | *0* | *0* | *62* | *205* | *0* | *0* | *55* |
| **Value of catch** | *US$ mill* | **33** | **31** | **21** | **48** | **32** | **35** | **29** | **19** |
| *Longline* | | *33* | *31* | *21* | *48* | *32* | *35* | *29* | *19* |
| *Purse seine* | | *0.26* | *0* | *0* | *0.11* | *0.44* | *0* | *0* | *0.068* |
| **National fleet**[a] | | | | | | | | | |
| **Number of vessels** | *number* | **79** | **78** | **83** | **102** | **106** | **77** | **86** | **77** |
| *Longline* | | *61* | *59* | *65* | *75* | *84* | *61* | *82* | *74* |
| *Purse seine* | | *18* | *19* | *18* | *27* | *22* | *16* | *4* | *3* |
| **Catch** | *tonnes* | **47,892** | **49,567** | **38,865** | **34,792** | **37,653** | **34,337** | **32,343** | **22,883** |
| *Longline* | | *9,174* | *11,727* | *15,145* | *11,410* | *12,990* | *14,238* | *11,829* | *14,539* |
| *Purse seine* | | *38,718* | *37,840* | *23,720* | *23,382* | *24,663* | *20,099* | *20,514* | *8,344* |
| **Value of catch** | *US$ mill* | **101** | **88** | **92** | **99** | **128** | **100** | **91** | **91** |
| *Longline* | | *33* | *43* | *61* | *58* | *74* | *58* | *61* | *81* |
| *Purse seine* | | *68* | *45* | *31* | *41* | *54* | *42* | *31* | *10* |

*Notes:* **a**. Domestically flagged and locally-based foreign charters, obtained from SC annual reports.

## C30 Vanuatu – Economic contribution

| | Units | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **Contribution to GDP** | *US$ mill* | | | | | | | | |
| **Harvest sector only[a]** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Combined harvest and onshore processing[b]** | | **na** | **na** | **na** | **na** | **na** | **0.30** | **0.30** | **0** |
| **Government revenue** | *US$ mill* | | | | | | | | |
| **Foreign vessels access fee payments** | | **1.7** | **1.8** | **1.3** | **2.5** | **1.8** | **2.2** | **2.0** | **1.7** |
| *US Treaty[c]* | | *0.35* | *0.36* | *0.34* | *0.34* | *0.37* | *0.55* | *0.53* | *0.72* |
| *Longline[d]* | | *1.4* | *1.5* | *1.0* | *2.1* | *1.4* | *1.7* | *1.4* | *1.0* |
| **Domestic vessels licensing and other payments[e]** | | **na** | **na** | **na** | **na** | **na** | **0.05** | **0.05** | **0** |
| **Onshore processing volumes[g]** | *tonnes* | **na** | **333** | **250** | **578** | **680** | **200** | **201** | **0** |
| **Employment[h]** | *number* | **50** | **206** | **112** | **93** | **80** | **175** | **136** | **228** |
| *Processing & ancillary* | | *na* | *20* | *15* | *27* | *25* | *84* | *0* | *0* |
| *Crew* | | *na* | *132* | *37* | *20* | *9* | *46* | *46* | *131* |
| *Observers* | | *na* | *4* | *10* | *na* | *na* | *na* | *30* | *32* |
| *Public sector* | | *50* | *50* | *50* | *46* | *46* | *45* | *60* | *65* |
| **Exports** | *US$ mill* | | | | | | | | |
| **Japan[i]** | | **0** | **2.4** | **2.2** | **5.3** | **4.4** | **1.8** | **0.26** | **0.11** |
| **Thailand[j]** | | **171** | **102** | **133** | **128** | **162** | **186** | **68** | **14** |
| **US[k]** | | **0** | **0** | **0.0034** | **0.20** | **1.1** | **0.10** | **0.44** | **0.20** |
| **Balance of payments[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **0.25** | **0.25** | **0** |
| **Employment earnings[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **0.18** | **0.18** | **0** |
| **Local purchases[b]** | *US$ mill* | **na** | **na** | **na** | **na** | **na** | **0.16** | **0.16** | **0** |

***Notes:*** na not available. **a**. The harvest sector contribution to GDP is nil as Vanuatu's national purse seine and longline fleets' centre of economic interest is abroad. **b.** Derived using per tonne contribution. **c**. As distributed by FFA. **d**. Calculated as 5% of the value of the longline catch of foreign vessels taken in EEZ. **e**. Includes licences, transhipment, port and agency fees and derived using the per tonne contribution. **g**. The volume processed refers only to the purse seine and longline catch processed to some form domestically onshore or on board vessels; excludes volumes transhipped or delivered directly to offshore canneries. Data sourced primarily from CES, SC annual reports and data collector's. **h**. Based on data collected as part of FFA data collection project; the public sector number includes 12 reported employees for "Other, artisenal" category for 2015; aggregate ignores the non-available. **i.** Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm). **j**. Japan Customs (http://www.customs.go.jp/toukei/download/index_d011_e.htm) (excludes frozen whole tuna). **k**. US NMFS (http://www.st.nmfs.noaa.gov/st1/trade/monthly_data/TradeDataCountryMonth.html).