



**SCIENTIFIC COMMITTEE  
TENTH REGULAR SESSION**

Majuro, Republic of the Marshall Islands  
6-14 August 2014

---

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

---

**WCPFC-SC10-AR/CCM-22**

**SOLOMON ISLANDS**



**PART 1: INFORMATION ON FISHERIES RESEARCH AND STATISTICS**

---

**SOLOMON ISLANDS - 2014**



**SCIENTIFIC COMMITTEE  
EIGHTH REGULAR SESSION**

6<sup>th</sup> - 14<sup>th</sup> August 2014

Majuro, Marshal Islands

---

**ANNUAL REPORT TO THE COMMISSION**

**PART 1: INFORMATION ON FISHERIES RESEARCH AND STATISTICS**

---

**Solomon Islands**

2014



**ANNUAL REPORT TO THE WESTERN AND CENTRAL PACIFIC  
FISHERIES COMMISSION**

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

**SOLOMON ISLANDS**

|  |            |
|--|------------|
| Scientific data was provided to the Commission in accordance with the decision relating to the provision of scientific data to the Commission by the 30 <sup>th</sup> April 2014 | <b>YES</b> |
|--|------------|



## **ABSTRACT**

The Tuna fishery of Solomon Islands is vitally important to the people of Solomon Islands economically and socially. This fishery consists of the commercial (domestic and foreign fleets) sector, the artisanal and subsistence sector. The Solomon Islands Government depends much on this fishery as it brings significant revenues through access fees, taxes, duties and levies. The artisanal fishery (sector) contributes to the social wellbeing of Solomon Islanders, though will not covered in this report.

In 2013 a total of 360 fishing vessels and 49 supporting vessels were directly licensed by the Solomon Islands government. The total fishing vessels comprises 183 Distant Water Fishing vessels (including purse seine, longline and pole-and-line), 177 charter vessels and 11 domestic (local) vessels. Foreign vessels that have access to the Solomon Islands EEZ in 2013 included:

- purse seine vessels operating from Korea, Japan, Taiwan, New Zealand, USA and the FSM home parties (Federated States of Micronesia, Kiribati, Papua New Guinea and Rep of Marshall Is) ;
- longline vessels operating from Japan and Korea
- pole-and-line vessels operating from Japan

The total catch estimated for 2013 for all fleets in Solomon Islands EEZ is about 124,724 mt (for all tuna species). This comprises of a total of 81,342mt of skipjack, 30,771mt of Yellowfin tuna, 4,354 mt of bigeye tuna and total of 8,257 mt of albacore tuna. The purse seine fleet dominated the catch with 88% followed by the longline fleet with 11% and pole-and-line with only 1% of the total catch.

The Solomon Islands tuna fishery is significant to the people of Solomon Islands economically and socially. It brings substantial revenues to the government as well as creating employment opportunities to the people of Solomon Islands. In recognition of the importance of this sector, the Solomon Islands Government encouraged more investments in this sector. This was started



with the introduction of new investment policies and reforms. One of the key elements in these policies is to ensure that the people of Solomon Islands get maximum economic benefits from the tuna fisheries at the same time maintained the tuna stocks at the healthy level.

The government's dual policy is to both secure rents from fishery access and to promote investment in onshore processing so as to generate increased value added to the people of the Solomon Islands. The strategy is supported by a National Tuna Management and Development Plan. Core to the plan is the government's strategy of encouraging investment in onshore processing plants and job creation.

## **INTRODUCTION**

The Solomon Islands Tuna Fishery is significantly important for food security, livelihood and economic growth. In recognition of the importance of this fishery the Solomon Islands government work in collaboration with other Pacific Island countries and organizations to ensure that these important resources are sustainably conserve and managed. The Ministry of Fisheries and Marine Resources (MFMR) is mandated in this management role.

The tuna fishery of Solomon Islands comprises of the purse seine, longline and pole-and-line fisheries. The purse seine fishery was first established in early 1980s with a small number of vessels operated in the EEZ. The fishery expanded over the years as more vessels from the distant waters fishing nations (DWFN) joined and participated in the fishery. The number of vessels continued to increase and reached more than 200 vessels in recent years. The DWFN vessels fish in the Solomon Islands EEZ, whereas domestic Solomon Islands vessels fish in both archipelagic waters as well as the SI EEZ.

The longline fishery was first established in late 1980s, with a few vessels operated in the EEZ. The number of vessels continued to increase as Solomon Islands entered into access agreements with certain DWFNs. In 2004 a total of 78 vessels licensed and subsequently increased to 184 vessels in 2007. The number continued to increase as a lot of Chinese and Taiwanese smaller vessels (<40 m) joined the sector and in 2010 more than 200 boats licensed. The number of



longline vessels has stabilized at 180, and the numbers of participating vessels will be reduced further in 2015.

The pole-and-line fishery of Solomon Islands has been established well before 1970s and expanded to be one of the largest in the region in the 1980s and 90s. The fleet was dominated by the Solomon Islands domestic or local fleets recording around 25 to 30 vessels in those periods. The fishery went through a lot of challenges and hardship which resulted in a dramatic decline in the number of local vessels, which resulted in a few vessels (less than 15 vessels) registered in 2000 to 2007. The local fleet was totally wiped out in 2008-2010, which no vessel was registered in the fishery.

However, the foreign distant fleet mainly Japanese long range pole-and-line vessels continue to fish in the EEZ under bilateral arrangement. Their number of boats fluctuated from time to time, though from 2009-2013, between 10-22 vessels were licensed. The Japanese foreign fleet accesses the Solomon Islands EEZ from time to time, whilst the domestic fleet operates entirely in Solomon Islands' archipelagic waters.

In 2011, the National Fisheries Development Ltd, a local company revived the Solomon Islands pole-and-line local fleet, registering 1 boat in 2010 and 3 boats as of 2011 up to 2013.

The Solomon Islands tuna fishery went through some policy changes in late 2011 and 2012 respectively. Some of these changes include, (i) reviewing of the longline fishery, (ii) reviewing of the access agreements (iii) introducing the local crewing policy, (iv) Setting a limit on the number of license for longline fishery, (v) implementing of the Purse seine VDS and (vi) applying the hard limits for the purse seine fishery. These changes are seen as vitally important as they geared up towards maximizing economic benefits to the people of Solomon Islands at the same time maintaining the tuna stocks healthy.

The Solomon Islands purse seine fishery was managed under the PNA vessel day scheme (VDS). Under the scheme, Solomon Islands was allocated with a total of 3185 fishing days as the PAE in 2013. The PAE or fishing days allocated were then allocated to fishing vessels or companies.



The Ministry of Fisheries and Marine Resources (MFMR) monitors the uptake of days during the fishing operations.

## 1.0. Flag State Reporting

### 1.1.1. Domestic Fleet

The domestic fleet mainly comprises a small fleet of purse seine, longline and pole-and-line vessels, which are flagged to Solomon Islands. These vessels are low in number relative to the DWFN fleets and only fish in the Solomon Islands EEZ, mainly in the archipelagic waters. This fleet plays an important role in the Solomon Islands economy as they landed their catch at the Noro Cannery in Solomon Islands. In the last 5 years, this domestic fleet was comprised 5-6 small size seiners and 1-3 pole-and-line vessels. There were no domestic longline vessels registered in the Solomon Islands fleet prior to 2012. However, in late 2013, 2 longline vessels were licensed domestically by South Seas Investment Ltd.

In 2013, a total of 14 vessels were registered, these include 6 purse seine, 2 longline, 3 pole-and-line, 1 carrier and 2 scout (supporting) vessels. These purse seine vessels are mostly under 50 meters and with a carrying capacity less than 500 mt. These vessels are largely dependent on anchored FAD sets, but are also known to fish free school and on log sets.

**Table 1. Solomon Islands flagged vessels by gear type licensed to fish in 2009 -2013**

| Gear type    | Year     |          |          |          |           |
|--------------|----------|----------|----------|----------|-----------|
|              | 2009     | 2010     | 2011     | 2012     | 2013      |
| Long line    | 0        | 0        | 0        | 0        | 2         |
| Purse seine  | 7        | 5        | 5        | 5        | 6         |
| Pole & Line  | 0        | 1        | 2        | 3        | 3         |
| Carrier      | 0        | 0        | 0        | 0        | 1         |
| Scout Boat   | 0        | 0        | 0        | 0        | 2         |
| <b>Total</b> | <b>7</b> | <b>6</b> | <b>8</b> | <b>8</b> | <b>13</b> |



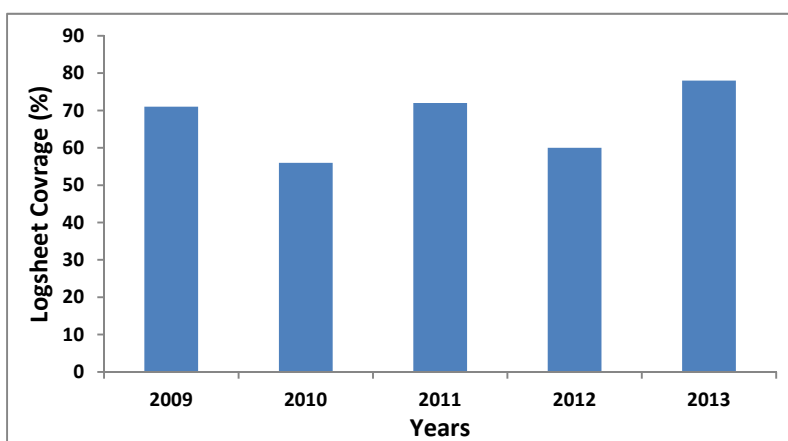
**1.2.0. Data Coverage**

Generally, the level of data coverage for the national fleet is good though it varies between fleets and companies. The logsheets are always provided by the companies, though sometimes submissions from the longline fleet are late.

All the domestic purse seine and longline vessels are monitored on the vessels monitoring system (VMS), except the pole-and-line vessels. The pole-and-line vessels at the end every fishing day have to call in ports to collect baitfish for their next day operations. These vessels are quite small in size and mostly fish close to the islands outside 6 miles. Pole-and-line vessels also fished for baitfish and the MFMR also collected data on baitfish.

The pole-and-line vessels had signed an MOU with the community based resource owners to get baitfish from their bait-grounds. These arrangements have been established since the pole-and-line fishing began in Solomon Islands years back.

Data collected from the domestic fleet include, catch data (logsheets), observers trip data and unloading and landing data. However, only the catch logsheet data is presented in this report.



**Fig 1: Logsheet coverage by percentage (%) against the VMS data for domestic purse seine fleet for 2009-2013**





### **1.3.0 Catch Estimates**

#### **1.3.1. Purse Seine**

The average annual catch estimates for the domestic purse seine fleet for the last 5 years (2009-2013) is about 21,527 mt. The catch composition shown that skipjack tuna dominated the catch with the average of 58% followed by Yellowfin tuna with 41%, and bigeye tuna with only 1% of the total catch.

In 2013, a total of 24,549 mt were recorded, this is a slight decline compared to the 2012 catch which is estimated around 26,499 mt. In comparison, the 2012 catch composition shown that skipjack tuna dominated with about 57%, yellowfin tuna 42% and bigeye tuna with only about 1% of the catch.

#### **1.3.2. Pole-and-line**

The Solomon Islands pole-and-line fishery had been one of the largest in the WCPO prior to 1999. The fishery was dominated by the domestic fleet, which recorded an average of more than 25,000 mt per year for 1980 - 1999. The pole-and-line catch started to decline since 2000. This is due to a number of vessels ceasing operations as the company faced financial difficulties after the ethnic tension which hit the country since 1999-2001. The catch trend continuously declined and reached 6,988 mt in 2006. More vessels tied-up and in 2008 the catch went lower and down to only 1,340 mt, and in 2011 it went further down to only 870 mt.

Unfortunately, Solomon Taiyo Ltd (now Soltuna) finally decided to cease all pole-and-line operations in 2009 and 2010 and concentrated on processing. The company (Soltuna) formulated an agreement with one of the local fishing companies (National Fisheries Development Limited (NFD)) to land their catch at the Noro plant for processing.

In trying to revive the domestic pole-and-line fishery, NFD Ltd registered 3 vessels in 2011, with a catch of 871 mt. The catch increased to 2,135 mt and 1,666 mt in 2012 and 2013 respectively.



Table 2. Annual tuna species catch estimates for the Solomon Islands-flagged (a) PURSE SEINE and (b) POLE-AND-LINE fleets for years 2009 - 2013.

(a)

| Year | Vessels | Catch (metric tons) |        |     |        |
|------|---------|---------------------|--------|-----|--------|
|      |         | SKJ                 | YFT    | BET | Total  |
| 2009 | 7       | 10,022              | 7,706  | 155 | 17,843 |
| 2010 | 5       | 8,084               | 4,733  | 148 | 12,965 |
| 2011 | 5       | 14,930              | 10,276 | 355 | 25,561 |
| 2012 | 5       | 15,508              | 10,763 | 228 | 26,499 |
| 2013 | 5       | 14,203              | 10,466 | 100 | 24,769 |

(b)

| Year | Vessels | Catch (metric tons) |     |     |       |
|------|---------|---------------------|-----|-----|-------|
|      |         | SKJ                 | YFT | BET | Total |
| 2009 | 0       | 0                   | 0   | 0   | 0     |
| 2010 | 0       | 0                   | 0   | 0   | 0     |
| 2011 | 3       | 722                 | 149 | 0   | 871   |
| 2012 | 3       | 1,877               | 258 | 0   | 2,135 |
| 2013 | 3       | 1,389               | 277 | 0   | 1,666 |

### 1.3.3. Longline vessel

Up until 2013, there had been no Solomon Islands flagged vessels operating in longline fishery since early 2000s. The first 2 vessels register as Solomon Islands domestic longline vessels were registered and licensed in late 2013.

However, 160 vessels were operating in the Solomon Islands EEZ in 2013, chartered through local companies. These chartered vessels are flagged to various countries, mostly China and Taiwan, as well as Fiji and Vanuatu. Under the charter arrangement all these vessels report to the chartering companies in Solomon Islands. However many of these vessels report to boat owners, which is creating significant delays in the transmission of logbooks to MFMR.

### 1.4.0 Catch Distribution

The Solomon Islands flagged (purse seine) vessels have fished predominantly on anchored FADs and concentrated their efforts more within the main group archipelagic (MGA) waters.

The catch and effort distribution pattern has shown the fleet concentrated in the northern part of the Main Group Archipelago (MGA) and in the north western part of Solomon Island waters. As shown in Fig. 2, the pattern for the catch and effort distribution in the last 5 years has been very similar, which indicates a high concentration of FADs in these areas. The data for this catch distribution is generated from the TUFMAN database.

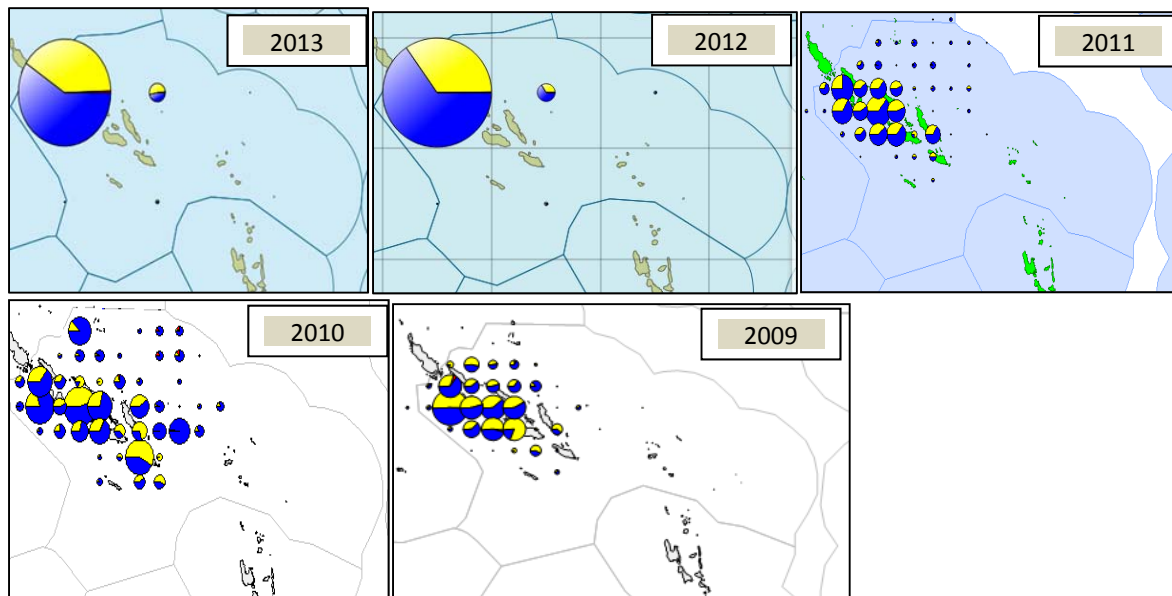


Fig 2: annual catch and effort distribution for the Domestic Purse seine fleet – 2009-2013

## 2.0 Coastal State Reporting

### 2.1.0 Foreign Fleet

Solomon Islands had a long history of having fishing access arrangements with distant water fishing nations (DWFN), Japan, Korea and Taiwan. These DWFNs have been operating in the Solomon Islands under bilateral arrangements. The number of DWFN vessels under these arrangements has increased since the 1990s, though declined during the ethnic tension period (2009-2012). The number of vessels participating in the fishery rose again after 2000 and eventually reached about 122 vessels in 2004. By 2013, a total of 153 vessels were licensed under these arrangements, which Japan licensed 68 vessels, Korea 51, Taiwan 30, and New Zealand 4.

New Zealand joined the arrangement in early 2000s and licensed 4 purse seine vessels. Their vessels come in and out of the EEZ from time to time. Their effort in Solomon Islands is quite low compared to other fleets.

A large number of foreign flagged longline fishing vessels access Solomon Island waters under charter arrangement. The charter arrangements were first established in late 1990s when only a few vessels were licensed. The number increased from 78 vessels in early 2000 to 201 vessels in



## PART 1: INFORMATION ON FISHERIES RESEARCH AND STATISTICS

### SOLOMON ISLANDS - 2014

2004. These vessels are mainly from Taiwan, China, Fiji and Vanuatu. In 2013 about 177 vessels (170 longliners and 7 purse seiners) were licensed under these arrangements.

Apart from bilateral agreements and charter arrangements, there are two other multilateral arrangements. The first is the US Multi-Lateral Treaty, which provides access for US flagged vessels in all PNA country waters, including the Solomon Island EEZ. This arrangement is administered by the Forum Fisheries Agency (FFA) on behalf of Pacific Island countries. Secondly, the Federated States of Micronesia Arrangement (FSMA), which was established by the PNA countries. The vessels licensed under this arrangement have access to fish in all the PNA countries. The arrangement was established to promote PNA countries domestic tuna fisheries by having multiple zone access into PNA fishing zones. Currently PNA parties with vessels in this fishery include the Federated States of Micronesia, Kiribati, Papua New Guinea and the Republic of the Marshall Islands. The number of vessels under this arrangement has continued to increase in the recent years, as many foreign flagged vessels, de-registered and reflag to PNA countries. Solomon Islands has not registered or licensed any vessel under this arrangement.

**Table 3. Foreign fishing vessels by flag licensed to fish in Solomon Islands EEZ 2009-2013**

| Flag        | 2009                    | 2010                    | 2011                    | 2012                    | 2013                    |
|-------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Japan       | 24 LL<br>10 PL<br>34 PS | 28 LL<br>13 PL<br>35 PS | 36 LL<br>22 PL<br>35 PS | 23 LL<br>17 PL<br>36 PS | 25 LL<br>12 PL<br>31 PS |
| Korea       | 12 LL<br>26 PS          | 13 LL<br>28 PS          | 17 LL<br>28 PS          | 8 LL<br>27 PS           | 23 LL<br>28 PS          |
| New Zealand | 3 PS                    | 4 PS                    | 1 PS                    | 4 PS                    | 4 PS                    |
| Taiwan      | 49 LL<br>33 PS          | 89 LL<br>35 PS          | 53 LL<br>35 PS          | 21 LL<br>30 PS          | 72 LL<br>30 PS          |
| Spain       | 1 LL<br>3 PS            | 4 PS                    | 4 PS                    | 4 PS                    | 0                       |
| US Treaty   | 39 PS                   | 39 PS                   | 39 PS                   | 39 PS                   | 40                      |
| FSMA        | 30 PS                   | 30 PS                   | 39 PS                   | 60 PS                   | Under flag state        |
| Vanuatu     |                         |                         |                         | 19LL                    | 23 LL                   |
| Fiji        |                         |                         |                         | 15LL                    | 20 LL                   |
| Cook Is.    |                         |                         |                         | 2LL                     | 2 LL                    |
| Kiribati    |                         |                         |                         | 0                       | 1 LL                    |
| China       |                         |                         |                         | 43LL                    | 52 LL<br>7 PS           |
| Philippines |                         |                         |                         | 2PS                     | 2PS                     |



## **2.2.0 Data Coverage**

### **2.2.1. Bilateral Vessels**

Generally, the data coverage for the foreign fishing vessels improved a lot in recent years, though it varies between fleets and flags. It is a requirement under the Solomon Islands legislations that all fishing vessels licensed to fish in Solomon islands EEZ must report to the Ministry of Fisheries and Marine Resources of Solomon Islands.

As part of the requirements, all vessels must submit the following reports to the MFMR within a prescribe time periods.

- (i) Catch logsheets
- (ii) Weekly and zone reports
- (iii) Transshipments and unloading reports
- (iv) Other reports as may be required by the MFMR from time to time.

The data coverage for the logsheets presented in this report is determined by verifying catch logsheet data received by MFMR against the VMS data, noting that the VMS coverage is 100% of the vessels trips. The logsheet coverage for the foreign fleets varies between fleets. The average logsheet coverage for the Taiwanese fleet was around 97%, Korea 86% and Japan around 70%.

For the vessels under FSM arrangements, logsheets coverage is fairly good. The coverage for the Kiribati flagged vessels was between 80 – 100% and the FSM vessels was around 70% - 90% for the last 5 years.

The logsheets coverage for the longline vessels in 2013 and 2012 is much higher than 2011 coverage. In 2013, the logsheet data coverage for the Fiji flagged vessels is much higher with 92% compared to other flagged vessels. Vanuatu flagged vessels logsheets coverage is 78%, Taiwan is 75% and China 52%.

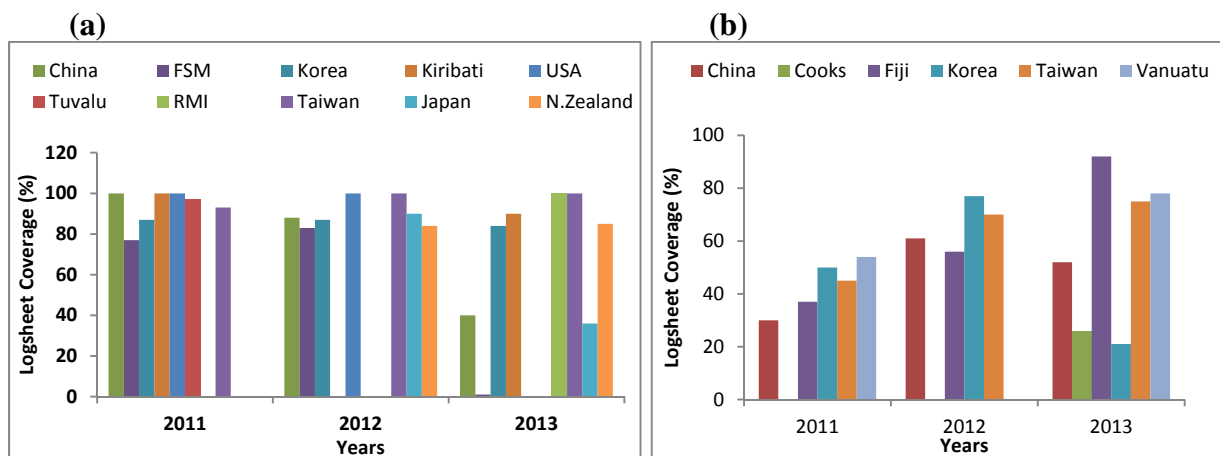


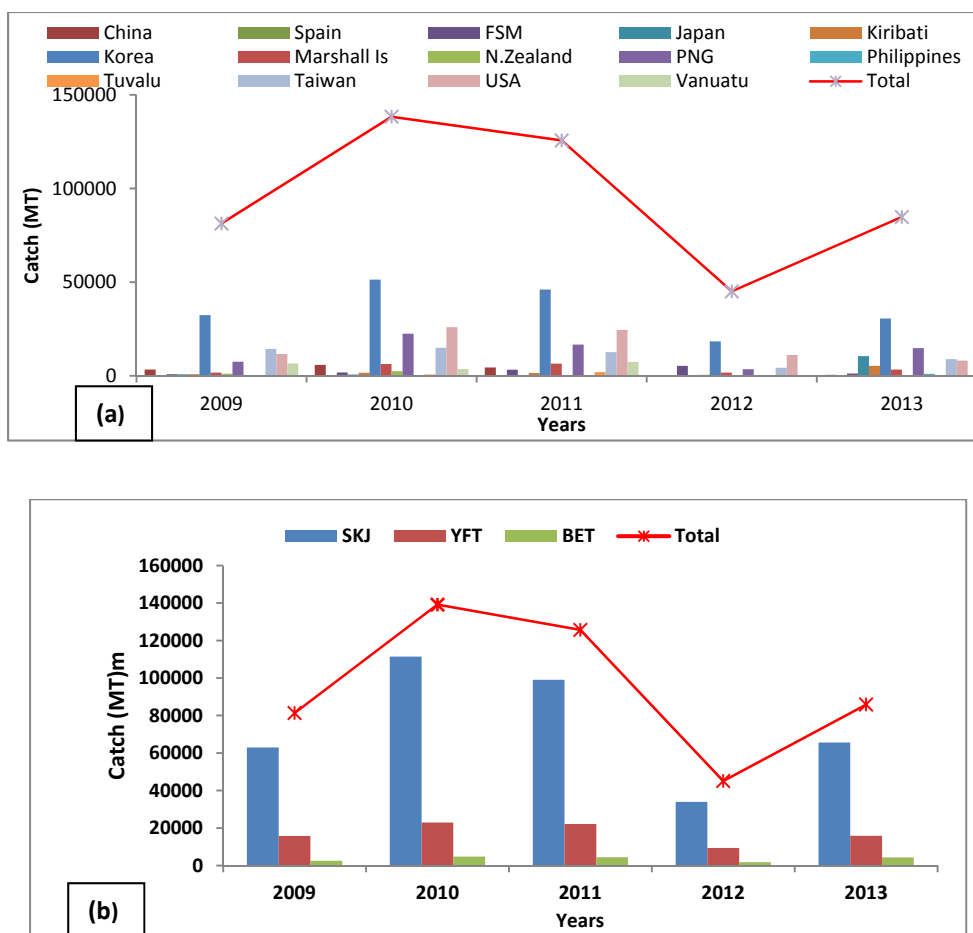
Table 3. Foreign flagged fishing vessels ((a) Purse seine & (b) longline) licensed to fish in Solomon Islands EEZ 2009-2013

### 2.3. Annual catch in Solomon Islands EEZ

#### 2.3.1. Purse seine

The average annual catch for the foreign purse seine fleets for the last 5 years (2009-2013) was more than 95,000mt. The highest catch was made in 2010 with more than 138,000mt and the lowest was in 2012 with about 45,089mt. As shown below, the Korean fleet had dominated the catch in the last 5 years, followed by Taiwan in 2009, US fleet in 2010-2012 and the PNG vessels in 2013.

In 2013, a total of 84,799mt were caught from this fleet, which comprises of 65,603mt of Skipjack tuna, 15,894mt yellowfin tuna and 4,356mt of bigeye tuna. This is an increase in the total purse seine catch compared to the 2012 record of 45,089mt.



**Fig. 4. Total catch estimates in Solomon Islands EEZ by foreign Purse seine fleets, (a) catch by flag & (b) catch by tuna species for 2009-2013**

### 2.3.2. Longline

The Solomon Islands longline fishery is dominated by the foreign fleets, operating under both bilateral and charter arrangements. The charter arrangements made up more than 60% of the total vessels licensed in the last 5 years. There are no Solomon Islands flagged vessels registered in the past years, though 2 vessels were re-flagged to Solomon Islands in late 2013.

The annual catch estimates for the longline fishery in Solomon Islands EEZ ranges between 13,000mt – 36,000mt in the last 5 years. The highest catch was recorded in 2010 with more than 35,000mt and the least was in 2013 with 13,618mt. The Solomon Islands fleet (mainly) vessels under charter arrangement dominated the catch in 2010 and 2011. The general trend had shown the catch reached its peak in 2010 and continues to decline in 2011, 2012 and 2013 respectively.



SOLOMON ISLANDS - 2014

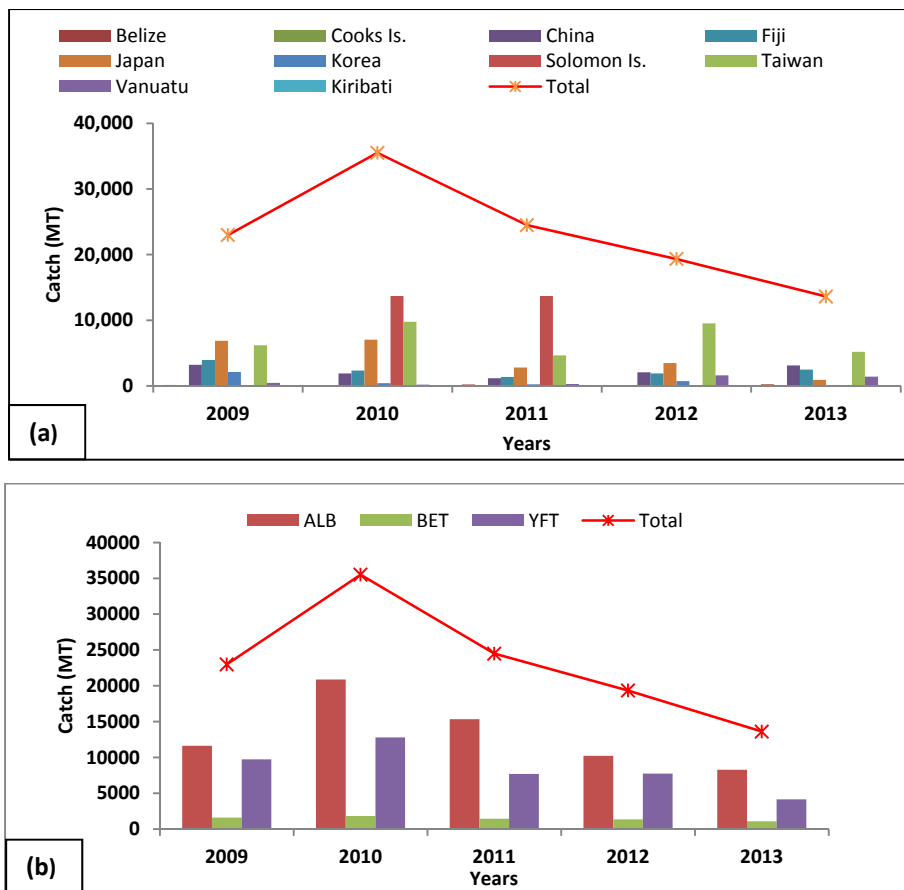


Fig. 5: Total catch estimates in Solomon Islands EEZ by the foreign longline fleets, (a) catch by flag & (b) catch by tuna species for 2009-2013

2.3.3. Pole-and-line

The Japanese long range pole-and-line vessels operated in Solomon Islands under bilateral arrangements. Under the arrangement, between 12 to 22 vessels have been licensed from 2009 to 2013. The catch for this fleet ranges between 98mt to 5,109mt in the last 5 years. In 2013, a total of 166 mt were recorded, which skipjack tuna was 165mts and yellowfin tuna only 1mt.





Table 4. Annual catch and effort estimates for JAPANESE POLE-AND-LINE FLEET, by primary species, in the Solomon Islands EEZ, for years 2009-2013.

| YEAR | Days | Catch (metric tons) |     |     |       |
|------|------|---------------------|-----|-----|-------|
|      |      | SKJ                 | YFT | BET | TOTAL |
| 2009 | 75   | 426                 | 3   | 0   | 428   |
| 2010 | 126  | 1,388               | 8   | 1   | 1,397 |
| 2011 | 536  | 5,072               | 37  | 0   | 5,109 |
| 2012 | 39   | 82                  | 16  | 0   | 98    |
| 2013 | 22   | 165                 | 1   | 0   | 166   |

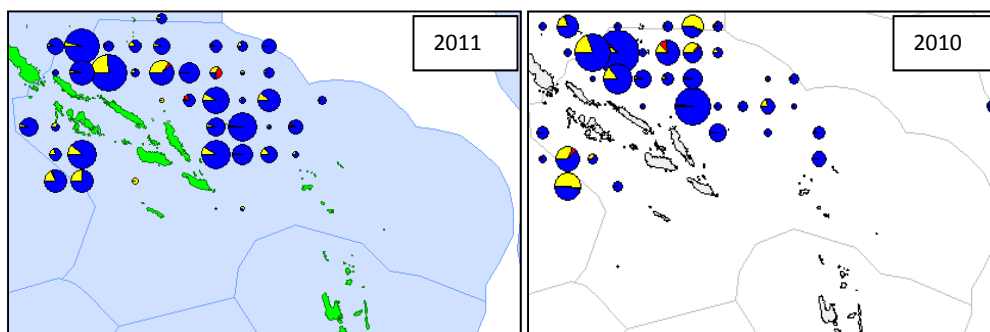
#### 2.4. Catch and effort Distribution

The foreign fishing vessels operating in Solomon Islands waters fish outside of 30 nautical miles from the baseline and outside of the archipelagic waters. These measures are incorporated in their license conditions. All vessels operating in Solomon Islands EEZ have VMS onboard and they can be easily monitored.

Foreign purse seine vessels under have concentrated their fishing effort up north of the EEZ and spreading eastwards. For instance the Japanese fleet in 2011 and 2012, fished up north spreading more towards the east and down towards the centre of the EEZ.

The Korean fleet seems to move from the north and spreading across the EEZ and further towards the east. Similarly, the Taiwanese fleet seems to concentrate up north and spreading to the east and towards the centre of the EEZ. The catch and effort data for 2012 and 2013 is not available therefore could not be included in this report.

(a) *Japanese Purse seine fleet*



(b) *Korea Purse seine fleet*

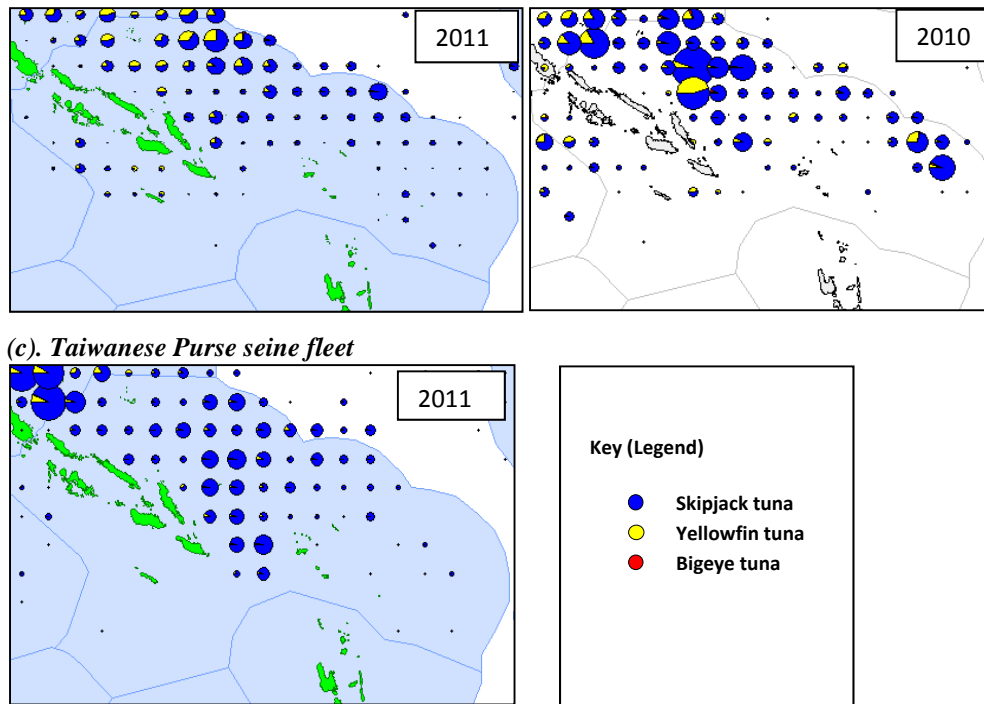
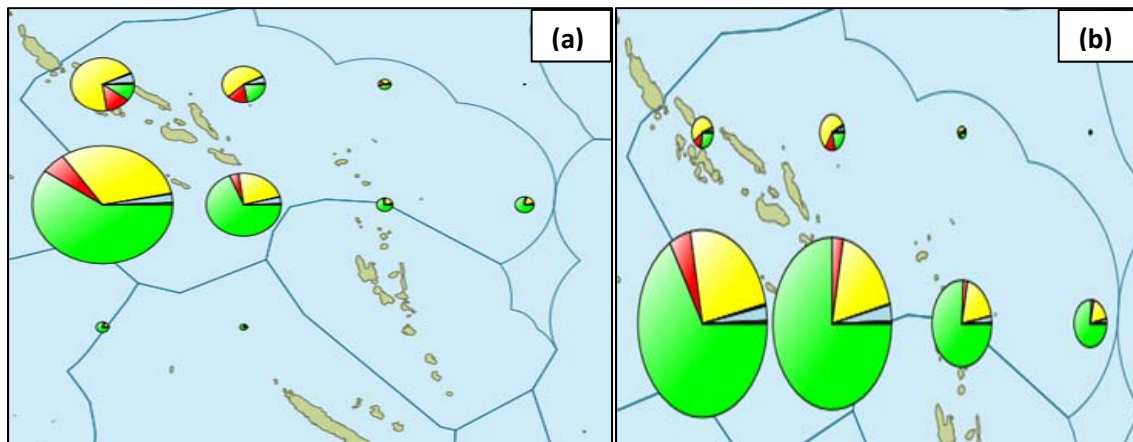


Fig. 6: Annual catch and effort distribution for the Foreign Purse Seine fleets licensed to fish in Solomon Island EEZ under bilateral Arrangements.

#### 2.4.2. Longline

The longline vessels operating under bilateral arrangements fished outside of the 30NM from the baselines, and excluded from the archipelagic and territorial waters. Generally, the level of longline fishing effort is higher towards the southern part of the EEZ. The Taiwanese flagged vessels concentrated more in the south towards the east of the EEZ. Similar fishing pattern was shown by the Japanese fleet. However, based on the data available the foreign fleets seem to fish within the same vicinity.

As shown below (Fig7) the vessels concentrated down south of the EEZ in 2013, showing the catch effort in the EEZ as well as within the convention area.



**Fig. 7: Catch and effort distribution (a) in Solomon Is. home EEZ and (b) catch in convention area for the foreign longline vessels for 2013**

### 3. Data Collection

The Ministry of Fisheries and Marine Resources (MFMR) is responsible for the management of the Solomon Islands tuna fishery. Tuna is a highly migratory resource, therefore multi zone management is required. MFMR works in collaboration with other Pacific Island countries, regional and sub-regional organizations to sustainably manage these resources.

In the Solomon Islands uses both input and to manage it's tuna fishery. Most of these controls have been adopted at the regional level through the Parties to the Nauru Agreement (PNA) and management procedures are incorporated into the Solomon Islands national legislations. For instance the application, monitoring and tracking of fishing vessels on the VMS, 100% observer coverage on purse seine vessels, and application of the PNA VDS.

Submission of tuna data from the fishing vessels to MFMR is a requirement under their licenses. The MFMR received the following data and information from the fishing vessels, (i) weekly and zone reports, (ii) catch logsheets and (iii) unloading and transshipment reports. In addition, VDS data is also taken from the vessels that are licensed to fish in Solomon Islands EEZ.

The MFMR provides catch logsheet, observer and port sampling data to the Secretariat of the Pacific Community (SPC) . These data support SPC in formulating stock assessments for key



target and bycatch species including skipjack, yellowfin, bigeye and albacore tuna, as well as some key shark species.

### **3.1 Observers' Coverage**

The Solomon Islands national observer programme was first established in the late 1980s. The programme initially started with placements only on the local fleet and later extended to the US treaty vessels. The programme started with only 3 full time fisheries observers. By 2013, the observer staff comprised more than 80 observers with fully functional observer trainers and observer debriefers.

A total of 198 observer trips were made in 2013, which 167 trips made on foreign boats and 31 trips on the domestic or local boats. The observer coverage recorded by gear, indicated that 165 observer trips were made on the purse seine fleets, 16 trips on the long line fleets and 17 on the pole-and-line. Observer coverage on purse seine vessels is at 100%, whilst observer coverage on longliners remains under 5%.

### **3.2. Port Sampling**

Port sampling takes place in Honiara and Noro In ports activity only covers the longline vessels. Longline unloading in these 2 ports continues to increase. Port sampling data is not available to present in this report.

### **3.3. Transshipments Data**

The Solomon Islands designated transshipment ports are, Noro Port in the Western part of Solomon Islands, Tulagi, and Island just outside of Honiara and Honiara Port. Transshipment at sea is prohibited under the laws of Solomon Islands.

Honiara port is one of the hotspots for transshipment activities for most of the foreign fleets, especially for the Korean and Taiwanese fleets. The transshipments in Honiara port are dominated by the purse seine vessels. Very few longline vessels transship.



The number of vessels transshipping in Honiara and Noro Ports in the last 5 years ranges from 166 to 221 vessels. The highest recorded in 2010 which 221 vessels come in Port. In 2013 a total of 166 vessels come in port for transshipment, which a total of 124,088MT were transshipped.

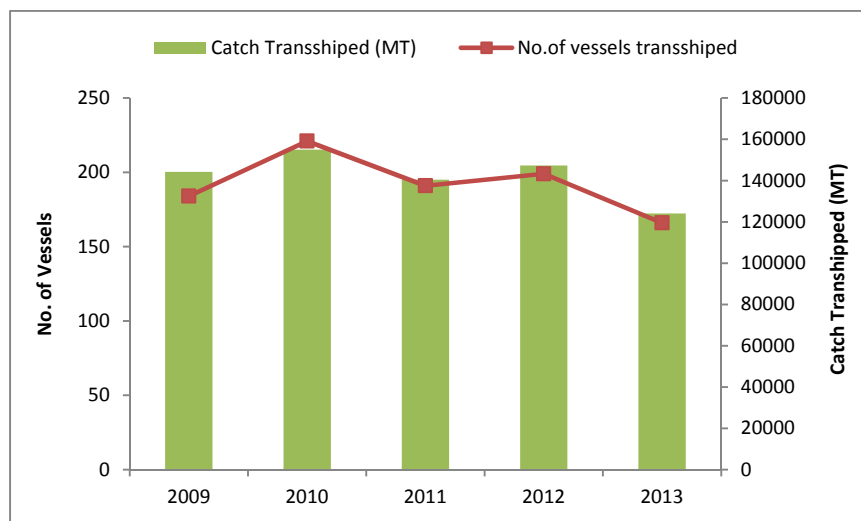


Fig 8: Total catch transshipped in Honiara and Noro ports against the number of vessels come in port for transshipment - 2009 -2013

### 3.4. By-catch and Incidental catch data

By-catch or catching of non-target species is a common problem associated with all the tuna fisheries. It is quite difficult to get the actual records or data for the by-catch or incidental catch as fishing vessels sometimes reluctant to provide such data voluntarily.

The only source to obtain data for bycatch of non-target species or other species of special interest is the observer’s reports. Observer’s coverage on purse seine vessels is 100%, whilst observer coverage on longline vessels is less than 5%. The data presented below is extracted from the observer reports in Solomon Islands EEZ held by SPC.

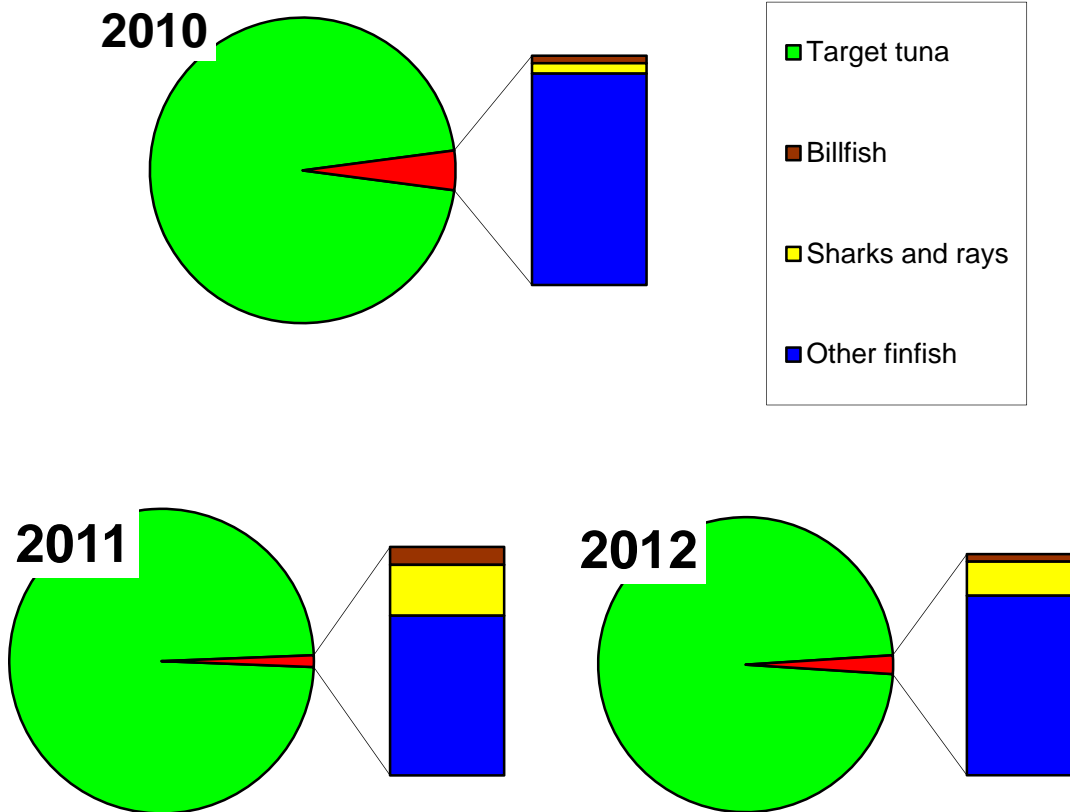


Fig 9. Species composition summary (%) for the Purse seine fishery based on the observers data 2010 - 2012

The total by-catch recorded in purse seine gear in the last 3 years is quite low, which the highest was recorded in 2010 with about 4.1%, the 2011 recorded 1.23%. The 2012 species catch composition data (Fig 9) shown that the main tuna species made up about 97.9% of the catch and the by-catch species total up to about 2.1%. The by-catch composition has shown that the billfish made up 0.07%, shark and rays 0.31% and other fin fish 1.6%.

The 2013 bycatch and incidental catch data is not available, therefore not covered in this report.



**PART 1: INFORMATION ON FISHERIES RESEARCH AND STATISTICS**

**SOLOMON ISLANDS - 2014**

**Table 5. Species of special interest catch composition for the purse seine fishery from the observers' data for 2010-2012**

| Category                    | Species                   | 2010 |      | 2011 |      | 2012 |      |
|-----------------------------|---------------------------|------|------|------|------|------|------|
|                             |                           | No.  | Dead | No.  | Dead | No.  | Dead |
| Marine Turtles              | Green Turtle              | 0    | 0    | 0    | 0    | 0    | 0    |
|                             | Loggerhead Turtle         | 0    | 0    | 0    | 0    | 0    | 0    |
|                             | Hawksbill turtle          | 0    | 0    | 0    | 0    | 0    | 0    |
|                             | Leatherback turtle        | 0    | 0    | 0    | 0    | 0    | 0    |
|                             | Olive Ridley Turtle       | 0    | 0    | 1    | 0    | 1    | 0    |
|                             | Turtles (unidentified)    | 0    | 0    | 0    | 0    | 0    | 0    |
| Marine Mammals              | Dolphins and Porpoises    | 0    | 0    | 0    | 0    | 0    | 0    |
|                             | Toothed Whales            | 0    | 0    | 0    | 0    | 0    | 0    |
|                             | Non-toothed Whales        | 0    | 0    | 0    | 0    | 0    | 0    |
|                             | Marine Mammals (unident.) | 0    | 0    | 0    | 0    | 0    | 0    |
| Whale Shark                 | Whale Shark               | 0    | 0    | 0    | 0    | 0    | 0    |
| Birds                       | Birds                     | 0    | 0    | 0    | 0    | 0    | 0    |
| <b>Total Turtles</b>        |                           | 0    | 0    | 1    | 0    | 1    | 0    |
| <b>Total Marine Mammals</b> |                           | 0    | 0    | 0    | 0    | 0    | 0    |

ETP (endangered, threatened or protected) species are those recognised by national legislation and / or binding international agreements. In this assessment we have considered those species classified as being extirpated, endangered, threatened, or a special concern. ETP species that represent less than 0.01% of the observed catch.

**Table 6: CITES listed species which may be regularly affected by the fishery.**

| Species  | % Observed Catch |       |
|--|------------------|-------|
|  | Free School      | FAD   |
| Whale shark ( <i>Rhincodon typus</i> )             | 0.17             | <0.01 |
| False killer whale ( <i>Pseudorca crassidens</i> ) | 0.01             | <0.01 |
| Sei whale ( <i>Balaenoptera borealis</i> )         | 0.01             | -     |
| Common dolphin ( <i>Delphinus delphis</i> )        | <0.01            | 0.02  |
| Oceanic whitetip shark                             | 0.01             | 0.04  |

Four species (false killer whale, sei whale, oceanic whitetip shark and common dolphin) fall into this category, of which two, the false killer whale and oceanic whitetip shark, are included as



**PART 1: INFORMATION ON FISHERIES RESEARCH AND STATISTICS**

**SOLOMON ISLANDS - 2014**

CITES Appendix II species in the Solomon Islands. In addition, the whale shark is CITES listed and accounts for about 0.17% of the observed catch by weight and is included in this ETP assessment.

Observers noted whale shark targeted sets represented 5 in every 1000 sets. From these sets, 107 interactions were recorded but it should be noted this does not necessarily result in a fishing mortality. When including sets where it was not known that whale sharks were present, this figure rises to 397 interactions; meaning that interactions also occurred in sets where whale sharks were not deliberately set upon, but were observed later in the set process. Observed mortalities recorded in the period between 2007-2010 were 75 – although this does not include any potential post-interaction mortality of whale sharks released.

No sea birds are caught in purse seine gear.

By-catch data from longline fisheries is presented below.

**Table 7. Species of special interest catch composition for the longline fishery from the observers' data for 2012**

| Species Name                      | No  | Species Composition % | CPUE   | Retained% | Discarded% | Alive% | Dead% |
|-----------------------------------|-----|-----------------------|--------|-----------|------------|--------|-------|
| Pelagic Sting-Ray                 | 970 | 4.930%                | 0.9780 | 1%        | 99%        | 91%    | 12%   |
| Skipjack                          | 807 | 4.101%                | 0.8140 | 65%       | 35%        | 6%     | 94%   |
| Escolar                           | 734 | 3.730%                | 0.7400 | 87%       | 13%        | 85%    | 15%   |
| Silky Shark                       | 632 | 3.212%                | 0.6370 | 96%       | 4%         | 74%    | 26%   |
| Wahoo                             | 619 | 3.146%                | 0.6240 | 96%       | 4%         | 15%    | 85%   |
| Great Barracuda                   | 379 | 1.926%                | 0.3820 | 94%       | 6%         | 66%    | 34%   |
| Longsnouted Lancetfish            | 371 | 1.885%                | 0.3740 | 0%        | 100%       | 13%    | 87%   |
| Mahi Mahi / Dolphinfinch / Dorado | 275 | 1.398%                | 0.2770 | 97%       | 3%         | 77%    | 23%   |
| Snake Mackerel                    | 269 | 1.367%                | 0.2710 | 3%        | 97%        | 53%    | 47%   |
| Blue Marlin                       | 216 | 1.098%                | 0.2170 | 99%       | 1%         | 42%    | 58%   |
| Sailfish (Indo-Pacific)           | 194 | 0.986%                | 0.1950 | 98%       | 2%         | 31%    | 69%   |
| Swordfish                         | 134 | 0.681%                | 0.1350 | 81%       | 20%        | 40%    | 60%   |
| Striped Marlin                    | 121 | 0.615%                | 0.1220 | 98%       | 2%         | 53%    | 47%   |
| Opah / Moonfish                   | 117 | 0.595%                | 0.1180 | 85%       | 15%        | 73%    | 27%   |
| Sickle Pomfret                    | 101 | 0.513%                | 0.1010 | 43%       | 57%        | 74%    | 26%   |
| Blue Shark                        | 100 | 0.508%                | 0.1000 | 90%       | 10%        | 90%    | 10%   |





**PART 1: INFORMATION ON FISHERIES RESEARCH AND STATISTICS**

**SOLOMON ISLANDS - 2014**

|                                    |    |        |        |      |      |      |      |
|------------------------------------|----|--------|--------|------|------|------|------|
| Shortsnouted Lancetfish            | 87 | 0.442% | 0.0870 | 1%   | 99%  | 14%  | 86%  |
| Oilfish                            | 66 | 0.335% | 0.0660 | 48%  | 52%  | 71%  | 29%  |
| Lancetfishes                       | 50 | 0.254% | 0.0500 | 0%   | 100% | 29%  | 73%  |
| Oceanic White-Tip Shark            | 39 | 0.198% | 0.0390 | 46%  | 54%  | 79%  | 21%  |
| Black Marlin                       | 36 | 0.183% | 0.0360 | 97%  | 3%   | 31%  | 69%  |
| Olive Ridley Turtle (New Fao)      | 33 | 0.168% | 0.0330 | 0%   | 100% | 18%  | 82%  |
| Barracudas (Unidentified)          | 31 | 0.158% | 0.0310 | 100% | 0%   | 90%  | 10%  |
| Bigeye Thresher Shark              | 29 | 0.147% | 0.0290 | 86%  | 14%  | 69%  | 31%  |
| Slender Sunfish                    | 26 | 0.132% | 0.0260 | 0%   | 100% | 46%  | 54%  |
| Blackfin Barracuda                 | 24 | 0.122% | 0.0240 | 92%  | 8%   | 63%  | 38%  |
| Roudi Escolar                      | 24 | 0.122% | 0.0240 | 4%   | 96%  | 54%  | 46%  |
| Short-Billed Spearfish             | 23 | 0.117% | 0.0230 | 91%  | 9%   | 22%  | 78%  |
| Short Finned Mako Shark            | 20 | 0.102% | 0.0200 | 95%  | 5%   | 80%  | 20%  |
| Pomfrets And Ocean Breams          | 17 | 0.086% | 0.0170 | 71%  | 29%  | 71%  | 29%  |
| Rainbow Runner                     | 13 | 0.066% | 0.0130 | 100% | 0%   | 23%  | 77%  |
| Soapfish                           | 11 | 0.056% | 0.0110 | 0%   | 100% | 55%  | 45%  |
| Dog Fishes                         | 11 | 0.056% | 0.0110 | 0%   | 100% | 100% | 0%   |
| Devil Manta Ray (Mobula Nei)       | 10 | 0.051% | 0.0100 | 0%   | 100% | 100% | 0%   |
| Long Finned Mako Shark             | 9  | 0.046% | 0.0090 | 67%  | 33%  | 67%  | 33%  |
| Pelagic Thresher Shark             | 7  | 0.036% | 0.0070 | 100% | 0%   | 86%  | 14%  |
| Filefish (Scribbled Leatherjacket) | 7  | 0.036% | 0.0070 | 86%  | 14%  | 14%  | 86%  |
| Unspecified                        | 7  | 0.036% | 0.0070 | 33%  | 67%  | 83%  | 17%  |
| Loggerhead Turtle                  | 6  | 0.030% | 0.0060 | 0%   | 100% | 33%  | 67%  |
| Manta Rays (Unidentified)          | 6  | 0.030% | 0.0060 | 0%   | 100% | 83%  | 17%  |
| Green Turtle                       | 6  | 0.030% | 0.0060 | 0%   | 100% | 50%  | 50%  |
| Barracuda (S. Jello)               | 5  | 0.025% | 0.0050 | 100% | 0%   | 100% | 0%   |
| Cape Pigeon                        | 5  | 0.025% | 0.0050 | 80%  | 20%  | 0%   | 100% |
| Red Sea Catfish                    | 5  | 0.025% | 0.0050 | 80%  | 20%  | 20%  | 80%  |
| Sargent Major                      | 5  | 0.025% | 0.0050 | 100% | 0%   | 20%  | 80%  |
| Atlantic Pomfret / Ray's Bream     | 4  | 0.020% | 0.0040 | 25%  | 75%  | 0%   | 100% |
| Razorback Scabbardfish             | 4  | 0.020% | 0.0040 | 25%  | 75%  | 0%   | 100% |
| Jackass Morwong                    | 4  | 0.020% | 0.0040 | 100% | 0%   | 75%  | 25%  |
| Ocean Sunfish                      | 4  | 0.020% | 0.0040 | 50%  | 50%  | 100% | 0%   |
| Hawksbill Turtle                   | 3  | 0.015% | 0.0030 | 0%   | 100% | 67%  | 33%  |
| Brilliant Pomfret                  | 3  | 0.015% | 0.0030 | 33%  | 67%  | 33%  | 67%  |
| Butterfly Tuna / Kingfish          | 3  | 0.015% | 0.0030 | 100% | 0%   | 100% | 0%   |
| Raja Rays Nei                      | 3  | 0.015% | 0.0030 | 100% | 0%   | 0%   | 100% |
| Glauert's Anglerfish               | 3  | 0.015% | 0.0030 | 100% | 0%   | 33%  | 67%  |
| Scalloped Hammerhead               | 3  | 0.015% | 0.0030 | 33%  | 67%  | 67%  | 33%  |
| Gizzard Shad (Konoshiro)           | 2  | 0.010% | 0.0020 | 100% | 0%   | 50%  | 50%  |

Source: SPC



**PART 1: INFORMATION ON FISHERIES RESEARCH AND STATISTICS**

**SOLOMON ISLANDS - 2014**

From observer data, the Key shark species interacting with the Solomon Islands longline and purse seine fisheries include blue sharks, pelagic stingray, silky shark, oceanic whitetip sharks, and shortfinned mako sharks (Table 1 below). Observer information shows that the majority of these are discarded, although finning may first occur leading to 100% mortality. No interactions with whale sharks have been noted within the fishery.

**Table 8: Estimated annual average catch and discard (2008-2010) of shark and ray species within the Solomon Islands offshore fleet (tonnes)**

|                         | Longline | Domestic purse seine | Foreign purse seine | Total |
|-------------------------|----------|----------------------|---------------------|-------|
| Silky shark             | 402      | 33                   | 421                 | 856   |
| Blue shark              | 402      |                      |                     | 402   |
| Ocean. whitetip shark   | 201      | 4                    | 53                  | 258   |
| Pelagic stingray        | 201      |                      | 8                   | 209   |
| Short finned mako       | 201      |                      | 2                   | 203   |
| Bigeye thresher         | 53       |                      |                     | 53    |
| Long finned mako        | 36       |                      | 2                   | 38    |
| Grey reef shark         | 21       |                      | 1                   | 22    |
| Manta rays (unid.)      | 18       | 4                    | 3                   | 25    |
| Galapagos shark         | 14       |                      |                     | 14    |
| Hammerhead sharks       | 14       |                      |                     | 14    |
| Pelagic thresher        | 14       |                      |                     | 14    |
| Blacktip shark          | 9        |                      |                     | 9     |
| Great white shark       | 7        |                      |                     | 7     |
| Silvertip shark         | 4        |                      |                     | 4     |
| Skates, rays and mantas | 16       |                      |                     | 16    |



## PART 1: INFORMATION ON FISHERIES RESEARCH AND STATISTICS

### SOLOMON ISLANDS - 2014

|                                |                                  |    |                       |       |
|--------------------------------|----------------------------------|----|-----------------------|-------|
| Sharks (Unidentified or other) | 13                               |    | 55                    | 68    |
| Total                          | 1,627                            | 41 | 544                   | 2,212 |
|                                |                                  |    |                       |       |
| Key                            |                                  |    |                       |       |
|                                | Non retention                    |    | CMM 2011-04 & 2013-08 |       |
|                                | 5% fin ratio and data collection |    | CMM 2010-07           |       |
|                                | Requires management action       |    | IUCN red listed       |       |
|                                | Trade approval                   |    | CITES Appendix II     |       |

Source: Extracted from SPS NTSFR and adjusted to total fleet catch

Shark interactions are likely to come under increasing scrutiny in the coming years.

Requirements for further mitigation approaches within the WCPO, and the need for continued monitoring of their effectiveness, seem likely. The Solomon Islands offshore logsheets already collect data on key sharks at the species level, and this requirement will be extended to the inshore fisheries. Solomon Islands is in the process of adopting a Shark National Plan of Action,

Observations of the state of captured sharks brought alongside the longline (Figure 1) indicate that:

- Silky shark was the most commonly reported shark species in the longline catch;
- Oceanic shark catches were also fairly predominant;
- The high proportion of sharks brought to the boat alive indicate some scope for reducing shark interactions if this is deemed necessary.

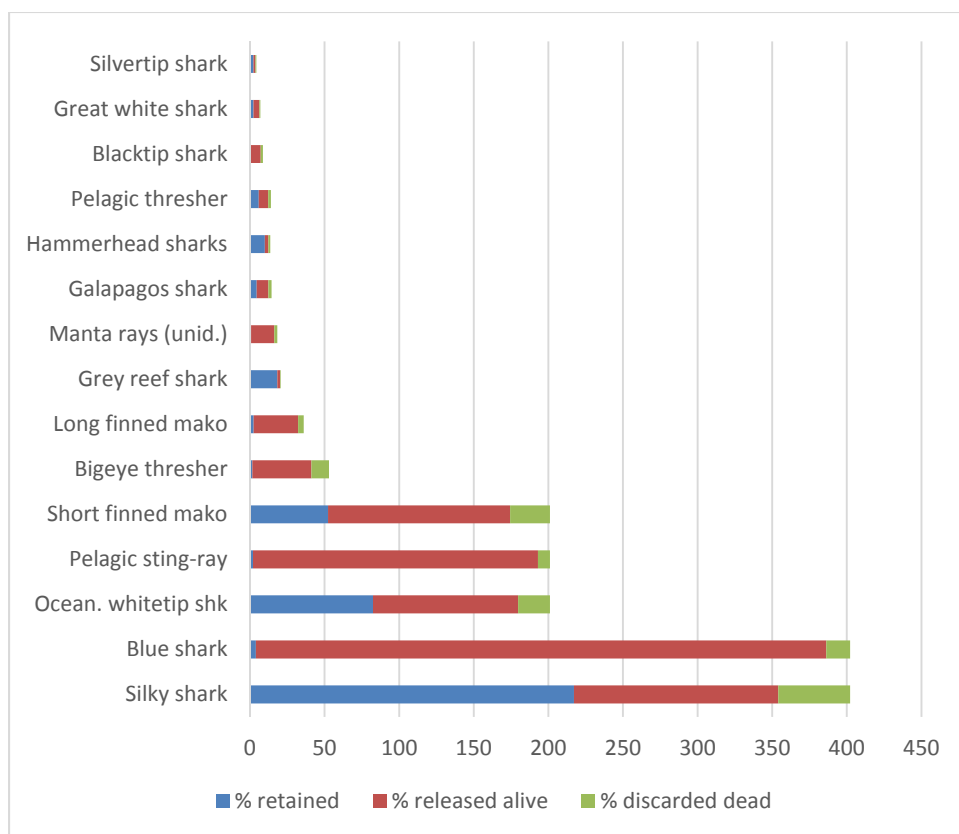


Figure 10 State of observed shark species when brought on board the longline vessel. Weights show the estimated total weight of each species observed between 2008-2010 (tonnes).

Four species of turtle are known to exist in the fishery waters of the Solomon Islands the most common of which is the olive ridley turtle (*Lepidochelys olivacea*), green turtle (*Chelonia mydas*) and the hawksbill turtle (*Eretmochlelys imbricata*). The loggerhead turtle (*Caretta caretta*) is also known to nest on the outer islands of the Solomon Islands. There have also been a small number of interactions with the flatback sea turtle (*Natator depressus*).

There are three main commercial tuna fisheries longline, purse seine and pole-and-line which have operated consistently within the Solomon Islands EEZ since 1978. There are no recorded interactions of pole-and-line vessels with turtles.

Solomon Islands has not implemented an NPOA of turtles. This is largely because the interactions are perceived to be low. However, the number of interactions with once species,



**PART 1: INFORMATION ON FISHERIES RESEARCH AND STATISTICS**

**SOLOMON ISLANDS - 2014**

olive ridleys turtle and longline gear (0.26%) in 2012/2013 is perceived to be unacceptably high. Recorded mortalities of this species is also believed to be in the region of 85%.

The reported interactions by gear for 2013/2014 are shown in the Table below.

**Table 9: Observer records of catch and discard of marine turtles within the Solomon Islands**

**Offshore fleet (tonnes)**

| <b>Longline</b>     |    |                       |       |        |         |        |           |            |         |       |
|---------------------|----|-----------------------|-------|--------|---------|--------|-----------|------------|---------|-------|
| Species Name        | No | Species Composition % | WT    | AVG WT | AVG LEN | CPUE   | Retained% | Discarded% | Alive % | Dead% |
| Olive ridley turtle | 33 | 0.168%                | 0.264 | 8.0    | 45.4    | 0.0330 | 0%        | 100%       | 18%     | 82%   |
| Loggerhead turtle   | 6  | 0.030%                | 0.060 | 10.0   | 40.0    | 0.0060 | 0%        | 100%       | 33%     | 67%   |
| Green turtle        | 6  | 0.030%                | 0.060 | 10.0   | 47.2    | 0.0060 | 0%        | 100%       | 50%     | 50%   |
| Hawksbill turtle    | 3  | 0.015%                | 0.030 | 10.0   | 51.0    | 0.0030 | 0%        | 100%       | 67%     | 33%   |
| Leatherback turtle  | 1  | 0.005%                | 0.015 | 15.0   | 0.0     | 0.0010 | 0%        | 100%       | 100%    | 0%    |
| Flatback turtle     | 1  | 0.005%                | 0.015 | 15.0   | 65.0    | 0.0010 | 0%        | 100%       | 100%    | 0%    |

| <b>Purse seine</b>            |      |            |            |     |     |
|-------------------------------|------|------------|------------|-----|-----|
| Species_name                  | sets | species_mt | species_no | %MT | %No |
| HAWKSBILL TURTLE              | 422  | 0.021      | 3          | 0%  | 0%  |
| OLIVE RIDLEY TURTLE (NEW FAO) | 422  | 0.019      | 2          | 0%  | 0%  |
| GREEN TURTLE                  | 422  | 0.007      | 1          | 0%  | 0%  |

Solomon Islands will prepare a turtle NPOA in 2014

Observer records for 2102 indicate that 1 seabird (unidentified) was caught.



#### ***4.0. Socio-economic Factors***

The Solomon Islands tuna fisheries are valuable natural resources and important to the people of Solomon Islands economically and socially. In recognition of the importance of these resources, the Government encouraged more onshore investment in the tuna sector. In 2011, the Solomon Islands Government, through the Ministry of Fisheries and Marine Resources introduced new policies to ensure more tuna caught in Solomon Island EEZ are landed and process locally, this is to maximize economic returns.

The Tuna fishery is vitally important as it creates employment opportunities and generates substantial revenues to the government through export and taxes. The government revenues continue to increase in this sector especially since the establishment of the PNA vessel day scheme (VDS). The data from the Ministry had shown that between 2007–2010 the government's revenue from the tuna fishery, in particular for the sale of VDS fishing days were recorded to be between SBD95 millions to SBD110millions. In 2012, the Solomon Islands government revenue increased significantly to more than SBD170 million. The government revenue shot after the introduction of the VDS minimum bench mark price of 2012, which implemented by all PNA countries.

The total export, mainly from the tuna products for 2013 was over US\$ 44 million. The employment in this sector is estimated to be around 3,000 people, with the 2 major players Sotuna and National Fisheries Development LTD both employed more than 1,750 people in 2013. The other portion comes from other companies like South Seas Investment Ltd, through their cold storage, cleaning and sashimi packing facilities in Honiara. The other companies employed local crews under the Solomon Islands local crewing policy, which require certain percentage of the crews of the vessels must be local Solomon Islanders. These other companies are Solong Ltd, Solfish Ltd, Mako Fisheries and Global Fishery Ltd.

It is the priority of the Solomon Islands Government to increase the value from the fishery for the benefit of the people of the Solomon Islands. This requires a higher proportion of the fish caught in Solomon Islands EEZ to be landed and processed in Solomon Islands. The Government, through the MFMR, is exploring partnerships with international processing



companies to build one more processing plant and 2 medium size loining plants. These have been very challenging projects for MFMR for the last 3 or 4 years, considering the difficulties in dealing with customary lands. However, these projects are national projects and the priority projects for the government.

The Noro plant in the Western part of Solomon Islands is expanding and currently they are operating 2 shifts in their production process. The company also set up loining facilities in 2012 and 2013 to cater for the increasing amount of supplied by the longline fleet. The company produced pre-cooked and frozen loins and export to overseas markets.

In Honiara, South Seas Investment Ltd operates more than 30 longline vessels to supply their facilities in Honiara. The fresh and first grade Yellowfin and bigeye tuna is cleaned and packed for export to Japanese sashimi markets. They are currently making around 4 shipments by air through Brisbane and to Japan.

The tuna fishery of Solomon Islands has the potentials to expand and generate more revenues to improve the economy of Solomon Islands. This requires collaboration between the Solomon Islands government and the private sector. The investors need to commit themselves to land and process more fish in Solomon Islands, this will lead to job creation for the people as well as increasing productions and exports of tuna products from Solomon Islands.