



**SCIENTIFIC COMMITTEE
EIGHTH REGULAR SESSION**

7-15 August 2012
Busan, Republic of Korea

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

WCPFC-SC8-AR/CCM-07

FIJI

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

**PART 1: INFORMATION ON FISHERIES, RESEARCH AND
STATISTICS FOR 2011**

FIJI

**NETANI TAVAGA
FISHERIES DEPARTMENT
MINISTRY OF FISHERIES AND FORESTS**

JULY 2012

FIJI

Scientific data was provided to the Commission in accordance with the decision relating to the provision of scientific data to the commission by 30 April 2012.	[YES]
If no, please indicate the reason (s) and intended actions:	

ABSTRACT

The Fiji Domestic tuna long line fleet is one that predominantly targets albacore. Whilst much of the fishing occurs in Fiji's waters, the said fleet also endeavours to catch tuna in the High Seas, areas north of the equator and also south of 20° south. Approximately 4.2% of the overall catch was made in other EEZs.

A marked decline in the Fiji Domestic long line catches [10,171 mt] was perceived by comparison to the previous 4 year period, of which 2010 catches [14,396 mt], was the highest. Whilst Albacore catches were seen to be slightly higher [7,085 mt] than 2007 levels, [7076 mt] the general trend was that the Fiji Domestic long line fleet experienced its lowest catch in 2011.

1.0 Background

Fiji is located between 12° and 20° S latitude and 177° E 177°W longitude has an EEZ of around 1,290,000 km² and is made up 300 islands.

This EEZ is flanked by the five Pacific Island nations of Vanuatu to the west, Solomon Islands to the North West, Tuvalu in the North, Wallis and Futuna to the North East and the Kingdom of Tonga to the South East. In addition to this, approximately 40 percent of the EEZ is bordered by the high seas.

The Offshore fishery was initially dominated by the pole and line fishing industry, but with the difficulties faced via the acquisition of the relevant bait type, a transition was made towards the Purse Seining. For Fiji, though, the more lucrative, Albacore targeting long line fishery was seen to be the more cost effect and thus, the more economically viable.

Fiji currently has 7 processing facilities, three major wharfs as a base for un-loadings and processing of exports of both fresh and frozen loins and sashimi and two canneries.

2.0 Annual Fisheries Information

2.1 Tuna Catches

Table 1. Annual Catch and Effort estimates for the Fiji Domestic Long line Fleet, 2007 – 2011.

TOTAL ANNUAL CATCH FOR FIJI DOMESTIC LONG LINE FISHING VESSELS 2007-2011 [MT]					
SPECIES	2007	2008	2009	2010	2011 (PROVISIONAL)
ALBACORE	7,076	7,609	7,166	7,279	7,085
BIG-EYE	551	667	689	532	551
YELLOW FIN	1,704	2,748	2,564	2,144	1671
TUNA LIKE	2,967	3,214	3,430	4,441	864
TOTAL	12,298	14,238	13,849	14,396	10,171

*NOTE:

1. Catch estimates do not include those taken in FIJI's territorial seas and archipelagic waters.

For the year 2011, a recorded low total catch [10,171 mt] was perceived for Fiji's Domestic Fleet, indicative of the low catch rates expressed by the industries stake-holders. Whilst Big-eye tuna catches showed a slight increase from 2010 Big-eye catch levels, Albacore tuna, Yellow-fin tuna and the relevant tuna-like species showed a significant decline in catch rates by comparison to the previous four years.

2.2 Billfish and Tuna Like Species Catches

Table 2. Annual Estimated Catches of Tuna like, Associated and Dependent Species for the Fiji Domestic Long Line Fleet, 2011.

TOTAL ANNUAL TUNA LIKE CATCH FOR FIJI DOMESTIC LONG LINE FISHING VESSELS 2011 [MT]	
SPECIES	2011
BILLFISH	
SWORDFISH	83
BLUE MARLIN	108
BLACK MARLIN	49
STRIPED MARLIN	29
SPEARFISH	8
TUNA LIKE SPECIES	
WAHOO	165
MAHI MAHI	79
BARRACUDAS	5
ESCOLARS	4
OPAH	74
OTHER SPECIES	132

***NOTE:**

1. Catch estimates do not include those taken in FIJI's territorial seas and archipelagic waters.
2. Catch estimates are taken from the Fiji Observer Program Data and raised to Fiji's Domestic Fleet Log-sheet data.

The above table shows the catches of Bill-fish and Tuna like Species in Fiji's Domestic tuna long lining fisheries. It should be noted that the shark catches are now listed under topic 2.6, titled 'Catch Based on CMMs'.

2.3 Fleet Structure

Table 3. Fiji Domestic Long Line Fleet Structure, 2009 - 2011.

FIJI DOMESTIC FLEET STRUCTURE 2009 -2011			
LENGTH (m)	2009	2010	2011
<20m	7	7	8
21m-30m	43	43	42
>31m	43	42	71
TOTAL	92	92	121

The above table shows Fiji's Domestic Fleet Structure from 2009 to 2011. The fleet structure for 2011 consists of the 67 Fiji licensed vessels; of which 11 vessels are chartered Chinese flagged tuna long line fishing vessels. In addition to this, 71 vessels were listed as Fiji flagged and fished in the nearby high-seas pockets and in other EEZs, by virtue of their respective license arrangements.

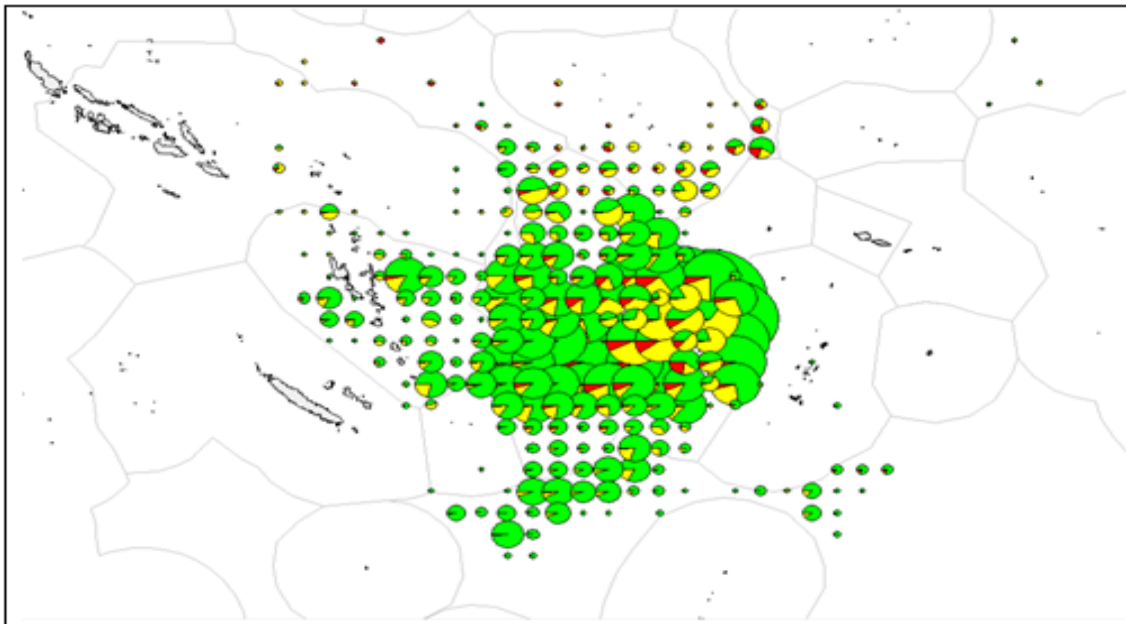
By virtue of their size class [$<20\text{m}$] and hence the limited supplies the vessel are able to carry, the smaller vessels spend approximately one to three weeks at sea. These vessels mostly utilize iced sea water or slurry to house the fish as soon as it is caught [processed] and then have the fish packed into ice the morning after, in order to maintain freshness.

The 21m-30m category, which spend anywhere from a three weeks to a month utilize the same overnight slurry method in order to maintain the proper temperature before packing the fish in freezers. With the recent authorisation, three companies in Fiji that have this method of fish handling and whose vessels are in the 21m-30m vessel category, had requested for transshipment authorization. This meant that the companies could call in the transshipment vessels, which are monitored by the Fiji National Observer Program, in order to transfer fish in it freshest state.

The final size class, $>30\text{m}$ category mostly use freezer to preserve their catch at sub zero temperatures. These vessels mainly stay at sea for longer periods of time, that is, for more than a month.

3.0 Fishing Patterns

Table 4. Fiji Domestic Long Line Fleet Fishing Pattern, 2011.



The above table is a snapshot of Fiji's Domestic Fleet catches for the 3 tuna species in 2011, namely Albacore [Green], Big-eye [Red] and Yellow-fin [Yellow]. As in the imagery, much of catch is carried out in Fiji's EEZ with certain portions in other EEZs [Where the vessel is licensed to.] and in the nearby high seas, where the vessels obtain High Seas Authorisations, in order to gain access.

It should be noted, that when taking into account, the estimated Tuna catches of the Fiji Domestic Fleet whilst including the Tuna catches in other EEZs, 4.2% of the Tuna catch was obtained in the Other EEZs.

It should also be noted that all vessels in the Fiji Domestic Long Line Fleet that fished north of the equator in 2011 for North Pacific Striped Marlin and North Pacific Albacore and South Pacific Albacore and Swordfish, have been addressed in this paper. [Refer to 5.0 –Catch Based on Relevant CMMs.]

4.0 Observed Interactions of Species of Special Interest.

Table 5. Annual Estimated catch of Species of Special Interest, 2011.

		YEARS							
		2008		2009		2010		2011	
CATERGORY	SPECIES	No.	Dead	No.	Dead	No.	Dead	No.	Dead
MARINE TURTLES	GREEN TURTLE	0	0	0	0	0	0	1	1
	LOGGERHEAD TURTLE	0	1	2	2	3	2	6	4
	HAWKSBILL TURTLE	1	1	1	1	2	1	1	1
	LEATHERBACK TURTLE	0	1	1	0	4	2	2	0
	OLIVE RIDLEY TURTLE	0	1	2	2	0	0	1	1
	TURTLES [UNIDENTIFIED]	1	1	0	0	0	0	0	0
	TOTAL TURTLES		2	4	6	5	9	5	11
MARINE MAMMALS	DOLPHINS AND PORPOISES	0	0	2	0	0	0	4	0
	TOOTHED WHALES	0	0	1	0	0	0	8	0
	NON-TOOTHED WHALES	0	0	0	0	0	0	0	0
	MARINE MAMMALS [UNIDENTIFIED]	0	0	0	0	0	0	0	0
TOTAL MARINE MAMMALS		0	0	3	0	0	0	12	0
WHALE SHARK	WHALE SHARK	0	0	0	0	0	0	0	0
BIRDS	BIRDS	0	0	0	0	0	0	0	0

***NOTE:**

1. The above data was collected from the Fiji Observer Program Data.

The above table shows both the Interactions and Sightings of the marine species that are listed under the Species of Special Interest Category. It should be noted that all Fiji National and Regional Observers are certified and trained in the mitigation/handling/releasing of sea turtles and are certified under the SPC/FFA PIRFO Standards.

The Fiji Fisheries Offshore Division has also endeavoured to ensure that all Fiji Licensed long line fishing vessels change their hooks arrangements to Circle Hooks under its licensing condition and also that all crew members be made aware, through awareness trainings, on the proper mitigation and handling techniques of turtles.

It should be noted that whilst Fiji is in the implementation range of the Conservation and Management Measure 2007-04 for Sea-bird, the Fiji Offshore Division National Observer program maintains that no sea-birds have been caught on tuna long lines in the past five years, including 2011. Irregardless, all Fiji Licensed vessels employ deep setting tuna long line fishing strategies and also use weighted branch-lines.

5.0 Catch Based on Relevant CMMs.

CMM 2005-03 –NORTH PACIFIC ALBACORE

In accordance with the WCPFC Conservation and Management Measure 2005-03, on the reporting of catches of all North Pacific Albacore, a total number of two Fiji flagged tuna long line fishing vessels were logged to have caught Albacore north of the equator, where the first vessel caught 1.311 mt and the other, 0.839 mt. This gives a total of 2.15 mt of north Pacific Albacore.

CMM 2009-03 –SOUTH PACIFIC SWORD-FISH

In accordance with CMM 2009-03 on South Pacific Sword-fish caught south of 20' south, there were a total number of 65 Fiji flagged tuna long line fishing vessels logged in this area and caught 35 mt of south pacific sword-fish.

CMM 2009-06 –TRANSHIPMENT

In accordance with CMM 2009-06 on Transshipment, a single Fiji flagged tuna long line fishing vessel made 2 transshipments in port at Apia, Samoa. As in the transshipment documentation, the catch was made in the Western and Central Pacific Commission's High Seas under three main product forms, as listed in table 6 below.

Table 6. Fiji Domestic Vessels Transshipment Information, 2011.

FIJI DOMESTIC VESSEL TRANSHIPMENT INFORMATION 2011 [mt]			
SPECIES	PRODUCT FORM		
	WHOLE	GILLED & GUTTED	HEAD OFF
BIG EYE TUNA	0	0.113	0
YELLOWFIN TUNA	0	0.056	0
SWORD FISH	0	0	0.007
STRIPED MARLIN	0	0.847	0
BLUE MARLIN	0	0	0.013
ALBACORE	0.011	0	0
TOTAL	0.011	1	0.0204

*NOTE:

1. All the above catch was offloaded in the WCPO and from the WCPO only.

It should be noted that all transshipments in Fiji waters are regulated to be made within Fiji's territorial seas.

CMM 2010-01 –NORTH PACIFIC STRIPED MARLIN

In accordance with the WCPFC Conservation and Management Measure 2010-01, on the reporting of catches of all North Pacific Striped Marlin, no Fiji flagged tuna long line fishing vessels were logged to have caught Striped Marlin north of the equator.

CMM 2010-05 –SOUTH PACIFIC ALBACORE

In accordance with CMM 2010-05 on South Pacific Albacore caught south of 20' south, there were a total number of 74 Fiji flagged tuna long line fishing vessel logged in this area and caught 2062 mt of south Pacific Albacore.

CMM 2010-07–SHARKS

In accordance with CMM 2010-07 on Sharks, the following table is presented:

Table 7. Fiji Domestic Long Line: TABLE OF SHARK CATCH, 2011.

FIJI DOMESTIC LONG LINE CATCHES: SHARKS CATCHES [MT]	
BLUE SHARK	374
SILKY SHARK	250
OCEANIC WHITE-TIP	92
SHORT FIN MAKO SHARK	172
LONG FIN MAKO SHARK	8
PELAGIC THRESHER	3
PORBEAGLE SHARK	0
GREAT HAMMER-HEAD [SPK]	0
WINGHEAD HAMMERHEAD [EUB]	0
SCALLOPED HAMMERHEAD [SPL]	0
SMOOTH HAMMERHEAD	13
OTHER SHARKS	27
TOTAL	939

*NOTE:

1. Catch estimates are taken from Observer Catch Data and raised to Fiji's Domestic Fleet Log-sheet data.

6.0 Marketing

Table 8. Table of Export of Tuna and Tuna-like Species.

TABLE OF PROVISIONAL EXPORTS OF TUNA AND TUNA LIKE SPECIES 2007-2011						
		2007	2008	2009	2010	2011
TUNA (mt)	FRESH/SASHIMI	6,377	7,856	7,411	9,955	11,343
	CANNING	16,072	21,604	22,004	20,345	23,181
	LOINS	3,625	5,106	3,987	4,103	4,675
TUNA LIKE SPECIES (mt)		2,324	5,106	4,617	4,441	2,027
TOTAL		28,398	39,280	38,019	38,844	41,226

*NOTE:

1. Exports data shows a marked increased attributed to the data collected by the Port Monitoring initiative.

Fiji continues to export fresh Sashimi to markets in Japan, Australia, New Zealand and the United States of America. Both fresh and frozen loins as sent to markets in Japan, China, Australia, New Zealand and the United States of America.

Fiji continues to provide cannery tuna products via the PAFCO cannery both locally and as an export product to China, Bangkok and American Samoa.

Tuna-like non-target species continue to be sold at processor outlets.

7.0 Research and Statistics

Catches on log-sheets continue to be maintained at 99% levels along with their related unloading forms. With the introduction of the Data Registrar position in the Fiji Offshore Division and the continuous reconciliation of the said log sheets and the relevant un-loadings data, this level of coverage shall continue to be maintained.

Table 9. Estimated Annual Coverage, 2007 - 2011.

	Percentage Coverage (%)				
	2007	2008	2009	2010	2011
Catch & Effort	99	99	99	99	99
Observer	2.2	2.5	3.1	2.9	3
Port Sampling	6.3	8.3	7.1	7.7	3.6

*NOTE:

1. With the introduction of the Port Monitoring initiative in 2011, much of the limited resources were diverted from port sampling, resulting in the low coverage in 2011.

With the continuous technical support from the Secretariat for the Pacific Community, in terms of upgrading the TUFMAN Database along with the Tuna Data Workshop that was held in Fiji in 2011, such continued capacity building ensures that all members of the Fiji Offshore Division understood and supported the initiative to properly collect and collate data at the highest level.

Fiji continues to maintain a level of character in its Regional Observer Program and was able to commit 10 of its observers to 39 placement trips upon the United States Treaty Purse Seiner vessel. This, along with the guidance of the Western and Central Pacific Fisheries Commission and the Forum Fisheries Agency representatives, ensured that the Fiji Regional Observer Program Observers on placement in the region were catered to, especially with regards to infringements that were reported to by the Observer Program.

The Fiji National Observer Program continued to maintain its national objectives with respect to placing of Observers on Fiji Licensed Tuna long line fishing vessels. These placement trips continue to be well spread across vessels, ranging from two weeks to a month at sea.

The year 2011 also saw the training of 5 new Fiji Regional Observer program Observers that were certified under the SPC and FFA PIRFO standards. It also saw the training of Fiji's first certified Observer Debriefer and the initial training of Fiji's first Observer Trainer.

Two new additions to the Offshore Fisheries Division were the introduction of the new Port Monitoring Program initiative and the 100% coverage of all at sea transshipment.

Port Monitoring was introduced to the Fiji Offshore Division in response to a levy that was passed by the Government of the day on vessels that were less than 40 meters and that were transshipping their catch for off-loading in Fiji. In response to this, the Port Monitoring Initiative was made in order to trace the fish/catch of a vessel from **the** vessel to its destination, that is, to find out the whether the fish was processed, placed in a reefer for transfer at a later date or if it was placed in storage.

The accelerated Observer coverage of the at sea transshipment initiative was in response to the request by 3 companies in Fiji, to assist in the transferral of fresh fish from the host vessel to their shore base in order to enhance the supply of tuna to the said products market, in order to sustain the companies through the 2011 low catch rate phase. This initiative was supported by the Offshore Fisheries Division and was fully covered by the available Fiji Regional Observer Program Observers, whilst they waited to be placed on the United States Treaty Purse Seine fishing vessel.

In addition to the above, the Fiji Offshore Division was able to assist a Marine Biologist named Mr. Derek Hamer, from the Australian Antarctic Division, on the viability of the "Tuna Guard Streamer POD" and the "Whale Shield-Jelly-fish" preliminary introductions. These devices were field tested this year with favourable results.

Last but not the least, Fiji's renewal of the existing Tuna Development and Management Plan was initiated in 2011. This will be the road map to which Fiji's Department of Fisheries will steer its fishing industry both in an ecologically sustainable and economically viable form.

At this point, Fiji would like to show its continuous appreciation to the Secretariat for the Pacific Community and the Forum Fisheries Agency in both its technical and policy making support and would like to reiterate that Fiji is willing to support scientific research that will contribute to the development of the fisheries in the region.