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

WCPFC-SC9-AR/CCM-12

REPUBLIC OF THE MARSHALL ISLANDS

Republic of the Marshall Islands

Annual Report to the Western and Central Pacific Fisheries Commission Part 1: Information of fisheries, statistics and research

> Oceanic and Industrial Affairs Division Marshall Islands Marine Resources Authority Republic of the Marshall Islands

> > August 2013

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 2013

Yes

SUMMARY

The Republic of the Marshall Islands (RMI) continued to operate ten purse seine vessels fishing throughout the Western and Central Pacific Ocean (WCPO) and four longline vessels which typically fished within the RMI EEZ north of the equator. The total catch by the national purse seine fleet in 2012 was provisionally estimated to be 71,957mt of which 17% was taken within the RMI EEZ. Total catch by the longline fleet increased slightly from the previous year to 523mt. In addition to these flagged vessels, the RMI has progressed a number of onshore developments including a longline fishbase servicing domestically-based vessels and a tuna loining plant that contribute significantly to local employment.

The commercial catches within the RMI EEZ are taken predominately by the purse seine fishery but longline and poleand-line operations also occur. The estimated total catch for all gears combined in 2012 was 27,906 mt with 64% taken by the purse seine fishery and about 74% of the total comprised of skipjack tuna.

Available observer data for the RMI purse seine fleet indicated one turtle and ten marine mammal interactions recorded with only the turtle and one marine mammal released alive. Other non-targets catches were provisionally estimated for the following groups: other finfish (55mt), sharks (30mt) and billfish (22mt). The RMI had yet to establish observer coverage on longline vessels in 2012 thus no interactions available.

In late 2011, the RMI passed legislation for the prohibition of shark retention in the longline fishery in response to growing concerns with the level of incidental catches from the fishery. While the RMI is working to reinstate observer coverage on longline trips, monitoring is primarily undertaken dockside at each unloading. In 2012, all of the 31 active RMI observers were deployed on purse seine vessels covering a provisional total of 108 trips.

FLAG STATE REPORTING

Annual catch and effort estimates for the national purse seine fleet, fishing throughout the Western and Central Pacific Fisheries Commission Convention Area (WCPFC-CA) during the last five years, are presented in Table 1a with historical estimates further provided in Figure 1a. Provisional catch in 2012 for purse seine fleet was estimated to be just under 72,000 metric tonnes (mt), a 11% decline compared to the previous year. Of this total catch, 88% was comprised of skipjack tuna followed by yellowfin (11%) and bigeye tuna (1%). Additionally, about 17% of the total catch was taken within the RMI EEZ. The reported catch and effort estimates from the national longline fleet are illustrated in Table 1b and Figure 1b. Bigeye and yellowfin tunas are the primary target species of this fleet and account for around 88% of the total catch.

Table 1a. Annual catch (mt) and effort (days) estimates for the Marshall Islands purse seine vessels, by primary species, for the WCPFC Convention Area, 2008-2012

Species	2008	2009	2010	2011	2012
SKIPJACK	26,500	39,697	48,106	73,054	63,277
YELLOWFIN	4,151	1,532	7,173	6,214	7,904
BIGEYE	1,567	2,233	1,556	1,827	776
TOTAL	32,218	43,462	56,835	81,095	71,957

Table 1b. Annual catch (mt) and effort (hooks) estimates for the Marshall Islands longline vessels, by primary species, for the WCPFC Convention Area, 2008-2012

Species	2008	2009	2010	2011	2012
YELLOWFIN	91	120	117	99	113
BIGEYE	375	381	257	259	335
BLUE MARLIN	63	52	52	37	43
BLACK MARLIN	0	0	0	7	10
SKIPJACK	0	0	0	0	0
ALBACORE	15	10	17	4	17
PACIFIC BLUEFIN	0	0	0	0	0
STRIPED MARLIN	1	0	0	0	0
SWORDFISH	7	4	5	3	5
TOTAL	552	567	448	409	523

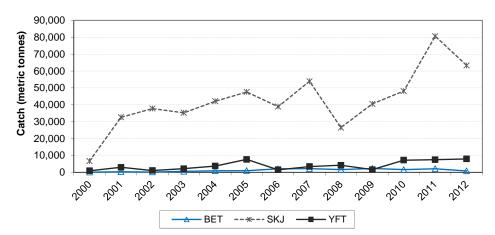


Figure 1a. Historical annual catch for the Marshall Islands purse seine vessels, by primary species, for the WCPFC Convention Area

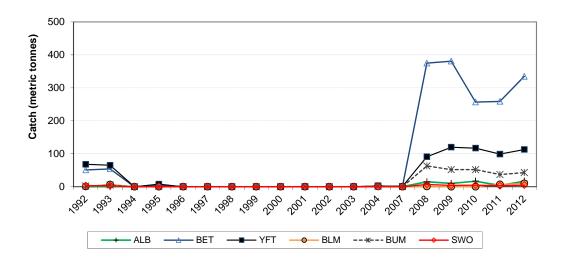


Figure 1b. Historical annual catch for the Marshall Islands longline vessels, by primary species, for the WCPFC Convention Area

As in the previous year, ten national purse seine and four longline vessels were active in the WCPFC-CA during 2012 (Table 2 & Figure 2). As the relationship with respect to nationality of catch is still being progressed, a number of domestically-based foreign longline vessels are not included in this list, but will be included in the future.

Table 2. Number of Marshall Islands-flagged vessels, by size category, active in the WCPFC Convention Area, 2008-2012

		Lon	gline			Purse seine			
Year GRT	0-10	10-50	50-200	200-500	0-500	500-1,000	1,000-1,500	1500+	
2008	0	0	4	0	0	0	5	0	
2009	0	0	4	0	0	0	5	0	
2010	0	0	4	0	0	0	6	3	
2011	0	0	4	0	0	0	7	3	
2012	0	0	4	0	0	0	7	3	

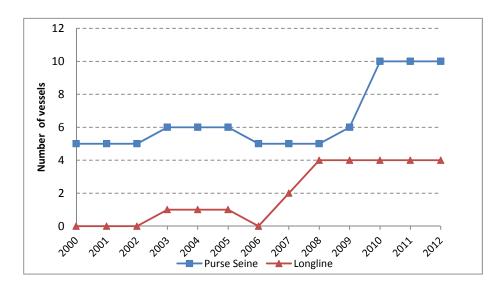


Figure 2. Historical annual vessel numbers for the Marshall Islands, by gear, for the WCPFC Convention Area

Figure 3a provides an illustration of the distribution of effort for the national purse seine fleet over the past two years. As the fleet is based out of Majuro, the effort is concentrated in the southern half of the RMI, and into the EEZs of Kiribati, Nauru and other adjacent EEZs. In 2012, there was an increase in the in-zone effort by the purse seine fleet, possibly as a result of the exclusion of the RMI EEZ from FAD closure for its own domestic fleet. The national longline fleet effort is more widely distributed within the RMI EEZ where it primarily fishes, although the fleet occasionally ventures out of the EEZ (Figure 3b).

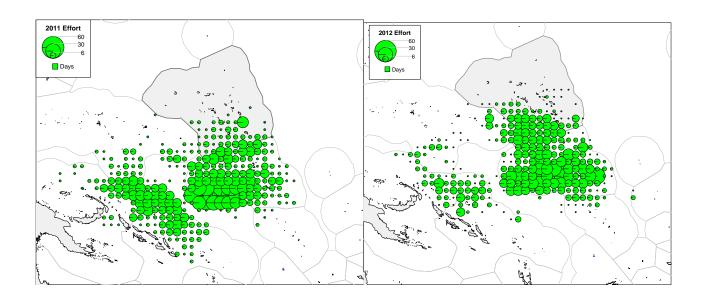


Figure 3a. Annual distribution of effort (days fishing and searching) by the Marshall Islands purse seine vessels active in the WCPFC Convention Area for 2011 (left) and 2012 (right)

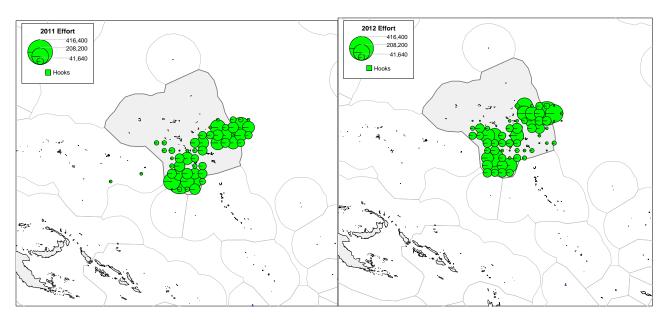


Figure 3b. Annual distribution effort (100s of hooks) by the Marshall Islands longline vessels active in the WCPFC Convention Area for 2011 (left) and 2012 (right)

Preliminary data for observed interactions with species of special interest by the RMI purse seine fleet are shown in Table 3. During 2012, there was one turtle interaction reported during which the animal was released alive. Additionally, ten marine mammals (8 dolphins/porpoises and 2 toothed whales) were encountered and all but one was dead. There were no observer trips on longline vessels in 2012 thus no interactions were recorded.

Further, provisional estimated total catch of non-target species are provided in Table 4 for the purse seine fleet. During 2012, the non-target catch amounted to about 0.15% of the total catch with other finfish making up the greatest proportion at 55mt followed by the shark (30mt) and billfish groups (22mt). Of the shark species reported, approximately 95% were silky sharks.

As stated previously, there was no observer coverage on national longline vessels to allow reporting of sharks and other non-target species. However, it can be provisionally assumed that there was no shark catch recorded in 2012 as the RMI enacted legislation in late 2011 to ban shark retention in the longline fishery. Observer coverage is still required for verification and measuring the level of discards and the RMI is striving to achieve this in the coming months.

Table 3. Observed annual estimated catches of species of special interest (seabird, turtle and marine mammals) from Marshall Islands purse seine vessels, in the WCPFC Convention Area, for 2010-2012 to the extent available.

			Individuals encountered					
		20	10	201	.1	2012		
Category	Species	No.	Dead	No.	Dead	No.	Dead	
Marine Turtles	Green Turtle	0	0	0	0	0	0	
	Loggerhead Turtle	0	0	1	0	0	0	
	Hawksbill turtle	0	0	2	0	0	0	
	Leatherback turtle	0	0	0	0	0	0	
	Olive Ridley Turtle	0	0	0	0	1	0	
	Turtles (unidentifed)	0	0	0	0	0	0	
Marine Mammals	Dolphins and Porpoises	19	0	0	0	8	8	
	Toothed Whales	18	1	1	0	2	1	
	Non-toothed Whales	0	0	0	0	0	0	
	Marine Mammals (unident.)	1	1	0	0	0	0	
Whale Shark	Whale Shark	0	0	3	0	1	0	
Birds	Birds	0	0	0	0	0	0	
	Total Turtles	0	0	3	0	1	0	
	Total Marine Mammals	38	2	1	0	10	9	

Table 4. Annual estimated catches of non-target, associated and dependent species, including sharks, by Marshall Islands purse seine vessels, in the WCPFC Convention Area, for 2010-2012 to the extent available.

			Catc	h estimates	(MT)		
		20	010	20	11	201	L2
Category	Species	MT	%	MT		MT	
Billfish	Blue marlin	10.7	0.0187%	17.4	0.0210%	15.6	0.0217%
	Black marlin	22.0	0.0385%	28.9	0.0348%	2.9	0.0041%
	Other Billfish	3.1	0.0053%	87.0	0.1047%	3.7	0.0051%
Sharks and Rays	Blue shark	0.1	0.0001%	0.0	0.0000%	0.0	0.0000%
	Mako sharks	1.8	0.0032%	0.1	0.0002%	0.0	0.0000%
	Oceanic whitetip shark	0.1	0.0002%	0.4	0.0005%	0.0	0.0000%
	Silky shark	21.1	0.0368%	479.3	0.5769%	28.6	0.0397%
	Other sharks and rays	1.7	0.0029%	629.1	0.7572%	1.4	0.0020%
Other finfish	Bullet/Frigate tunas	3.3	0.0058%	2.8	0.0034%	1.9	0.0027%
	Kawakawa	1.5	0.0026%	0.2	0.0003%	0.0	0.0000%
	Rainbow Runner	227.6	0.3973%	457.7	0.5509%	15.4	0.0214%
	Wahoo	14.8	0.0259%	71.0	0.0854%	5.9	0.0081%
	Common dolphinfish	15.5	0.0271%	50.8	0.0612%	3.9	0.0054%
	Triggerfish	62.5	0.1091%	30.5	0.0367%	4.7	0.0065%
	Barracudas	0.1	0.0002%	9.6	0.0116%	0.5	0.0008%
	Escolars	0.0	0.0000%	0.0	0.0000%	0.0	0.0000%
	Lanctfishes	0.0	0.0000%	0.0	0.0000%	0.0	0.0000%
	Ocean sunfish	0.0	0.0000%	0.0	0.0000%	0.0	0.0000%
	Oilfish	0.0	0.0000%	0.0	0.0000%	0.1	0.0001%
	Opah	0.0	0.0000%	0.0	0.0000%	0.0	0.0000%
	Pomfrets	0.4	0.0007%	46.6	0.0561%	0.0	0.0000%
	Small baitfish	43.3	0.0756%	25.4	0.0305%	1.0	0.0013%
	Other fish	26.7	0.0466%	52.4	0.0631%	21.2	0.0294%
	Total Target tuna	56,835	99.2034%	81,095	97.6057%	71,957	99.8518%
	Total larger cana	30,033	33.20310	01,000	37.00370	,1,55,	JJ.03100
	Total billfish	36	0.0625%	133	0.1605%	22	0.0308%
	Total sharks and rays	25	0.0432%	1,109	1.3347%	30	0.0417%
	Total finfish	396	0.6908%	747	0.8991%	55	0.0756%
	Total non-target	456	0.7966%	1,989	2.3943%	107	0.1482%

COASTAL STATE REPORTING

Table 5 provides a description of foreign-flagged vessels licensed to fish in the Marshall Islands waters over the past five years. A total of 202 foreign vessels were licensed however, not all were active during the period. Domestically-based foreign longline vessels operating under the Marshall Islands Fishing Venture fly foreign flags of registration and not necessarily the flag of the countries operating and managing these vessels, which is essentially the Marshall Islands.

Table 5. Number of foreign longline, pole-and-line and purse seine vessels licenced to fish in the RMI EEZ, by year and flag. (Note: Vanuatu includes PNG home party vessels)

		Year				
FLAG	GEAR	2008	2009	2010	2011	2012
CHINA	LL	39	33	22	22	21
	PS	10	4	1	2	2
FSM	LL	6	6	11	11	15
	PS	4	4	6	7	7
JAPAN	LL	6	6	14	16	5
	PL	25	12	26	25	21
	PS	28	30	31	30	29
KIRIBATI	PS	1	1	2	5	9
KOREA	PS	27	26	0	0	26
NZ	PS	1	1	0	0	0
CH-TAIPEI	LL	2	0	2	2	2
	PS	27	18	16	16	9
TUVALU	PS	0	1	1	1	1
VANUATU	PS	20	19	20	22	16
SOLOMON	PS	0	0	1	0	0
USA	PS	32	38	38	39	39
TOTAL	LL	53	45	49	51	43
	PL	25	12	26	25	21
	PS	150	142	116	122	138

Available logsheet data indicate that total catch by purse seine fleets operating in the RMI EEZ slightly increased from 16,651 mt in 2011 to 17,847 mt in 2012 and most of the catch was taken by the domestic fleet(Table 6). Skipjack tuna continues to be the dominant catch, accounting for over 95% of the total catch in the last year. Most of the purse seine fishing in-zone is restricted to southern areas of the EEZ.

The domestically-based foreign longline fleet comprises of vessels from China, Chinese Taipei and FSM which are managed and operated through a local joint-venture fishing company. Japanese longline vessels offload their catch in ports in Japan. Catch estimates for the domestically-based vessels have been raised using unloadings data. The overall catch estimates by all longline fleets in 2012 indicate about a 20% increase from the previous year (Table 7). Bigeye catch continues to account for the major part of the target catch composition. As with the purse seine fishery, most of the longline fishing effort occurs in the southern areas of the RMI EEZ however in the longline fishery, effort is more widely distributed throughout the zone.

In 2012, catches from the pole-and-line fleet again experienced resurgence in the catch compared to the previous year (Table 8). The short-term trend shows some variability between years. Skipjack is the main species making up the catch composition for this fleet and accounts for almost 100% of the total. However, the RMI observer program did not have coverage on this fleet for validation purposes.

Figure 4 illustrates the variability in catch trends in the RMI EEZ for all gears combined. During the last five-year period, 2012 has had the highest catch recorded. The catches in the EEZ are mainly taken by the purse seine fishery which account for about 64% of the catch.

Table 6. Annual catches of purse seine fleets operating in the RMI EEZ, by flag and species, 2008-2012 (Source: Unraised logsheet data collected by MIMRA)

Table 7. Annual catches of longline fleets operating in the RMI EEZ, by flag and species, 2008-2012 (Source: catch estimates of locally-based fleet derived from best combination of logsheet and unloadings data, others are unraised logsheet data collected by MIMRA)

			Catch	(metric t	connes)	
Flag	Year	ALB	BET	YFT	OTH	Total
China	2008	58	2,270	554	394	3,275
	2009	57	2,156	732	359	3,304
	2010	109	1,882	793	395	3,179
	2011	55	1,852	609	358	2,874
	2012	128	2,336	777	396	3,637
FSM	2008	9	434	112	76	631
	2009	23	711	227	98	1,059
	2010	39	710	285	179	1,213
	2011	23	516	146	105	790
	2012	50	1,016	398	217	1,681
Japan	2008	0	0	0	0	0
	2009	23	147	68	31	269
	2010	76	344	194	70	684
	2011	18	370	181	141	710
	2012	1	32	10	8	51
RMI	2008	15	375	91	71	552
	2009	10	381	120	56	567
	2010	17	257	117	57	448
	2011	4	259	99	47	409
	2012	17	335	113	58	523
Ch-Taipei	2008	0	10	2	0	12
	2009	0	0	0	0	0
	2010	1	108	28	2	139
	2011	33	167	52	46	298
	2012	58	308	74	58	498
TOTAL EEZ	2008	82	3,089	759	541	4,470
	2009	113	3,395	1,147	544	5,199
	2010	242	3,301	1,417	703	5,663
	2011	133	3,164	1,087	697	5,081
	2012	254	4,027	1,372	737	6,390

Table 8. Annual catches of pole-and-line fleet operating in the RMI EEZ, by flag and species, 2008-2012 (Source: Unraised logsheet data collected by MIMRA)

		Catch (metric tonnes)						
Fleet	Year	BET	SKJ	YFT	OTH	TOTAL		
JAPAN	2008	9	2,451	7	1	2,468		
	2009	1	475	0	1	476		
	2010	1	3,122	1	0	3,124		
	2011	1	287	1	0	288		
	2012	3	3,652	15	0	3,669		

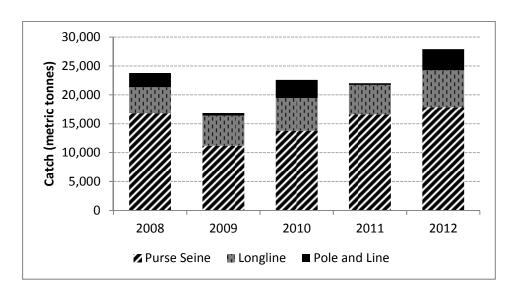


Figure 4. Total catch by the different gears operating in the RMI EEZ

DISPOSAL OF CATCH

The Marshall Islands Fishing Venture (MIFV) operates the Longline Fishbase with domestically-based foreign longline vessels as well as the national longline fleet. There was a a total 5,867 mt tons of fish unloaded in 2012 by the fleet and most of the unloaded catches were bound for export markets (Table 9). The MIFV exports mainly fresh chilled tuna species to markets in the US, China and Canada. Frozen fish (rejects and bycatch), designated as OTHER, are shipped to China via transport containers and/or sold locally.

Majuro lagoon is the only designated port for transshipment in the RMI and this continues to provide a considerable source of revenue for the local economy as well an opportunity to collect data directly from vessels. In 2012, there was an estimated 271 purse seine transshipments undertaken in Majuro with a provisional total of 180,375 mt of mixed tuna transshipped (Table 10).

Table 9. Total unloaded catch (mt) for domestically-based longline vessels, 2012

Species	Export	Other	Total
ALBACORE	0	228	228
BIGEYE	3,325	288	3,613
BLUE MARLIN	43	595	638
MAHI MAHI / DOLPHINFISH	4	39	44
OPAH / MOONFISH	7	1	8
SAILFISH (INDO-PACIFIC)	0	13	13
SWORDFISH	2	59	61
OOHAW	10	93	103
YELLOWFIN	1,053	106	1,159
Total	4,445	1,422	5,867

Table 10. Total purse seine transshipments in Majuro port, 2012

			Transhipped catch (metric tonnes)					
	No. of PS	No. of						
Flag	transhipments	carriers	SKJ	YFT	BET	YFT + BET	SKJ + YFT + BET	TOTAL
China	3	1	0	0	0	274	215	489
FSM	10	9	2,627	157	0	38	2,473	5,295
Kiribati	4	4	2,518	546	0	0	0	3,064
Korea	1	1	490	10	0	0	0	500
RMI	85	19	46,862	3,670	40	1,896	3,240	55,707
NZ	2	2	1,640	0	0	0	0	1,640
Tuvalu	8	7	5,220	1,555	0	0	0	6,775
Taiwan	54	31	25,928	4,942	0	2	576	31,448
USA	66	27	41,419	6,192	113	50	1,288	49,062
Vanuatu	38	26	20,686	5,709	0	0	0	26,395
TOTAL	271	127	147,390	22,781	153	2,260	7,792	180,375

ONSHORE DEVELOPMENTS AND SOCIO-ECONOMIC FACTORS

The Joint Venture between MIMRA and Koo's Fishing Company, Ltd. (KFC), operating under the name Marshall Islands Fishing Company (MIFCO), which commenced in March 2006, is ongoing with the vessel, F/V Marshalls 201, operating under the FSM Arrangement for Regional Fisheries Access (FSMA) formerly administered by the FFA and now currently by the PNA Office in Majuro. This venture continues to provide additional revenue stream and overall economic prospects for the small yet vibrant domestic fisheries sector in the RMI which in turn contributes to the overall economic well-being of the RMI through quarterly transfers to the General Fund. KFC launched 2 additional fishing vessels in 2010, F/V Marshalls 202 and F/V Marshalls 203, which also fish under the FSMA.

The Pan Pacific Foods (PPF) loining plant continues to operate with viable production outputs entailing ongoing hiring and recruitment of local Marshallese employees (total of 6,230 employees; 327 on average/day working two shifts). As has been reported before, the company also operates three (3) purse seine vessels which supply the plant with raw materials from time to time. In 2012, a total of 9,700mt was offloaded to the plant from both PPF and KFC vessels (8,542 SKJ and 1158 YF). As well, 2,909mt of pre-cooked tuna loins and related products were exported to various markets.

FUTURE PROSPECTS OF THE FISHERY

The RMI remains keen to further develop its domestic fishery through innovative and sustainable means. All of these prospects are lined up bearing in mind the sound scientific advice and conservation concerns through practicable measures. The RMI intends to support domestic fisheries development aspirations in the region so long as it goes hand in hand with sustainable management measures that do not put a disproportionate burden on SIDS, in accordance with Article 30 of the Convention.

Other notable future prospects for the RMI tuna fishery involve further observer capacity development as MIMRA continues to progressively train and recruit additional fisheries observers. Additional developments and improvements to in-house data management systems is another area of focus that the RMI will continue to pursue so as to streamline our overall management efforts. In this regard, relevant details are briefly provided in the next section below.

DATA COLLECTION SYSTEM AND RESEARCH ACTIVITIES

The Marshall Islands Marine Resources Authority (MIMRA) continues to employ a dedicated port sampler covering almost 100% of longline unloadings. Collated data are entered into the TUFMAN database as well as being sent to

SPC-OFP on a regular basis for further analysis. Preliminary data for 2012 indicate that over 75,000 fish were measured and a majority of that was the main target of bigeye tuna (Table 11). Also in 2012, there were more effort refocused into port sampling on purse seine vessels transshipping in Majuro and over 92,000 fish were sampled (Table 12).

Data management and statistical capability continues to be a vital tool for MIMRA. The SPC-OFP has been very instrumental in the Oceanic Division's data efforts, as evidenced by such activities as the successful integration and regular updates of the TUFMAN and CES at MIMRA.

Recent joint assistance from SPC and FFA has allowed for considerable improvements in data collection and management where it is envisaged that a more integrated fisheries information management system will assist in streamlining most if not all of our reporting obligations. Additional details and information on the latter will be provided in next year's report.

The MIMRA Observer Program has increased the number of observer trainings and refresher courses in an effort to meet all coverage requirements. Nevertheless, more public awareness has generated increased interest in the Program and in fact, the first female recruit was deployed in 2012. As shown in Table 13, a provisional total of 108 trips and 3,337 seadays were carried out by 31 active observers during the 2012 on purse seine vessels. A bulk of the observer placements were on Reciprocal Arrangements (RA) trips which is an agreement between the RMI and FSM whereby each country provides necessary observer coverage for each of their respective flagged vessels.

Table 11. Total number of fish sampled from longline unloadings Majuro port, 2012

		Number measured				Number not measured		
Month	ALB	BET	YFT	OTH	ALB	BET	YFT	OTH
January	0	5,097	2,511	24	238	55	63	1,980
February	0	3,649	1,317	12	21	39	15	1,264
March	0	4,985	526	36	625	148	84	1,493
April	0	5,626	988	93	790	17	19	1,899
May	0	5,835	1,773	28	1,159	13	18	1,672
June	0	6,264	2,448	9	1,611	68	29	2,107
July	0	4,950	1,612	22	425	23	25	2,213
August	0	5,164	3,528	33	763	25	40	3,012
September	0	1,840	1,265	3	166	12	44	1,227
October	0	3,726	2,468	15	350	33	372	2,587
November	0	2,757	1,754	27	311	26	144	2,421
December	0	2,643	2,202	0	205	30	190	3,426
TOTAL	0	52,536	22,392	302	6,664	489	1,043	25,301

Table 12. Total number of fish sampled from purse seine transshipments in Majuro port, 2012

Month	SKJ	YFT	BET
January	3,952	807	43
February	5,536	2,006	76
March	8,678	1,620	407
April	9,635	2,177	295
May	7,465	1,185	465
June	8,419	1,758	948
July	7,607	764	395
August	6,383	1,221	132
September	4,433	450	179
October	8,717	1,041	370
November	2,157	383	184
December	1,448	553	182
TOTAL	74,430	13,965	3,676

Table 13. Observer trips in 2012, by arrangement

Arrangement	Trips	Seadays
FFA	30	921
MIMRA	29	852
RA	49	1,564
TOTAL	108	3,337