

*Marshall Islands Marine Resources Authority*

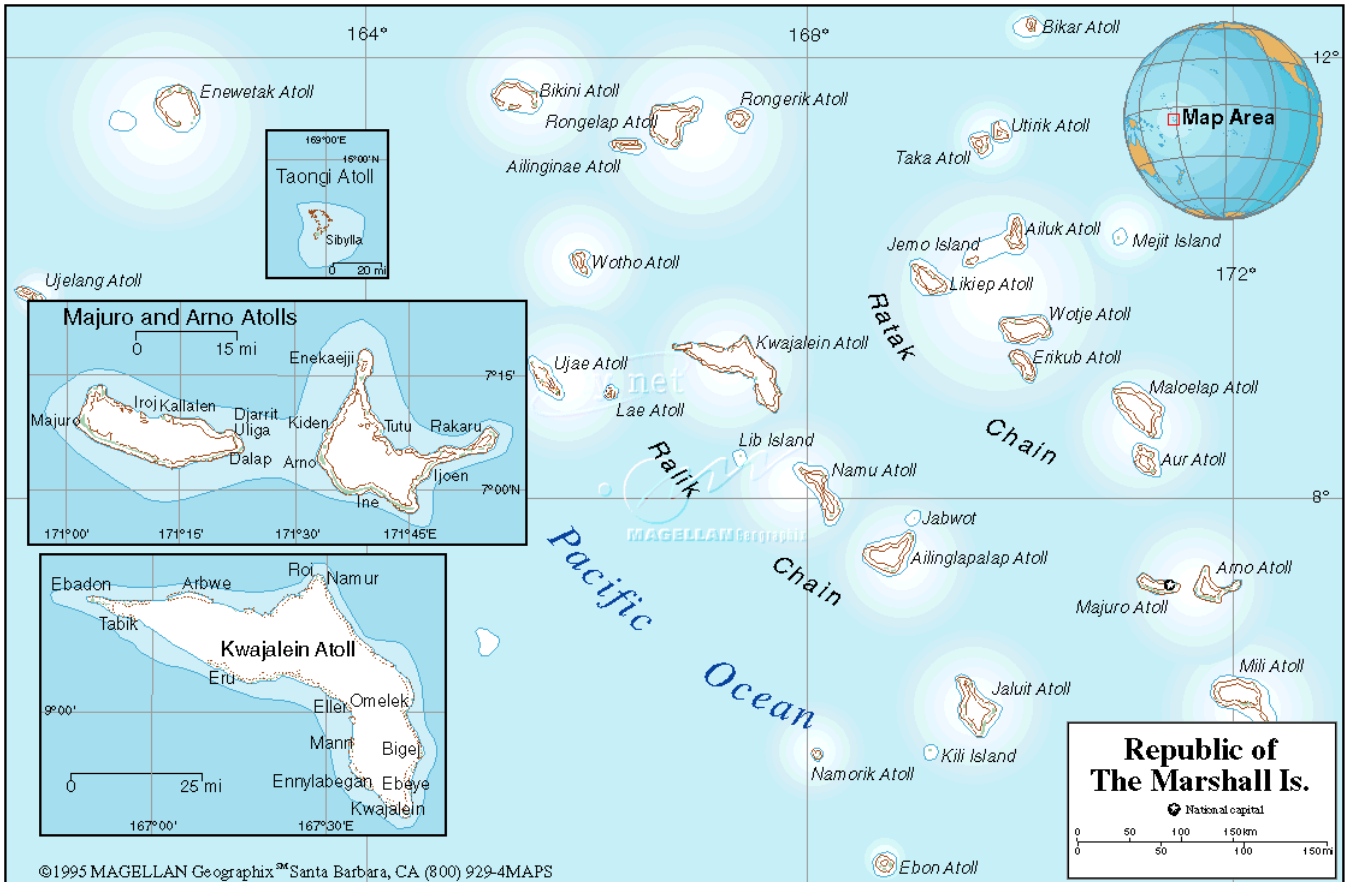
*Annual Report 2007/2008*



*September 2009*



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# Message from the Chairman

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**YOKWE!**



## *Message from Hon. Mattlan Zackhras*

*On behalf of the Board of Directors, Staff and Management of the Marshall Islands Marine Resources Authority (MIMRA), I am pleased to present to the Honorable Members of the Nitijela, the 2007/2008 MIMRA Annual Report. The achievements of the past year are a credit to the hardworking and dedicated MIMRA Staff, but in particular, to the excellent leadership of the former Chairman and his Board members, who continue to work towards a fisheries that is sustainable, profitable and supports strong local communities, and one that is managed effectively as an integral part of coherent policies for the marine environment. Improvements in management and outcomes will not only rebuild and retain healthy fish stocks, but ensure that both people and the environment we share can benefit from this sound management.*

*The past year was highlighted by achievements against a number of fisheries objectives and outcomes. At a policy level, a notable achievement this past year was the launching of a national strategic framework, the Reimaanlok (RMI National Conservation Area Plan), which develops the principles, process and guidelines for the design, establishment and management of conservation areas which are fully owned, led and endorsed by local communities based on their needs, values and cultural heritage. MIMRA continue its endeavors into sustainability and works as part of the national and regional communities on a number of initiatives including a key role in the establishment of the Micronesia Challenge, which commits the Marshall Islands to effectively conserve 30% of nearshore marine and 20% of terrestrial resources by the year 2020.*

*MIMRA continues to work collaboratively with National and NGO partners within the Coastal Management Advisory Council to facilitate the development of Resource Management Plans for local communities to provide alternative sustainable livelihoods as well as to sustainably utilize and capitalize from their vast marine resources. Our inshore highlights includes a dynamic collaboration with the CMAC and local communities in establishing Conservation Areas and laying the groundwork for fisheries plans as well as encouraging sustainable aquaculture development. Aquaculture has immense potential for growth and we intend to support this industry to reach its future goals.*

*The past year was indeed a challenging one for the Authority. These challenges aside, a lot was accomplished as well. A key accomplishment that continues in this and future Annual Reports is revamped operations joining plant under Pan Pacific Foods (RMI), Incorporated. With a new company overseeing plant operations, this has indeed been a welcoming endeavor that should serve to signify that our nation's economic well-being is enhanced and sustained with sufficient employment opportunities to local Marshallese men and women. This is but one of many important accomplishments in recent years to which we very much look forward to ongoing success and benefits for the Marshallese people.*

*In closing, I believe this Annual Report adequately encapsulates the activities undertaken by MIMRA over the past year. It is my hope that it will serve as a useful source of information for all concerned and that it will further provide details and general knowledge about the importance of our valuable marine resources. As always, our doors are always open for further discussion and engagement on any matters of concern relating to this Annual Report.*

*Kommol Tata,*

*Hon. Mattlan Zackhras*

*Minister of Resources and Development / Chairman, MIMRA Board of Directors*



# Message from the Director

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## *Bar YOKWE Juon Alen!*

*On behalf of the Staff and Management of the Authority, I take this opportunity to present to further echo the Honorable Minister and Chairman's message regarding the past year and MIMRA's continued aspirations for the coming years.*

*At the outset, while this report continues in the tradition of past Annual Reports in that seeks to provide a general update on current project reports, it does not fully represent the daily motivations, constraints, and challenges continually faced in implementation of these ongoing projects. As always, the challenge once again for the Authority lies ahead in our continuing efforts to continue to assist the RMI in the conservation, management, and protection of our marine resources. These are very important steps in our attempts to effectively conserve and manage our marine resources while sustainably developing our fishery in the long term for the benefit of our people.*

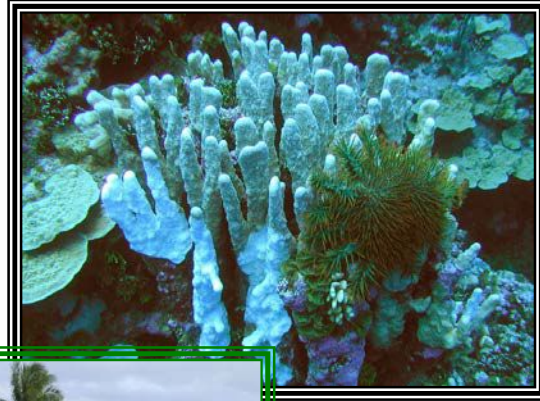
*The Authority has already started implementing a series of management measures in the tuna fishery sector, through the Oceanic and Industrial Affairs division. This is necessary to complement our national, regional, and international obligations. At the national level, the revised Tuna Management Plan has been approved. The highly migratory nature of tuna and its economic importance to Pacific Island countries has placed a sense of urgency upon the region and it is clear that the RMI, along with the rest of the region, must continue to further develop, implement, and enforce sustainable measures for the stocks. Without a doubt, as we have come to fully realize its implications on our domestic development aspirations, the ongoing and new conservation and management measures stemming from the Western and Central Pacific Fisheries Commission (WCPFC) will continue to present distinct challenges for the RMI as a member and Small Island Developing State (SIDS).*

*Insofar as the Coastal and Community Affairs Division is concerned, it has been continually under review in recent years with regards to its community development programs. The sector, with its limited capacity, has been tasked to assist outer island communities; local governments develop management plans and management ordinances for their marine resources and environment. It has been very fortunate to have recruited much-needed assistance from qualified local individuals to carry out related surveys and activities. The said review takes into account overlapping and crossing cutting themes in which some of these concerns address, and in that respect, the Authority has developed a rather innovative integrated management approach through an established inter governmental group, comprising relevant government agencies and non-governmental organizations alike, to mandate its advisory roles to the Authority's efforts.*

*The past year saw significant progress in the successful completion of the First National Fisheries Forum where all Mayors as well as stakeholders from a range of sectors had participated in discussions and learning opportunities on both oceanic and coastal fisheries. MIMRA's goal is to conduct national forums as such to build knowledge and awareness of both national and global events and trends on such issues as climate change, sea level rise, overfishing, migratory behavior of fish stocks and the migratory behavior of turtles, to name a few. It is our vision that our fisheries resources are used sustainably and that our island biodiversity is well protected, contributing to the well-being of the Marshallese and their communities. Our focus now, and in the years to come, is to continue to build on our success and to chart the way toward a sustainable future for our children.*

*God bless,*

*Glen Joseph  
Executive Director, MIMRA*





## OCEANIC & INDUSTRIAL AFFAIRS

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### • OVERVIEW

The tuna fishery in the RMI continues to be dominated by purse seine fishing vessels, a majority of which are operated by distant water fleets, whose primary target catch is skipjack tuna. The number of RMI-flagged purse seine vessels remained steady at 5 vessels which continued to fish both within the RMI EEZ and throughout the Western and Central Pacific Ocean (i.e. the WCPFC Convention Area). In addition, 4 new RMI-flagged longline fishing vessels entered the fishery in late 2007 and fished primarily in the EEZ as part of the locally-based distant longline fleet based at the MIFV fishbase. The remainder of the fleets licensed to fish in the RMI EEZ consists of Japanese longline and pole-and-line vessels.

For the reporting period, the total number of foreign fishing vessels (all gears) operating in the RMI experienced a slight increase from 216 vessels in 2007 to 227 vessels in 2008. Purse seine vessels continue to comprise more than half of the total vessel numbers. Available catch estimates for 2008 for purse seine indicated a decline in the in-zone catch (from 9,580 mt in 2007 to 5,407mt in 2008); on the other hand, the longline catch experienced a slight increase (from 3,836 mt in 2007 to 4,470mt in 2008). In 2008, catches from the pole-and-line fleet declined again after a resurgence during the previous year. Skipjack is the main species making up the catch composition for this fleet with yellowfin representing a very minor component.

In short, 2008 represented a downward trend in terms of catch productivity for the tuna fishery in the RMI EEZ. The actual figures are based on unloadings data as logsheet data coverage has yet to reach the recommended coverage level but continues to improve over time.

The RMI purse seine fleet experienced a decrease in overall catch inzone, registering 3,621mt of total catch for 2008, compared to 4,937mt for 2007. Compared to 2007, the catch by the RMI purse seine fleet in 2008 throughout the Convention Area went down from 59,404mt to 32,218mt.

The catch for the locally-based longline fleet, according to unloadings data, represents a slight increase from 3,836 mt in 2007 to around 4,470mt in 2008 for all species. Bigeye continues to account for a substantial part of the target catch composition for this fleet.

The revitalization of the loining plant continued in 2008 with initial trial production run coinciding with additional technical improvements to the plant and its operations.

### • FLEET STRUCTURE

Table 1 shows the various access agreements and parties conducting fishing operations in the RMI EEZ for the 2008 period.

Tables 2 – 4 provide a description of foreign-flagged vessels licensed to fish in the Marshall Islands waters over the past five years. 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 RMI. As such the catch attribution from these vessels has always been flag-based as opposed to zone-based, an issue that MIMRA continues to iron out with all concerned, namely WCPFC and SPC among others.

**Table 1. Access agreements with the RMI in 2008.**

Country/Company/Association	Type	Adminstrator	Type
USA	Multilateral	FFA	Regional
FSMA	Multilateral	FFA	Subregional
Japan Far Seas Purse Seine Fishing Association (KAIMAKI)	Bilateral	MIMRA	Govt to Govt
Federation of Japan Tuna Fisheries Cooperative Association (NIKKATSUREN) / National Offshore Tuna Fisheries Association (KINKATSUKYO)	Bilateral	MIMRA	Govt to Govt
Taiwan Deep Sea Boat Owners and Exporters Association	Bilateral	MIMRA	Industry to Govt
Korea Overseas Fisheries Association	Bilateral	MIMRA	Industry to Govt
Amaltal Fishing Co., Ltd., Nelson (New Zealand)	Bilateral	MIMRA	Industry to Govt
Fong Seong Fishery Group	Bilateral	MIMRA	Industry to Govt
Distant Water Fishing Association of China Fisheries Association	Bilateral	MIMRA	Industry to Govt

**Table 2. Number of foreign longline vessels licensed to fish in the Marshall Islands EEZ, by year and flag.**

	Longline							TOTAL
	CHINA	FSM	JAPAN	KOREA	CH-TAIPEI	BELIZE		
2004	40	4	17	1	3	6	71	
2005	43	6	25	2	5	7	88	
2006	40	9	34	1	6	0	90	
2007	36	6	21	0	1	0	64	
2008	39	6	6	0	2	0	53	

**Table 3. Number of foreign pole-and-line vessels licensed to fish in the Marshall Islands EEZ, by year and flag.**

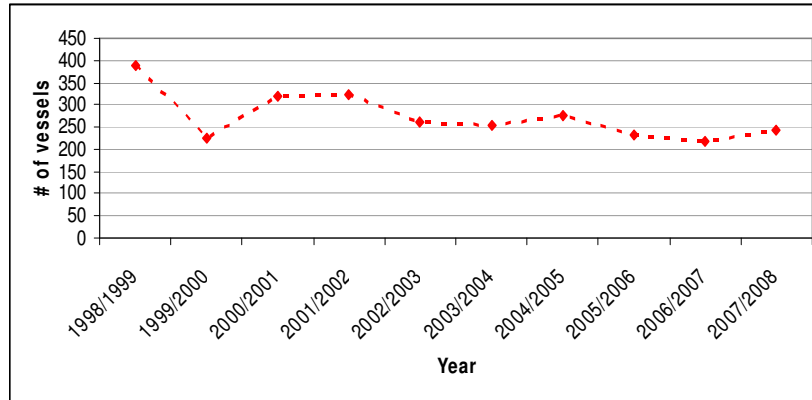
Pole-and-line	
JAPAN	
2004	23
2005	35
2006	23
2007	22
2008	25

**Table 4. Number of foreign purse seine vessels licensed to fish in the Marshall Islands EEZ, by year and flag.**

	YEAR				
	2004	2005	2006	2007	2008
CHINA	4	5	8	12	10
FSM	6	6	1	3	4
JAPAN	32	34	33	35	28
KIRIBATI	1	1	1	1	1
KOREA	28	27	20	20	27
NZ	4	3	3	0	1
PNG	17	17	16	17	15
CH-TAIPEI	34	34	19	13	27
VANUATU	7	8	8	7	4
SOLOMON	0	3	0	0	0
USA	21	15	12	22	32
TOTAL	154	153	121	130	149

Figure 1 illustrates the number of vessels licensed in the RMI for the periods since 1998/1999. It should be noted that the list does not include the carriers and bunker vessels, which are, by definition, considered as fishing vessels and treated as such in

accordance with the WCPF Convention given the nature of their direct support and provisioning operations. As in past annual reports, such vessels and their numbers are covered in the transshipment section of this report.

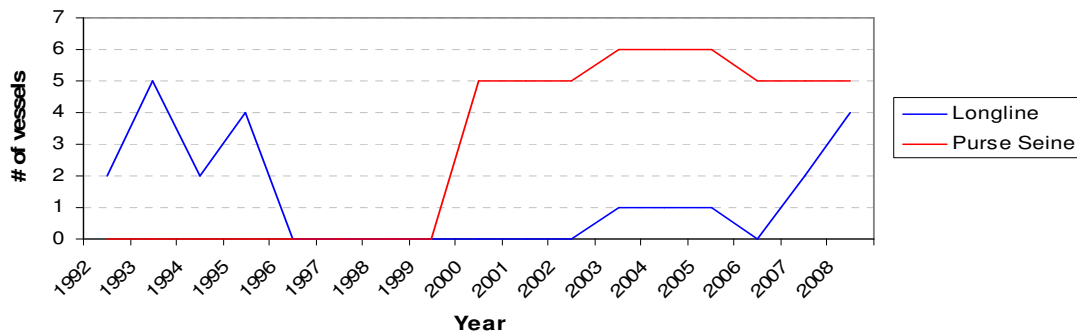


**Figure 1: Number of licensed vessels 1998-2008.**

- ANNUAL CATCHES IN THE WCPFC CONVENTION AREA, 2004–2008 BY RMI FLAGGED VESSELS**

Figure 2 below illustrates the trends in number of RMI-flagged fishing vessels active in the Convention Area dating back to 1992. Tables 5a and 5b provide a list of RMI-flagged vessels, by size category, active in the WCPF Convention Area over the past five years. The national purse seine fleet is based out of Majuro and fishes throughout the region under the FSM Arrangement for Regional Access (FSMA)

administered by the Forum Fisheries Agency (FFA). Coverage of data collected from both the national purse seine and longline fleets satisfy the coverage levels recommended by the WCPF. Additionally, the coverage of unloading data from the domestically-based foreign longline fleet continues to improve over time and is nearing 100%.



**Figure 2. Historical annual vessel numbers for the RMI, by gear, for the WCPFC Convention Area**

**Table 5a. Number of RMI purse seine vessels, by size category, active in the WCPFC Convention Area, 2004-2008**

Size class (GRT)	2004	2005	2006	2007	2008
0-500					
500-1,000					
1,000-1,500	6	6	5	5	5
1,500+					

**Table 5b. Number of RMI longline vessels, by size category, active in the WCPFC Convention Area, 2004-2008**

Size class (GRT)	2004	2005	2006	2007	2008
0-10					
10-50					
50-200	1	1	0	2	4
200-500					
500+					

***National purse seine catch/effort***

Annual catch and effort estimates for the national purse seine fleet, fishing throughout the WCPFC Convention Area during the last five years, are presented in Table 6 with historical estimates further provided in Figure 3.

Catch estimates for purse seine fleet in 2008 amounted to just over 32,000 mt, a considerable decrease from previous years. In 2008, skipjack tuna catch accounted for

over 80% of total catch with the rest comprising of yellowfin (13%) and bigeye tuna (5%).

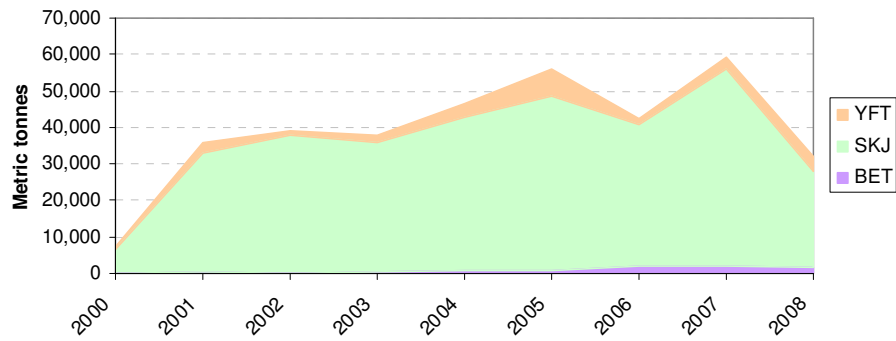
Figure 4 provides an illustration of the distribution of effort for the national purse seine fleet over the past two years. As the fleet is based out of Majuro, the effort is concentrated in the southern half of the Marshall Islands, Kiribati, Nauru and other adjacent EEZs and high seas areas.

**Table 6. Annual catch (mt) and effort (days) estimates for the RMI purse seine vessels, by primary species, for the WCPFC Convention Area, 2004-2008**

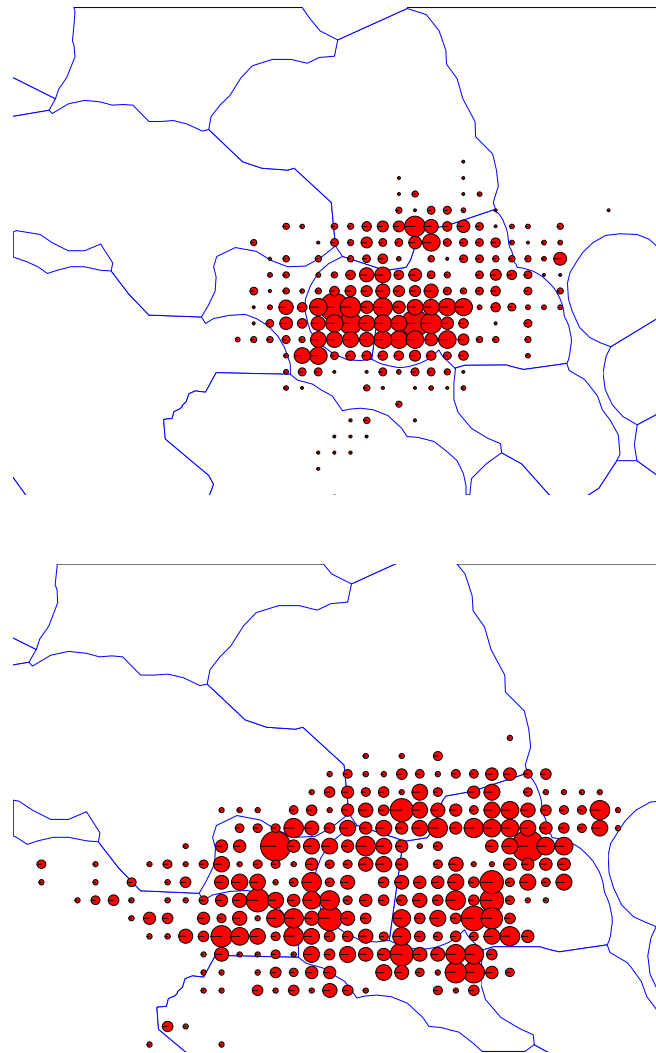
Species	2004	2005	2006	2007	2008
DAYS FISHING AND SEARCHING	1408	1233	976	1216	1041
SKIPJACK	42078	47565	38881	53916	26500
YELLOWFIN	3716	7628	1436	3370	4151
BIGEYE	878	971	2032	2118	1567

**Notes**

1. These catch estimates also apply to the WCPO Area (the Pacific Ocean west of 150°W)
2. Catches were taken from logsheet data and the coverage of the logsheet data is considered to be 100%.



**Figure 3. Historical annual catch for the RMI purse seine vessels, by primary species, for the WCPFC Convention Area**



**Figure 4. Annual distribution of effort (days fishing and searching) by the RMI purse seine vessels active in the WCPFC Convention Area for 2007 (top) and 2008 (bottom)**

Table 7 below shows the estimated total catch of non-target species (by species groups) by RMI purse seine vessels, based on data

collected by observers. Rainbow runner is typically the main non-target species taken by the fleet, but the following species/species

groups are also commonly caught – small baitfish, silky (and other) sharks, blue and

black marlin, triggerfish and mahi mahi.

**Table 7. Annual estimated catches of non-target, associated and dependent species, including sharks, by the RMI purse seine vessels, in the WCPFC Convention Area, for 2006-2008 to the extent available.**

		Catch estimates					
Category	Species	2006		2007		2008	
		MT	%	MT	%	MT	%
Billfish	Blue marlin	22.3	0.0514%	21.5	0.0360%	8.1	0.0251%
	Black marlin	8.2	0.0190%	0.0	0.0000%	2.0	0.0061%
	Other Billfish	1.7	0.0038%	1.7	0.0029%	2.9	0.0090%
Sharks and Rays	Blue shark	0.0	0.0000%	0.0	0.0000%	0.0	0.0000%
	Mako sharks	0.0	0.0000%	0.1	0.0001%	0.1	0.0003%
	Oceanic whitetip shark	0.2	0.0004%	0.8	0.0014%	0.2	0.0006%
	Silky shark	43.2	0.0996%	13.0	0.0218%	13.2	0.0407%
	Other sharks and rays	0.5	0.0012%	1.2	0.0020%	0.6	0.0020%
Other finfish	Bullet/Frigate tunas	2.9	0.0066%	0.4	0.0006%	0.0	0.0000%
	Kawakawa	0.1	0.0003%	0.0	0.0000%	0.0	0.0000%
	Rainbow Runner	466.4	1.0762%	133.8	0.2243%	60.4	0.1868%
	Wahoo	5.6	0.0128%	4.4	0.0074%	6.4	0.0198%
	Common dolphinfish	35.8	0.0826%	9.3	0.0156%	21.8	0.0676%
	Triggerfish	55.2	0.1274%	37.8	0.0634%	8.9	0.0274%
	Barracudas	0.2	0.0006%	0.1	0.0002%	0.3	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	0.3	0.0008%	0.1	0.0002%	0.0	0.0000%
	Oilfish	0.0	0.0000%	0.0	0.0000%	0.0	0.0000%
	Opah	0.0	0.0000%	0.0	0.0000%	0.0	0.0000%
	Pomfrets	0.0	0.0000%	0.0	0.0000%	0.0	0.0001%
	Small baitfish	98.4	0.2271%	22.0	0.0369%	0.4	0.0012%
	Other fish	157.1	0.3625%	4.9	0.0082%	0.5	0.0016%
<b>Total billfish</b>		32	0.0742%	23	0.0389%	13	0.0401%
<b>Total sharks and rays</b>		44	0.1012%	15	0.0254%	14	0.0436%
<b>Total finfish</b>		822	1.8969%	213	0.3568%	99	0.3053%
<b>Total non-target</b>		898	2.0723%	251	0.4211%	126	0.3890%

#### *National longline catch/effort*

Table 8 shows the catch estimates for the Marshall Islands longline fleet and Figure 5 shows the distribution of effort for these vessels during the last two years. The fleet fishes primarily in the EEZ and as it was only

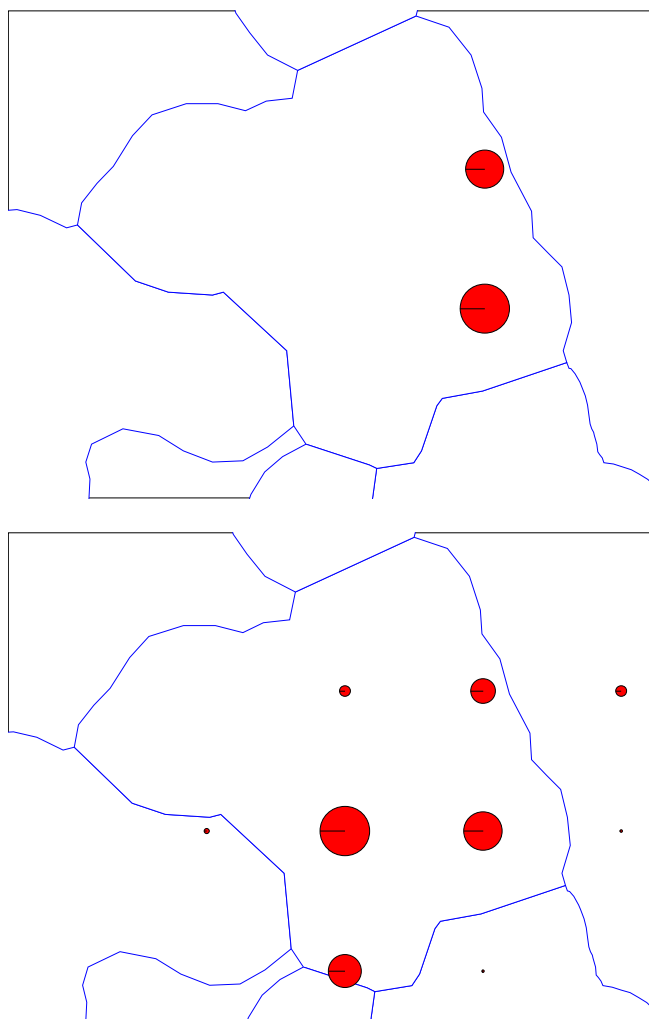
revitalized in late 2007 there was very little catch reported from that period but in 2008, estimates totaled 552 mt, by primary species, with bigeye comprising most of the catch.

**Table 8. Annual catch (mt) and effort (hooks) estimates for the RMI longline vessels, by primary species, for the WCPFC Convention Area, 2004-2008**

Species	2004	2005	2006	2007	2008
100s OF HOOKS	383	0	0	177	18347
YELLOWFIN	3	0	0	2	91
BIGEYE	1	0	0	3	375
BLUE MARLIN	0	0	0	1	63
BLACK MARLIN	0	0	0	0	0
SKIPJACK	0	0	0	0	0
ALBACORE	0	0	0	0	15
PACIFIC BLUEFIN	0	0	0	0	0
STRIPED MARLIN	0	0	0	0	1
SWORDFISH	0	0	0	0	7

**Notes**

1. These catch estimates also apply to the following areas
  - a. The WCPO Area (the Pacific Ocean west of 150°W)
  - b. The WCPFC Convention Area north of the equator
  - c. The WCPO Area north of the equator
2. The MARSHALL ISLANDS longline fleet does not fish in any other areas for which catch estimates are required by the WCPFC
3. Catch estimates were determined from logsheet data adjusted with unloadings data, and the coverage of both types of data is considered to be 100%.



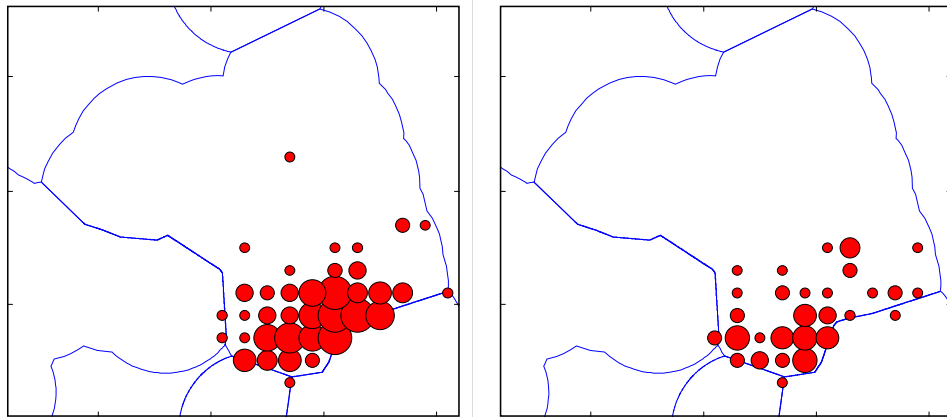
**Figure 5. Annual distribution effort (100s of hooks) by the RMI longline vessels active in the WCPFC Convention Area for 2007 (top) and 2008 (bottom)**

- **ANNUAL CATCHES IN THE RMI EEZ BY FOREIGN FISHING FLEETS, 2004 – 2008**

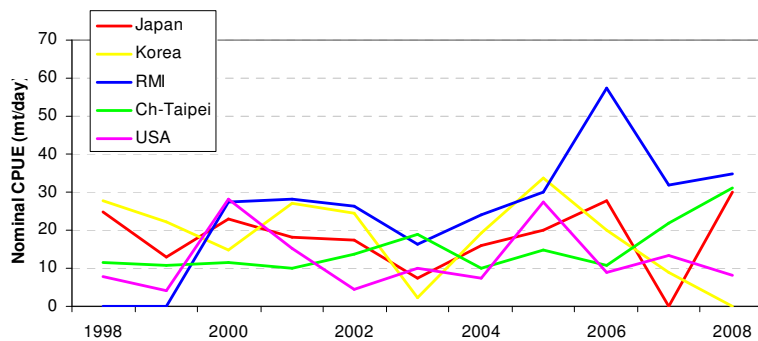
*Purse seine fleet catch/effort*

Available data indicate that total catch by purse seine fleets operating in the RMI EEZ continues to decline from previous years (Table 9). Skipjack tuna continues to be the dominant catch, accounting for ~86% of the total catch. Most of the purse seine fishing in-zone is restricted to southern areas of the EEZ (Figure 6).

Overall trends in Catch Per Unit Effort (CPUE) indicate variable catch rates among fleets and years with the domestic fleet having significant catch rates of skipjack in recent years (Figures 5 & 6).



**Figure 6. Annual distribution of combined effort (days fishing and searching) by the main foreign purse seine fleets active in the RMI EEZ for 2007 (left) and 2008 (right)**



**Figure 7. Trends in nominal catch rates of SKIPJACK TUNA taken by the main purse-seine fleets operating in the RMI EEZ, 1998-2008**



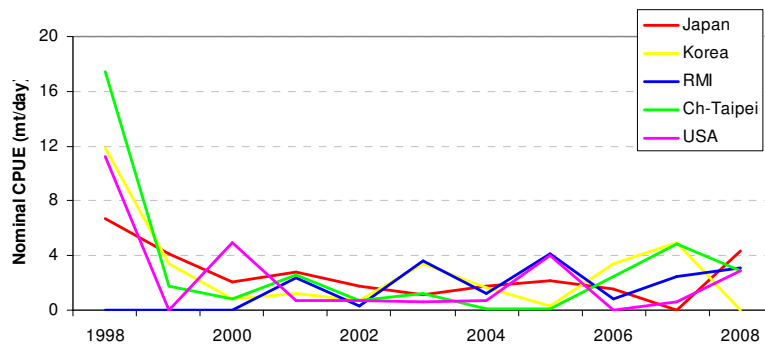


Figure 8. Trends in nominal catch rates of YELLOWFIN TUNA taken by the main purse-seine fleets operating in the RMI EEZ, 1998-2008

Table 9. Annual catches by foreign purse seine fleets in the RMI EEZ, by flag and species, 2004-2008 (Source : Unraised logsheet data collected by MIMRA)

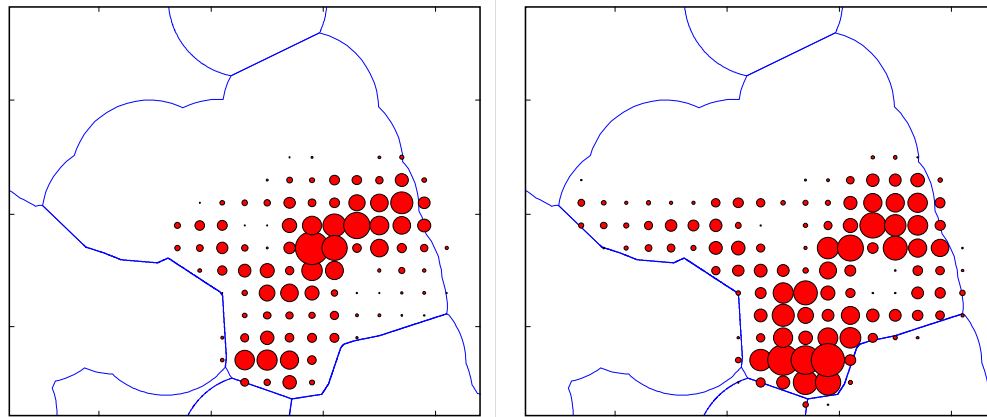
Fleet	Year	CATCH (metric tonnes)				TOTAL
		SKJ	YFT	BET	OTH	
China	2004	663	0	0	0	663
	2005	0	0	0	0	0
	2006	526	217	6	0	749
	2007	0	0	0	0	0
	2008	0	0	0	0	0
FSM Arrangement	2004	7,773	507	110	0	8,391
	2005	6,662	838	93	0	7,593
	2006	5,253	710	22	0	5,985
	2007	3,280	305	150	10	3,745
	2008	3,175	286	160	0	3,621
Japan	2004	2,417	272	5	0	2,693
	2005	1,311	131	23	0	1,466
	2006	3,148	181	0	0	3,329
	2007	0	0	0	0	0
	2008	489	69	44	0	602
Korea	2004	1,621	104	7	0	1,732
	2005	2,231	0	0	0	2,231
	2006	1,231	235	21	0	1,488
	2007	175	100	0	0	275
	2008	0	0	0	0	0
Chinese Taipei	2004	1,271	16	1	0	1,287
	2005	1,488	0	0	0	1,488
	2006	1,705	218	11	0	1,933
	2007	1,664	367	0	2	2,033
	2008	781	48	71	0	900
USA	2004	144	14	5	0	163
	2005	2,932	336	116	0	3,384
	2006	163	8	4	0	175
	2007	110	17	0	0	126
	2008	208	75	0	0	284
Vanuatu	2004	1,496	0	0	0	1,496
	2005	3,376	97	3	0	3,475
	2006	767	192	1	0	959
	2007	3,233	164	3	1	3,401
	2008	0	0	0	0	0
TOTAL EEZ	2004	15,384	913	128	0	16,425
	2005	18,000	1,402	235	0	19,637
	2006	12,793	1,761	65	0	14,618
	2007	8,462	953	153	13	9,580
	2008	4,654	478	275	0	5,407

**Foreign longline fleet catch/effort**

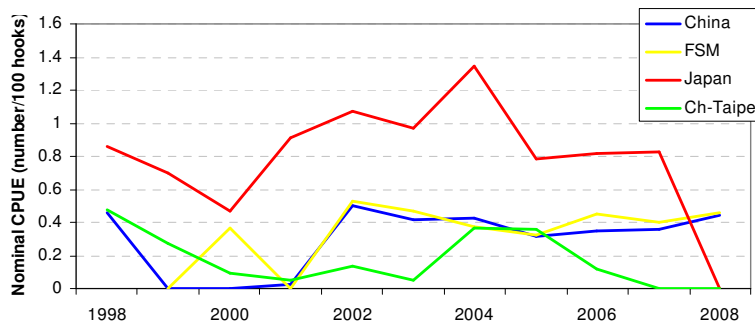
The domestically-based foreign longline fleet comprises of vessels from China and FSM which are managed and operated through MIFV.

Japanese longline vessels offload their catch in ports in Japan. Catch estimates for 2006-2008 for the domestically-based vessels have been raised using unloadings data. The overall catch estimates by foreign longline fleets in 2008 indicate a slight increase from the previous year (Table 10). Bigeye catch continues to account for the major part of the target catch composition.

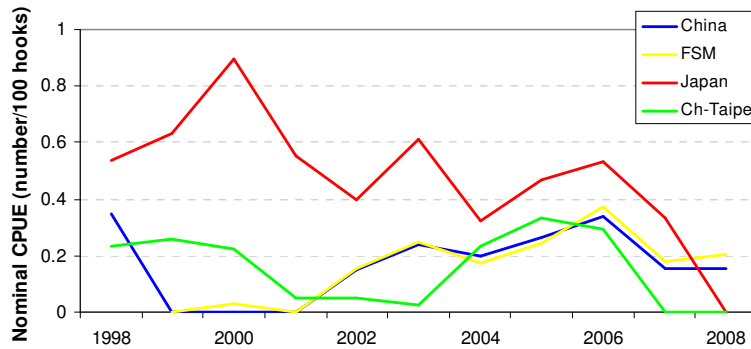
As with the purse seine fishery, most of the longline fishing effort occurs in the southern areas of the RMI EEZ however in the longline fishery, effort is more widely distributed in the zone (Figure 9). Variability in catch rates of bigeye and yellowfin is evident among fleets and years with the Japanese fleet consistently having had the highest CPUE in the last ten years and suddenly experiencing a sharp decline in 2008 (Figures 10 & 11).



**Figure 9. Annual distribution of combined effort (100s of hooks) by the main foreign longline fleets active in the RMI EEZ for 2007 (left) and 2008 (right)**



**Figure 10. Trends in nominal catch rates of BIGEYE TUNA taken by longline fleets operating in the RMI EEZ, 1998-2008**



**Figure 11. Trends in nominal catch rates of YELLOWFIN TUNA taken by longline fleets operating in the RMI EEZ, 1998-2008**

**Table 10. Annual catches by foreign longline fleets in the RMI EEZ, by flag and species, 2004-2008**  
(Source : 2006-2008 catch estimates of locally-based fleet derived from best combination of logsheet and unloads data, others are unraised logsheet data collected by MIMRA)

Flag	Year	ALB	BET	YFT	OTH	Total
China	2004	6	953	328	1	1,288
	2005	20	1,030	600	2	1,651
	2006	39	1,908	1,478	388	3,811
	2007	14	2,028	727	348	3,116
	2008	58	2,270	554	394	3,275
FSM	2004	0	218	74	0	292
	2005	0	136	74	2	211
	2006	4	417	235	76	732
	2007	3	359	133	66	561
	2008	9	434	112	76	631
Japan	2004	6	491	96	7	599
	2005	12	106	45	0	163
	2006	23	120	70	0	212
	2007	5	114	40	0	159
	2008	0	0	0	0	0
Ch-Taipei	2004	1	37	16	0	53
	2005	0	35	21	0	56
	2006	0	5	7	0	12
	2007	0	0	0	0	0
	2008	0	10	2	0	12
TOTAL EEZ	2004	12	1,698	514	8	2,232
	2005	33	1,307	738	3	2,081
	2006	65	2,449	1,790	463	4,768
	2007	21	2,501	899	415	3,836
	2008	67	2,714	668	470	3,918

Table 11 shows the estimated total catch of non-target species (and species groups) by locally-based longline vessels, according to observer data collection.

As in the purse seine fishery, the target tuna species comprise most of the catch, but the

proportion of non-target species catch is higher in the longline fishery (~39% in 2008). Observer data suggest that, for locally-based longline vessels the most predominant species in each category are: Blue marlin (billfish), Blue shark (sharks and rays), wahoo (“other” finfish).

**Table 11. Annual estimated catches of non-target, associated and dependent species, including sharks, by the locally-based longline vessels (China, FSM and RMI-flagged), in the WCPFC Convention Area, for 2006-2008 to the extent available.**

		Catch estimates						
Category	Species	2006		2007		2008		
		MT	%	MT	%	MT	%	
Billfish	Blue marlin	235.9	3.8322%	485.7	8.1907%	362.7	4.7500%	
	Black marlin	44.1	0.7167%	36.5	0.6159%	16.9	0.2209%	
	Striped marlin	85.2	1.3838%	135.0	2.2775%	151.6	1.9862%	
	Swordfish	78.7	1.2791%	77.4	1.3047%	42.9	0.5621%	
	Other Billfish	39.4	0.6399%	15.7	0.2646%	46.5	0.6088%	
Sharks and Rays	Blue shark	534.3	8.6807%	701.8	11.8362%	378.4	4.9565%	
	Mako sharks	87.9	1.4286%	83.7	1.4123%	38.5	0.5046%	
	Oceanic whitetip shark	90.0	1.4629%	177.9	3.0007%	181.4	2.3759%	
	Silky shark	257.6	4.1845%	506.9	8.5484%	786.3	10.2992%	
	Other sharks and rays	254.6	4.1371%	118.2	1.9941%	1,327.6	17.3892%	
Other finfish	Bullet/Frigate tunas	1.0	0.0166%	0.6	0.0102%	4.5	0.0593%	
	Kawakawa	0.0	0.0000%	0.0	0.0000%	0.0	0.0000%	
	Rainbow Runner	0.2	0.0031%	0.6	0.0099%	0.5	0.0072%	
	Wahoo	136.4	2.2166%	151.7	2.5577%	125.5	1.6432%	
	Common dolphinfish	73.3	1.1905%	36.8	0.6207%	97.8	1.2804%	
	Triggerfish	0.1	0.0022%	0.0	0.0000%	0.0	0.0000%	
	Barracudas	12.3	0.1993%	3.0	0.0505%	7.4	0.0970%	
	Escolars	11.8	0.1924%	9.9	0.1669%	18.1	0.2371%	
	Lanctfishes	12.3	0.2006%	8.8	0.1492%	7.4	0.0970%	
	Ocean sunfish	4.8	0.0773%	24.7	0.4165%	0.0	0.0000%	
	Oilfish	3.0	0.0492%	4.1	0.0695%	3.7	0.0485%	
	Opah	43.4	0.7043%	30.5	0.5150%	61.7	0.8081%	
	Pomfrets	11.0	0.1793%	15.3	0.2579%	11.9	0.1562%	
	Small baitfish	0.0	0.0000%	0.0	0.0000%	0.0	0.0000%	
	Other fish	57.7	0.9377%	33.5	0.5657%	44.4	0.5819%	
	<b>Total billfish</b>		483	7.8517%	750	12.6534%	621	8.1280%
	<b>Total sharks and rays</b>		1,224	19.8937%	1,589	26.7918%	2,712	35.5255%
<b>Total finfish</b>		367	5.9691%	320	5.3896%	383	5.0158%	
<b>Total non-target</b>		2,075	33.7145%	2,658	44.8347%	3,716	48.6693%	

### *Foreign pole-and-line fleet catch/effort*

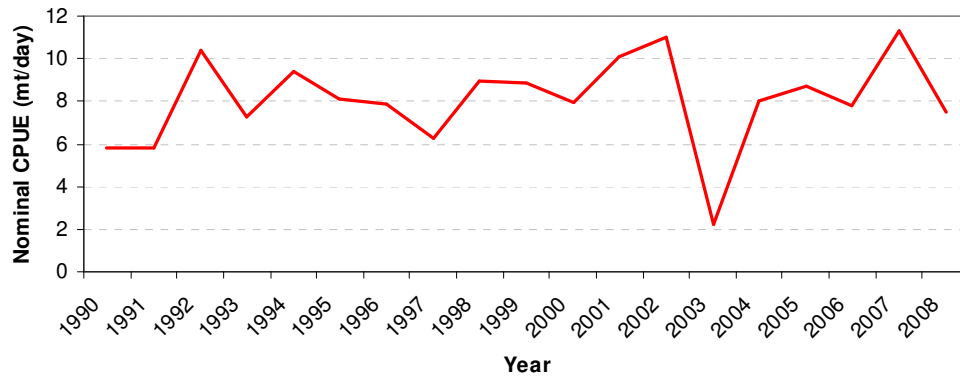
In 2008, catches from the pole-and-line fleet declined again after a resurgence in the previous year (Table 12) and as evident in the marked decline in CPUE (Figure 12) despite very slight increase in number of pole-and-line vessels licensed. Skipjack is the main species making up the catch composition for this fleet with yellowfin representing a very

minor component. However, there has been no observer data to validate these data.

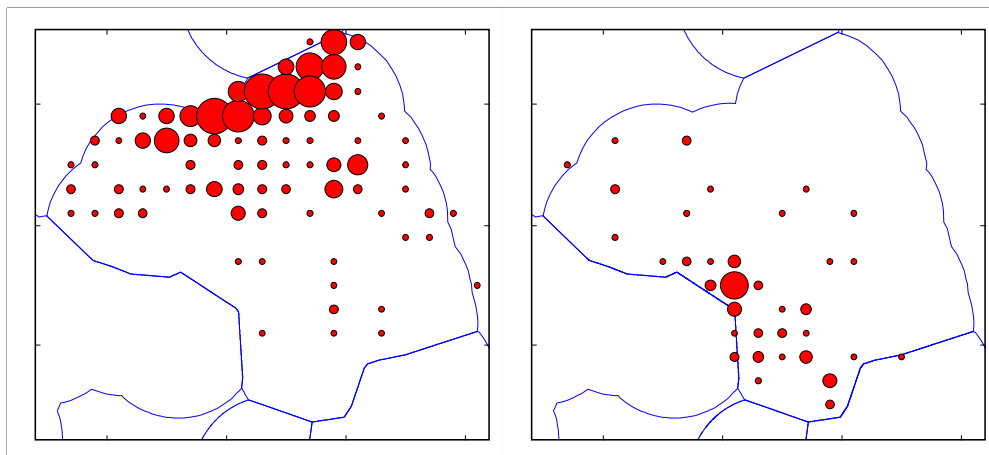
There is continuing variability in distribution of effort for the fleet as shown in Figure 13. Japan remains the sole pole-and-line operator in the RMI.

**Table 12. Annual catches by foreign pole-and-line fleets in the RMI EEZ, by flag and species, 2004-2008 (Source: Unraised logsheet data collected by MIMRA)**

		Catch (metric tonnes)				
Fleet	Year	BET	SKJ	YFT	OTH	TOTAL
JAPAN	2004	0	1,152	9	11	1,171
	2005	0	653	1	1	655
	2006	0	978	8	1	987
	2007	0	4,517	1	0	4,518
	2008	9	2,447	6	0	2,462



**Figure 12. Trends in nominal catch rates of SKIPJACK TUNA taken by the Japanese pole-and-line fleet operating in the RMI EEZ, 1990-2008.**



**Figure 13. Annual distribution of effort (days fishing and searching) by the Japanese pole-and-line fleets active in the RMI EEZ for 2007 (left) and 2008 (right)**

• **MARKETS AND DETAILS OF LOCAL INDUSTRY**

The Marshall Islands Fishing Venture (MIFV) operates the Longline Fishbase with locally-based foreign longline vessels as well as the national longline fleet. There was an increase in total unloadings in 2008 compared to the previous year and most of the unloaded catches were bound for export markets (Tables 13 & 14). 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.



**Unloading of catch at MIFV Fishbase**

**Table 13. Total unloaded catch (mt) for locally-based longline vessels, 2007**

<b>SPECIES</b>	<b>EXP</b>	<b>OTH</b>	<b>TOTAL</b>
ALBACORE	0	15	15
BIGEYE	2,000	170	2,170
YELLOWFIN	587	178	765
BLUE MARLIN	64	312	377
MAHI MAHI / DOLPHINFISH	10	15	25
OPAH / MOONFISH	9	11	20
SAILFISH (INDO-PACIFIC)	0	2	2
SHARKS (UNIDENTIFIED)	0	256	256
SHORT-BILLED SPEARFISH	0	12	12
SWORDFISH	15	24	39
WAHOO	34	55	88
	<b>2,718</b>	<b>1,051</b>	<b>3,769</b>

**Table 14 Total unloaded catch (mt) for locally-based longline vessels, 2008**

<b>SPECIES</b>	<b>EXP</b>	<b>OTH</b>	<b>TOTAL</b>
ALBACORE	17	52	69
BIGEYE	2,706	107	2,813
YELLOWFIN	592	100	692
BLUE MARLIN	38	444	482
MAHI MAHI / DOLPHINFISH	13	37	50
OPAH / MOONFISH	12	44	56
SAILFISH (INDO-PACIFIC)	0	1	1
SHARKS (UNIDENTIFIED)	0	215	215
SHORT-BILLED SPEARFISH	0	0	0
SWORDFISH	19	28	47
WAHOO	20	97	117
	<b>3,378</b>	<b>1,000</b>	<b>4,378</b>

• **TRANSSHIPMENT/PORT UNLOADING ACTIVITIES**

Transshipment continues to be a significant source of revenue for the RMI. It has proven to be a positive indicator for economic spin-offs in private sector areas dealing directly and indirectly when the fishing vessels are in port (e.g. fuel sales with Marshalls Energy Company, etc).

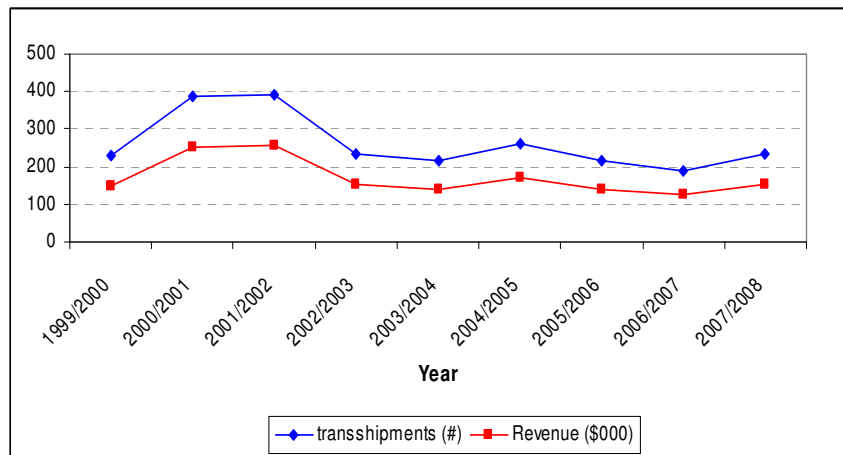
In recent years, Majuro has become a major transshipment port for the purse seine fleets operating in the WCPO. During 2008, a total of 233 transshipments were undertaken with total transshipped catch amounting to just over 156,000 mt (73% SKJ, 26% YFT, 1% BET) as detailed in Table 15.

**Table 15. Total catch transshipped in Majuro, 2008**

Month	SKJ	YFT	BET	TOTAL
Jan	8,538	408	194	9,140
Feb	10,418	508	184	11,110
Mar	4,565	180	60	4,805
Apr	5,926	351	107	6,384
May	8,675	364	141	9,180
Jun	20,950	2,107	111	23,168
Jul	15,447	1,505	37	16,989
Aug	14,807	7,692	181	22,680
Sep	5,297	6,708	121	12,126
Oct	12,955	11,843	201	24,999
Nov	2,934	8,984	219	12,137
Dec	2,934	406	115	3,455
<b>Total</b>	<b>113,446</b>	<b>41,056</b>	<b>1,671</b>	<b>156,173</b>

Figure 14 is indicative of transshipment activity, relative to the revenue (MIMRA

only) collected from 1998 through to 2007/2008 (PS and support vessels).



**Figure 14. Number of transshipments (blue) and income generated (red), 1998-2008**

Table 16 is indicative of the number of support vessels by flag licensed by MIMRA that are directly involved in transshipment

activities. As mentioned earlier, these vessels are defined as fishing vessels under the WCPF Convention.

**Table 16. Number of RMI-licensed support vessels in 2008**

<b>FLAG</b>	<b>Bunker</b>	<b>Carrier</b>
<i>China</i>	0	5
<i>Cyprus</i>	0	1
<i>FSM</i>	0	1
<i>Kiribati</i>	5	6
<i>Korea</i>	2	4
<i>Lithuania</i>	0	1
<i>Malta</i>	0	1
<i>RMI</i>	0	6
<i>Panama</i>	3	20
<i>Singapore</i>	2	1
<i>St. Vincent</i>	0	2
<i>Taiwan</i>	0	3
<i>Vanuatu</i>	0	1
<b>TOTAL</b>	<b>12</b>	<b>52</b>

#### • OBSERVER PROGRAM

MIMRA has attempted to carry observer trainings every year to meet the increasing demands placed on the Observer Program. In 2008, there were 17 active observers and

a total of 71 trips and 1,653 sea days were completed on both longline and purse seine vessels (Table 17).

**Table 17. Observed trips and days at sea in 2008**

Month	Number of Trips			Number of Days		
	LL	PS	Total	LL	PS	Total
January	4	0	4	63	0	63
February	2	0	2	28	0	28
March	0	0	0	0	0	0
April	0	1	1	0	41	41
May	3	4	7	44	148	192
June	2	6	8	17	195	212
July	7	2	9	98	81	179
August	5	3	8	72	122	194
September	4	1	5	54	26	80
October	7	2	9	89	112	201
November	4	10	14	65	337	402
December	4	0	4	61	0	61
	42	29	71	591	1,062	1,653

#### *Port Sampling*

In 2008, port sampling activities continue to improve compared to 2007 (Tables 18 & 19). A total of 78,693 fish were measured during 2008 by a full-time port sampler stationed the MIFV longline fishbase. Collated data are sent directly to SPC on a bi-weekly basis for analysis. However, it is envisaged that

MIMRA will acquire additional data entry staff to increase in-house processing.





Port sampling and sorting of catch unloaded at MIFV Fishbase

The development of its data 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 the successful integration and regular updates of the TUFMAN database at MIMRA.

Tables 18. Port sampling (locally-based longline vessels), 2007

Month	Port	Number (Measured)					Number (Not Measured)				
		ALB	BET	YFT	OTH	TOTAL	ALB	BET	YFT	OTH	TOTAL
January	Majuro	0	3,430	1,518	90	5,038	34	0	52	3,309	3,395
February	Majuro	0	1,790	937	94	2,821	11	25	77	5,084	5,197
March	Majuro	0	2,766	1,821	4,587	9,174	86	12	98	3,656	3,852
April	Majuro	0	4,751	1,021	171	5,943	80	2	68	2,654	2,804
May	Majuro	0	5,090	2,712	142	7,944	9	20	33	2,629	2,691
June	Majuro	0	1,713	902	62	2,677	3	18	17	1,094	1,132
July	Majuro	0	2,583	746	121	3,450	1	35	8	727	771
August	Majuro	0	3,479	1,440	153	5,072	5	21	32	1,757	1,815
September	Majuro	0	6,001	1,905	245	8,151	18	7	7	2,601	2,633
October	Majuro	0	4,622	2,198	191	7,011	12	14	7	2,194	2,227
November	Majuro	0	2,806	1,800	95	4,701	24	8	42	2,162	2,236
December	Majuro	1	5,841	3,959	107	9,908	268	10	58	2,808	3,144
		<b>1</b>	<b>44,872</b>	<b>20,959</b>	<b>6,058</b>	<b>71,890</b>	<b>551</b>	<b>172</b>	<b>499</b>	<b>30,675</b>	<b>31,897</b>

Tables 19. Port sampling (locally-based longline vessels), 2008

Month	Port	Number (Measured)					Number (not measured)				
		ALB	BET	YFT	OTH	TOTAL	ALB	BET	YFT	OTH	TOTAL
January	Majuro	0	4,466	3,381	148	7,995	265	15	64	4,173	4,517
February	Majuro	8	5,027	2,059	157	7,251	14	9	69	4,157	4,249
March	Majuro	9	5,679	1,982	142	7,812	200	65	143	4,428	4,836
April	Majuro	83	7,353	1,777	255	9,468	139	36	131	4,994	5,300
May	Majuro	221	6,106	1,190	165	7,682	48	40	69	2,592	2,749
June	Majuro	100	6,157	1,304	73	7,634	49	40	136	2,645	2,870
July	Majuro	226	5,646	2,345	75	8,292	509	78	89	2,155	2,831
August	Majuro	0	4,741	1,406	83	6,230	95	38	109	2,358	2,600
September	Majuro	1	5,124	1,325	97	6,547	128	27	58	1,970	2,183
October	Majuro	8	4,335	891	73	5,307	221	15	37	1,567	1,840
November	Majuro	9	3,663	619	61	4,352	142	10	9	1,165	1,326
December	Majuro	0	84	39	0	123	0	0	0	0	0
		<b>665</b>	<b>58,381</b>	<b>18,318</b>	<b>1,329</b>	<b>78,693</b>	<b>1,810</b>	<b>373</b>	<b>914</b>	<b>32,204</b>	<b>35,301</b>

### • TUNA MANAGEMENT PLAN AND DEVELOPMENT(S):

The MIMRA adopted its (revised) Tuna Management Plan (TMP) in late 2004. Since then, MIMRA has undergone significant changes, particularly in the implementation of the revised TMP.



A timely consultancy aimed at reviewing the TMP was successfully undertaken in March 2008. The current revised draft was recently endorsed by the Board of Directors in early 2009 and will comprise part of the next Annual Report. It is envisaged that the revised TMP will further enhance and strengthen the management and organization of the Authority in its ongoing efforts to fulfill the RMI's national, regional, and international obligations.

- **TUNA COMMISSION**

A number of meetings related to the Western and Central Pacific Fisheries Commission (WCPFC) were held during 2008.



The Fourth Regular Session of the Scientific Committee (SC4) took place at Port Moresby, Papua New Guinea from 11–22 August 2008. All Members, Cooperating Non-members and Participating Territories (CCMs), except American Samoa, Belize, Commonwealth of the Northern Mariana Islands, Guam, Niue, Tokelau, and Wallis and Futuna, attended. Dr. Dae-Yeon Moon (Korea) chaired the meeting. Six Specialist Working Groups (Statistics, Stock Assessment, Ecosystems and By-catch, Methods, Fishing Technology and Biology) met during the first week of the Committee.

The Fourth Regular Session of the Northern Committee (NC4) took place at Tokyo, Japan from 9–11 September 2008. The meeting was attended by members from Canada, China, Cook Islands, Japan, Republic of Korea, Philippines, Chinese Taipei, United States of America (USA) and Vanuatu and five observers from CCMs. Mr. Masanori Miyahara (Japan) chaired the meeting. NC4 reviewed the advice and recommendations for northern stocks formulated by the ISC at its 8<sup>th</sup> Plenary Session (ISC8), Takamatsu, Japan 22-27 July 2008. A full stock assessment was conducted for the Pacific bluefin tuna in 2008.

The second meeting of the Inter-sessional Working Group to develop the Regional Observer Programme (IWG-ROP2) took place at Nadi, Fiji from 7-10 July 2008. Twenty-one participants representing CCMs

and observers (Birdlife International, SPC-OFP and FFA) attended the meeting that was chaired by Dr Charles Karnella (USA). The IWG-ROP2 reached agreement on interim data standards, observer programme authorization processes and audits. Also during the IWG-ROP2 meeting, 11 interim minimum standards were agreed on, covering the following areas: Data Fields; Observer Guides and Manual; Training; Code of Conduct; Safety; ROP National Coordinators; Briefing and Debriefing; Equipment and Materials; Communications; Measuring Performance; and Dispute Settlement. These standards are recommended to the Commission on an interim basis as they may need to be revised as implementation of the ROP proceeds.



**MIMRA Director at TCC4 Meeting in Pohnpei, October 2008**

The Fourth Regular Session of the Technical and Compliance Committee (TCC4) was held at Pohnpei, Federated States of Micronesia from 2 to 7 October 2008. The meeting was chaired by Mr. Wendell Sanford (Canada), and 145 participants from 27 CCMs and 7 observers attended the meeting. TCC4 noted the conclusions reached by the IWG-ROP2, and recommended that WCPFC5 approve its report and extend the mandate of the IWG-ROP for a further year during which it would continue its work on outstanding items contained in CMM-2006-07. TCC4 made several recommendations in support of operationalizing the Commission VMS: including a request that the WCPFC Secretariat and FFA Secretariat prepare a draft service level agreement for the consideration of WCPFC5; VMS SSPs; allocation of costs for the Commission VMS

and an activation date of 1 April 2009. TCC4 finalized a provisional list of two fishing vessels alleged to have undertaken illegal, unregulated and unreported (IUU) fishing activities in the region in 2007/08 and made several recommendations in relation to those vessels on the existing WCPFC IUU Vessel List.



**WCPFC Commissioners at WCPFC5 held in Busan, December 2008**

The Fifth Regular Session of the Commission (WCPFC5) met in Busan, Republic of Korea from 08 – 12 December under the Chairmanship of Mr Glenn Hurry, whose term was up for re-election. A major outcome

from the meeting was the election, by consensus, of Ambassador Satya Nandan (Fiji) as Chairman for two (2) years. All told, the meeting also adopted the RMI proposed Resolution on the Development Aspirations of SIDS.

Likewise, the FFA held three subregional WCPFC management options workshops as part of the preparations of FFA members for WCPFC5. These workshops included reviews of FFA members legislative implementation of WCPFC Convention and decisions, as well as discussion of key WCPFC issues for WCPFC5 and preparation for the FFA Management Options Consultation (20 – 23 October, held in Apia, Samoa). The workshops also covered issues of importance for SC4 and TCC4. The workshops considered the national as well as regional perspectives on particular WCPFC issues as they arise and the rapid pace of progress to date and the ongoing concerns raised by Pacific Island countries, especially those with small administrations.

## • ONSHORE DEVELOPMENTS AND FUTURE PROSPECTS

### ***Marshall Islands Fishing Company (MIFCO)***

The Joint Venture between MIMRA and Koo's Fishing Company, Ltd. (KFC) continues with the vessel, Marshalls 201, operating under the auspices of the FSM Arrangement for Regional Fisheries Access administered by the Forum Fisheries Agency (FFA). The vessel is owned by the Marshall Islands Fishing Company (MIFCO), a RMI corporation established pursuant to the JV. At the outset, the venture aims to further develop the local fishing industry and the RMI economy in general.



**KFC/MIFCO HQ Building**

In May 2008, the company, Marshall Islands Fishing Company (MIFCO), formally opened its permanent offices within KFC's new office building adjacent to MIMRA. Adjoining space behind the office building has been set aside for the establishment of a fish (by-catch) processing facility in the near future. Investment in these new facilities is estimated at approximately \$3 million and it is anticipated that the new processing plant will employ up to 100 local employees.



**KFC Cold Storage Facility**

Although KFC is managing partner for MIFCO, it is important to note that the RMI Government, through MIMRA, and even more importantly, the RMI economy are the immediate beneficiaries of the joint venture. Aside from income derived from the fishing operations of the vessel, the RMI economy is further boosted by other favorable externalities by virtue of the fact that the vessel is based in the RMI and partially crewed by local Marshallese.

Both KFC and MIFCO continue to play a positive role in the economic development of the RMI. It is worth noting that MIMRA's shares from the JV were utilized pursuant to a Cabinet decision to assist with the burdens endured by the RMI Government during the state of economic emergency declared in June 2008. It is envisaged that the loan put up for the purposes of the JV will be paid off momentarily in due course and further updates in this regard will be presented in the next Annual Report.

***Pan Pacific Foods (PPF RMI), Inc.***

The long-awaited completion of the revitalized loining plant, under new management by Pan Pacific Foods (RMI), Inc. has finally been achieved with the initial hiring of close to 200 local Marshallese, most of whom were employed by the previous plant.



**PPF Loining Plant main entrance**

A routine albeit successful trial run took place in mid-April 2008 whereby the company bought raw materials from KFC. In its intermediate stages of operations following the trial run, the plant was able to successfully produce 20 mt of processed loins per day and was able to ship out its first batch of exports; at best, the company aims to produce 80mt daily once production is in full swing and operations progress with no hindrances. Further details will comprise part of the next Annual Report.



**PPF production line in full swing**

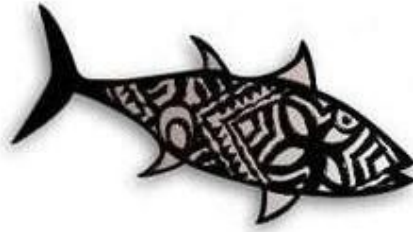
### *Future Prospects*

As previously mentioned, transshipment in Majuro port continues to pick up in recent years and remains an important catalyst for economic development in the RMI. It is envisaged that MIMRA and all concerned will continue and advocate for in-port transshipment noting the favorable economic spin-offs associated with this vital activity. Further clarity on this issue is evident in the transshipment discussion paper through the Secretariat in April 2009.

At the same time, MIMRA is keen to shift longline catch attribution from a flag-based to zone-based approach noting the recent developments stemming from recent WCPFC meetings and inter-sessional discussions all the while being very mindful of the immediate implications as far as assessed annual financial contributions to the WCPFC is concerned.

Ultimately, with the recent shifts in paradigms taking shape around the region and the renewed active stance of the Parties to the Nauru Agreement (PNA), of which the RMI is a committed member, through adoption of

the 3<sup>rd</sup> Implementing Arrangement (3IA) among other things, the RMI remains keen to further develop its domestic fishery through innovative means. All of these prospects are lined up bearing in mind all the while the ongoing crucial scientific advice and conservation concerns through practicable measures to safeguard the last remaining healthy tuna stocks in the world.



While MIMRA admits to constraints in the overall development of national fishery including, but not limited to the regional and international obligations, the Authority remains hopeful that it can further take advantage of the opportunities and related benefits attained to provide for the long-term viability of our fisheries management and operations into the future and beyond.

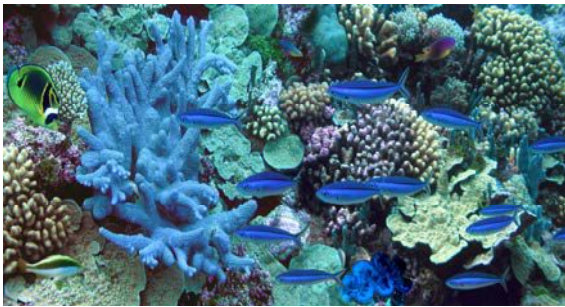
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## COASTAL AND COMMUNITY AFFAIRS

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### Overview

MIMRA's Coastal Fisheries Division continues with its commitment to ensuring that the communities benefit from the projects are shown through the continuance of Outer Islands Fishing Projects, aquaculture/mariculture projects, the fisheries management and catch data program.



MIMRA continues to encourage the development of culture fisheries and aquaculture for its potential to contribute to improving national fisheries production capacity and stimulate local economies.

This year marked MIMRA's 10<sup>th</sup> Anniversary of implementing the MIMRA Act 1997. The first ever National Fisheries Forum highlighted the various services that MIMRA aims to serve the RMI covering both the Oceanic and the Coastal Fisheries Sectors. The promotion and sustainable development of the coastal fisheries remain a priority with the Division, with more activities towards the enhancement of aquaculture activities and promotions of community fisheries (or resource) management plans to be facilitated with assistance from Coastal Management Advisory Council (CMAC) partners.

The Coastal Fisheries Division deals mainly with the development and management of community based projects that provide benefits to the people in the community. It is required to coordinate and consult with

traditional leaders and local government councils during planning or development stages of projects. It is required to coordinate and consult or advise local communities with respect to the development of sustainable management plans for inshore or coastal fisheries resources. It is also required to ensure community or public awareness of MIMRA policies or plans, and MIMRA's role and capacity to provide assistance to communities while at the same time, ensuring the implementation of action plans and strategies in carrying out policy decisions by the Board, decisions or recommendations made by sub-regional, regional and international organizations that RMI is a party to; and other policy related activities that concerns coastal fisheries.

MIMRA continues shifting management measures towards sustainable resource practices, to allow for continued and long term achievements of project objectives and community and local government fisheries development plans and projects. In-house capacity building as well as community trainings remains one of the objectives in ensuring that communities continue to be self sufficient and take charge of their resources.



## OUTER ISLANDS PROJECTS

The Outer Island Fish Market Center on Majuro receives fish from Arno, Aur, Jaluit and Maloelap and has continued provide fishermen with income by purchasing fish and fish products directly. For the Arno fishermen, a total of 20,972 lbs of fish were purchased at a value of \$18,436; Jaluit fishermen received \$6,168.84 for 8,027 lbs of fish; and 16,703 lbs of fish were purchased from Maloelap and Aur fishermen at a value of \$17,073.20. The monetary benefits that the fishermen of these four atolls received directly totaled \$41,678.04. In comparison to last annual report, the effects of increase in fuel prices on the fishermen are evident with the decreased number of fishing trips to the outer islands by not only the number of trips but also the monetary benefits (last annual report showed the fishermen of the same four atolls receiving \$50,646.27 from the fishing projects).

Unfortunately, for the fishbases supplying fish to the Kwajalein Atoll Fish Market Center (KAFMC), the benefits of having a fishbase are still not seen due to the damages sustained by F/V Ieplap during a trip to Likiep in early 2006 and unsustainable logistics to accommodate the KAFMC and its fishbase partners. In this interim period, the KAFMC continued direct purchase of fish from Ebeye fishers as well as provided assistance in fuel and ice provisions. (Note: KAFMC reports of fish purchase activities minimal to report.)

Table 20 below reflect the transactions between the fishers and the projects. Note that with the rotational nature of the trips to the outer islands, some months will have no record dated due to the fact that the MIMRA boats did not visit during those months. Also, in regards to the Jaluit Fishing Project, fish recorded to be purchased from the fishers, include fish destined for the KAFMC on Ebeye (Ebeye Fish Market). Otherwise, the data presented reflects fish brought in for the OIFMC on Majuro.



Effort is still underway in anticipation of the new JICA funded Fish Market Center. Preliminary assessment by JICA and JICA consultants have been conducted including stakeholder consultation meetings and general survey of the proposed site located in the Uliga Dock area. MIMRA is charged with being the implementing agency for the project and preparations have already begun with securing land lease agreements with landowners in anticipation of the project initiation starting fiscal year 2008/2009.

AAFA, COFDAS & JAFP Projects 07/08						
	AAFA		COFDAS		JAFP	
	weight (lb)	\$ purch.	weight (lb)	\$ purch.	weight (lb)	\$ purch.
OCT 07	4772	4508	1397	1106.8	---	---
NOV 07	829	708	936	711.2	---	---
DEC 07	976	882	---	---	---	---
JAN 08	1372	1095	1321	1014	1091	916.04
FEB 08	1069	681	---	---	---	---
MAR 08	2328	1739	2819	2257.3	---	---
APR 08	2699	2426	939	850	2338	1932.6
MAY 08	2005	1650	---	---	---	---
JUN 08	1456	1177	2273	2361.95	1797	1651.45
JULY 08	381	590	1038	2079.3	---	---
AUG 08	1152	1386	725	841.75	2801	3468.75
SEP 08	1933	1594	5255	5850.9	---	---
<b>TOTAL</b>	<b>20972</b>	<b>18436</b>	<b>16703</b>	<b>17073.2</b>	<b>8027</b>	<b>6168.84</b>

**Table 20. Outer Islands Fishing Projects Fish Collection Weight and Value (AAFA, COFDAS, & JAFP)**

### **FDAPIN/FESAP - JAPAN**

Overseas Fisheries Cooperation Foundation (OFCF) began FDAPIN projects in the 1992 and 1993 fiscal year in the RMI. From the 1995 fiscal year, FDAPIN II was implemented for a duration of five years, consisting of assistance ranging from repairs and restoration of fisheries related facilities to related skills, technology and knowledge being transferred. Each year, during the annual OFCF Japan/Pacific Island Nations Fisheries Directors Meeting on Fisheries Cooperation, OFCF receives requests from each country for FDAPIN projects. This year's Director's Meeting stressed the importance of prioritization of requests due to Japan's economic situation.

After conducting field surveys and consultation with each government, the scope of the projects are developed and are followed by a drafting and signing of the MOU and Implementation Plan.



**OFCF Expert, Mr. Hatano with MIMRA Maintenance Personnel during annual FDAPIN/FESAP mission trip to Majuro.**



*This year requests that were implemented are as follows:*

1. Construction of new MIMRA maintenance facility;
2. Conducting Freezer machine seminar; and
3. Advice on operation management of MIMRA's 3 fish carrier vessels to promote outer islands fisheries.

*Request Submittal for fiscal year 2008/2009 are as follows:*

1. Maintenance of Ice Making Machine and Cold Storage Unit – Majuro;
2. Maintenance of Ice Making Machine and Cold Storage Unit – Ebeye;
3. Lentanir & Laintok Maintenance; and
4. Continued advice on operation management for both KAFMC and OIFMC.

### **COASTAL FISHERIES CATCH DATA PROGRAM**

Under the OFCF ATOLL Project, the fisheries catch data component had consisted of working with Arno and Majuro Fishers in collecting fish catch data twice yearly. To continue and expand on this initiative, MIMRA, in collaboration with the OFCF, began ATOLL II “Project to assist in the improvement of data collection system for coastal fisheries management.”

The overall goal of the project is to promote the sustainable use of marine resources through effective fisheries management coordination between the resources users (outer island fishers) and the administrators (local and national government entities). The Project has the main objective to assist the Policy, Planning and Statistics Section of the Coastal Fisheries Division of MIMRA to



**1<sup>st</sup> Catch Data Workshop on Majuro**

collect, manage and utilize the coastal fisheries data for nation-wide coastal fisheries management. Through consultations and site visits, Jaluit, Likiep, Ailuk, Namdrik and Kwajalein Atolls, in addition to the previous ATOLL Project sites of Majuro and Arno as well as, are targeted for implementation. A fisheries information collection system is now in place to categorize the different atolls through indicators such as commercial levels of fisheries. Each of the ATOLL II target atolls have been chosen to represent the different levels of fishing pressure i.e. Namdrik representing pure subsistence fishing and Majuro and Ebeye representing high sales of fish.



**Fish Catch Data Workshop on Likiep**

The estimation of catch totals for the ATOLL II Project sites have been put on hold to focus on the quality of data collected from fishers. More effort is to go into ensuring that participating fishers understand the purpose of the data collected and to ensure that they understand how to collect the data needed. Transportation to

the outer islands remains a hindering factor to carrying out the activities. To ensure that consultations do take place, MIMRA and OFCF plan to take advantage of the yearly summer church meetings on Majuro to conduct workshops with target community groups.

## **NATIONAL FISHERIES FORUM**

The Marshall Islands National Fisheries Forum was hosted by MIMRA at the RMI International Convention Center on July 7 and 8, 2008. It was attended by Mayors of the Marshall Islands and by national partners in resource management.



**Honorable Mayors and Participants, National Fisheries Forum, July 2008**

Day 1 focused on oceanic and industrial fisheries. Presentations and discussions were held on why the RMI licenses foreign fishing vessels, why boats are in Majuro lagoon, why there is fluctuation in revenues and the management regimes for oceanic fisheries. Day 2 focused on coastal fisheries with presentations and discussion on outer-island projects, the Micronesia Challenge and Reimaanlok, the Coastal Management Advisory Council (CMAC) and the Sustainable Financing Plan recently developed. The chairman of the Ailuk Fisheries Committee presented on their

community-based resource management. Presentations were also made on the Fisheries Nautical Training Center, the satellite tagging and tracking of turtles. The Mayor of Rongelap spoke about the conservation and marine science projects planned for Rongelap. Participants went on field trips to the tuna loining plant, tuna off-loading facilities, the Marshall Islands Fishing Venture and the Taiwanese fish farm at Arrak.

### **Key successes:**

- The Forum was attended by all Mayors except for Enewetak for the entire two days. They were very engaged and interested, which was demonstrated by the fact that many stayed until 7pm for discussions.
- Participants were more engaged and more able to connect on Day 2 as they have more direct knowledge and experience of coastal fisheries and the importance of these to their communities.
- Participants requested another similar Forum in one year's time, perhaps to be held on an outer island.
- Participants were grateful for the opportunity to learn more and to participate in discussion about their fishery resources.

## ICDF/MIMRA FISH FARM



The ICDF/MIMRA Fish Farm, through the collaboration of MIMRA, CMI and Taiwan Technical Mission, has operated for over 3 years with the objective of providing potential income generating opportunities for local communities, food security and, as one of the conservation efforts MIMRA is mandated to carry out, enhancing the local fish population. Funding and technical work are carried out by the ICDF and MIMRA and CMI provide support and ensure compliance with national laws and requirements.

The facility is located at the CMI's Land Grant compound in Arrak Village and contains:

- 10 cemented holding tanks for fish larvae and fry

- 4 fiber glass tanks for larval rearing
- 1 floating cage for brood stocks
- A pump house that supplies saltwater to the tanks

Fish species that are currently being reared are three grouper species and two rabbitfish species: Highfin Grouper (*Epinephelus maculatus*), Brown Marbled Grouper (*Epinephelus fuscoguttatus*), Camouflage Grouper (*Epinephelus polyphekadion*) Scribbled Rabbitfish (*Siganus argenteus*) and the Spotted Rabbitfish (*Siganus punctatus*). All brood stocks were collected from all around Majuro.



Rabbitfish species, *S. argenteus* (Mole) and *S. punctatus* (Muramur)



Grouper species, *Epinephelus polyphekadion* (Kuro)

Rabbitfish are spawned once every month and have successfully produced more than 300 juveniles. Currently, there are approximately 150 rabbitfish brood stock and about 98% are able to spawn successfully.

Despite the success in reproduction and fertilization, 75% of the fries die between the period of hatching from eggs (occurs 36hrs after fertilization) to around 4-5 days (when fish starts to feed).

It was determined that the available feed was too big for the fish larvae, hence not suitable for the fish larvae. Alternate feed has been considered (e.g Oyster and giant clam fertilized eggs), however, investigation still needs to be carried out to verify the outcome. In the case of grouper species, spawning has not yet been successful. It is assumed that either the fish are too old or too young to spawn. Because of this, more than 100

grouper fish were collected from all around Majuro and have been placed in the floating cage awaiting optimal periods for spawning. The fish farm has not yet fulfilled its objective due to problems with the mortality rate of the rabbit fish larval stage and groupers unable to reproduce and fertilize eggs. Therefore, the farm is still classified as a pilot project and is now conducting experiments and research on these issues. Once problems are resolved, the project's future work plans will be carried, including:

- Workshop training for local fishermen
- Releasing of fish into the lagoon (Replenishing the local fish population)
- Supply local fish markets during winter season
- Introduce the project to local and Outer-islands communities



**Inside the Pump house**



**Floating cage near the fish farm**



**Tanks for brood stocks and larvae**



**Large tank containing algae (fish feed)**

## MIMRA GIANT CLAM SATELLITE PROGRAM

MIMRA operates a giant clam hatchery on Loto Island at Likiep Atoll that provides young clams of several species *viz.* *T. maxima*, *T. squamosa*, and *T. gigas* for restocking reef areas, supplying local farmers for grow-out and reselling, and for direct marketing to the Marshall Islands Mariculture Farm (MIMF). MIMRA also provides training to interested farmers in propagation and management. The initial intention was to export clam meat to Asia. However, the extended grow out period (5 years or more) did not make this feasible and the objective changed to supplying the ornamental aquarium market. The Loto Hatchery is comprised of 12 raceways. MIMRA employs 4 staff to operate the hatchery and farm. The hatchery has concentrated primarily on spawning and raising the species *T. derasa*, *T. squamosa* and *T. maxima*.



An additional hatchery to raise giant clams (and other targeted species) was constructed on Arno Atoll in early 2003 with the financial assistance of the Overseas Fisheries Cooperation Foundation (OFCF) of Japan. The hatchery on Arno Atoll has also successfully spawned *T. gigas*, *T. maxima* and *T. squamosa*.

The privately-owned Marshall Islands Mariculture Farm (MIMF) is the only

authorized exporter of giant clams in the RMI. In addition to producing its own cultivated clams, MIMF also purchases clams cultivated at the two MIMRA facilities in order to fill orders for species that it does not have readily available. The revenue from these sales is used to offset operational and salary costs.

In addition to selling juvenile stock to the commercial exporter (MIMF), the two MIMRA hatcheries also operate as sources of cultivated stock to community satellite farms (Likiep - 3 communities; Arno - 12 communities). Nine month old juveniles are made available to participating community farms where the young clams are raised in ocean cages for a further nine months before being sold to the commercial operation for export. In order to ensure that communities obtain a fair price for their stock, MIMRA negotiates the selling price with the buyer on behalf of the communities.

The two MIMRA hatcheries also serve as research stations with the objectives of enhancing giant clam populations in the Marshall Islands. Hatchery-reared juveniles and transplanted wild adults are used to establish giant clam sanctuaries.

The Likiep Hatchery maintains its brood stock of *T. gigas*, *T. maxima*, *T. squamosa* and *H. hippopus* at Likiep Atoll in floating cages in the lagoon near the hatchery. When brood stock is required for spawning, selected animals are removed, cleaned of debris and placed into spawning tanks. If the clams have mature gonads and spawning induction is successful, sperm is first released generally for 1-2 hours. Eggs are released approximately one hour after the emission of sperm has ceased. The sperm and eggs are collected from as many

individuals as possible and stored in individual containers according to the parent individual. Eggs and a mixture of sperm from different individual animals are combined to maximize the genetic diversity in each batch of larvae.

Juvenile clams are raised for the first two months in 50 percent shaded raceways which receive filtered seawater. Under these conditions, juvenile clams require little attention. At 2-3 months old (1-3cm in length) juvenile clams become easily visible to the naked eye. Small algal grazing fish (*Acanthurus triostegus*) are introduced into

each holding tank to control algal growth and avoid any smothering of the small clams. As the clams increase in size, additional small fish are introduced into the tanks. In cases of extreme algal fouling, all the clams are removed and placed into another tank, thereby enabling the fouled tank to be thoroughly cleaned.

In the case of the two MIMRA operations, animals greater than 30mm length may be placed into floating cages for further raising or distributed as seed clams to participating community farms in the outer islands.

### **MARINE AQUARIUM TRADE**

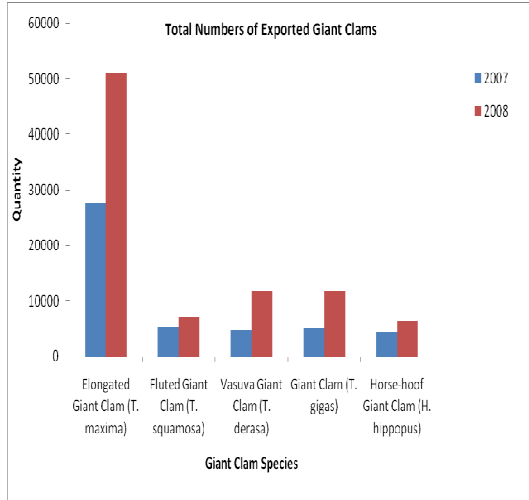
The marine ornamental trade (or aquarium trade) has continued to rise with exports increasing. Organisms exported out of the Marshall Islands by local companies are live fish, giant clams, live rock, corals and various marine invertebrates.

There are five (5) local companies that export and as reflected in the below chart, this trade is based on the preference of the customers. With the giant clams, it is the *T. maxima* species that is in high demand. All clams exported out of the Marshall Islands are hatchery-reared and not from the wild, one of the requirements of CITES. All certificates of origin & health are required when exporting marine ornamentals.

Although the Marshall Islands is not a party to CITES, these permits are the equivalent in authority to any permits to be issued pursuant to Fish and Wildlife in lieu of CITES (Annex II) statement RE: 50CFR-23(b3). The Marshall Islands Marine Resources Authority (MIMRA) in collaboration with the Environmental

Protection Agency (RMIEPA), initiated a stakeholders consultation meeting to begin the implementation, monitoring and enforcement of a new policy in support of existing regulations for all companies involved in the marine product export trade on December 6, 2007.

The Meeting was considered not only informative but also considered a stepping-stone to better collaboration between the Regulatory Bodies (MIMRA & RMIEPA) and the Marine Ornamental Industry. Although the invitation went out to ALL marine product exporters, the companies present (with the exception of one) were from the marine ornamental trade. The presentations of implementation of regulations and policies, both from MIMRA and EPA, were accepted with recommendations on ways to move forward with formal registration of companies, and implementation of best management practices by the industry from collection efforts to exportation of products.



Giant Clam Species	2007	2008
Elongated Giant Clam ( <i>T. maxima</i> )	27600	51200
Fluted Giant Clam ( <i>T. squamosa</i> )	5300	6900
Vasuva Giant Clam ( <i>T. derasa</i> )	4800	11700
Giant Clam ( <i>T. gigas</i> )	5050	11700
Horse-hoof Giant Clam ( <i>H. hippopus</i> )	4500	6400

Figures 15 & 16. The total amount of the 5 giant clam species that have been exported out of RMI by the exporting company Marshall Islands Mariculture Farm.

The above figures illustrate the Elongated Giant Clam, *Tridacna maxima*, having the highest number of exports given that it is the only species with a high commercial demand. The low export numbers of the Horse-hoof giant clam (*Hippopus hippopus*),

is a direct result of the low commercial demand of the species. Regardless of this fact, the species continues to be collected and spawned at the two government hatcheries for restocking purposes.

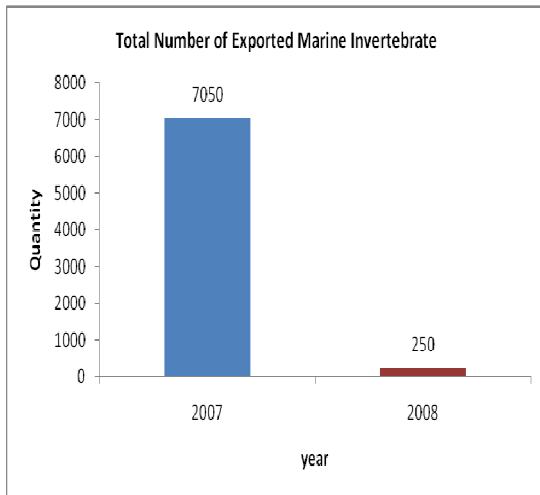


Figure 17. Export Totals for Marine Invertebrate 2007 & 2008

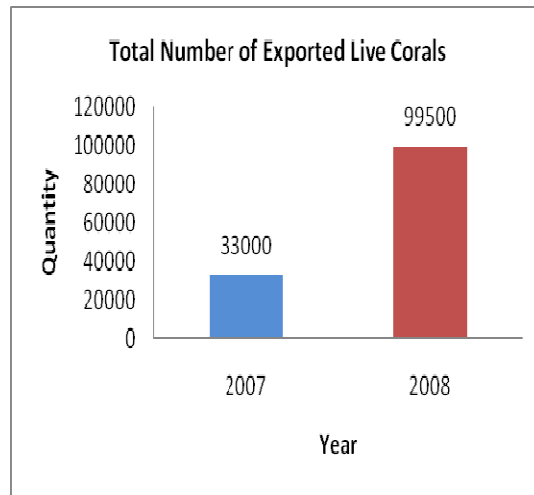


Figure 18. Total amount of exported Live Corals for 2007 and 2008

The results from Figure 17 shows a decrease in number of exported Marine invertebrate species in 2008. Where a total number of 7050 invertebrates were exported in 2007, only 250 were exported in 2008. Although the total for 2008 shows significant decrease in the quantity of exported invertebrate, this does not indicate

overfishing activity. Marine invertebrates are not as in high demand as giant clams and aquarium fish.

The results from Figure 18 shows an increase in number of Live Corals exported in 2008.

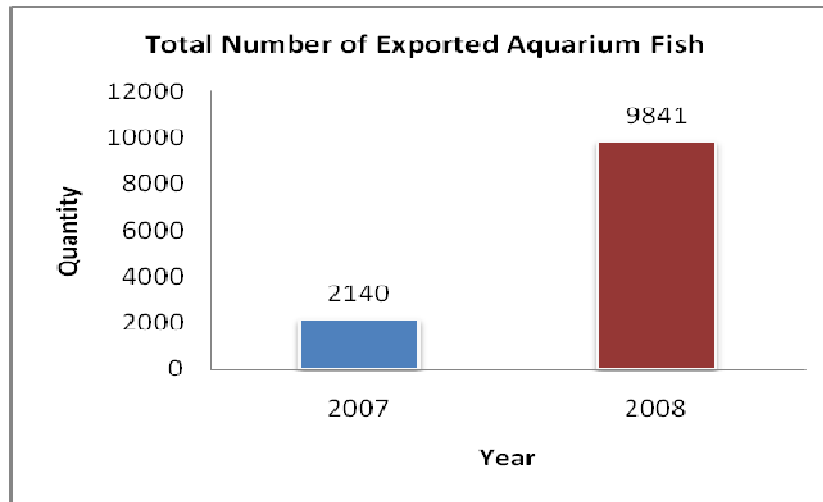


Figure 19. Total amount of exported Aquarium Fish for 2007 and 2008

**\*\*** *Aside from Giant clams, the total quantities of exported marine products are reflected from the request application which is submitted before permit issuance. However, during inspection, the quantities are usually less than what's been estimated on the request form. The actual quantities of products are adjusted on the packing list that the inspector fills out during inspection. The inspection officer is still in the process of updating the marine ornamental export database. Therefore, it is with hope that the actual total quantities of exported products will be reflected in the upcoming annual reports.*

An Aquarium fish underwater assessment was conducted in June 2008 to assess the status of the local aquarium trade finfish around Majuro. The primary purpose of the study was to conduct an assessment of the marine aquarium fish resources of Majuro Atoll, to provide an understanding of the current status of these resources and an estimate of the current stocks of some of the important target species in this trade that will provide the basis for some management measures.

Most of the Pacific countries do not have local expertise to conduct resources surveys so, as a side objective of this study, a training component was included to address this issue and train at least 4 local divers, from the Marshall Islands Marine Resources Authority (MIMRA), on the underwater visual census method that SPC uses in their reef fisheries resources assessment work.

With this building of local technical capacity to do surveys, it is then expected that over the long term, MIMRA would be able to use these acquired skills to conduct further underwater resource surveys on their own to monitor their marine aquarium trade.

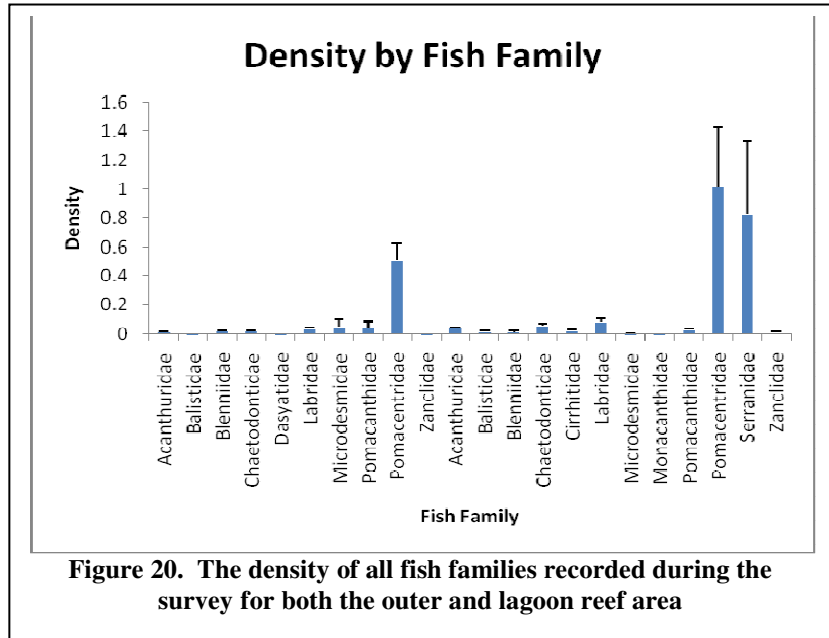
The **distance-sampling underwater visual census (D-UVC)** method was used to assess marine aquarium trade finfish resources around Majuro. This is the method that SPC has developed and uses to assess reef fisheries resources in the Pacific region. All fish species with potential for the marine aquarium trade are assessed using Pacific export records, which reports up to 150 fish species from 20 families. The bottom substrate was also surveyed using a medium scale approach (MSA), which was also developed by SPC as part of the fisheries resources D-UVC method.

The results of the survey showed a total of **111** fish species from **13** fish families that are usually taken for the marine aquarium trade (Table 21.).



FISH FAMILY:	Number of Species
Acanthuridae	8
Balistidae	4
Blenniidae	3
Chaetodon	21
Cirrhitidae	2
Dasyatidae	1
Labridae	28
Microdesmidae	2
Monacanthidae	2
Pomacanthidae	9
Pomacentridae	24
Serranidae	6
Zanclidae	1
<b>TOTAL</b>	<b>111</b>

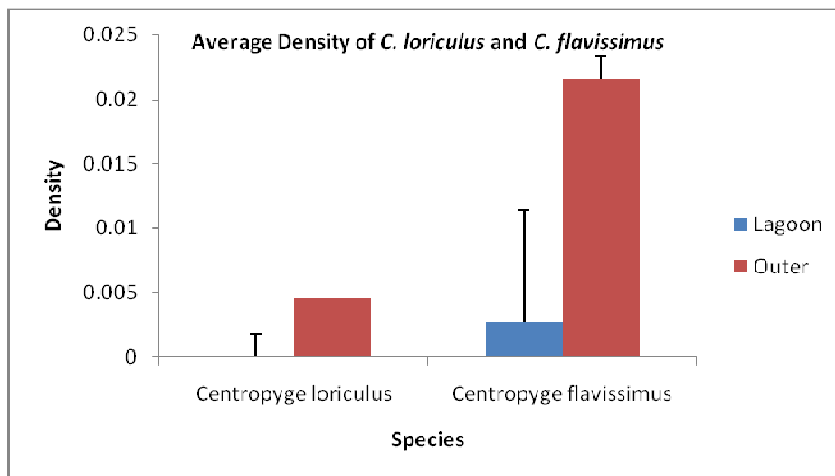
**Table 21. Marine Aquarium Trade Targeted species**



**Figure 20. The density of all fish families recorded during the survey for both the outer and lagoon reef area**

The most dominant fish families include the Damsel fish family (*Pomacentridae*), Anthias (*Serranidae*) and the Angel fish (*Pomacanthidae*) (Figure 20.). The top two exported marine aquarium trade species, the

lemon peel, *Centropyge flavissima* and the flame angelfish, *C. loricula* were seen mostly in the Outer reef area. Whereas *C. flavissimus* was only found in the Lagoon reef area ( Figure 21).



**Flame Angel fish, *Centropyge loriculus***



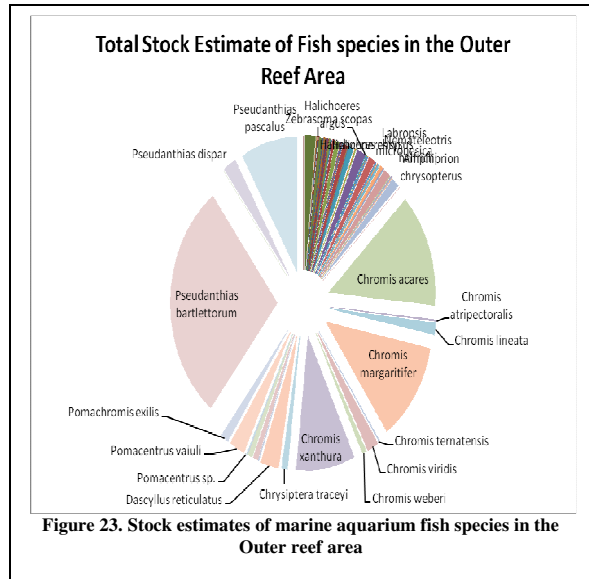
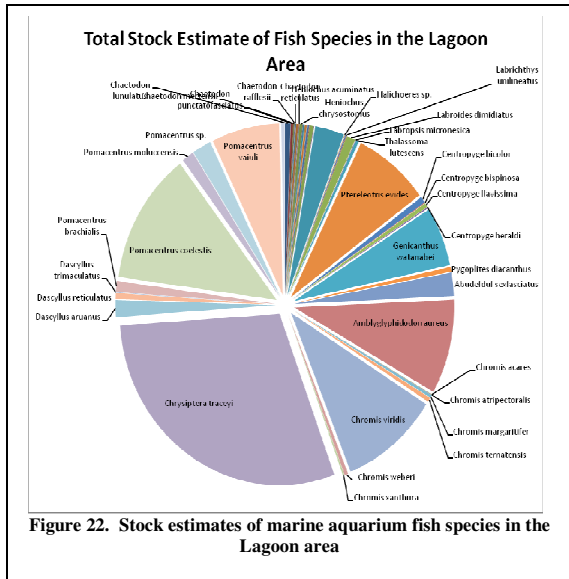
**Lemon Peel fish, *Centropyge flavissima***

**Figure 21. The density of the two most popular species in aquarium trade recorded in both outer and lagoon reef**

Using the mean densities of the different species from the survey for the outer fringing reef and the lagoon reef, and the total area of reef in these two habitats, it was then possible to get an estimate of the stock of each fish species. The most abundant marine aquarium trade species in the lagoon area is the damsel fish called Tracey's damsel (*Chrysopterus traceyi*) and for the Outer reef area, the Bartlett Anthias

(*Pseudanthias bartlettorum*)(Figures 24 & 25).

In summary, the highly traded species are not easily accessible to the dive collectors. Those that are accessible and show high abundance are traded in comparatively low numbers.



**Figure 24. Tracey's Damsel fish, *Chrysopterus traceyi***



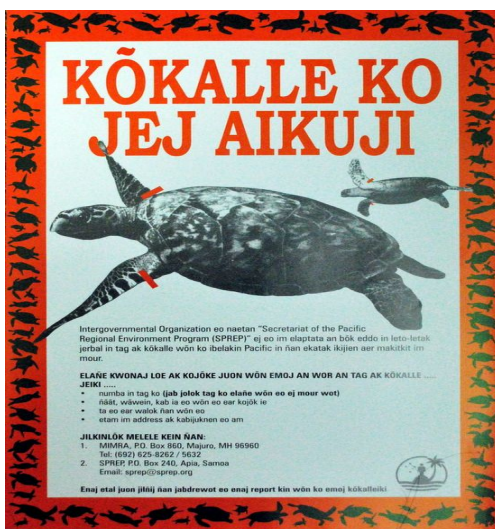
**Figure 25. Bartlett Anthias fish, *Pseudanthias bartlettorum***

## TURTLE CONSERVATION EFFORTS

MIMRA continues to support initiatives in response to growing concern for conservation and sustainable use of RMI turtles. Although regulation of turtle harvest has been incorporated into law (MIMRA Act 1997), it conflicts with local practices and cultural expectations. Additionally, there is lack of awareness in the RMI about marine turtles being endangered and threatened species. MIMRA continues to build support in protecting these species and to promote conservation and management of turtles and their habitats for future generations.

### **December 2007: ‘Tags Wanted’ posters reprinted in Marshallese**

As part of SPREP’s efforts to promote and raise awareness of its turtle tag recovery program, member countries were provided with posters made available in local language. Materials included SPREP’s ‘Tags Wanted’ posters which were reprinted in Marshallese along with a number of other materials to be distributed across the country to help increase the public’s awareness and understanding of the actions needed to protect these species.



### **February 2008: Observer’s take on tissue sampling**

Turtle tissue sampling supplies were provided to MIMRA observers in an effort to obtain more skin samples from the Marshall Islands. WUTMI is the lead organization in tissue sampling and has an on-going turtle data collection project, whereby women data collectors from several atolls obtain skin samples from turtles used for food or ceremonies by the Marshallese. These tiny skin samples are shipped to the NOAA-Fisheries Service Southwest Fisheries Science Center for mitochondrial DNA analysis.

### **March 2008: Collection of turtle reports and documents for MIMRA library**

RMI’s Turtle Network, coordinated by MIMRA, begun collecting and collating available data and information on marine turtles in the RMI, i.e. past research assessments on marine turtles, scientific reports and articles on turtles. Digital and hard copies were compiled and made available at MIMRA’s library and for awareness purposes including: Puleloa (1992) The Sea Turtles of the Northern Marshalls; Eckert (1993) The Biology and Population Status of Marine Turtles in the North Pacific Ocean; McCoy (2004) Defining Parameters for Sea Turtle Research in the Marshall Islands; Balazs (1999) Factors to Consider in the Tagging of Sea Turtles; Rudrud (2008) Sea Turtles of the RMI – Culture, Tradition, and Ecological Knowledge; and a collection of more turtle information!

### **April 2008: MCAF & SPREP Grant Award for Turtle Education & Awareness!**

A successful bid to the Marine Conservation Action Fund (MCAF), as well as financial support from SPREP, allowed the development of a turtle education and awareness project. It aims to promote conservation and management of turtles and their habitats for future generations by raising awareness initially on Majuro and

Wotje atolls. Majuro is the capital and the most highly populated area in the RMI; the place where the demand for turtle meat is greatest. Wotje atoll neighbors the uninhabited atoll of Erikub, a well known turtle nesting site and harvest area. Main objectives include: 1) *To promote turtle education and awareness by organizing special activities related to marine turtle conservation;* and 2) *To develop and implement of a mass media information program on turtles.*

## **RMI FADs DEPLOYMENT**

FADs have proven to be very successful in attracting tuna, thus increasing the domestic landings of tuna to the local markets in Majuro. Past deployments with the Marshalls Billfish Club (MBC) has proven success, however, FADs have never been stable in one area over a year. Through the MBC and other local fisherman, Majuro has seen an increase in landings of tunas and tuna like species caught around the FADs. With the loss of the FADs deployed, landings were decreasing as fishermen had to search longer for surface schools of tuna to fish. This, coupled with the increasing cost of fuel, signaled an almost end to local fishing for the pelagic fish. There is a need for the government to assist fishers through the development of a FAD program in MIMRA.

The Marshalls Islands currently does not have a FAD policy or a program. In 1986, Japan, through OFCF, deployed several fads in Majuro and Arno which prompted considerable interests, but did not materialize as a program. In 2000, several FADs were deployed by MBC, which at this time have either gone missing, been

destroyed or drifted off with the tides and currents.

In early 2007, MIMRA secured funding to procure five sets of FADs from a New Zealand based company. The specifications and quantity of materials required was prepared by consultation with SPC, MBC, local fisherman, and MIMRA. These were in line with recommended SPC FAD design-material specifications (Boy & Smith, 1984 and Gateset al., 1996). Local contribution and in kind donations (weights, floats, deployment vessel) were used to complete rigging and the eventual deployment of FADs.

**Technical design:** The design taken from the SPC FAD handbook, is known as the Indian Ocean FAD (see Fig. 40), also known as deep sea FADs. The proposed FAD design is considered highly suited for the Atoll terrain like Majuro, with a steep drop off from the oceans coastlines.

By May 2007, three sets of Indian Ocean FADs were deployed in the southern part of Majuro Atoll (see Figure 1). The coordinates along with the readings are as follows:

## 1. Woja

N 07 degrees 04.111

E 171 degrees 05.688

700 Fathoms (1400 meters)

## 2. Airport

N 07 degrees 01.690

E 171 degrees 14.690

850 Fathoms (1700 meters)

## 3. Bridge

N 07 degrees 02.744

E 171 degrees 21.147

400 fathoms (800 meters)

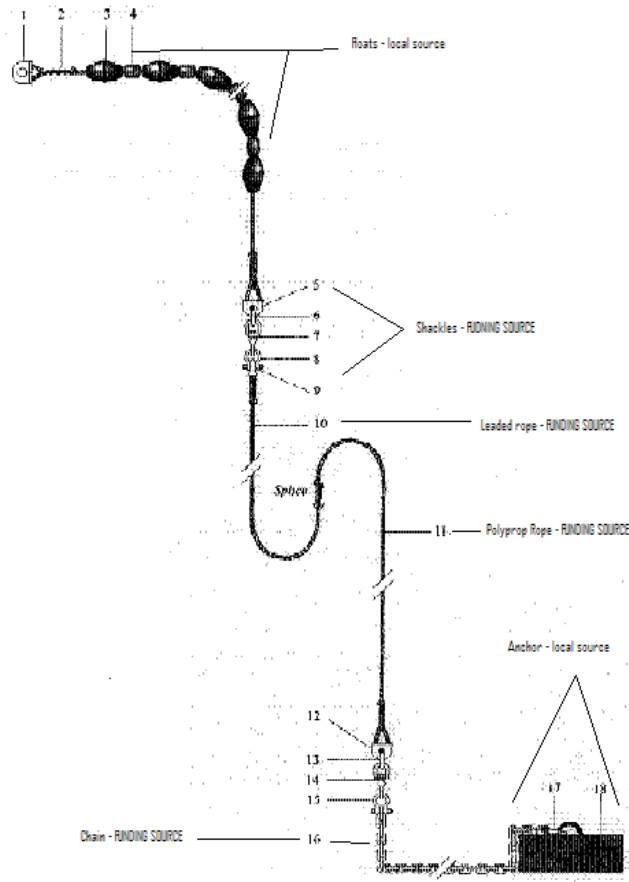
All three FADs have shown to be productive over a two week period. However, a predicament arose due to little effort on practically identifying a suitable location for deployment. It is best practice to conduct a site survey with a depth sounder before executing any action. The crew on board the landing craft at the time of deployment had a reading of 800-900 fathoms in depths which were taken from an American Defense Mapping Agency chart of Majuro. However, all three FADs were dropped in shallow water, roughly about 400-800 fathoms. This depth was obtained from the positions overlaid on GIS software. Within weeks after deployment, fishermen were reporting problems around the FADs because the long stretch of rope floating at the surface was getting caught on their boat engines. By the time technical advice was sought from SPC, all three FADs had either

drifted from their positions or been cut off for boat safety.

Although three sets of FADs have gone missing, two sets are still waiting for future deployments in which more effort will be put in place to ensure a successful launch in line with a set RMI National FAD Program.



**Map of Majuro Atoll with points indicating FAD locations**



**Indian Ocean FAD**



**FAD materials and deployment**

## COASTAL MANAGEMENT ADVISORY COUNCIL (CMAC)

The Coastal Management Advisory Council has continuously met throughout the year to continuously identify projects and assisted MIMRA implement its Community-based Resource Management Initiative. To date, the Community-based Resource Management Initiative has assisted up to local communities through a consultation process establish draft resource management plans and draft ordinances with more local communities registering interest.

MIMRA has assisted 5 local governments develop resource management plans and ordinances. These include Arno Atoll, Likiep Atoll, Ailuk Atoll, Majuro Atoll and Rongelap Atoll. Through an integrated process whereby both scientific and local knowledge are collected analyzed and reported back to local governments and communities.

### *Likiep Atoll Updates*

A Community –Based Resources Management Plan & Catch Data Workshop was conducted in Likiep in October 2007. The objectives of this trip that were accomplished are as follows:

- Review Fisheries Management Plan and incorporate new activities and adaptive management efforts;
- Meet with Likiep Fisheries Management Advisory Committee & Local Government Officials to inquire about the consultation process;

- Conduct Catch Data workshop for Likiep Fisherfolks and follow up on catch data collection;
- Conduct community awareness & update Likiep's profile.



**Consultations with Likiep Fishers**

### *PROCFISH*

The PROCFish Project was conducted during the period of July through September of 2007, entailing a series of assessment in three (3) main thematic areas: Finfish Assessment, Invertebrate Assessment and Socioeconomic Assessment by Secretariat of the Pacific Community for the Pacific Island Countries, with assistance from the Policy, Planning and Statistics Section of the Coastal Fisheries Division, through funding by the European Union. Preliminary reports of the assessments have been submitted to MIMRA for the atolls surveyed: Arno, Ailuk, Likiep and Majuro.

## MANAGEMENT DISCUSSION & ANALYSIS

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This section of the Marshall Islands Marine Resources Authority (MIMRA) annual financial report presents our discussion and analysis of MIMRA's financial performance for the fiscal year ending September 30, 2008. Please read

it and verify any clarification to the financial statements, which follow this section. The below table summarizes the financial condition and operations of MIMRA for fiscal year 2008 and 2007.

	2008	2007	%Change	2006
<b>ASSETS:</b>				
Current and other assets	\$1,713,840	\$ 1,120,309	53%	\$ 1,489,120
Capital assets	175,471	233,272	(25)%	351,799
Investment in JV	<u>4,192,609</u>	<u>3,872,761</u>	8%	<u>0,000</u>
Total Assets	<u>\$6,081,920</u>	<u>\$ 5,226,342</u>		<u>\$1,840,919</u>
=====				
<b>LIABILITIES:</b>				
Current liabilities	\$ 338,670	\$ 396,570	(15)%	337,444
Long-term liabilities	<u>2,526,813</u>	<u>2,800,717</u>	(10)%	<u>-</u>
Total Liabilities	<u>\$2,865,483</u>	<u>\$ 3,197,287</u>		<u>337,444</u>
=====				
<b>NET ASSETS:</b>				
Investment in capital Assets	175,471	232,272	(25)%	351,799
Unrestricted	<u>3,040,966</u>	<u>1,796,783</u>	69%	<u>1,151,676</u>
Total Net Assets	<u>\$3,216,437</u>	<u>\$ 2,029,055</u>		<u>1,503,475</u>
=====				
<b>Revenue, Expenses and Changes in Net Assets:</b>				
Operating Revenue	\$ 2,131,989	\$ 1,205,168	77%	\$ 2,074,042
Operating Expenses	<u>1,603,786</u>	<u>1,761,005</u>	(9)%	<u>1,578,158</u>
Operating Income	<u>\$ 528,203</u>	<u>\$ (555,837)</u>		<u>495,884</u>
=====				
Non-operating revenues	652,941	1,068,747	(39)%	38,947
Non-operating expenses	<u>6,238</u>	<u>12,670</u>	(51)%	<u>0,000</u>
Net non-op rev(expenses)	<u>659,179</u>	<u>1,081,417</u>		<u>38,947</u>
Capital contributions	<u>- 0 -</u>	<u>- 0 -</u>	0%	<u>- 0 -</u>
Changes in net assets	1,187,382	525,580	126%	534,831
Net assets at beg of year	<u>2,029,055</u>	<u>1,503,475</u>	35%	<u>968,644</u>
NET ASSETS at end of year	<u>\$ 3,216,437</u>	<u>\$ 2,029,055</u>		<u>1,503,475</u>
=====				



## OVERALL ANALYSIS

Compare to FY 2007 results of operation, there was a 77% increase in FY 2008 operating revenue as compare to FY 2007 which has 42% decline compare to FY2006. The reason for this was that, both Korea and Taiwan has registered 26 & 24 boats respectively during the current year. Though these are lesser number of boat compare to previous years' high in 2005 which were 27 & 34 respectively, but since the access fees has increased, that's why there is an increase in total revenues. Though the locally registered boat has maintained the registration, the non increase of their registration payments has no effect in the overall revenue picture of the current year. Licensing fee collection increase by 130% and follows all other revenue generation which has also increase by 46%. Compared to FY2007 over FY 2006 which has -33% effect. Overall, the revenue operation in FY2008 resulted in an increase in collection of 77%, which is short by \$146,000 against the budgeted collection of \$ 2.278M during the year. Budgeted amount of collection here in MD&A do not include Japan bilateral, FSM & US Treaty and interest and other income.

As a result of an increase in collection of license fees and other related fees, comes the increase of the boats calling port at Majuro, the overall picture of MIMRA financial condition is better compare to the negative results during FY2007. Operating expenses for FY 2008 has a favorable condition against FY 2007. MIMRA has saved at least \$170,000.00 during FY2008 compared to FY2007. This is more than lower the expenses during FY2007 which has 12% increase compared to FY2006. The biggest expense increase so far during the current year is training-55%, utilities-36% and petroleum, oil & lubricants at 14%. Almost all other expenses

went down though there are increases with high percentage but with lower amounts. There is also a saving during the year which comes from Salaries and Wages which is \$ 14,143.00 equivalent to 2% over FY2007. The increase in revenue collection and the savings in the operating expenses resulted to an operating income for MIMRA for the current year of \$.528M.

MIMRA's financial condition as shown on the Changes in Net Assets shows an overall 126% increase compared to FY 2007.

Management's Discussion and Analysis for the year ended September 30, 2008 is set forth in MIMRA's report on the audit of financial statements, which is dated June 11, 2009. That Discussion and Analysis explains the major factors impacting the 2008 financial statements and can be obtained from MIMRA's Administrator.

## FUND ANALYSIS

As MIMRA completed the year, the agency's combined fund (Savings and Current Account) has a total balance of \$ 1,539,514.00 which was \$ 545,929.00 higher compared to FY 2007. The reason for the increase is due to the increase in revenue generated during the current fiscal year and a savings in the operating expenses. Even though interest earned is lesser by almost \$ 3,000.00 over FY 2007, but it has really almost no effect in the overall picture of the MIMRA financial condition. Transfer Out to REPMAR, at \$450,000 comes from the earned dividend from the Joint Venture with Koos' Fishing Ltd. Said amount will be deducted from MIMRA's profit share. Details of which is discussed in No. 4 on the Notes to Financial Statements.

**BUDGET VARIANCES**

Actual operating revenues is on the unfavorable by as much as \$ 1,334,411.00 compare to the final budget (*budget income includes that of Japan bilateral, FSM arrangement and US Treaty*). But since the payment from the mentioned group is not included in the MIMRA financial statements, the unfavorable amount is only around \$ 146,000.00. Actual expenses of \$1,592M compare to the budgeted for the current year of \$ 1,832M is at least favorable by 13%.

**CAPITAL ASSET**

At the end the current year FY 2008, MIMRA has a net asset of \$ 175,471.00. Though there was a total addition of \$ 17,700.00 on the capital assets, the net effect is a reduced balance of capital assets. The decrease which is equivalent to 24% compared to the previous years is not a good indication. The capital assets MIMRA right now are not in good standing, thus the management need to look at it carefully. (See table below).

## MIMRA Capital Assets

	2008	2007	2006
Buildings and improvements	\$ 176,367.00	\$ 176,367.00	\$ 341,367.00
Equipment improvements	86,070.00	78,920.00	76,320.00
Vehicles	146,595.00	146,595.00	123,595.00
Equipment	206,354.00	198,665.00	184,230.00
Furniture & Fixtures	24,654.00	23,792.00	19,734.00
Motorboats	63,316.00	63,316.00	60,016.00
Grand Total	\$ 703,356.00	\$ 687,655.00	\$ 805,262.00
Less: Accumulated Depreciation	527,885.00	454,383.00	453,463.00
	\$ 175,471.00	\$ 233,272.00	\$ 351,799.00
Construction in Progress	-	-	-
NET	\$ 175,471.00	\$ 233,272.00	\$ 351,799.00

Fiscal Year 2008 major capital asset addition includes:

## EQUIPMENT:

a.) Computers & printer	\$ 7,689.00
b.) Woja Hatchery Equipment	-
c.) Others	911.00
d.) New air condition unit (FNCTC)	1,950.00
TOTAL	\$ 10,550.00
MOTORBOATS – Coastal	\$ 7,150.00
3. VEHICLES	\$ 0.00

For additional information concerning capital assets, please see note 4 to the financial statement.

## **LONG-TERM DEBT**

Long term debt shown in the financial statements is the cost of the boat for the Joint venture with Koo's Fishing Ltd., which represents 49% ownership of the Joint Venture. MIMRA will be charged interest at 3% per annum for the share of the joint venture which the capital contribution is provided for MIMRA by Koo's. As per the agreement, MIMRA's share for the first two years will be 100% applied to the liability and 50% thereafter.

## **ECONOMIC FACTORS AND NEXT YEAR BUDGETS AND RATES**

Budgeted expenditure is reduced by 1% in FY 2009. The highest increase budgeted is the utilities which has a 30% increase. The continuing up and down prices of fuel in the world market also affected the Marshall Islands. In fact, Marshall Islands has the highest fuel prices in the Micronesia by at least a little bit

over 50% of the pump prices. Thus, commodities in the island has a high prices compare to that of the previous years. Due to the increases of prices in the island, the agency has adopted a savings and conservation measures and is applied to the budget for FY 2009 by maintaining and/or lowering some expenditures. Salaries and wages though will be reviewed if an increase will have to be effected for next year.

The state of the climate change and global warming is still impacting Marshall Islands. Not only the mentioned phenomena is affecting the collection, the increase in the access fees and other fees implemented in the second half of FY2009, to follow the VDS program by the Tuna Commission is also a factor of a lesser collection for FY 2009. Only 6 boats for Taiwan is paying for the VDS rate MIMRA implemented as of to date, (as of this date during FY 2008 Taiwan has already paid 20 boats) meaning, MIMRA is expecting fewer boats to register due to the increase in the access fee rates.

<b>FFA CALENDAR OF MEETINGS 2009</b>		
<b>JANUARY</b>		
13-14 January	Ecosystem Approach to Fisheries Management Scoping Workshop	Majuro, Marshall Islands
19-21 January	PNA Legal Workshop on Third Implementing Arrangement	FFA Conference Centre, Honiara, Solomon Islands
<b>FEBRUARY</b>		
10-13 February	WCPFC/FFA VMS Operationalisation discussions	Brisbane
12-13 February	FFA/MRAG Regional Strategy Planning Workshop on	Wollongong, Australia
16-18 February	Monitoring and Evaluation Framework Workshop	Auckland, New Zealand
16-20 February	FFA VMS training course at ANCORS	Wollongong, Australia
16-20 February	MRAG/FFA Solomon Islands in country consultation	Honiara, Solomon Islands
20-22 February	MRAG/FFA Nauru in country consultation	Nauru
18-22 February	MRAG/FFA Hawaii in country consultation	Honolulu, Hawaii
21-23 February	MRAG/FFA Fiji in country consultation	Suva, Fiji
23-25 February	MRAG/FFA Marshall Islands in country consultation	Majuro, RMI
23-24 February	MRAG/FFA Tuvalu in country consultation	Funafuti, Tuvalu
16-20 February	Regional MCS Project Planning Meeting ANCORS	Wollongong, Australia
23-25 February	<i>Regional Legal Workshop on WCPFC Regulations</i>	<i>FFA Conference Centre, Honiara, Solomon Islands</i>
26 February – 2 March	MRAG/FFA Federated States of Micronesia in country consultation	Pohnpei, FSM
26 February – 2 March	MRAG/FFA Fiji in country consultation	Suva, Fiji
<b>MARCH</b>		
1-4 March	MRAG/FFA Vanuatu in country consultation	Efate, Vanuatu
3-7 March	MRAG/FFA Guam in country consultation	Hagatna, Guam
5-6 March	MRAG/FFA Palau in country consultation	Koror, Palau
9 March	<i>DEVFISH Meeting</i>	<i>Koror, Palau</i>
10-11 March	21 <sup>st</sup> Annual Meeting of the Pacific Island Parties (PIPs)	Koror, Palau
12-13 March	21 <sup>st</sup> Annual Consultation with the US	Koror, Palau
13 March (pm)	7 <sup>th</sup> VDS Committee Meeting	Koror, Palau
14 March	VDS Consultation between United States and PNA	Koror, Palau

16-18 March	MRAG/FFA Cook Islands in-country consultation	Rarotonga, Cook Is
17 March	<i>FFA Preparatory Meeting – to consider the FFA brief</i>	Guam, USA
17-20 March	MRAG/FFA Papua New Guinea in-country consultation	Port Moresby, PNG
19-23 March	MRAG/FFA Tonga in-country consultation	Nuku'alofa, Tonga
18-20 March	Japan and FFA Meeting on FFA VMS Type Approval	Honiara, SI
18-21 March	3rd Inter-sessional Working Group on the WCPFC Regional Observer Programme (IWG-ROP)	Guam, USA
22 March	<i>FFA Preparatory Meeting – to consider the FFA brief</i>	Guam, USA
23-24 March	WCPFC Ad Hoc Task Group [MCS data]	Guam, USA
24-28 March	MRAG/FFA Samoa/Tokelau in-country consultation	Apia, Samoa
27-28 March	MRAG/FFA New Zealand in-country consultation	Wellington
29 February-4 March	MRAG/FFA Niue in-country consultation	Alofi, Niue
30-31 March	2 <sup>nd</sup> Joint Committee Meeting of Japanese Promotion Fund	FFA Conference Centre, Honiara, Solomon Islands
<b>APRIL</b>		
6-10 April	12 <sup>th</sup> MCS Working Group Meeting	FFA HQ, Honiara, SI
13-17 April	Pacific Island Information management & Data collection Project Scoping mission	Apia, Samoa
20-24 April	In-Country Us Treaty Seminar	Tarawa, Kiribati
<b>MAY</b>		
5-9 May	<i>Subregional Workshops (PNA, FSM &amp; Palau Arrangement/Sub-committee on SPTBF)</i>	Alofi, Niue
11 May	<i>PNA Ministerial 4<sup>th</sup> Annual Meeting</i>	Alofi, Niue
11-15 May	Ministerial & 70 <sup>th</sup> Forum Fisheries Committee Meeting – Annual Session	Alofi, Niue
18 – 22 May	7 <sup>th</sup> International Meeting of the South Pacific Regional Fisheries Management Organisation	Lima, Peru
<b>JUNE</b>		
16-17 June	Ecosystem Approach to Fisheries Management Stakeholders Consultation	TBA
Mid 2009	Three FFA Subregional Workshops on WCPFC	TBA
Mid 2009	Joint Tuna RFMO Meeting	Spain, Europe
<b>JULY</b>		
10 July	UST Extension PIPs Special Meeting	Nadi

13-17 July	2nd Subregional WCPFC W/S	Nadi: (CK, MH, NZ, PW, SA, TK, TA, TV, KI)
28 July	Symposium “Future of Our Fisheries”	Majuro
29-31 July	PNA Technical Working Group (PNA secretariat) 1st Meeting	Majuro
AUGUST		
4-6 August	FFA Legal Workshop on WCPFC Issues	FFA, Honiara
7-8 August	FFA Science Working Group (Preparatory Meeting – to consider the FFA brief)	Port Vila, Vanuatu
10-21 August	5th Regular Session of the WCPFC Scientific Committee (SC5)	Port Vila, Vanuatu
31 August	PNA Technical Working Group (PNA secretariat) 2nd Meeting	Port Moresby, PNG
SEPTEMBER		
1-3 September	Pacific Tuna Forum	Port Moresby, PNG
4-5 September (tentative)	PNA-Korea Informal Consultation	Port Moresby, PNG
8-10 September	5th Regular Session of the WCPFC Northern Committee (NC5)	Nagasaki, Japan
11 September	FFA-Japan Annual Consultation	Nagasaki, Japan
28-29 September	Ad Hoc Task Group [data] – MCS data rules	Pohnpei, Federated States of Micronesia
28- 30 September	FFA TCC Working Group (FFA Preparatory Meeting – to consider the FFA brief for TCC5)	Pohnpei, Federated States of Micronesia
Tba (date to be agreed-margins of FFA-TCC)	PNA-New Zealand Meeting	Pohnpei, FSM
OCTOBER		
1-6 October	5th Regular Session of the WCPFC Technical and Compliance Committee (TCC5)	Pohnpei, Federated States of Micronesia
16 & 19-20 October	SPNA27	Tarawa, Kiribati
21 October	PNA Ministerial Special Meeting	Tarawa, Kiribati
26 October	GEF Annual Meeting	FFA, Honiara
27-28 October	PIPs Internal Meeting	FFA, Honiara
29-30 October	US Treaty Re-Negotiation Preliminary Meeting	FFA, Honiara
NOVEMBER		
2-6 November	FFA Management Options Consultation and Special FFC	FFA, Honiara

12-13 November	UST Broader Cooperation Talks	San Diego
DECEMBER		
29 November (tentative)	SPNA28 (to be confirmed)	Papeete, French Polynesia
30 November – 5 December	(Special FFC – FFA Preparatory Meeting to consider the FFA brief)	Papeete, French Polynesia
6-11 December	6th Regular Session of the WCPFC (WCPFC6)	Papeete, French Polynesia

**Policy, Planning and Statistical Section**  
**Summary of List of Activities October 2007- September 2008**

<b>MONTH</b>	<b>ACTIVITY</b>
October 2007	
1- 16 November 2007	JICA Training: "Community-based Fisheries Diversification in Small Island States"
January 2008	
7-11	Atoll Project II: Joint Committee Meeting with OFCF Officials
21-25	SPC Training: Data entry for Socio-Economic Monitoring
24-31	JICA Preliminary survey for construction of new fish market center in Uliga
February	
25-28	SOPAC GIS Server Training
March	
3-7	Ebeye Fishermen & Retail Survey
31- 4 April	TNC Workshop: Conservation Area Planning in Chuuk
April	
14-18	Micronesians in Island Conservation Retreat in Guam
21-22	TNC Sustainable Financing Part II
14-25	SPC Aquarium Fish Training and Assessment
May	
5-7	Workshop: FAO Risk Assessment
4-9	Workshop: SEM-Pasifika (Socio-Economic Monitoring)
15	MIMRA/Marshall Billfish Club Fish Aggregating Devices deployed
June	
4-6	Japanese Government Audit Team visit
2-6	Meeting: Micronesia Challenge in Pohnpei
30- 9 July	Training: SPC Underwater Visual Census of Reef Fisheries
July	
7-8	National Fisheries Forum with all Mayors
9-11	Catch Data workshop with all fisheries officers from different target communities
28-9 August	Strategic Planning Session with Nicole Baker
August	
11-15	Workshop: Eco-system based Approach with Ueta Faasili
25-29	US Coral Reef Task Force Committee meeting in Kona, HI
September	
2-5	Workshop: Marine Managed Areas with Wayne Andrew



*-END-*