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

WCPFC-SC9-AR/CCM-22

CHINESE TAIPEI

National Report

Tuna Fisheries Status Report of Chinese Taipei in the Western and Central Pacific Region

Fisheries Agency, Council of Agriculture
and
Overseas Fisheries Development Council

August, 2013
This paper is prepared for the 9th meeting of the WCPFC Scientific Committee held in Pohnpei, Federated States of Micronesia, from 6 to 14 August, 2013.

Scientific data was provided to the Commission in accordance with the decision relating to the provision of scientific data to the Commission by 30 April 2012	Yes

Summary

There are 3 Taiwanese tuna fishing fleets operating in WCPFC Convention Area: large scale tuna longline fleet (LTLL, previous named FTLL), distant-water purse seine fleet (DWPS) and small scale tuna longline fleet (STLL, previous named CTLL). In 2012, the total catches of main tuna and tuna-like species for these 3 fleets were 16,249 MT for LTLL, 200,653 MT for DWPS and 38,478 MT for STLL, respectively. In 2012, 37 observers were deployed on the tuna longline fishing vessels operating in the Pacific Ocean.

1 Annual fisheries' information

The Pacific Ocean is one of the earliest tuna fishing grounds exploited of our fisheries. Currently, there are three tuna fishing fleets operating in the WCPFC Convention Area: large scale tuna longliners (LTLL), distant-water purse seiners (DWPS) and small scale tuna longliners (STLL). All LTLL and DWPS vessels operate outside the EEZ of Taiwan; most of the STLL vessels operate in the EEZ of Taiwan with some operate on the high seas or in the PICS' EEZ through relevant agreements.

1.1 Fleet structure

Table 1 shows the numbers of active vessel of LTLL, DWPS and STLL fleets in recent five years (2008-2012) in the WCPFC Convention Area.

1.1.1 LTLL

The LTLL vessels refer to those vessels larger than 100 GRT, and the number of active vessels fishing in the WCPFC Convention Area in 2012 was 87. The number of active vessels decreased to lower than 85 in 2008 and 2009 for high fuel price with some fishing vessels ceasing operation temporarily, and the vessel number returned to 90 in 2010; increased to 95 for some shifting from Indian Ocean for pirate issue in 2011, and decreased to 87 for 2012 with some vessels shifting back to Indian Ocean.

1.1.2 DWPS

Tuna purse seine fishery was introduced into Taiwan in 1982 and has become one of our major fishing fleet operating in WCPO. In 1992 the fleet reached its peak of 45

vessels, and reduced to 42 due to adjustment of business strategy of some companies. The fleet further reduced to 34 authorized in 2004 and maintained at this level ever since. The number of active purse seiners reached the lowest of recent years at 32 in 2009 for 2 fishing vessels sank, and returned to 34 in 2010 with 2 new building ones. Three aged smaller purse seiners of less than 1,000 GRT were replaced by 3 new-built larger ones of larger than 1,000 GRT in 2012.

1.1.3 STLL

The STLL fleet operates both within and beyond the EEZ of Taiwan. Vessels with freezing equipment extended their fishing grounds to more distant waters operating in a similar pattern as LTLL vessel. They change their fishing grounds and target species based on fishing season and market price. In 2012 there were about 1,326 STLL vessels operating actively in the WCPFC Convention Area. Parts of them operate seasonally in the Western and Central Pacific Ocean.

1.2 Annual Catch in the WCPFC Convention Area

1.2.1 LTLL

The fishing grounds of LTLL fleet distribute extensively in WCPFC Convention Area (Figure 1). Before 1990s, most of the LTLL fishing vessels targeted albacore in the South Pacific Ocean for canning, and some fishing vessels started fishing northern albacore in the North Pacific Ocean in mid 1990s. Since late 1990s, a higher proportion of this fleet changed to fish tropical tuna in equatorial areas for Japanese frozen sashimi market (Figure 2). Table 2 shows the catch of major tuna and tuna-like species caught by LTLL fishery in the recent five years (2008-2012) in the WCPFC Convention Area.

1.2.2 DWPS

The catch of major tuna species in the WCPFC Convention Area during 2008-2012 is shown in Table 3. The most dominant species remained to be skipjack, accounting for about 85.8% of the total catch, followed by yellowfin tuna and bigeye, which accounts for 12.9% and 1.4% of the total catch, respectively (Figure 3).

1.2.3 STLL

Taiwanese STLL vessels landed their catches both in domestic and foreign ports. Preliminary estimates of total catch of tuna and tuna-like species was 17,954 MT that landed in domestic ports in 2012, composed mainly of yellowfin (50%), billfishes (25%), swordfish (15%) and bigeye (8%); and 38,478 MT landed in foreign ports, composed mainly of yellowfin (39%), albacore (22%), billfishes (17%) and bigeye (14%). Total catch of main species by STLL from 2008 to 2012 in WCPFC

Convention Area is shown in Table 4.

1.3 Fishing Patterns

1.3.1 LTLL

LTLL fleet can be divided into two groups in accordance with target species: those operating mainly in tropical area (between 15°N and 15°S) targeting on bigeye tuna, and those operating in subtropical and temperate waters targeting on albacore. The fleet targeting bigeye tuna usually conducts a year round operation, and transship their catches to transport vessels and receive fuel and supplies during transshipment. Those fishing for albacore usually entered fishing ports in the Pacific twice a year for landing, fuel and supply. The fishing effort distribution in recent 5 years (2008-2012) is shown in Figure 1.

1.3.2 DWPS

The DWPS vessels mainly operate in the tropical waters around the equator area targeting on skipjack. Since most of the fishing grounds are located in the EEZs of PICs (Figure 4), these vessels acquired fishing permits through access agreements with PICs, including PNG, FSM, Nauru, Marshall Islands, Solomon Islands, Tuvalu and Kiribati. Figure 4 shows the effort distribution of the fishery.

In early 1980s, logs were used as fish aggregation objects and sets were made on schools associated with these floating objects. This practice continued throughout the 80s and early 90s. Successful exploitation on free-swimming schools in mid 1990s has made free school setting to be the most prevailing fishing method. In 2012, about 54.5% sets were deployed on free school.

1.3.3 STLL

Fishing days per trip are usually less than 30 days owing to smaller fishing capacity for STLL vessels. Most of STLL based at domestic or foreign ports target on yellowfin for fresh sashimi markets, while some STLL vessels target on billfish or albacore Flake ice is used as coolant on the STLL vessels, but some are equipped with freezing equipment for better preservation of their catches. The fishing effort distribution in recent 3 years (2010-2012) is shown in Figure 5.

1.4 Estimated total catches of non-target, associated and dependent species

The LTLL logbook format had been revised in 2003 to accommodate 4 shark species (blue shark, silky shark, shortfin mako, and other sharks) and sea birds, sea turtles and

other marine mammals. To be in compliance with CMM 2008-06 and CMM 2009-04, the logbook was revised again to acquire information of more shark specie, including thresher shark, tiger shark, white shark, probeagle, crocodile shark, hammerhead shark and oceanic white tip shark. Annual catch estimates of key shark species by LTLL, STLL and DWPS in 2012 is shown in Table 5.

According to the "ANNUAL REPORT TO THE COMMISSION PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS" format approved by Commission meeting, the followings provide the required bycatch information. Observer data showed that 33 sea turtles (4 loggerhead, 2 hawksbill, 2 leatherback, 3 green and 22 olive ridley turtles), 127 seabirds (3 white-chinned petrels, 108 albatrosses nei and 16 other seabirds) and 2 cetaceans (1 false killer whale and 1 blackfish) were taken, and 2 seabirds and 1 sea turtle and 6 cetaceans were sighted in 2011; and 28 sea turtles (1 Kemp's ridley, 3 hawksbill, 1 leatherback, 2 green and 21 olive ridley turtles), 16 seabirds (9 albatrosses nei, 4 great frigate birds and 2 black-footed albatross, 1 other seabird) and 1 cetacean (1 blackfish) were taken, and 10 seabird, 3 cetaceans were sighted in 2012.

Logbooks of DWPS showed that the fishery has incidentally encircled 1 hawksbill, 20 common bottlenose dolphins and 15 whale sharks in 2012, and all of these incidental bycatch were live released.

1.5. Trends in the fishery and future prospects of the fishery

In view of conservation of tuna species, it is the policy of the government to maintain the size of its fleets to a level that is commensurate with the availability of fishing possibilities. The government will continue implementing the policy of limited entry in tuna fisheries.

2 Research and statistics

2.1 Summary of observer programs

During 2002-2012, the numbers of LTLL, STLL and DWPS fisheries of observation trips in Pacific Ocean is shown in Table 6. In accordance with the government's policy in establishing an observers program and supporting the increase of observers, the observational trips gradually increased year by year. In 2012, totaled 26 observation trips were conducted on LTLL vessels. Furthermore, in 2012 the observer program was extended to the STLL fleets. There were 11 observation trips were conducted on STLL vessels in 2012.

Our observer program had received interim authorization in 2009 and received full authorization after auditing in November 2011. The forms used in our observer program are fully conformed to the standards set by WCPFC which include the fishing activities, catch number and weight, species identification, bycatch species and status. In addition, length frequency of major species and the sighting and incidental catch of ecological species were recorded, and biological samplings were collected for biological research.

2.2 Research activities

For the purpose of improving stock assessment of species in the Pacific Ocean, government of Taiwan has commissioned scientists to conduct a series of researches as follows：

- Stock assessment of Pacific bluefin tuna.
- Age and growth of Pacific bluefin tuna revealed by otolith microstructure.
- Impact of climate change on Pacific albacore stock and fishing ground.
- Studies on the assessment of south Pacific albacore stock.
- Age and growth study of south Pacific albacore.
- Study on the north Pacific albacore resource.
- Integrating environmental effects in CPUE standardization of swordfish in the Pacific.
- Studies on CPUE standardization and stock status for Pacific blue marlin, north Pacific striped marlin.
- The billfish and tuna tagging project in waters off eastern Taiwan.
- Estimation on the ratio between fins and body weight, and life history parameters for shark by-catch species in Pacific Ocean.
- Research on Ecological Related Species bycatch of distant water tuna longline fisheries.
- Review of historical catch data of WCPO tropical tunas by Taiwanese longline fishery and standardization of CPUE.
- Estimation of historical catches and standardization of CPUEs for dominant sharks in three oceans.
- Population chracteristics of longtail tuna (*Thunnus tonggol*) in waters off eastern Taiwan.

The scientific papers presented at recent Pacific Ocean RFMOs meetings were as follows:

- Current situation of Taiwanese longline PBF CPUE data.（ISC/12/PBFWG-1）

— Input data for stock assessment model, Stock Synthesis 3, on Pacific bluefin tuna, *Thunnus orientalis*. （ISC/PBFWG/12-2/02）

— Oversea Fisheries Development Council. Activities and data collection of Pacific Bluefin tuna by Taiwanese fishery. （ISC/PBFWG/12-2/13）

— Abundance index of Pacific Bluefin tuna (*Thunnus orientalis*) by Taiwanese small-scale longline fleet in the southwestern North Pacific Ocean. （ISC/PBFWG/12-2/14）

— A review of Taiwan's blue marlin fisheries in the Pacific Ocean, 1958-2010. The Intercessional Workshop of the Billfish Working Groups of the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean. April 2-9, 2012, Shanghai, China. （ISC/12/BILLWG-1/4）

— Standardized catch-rates of blue marlin (*Makaira nigricans*) in the Pacific Ocean for Taiwanese distant-water longline fishery, 1964-2010. The Intercessional Workshop of the Billfish Working Groups of the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean. April 2-9, 2012, Shanghai, China. （ISC/12/BILLWG-1/5）

— A review of life history parameters of the Pacific blue marlin. The Intercessional Workshop of the Billfish Working Groups of the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean. April 2-9, 2012, Shanghai, China. （ISC/12/BILLWG-1/6）

— The catch of shark caught by Taiwanese offshore longline fisheries in 2001-2010. (ISC/12/SHARKWG-1/10)

— Age and growth of the blue shark, *Prionace glauca*, in the central and south Pacific. （ISC/12/SHARKWG-1/16）

— Standardizing catch and effort data of the Taiwanese distant-water tuna longline fishery for blue marlin (*Makaira nigricans*) in the Pacific Ocean, 1967-2011. (ISC/13/BILLWG-1/09)

— Sex-specific growth parameters and natural mortality rates for blue marlin (*Makaira nigricans*) in the northwest Pacific Ocean. (ISC/13/BILLWG-1/10)

— Catch and standardized CPUE of the blue shark by Taiwanese large-scale longline fishery in the North Pacific Ocean. (ISC/13/SHARKWG-1/07)

— Catch and abundance index of the blue shark by Taiwanese small-scale longline fishery in the North Pacific Ocean. (ISC/13/SHARKWG-1/08)

— Development of Taiwanese albacore-targeting longline fisheries in the North Pacific Ocean, 1995-2010. (ISC/13/ALBWG/16)

— Estimate of the intrinsic rate population increase for the blue shark in the North Pacific. (ISC/13/SHARKWG-2/04)

— Updated historical catches and standardized CPUE series of blue shark by Taiwanese tuna longline fisheries in the North Pacific Ocean. (ISC/13/SHARKWG-2/05)
— Vertical and horizontal movements of blue marlin in the northwestern Pacific Ocean determinded using pop-up satellite tags. (ISC/13/BILLWG-2/03)
— Stock assessment of blue marlin (*Makaira nigricans*) in the Pacific Ocean using an age-structured model. (ISC/13/BILLWG-2/07)

Scientific papers published on journals were as followings:

— Su, N. J., C. L. Sun, A. E. Punt, S. Z. Yeh and G. DiNardo. 2012. Incorporating habitat preference into the stock assessment and management of blue marlin (*Makaira nigricans*) in the Pacific Ocean. Marine and Freshwater Research, 63(7): 565-575.
— Hsu, H. H., S. J. Joung and K. M. Liu. 2012. Fisheries, management, and conservation for the whale shark, *Rhincodon typus* in Taiwan. Journal of Fish Biology, 80: 1595-1607.
— Yen, K. W., H. J. Lu, Y. Chang and M. A. Lee, 2012. Using remote sensing data to detect habitat suitability for yellowfin tuna in the western and central Pacific Ocean. International Journal of Remote Sensing, 33(23): 7507-7522.
— Su, N. J., C. L. Sun, A. E. Punt, S. Z. Yeh, W. C. Chiang, Y. J. Chang and H. Y. Chang. 2013. Effects of sexual dimorphism on population parameters and exploitation ratios of blue marlin (Makaira nigricans) in the northwest Pacific Ocean. Aquatic Living Resources, 26(1): 19-24.
— Flicia, S. J. Joung, K. M. Liu, H. H. Hsu and T. C. Hsieh. A preliminary study of the feasibility study of whale shark (*Rhincodon typus*) ecotourism in Taiwan. Ocean & Coastal Management (Accepted).

2.3 Statistics data collection system in use

Logbooks of LTLL, STLL and DWPS fishing vessels authorized to operate in WCPFC Convention Area are collected while calling port or transshipping. All fleets are required to submit catch reports periodically while fishing: fishing vessels of LTLL and DWPS report weekly and the STLL fishing vessels operating outside of our EEZ report monthly.

In addition, the fishing vessels and the fish traders have to report the trade and transshipment data. Market State data on LTLL are collected from the Organization for the Promotion of Responsible Tuna Fishery (OPRT) and from fish traders at foreign ports; as to the landing of STLL fishery in foreign ports, information on the fishing activities of the fishery was obtained from port States trading companies and

such information together with available commercial trade data was used for the catch estimation.

2.4 Data coverage of catches, effort and size data for all species

2.4.1 Longline fisheries

The logbook is the main data source of catch and effort for all species, supplemented by trade data. The size data of all species is mainly from the first 30 fish caught for each setting recorded on logbook. A port-sampling program conducted in domestic ports aims at collecting the length data of tuna and tuna-like catch. The observer program has been collecting size data for all species. The coverage has gradually increased. These data have already been used and reported in some researches.

2.4.2 DWPS fishery

The logbook is the source of catch and effort data. Trade data has been collected for estimating the catch composition of bigeye tuna and yellowfin tuna.

3. Implementation of Conservation and Management Measure

3.1 CMM 2005-03

In accordance with CMM 2005-03, all CCMs shall report annually to the WCPFC Commission all catches of albacore north of the equator and all fishing effort north of the equator in fisheries directed at albacore. In 2012, estimate of total catch of North Pacific albacore was 2,643 MT with 2,176 MT from the north Convention area, by 21 albacore targeting LTLL vessels and 1,423 fishing days (1,189 days was deployed in the north Convention area).

3.2 CMM 2006-04

In accordance with CMM 2006-04, CCMs shall report annually to the Commission the catch levels of their fishing vessels that have taken striped marlin as a bycatch as well as the number and catch levels of vessels fishing for striped marlin in the Convention Area south of 15°S. The bycatch of striped marlin in the convention area south of 15°s during the period 2000-2012 is shown in Table 7 with preliminary estimate of 82 MT in 2012. None of our fishing vessel targets on striped marlin.

3.3 CMM 2007-04

In accordance with CMM 2007-04, CCMs shall annually provide to the Commission, in Part 1 of their annual reports, all available information on interactions with seabirds, including bycatches and details of species, to enable the Scientific Committee to estimate seabird mortality in all fisheries to which the WCPFC Convention applies.

The information is provided in Section 1.4.

3.4 CMM 2009-03

In accordance with CMM 2009-03, the number of the fishing vessels for swordfish in the Convention Area south of 20°S was limited to the number in any year during 2000-2005, and the catch of swordfish caught in the Convention Area south of 20°S is limited to the amount caught in any year during the period 2000-2006. In 2012, total catch of swordfish was estimated as 119 MT caught by 57 vessels as bycatch (Table 8). There is no seasonal targeting vessel on the species in 2012.

3.5 CMM 2009-06

In accordance with CMM 2009-06, CCMs shall report on all transshipment activities (including transshipment activities that occur in ports or EEZs) in Part 1 of its Annual Report. Table 9 provides the information of transshipment activities of Taiwanese fleets in 2012.

3.6 CMM 2010-05

In accordance with CMM 2010-05, CCMs shall report annually to the Commission the catch levels of their fishing vessels that have taken South Pacific Albacore as a bycatch as well as the number and catch levels of vessels actively fishing for South Pacific albacore in the Convention area south of 20°S. The catch of South Pacific albacore in the convention area south of 20°s during the period 2006-2012 and the number of longline vessels fishing are shown in Table 10. Totally 2,854 MT were caught by 28 LTLL vessels and 29 STLL vessels in 2012.

3.7 CMM 2010-07

In accordance with CMM 2010-07, each CCM shall include key shark species, as identified by the Scientific Committee, in their annual reporting to the Commission of annual catch and fishing effort statistics by gear type, including available historical data, in accordance with the WCPFC Convention and agreed reporting procedures. The required information is provided in Table 5 and Section 1.4.

Table 1. The number of active vessel by fishery in the WCPFC Convention Area during 2008-2012.

	LTLL	DWPS	STLL
2008	84	34	1,260
2009	75	32	1,220
2010	90	34	1,235
2011	95	34	1,376
2012	87	34	1,326

Table 2. The catch (in MT, round weight) of major tuna and tuna-like species of LTLL fishery in the WCPFC Convention Area during 2008-2012.

	N-ALB	S-ALB	BET	YFT	SWO	MLS	BUM	BLM	SKJ	TOTAL
2008	2,160	2,184	8,777	1,759	1,079	173	812	5	174	17,123
2009	1,861	3,697	8,863	3,111	1,278	187	1,111	12	506	20,626
2010	1,952	5,831	8,000	3,569	1,339	239	1,269	61	104	22,364
2011	2,818	4,121	6,579	3,167	1,554	257	1,166	22	155	19,839
2012*	1,592	4,064	5,770	2,059	1,319	249	975	7	214	16,249

* Preliminary estimate

Table 3. The catch (in MT, round weight) of major tuna species of DWPS fishery in the WCPFC Convention Area during 2008-2012.

	SKJ	YFT	BET	Total
2008	165,007	35,770	3,196	203,973
2009	173,725	16,237	2,113	192,075
2010	166,211	29,203	3,437	198,851
2011	155,641	18,143	2,151	175,935
2012*	172,664	25,750	2,239	200,653

* Preliminary estimate

Table 4. The catch (in MT, round weight) of tuna and tuna-like species of the STLL fishery in WCPFC Convention Area during 2008-2012.

	ALB	BET	YFT	SWO	BILL**
2008	5,337	6,452	14,652	3,638	7,460
2009	8,288	4,456	16,582	3,261	6,117
2010	12,652	3,874	18,656	2,740	7,861
2011	9,276	4,696	18,153	3,239	7,046
2012*	8,505	5,224	14,889	3,430	6,430

* Preliminary estimate

**BILL: striped marlin, blue marlin, black marlin, and other billfish

Table 5. The catches (in MT, round weight) of key shark species of LTLL, STLL and DWPS fisheries in WCPFC Convention Area in 2012 (preliminary estimate).

	BSH	FAL	MAK		OCS	PTH	BTH	ALV	SPZ	SPL	SPK	EUB	POR	SHK
			SMA	LMA										
LTLL	923	460	269	11	70	34	44	0	16	4	0	0	0	24
STLL	11407	110	688		2	164	413	0	92	256	0	0	0	3978
DWPS	0	17	<1		<1	0	<1	0	0	0	0	0	0	37

Table 6. The Observation trips of LTLL, STLL and DWPS fisheries in Pacific Ocean during 2002-2012.

	LTLL	STLL	DWPS*
2002	1	-	6
2003	3	-	2
2004	4	-	2
2005	5	-	2
2006	10	-	0
2007	15	-	11
2008	14	-	7
2009	22	-	-*
2010	17	-	-*
2011	15	-	-*
2012	26	11	-*

* In accordance with CMM 2008-01, all our coverage of observers for DWPS has reached 100% during July and September of 2009, and the coverage of observers for DWPS has also reached 100% from 2010 to 2012.

Table 7. The bycatch of striped marlin in Convention Area in south of 15°S during 2000-2012.

Year	Catch (MT)
2000	22
2001	210
2002	198
2003	268
2004	298
2005	143
2006	106
2007	76
2008	56
2009	95
2010	138
2011	132
2012*	82

* Preliminary estimate

Table 8. The total catch of swordfish and the number of the fishing vessels in Convention Area in south of 20°S during 2000-2012.

Year	Catch (MT)	Vessel numbers	
		Seasonal Target	Bycatch
2000	54	10	58
2001	208	10	58
2002	233	10	59
2003	248	12	72
2004	466	8	56
2005	202	6	59
2006	198	4	53
2007	217	3	46
2008	61	0	53
2009	133	7	46
2010	105	4	40
2011	98	3	66
2012*	119	0	57

* Preliminary estimate

Table 9. The information of transshipment of our fishing fleets in 2012.

Offloaded / Received	Location of transshipment	Area of transshipment	Area of catch	Product Form	Gear Type	Number of Transshipment	BET	ALB	YFT	SKJ	SWO	BUM	MLS	SKX	OTH
Offloaded	In port	Inside*	Inside	Fresh	STLL	851	3,089	7,962	6,186	0	406	1,121	84	2,493	1,766
Offloaded	In port	Inside	Inside	Frozen	LTLL	103	771	1,885	1,439	0	109	114	66	209	263
Offloaded	In port	Inside	Outside	Fresh	STLL	26	54	993	18	0	14	19	6	7	71
Offloaded	In port	Inside	Outside	Frozen	LTLL	18	5	836	1	0	3	53	3	102	258
Offloaded	beyond EEZ	Inside	Inside	Fresh	STLL	6	48	140	37	0	2	7	0	9	22
Offloaded	beyond EEZ	Inside	Inside	Frozen	LTLL	197	5,701	609	988	0	863	386	98	588	681
Offloaded	beyond EEZ	Inside	Outside	Fresh	STLL	1	3	0	2	0	0	0	0	2	1
Offloaded	beyond EEZ	Outside**	Outside	Fresh	STLL	10	22	208	6	0	3	5	5	16	39
Offloaded	beyond EEZ	Outside	Outside	Frozen	LTLL	36	586	1,473	113	0	111	43	59	102	192
Offloaded	In port	Inside	Inside	Frozen	DWPS	264	539	0	24,659	159,924	0	0	0	0	0

* Inside the WCPFC Convention Area

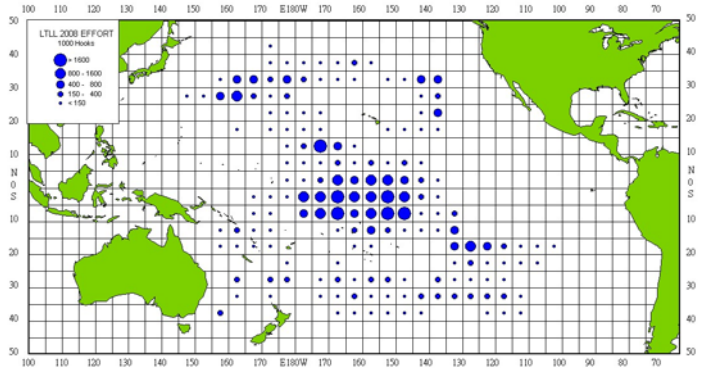
** Outside the WCPFC Convention Area

Table 10. The total catch of South Pacific albacore and the number of the fishing vessels targeting South Pacific albacore in Convention Area in south of 20°S during 2006-2012.

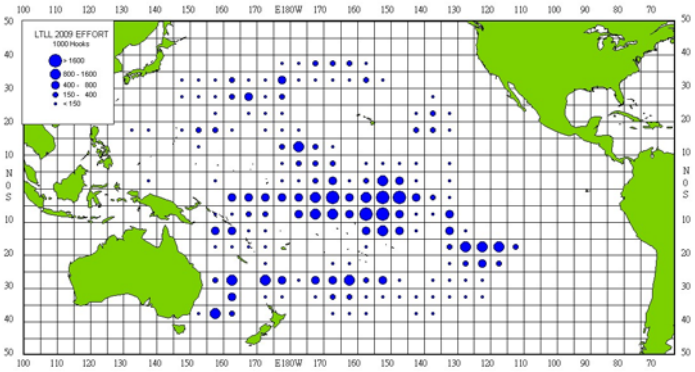
Year	Catch (MT)	Vessel numbers	
		LTLL	STLL
2006	5,042	31	26
2007	4,605	19	30
2008	1,907	17	36
2009	3,372	22	31
2010	4,352	19	25
2011	3,978	30	39
2012*	2,854	28	29

* Preliminary estimate

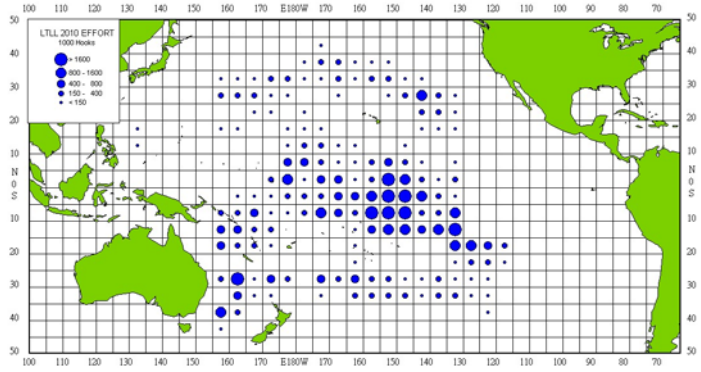
2008



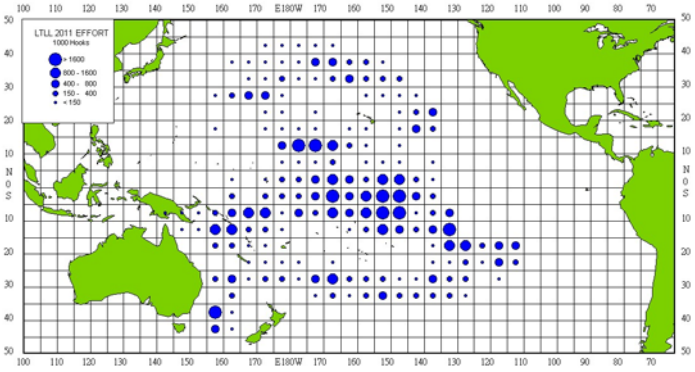
2009



2010



2011* preliminary



2012* preliminary

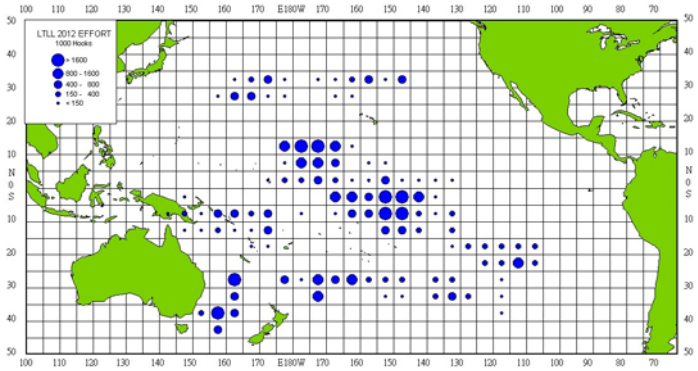


Figure 1. The effort distributions of our LTLL fishery during 2008-2012. The figures of 2011 and 2012 are still in preliminary.

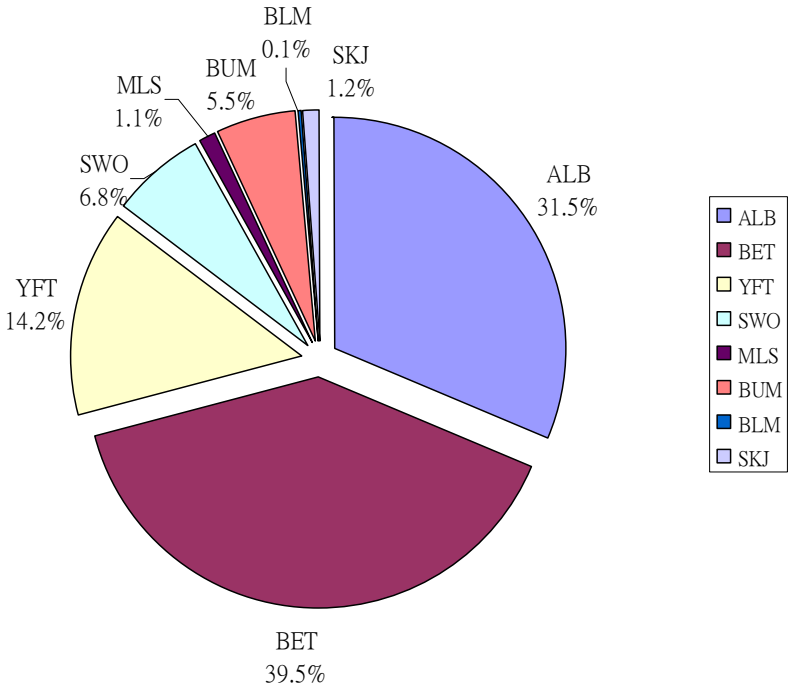


Figure 2. Mean catch percentage of major tuna and tuna-like species of our LTLL fishery in the WCPFC Convention area during 2008-2012.

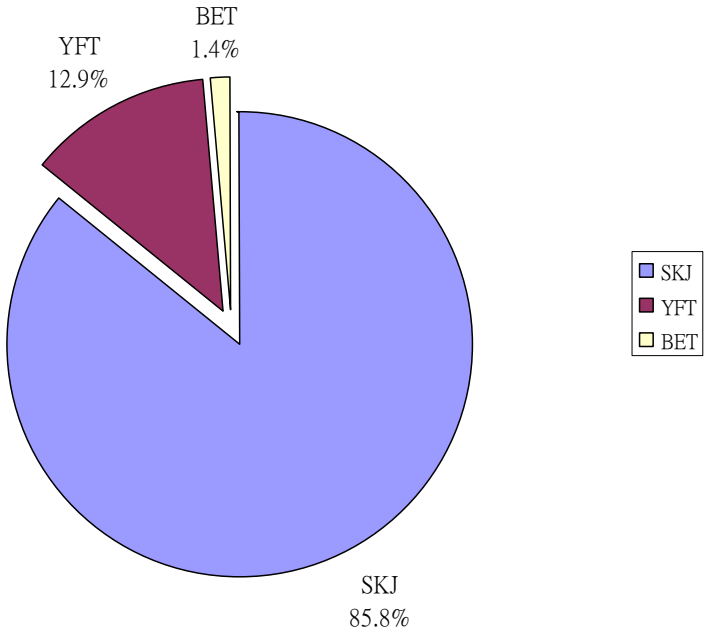
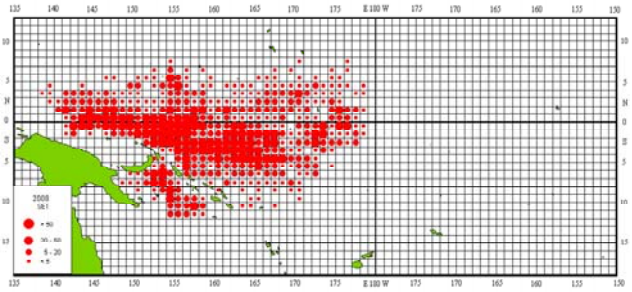
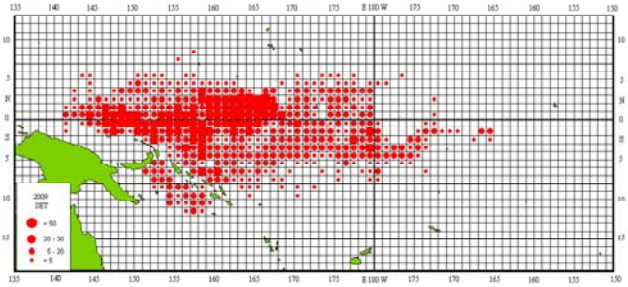


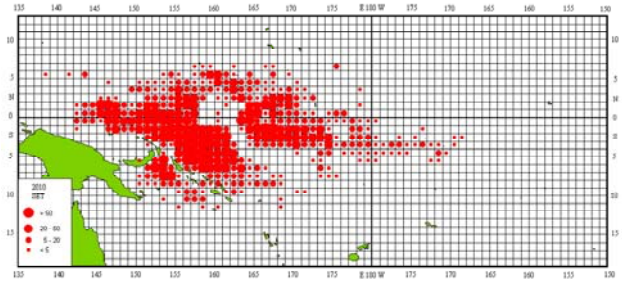
Figure 3. Mean catch percentage of major tuna and tuna-like species of our DWPS fishery in the WCPFC Convention area during 2008-2012.



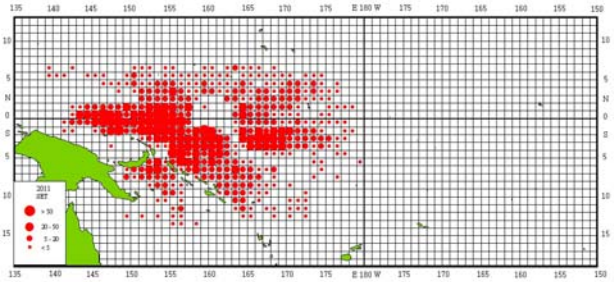
2008



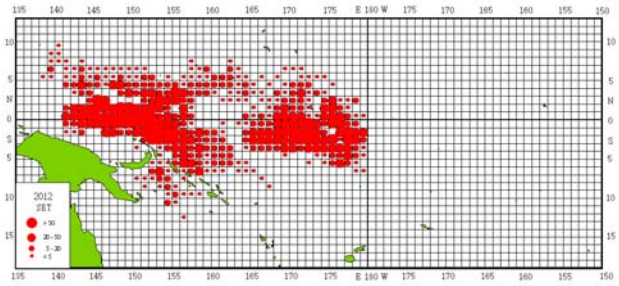
2009



2010



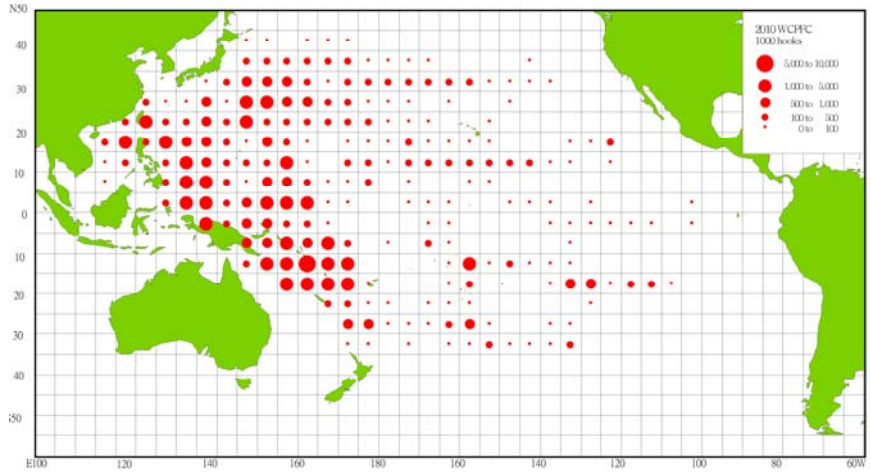
2011



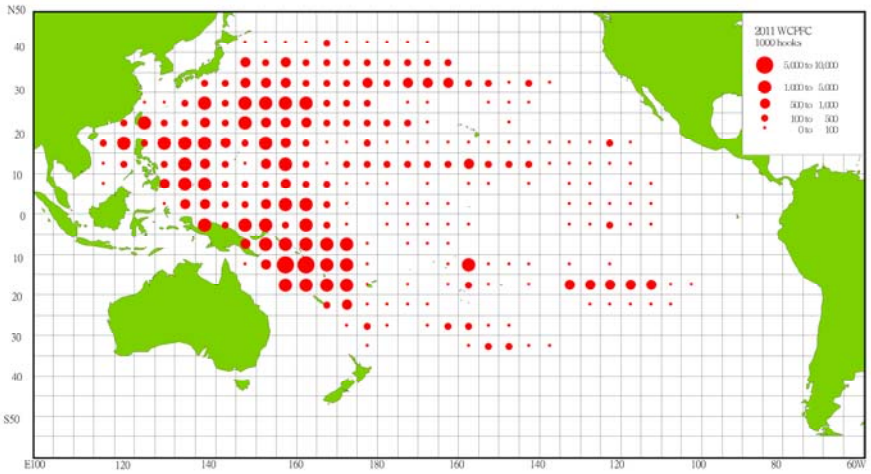
2012

Figure 4. The effort distributions of our DWPS fleet during 2008-2012.

2010



2011* preliminary



2012* preliminary

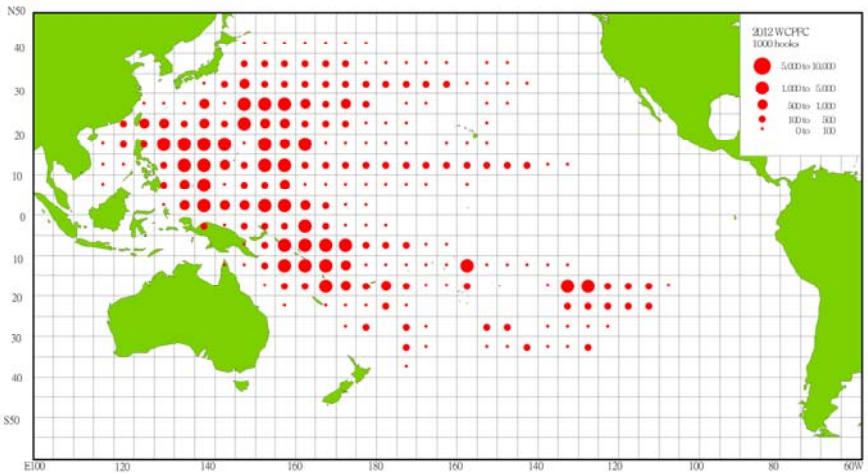


Figure 5. The effort distributions of our STLL fishery during 2010-2012.