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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

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This paper is prepared for the 21st WCPFC Scientific Committee, from 13 to 21 August, 2025.

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 2025	Yes

Summary

In Taiwan, we have two categories tuna fishing fleets which namely longline fleet (LL) and purse seine fleet (PS). In 2024, the total catches of main tuna and tuna-like species for these two fleets were 52,938 MT for LL and 228,956 MT for PS, respectively. In 2024, 49 observers were deployed on our tuna longline fishing vessels operating in the Pacific Ocean.

To comply with international conventions such as the IMO Fishing Vessel Safety Regulations, and to uphold humanitarian standards related to crew safety and welfare, the government approved the expansion of vessel size. For example, some vessels were modified to provide additional resting space for crew members. These changes led to increases in GT, but did not enhance fishing capacity or alter fishing operations.

As a result, continuing to classify vessels based on the 100 GT standard led to inconsistencies and confusion in administrative management. To resolve this issue, Taiwan decided to no longer distinguish longline fleets based on vessel tonnage. Beginning this year, all tuna longline vessels are reported under a unified category (LL), regardless of their tonnage. This adjustment improves statistical consistency and more accurately reflects actual fishing practices.

1. Annual fisheries' information

The Pacific Ocean has long been the primary fishing ground for Taiwanese tuna fisheries. The LL fishing fleet mainly operates beyond the EEZ of Taiwan with some longliners operate in the EEZ of Taiwan. All PS vessels operate beyond the EEZ of Taiwan and most fishing activities are made in the EEZs of Pacific Island Countries (PICs) under relevant access agreements.

1.1 Fleet structure

Table 1 shows the numbers of active fishing vessels of LL and PS fleets from 2020 to 2024 in the WCPFC Convention Area.

1.1.1 LL

The numbers of active fishing vessels of LL ranged between 792 and 921 with an average of 822 in the last 5 years. The number of active LL fishing vessels was 921 in 2024.

1.1.2 PS

The numbers of active fishing vessels of PS ranged between 24 and 29 with an average of 26 in the last 5 years. The number of active PS fishing vessels was 24 in 2024.

1.2 Annual Catch in the WCPFC Convention Area

1.2.1 LL

The catch of primary species by LL fishery over the last five years (2020-2024) in the WCPFC Convention Area is shown in Table 2. To provide a clearer overview of the species targeted by the LL fishery during this period, the distribution of species

composition is shown in Figure 1. Overall, the primary species caught by our LL fleet in the WCPFC Convention Area were mainly albacore, accounting for 36% of the total catch, followed by yellowfin tuna and bigeye tuna, which accounted for 26% and 18%, respectively.

1.2.2 PS

The catch of primary species by PS over the last five years (2020-2024) in the WCPFC Convention Area is shown in Table 3. During this period, the distribution of our primary species composition is shown in Figure 2. Skipjack remained the most dominant species, accounting for 84% of the total catch, followed by yellowfin tuna and bigeye tuna, which accounted for 13% and 3%, respectively.

1.3 Fishing Patterns

1.3.1 LL

The LL fleet can be divided into two subgroups in accordance with their targeting species and fishing areas. One of the subgroups targets tropical tuna and operates mainly in tropical waters between 15°N and 15°S. These vessels typically conduct year-round fishing operations, with transshipment of catch, refueling, and resupply carried out at sea.

The other subgroup targets albacore tuna and generally operates in subtropical and temperate waters. These vessels usually make port calls in the Pacific Ocean twice a year for catch landing, refueling, and resupply.

Additionally, a number of vessels, mostly based in domestic or foreign ports, target yellowfin tuna for the fresh tuna sashimi market, while some also target billfish or albacore in the South Pacific Ocean. These vessels often use flake ice for preservation, although a portion of the fleet is equipped with freezers to store catch in frozen form.

The distribution of fishing effort for the LL fleet over the past five years (2020–2024) is shown in Figure 3.

1.3.2 PS

The PS vessels mainly operate in tropical waters close to the equator area and target skipjacks. Since most of the fishing grounds locate in the EEZs of PICs, these vessels acquire fishing permits through access agreements with PICs, including PNG, FSM, Nauru, Marshall Islands, Solomon Islands, Tuvalu, and Kiribati.

In the 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 of free-swimming schools in the mid-1990s has made free school settings the most prevailing fishing method, and it was observed that 83.7% of sets were deployed on free schools in 2024. The distribution of fishing efforts in the recent five years (2020-2024) is shown in Figure 4.

In the years when El Niño phenomena occur, the fish tend to move more eastwards, and the fishing activities follow the pattern of this movement. On the contrary, in the years of La Niña, fish schools tend to concentrate more in the western part of the Pacific, and the fishing activities move likewise.

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

In 2023, our observers had recorded 12 sea turtles (5 Olive ridley turtles, 3 Kemp's ridley turtles, 3 Green turtles and 1 Leatherback turtle), 10 seabirds (65 Black-browed albatross, 1 Grey-headed albatross, 1 Wandering albatross, 1 Westland petrel, 1 Great

shearwater and 1 Other seabird) and 1 cetacean (1 Risso's dolphin) hooked with sightings of 4,769 seabirds and 68 cetaceans.

In 2024, our observers had recorded 23 sea turtles (15 Olive ridley turtles, 5 Loggerhead turtle, 1 Green turtles and 2 Leatherback turtle), 57 seabirds (1 Ascension Frigatebird, 5 Black-browed albatross, 13 Black-footed albatross, 1 Frigate bird, 37 Laysan albatross) and 5 cetacean (4 False killer whale, 1 Pantropical spotted dolphin) hooked with sightings of 9,464 seabirds and 221 cetaceans. Because some observation trips of 2024 extended to 2025, the observer data of 2024 is still in preliminary for data not being retrieved completely. As for the information on cetaceans and whale sharks encircled by our purse seiners is related in section 3.4 of this report.

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 statistic

2.1 Summary of observer programs

The number of observers deployed on LL and PS fleets in Pacific Ocean during 2020-2024 is shown in Table 4. In accordance with the government's policy in establishing an observer program and supporting the increase of observers, in 2012 the observer program was extended to the TLL fleets. The total number of observers deployed on longline vessels in 2024 was 49.

Our observer program received interim authorization in 2009 and received full authorization after auditing in November 2011, October 2017 and May 2024, respectively. 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, the 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 highly migratory species in the Pacific Ocean, government of Taiwan has commissioned scientists to conduct a series of researches in 2024 as follows：

- Study on the stock assessment of WCPO tropical tunas and the management strategy developments of the Pacific Bluefin tuna.
- A study on the management strategy developments of the Pacific albacore and swordfish.
- Study on the stock assessment of North Pacific shortfin mako shark and stock status and NDF assessment of sharks in the Pacific Ocean.
- The impacts of mitigation measures on the bycatch species in Taiwanese distant water vessels.

The scientific papers presented at recent Pacific Ocean RFMOs meetings during 2024 to 2025 were as follows:

- Mako Age and Growth, Meta-analysis Revisited. (ISC/24/SHARKWG-1/01)
- Relationships between fleet-specific spawning potential ratios and measures of catch and effort for North Pacific albacore tuna. (ISC/24/ALBWG-1/07)

- Horizontal and vertical movements of striped marlin (*Kajikia audax*) in the northwestern Pacific Ocean. (ISC/24/BILLWG-01/04)
- Re-evaluation of coefficient of variance (CV) in growth curve using the latest otolith data. (ISC/24/PBFWG-1/01)
- Developing abundance indices for Taiwanese PBF longline fishery using GLMM and VAST, incorporating SST and size data. (ISC/24/PBFWG-1/05)
- Inferring vertical and horizontal movements of shortfin mako sharks *Isurus oxyrinchus* in the northwestern North Pacific Ocean from electronic tags. (ISC/25/SHARKWG-1/06)

The scientific papers published on scientific journal during 2024 to 2025 were as follows:

- Hung, S. Y., Huynh, H. H., & Tsai, W. P. (2024). Population dynamics of the data-poor tiger shark (*Galeocerdo cuvier*) in the Northwest Pacific Ocean: Measurement of growth parameters and mortality rates. Regional Studies in Marine Science, 75, 103526.
- Ma, T. H., Chang, Y. J., Shiao, J. C., Jin, C. B., & Kuo, Y. F. (2024). Enhancing machine learning-based age estimation for Pacific bluefin tuna: An approach with data imputation and image augmentation strategies. Fisheries Research, 274, 106992.
- Yang, J. H., Chang, Y., & Hsiao, S. C. (2024). Finding harmony in the sea: Resolving conflicts by regional marine spatial planning. Ocean & Coastal Management, 254, 107200.
- Yuan, T. L., Xu, H., Lu, B. J., & Chang, S. K. (2024). Comparison of linear and nonlinear modeling approaches to develop an abundance index based on voyage and market data for a data-limited fishery. Frontiers in Marine Science, 11, 1344181.
- Ma, T.H., Chang, Y.J., Shiao, J.C., Jin, C.B., Kuo, Y.F.* (2024) Enhancing machine learning-based age estimation for Pacific bluefin tuna: An approach with data imputation and image augmentation strategies. Fisheries Research, 274, 106992.
- Ng, S. L., Liu, K. M., & Joung, S. J. (2024). Description of a new lanternshark species from the South China Sea, with additional description of *Etmopterus sheikoi* from Taiwanese waters (*Squaliformes: Etmopteridae*). Raffles Bulletin of Zoology, 72.
- Ng, S. L., Straube, N., Liu, K. M., & Joung, S. J. (2025). Confusions across the hemispheres: Taxonomic re-evaluation of two lanternshark species, *Etmopterus lucifer* and *E. molleri* (*Squaliformes*: *Etmopteridae*). Vertebrate Zoology, 75, 59-86.

2.3 Statistics data collection system

To collect fishery data completely and in real-time, Taiwan implemented electronic logbook reporting on LL fishing vessels which operate beyond EEZ and PS fleets in 2014. Now, all fishing vessels operating outside Taiwan's EEZ are required to report their fishing data via e-logbook daily.

The operator or the captain of any fishing vessel intending to land or transship has been mandatory to fill in the Landing/Transshipment Notice and submit it to the competent authority for approval. Moreover, after the completion of landing or transshipment, the operator or the captain is required to submit the Landing/Transshipment Declaration to the competent authority so that the competent authority can verify the catches with e-logbook data and other relevant data so as to

ensure the catches are legal and traceable.

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

2.4.1 LL

Tuna longliners which operate beyond Taiwan's EEZ have been reporting their fishery data through e-logbooks, and the catch and effort data is compiled from e-logbook data. The size data, length, and weight of individual catches of all species are also compiled from the first 30 fish caught for each set recorded on the e-logbook. A port-sampling program conducted in domestic ports aims to collect data on the size of tuna and tuna-like species. The observer program has been collecting size data for all species. The data has already been used for scientific purposes and reported to WCPFC.

2.4.2 PS fishery

The iFIMS e-logbook data is compiled into catch and effort data of our purse seine fleet. Thai canneries' sizing data have been collected to estimate the catch composition of skipjack, bigeye tuna, and yellowfin tuna. Length data was collected from fishing vessels' reporting.

3. Implementation of Conservation and Management Measure

3.1 CMM 2009-03

In accordance with CMM 2009-03, the number of 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. The information mentioned above is shown in Table 5 and updated to 2024.

3.2 CMM 2018-05 (replace CMM 2007-01)

In order to estimate observer coverage rates on longline vessels fishing according CMM 2007-01 and in accordance with the decision of WCPFC11, Table 6 provides the information of observer coverage rate estimates for LL of 2024.

3.3 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 7 shows the information of transshipment activities of our fishing fleets in 2024.

3.4 CMM 2011-03 and CMM 2022-04

In accordance with CMM 2011-03 and CMM 2022-04, CCMs shall advise in their Part 1 Annual Report of any instances in which cetaceans and whale sharks have been encircled by the purse seine nets of their flagged vessels, respectively. Table 8 shows detailed information on cetaceans and whale shark encircled during operation reported in 2024 by fishing masters of our purse seine fleet.

3.5 CMM 2018-03

In accordance with CMM 2018-03, CCMs shall annually provide to the Commission, in Part 1 of their annual reports, all available information on interactions with seabirds reported or collected by observers to enable the estimation of seabird mortality in all fisheries to which the Convention applies. All Taiwanese longliners operating in the area south of 30°S are required to deploy at least two of the following

seabird mitigation measures, namely tori lines, weighted branch lines and night setting with minimum deck lighting. For Taiwanese longliners larger than 24m operating in the Convention area north of 23°N are required to employ tori lines and one of the following seabird mitigation measures, namely tori lines, weighted branch lines, night setting with minimum deck lighting, line shooter or management of offal discharge. In addition, all Taiwanese longliners operating in the area between 25°S to 30°S are required to deploy a tori line as seabird mitigation measure since January 1, 2020. Furthermore, fishing vessels are required to carry de-hookers and line cutters on board for the purpose of releasing seabirds alive. The information regarding interactions with seabirds are shown in Tables 9-18.

3.6 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 2020-2024 is shown in Table 19. None of our fishing vessel targets on striped marlin.

3.7 CMM 2015-02

In accordance with CMM 2015-02, CCMs shall report annually to the Commission the annual catch levels taken by each of their fishing vessels that has taken South Pacific albacore, as well as the number of vessels actively fishing for South Pacific albacore, in the Convention area south of 20°S. Catch by vessel shall be reported according to the following species groups: albacore tuna, bigeye tuna, yellowfin tuna, swordfish, other billfish, and sharks. The information required for this measure has been provided through Annual Report Part 2.

3.8 CMM 2019-03 (replace CMM 2005-03)

In accordance with CMM 2019-03, 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 2024, the total catch of north Pacific albacore made by our fishing fleets was 9,231MT with 8,925 MT in the north Convention area. There were 25 LL vessels directed at north Pacific albacore with 1,950 fishing days in the North Pacific Ocean, and with 1,594 days deployed in the north Convention area. The annual fishing efforts of LL vessels directed at North Pacific albacore for 2020-2024 was provided through Annual Report Part 2.

3.9 CMM 2023-03 (replace CMM 2022-02)

In accordance with CMM 2022-02, all CCMs shall report annually to the WCPFC Commission all catches of North Pacific swordfish in the area (defined as Convention area north of 20°N) and all fishing effort in those fisheries. The required information is provided in Table 20 and was submitted to the Northern Committee. In 2024, the total catch of north Pacific swordfish made by our fishing fleets were 893 MT which including 267 MT by 483 coastal artisanal longline vessels and 625 MT with 15,511 fishing days by Longline vessels.

Table 1. The number of active fishing vessels by fishery in the WCPFC Convention Area during 2020-2024.

Year	LL	PS
2020	792	28
2021	872	29
2022	716	26
2023	809	24
2024	921	24

Table 2. The catch (in MT, round weight) of major tuna and tuna-like species of LL fishery in the WCPFC Convention Area during 2020-2024.

Year	N-ALB	S-ALB	BET	YFT	PBF	SWO	MLS	BUM	BLM	SKJ	Total
2020	3,307	13,745	7,143	10,212	1,150	3,230	742	2675	240	774	43,218
2021	5,430	5,655	7,315	11,306	1,478	2083	514	2646	194	689	37,310
2022	4,023	10,222	9,499	15,469	1,496	2496	527	2853	214	726	47,525
2023	6,012	10,629	8,854	11,992	2,117	2,411	851	2972	327	536	46,701
2024*	8,926	9,733	9,322	13,855	2,259	1,918	809	4173	275	1229	52,499

*Preliminary estimate

Table 3. The catch (in MT, round weight) of major tuna species of PS fishery in the WCPFC Convention Area during 2020-2024.

Year	SKJ	YFT	BET	Total
2020	123,154	23,533	3,684	150,371
2021	179,187	25,110	11,057	215,354
2022	176,368	26,703	7,807	210,878
2023	137,560	27,131	3,946	168,637
2024*	201,939	23,514	3,503	228,956

*Preliminary estimate

Table 4. The number of observers deployed on LL fishery in the Pacific Ocean during 2020-2024.

Year	LL
2020	56
2021	54
2022	54
2023	45
2024*	49

*Preliminary

**In accordance with CMM 2008-01, all our PS fishing vessels have to be deployed PIC observer on board and the observer coverage reaches 100%.

Table 5. The catch of swordfish and the number of the tuna longline fishing vessels operating in the area of south of 20°S during 2000-2024.

Year	Catch (MT)	Number of fishing vessel	
		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
2013	140	0	62
2014	105	0	52
2015	116	0	45
2016	124	0	44
2017	231	0	56
2018	307	0	67
2019	249	0	56
2020	330	0	84
2021	99	0	43
2022	113	0	36
2023	136	0	39
2024*	98	0	27

*Preliminary

Table 6. The estimate of observer coverage rate for Taiwanese longline fisheries in 2024.

CCM Fleet	Fishery	No. of Hooks			Days Fished			Days at Sea			No. of Trips			See NOTEs
		Total estimated	Observer	%	Total estimated	Observer	%	Total estimated	Observer	%	Total estimated	Observer	%	
Chinese Taipei	LL							81,806	7,340	9%				

Table 7. The summary of transshipment operations by fishery of 2024:

Offloaded and received	Transhipped in port, transhipped at sea in areas of national jurisdiction, and transhipped beyond areas of national jurisdiction	Transhipped inside the Convention Area and transhipped outside the Convention Area	Caught inside the Convention Area and caught outside the Convention Area	Product Form	Fishing gear	Number of Transshipments	Species (MT)								
							BET	ALB	YFT	SKJ	SWO	BUM	MLS	SKX	OTH
offloaded	beyond EEZs	inside	inside	Frozen	Longliner	219	1,671	803	2,612	221	90	374	21	59	284
offloaded	beyond EEZs	inside	both	Frozen	Longliner	117	1,617	519	1,493	109	133	331	54	265	339
offloaded	beyond EEZs	inside	outside	Frozen	Longliner	0	0	0	0	0	0	0	0	0	0
offloaded	beyond EEZs	outside	inside	Frozen	Longliner	0	0	0	0	0	0	0	0	0	0
offloaded	beyond EEZs	outside	both	Frozen	Longliner	0	0	0	0	0	0	0	0	0	0
offloaded	inside EEZs	inside	inside	Frozen	Purse seiner	0	0	0	0	0	0	0	0	0	0
offloaded	in port	inside	inside	Frozen	Purse seiner	312	2,030	0	26,606	216,687	0	0	0	0	0
offloaded	in port	inside	inside	Frozen	Longliner	58	422	95	1,554	17	18	179	0	24	154
offloaded	in port	inside	both	Frozen	Longliner	12	110	11	369	1	5	29	0	3	34
offloaded	in port	inside	outside	Frozen	Longliner	0	0	0	0	0	0	0	0	0	0
received	beyond EEZs	inside	inside	Frozen	Longliner	193	787	803	2,149	221	52	374	20	59	284
received	beyond EEZs	inside	both	Frozen	Longliner	96	577	519	936	109	102	331	53	265	339
received	beyond EEZs	inside	outside	Frozen	Longliner	0	0	0	0	0	0	0	0	0	0
received	beyond EEZs	outside	inside	Frozen	Longliner	0	0	0	0	0	0	0	0	0	0
received	beyond EEZs	outside	both	Frozen	Longliner	0	0	0	0	0	0	0	0	0	0
received	in port	inside	inside	Frozen	Longliner	58	422	95	1,554	17	18	179	0	24	154
received	in port	inside	both	Frozen	Longliner	12	110	11.4	369	1	5	29	0	3	34
received	in port	inside	outside	Frozen	Longliner	0	0	0	0	0	0	0	0	0	0

Table 8. The summary on cetaceans/whale sharks encircled incidentally in purse seine fishing operation in 2024.

Date	Longitude	Latitude	Species	Number	Reason	Measure for ensure safe release	Status on release
2024-01-01	E155°15'	S08°48'	Whale shark	1	not deliberately encircled	stop hauling and operating	Alive1
2024-02-09	E170°37'	S00°57'	Risso's dolphin	1	not deliberately encircled	stop hauling	Alive1
2024-02-12	E147°13'	S00°50'	Whale shark	1	not deliberately encircled	stop operating	Alive1
2024-03-05	E152°37'	N01°34'	False killer whale	4	not deliberately encircled	stop hauling	Alive1
2024-03-07	E152°48'	N01°02'	False killer whale	5	not deliberately encircled	stop hauling	Alive1
2024-03-10	E158°06'	S05°38'	Whale shark	1	not deliberately encircled	stop operating	Alive1
2024-03-12	E153°27'	S08°17'	Whale shark	1	not deliberately encircled	stop operating	Alive1
2024-04-02	E143°39'	N00°02'	Whale shark	1	not deliberately encircled	stop hauling	Alive1
2024-04-03	E145°57'	N00°37'	Common dolphin	10	not deliberately encircled	stop hauling	Alive1
2024-04-03	E144°54'	S02°28'	Whale shark	1	not deliberately encircled	stop hauling	Alive1
2024-04-16	E152°31'	S04°43'	Whale shark	1	not deliberately encircled	stop operating	Alive1
2024-04-17	E152°46'	N04°59'	False killer whale	1	not deliberately encircled	stop hauling	Alive1
2024-04-18	E152°42'	S04°49'	Whale shark	1	not deliberately encircled	stop hauling	Alive1
2024-04-25	E149°52'	S01°29'	False killer whale	17	not deliberately encircled	stop hauling	Alive1
2024-05-16	E139°01'	N05°11'	Whale shark	1	not deliberately encircled	stop operating	Alive1
2024-06-02	E151°31'	N00°24'	Whale shark	1	not deliberately encircled	stop hauling and operating	Alive1
2024-06-02	E151°28'	S01°14'	Aquatic mammals nei	1	not deliberately encircled	stop operating	Alive0
2024-06-03	E154°51'	S02°04'	Sei whale	1	not deliberately encircled	stop hauling	Alive0
2024-06-07	E154°51'	S02°20'	Sei whale	1	not deliberately encircled	stop hauling	Alive0
2024-06-16	E157°37'	S03°27'	Whale shark	1	not deliberately encircled	stop operating	Alive
2024-06-24	E154°12'	S01°24'	Aquatic mammals nei	1	not deliberately encircled	stop hauling	Alive1
2024-08-03	E157°08'	S04°20'	Bottlenose dolphin	5	not deliberately encircled	stop operating	Alive1
2024-08-11	E170°34'	S02°42'	Sei whale	4	not deliberately encircled	stop hauling	Alive1
2024-08-21	E161°56'	N03°05'	Whale shark	1	not deliberately encircled	stop hauling	Alive1

Date	Longitude	Latitude	Species	Number	Reason	Measure for ensure safe release	Status on release
2024-09-02	E165°38'	S03°25'	Dolphins nei	1	not deliberately encircled	stop hauling	Alive1
2024-09-12	E160°26'	S01°48'	False killer whale	1	not deliberately encircled	stop hauling	Alive1
2024-09-13	E166°17'	N03°54'	Whale shark	1	not deliberately encircled	stop hauling	Alive1
2024-09-24	E161°51'	S03°26'	Whale shark	1	not deliberately encircled	stop operating	Alive1
2024-09-25	E160°45'	S03°16'	Whale shark	1	not deliberately encircled	stop hauling and operating	Alive1
2024-09-25	E162°08'	S03°05'	Whale shark	1	not deliberately encircled	stop operating	Alive1
2024-10-03	E160°01'	S02°14'	Whale shark	1	not deliberately encircled	stop hauling	Alive1
2024-10-17	E157°20'	S03°00'	False killer whale	4	not deliberately encircled	stop hauling	Alive1
2024-10-18	E152°44'	S01°02'	False killer whale	1	not deliberately encircled	stop hauling	Alive1
2024-10-19	E157°52'	S02°20'	Whale shark	1	not deliberately encircled	stop operating	Alive1
2024-10-20	E160°01'	S02°27'	Whale shark	1	not deliberately encircled	stop hauling	Alive1
2024-11-02	E175°23'	N04°48'	False killer whale	1	not deliberately encircled	stop hauling	Alive1
2024-11-03	E163°00'	N03°28'	Whale shark	1	not deliberately encircled	stop hauling	Alive1
2024-12-05	E147°46'	S01°39'	Rough-toothed dolphin	11	not deliberately encircled	stop hauling	Alive1
2024-12-19	E150°26'	S00°53'	False killer whale	1	not deliberately encircled	stop hauling	Alive1
2024-12-28	E149°36'	S02°16'	Sei whale	1	not deliberately encircled	stop operating	Alive2

Table 9. The fishing efforts, observed and estimated seabird captures of longline fishery in the area of south of 30°S during 2020-2024.

Year	Fishing effort				Observed seabird hooked	
	Number of vessels	Number of hooks	Observed hooks	% hooks observed	Number	Rate
2020	58	10,171,657	661,591	6.5%	4	0.006
2021	32	4,852,414	305,557	6.3%	0	0.000
2022	21	5,393,630	578,181	10.7%	3	0.005
2023	22	6,061,462	441,952	7.3%	12	0.027
2024*	17	3,452,253	86,894	2.5%	0	0.000

*Preliminary

Table 10. The fishing efforts, observed and estimated seabird captures of longline fishery in the area of 25°S - 30°S during 2020-2024.

Year	Fishing effort				Observed seabird hooked	
	Number of vessels	Number of hooks	Observed hooks	% hooks observed	Number	Rate
2020	99	15,392,455	1,503,987	9.8%	0	0.000
2021	38	4,671,972	308,049	6.6%	1	0.003
2022	27	3,775,512	184,777	4.9%	0	0.000
2023	27	3,326,436	153,346	4.6%	0	0.000
2024*	22	3,807,691	138,037	3.6%	0	0.000

*Preliminary

Table 11. The fishing efforts, observed and estimated seabird captures of longline fishery in the area of north of 23°N during 2020-2024.

Year	Fishing effort				Observed seabird hooked	
	Number of vessels	Number of hooks	Observed hooks	% hooks observed	Number	Rate
2020	205	28,842,954	1,527,417	5.3%	46	0.030
2021	109	16,723,505	868,928	5.2%	59	0.068
2022	122	18,228,114	1,175,641	6.4%	89	0.076
2023	161	23,305,003	193,070	0.8%	6	0.031
2024*	169	25,031,526	804,416	3.2%	54	0.067

*Preliminary

Table 12. The fishing efforts, observed and estimated seabird captures of longline fishery in the area of 23°N - 25°S during 2020-2024.

Year	Fishing effort				Observed seabird hooked	
	Number of vessels	Number of hooks	Observed hooks	% hooks observed	Number	Rate
2020	488	107,115,471	5,001,143	4.7%	0	0.000
2021	392	107,274,154	7,441,365	6.9%	0	0.000
2022	394	122,731,517	7,913,557	6.4%	4	0.001
2023	380	107,175,985	5,199,977	4.9%	2	0.000
2024*	394	98,992,611	4,671,238	4.7%	3	0.001

*Preliminary

Table 13. Proportion of mitigation types used by longline fishery in 2020.

	Combination of Mitigation Measures*	Proportion of observed effort using mitigation measures			
		South of 30°S	25°S - 30°S	25°S - 23°N	North of 23°N
	No mitigation measures	0.0%	0.0%	0.0%	0.0%
Options required south of 25°S	TL + NS	0.0%	0.0%	0.0%	0.0%
	TL + WB	30.8%	11.9%	0.4%	28.9%
	NS + WB	69.2%	67.7%	82.2%	8.1%
	TL + WB + NS	0.0%	0.3%	0.0%	21.5%
	HS				
Other options 25°S-30°S	WB		20.2%	17.4%	27.3%
	TL		0.0%	0.0%	0.0%
Other options north of 23°N	SS/BC/WB/DSLS				
	SS/BC/WB/(MOD or BDB)				
Provide any other combination of mitigation measures here	TL+TL+WB				6.8%
	TL+WB+MOD				7.5%
	Totals	100.0%	100.0%	100.0%	100.0%

*TL = tori line, NS = night setting, WB = weighted branch lines, SS = side setting, BC = bird curtain, BDB = blue dyed bait, DSLS = deep setting line shooter, MOD = management of offal discharge, HS = hook-shielding device.

Table 14. Proportion of mitigation types used by longline fishery in 2021.

	Combination of Mitigation Measures*	Proportion of observed effort using mitigation measures			
		South of 30°S	25°S - 30°S	25°S - 23°N	North of 23°N
	No mitigation measures	0.0%	0.0%	0.0%	0.0%
Options required south of 25°S	TL + NS	0.0%	0.0%	0.0%	0.0%
	TL + WB	76.5%	36.0%	0.2%	5.7%
	NS + WB	23.5%	52.0%	68.4%	11.9%
	TL + WB + NS	0.0%	2.0%	0.0%	1.4%
	HS				
Other options 25°S-30°S	WB		10.0%	31.4%	47.6%
	TL		0.0%	0.0%	0.0%
Other options north of 23°N	SS/BC/WB/DSLS				
	SS/BC/WB/(MOD or BDB)				
Provide any other combination of mitigation measures here	TL+TL+WB				2.9%
	TL+WB+MOD				30.5%
	Totals	100.0%	100.0%	100.0%	100.0%

*TL = tori line, NS = night setting, WB = weighted branch lines, SS = side setting, BC = bird curtain, BDB = blue dyed bait, DSLS = deep setting line shooter, MOD = management of offal discharge, HS = hook-shielding device.

Table 15. Proportion of mitigation types used by longline fishery in 2022.

	Combination of Mitigation Measures*	Proportion of observed effort using mitigation measures			
		South of 30°S	25°S - 30°S	25°S - 23°N	North of 23°N
	No mitigation measures	0.0%	0.0%	0.0%	0.0%
Options required south of 25°S	TL + NS	0.0%	0.0%	0.0%	0.0%
	TL + WB	10.7%	0.0%	0.0%	36.1%
	NS + WB	89.3%	50.0%	74.3%	0.6%
	TL + WB + NS	0.0%	0.0%	0.0%	11.6%
	HS				
Other options 25°S-30°S	WB		50.0%	25.7%	43.0%
	TL		0.0%	0.0%	0.0%
Other options north of 23°N	SS/BC/WB/DSLS				
	SS/BC/WB/(MOD or BDB)				
Provide any other combination of mitigation measures here	TL+TL+WB				1.7%
	TL+WB+MOD				7.2%
	Totals	100.0%	100.0%	100.0%	100.0%

*TL = tori line, NS = night setting, WB = weighted branch lines, SS = side setting, BC = bird curtain, BDB = blue dyed bait, DSLS = deep setting line shooter, MOD = management of offal discharge, HS = hook-shielding device.

Table 16. Proportion of mitigation types used by longline fishery in 2023.

	Combination of Mitigation Measures*	Proportion of observed effort using mitigation measures			
		South of 30°S	25°S - 30°S	25°S - 23°N	North of 23°N
	No mitigation measures	0.0%	0.0%	0.0%	0.0%
Options required south of 25°S	TL + NS	0.0%	0.0%	0.0%	0.0%
	TL + WB	70.0%	3.3%	0.0%	1.9%
	NS + WB	0.0%	65.6%	79.4%	4.4%
	TL + WB + NS	30.0%	4.9%	0.0%	0.0%
	HS				
Other options 25°S-30°S	WB		26.2%	20.6%	71.1%
	TL		0.0%	0.0%	0.0%
Other options north of 23°N	SS/BC/WB/DSLS				
	SS/BC/WB/(MOD or BDB)				
Provide any other combination of mitigation measures here	TL+TL+WB				0.6%
	TL+WB+MOD				22.0%
	Totals	100.0%	100.0%	100.0%	100.0%

*TL = tori line, NS = night setting, WB = weighted branch lines, SS = side setting, BC = bird curtain, BDB = blue dyed bait, DSLS = deep setting line shooter, MOD = management of offal discharge, HS = hook-shielding device.

Table 17. Proportion of mitigation types used by longline fishery in 2024**.

	Combination of Mitigation Measures*	Proportion of observed effort using mitigation measures			
		South of 30°S	25°S - 30°S	25°S - 23°N	North of 23°N
	No mitigation measures	0.0%	0.0%	0.0%	0.0%
Options required south of 25°S	TL + NS	0.0%	0.0%	0.0%	0.0%
	TL + WB	0.0%	93.8%	0.0%	21.9%
	NS + WB	0.0%	0.0%	81.2%	4.8%
	TL + WB + NS	0.0%	0.0%	0.0%	20.7%
	HS				
Other options 25°S-30°S	WB		6.3%	18.8%	6.3%
	TL		0.0%	0.0%	0.0%
Other options north of 23°N	SS/BC/WB/DSLS				
	SS/BC/WB/(MOD or BDB)				
Provide any other combination of mitigation measures here	TL+TL+WB				22.4%
	TL+WB+MOD				23.9%
	Totals	0.0%	100.0%	100.0%	100.0%

*TL = tori line, NS = night setting, WB = weighted branch lines, SS = side setting, BC = bird curtain, BDB = blue dyed bait, DSLS = deep setting line shooter, MOD = management of offal discharge, HS = hook-shielding device.
**Preliminary

Table 18. Number of observed seabirds captured of tuna longline fishery by species and by area during 2020-2024.

Year	Species	South of 30°S	25°S - 30°S	North of 23°N	23°N - 25°S	Total
2020	Black-footed albatross	0	0	9	0	9
	Laysan albatross	0	0	36	0	36
	Northern royal albatross	1	0	0	0	1
	Petrels nei	0	0	1	0	1
	Wandering albatross	2	0	0	0	2
	Westland petrel	1	0	0	0	1
	Total	4	0	46	0	50
2021	Black-browed albatross	0	1	0	0	1
	Black-footed albatross	0	0	1	0	1
	Laysan albatross	0	0	58	0	58
	Total	0	1	59	0	60
2022	Antipodean albatross	1	0	0	0	1
	Black-footed albatross	0	0	24	0	24
	Boobies and gannets nei	0	0	0	2	2
	Great shearwater	0	0	0	1	1
	Grey petrel	1	0	0	0	1
	Laysan albatross	0	0	65	0	65
	Wandering albatross	1	0	0	0	1
	Other seabird	0	0	0	1	1
	Total	3	0	89	4	96
2023	Black-browed albatross	5	0	0	0	5
	Great shearwater	0	0	0	1	1
	Grey-headed albatross	1	0	0	0	1
	Wandering albatross	1	0	0	0	1
	Westland petrel	1	0	0	0	1
	Other seabird	0	0	0	1	1
	Total	8	0	0	2	10
2024*	Ascension Frigatebird	0	0	0	1	1
	Black-browed albatross	0	5	0	0	5
	Black-footed albatross	0	13	0	0	13
	Frigate bird	0	0	0	1	1
	Laysan albatross	0	36	0	1	37
	Total	0	54	0	3	57

*Preliminary

Table 19. The catch of striped marlin of tuna longline fisheries in the area of south of 15°S during 2020-2024.

Year	Catch (MT)
2020	306
2021	154
2022	150
2023	176
2024*	117

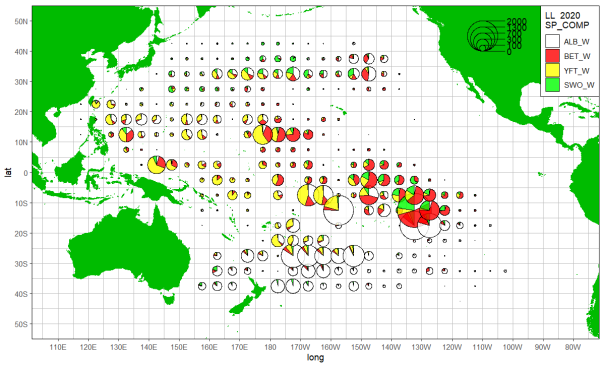
*Preliminary

Table 20. Average annual fishing effort for 2008-2010 and annual fishing effort for subsequent years for fisheries taking North Pacific swordfish for the previous 3-years.

Area	Fishery (gear type)	2008-2010 Average			2022			2023			2024*		
		Catch (t)	No. of vessels	Fishing days	Catch (t)	No. of vessels	Fishing days	Catch (t)	No. of vessels	Fishing days	Catch (t)	No. of vessels	Fishing days
CA north of 20°N (The area)	Setnet	31			0.587			1.008			1.008		
	Gillnet	6			2.608			0.422			0.422		
	Harpoon	37			0			0			0		
	Coastal artisanal longline	610	673		279	277		489	383		267	483	
	Longline	611	633	30,031	402	190	10,522	631	230	14,272	625	251	15,511
	Total	**1,295**			684			1,121			893		

*All swordfish were bycatch. Data of 2024 are still preliminary.

2020



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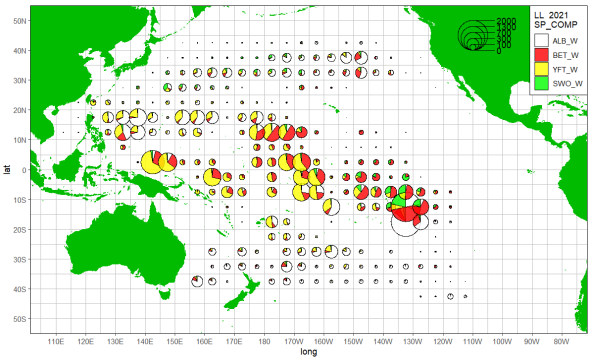

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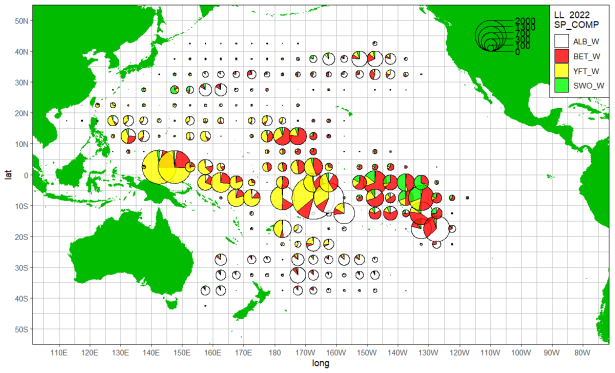

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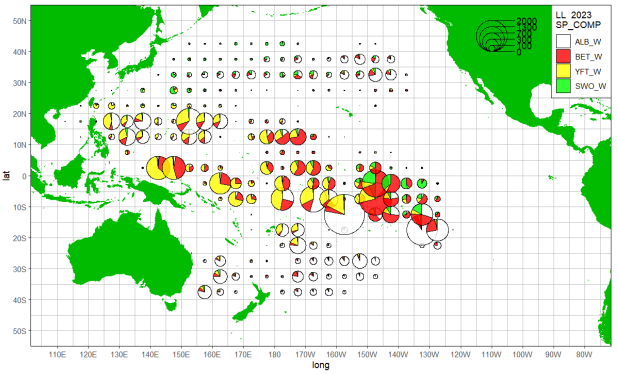

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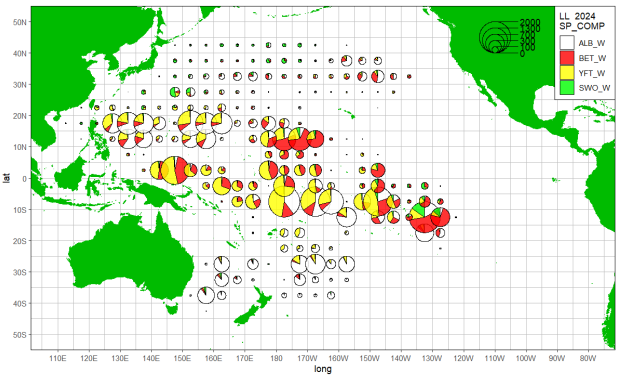
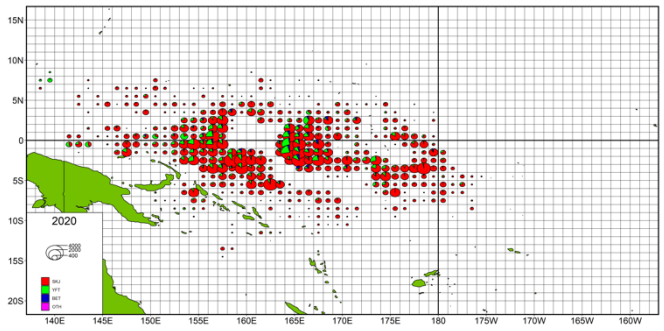
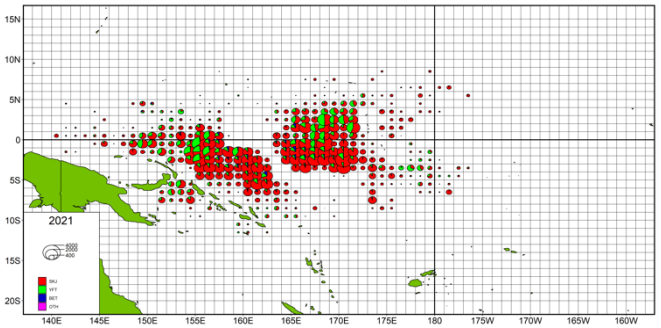


Figure 1. The catch composition distributions of tuna and tuna-like species of LL fishery during 2020-2024. The figures of 2023 and 2024 are still in preliminary.



2020



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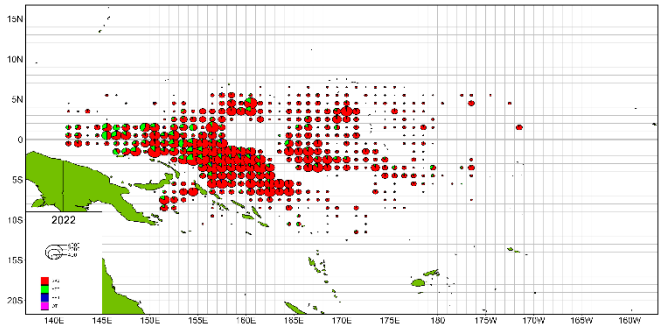

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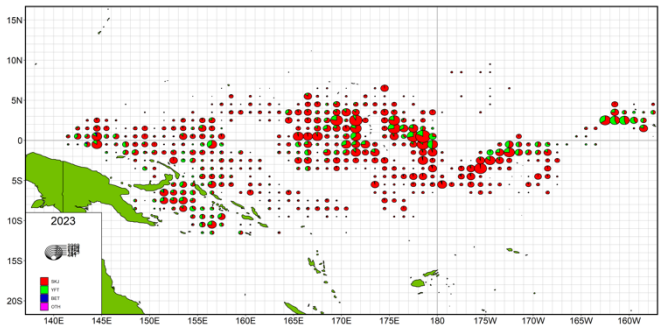
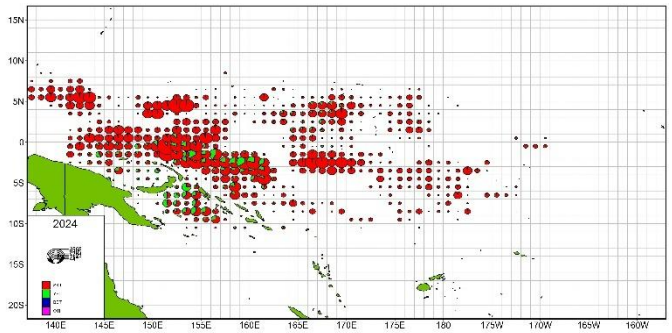


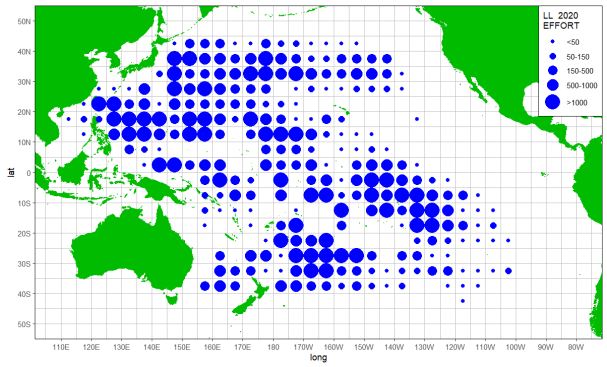
2023



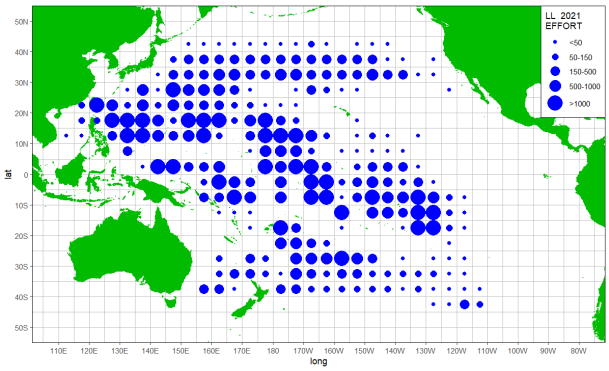
2024

Figure 2. The catch composition distributions of PS fleet during 2020-2024.

2020



2021



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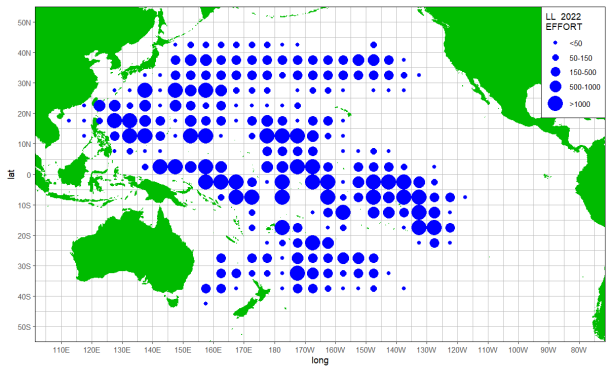

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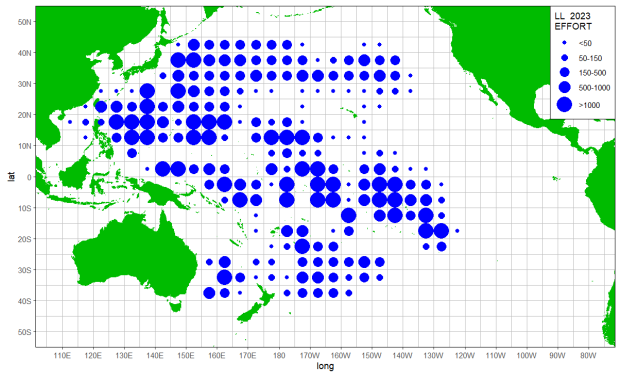

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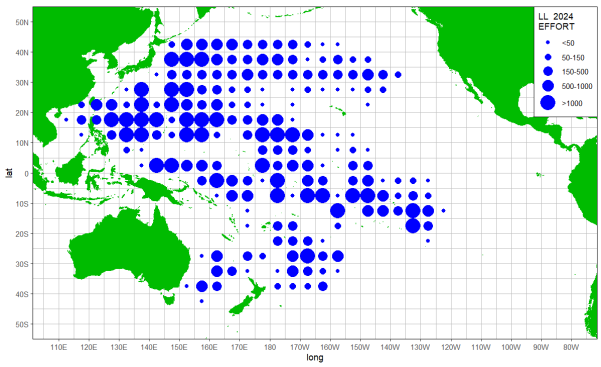
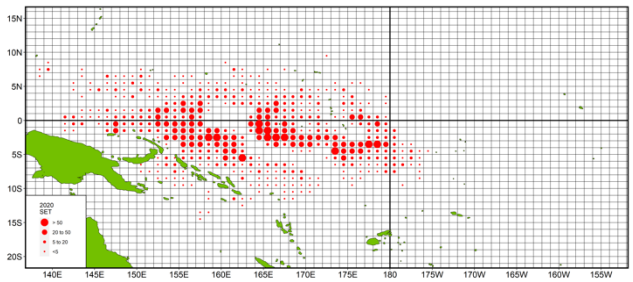
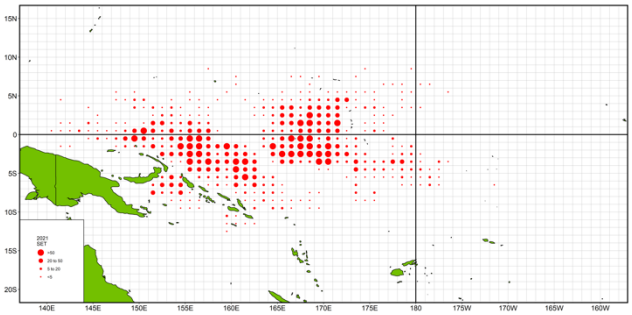


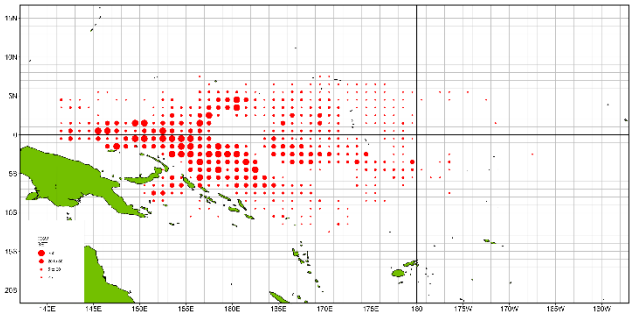
Figure 3. The fishing effort distributions of LL fishery during 2020-2024. The figures of 2023 and 2024 are still in preliminary.



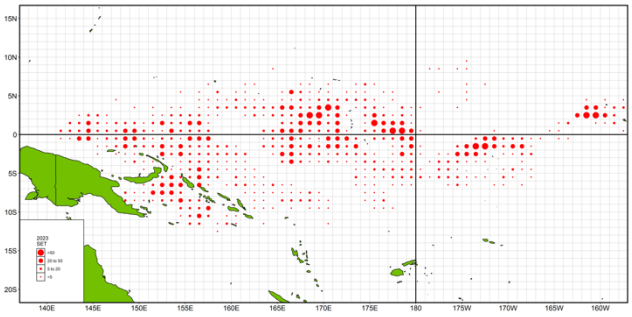
2020



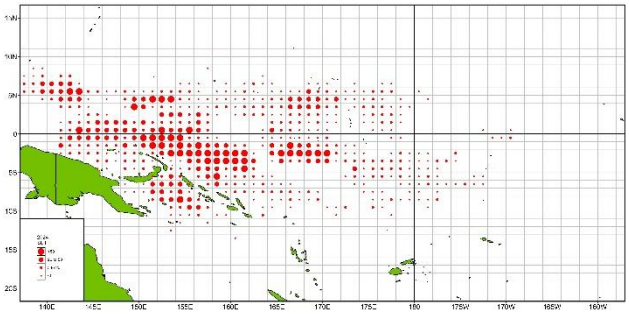
2021



2022



2023



2024

Figure 4. The fishing effort distributions of PS fleet during 2020-2024.