A Summary of North Pacific Albacore Tuna Fishery Data Reported by Non-ISC Countries[1]

Sarah Hawkshaw

Fisheries and Oceans Canada
Institute of Ocean Sciences
9860 West Saanich Road
Sidney, BC, Canada V8L 4B2

Email: Sarah.Hawkshaw@dfo-mpo.gc.ca

1. This working paper was submitted to the ISC Albacore Working Group Intercessional Workshop, October 27 – November 2, 2025, held at the National Research Institute of Fisheries Science, Yokohama, Japan.

ABSTRACT

The Albacore Working Group (ALBWG) of the International Scientific Committee on Tuna and Tuna-like Species in the North Pacific Ocean (ISC) will be conducting a benchmark assessment of the North Pacific albacore stock (NPALB) in 2026. This Working Paper summarizes the annual catch, size composition, and the spatial distribution of catch from 1994 to 2024 reported for NPALB by countries that do not submit data directly to the ISC. These countries do submit data directly to the two Regional Fisheries Management Organizations (RFMOs) responsible for the management of NPALB: the Inter-American Tropical Tuna Commission (IATTC) and the Western and Central Pacific Fisheries Commission (WCPFC). These two data sources were reviewed for the inclusion in the upcoming 2026 stock assessment. Several non-ISC countries have reported catches of NPALB but China and Vanuatu had the most significant catches throughout the timeseries. These data were also compared to data used in the 2017, 2020 and 2023 stock assessments. Relatively large differences in the catches of China and Vanuatu longline fleets were noted between 2017 and 2020 (**ISC/20/ALBWG-01/04**) but no difference was found between the 2020 and 2023 catch data reported by China and only minor differences in the Vanuatu catches in some years (**ISC/23/ALBWG-01/03**). It was also found that Vanuatu had some significant catches reported in numbers of fish, rather than in weight, in the IATTC area in recent years, 2020-2024.

INTRODUCTION

The Albacore Working Group (ALBWG) of the International Scientific Committee on Tuna and Tuna-like Species in the North Pacific Ocean (ISC) will be conducting a benchmark assessment of the North Pacific albacore stock (NPALB) in 2026. The ALBWG will be examining updated NPALB fishery datasets from 1994 to 2024 in this updated analysis. The majority of countries that have significant NPALB fisheries participate in the ISC and submit their fisheries data directly, however, there are several countries that catch NPALB in their fisheries but do not participate in the ISC. These countries do, however, submit data directly to the two Regional Fisheries Management Organizations (RFMOs) responsible for the management of NPALB: the Inter-American Tropical Tuna Commission (IATTC) and the Western and Central Pacific Fisheries Commission (WCPFC). The objectives of this Working Paper are to summarize the NPALB catch, spatial distribution, and size composition data submitted annually by the non-ISC countries to the IATTC and WCPFC, compare the data submitted by non-ISC countries in 2025 to that used in previous stock assessments, and make recommendations about which data should be included in the 2026 updated stock assessment.

METHODS

ISC countries include: Canada, Japan, Korea, Mexico, Taiwan and US. All other countries that catch NPALB are considered non-ISC countries.

Three types of data are available for the non-ISC countries:

1. Annual catch (Category I);
2. Spatial distribution of monthly catch and effort (Category II); and
3. Size composition data (Category III)

These datasets were requested for the western and central Pacific Ocean from the Secretariat of the Pacific Community (SPC; The science service provider WCPFC) and were received from the data manager, on September 19, 2025. For the eastern Pacific Ocean (east of 150°W longitude) these data were downloaded from the IATTC website (https://www.iattc.org/en-US/Data/Public-domain) on 18 October 2025. The data

from both sources were combined into single dataset, any values from the south Pacific were removed, and the data were configured to quarterly time steps annually and the fleet structure used in the 2023 stock assessment.

RESULTS

Catch and Effort Data

Nine (9) non-ISC countries (Belize, China, Panama, Vanuatu, Federated States of Micronesia, Marshall Islands, Kiribati, Palau, and Fiji) reported catches of NPALB between 1994 and 2024 (Figure 1). The majority of the non-ISC NPALB catch reported was from China and Vanuatu longline fleets. In 2020 the ALBWG compared the non-ISC catch data submitted to the WCPFC and IATTC in 2017 with the data used in the 2020 stock assessment (**ISC/20/ALBWG-01/04**). There appeared to be relatively large differences in the catches of China and Vanuatu longline fleets between 2017 and 2020 and the cause for this could not be identified. In 2023 there were no differences in the data submitted by China compared to the 2020 data submission, however the data submitted by Vanuatu was slightly different from that submitted in 2020 (**ISC/23/ALBWG-01/03**). For the 2026 stock assessment the data for China showed a very minor difference from the 2021 catch data from the 2023 stock assessment. The data submitted by Vanuatu again was slightly different from that submitted in 2023, however the differences were less than between 2020 and 2023 stock assessments. The largest differences were reported in 2020 and 2021. The source of these differences in Vanuatu catch data submissions are still unclear.

China and Vanuatu were the only non-ISC countries that had substantial NPALB catches when disaggregated to quarters (Figure 2). Similar to previous stock assessments, all non-ISC countries catches, besides China, were combined with Vanuatu catches. China reported similar annual catches amongst the four quarters while catches by the Vanuatu longline fishery occur primarily in the first and fourth quarters.

All non-ISC countries other than China and Vanuatu reported longline effort in the north Pacific Ocean mostly in equatorial waters (0-5°N) where tropical tuna species are targeted rather than NPALB.

Spatial and Seasonal Distribution of Catch

The China and Vanuatu longline fleets operated in both the IATTC and the WCPFC areas (Figures 4-7).

Before 2001 the Chinese longline fleet only operated in a small part of the WCPFC area (Figure 4). In 2001 the fleet expanded into the eastern Pacific ocean IATTC area (Figure 5) and catches increased substantially after 2010. In the WCPFC area the distribution of the catch is fairly even across the seasons in the last four years of data (Figure 6). In most years the catch occurs in all seasons in the IATTC area and in the last 4 years of data there was slightly more catch seen in seasons 2 and 3 (Figure 7).

Before 2007 the Vanuatu longline fleet reported spatial catch data only in the WCPFC area (Figure 8) and then expanded into the eastern Pacific Ocean IATTC area (Figure 9). Since 2016 the majority of catch by the Vanuatu fleet has been reported in numbers of fish rather than metric tonnes. The majority of the Vanuatu reported catch occurred in the seasons 1 and 4 (Figures 2 and 3) in both the WCPFC (Figure 10) and the IATTC (Figure 11).

Size Composition Data

Six non-ISC countries have reported fork length measurements for north Pacific albacore in 1994-2024 (Table 2). Only the data from the China fishery were abundant enough to be considered in analyses (Figure

12 and 13). Catch size composition data reported by China in northern areas north of 30°N (Figure 12) was not as abundant as in the southern areas, south of 30°N (Figure 13). The size data collection from the China and Vanuatu fleets are not documented and it is still uncertain if the collection program is sufficient enough to include in the NPALB stock assessment.

TABLES

Table 1. Comparison of the NPALB total catch provided by the SPC and IATTC for China and Vanuatu for the 2017 (**ISC/20/ALBWG-01/04**), 2020 and 2023 (**ISC/23/ALBWG-01/03)** stock assessments.

Year	Quarter	China Catch (t)					Vanuatu Catch (t)				
		2020	2023	Δ	2026	Δ	2020	2023	Δ	2026	Δ
2010	1	121	121	0	121	0	844	868	25	868	0
2010	2	182	182	0	182	0	69	71	2	71	0
2010	3	228	228	0	228	0	4	5	0	5	0
2010	4	380	380	0	380	0	1432	1477	45	1477	0
2011	1	754	754	0	754	0	2671	2739	68	2738	0
2011	2	1045	1045	0	1045	0	138	142	4	142	0
2011	3	420	420	0	420	0	10	11	0	11	0
2011	4	620	620	0	620	0	738	759	22	759	0
2012	1	1867	1867	0	1867	0	749	779	30	779	0
2012	2	840	840	0	840	0	9	9	0	9	0
2012	3	837	837	0	837	0	0	0	0	0	0
2012	4	1712	1712	0	1712	0	1374	1420	46	1420	0
2013	1	1443	1443	0	1443	0	1652	1727	74	1727	0
2013	2	637	637	0	637	0	185	191	6	191	0
2013	3	670	670	0	670	0	257	257	0	257	0
2013	4	505	505	0	505	0	778	808	30	808	0
2014	1	368	368	0	368	0	1542	1547	5	1541	-6
2014	2	268	268	0	268	0	107	107	0	107	0
2014	3	304	304	0	304	0	247	248	1	247	-1
2014	4	820	820	0	820	0	989	993	4	988	-4
2015	1	474	474	0	474	0	2259	2144	-115	2175	31
2015	2	551	551	0	551	0	231	220	-11	223	3
2015	3	149	149	0	149	0	29	29	0	29	0
2015	4	549	549	0	549	0	822	780	-42	791	11
2016	1	286	286	0	286	0	775	775	0	777	1
2016	2	44	44	0	44	0	7	7	0	7	0
2016	3	36	36	0	36	0	0	0	0	0	0
2016	4	318	318	0	318	0	456	456	0	456	1
2017	1	200	200	0	200	0	556	583	27	584	0
2017	2	136	136	0	136	0	3	3	0	3	0
2017	3	230	230	0	230	0	4	4	0	4	0
2017	4	402	402	0	402	0	1186	1244	58	1245	1
2018	1	341	341	0	341	0	934	1000	66	1000	0
2018	2	139	139	0	139	0	4	5	0	5	0
2018	3	94	94	0	94	0	1	1	0	1	0
2018	4	272	272	0	272	0	574	614	40	613	-1
2019	1		767		767	0		1103		1103	0
2019	2		257		257	0		83		83	0
2019	3		89		89	0		51		51	0
2019	4		259		259	0		672		672	0
2020	1		867		867	0		761		882	122
2020	2		214		214	0		55		51	-4
2020	3		107		107	0		10		10	0
2020	4		133		133	0		766		1066	300
2021	1		342		343	1		1185		1095	-90
2021	2		244		244	0		15		13	-2
2021	3		8		8	0		10		12	2
2021	4		197		206	9		1406		1793	387

Table 2. Number of length measurements by annual quarter reported by non-ISC countries to the IATTC and WCPFC.

Country	Years	Quarter			
		1	2	3	4
China	1993 - 2024	5707	7872	16678	19130
Vanuatu	2000 - 2024	2938	606	955	7276
Federated States of Micronesia	1994 - 2024	307	670	483	752
Kiribati	2016 - 2024	25	4	11	147
Marshall Islands	1993 - 2024	181	372	215	438
Palau	2000 - 2023	1	0	12	0

FIGURES

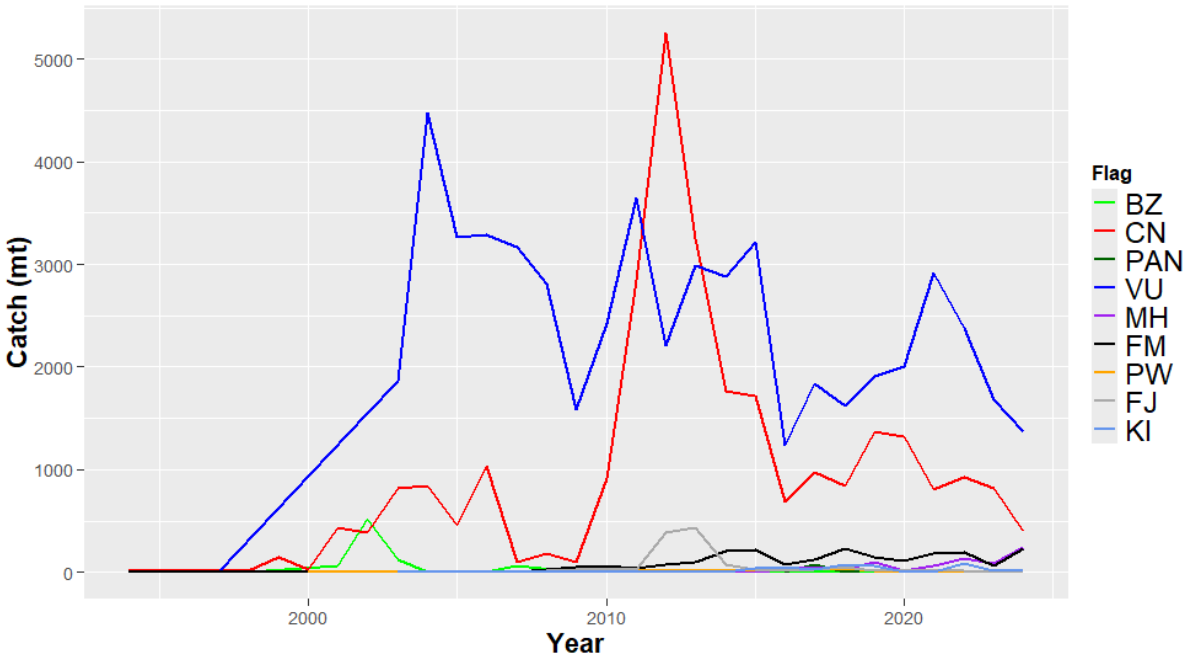

Figure 1. Annual north Pacific albacore catches (metric tonnes) reported by non-ISC countries including Belize (BZ); China (CN); Panama (PAN); Vanuatu (VU); Federated States of Micronesia (FM); Marshall Islands (MH); Kiribati (KI); Palau (PW); and Fiji (FJ).

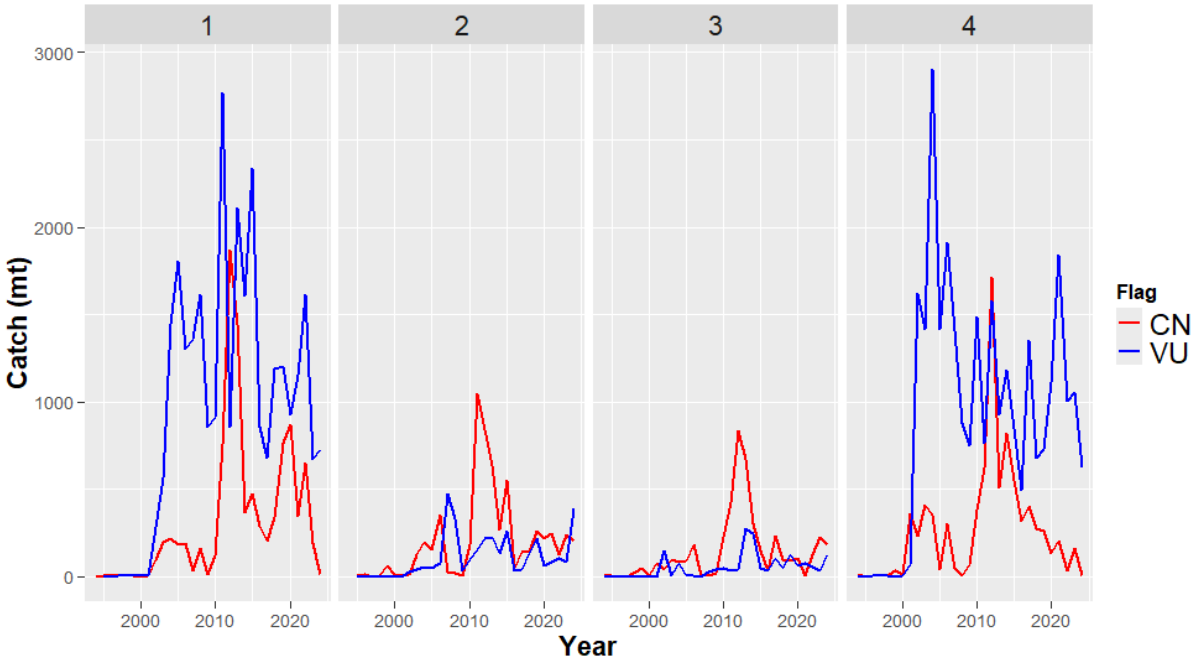

Figure 2. Annual north Pacific albacore catches (metric tonnes) by quarter reported by China (CN) and Vanuatu (VU). Note all non-ISC countries catch other then China are combined with Vanuatu catches.

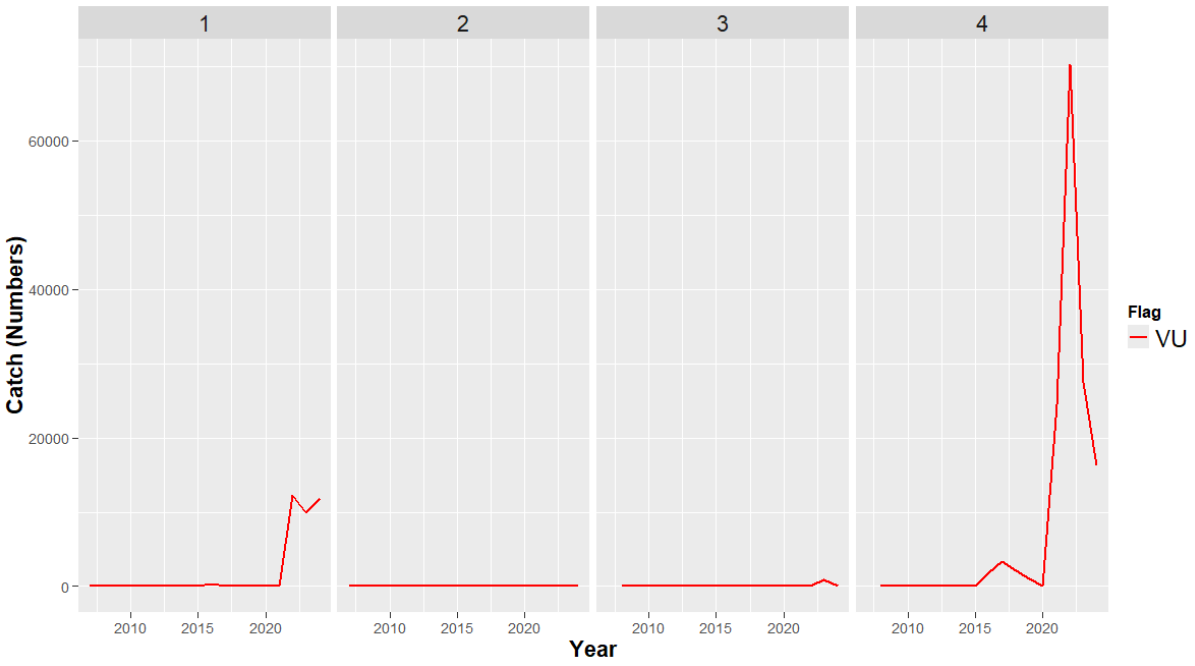

Figure 3. Annual north Pacific albacore catches (numbers) by quarter reported by Vanuatu (VU).

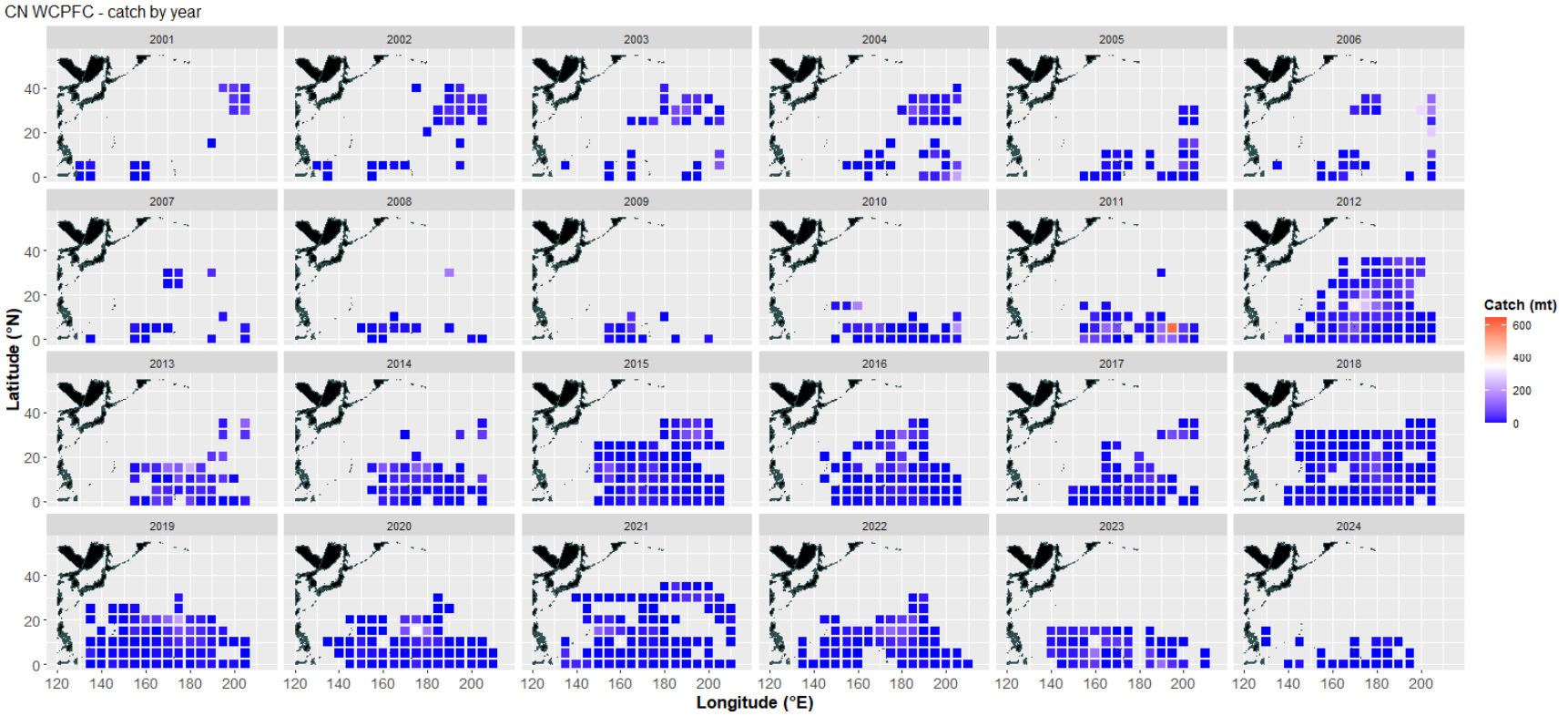

Figure 4. Spatial distribution of the annual north Pacific albacore catches (metric tonnes) reported by Chinese longline fishery (5° x 5°) in the WCPFC area.

Figure 5. Spatial distribution of the annual north Pacific albacore catches (metric tonnes) reported by Chinese longline fishery (5° x 5°) in the IATTC area.

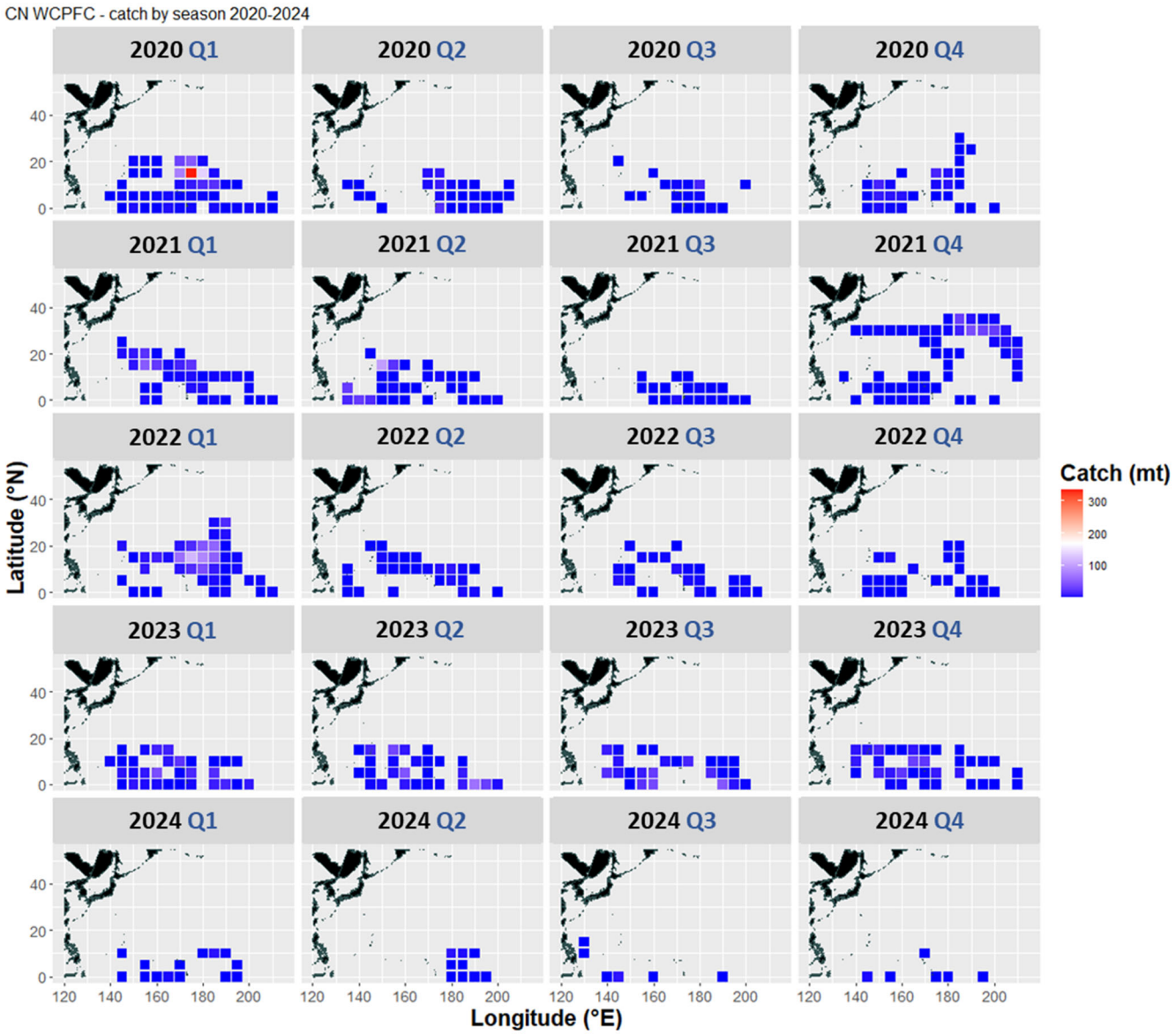

Figure 6. Annual north Pacific albacore catch in the WCPFC area by China from 2020 to 2024 by quarter.

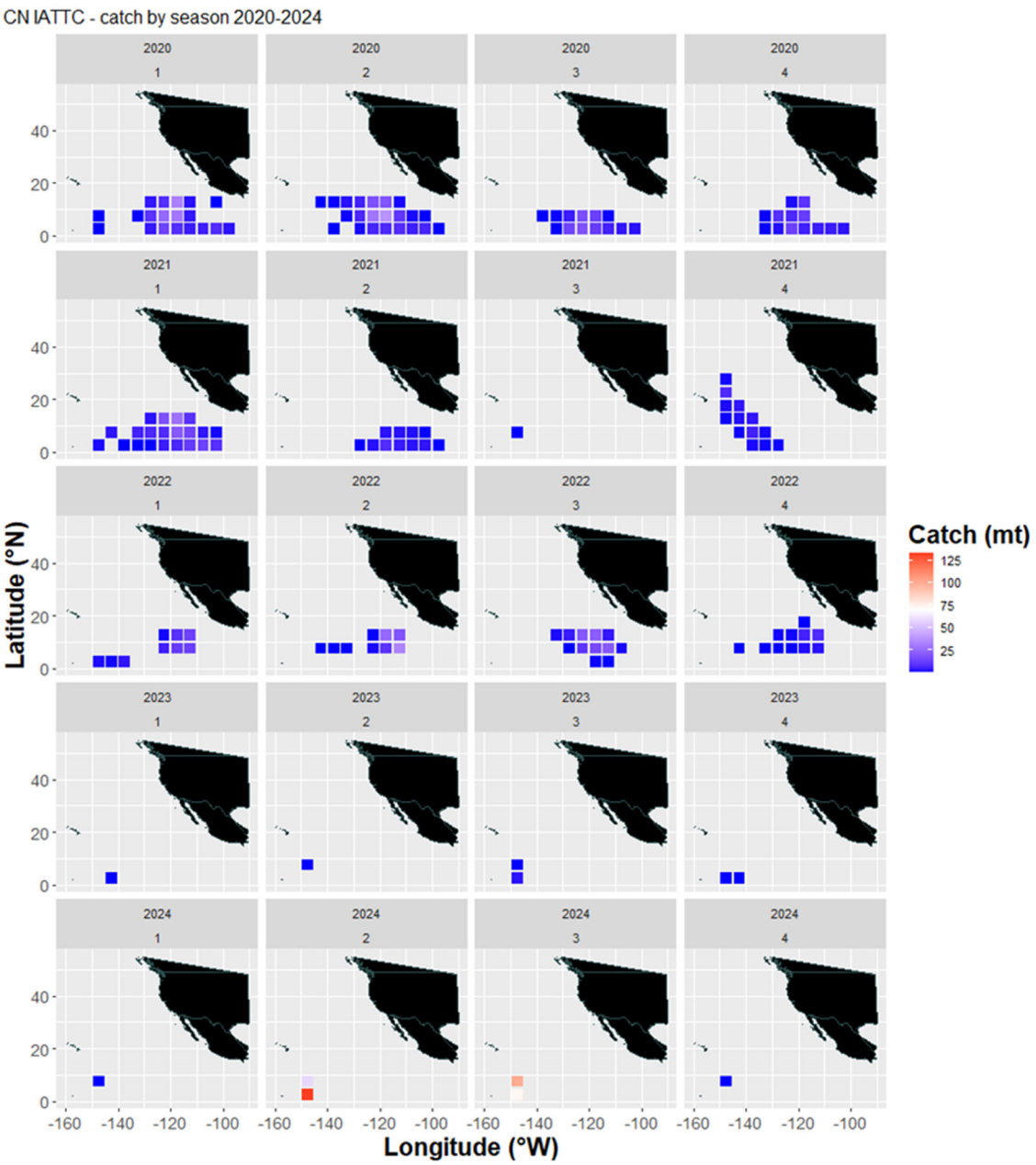

Figure 7. Annual north Pacific albacore catch in the IATTC area by China from 2018 to 2021 by and by quarter.

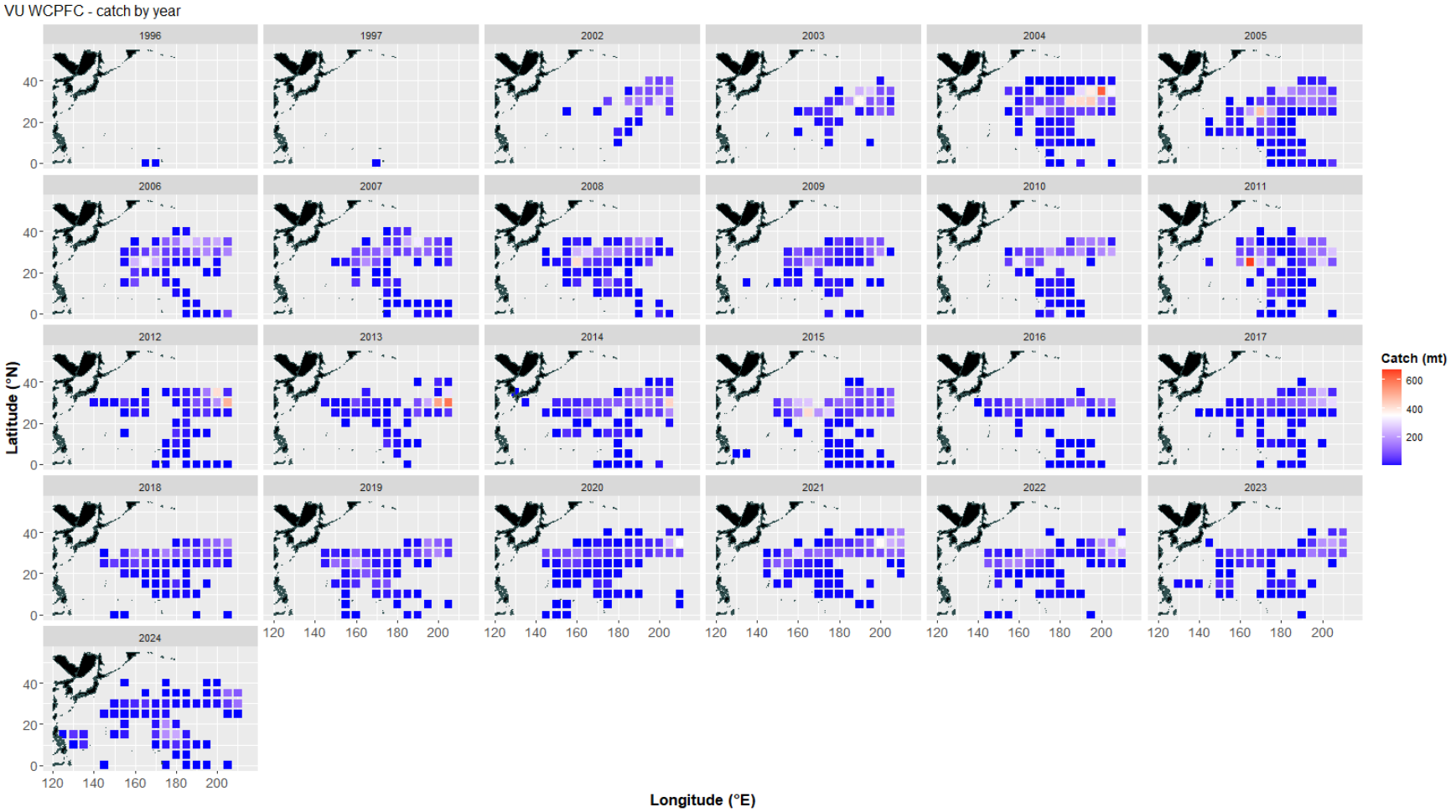

Figure 8. Spatial distribution of the annual north Pacific albacore catches (metric tonnes) reported by Vanuatu longline fishery (5° x 5°) in the WCPFC area. Note all non-ISC countries catch other then China are combined with Vanuatu catches.

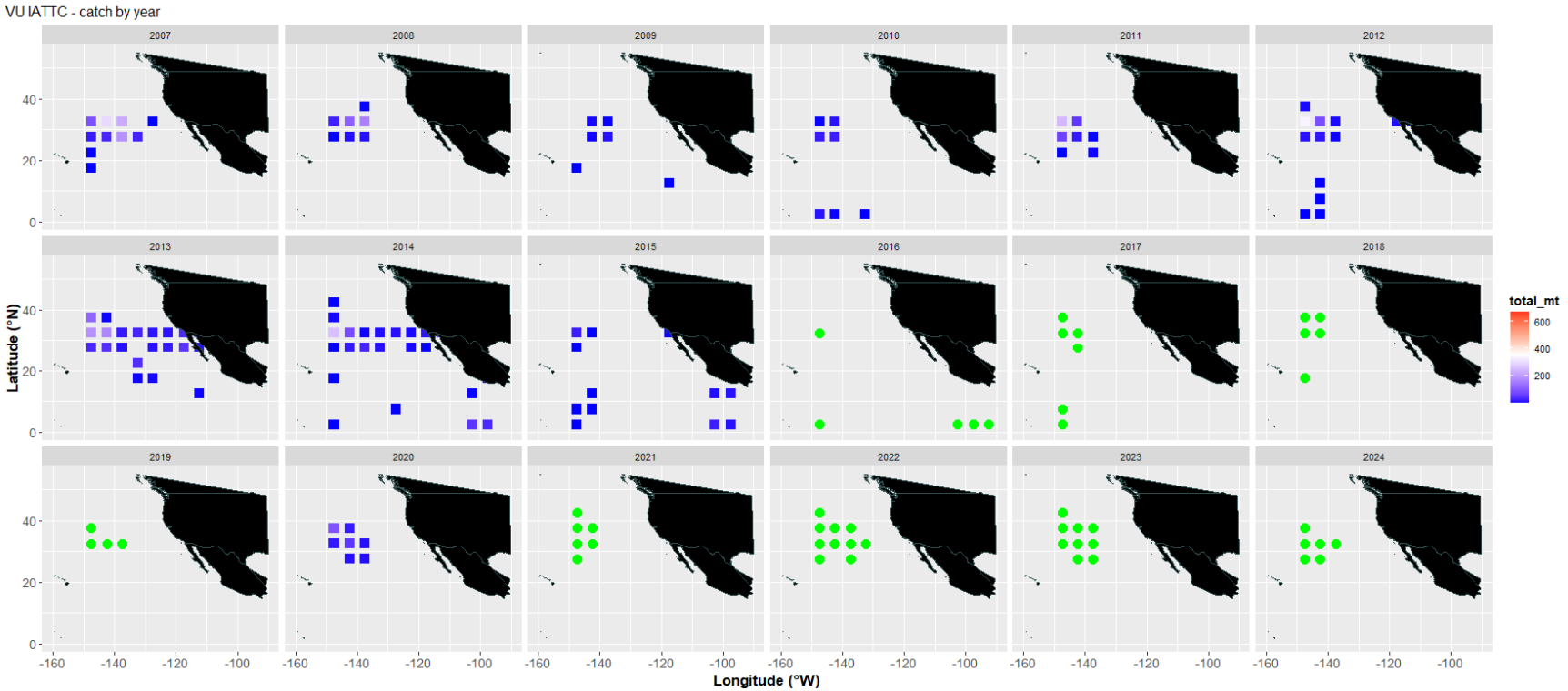

Figure 9. Spatial distribution of the annual north Pacific albacore catches (metric tonnes) reported by Vantuatu longline fishery (5° x 5°) in the IATTC area. Green circles indicate areas where catches were reported in numbers of fish.

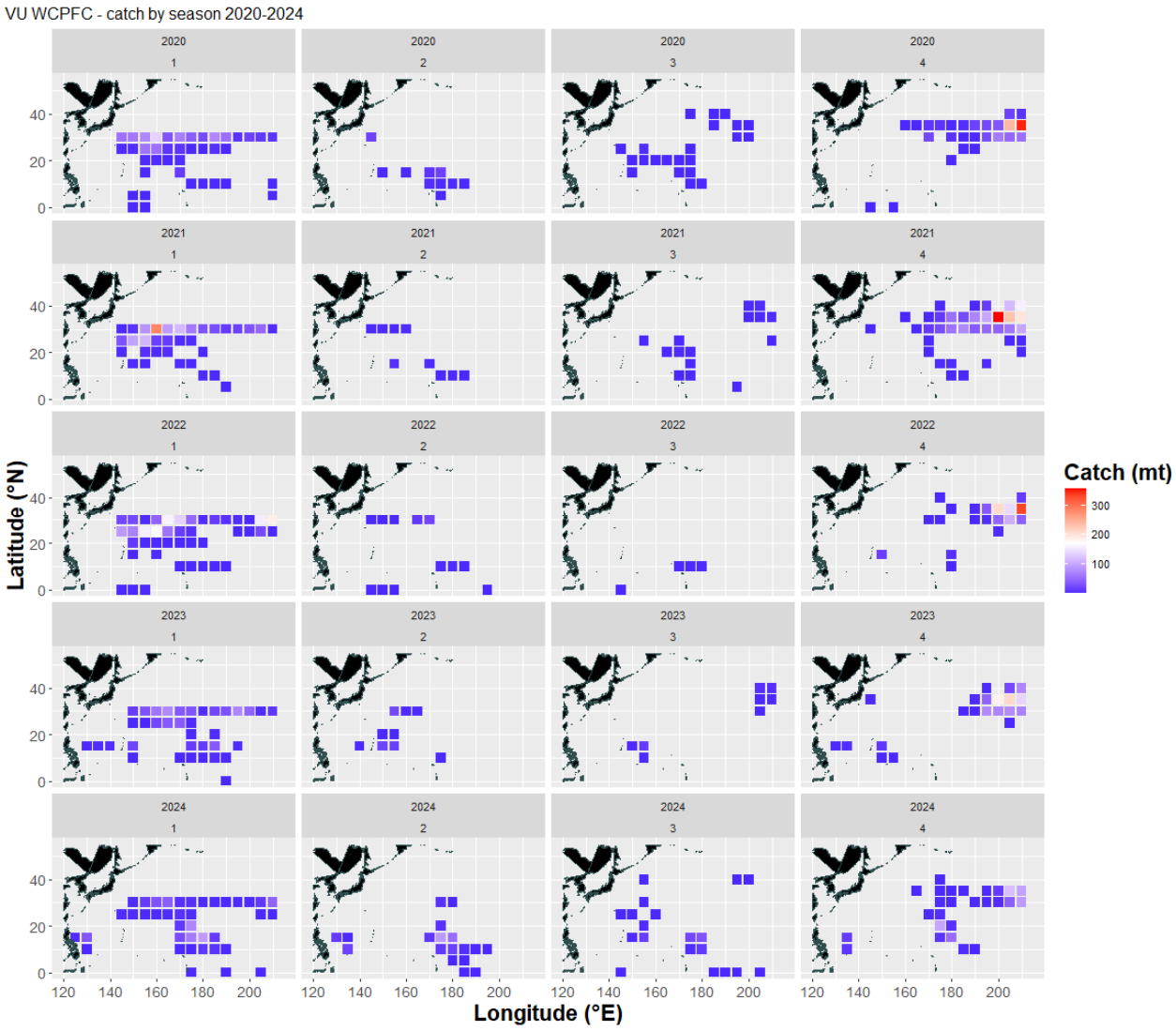

Figure 10. Annual north Pacific albacore catch in the WCPFC area by Vanuatu from 2020 to 2024 by quarter.

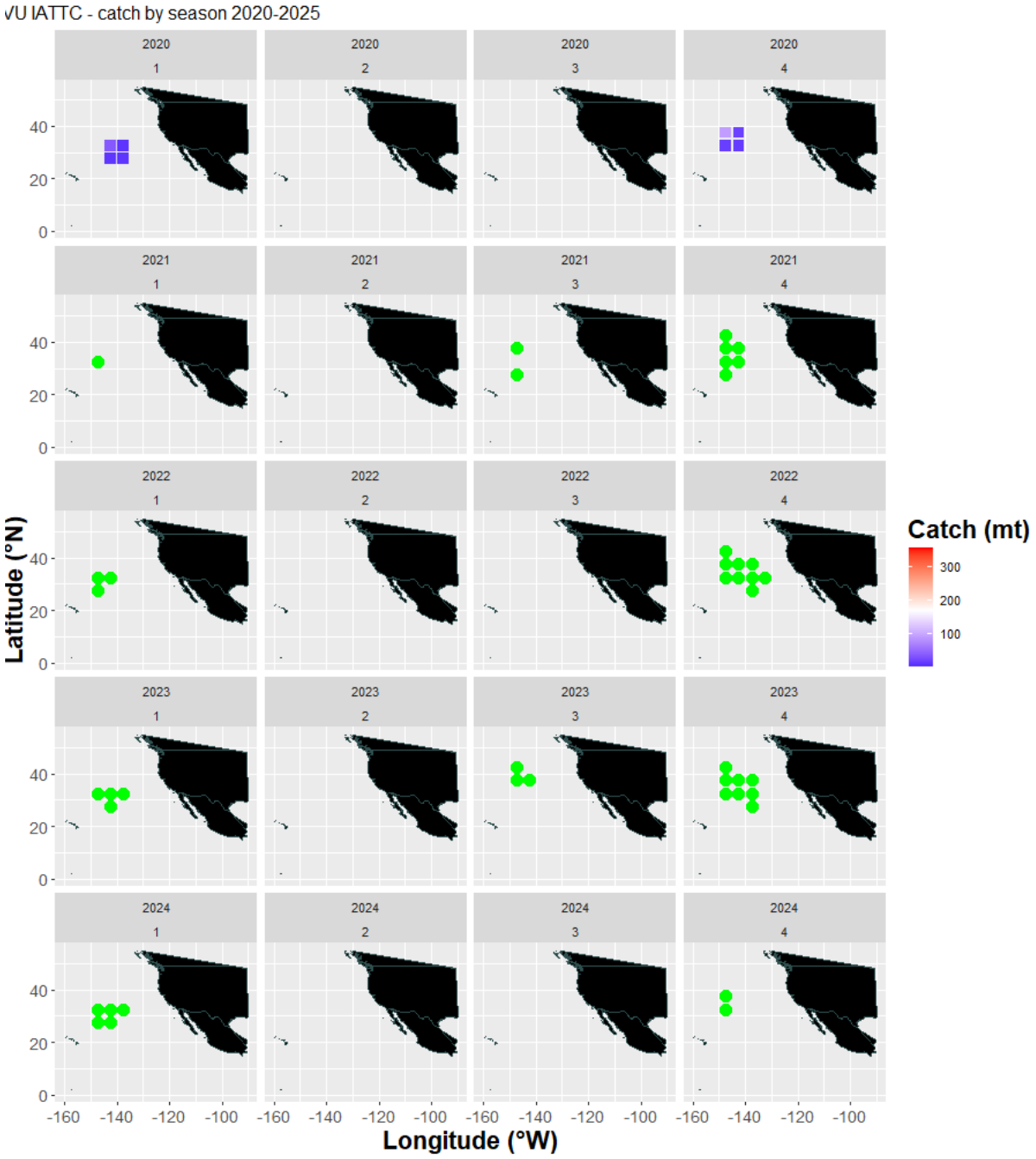

Figure 11. Annual north Pacific albacore catch in the IATTC area by Vanuatu from 2020 to 2024 by quarter. Green circles are areas where catch was reported in numbers of fish.

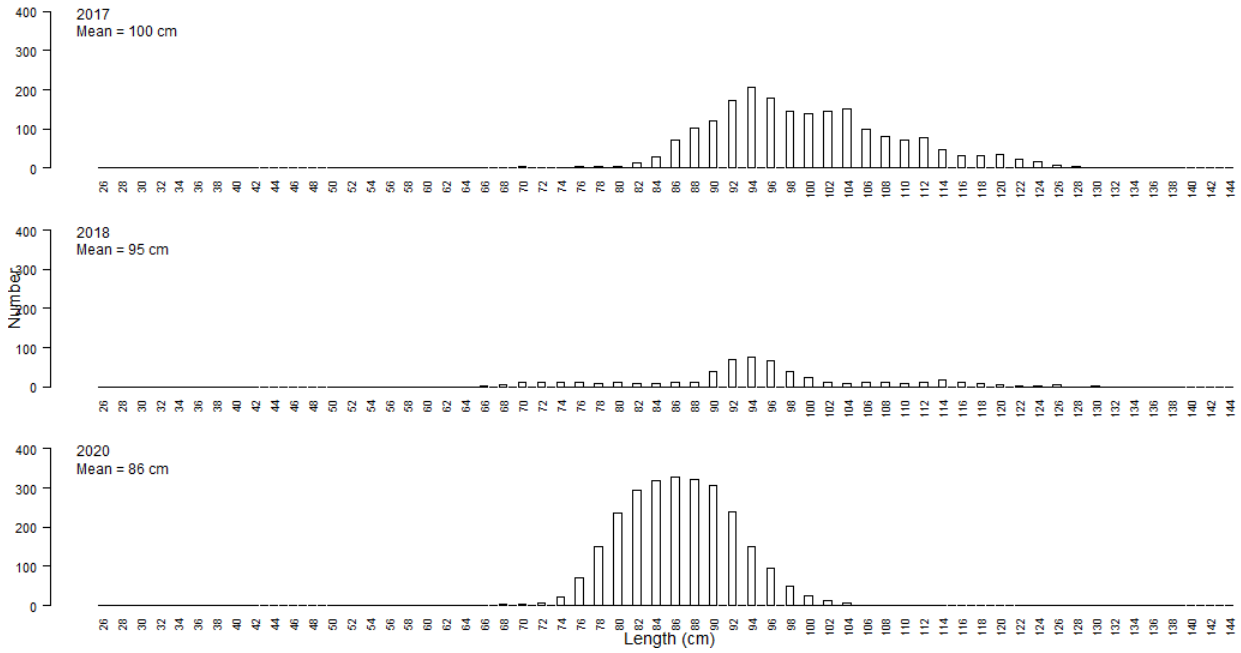

Figure 12. Annual size composition data reported for the Chinese longline fishery north of 30ºN (Areas 3/5) for the last three years of available data, 2017, 2018, and 2020.

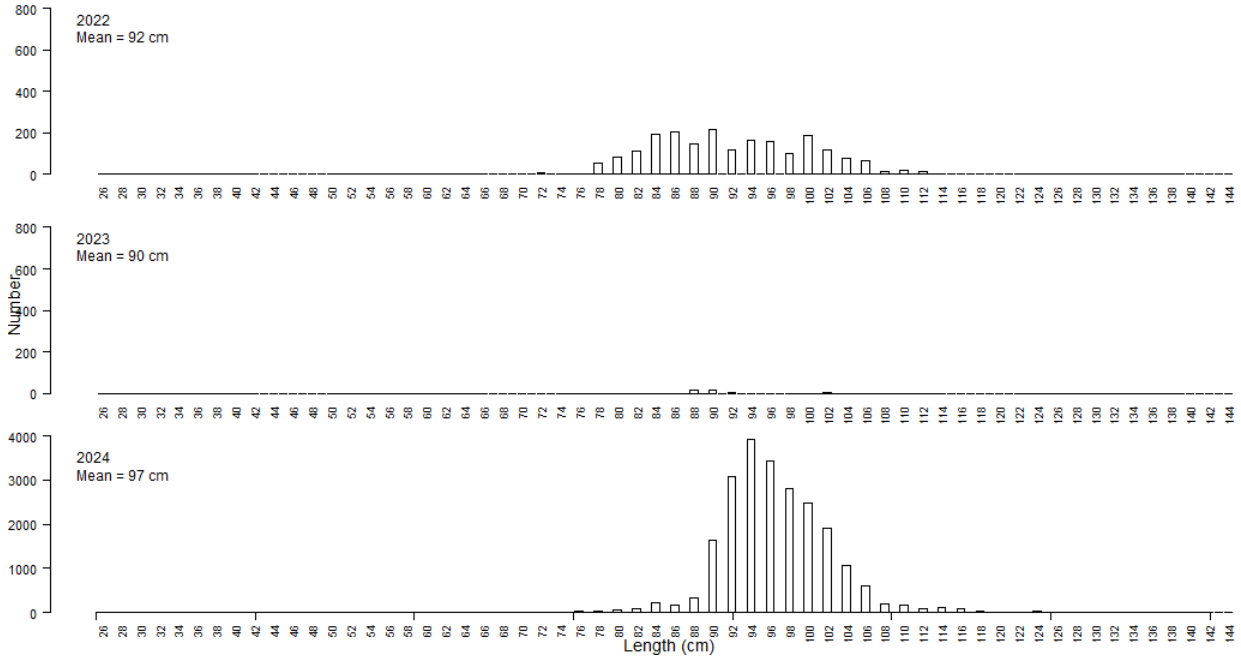

Figure 13. Annual size composition data reported for the Chinese longline fishery north of 30ºN (Area 4/2) for the last three years of data, 2022, 2023, and 2024.