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Overview of Tuna Fisheries in the Western and Central Pacific Ocean, Including Economic Conditions - 2024

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Rev 1: Updated South Pacific albacore catch values to reflect recent data updates

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Executive Summary

This paper provides a broad description of the major fisheries in the WCPFC Statistical Area (WCPFC-CA) highlighting activities during the most recent calendar year (2024) and covering the most recent summary of catch estimates by gear and species.

The provisional total WCPFC–CA tuna catch for 2024 was estimated at 3,024,149 mt, a record for the time series dating back to 1970, and substantially higher than the 2023 catch level (2,665,161 mt). The catches in 2024 were about 50,000 mt higher than the previous record catch in 2019 (2,974,314 mt). The WCPFC–CA tuna catch (3,024,149 mt) for 2024 represented 85% of the total Pacific Ocean tuna catch of 3,559,788 mt, and 54% of the global tuna catch (the provisional estimate for 2024 is 5,327,838 mt), noting that unlike other oceans, over 80% of the WCPFC–CA tuna catch occurs in the waters of coastal states.

The 2024 WCPFC–CA catch of skipjack (2,107,666 mt – 70% of the total catch) was a record high and approximately 63,000 mt higher than the previous record in 2019 (2,044,779 mt). The WCPFC–CA yellowfin catch for 2024 (677,594 mt – 22%) was 87,591 mt below the record 2021 catch (765,185 mt). The recent relatively high catches of yellowfin are partially due to the high catch levels from the 'other' category (primarily small-scale fisheries in Indonesia).

The WCPFC–CA bigeye catch for 2024 (119,021 mt – 4%) was again one of the lowest of the time series since 1990, and 13,749 mt below the 2023 catch level. The 2024 WCPFC–CA albacore catch (119,876 mt – 4%) was around 10,531 mt higher than in 2023. The provisional South Pacific albacore catch in 2024 was 74,340 mt; however, these estimates are expected to change with the addition of catches from the Eastern Pacific Ocean, which have not yet been received.

The provisional 2024 purse seine catch of 2,148,963 mt was around 49,000 mt higher than the record catch in 2019 (2,100,135 mt). With respect to species specific purse seine catches, skipjack (1,780,549 mt: 83% of the catch) was a record catch, exceeding the previous (2019) record by about 80,000 mt, yellowfin tuna (331,367 mt; 15% of the total purse seine tuna catch) was around 169,000 mt lower than the record catch in 2017 (500,506 mt) and one of the lowest catches since the mid-2000s, the 2024 provisional catch estimate for bigeye tuna (33,787 mt; 2% of the total purse seine catch) was about 8,300 mt lower than the 2023 catch and the lowest catch level since 1990. The decrease in bigeye tuna catches in the most recent year may be due to an increase in free school sets largely concentrated in the western region of the Convention Area.

The provisional 2024 pole-and-line catch (154,612 mt) was up about 41% from 2023 (109,358 mt) but remains relatively low compared to the annual catches since the early-1960s, due to reduced catches in the Japanese fishery, although we note as in previous years the provisional nature of the estimates at this stage.

The provisional WCPFC–CA longline catch (231,704 mt) for 2024 was comparable to the 2023 catch level (231,103 mt) and remains lower than the average over the previous decade. The bigeye (47,653

mt) and yellowfin (79,974 mt) components of the longline fishery decreased from 2023 catch levels - which are some of the lowest catches reported over the last two decades. Both albacore (97,850 mt) and skipjack (6,228 mt) catches were higher in 2024 than in 2023.

The South Pacific troll albacore catches in 2023 and 2024 (1,485 mt) were among the four lowest since 1980 (744 mt were reported in 1983 and 1,468 mt in 1980), largely owing to a contraction in NZ's troll fleet operating in the region. The New Zealand troll fleet (82 vessels catching 1,321 mt in 2024) and the United States troll fleet (4 vessels catching 164 mt in 2024) accounted for all of the 2024 South Pacific albacore troll catch, although minor contributions also come from the Canadian, Cook Islands and French Polynesian fleets when their fleets are active in this fishery.

In 2024, market prices for purse seine-caught tuna products declined across key markets. Thai imports averaged $1,523/mt, representing a 14% decrease from 2023 levels. Similarly, prices in Yaizu fell by 24% to $1,466/mt.

Prices for longline-caught yellowfin declined across all major markets in 2024, with the exception of fresh product from selected ports in Japan. Prices for yellowfin from Oceania dropped by 17% to $7.10/kg, while Yaizu prices declined by 13% to $4.39/kg. Frozen yellowfin from selected Japanese ports fell by 12% to $4.91/kg. In contrast, fresh yellowfin from selected ports recorded a modest increase of 3%, reaching $7.54/kg. Notably, U.S. dollar-denominated prices for yellowfin from Oceania, Yaizu, and frozen product from selected ports declined more sharply than their yen-denominated values, reflecting the appreciation of the U.S. dollar against the Japanese yen.

Prices for longline-caught bigeye declined across all major markets in 2024, with the exception of U.S. fresh import prices. In Japan, average prices for fresh bigeye from selected ports dropped by 12% to $10.84/kg, while frozen bigeye fell by 11% to $6.36/kg. Fresh imports from Oceania also saw a 16% decline, reaching $11.79/kg. In contrast, U.S. fresh bigeye import prices edged up slightly by less than 1%, from $11.52/kg in 2023 to $11.57/kg in 2024.

Albacore prices followed a similar trend. Thai import prices declined by 17% to $2.64/kg, and fresh prices from selected Japanese ports decreased by 11% to $2.90/kg. Conversely, U.S. fresh albacore prices rose by 8%, reaching $6.10/kg in 2024.

In 2024, the total estimated delivered value of the tuna catch in the WCP-CA declined by 6% to $5.6 billion. The purse seine fishery remained the dominant contributor, accounting for 61% of the total value. Similarly, the value of the longline fishery dropped significantly by 20% to $1.1 billion. The pole-and-line fishery also experienced a notable decline, with catch value falling by 11% to $227 million, largely driven by a 30% decrease in Yaizu prices for pole-and-line-caught skipjack. The value of catches from other gears declined slightly by less than 1% to $882 million.

In 2024, the value of the WCP-CA skipjack catch rose by 8% to $3.2 billion, accounting for over half of the total tuna catch value. In contrast, the value of other major species declined: yellowfin fell to $1.6 billion (down 20%), bigeye to $508 million (down 26%), and albacore to $292 million

(down 5%).

In 2024, economic conditions in the WCP-CA purse seine fishery improved, while those in the tropical and southern longline fisheries deteriorated compared to 2023. The tropical purse seine index rose to 111, remaining above its 20-year average, largely due to higher catch rates and lower fuel prices. From 2018 to 2020, the index consistently exceeded the long-term average, supported by high catch rates. It dipped slightly below average in 2021 and 2022 but rebounded in 2023, driven by a combination of rising fish prices, reduced fuel costs, and improved catch rates. This positive trend continued into 2024, sustained mainly by high catch rates and falling fuel prices.

In contrast, the southern longline fishery experienced a downturn in 2024, with the economic index falling below its 20-year average, primarily due to a sharp decline in fish prices, despite improved catch rates and lower fuel costs. Similarly, economic conditions in the tropical longline fishery deteriorated, as the index also dropped below the long-term average. This decline was likewise driven by low fish prices, offsetting the benefits of high catch rates and reduced fuel prices.

Contents

1 Introduction

The tuna fishery in the Western and Central Pacific Ocean is diverse, ranging from small-scale artisanal operations in the coastal waters of Pacific states, to large-scale, industrial purse seine, pole-and-line and longline operations in both the exclusive economic zones of Pacific states and on the high seas. The main species targeted by these fisheries are skipjack tuna (*Katsuwonus pelamis*), yellowfin tuna (*Thunnus albacares*), bigeye tuna (*T. obesus*) and albacore tuna (*T. alalunga*).

This overview provides a broad description of the major fisheries in the WCPFC Statistical Area (WCPFC–CA; see Figure 1.1), highlighting activities during the most recent calendar year – 2024. This overview draws on the latest catch estimates compiled for the WCPFC–CA, found in SC21 Information Paper: *Estimates of annual catches in the WCPFC Statistical Area* (SPC-OFP, 2025). Where relevant, comparisons with previous years' activities have been included, although 2024 data for some fisheries are provisional at this stage.

This paper includes sections covering the four target tuna species, as well as blue marlin (*Makaira mazara*), black marlin (*Istiompax indica*), striped marlin (*Kajikia audax*) and swordfish (*Xiphias gladius*) catch in the WCPFC–CA tuna fisheries and an overview of the WCPFC–CA tuna fisheries by gear, including economic conditions in the main fisheries. In each section, the paper comments on recent developments in each fishery, with emphasis on 2024 catches relative to those of recent years, but refers readers to the SC21 National Fisheries Reports, which offer more detail on recent activities at the fleet level.

Additional graphical information that provides more information related to the recent condition of the fishery and certain WCPFC Conservation and Management Measures (CMMs) has been provided in an Appendix of this document, and other tabular and graphical information on the fishery can be found in (Hare et al., 2025) and (WCPFC Secretariat and SPC-OFP, 2025).

This overview includes brief summaries of several fisheries in the North Pacific Ocean, including those fisheries catching albacore tuna, Pacific bluefin tuna (*T. orientalis*), striped marlin and swordfish. Information on these fisheries will be expanded in future reviews, as two additional billfish species have been included as key species to report in the SciData (i.e., sailfish *Istiophorus platypterus* and shortbill spearfish *Tetrapturus angustirostris*). The Scientific Services Provider (SSP) will work with CCMs to improve the availability of historical catch data for these additional species.

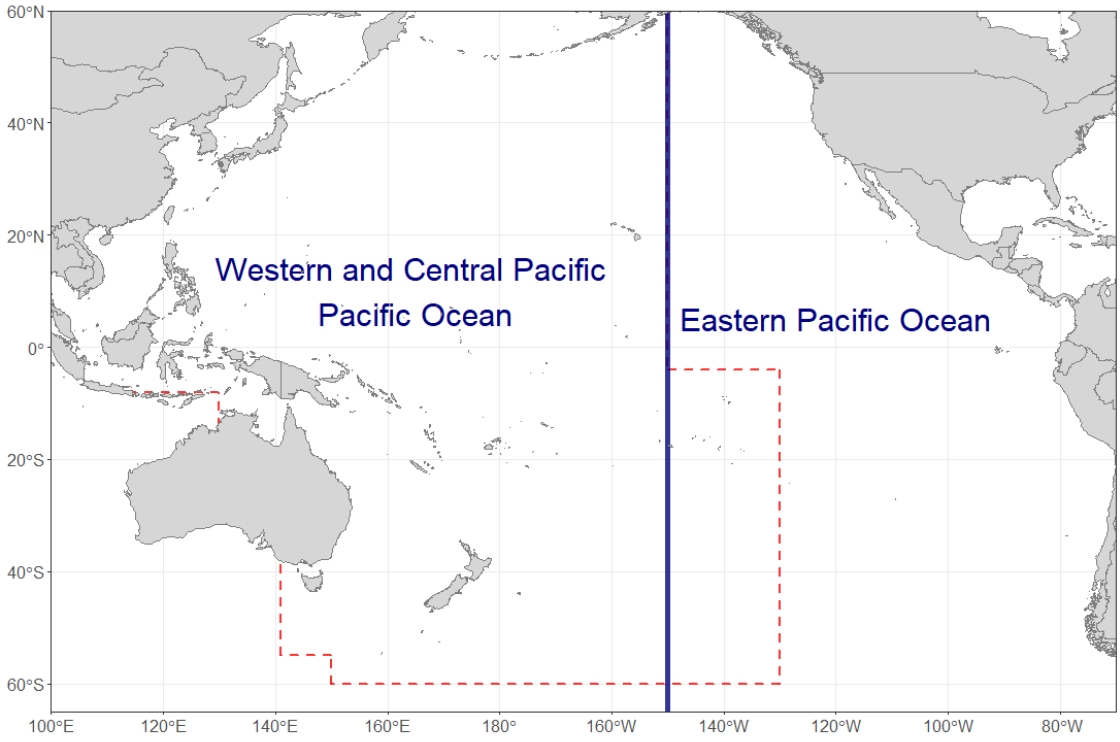

Figure 1.1: The western and central Pacific Ocean (WCPO), the eastern Pacific Ocean (EPO) and the WCPFC Convention Area (WCPFC–CA in dashed lines)

2 Total tuna catch and catch value for 2024

Annual total catches of the four main tuna species (skipjack, yellowfin, bigeye and albacore) in the WCPFC–CA increased steadily from 1980s through the 2000s with the purse seine fleet clearly becoming the dominant fishery in terms of catch volume. The increasing trend in total tuna catch continued through to about 2009, followed by two years (2010-2011) of reduced catches (due in part to La Niña conditions), before returning to record levels in successive years over the period 2012–2014. Catches in the period 2015–2017 were lower than 2014 but increased again over the next two years, with a record catch taken in 2019. Catches declined from the 2019 levels, but were relatively stable through 2023. In 2024, a new record catch were reported in the WCPFC-CA, with total tuna catch exceeding 3 million metric tonnes (Figures 2.1 and 2.2).

The provisional total WCPFC–CA tuna catch for 2024 was estimated at 3,024,149 mt, substantially higher than the 2023 catch level (2,665,161 mt). The catches in 2024 were about 50,000 mt higher than the previous record catch in 2019 (2,974,314 mt). For 2024, the purse seine fishery accounted for a catch of 2,148,963 mt (71% of the total catch), with pole-and-line taking an estimated 154,612 mt (5%), the longline fishery an estimated 231,704 mt (8%), and the remainder (16%) taken by troll

gear and a variety of small-scale gears, mostly in the western Pacific-east Asia region (i.e., Indonesia, Philippines and Vietnam). The WCPFC–CA tuna catch (3,024,149 mt) for 2024 represented 85% of the total Pacific Ocean tuna catch of 3,559,788 mt, and 54% of the global tuna catch (the provisional estimate for 2024 is 5,327,838 mt), noting that unlike other oceans, over 80% of the WCPFC–CA tuna catch occurs in the waters of the coastal states (88% in 2024; see Figure A1 in the Appendix).

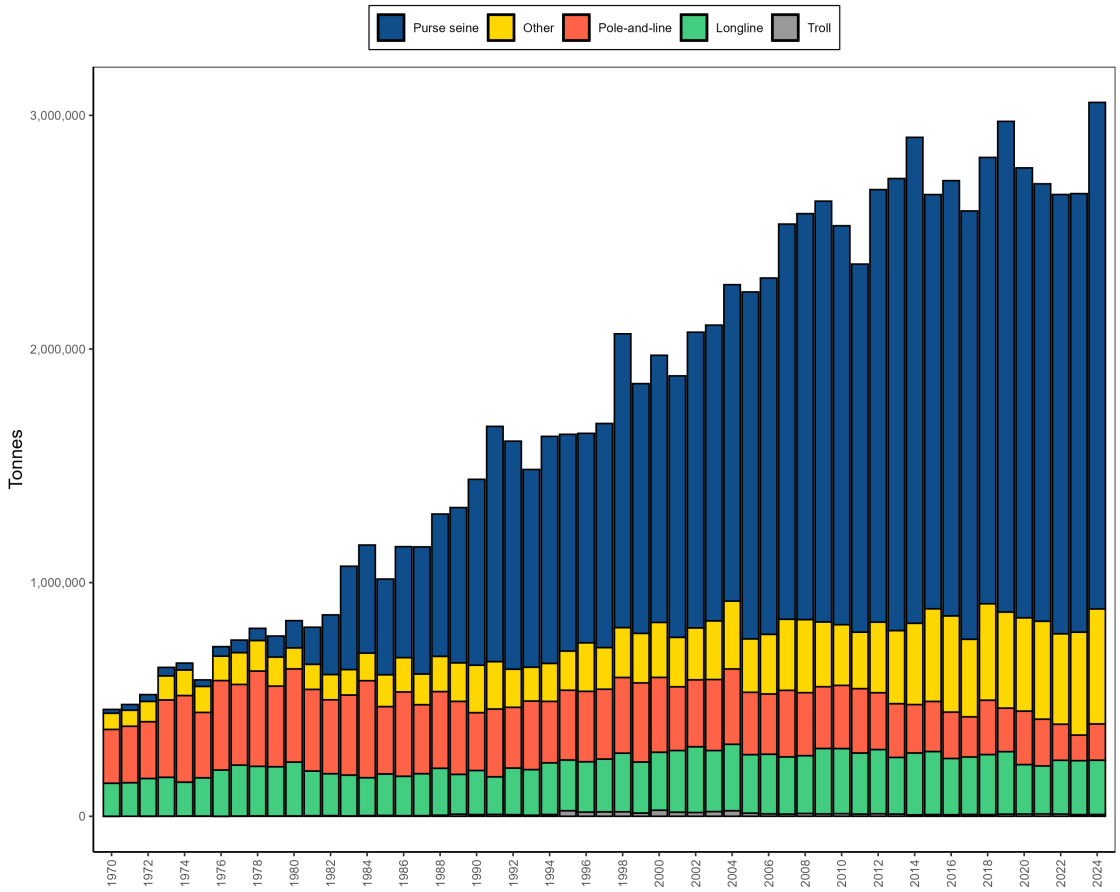

Figure 2.1: Catch (mt) of albacore, bigeye, skipjack, and yellowfin tuna in the WCPFC-CA, by longline, pole-and-line, purse seine, troll, and other small-scale gear types

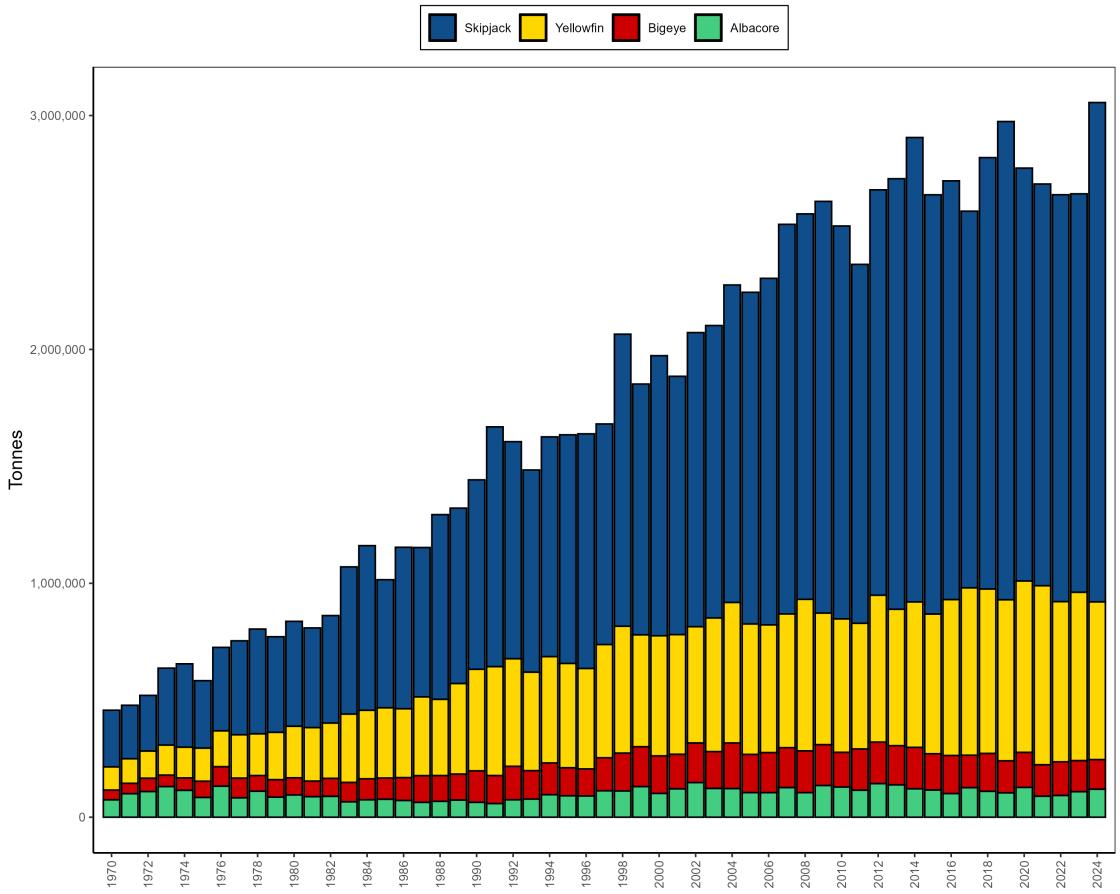

Figure 2.2: Catch (mt) of albacore, bigeye, skipjack, and yellowfin in the WCPFC–CA

The 2024 WCPFC–CA catch of skipjack (2,107,666 mt – 70% of the total catch) was around 63,000 mt higher than the previous record in 2019 (2,044,779 mt). The WCPFC–CA yellowfin catch for 2024 (677,594 mt – 22%) was a decrease of 87,591 mt from the record 2021 catch (765,185 mt), and a slight decrease of 41,624 mt from 2023. The WCPFC–CA bigeye catch for 2024 (119,023 mt – 4%) was the lowest since 1996, and about 13,750 mt less than 2023 catch levels. The 2024 WCPFC–CA albacore catch (119,867 mt – 4%) was around 10,531 mt higher than in 2023. The albacore catches have been increasing since 2021, but remain below the record catch in 2002 of 148,051 mt.

In 2024, the provisional total value of the tuna catch in the WCP-CA was estimated at approximately $5.6 billion, representing a 6% decline from 2023. The purse seine fishery contributed the largest share, valued at around $3.4 billion or 61% of the total. The longline fishery recorded a substantial 20% decrease in value, falling to $1.1 billion and accounting for 20% of the total catch value. The pole-and-line fishery also declined by 11%, with an estimated value of $227 million, while catch value from other gears decreased slightly to $882 million- down less than 1% from the previous year- contributing 16% of the total.

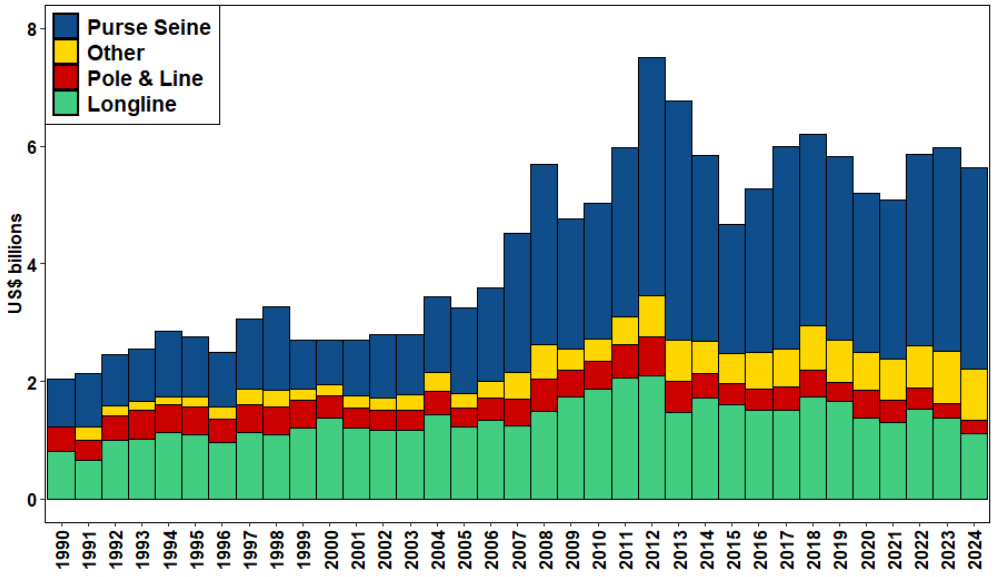

Figure 2.3: Catch value of albacore, bigeye, skipjack and yellowfin in the WCPFC–CA, by longline, pole-and-line, purse seine and other gear types

In 2024, the estimated value of the WCP-CA skipjack tuna catch was estimated at $3.2 billion, reflecting a 8% increase from 2023, and accounting for 57% of the total tuna catch value. The value of the WCP-CA yellowfin tuna catch reached $1.6 billion, representing a significant 20% decrease compared to the previous year. Similarly, the WCP-CA bigeye tuna catch saw a substantial 26% decline in value to approximately $508 million, or 9% of the total tuna catch value. Also, the value of the WCP-CA albacore tuna catch decreased by 5%, falling to $292 million in 2024.

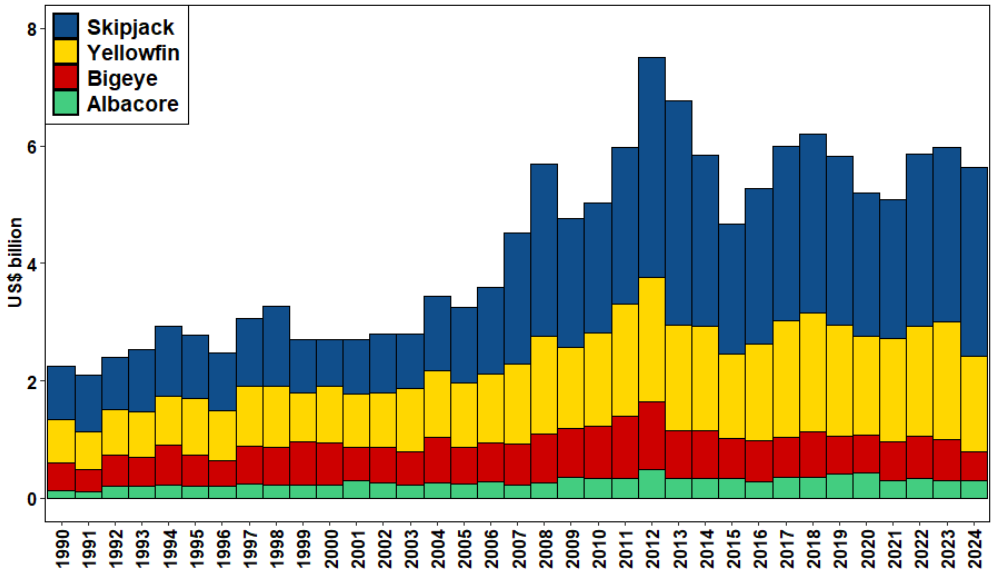

Figure 2.4: Catch value of albacore, bigeye, skipjack and yellowfin in the WCPFC–CA

3 WCPFC-CA Purse Seine Fishery

3.1 Historical Overview

During the mid-1980s, the purse seine fishery (400,000-450,000 mt) accounted for only 40% of the total catch but has grown in significance to a level now over 70% of total tuna catch volume (with more than 2,000,000 mt in 2014, 2019, and in 2024). The majority of the historical WCPFC–CA purse seine catch has come from four of the main Distant Water Fishing Nation (DWFN) fleets – Japan, Korea, Chinese-Taipei and USA, which numbered a combined 163 vessels in 1992 (Figure 3.1). There was a reduction in DWFN vessels from the late 1990s to the mid-2000s (due to reductions in the US fleet). There was a modest rebound in early to mid-2010s (up to 142 vessels in 2012); however this portion of the DWFN fleet has again been reduced to 70 vessels in 2024. The Pacific Islands fleets have gradually increased until about 2016, from which point the fleet has been relatively stable (142 vessels in 2024; Figure 3.1). The remainder of the purse seine fishery includes several fleets which entered the WCPFC tropical fishery during the 2000s (e.g., China, Ecuador, El Salvador, New Zealand and Spain).

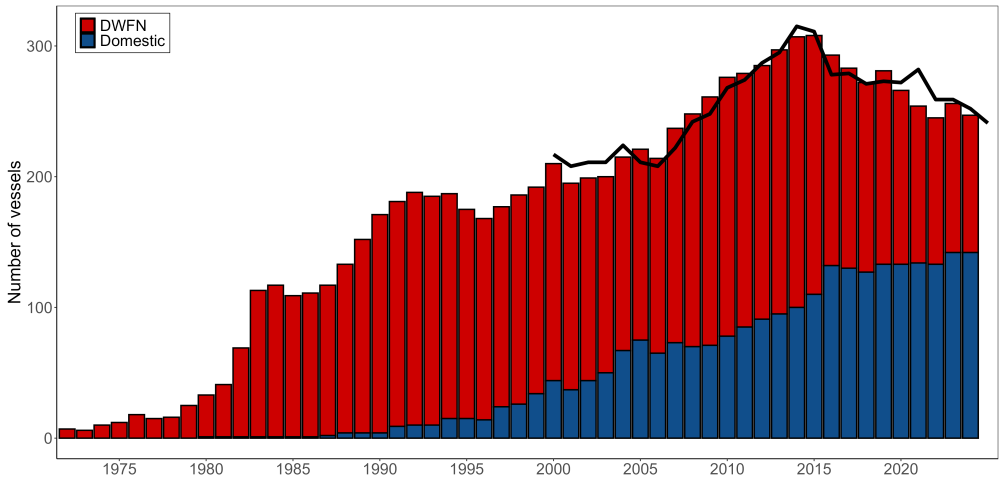

Figure 3.1: Number of purse seine vessels operating in the WCPFC-CA tropical fishery (excludes Indonesia, Philippine and Vietnam domestic purse seine/ringnet fleets; bars represent WCPFC yearbook vessel number data); line represents vessel numbers according to a combination of logbook and VMS data.

The total number of purse seine vessels was relatively stable over the period 1990-2006 (in the range of 170–250 vessels), but between 2006 and 2014, the number of vessels gradually increased, attaining a record level of 315 vessels in 2014, before steadily declining since (to 247 vessels in 2024). Further declines have occurred in recent years, with a significant reduction in vessels from one component of the US purse seine fleet. Table 4 in WCPFC Secretariat and SPC-OFP (2025) provides a breakdown on purse seine vessel numbers, tuna catch and effort by fleet, set type and species in the tropical tuna purse seine fishery based on raised logsheet data.

The WCPFC–CA purse seine fishery is essentially a skipjack fishery, unlike those in other ocean areas. Skipjack generally account for 65–80% of the purse seine catch, with yellowfin accounting for 18–25% in recent years and bigeye, accounting for only a small proportion – 2-5%. In 2024, the catches of yellowfin and bigeye were down to 15% and 2% of the total purse seine catches, respectively. Small amounts of albacore tuna are also taken in temperate water purse seine fisheries in the North Pacific.

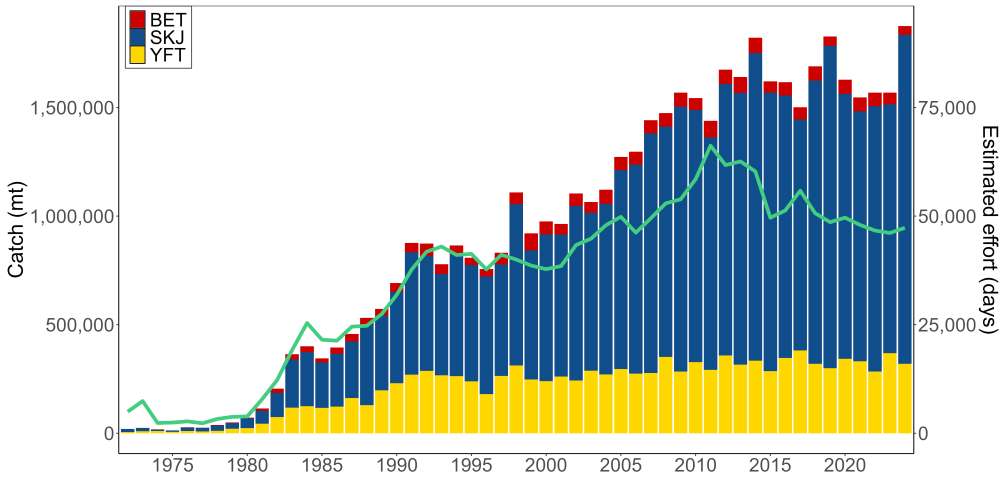

Figure 3.2: Purse seine catch (mt) of bigeye, skipjack and yellowfin (bars; left y-axis) and fishing effort (days fishing and searching; green line and right y-axis) in the WCPFC–CA (effort: excludes Indonesia, Philippine, and Vietnam domestic purse seine/ringnet fleets)

Features of the purse seine catch by species during the past two decades include:

1. Annual skipjack catches fluctuating between 600,000 and 850,000 mt prior to 2002, a significant increase in the catch during 2002, with subsequent skipjack catches maintained well above 1,200,000 mt, with a record catch of 1,780,549 mt in 2024;

2. Annual yellowfin catches fluctuating considerably between 250,000 and 400,000 mt, with a significant catch (record) of 500,506 mt taken in 2017. The proportion of large yellowfin in the catch is generally higher during El Niño years and lower during La Niña years, although other factors appear to affect purse seine yellowfin catch;

3. Increased bigeye tuna purse seine catch estimates, coinciding with the introduction of drifting Fish Aggregating Devices (dFADs) since mid-late 1990s. Significant years for bigeye catches have been 2011 (86,997 mt – record high), 2013 (84,404 mt) and 2014 (81,430 mt) which correspond to years with a relatively high proportion of associated sets, increased bigeye tuna availability to the gear, and/or strong bigeye recruitment.

Total estimated effort shows the same increasing trend as the catch over time (Figure 3.2), until around 2010 after which estimated purse seine fishing days start to decline. Years of relatively high

catch rates are apparent when the effort line is substantially lower than the top of the histogram bar (that is, in 1998, 2014–2023, and most notably in 2024).

3.2 Provisional estimates of catch, effort, and fleet size (2024)

The provisional 2024 purse seine catch of 2,148,963 mt was the highest catch reported since the beginning of the time series (1970), exceeding the previous 2019 record of 2,100,135 mt. The 2024 purse seine skipjack catch (1,780,549 mt: 83% of the catch) was the highest of the time series and around 78,000 mt higher than the catch in 2019. The 2024 purse seine catch for yellowfin tuna (331,367 mt; 15% of the total purse seine tuna catch) was one of the lower catches of the past two decades and represented the lowest proportion of the total catch since 1970. The provisional catch estimate for bigeye tuna for 2024 (33,787 mt; 2% of the total purse seine fishery) was about 8,300 mt lower than the 2023 catch and the lowest catch estimate since 1990. The increased bigeye tuna catches from 2020-2022 appear to be related to a higher number of associated sets, with a reduction in the most recent years. Figure 3.3 compares annual purse seine effort and catches for the five main purse seine fleets operating in the tropical WCPFC–CA in recent years. The combined 'main-fleet' effort increased steadily from about 1998-2010 but has been relatively stable since 2018.

The decline in effort during 2015/2016 was related to several factors including reduced access to fishing areas for some fleets, economic conditions and simply a choice to fish in areas outside the WCPFC-CA. In contrast, catches have generally trended upwards over this time series until about 2014 after which catches (and effort) have been maintained at a fairly stable level, albeit with some inter-annual variability. The 2019 and 2024 catches for the 'main fleets' are consistent with the overall record catches and years with good catch rates. The slight drop in effort from 2017 to 2023 appears to be primarily related to a decline in vessel numbers (Figure 3.1), and the drop in catches from 2020-2022, compared to 2019, maybe due to less favourable fishing conditions affecting catch rates, and also to some extent, and the impacts of COVID-19.

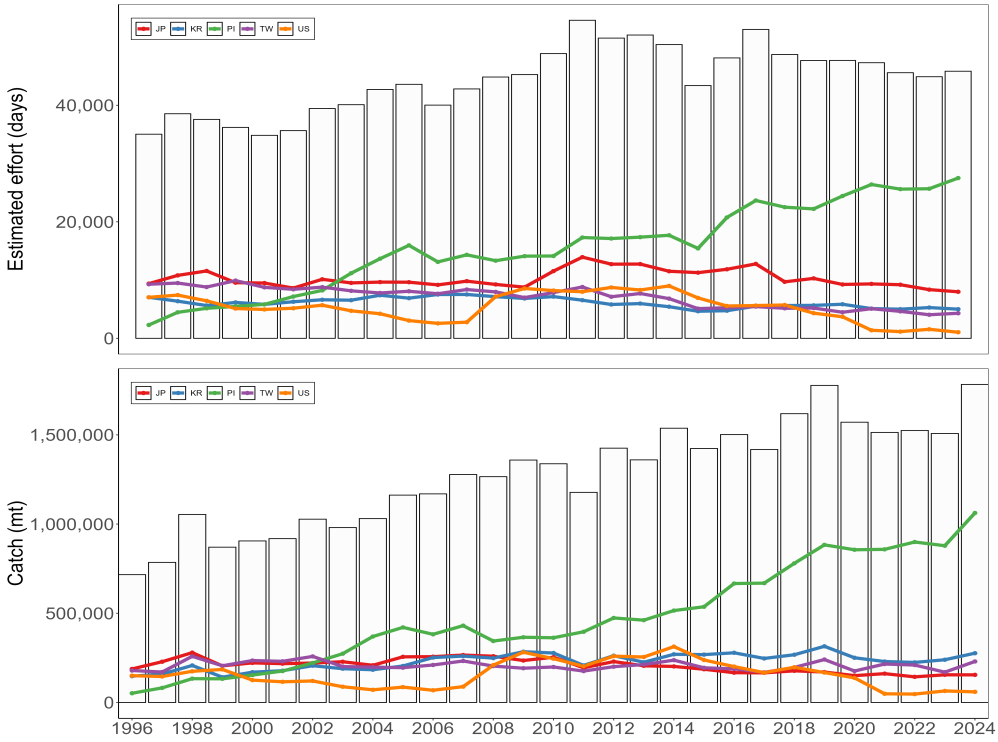

Figure 3.3: Trends in annual effort (top) and catch (bottom) estimates for the top five purse seine fleets operating in the tropical WCPFC–CA, 1996–2024. Fleets (lines; left axis) and the total values for five fleets (bars; right axis). Fleets are indicated as follows: JP = Japan; KR = Republic of Korea; PI = Pacific Islands; TW = Chinese Taipei; US = United States.

The combined Pacific Islands fleet has been clearly the most dominant in the tropical purse seine fishery since 2003 and unlike the other fleets shown in Figure 3.3, their recent catches continue to increase each year. There was a hiatus in the Pacific Islands fleet development in 2008 (when some vessels re-flagged to the US purse seine fleet) but catch/effort has picked up in recent years and catch by this component of the fishery continues to be the main contributor to purse seine catches (with a record high in 2024; 1,062,328 mt). The combined Pacific Islands fleet catch in 2024 far exceeded the combined catch from the other fleets shown in Figure 3.3 (combined 2024 catch for Japan, Korea, Chinese Taipei and USA was 720,506 mt). The fleet sizes and effort by the Japanese and Korean purse seine fleets have been relatively stable for most of this time series. Several Chinese-Taipei vessels re-flagged in 2002, dropping the fleet from 41 to 34 vessels, with fleet numbers relatively stable since. Since 2014, the catch/effort by most of the non-Pacific Island fleets have tended to decline while the catch/effort by the combined Pacific Islands fleet have continued to increase.

The total number of the combined Pacific Islands purse seine fleet vessels has gradually increased over the past two decades, attaining its highest level in 2023 and 2024 (142 vessels). The combined Pacific Islands purse seine fleet covers vessels fishing under the FSM Arrangement, bilateral

agreements and domestically based vessels, and in 2024, comprised vessels from the Cook Islands (2 vessels), Federated States of Micronesia (FSM; 26 vessels), Kiribati (25 vessels), Nauru (13 vessels), Marshall Islands (11 vessels), Papua New Guinea (PNG; 48 vessels including their chartered vessels), Solomon Islands (9 vessels), Tuvalu (6 vessels) and Vanuatu (2 vessels).

The domestic Philippine purse seine and ringnet fleets operate in Philippine waters and, since 2013 (as was the case prior to 2010), in the high seas pocket between Palau, Indonesia, FSM and PNG (i.e., High Seas Pocket #1); this fleet accounted for a catch in the range 55,000-90,000 mt annually in the period since 2013. Prior to 2013, the domestic Indonesian purse seine fleet accounted for a similar catch level to the Philippines domestic fishery but generally has not fished in high seas areas. During 2013, the Indonesian fleet catch increased substantially (215,582 mt) with more on-shore processing facilities and more vessels entering the fishery. However, the purse seine catch in 2015 (~56,000 mt) dropped considerably from this level, mainly due to the introduction of a ban on fishing and transhipment-at-sea for vessels not built in Indonesia (which, at the time, was nearly all of the large vessels in their purse seine fleet). The Indonesian purse seine catch recovered (214,605 mt in 2017) apparently due to increased catches by the smaller-scale purse seine component of this fleet, although in recent years (2021-2023), the catch has varied between 139,000 and 156,000 mt. Prior to 2009, the domestic fleets of Indonesia and Philippines accounted for about 13-16% of the WCPFC-CA total purse seine catch. Since then, this proportion has ranged from about 7-17%, whilst generally being around 10%.

Figure 3.4 shows annual trends in total tuna catch by set type (left) and total number of sets by set type (right) for the major purse seine fleets. Sets on free-swimming (unassociated) schools of tuna dominate during recent years (79% of all sets for these fleets in 2024, although it should be noted that this category includes considerable unsuccessful [zero-catch] sets). The proportion of sets on drifting FADs decreased notably in 2024 (17.5%) relative to 2023 (30%), despite the reduction in the FAD closure period in 2024. The peak for dFAD sets occurred in 2022, representing 32% of all purse seine sets. The reliance on drifting FAD sets in recent years is understood to be related to the La Niña conditions. The number and proportion (~1-3% and <1% since 2020) of sets on natural logs and anchored FADs, respectively, were clearly the lowest in the fishery for the major fleets and reflects a move away from this type of fishing, in line with the improvements in technology/efficiency involving drifting FAD use. Associated set types, particularly drifting FAD sets, generally account for a higher average catch per set than unassociated sets, so the percentage of catch for drifting FADs (28%; Figure 3.4 – left [red]) tends to be higher than the percentage of sets for drifting FADs (for 2024 = 17.5%; Figure 3.4 – right [red]). In contrast, the catch from unassociated schools in 2024 was 67% of the total catch but taken from 79% of the total sets.

For the US fleet, between 82-94% of all sets were conducted on drifting FAD in 2021 and 2022; however, in 2023 and 2024, this percentage was reduced to 65% and 71%, respectively. Even with the recent reduction in dFAD sets, these numbers continue to highlight the reliance on this fishing strategy in the eastern areas of the tropical WCPO (Figure 3.4 – right). Table 4 in WCPFC

Secretariat and SPC-OFP (2025) provides a more detailed breakdown of catch and effort by set type in 2000-2024 using available logsheet and observer data.

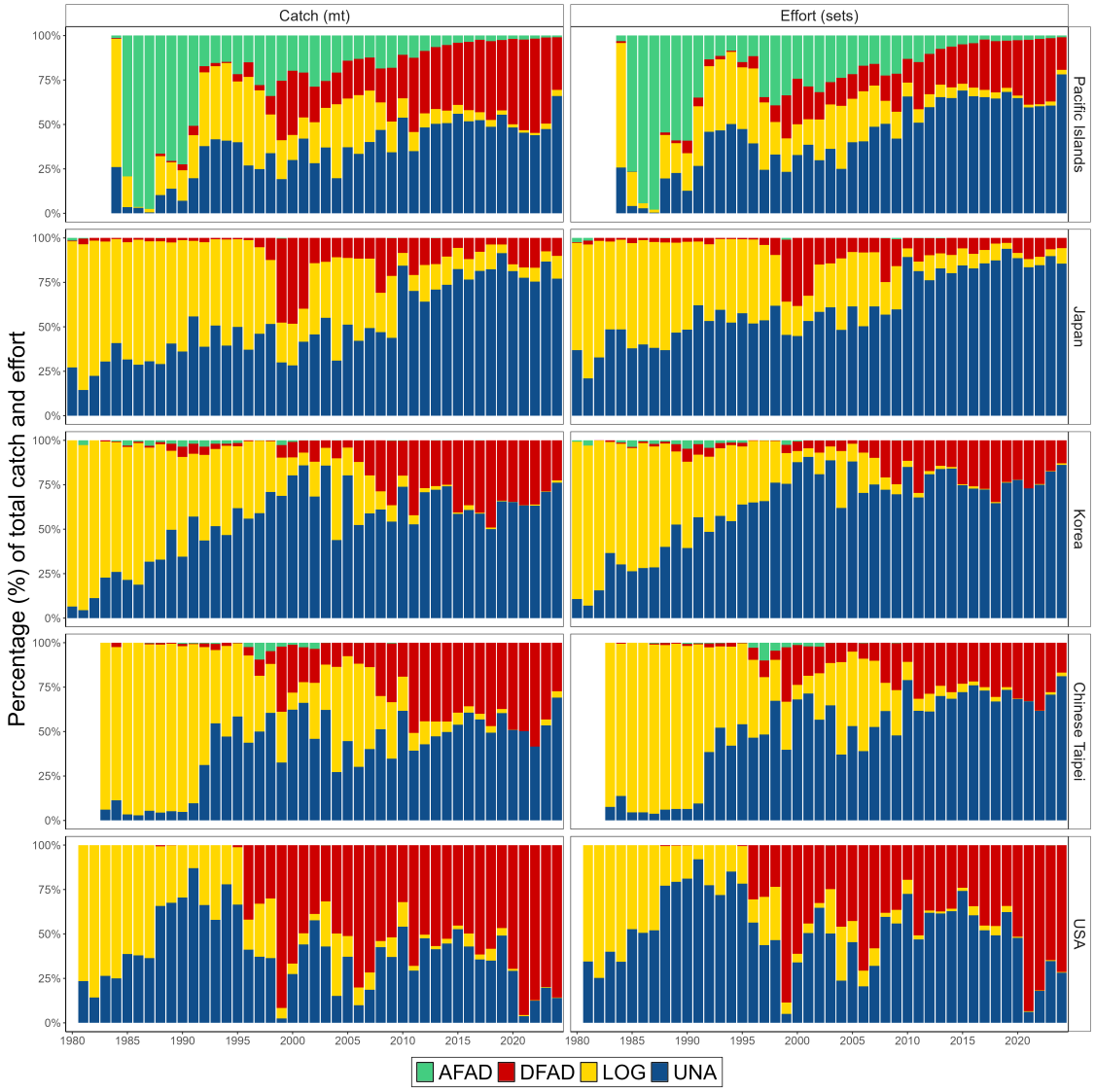

Figure 3.4: Time series showing the percentage of total catch (left) and total sets (right), by school type for the major purse seine fleets operating in the WCPFC–CA

3.3 Environmental conditions

The purse seine catch/effort distribution in tropical areas of the WCPFC–CA is strongly influenced by El Niño–Southern Oscillation Index (ENSO) events (Figure 3.5). Figure 3.6 (left) demonstrates the effect of ENSO events on the spatial distribution of the purse seine activity, with fishing effort typically expanding further to the east during El Niño years and contracting to western areas during La Niña periods.

The WCPFC–CA fishery was in an ENSO neutral state during most of 2017, but La Niña conditions

developed later that year and continued into the early months of 2018, before transitioning through a neutral state which presided over the rest of 2018. Weak to moderate El Niño conditions developed in late 2018, leading into the middle of 2019, and then subsided later in the year to neutral conditions by the start of 2020. The second half of 2020 and into the early months of 2021 demonstrated relatively neutral ENSO conditions, but from early-2021 through to the end of 2022, relatively strong La Niña conditions persisted. There was a clear transition from La Niña to neutral to El Niño conditions in the first half of 2023, which persisted for the remainder of 2023 and into 2024. From about mid-2024 La Niña conditions returned and continued into the first quarter of 2025.

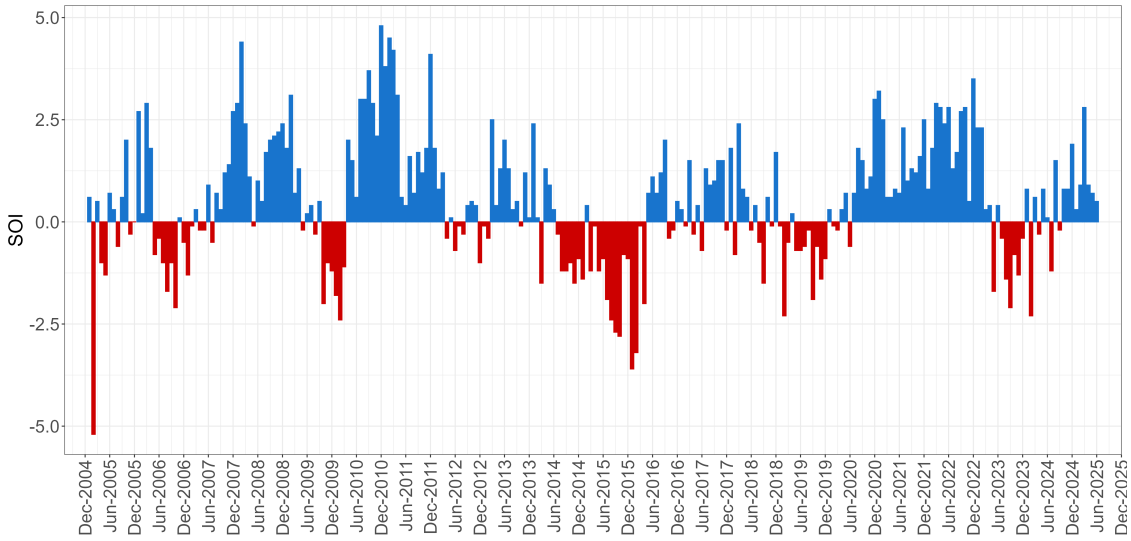

Figure 3.5: Trends in the El Niño Southern Oscillation Index (SOI), 2005-2025 (blue - La Niña; red - El Niño); data from https://www.cpc.ncep.noaa.gov/data/indices/soi

3.4 Distribution of fishing effort

Despite the FAD closure for certain periods in each year since 2010, drifting FAD sets remain an important fishing strategy (Figure 3.6), particularly to the east of 160°E. By late 2018, weak El Niño conditions presided over the fishery and relatively high catches were taken in the eastern tropical areas, in and adjacent to the waters of Tokelau and the Phoenix Group. El Niño conditions continued into 2019 with purse seine effort extending further to the east compared to recent years (Figure 3.6) and very good catches were taken in a few concentrated areas of the eastern tropical waters (see Figure 3.15). The La Niña conditions experienced in 2020 through to 2022 resulted in a general westward shift of fishing effort compared to 2019, with most of the effort in PNG, FSM, Solomon Islands (west of 160°E) during 2022. The western contraction of the warm pool in 2022 (Figure 3.6 – bottom left) resulted in more reliance on drifting FADs in the area east of 160°E which is in contrast to 2017, for example. The transition to El Niño in 2023 is evidenced by the expansion of the warm pool towards the east along with an eastward expansion of fishing effort. The fishing strategy in 2024 shows an increase in free-school sets, as compared to 2023, especially

in the eastern WCPO, and a notable westward concentration of fishing effort.

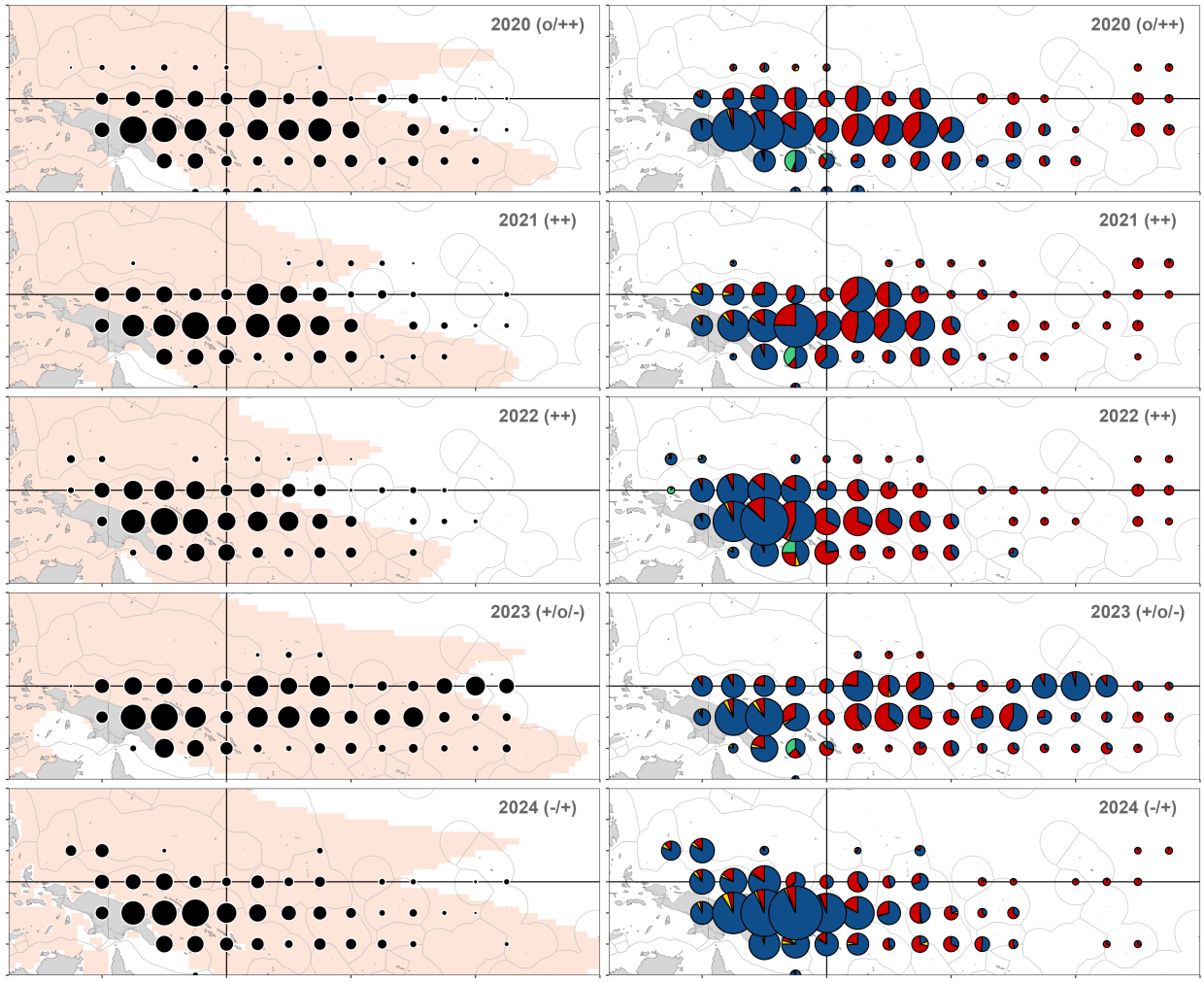

Figure 3.6: Distribution of purse seine effort (days fishing – left; sets by set type – right), 2020–2024 (blue – unassociated; yellow – log; red – drifting FAD; green – anchored FAD). Pink shading represents the extent of average sea surface temperature > 28.5° ENSO trends are denoted by '+': La Niña; '-': El Niño; 'o': transitional period

Figure 3.7 shows the distribution of purse seine effort for the five major purse seine fleets during 2023 and 2024. There is a notable contraction of effort in the western region in 2024 as compared to 2023 likely related to the shift from El Niño to La Niña conditions during the second half of 2024. This shift toward the west is noticeable in all fleets, excepting the US. The US fleet have tended to fish in the more eastern areas in recent years, mainly in the eastern high seas areas adjacent to the Phoenix and Line Islands EEZs, and to the north of the Cook Islands and French Polynesia EEZs. The difference in areas fished by the non-Pacific Islands' fleets (Figure 3.7) is generally related to the areas they have access to and perhaps also related to fishing strategy (e.g., use of

traditional fishing grounds in FSM, PNG and the Solomon Islands by the Japan fleet). In 2024, PNG incentivised fishing in their waters through reduced licensing fees, further attracting effort to the western waters of the WCPO.

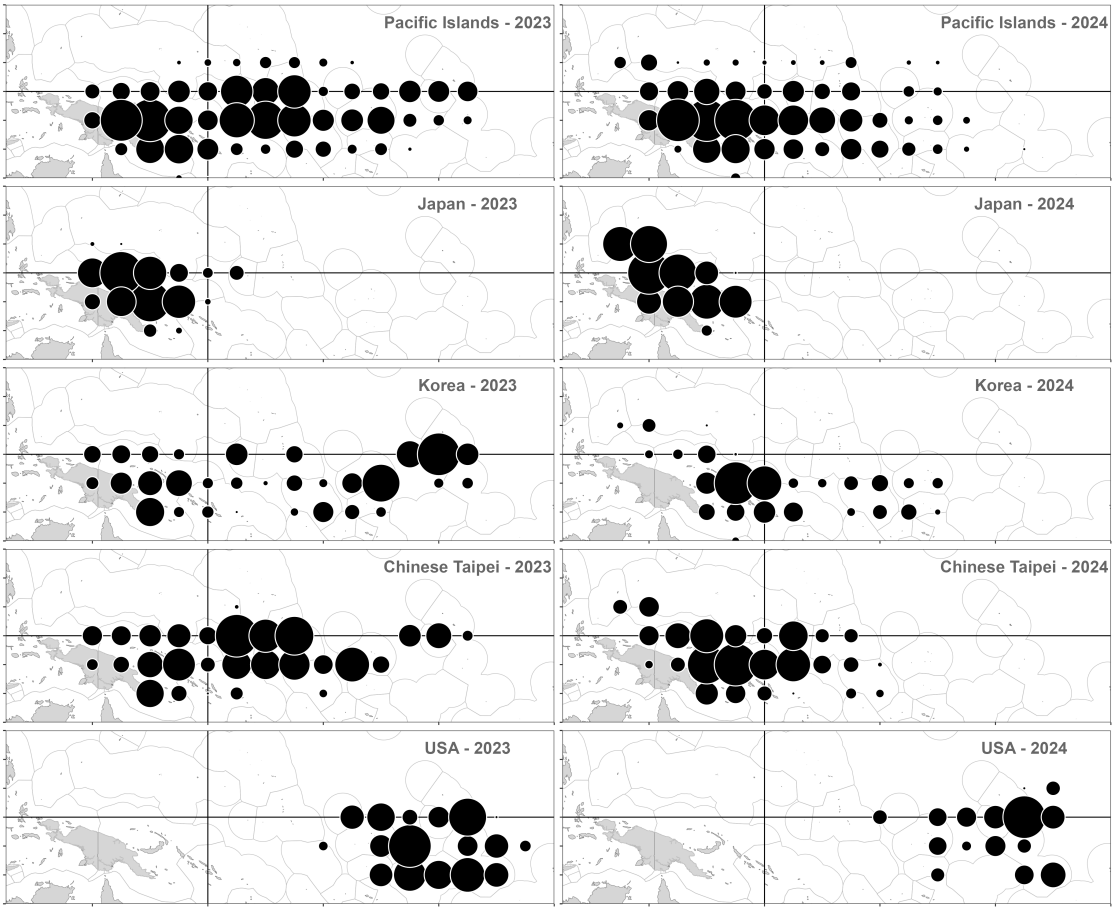

Figure 3.7: Distribution of purse seine effort by (from top to bottom) the Pacific Islands, Japanese, Korean, Chinese Taipei, and US purse seine fleets during 2023 (left) and 2024 right); lines for the equator (0° latitude) and 160°E longitude included.

3.5 Catch per unit effort

Figure 3.8 shows the annual time series of nominal CPUE by set type and fleet for skipjack (left) and yellowfin (right). These trends are not standardised for environmental factors or factors that may relate to the efficiency of the fleets, e.g., technological improvements and increased vessel power, so must be interpreted with caution. Recent reviews of the available logsheet data used to determine nominal CPUE highlight an apparent change in reporting behaviour, with a clear increase in the reporting of transit days (over days searching); since transit days are not included as purse seine effort (and days searching is included), this change will inevitably result in a positive bias in the

nominal CPUE data presented herein (see also Vidal et al., 2024a).

Purse seine skipjack CPUE in 2024 was elevated compared to catch rates in 2023 and represent some of the highest catch rates of the time series, due to a combination of environmental conditions and potentially strong recruitment, as seen in 2019. Drifting FAD CPUE has generally increased over much of the time series, but has declined in more recent years, most notably for yellowfin and bigeye, with increasing variability among the fleets. The log set CPUE shows increasingly high variability, largely due to the relative infrequency of this set type in recent years. Over the entire time series, the trend for skipjack CPUE has generally been increasing, although, as noted, these figures present nominal CPUE and do not consider the increase in fishing efficiency (often referred to as 'effort creep'). A possible indicator of an increase in fishing efficiency is the gradual reduction in average trip length over time, which is apparent in the linear trend of VMS trip length. There is considerable temporal variability in trip length and CPUE, with some of the highest values of CPUE and shortest trip lengths observed towards the end of 2023 and into the early part of 2024, potentially influenced by the concentration of effort in the western regions of the WCPO (Figure 3.10).

Yellowfin purse seine CPUE shows strong inter-annual variability, lacking directional trends in catch rates, except for dFADs where there is a recent declining trend in CPUE. Unassociated-set yellowfin CPUE appears influenced by ENSO variation in the WCPFC–CA, with CPUE generally higher during El Niño episodes, including in 2023 with the transition to El Niño conditions. This is believed to be related to increased catchability of yellowfin tuna due to a shallower surface mixed layer during these periods. In 2024, with the shift to La Niña conditions, yellowfin catch rates declined. Associated (log and drifting FAD) sets generally yield higher catch rates (mt/day) for skipjack than unassociated sets, while unassociated sets sometimes yield a higher catch rate for yellowfin than associated sets. The higher yellowfin CPUE from free-schools occurs when 'pure' schools of large, adult yellowfin are more available to the gear in the more eastern areas of the tropical WCPFC-CA, and so account for a larger catch (by weight) than the (mostly) juvenile yellowfin encountered in associated sets.

The purse seine yellowfin CPUE for free-schools by the US fleet which rebounded in 2022 and 2023 from the very low levels experienced in both 2020 and 2021, once again dipped to some of the lowest catch rates of the time series. The US fleet is active in the eastern areas compared to the other 'main' fleets shown in these CPUE trends (refer to Figure 3.7). The yellowfin tuna free-school CPUE in 2024 was lower for all fleets than in 2023 with effort shifted toward the west. Figure 3.12 shows that for unassociated sets, the 'pure' schools of large, adult yellowfin were largely absent in the east during 2024, perhaps related to the prevailing ENSO conditions and/or different fishing strategies related to market demands, noting potential limitations of the observer data available at this time.

Yellowfin tuna contributed approximately 15% to the total 2024 tuna purse seine catch (SPC-OFP, 2024). Catch rates on drifting FADs in 2024 increased slightly compared to 2023, with a general

decrease in drifting FAD sets (Figure 3.4). The long-term time series for yellowfin CPUE shows more inter-annual variability and overall, a flatter trend than the skipjack tuna CPUE. It is unknown whether these trends reflect an increasing ability to target skipjack tuna at the expense of yellowfin, or potentially reflect a change in yellowfin abundance, impacts of management, or market demands, for example.

The difference in the time of day that sets are undertaken is thought to be one of the main reasons why bigeye tuna are rarely taken in unassociated schools compared to log and drifting FAD schools, which have catch rates of this species an order of magnitude higher (Figure 3.9). The CPUE time series for bigeye tuna since 2000 varies greatly by fleet and set type with no clear pattern evident, but with drifting FADs accounting for the highest catches, albeit with substantial variability. The bigeye tuna CPUE levels in 2024 were lower overall compared to the previous couple years and comparable to the low levels experienced during 2019, perhaps due to increased focus on free-school sets during 2024 (Figure 3.6). The bigeye tuna CPUE for drifting FADs for the US fleet has been notably higher in recent years, no doubt related to this fleet's move further east, to areas adjacent to the Eastern Pacific tropical fishery which is acknowledged to have higher proportions of bigeye tuna in their catches.

Figure 3.10 shows the inverse relationship between monthly CPUE (total tuna catch (mt) per day) and average trip length estimates (from logsheets and VMS); logsheet trip length tends to fluctuate in synchrony with CPUE, with shorter trips corresponding to higher CPUE. Average trip length from VMS data generally compares well to average trip length from logsheet data, but as logsheet coverage declines (e.g., early 2024), estimates from these two sources tend to diverge since available logsheets are probably not representative. The FAD closure period each year (commencing in 2010) generally coincides with a decline in total tuna CPUE, with longer trips and apparent difficulties obtaining consistent catches from free-swimming schools. The drop in CPUE from late 2016 into the first 6-8 months of 2017 may simply be due to a return to conditions prior to the most recent El Niño of 2014–2016. The pattern of high CPUE in the months immediately following the FAD closure periods is understood to be mainly due to the build-up of unexploited biomass which then becomes available through FADs, although in 2022, the fishery had an increase in CPUE before the FAD closure period (that is, from months May-June 2022). The record high catch rates in the first half of 2024 appears to be related to good catches in the more western tropical waters during the shift toward La Niña conditions (Figure 3.15).

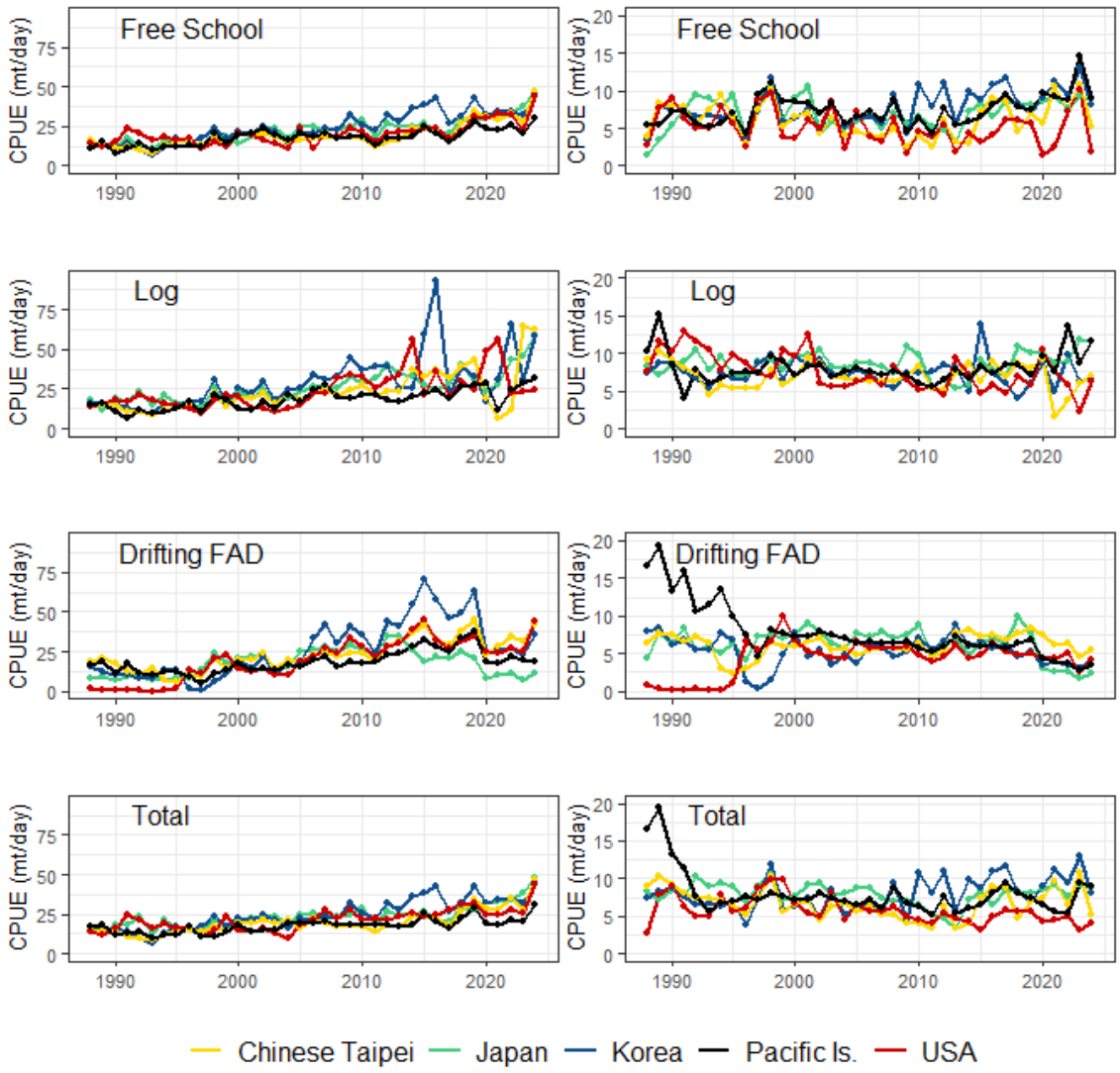

Figure 3.8: Skipjack tuna CPUE (mt per day–left) and yellowfin tuna CPUE (mt per day–right) by set-type, and all set types combined, for selected purse seine fleets fishing in the tropical WCP–CA. Effort and CPUE were partitioned by set type according to the proportions of total sets attributed to each set type. The black line represents the Pacific Islands purse seine fleets combined.

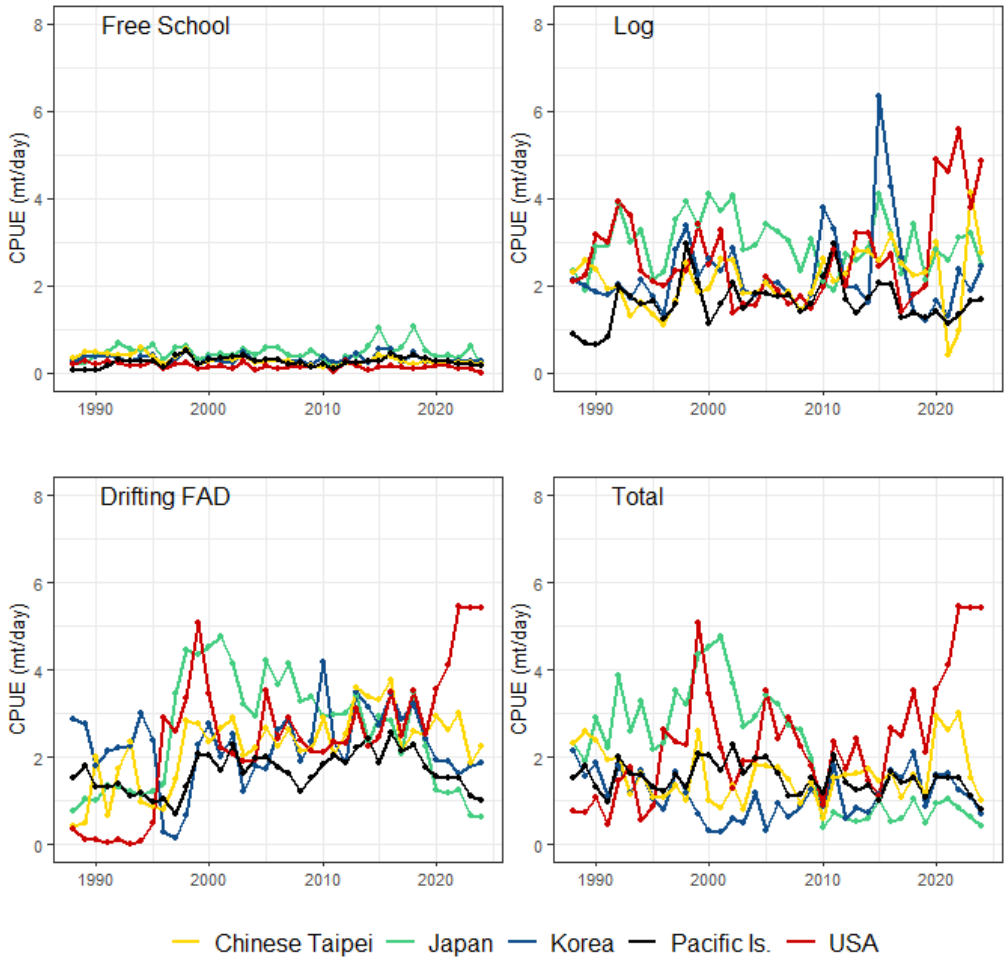

Figure 3.9: Estimated bigeye tuna CPUE (mt per day) by major set-type categories (free-school, log and drifting FAD sets) and all set types combined for Japanese, Korean, Chinese-Taipei and US purse seiners fishing in the tropical WCP–CA. Effort and CPUE were partitioned by set type according to the proportions of total sets attributed to each set type. The black line represents the Pacific Islands purse seine fleets combined.

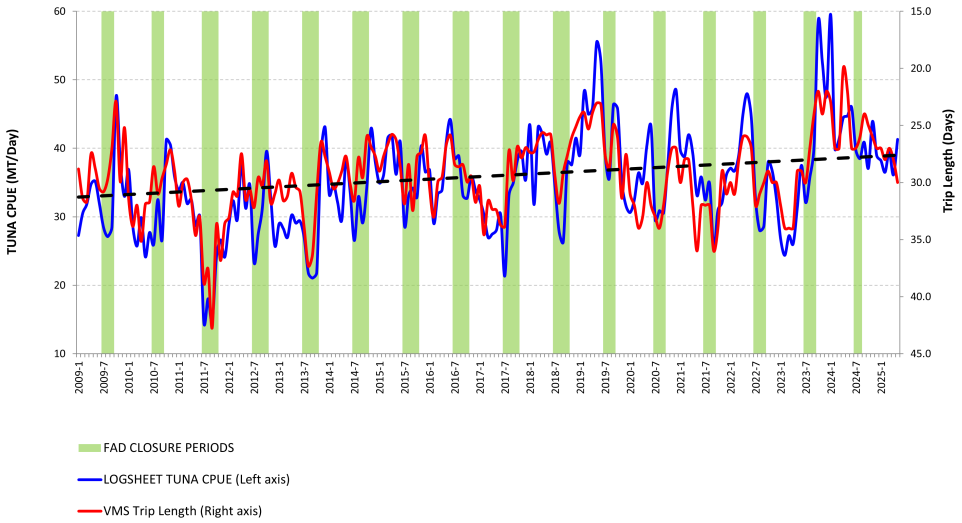

Figure 3.10: Monthly purse seine tuna CPUE (mt/day) and average trip length (VMS days), 2009–2024. Dashed, black line represents the linear trend on VMS Trip length. VMS Trip length axis (right) is reversed/inverted. For 2020 - 2023, only the full-fishery, mandatory FAD closure period (i.e., July-Sept for 2020-2023; July - 15 August for 2024) is shown and acknowledges that flag states must choose an additional two (2020-203) or one-month (2024) FAD closure period as per the requirements in CMM 2018-01, 2020-01, 2021-01, and 2023-01.

3.6 Species and size composition of the catch

Figures 3.11 and 3.12 show the species and size composition of the purse seine catch for 2023 and 2024, by set type and broad area of the tropical fishery. Points of interest in the comparison of these graphs include:

1. Larger tuna caught in the associated set-type categories in both 2023 and 2024 for the tropical area east of 170°E, dominated by skipjack, with greater proportions of yellowfin tuna coming from the unassociated sets;

2. Slightly larger skipjack tuna in the area west of 170°E from unassociated sets in 2024 compared with 2023, which appears to be the opposite for the eastern region;

3. Smaller skipjack and yellowfin from associated sets in the western region as compared to those encountered in the region east of 170°E;

4. A higher proportion of the bigeye tuna in associated sets east of 170°E (compared to the west);

5. The absence of large yellowfin tuna in the unassociated set catch in the area east of 170°E in 2024, compared to 2023. The lack of large yellowfin tuna in the unassociated-set catch in this eastern area during 2024 could be due to a combination of factors, for example, fewer unassociated sets conducted in this area (see Figure 3.6 – bottom right) and the lack of size data from observers in this area.

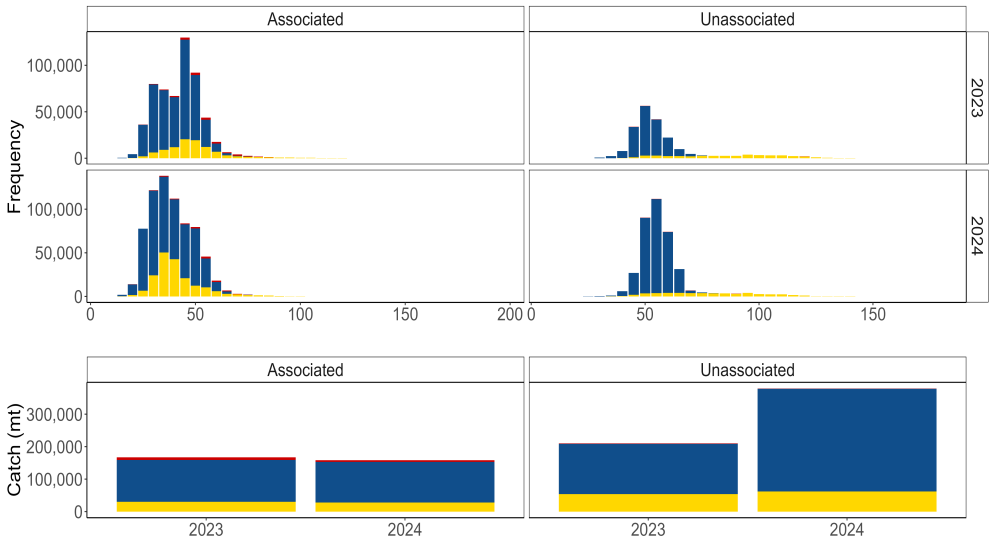

Figure 3.11: Species composition (mt: y-axis) of the 2023 and 2024 purse seine catch, by set type category and 5cm size categories (x-axis) for the tropical fishery, west of 170°E (skipjack – blue; yellowfin – yellow; bigeye – red)

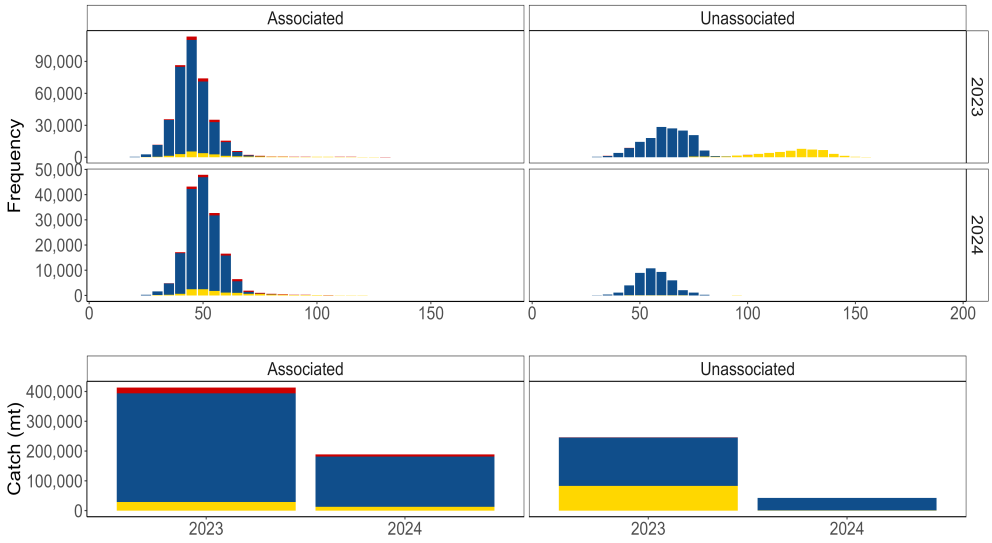

Figure 3.12: Species composition (mt: y-axis) of the 2023 and 2024 purse seine catch, by set type category and 5cm size categories (x-axis) for the tropical fishery, east of 170°E (skipjack – blue; yellowfin – yellow; bigeye – red)

3.7 Seasonality

Figure 3.13 and 3.14 show the seasonal average CPUE for skipjack and yellowfin tuna in the purse seine fishery for the period 2020–2024, respectively. Figure 3.15 shows the distribution of effort by quarter for the period 2020-2023 in comparison to effort by quarter in 2024. From 2020-2023, there

is very little seasonal signal in skipjack CPUE, showing slightly higher variability in catch rates toward the second half of the year. In 2024, catch rates during the first part of the year are elevated and the monthly catch rates are generally higher than the mean from 2020-2023, but overall catch rates are fairly stable throughout the year.

For yellowfin tuna, the patterns in catch rates from 2020-2023 show a slight increasing trend through the year, with high variability from June-September, potentially due in part to the FAD closure period and increased reliance on free-school sets. In 2024, there is a strong seasonality where catch rates are relatively high in January and then decrease to catch rates considerably below the recent average (Figure 3.14). Following the reduced catch rates from March-June, catch rates once again increase from the middle toward the end of the year. Figure 3.15 shows that during quarter 2-4 of 2024, the catches of yellowfin are concentrated in the western region of the WCPO, near the boundary of the warm pool, with reduced catches in the central region.

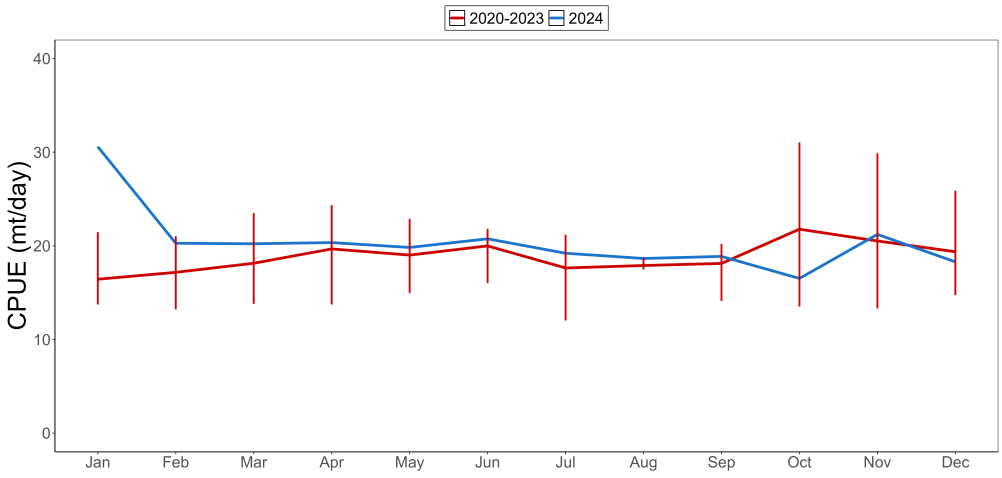

Figure 3.13: Average monthly skipjack tuna CPUE (mt per day) for purse seiners fishing in the tropical WCPFC–CA, 2020–2024 (red line represents the period 2020–2023; blue line represents 2024; the red bars represent the range (i.e., minimum and maximum) of monthly values for the period 2020–2023

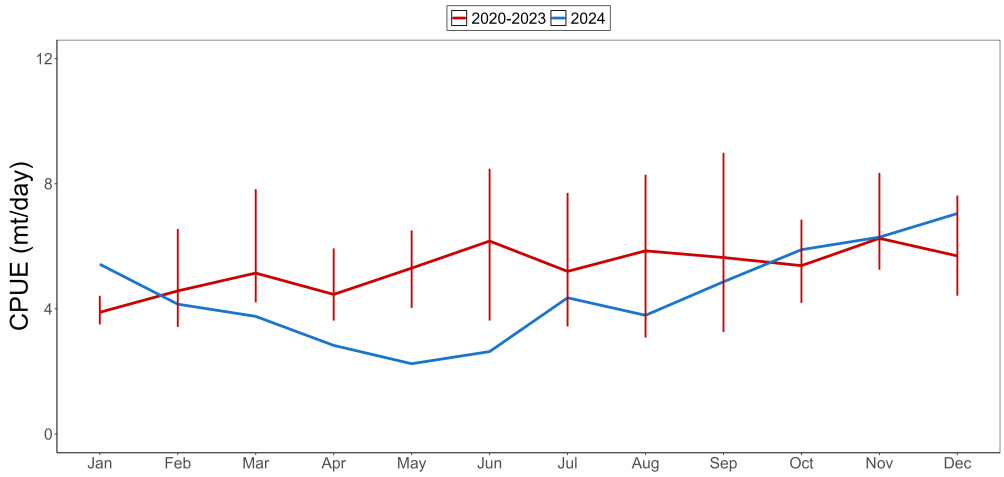

Figure 3.14: Average monthly yellowfin tuna CPUE (mt per day) for purse seiners fishing in the tropical WCPFC–CA, 2020–2024 (red line represents the period 2020–2023; blue line represents 2024; the red bars represent the range (i.e., minimum and maximum) of monthly values for the period 2020–2023

The quarterly extent of the warm pool (i.e., surface water >28.5°C on average) in 2024 compared to the average for 2020-2023 (Figure 3.15). The shift from El Niño to La Niña conditions during 2024 is apparent by the contraction of the warm pool to the western areas compared to the first 2 quarters of the year, where there was a greater eastern expansion of the warm pool.

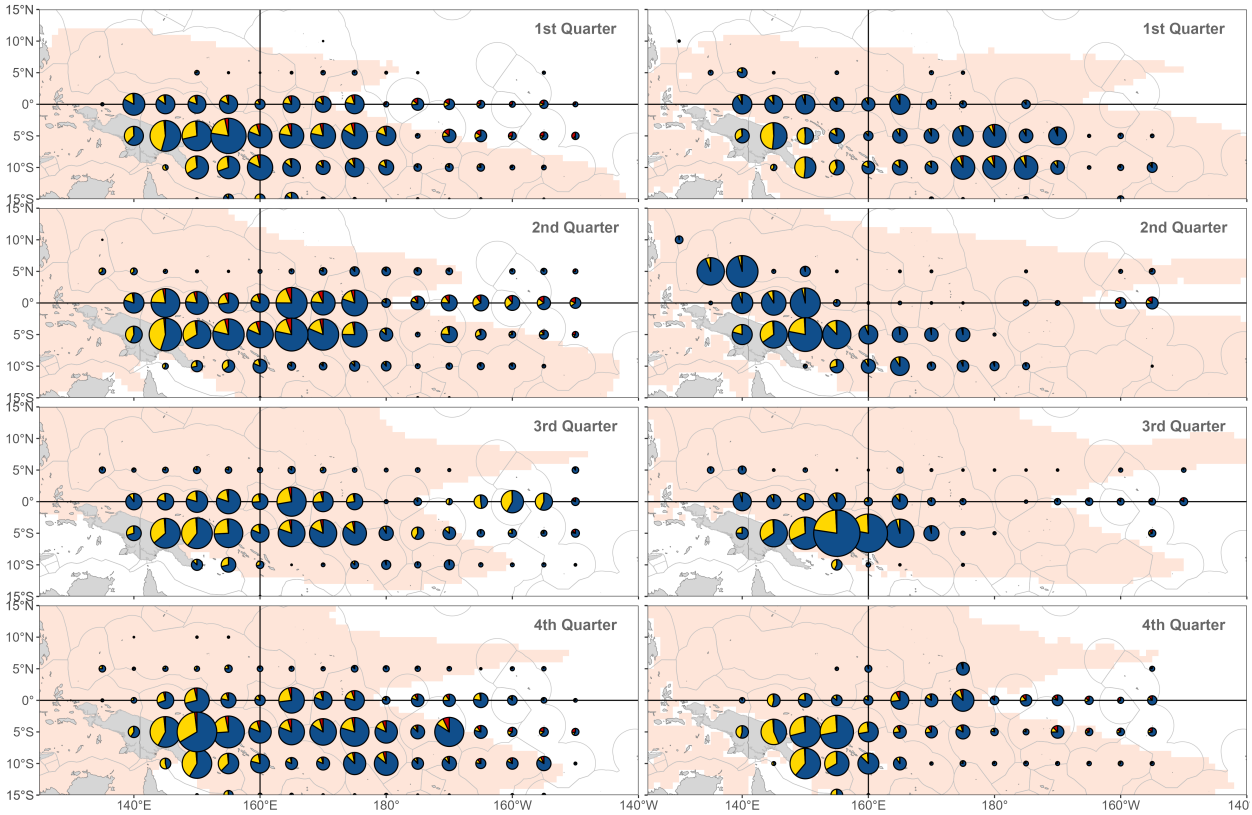

Figure 3.15: Quarterly distribution of purse seine catch by species for 2020–2023 (left) and 2024 (right; blue – skipjack; yellow – yellowfin; red – bigeye). Pink/light brown shading represents the extent of average sea surface temperature >28.5°C by quarter for the period 2020–2023 (left) and 2024 (right).

3.8 Prices, catch value, and overall economic conditions

3.8.1 Prices

Skipjack

In recent years, prices have generally trended downward following a notable increase in 2017. Prices stabilized in 2021, with Thai import prices rising modestly by 1% to $1,379/mt, while Yaizu purse seine caught skipjack prices (ex-vessel) declined sligthly by less than 1% to ¥156/kg ($1,423/mt). A significant price surge occurred in 2022, with Thai import prices increasing by 19% to $1,644/mt and Yaizu prices rising sharply by 44% to ¥225/kg ($1,710/mt). This upward momentum continued into 2023, as Thai import prices rose by a further 8% to $1,773/mt and Yaizu prices increased by 20% to ¥270/kg ($1,923/mt). However, in 2024, both markets saw notable declines: Thai import prices fell by 14% to $1,523/mt, and Yaizu prices dropped by 18% to ¥222/kg ($1,466/mt).

In real terms, after adjusting for inflation[3], the 2024 Thai import and Yaizu purse seine caught USD skipjack prices were 21% and 26% below their respective 20-year averages. For the period up to May 2025, Thai skipjack import prices averaged $1,632/mt, while Yaizu prices averaged around $1,514/mt through June 2025.

In 2023, reports from the Bangkok market indicated that skipjack prices (4–7.5 lbs, c&f) rose from $1,680/mt to $1,980/mt during the first quarter, followed by a slight increase to $2,000/mt, where they remained through the end of the second quarter. Prices began to decline in the third quarter, reaching $1,700/mt by its close, and continued to fall to $1,450/mt by the end of the fourth quarter. The downward trend extended into early 2024, with prices declining further to $1,300/mt by the end of the first quarter. A modest recovery occurred in the second quarter, with prices rising to $1,580/mt by mid-year. However, the second half of 2024 saw a gradual decline, with prices slipping to $1,540/mt by year-end. In 2025, skipjack prices rose to $1,740/mt by the end of the first quarter. However, this upward trend reversed in the second quarter, with prices falling to $1,500/mt by the end of June

In 2024, the Bangkok skipjack price index (4–7.5 lbs, c&f) stood at 109, below the FAO Food Price Index of 122- a significant 19% decline from the previous year, when the skipjack index had exceeded the FAO Food Price Index. By June 2025, the skipjack price index had risen to 120, but remained below the FAO Food Price Index of 127.

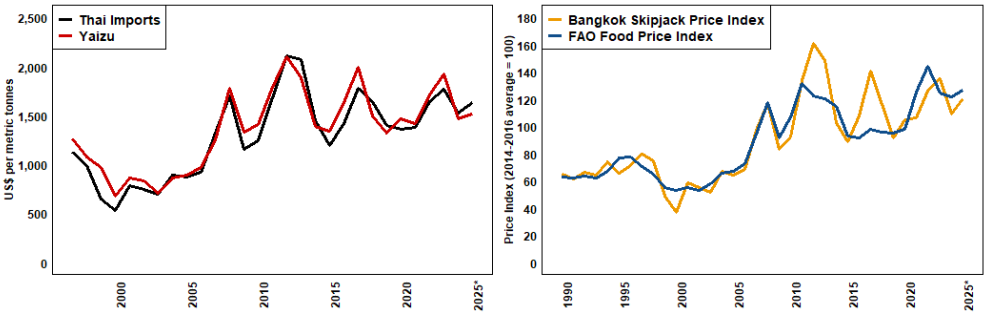

Figure 3.16: Annual skipjack prices, Thai imports (c&f) and Yaizu (ex-vessel; left). FAO Food Price Index and Bangkok 4-7.5lbs skipjack price (c&f) index (right). The 2025 data are from January through June (left); and January through May (right).

Yellowfin

In 2024, the Thai import price for yellowfin tuna (c&f) declined by 8%, averaging $1,979/mt compared to the previous year. Similarly, ex-vessel prices for purse seine-caught yellowfin at Yaizu fell by 15% to ¥327/kg ($2,162/mt). In real terms, the 2024 Thai import price was 16% below the 20-year average, while the Yaizu price was 32% lower than its long-term average.

[3] Based on the US CPI as measured by the Bureau of Labor Statistics All Urban Consumers CPI (www.bls.gov/cpi/data.htm)

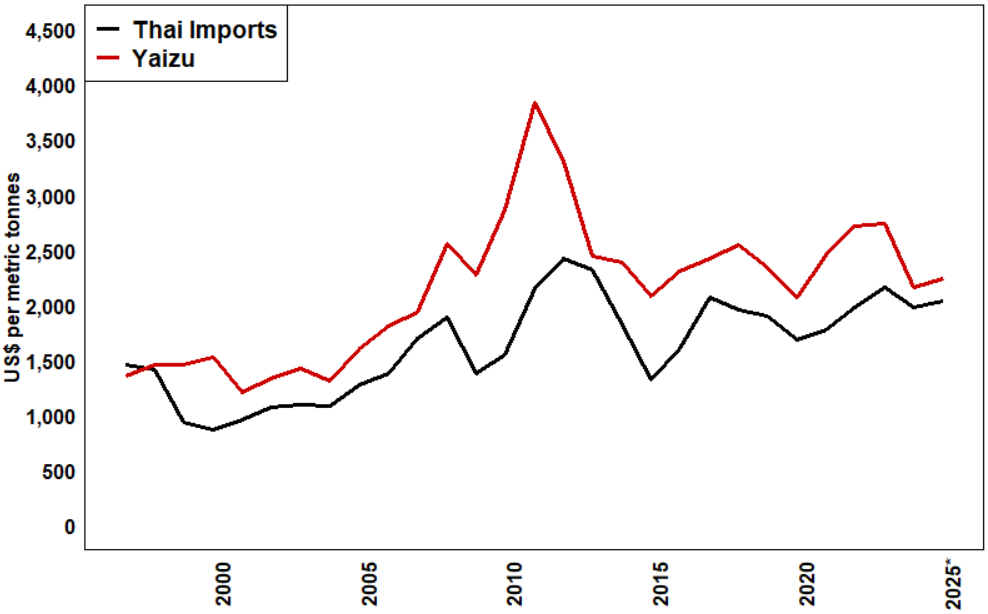

Figure 3.17: Annual yellowfin prices, Thai imports (c&f) and Yaizu (ex-vessel). Note: 2025* refers to January–May 2025 for Thai import price and January–June 2025 for Yaizu prices.

By the end of May 2025, the average yellowfin price had increased by 7% compared to the same period in 2023, with Thai import prices averaging $2,033/mt. Similarly, Yaizu prices averaged ¥332/kg ($2,235/mt) through June 2025, reflecting a marginal 1% increase from the previous year. Additionally, Thai import volumes for yellowfin during the first five months of 2025 were nearly 70% higher than in the same period of 2024.

3.8.2 Catch value

The estimated delivered value of the purse seine tuna catch in the WCP-CA region for 2024 was $3.4 billion, reflecting a marginal 1% decrease or $40 million compared to 2023. This represents a decline of approximately 16% from the peak values recorded in 2012 and 2013, when the catch exceeded $4 billion due to elevated prices for canning-grade raw material. Notably, the 2024 value is comparable to that of 2017 and has remained above $3 billion in recent years, including in 2019, 2022, and 2023.

The value of the skipjack catch increased by 11%, rising from $2.42 billion in 2023 to $2.7 billion in 2024, and accounted for 79% of the total purse seine tuna catch value. This growth was primarily driven by a 31% increase in purse seine-caught skipjack compared to the previous year. In contrast, the value of the yellowfin catch declined sharply by 30%, falling to $658 million in 2024, which represented 19% of the total purse seine catch value. This decline was the result of both a 22% reduction in yellowfin catch volume and an 8% drop in the Thai import price for yellowfin.

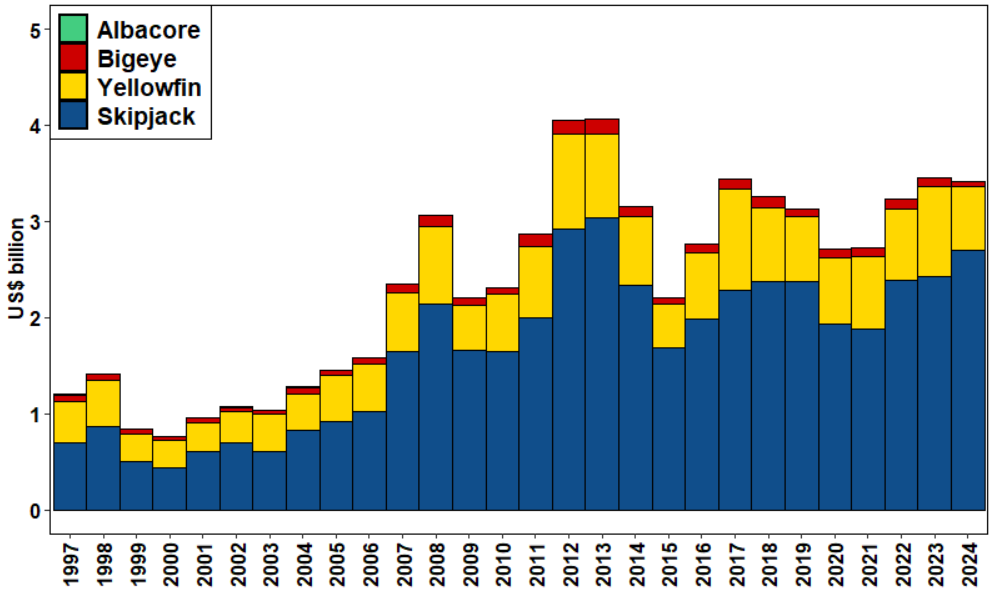

Figure 3.18: Value of the WCPFC-CA purse seine fishery tuna catch by species

3.8.3 Economic Conditions in the tropical purse seine fishery

Economic condition indexes for the major WCPFC-CA tuna fisheries have been presented to the Scientific Committee (SC) over several years. These indexes evaluate the economic conditions in a fishery based on key factors such as relative fish price, fishing costs (excluding license and access fee payments), and catch rates over the past 20 years (from 2005 to 2024).

The data from these components is combined into a single index value, expressed relative to the average value over the preceding 20 years, which is set at 100. This index provides a relative measure of changes in economic conditions over time. Values below 100 indicate below-average economic conditions in the fishery, while values above 100 indicate relatively favorable economic conditions[4] It is important to note that these indexes pertain to the fishery as a whole and not to individual vessels operating within it. While favorable economic conditions suggest the fishery's potential to generate significant profits, the indexes do not specify which parties, such as vessel owners or coastal states, benefit from these profits.

[4] Full details of the methodology used to derive the economic conditions indexes presented can be found in Skirtun and Reid (2018).

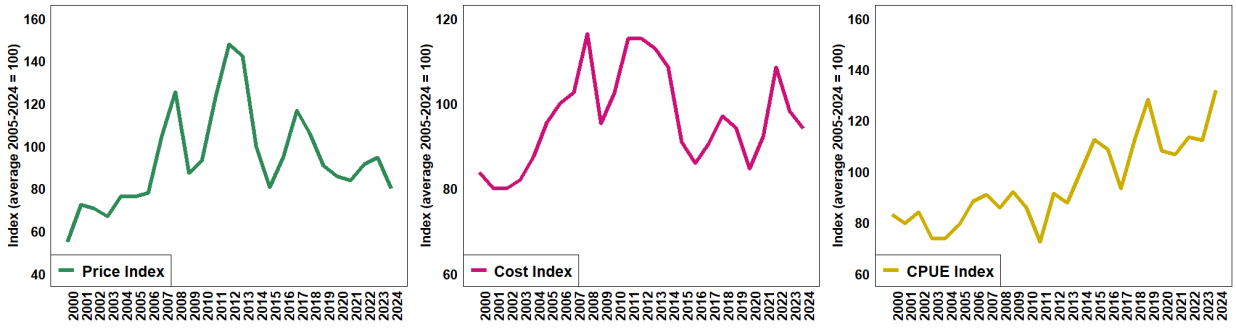

Figure 3.19: Tropical purse seine fishery economic conditions component indexes

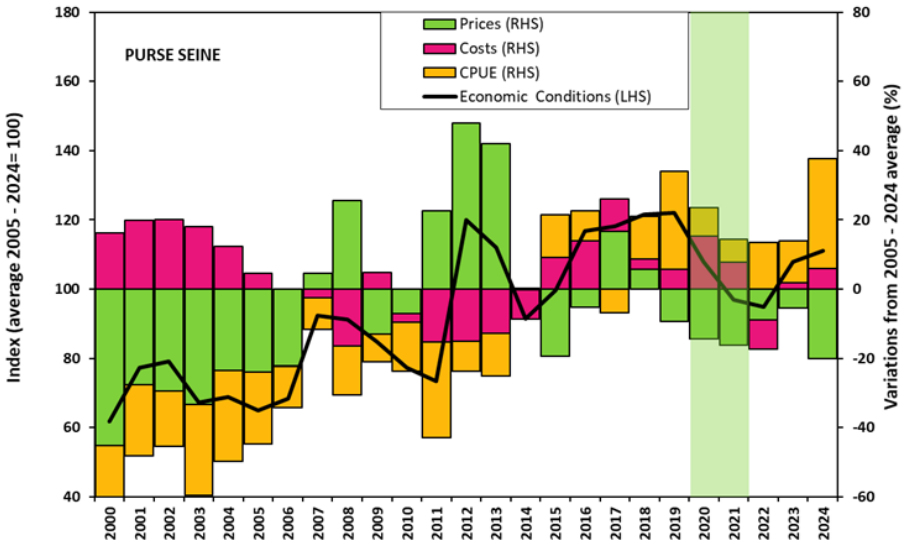

Figure 3.20: Tropical purse seine fishery economic conditions index (left y-axis) and variance of component indices against average (2000-2024) conditions (right y-axis)

Since 2012, the economic conditions index for the tropical purse seine fishery has generally remained above the long-term average, with the exception of 2014, 2021, and 2022. In recent years, the contributions of individual index components have varied significantly. From 2021 to 2023, elevated index values were primarily driven by high catch rates. The decline below the 20-year average in 2022 was largely due to a sharp increase in Marine Diesel Oil (MDO) prices, influenced by the Russia - Ukraine conflict. In 2023, the index rebounded, supported by rising fish prices, reduced fuel costs compared to the previous year, and continued strong catch rates. Similarly, in 2024, the index reached 111 - well above the 20-year average, primarily due to high catch rates and declining fuel costs, despite relatively low fish prices.

4 WCPFC-CA Pole-and-Line fishery

4.1 Historical Overview

The WCP–CA pole-and-line fishery has historically had several components:

- the year-round tropical skipjack fishery, mainly involving the domestic fleets of Indonesia, Solomon Islands and French Polynesia, and the distant water fleet of Japan
- seasonal sub-tropical skipjack fisheries in the domestic (home) waters of Japan, Australia, Hawaii and Fiji (although no recent activity in the last three fisheries)
- a seasonal albacore/skipjack fishery east of Japan (largely an extension of the Japanese home-water fishery).

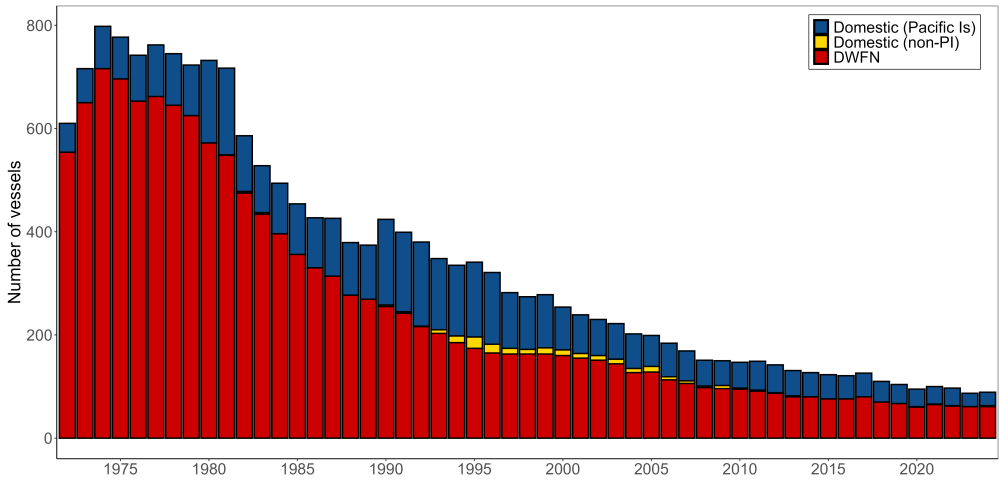

Figure 4.1: Pole-and-line vessels operating in the WCPFC–CA (excludes pole-and-line vessels from the Japanese Coastal and Indonesian domestic fisheries)

4.2 Provisional catch estimates (2024)

The provisional 2024 pole-and-line catch (154,612 mt) remains one of the lowest annual catch since the early-1960s, due to reduced catches in the Japanese fishery, although we note as in previous years the provisional nature of the estimates at this stage (Figure 4.2).

Skipjack accounts for the majority of the catch from tropical waters (∼70-84% in recent years, but typically more than 85% of the total catch in tropical areas) and albacore (5–16% in recent years, with albacore representing 9% of the catch in 2024) is taken by the Japanese coastal and offshore fleets in the temperate waters of the north Pacific. Yellowfin tuna (recently 10–13%) and a small amount of bigeye tuna (∼1-2% in recent years) make up the remainder of the catch. There were two pole-and-line fleets active in the WCPO in 2024 (Japan and Indonesia)[5]. Japanese distant-water

[5] French Polynesia's pole-and-line fleet has been included here in the past, but after recent discussions, it is

and offshore fleets (101,282 mt in 2024), and the Indonesian fleets (53,337 mt in 2023, carried over to 2024 at this stage), account for all of the WCPFC–CA 2024 pole-and-line catch. The catches by the Japanese distant-water and offshore fleets in 2024 are higher than they have been for several years, potentially reflecting good fishing conditions, as the fleet size appears unchanged from the year prior (61 distant-water vessels). The Solomon Islands resumed activity in this fishery in 2011 and participated until 2023; no fishing activities were conducted in 2024.

Figure 4.3 shows the average distribution of pole-and-line effort for the period 1995–2024. Effort in tropical areas is usually year-round and includes domestic fisheries in Indonesia and the Solomon Islands, and the Japanese distant-water fishery. The pole-and-line effort in the vicinity of Japan by both offshore and distant-water fleets is seasonal (highest effort and catch occurs in the 2nd and 3rd quarters). There was also some seasonal effort by pole-and-line vessels in Fiji, New Zealand, and Australia during this period. The effort in French Polynesian waters is essentially the bonitier (artisanal) fleet. Effort by the pole-and-line fleet based in Hawaii is not shown in this figure because spatial data are not available.

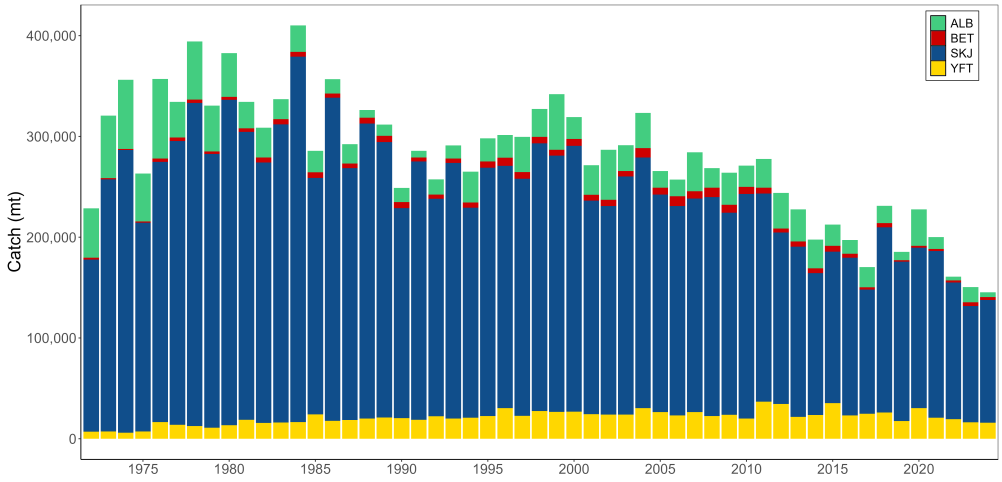

Figure 4.2: Pole-and-line catch in the WCPFC–CA

understood that their pole-and-line fishery is an artisanal fishery and is more appropriately grouped with the artisanal fishery catches under the gear defined as 'other'.

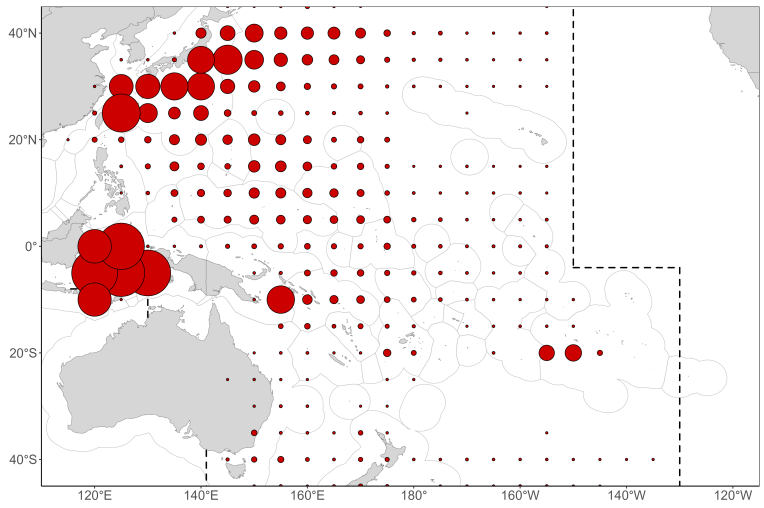

Figure 4.3: Average distribution of WCP–CA pole-and-line effort (1995–2024)

4.3 Prices and catch value

4.3.1 Prices

The pole and line fishery in the WCP-CA region is predominantly operated by fleets from Japan and Indonesia, with smaller catches from the fleets of the Solomon Islands and French Polynesia. The Japanese fleet follows a seasonal pattern in skipjack pole and line fishing, typically targeting southern skipjack from November to June. In contrast, fishing for nearshore albacore and eastern offshore skipjack fishing primarily occur from July to October.

In 2024, the average Yaizu price for pole-and-line caught skipjack was $1,840/mt, representing a significant 30% decline from the previous year. The price for skipjack caught in waters off Japan also declined significantly by nearly 50% to average of $1,539/mt(¥233/kg). In contrast, the price for skipjack for south of Japan decreased only marginally by 3% averaging $2,310/mt (¥350/kg). Notably, while the price in yen for skipjack caught off Japan increased to ¥399/kg in 2023 from ¥389/kg in 2022, the value in US dollars decreased due to the appreciation of the US dollar against the Japanese yen. As of June 2025, the prices for skipjack caught in waters off and south of Japan shows signs of recovery, averaging ¥315/kg and ¥361/kg, respectively, though still lower than the prices during the same period in 2024.

In 2024, the volume of pole-and-line caught skipjack landed at Yaizu port from waters off Japan increased by over 170% compared to the previous year. In contrast, the volume of skipjack caught in waters south of Japan declined by 33% relative to 2023 levels.

4.3.2 Catch value

In 2024, the estimated delivered value of the pole-and-line tuna catch in the WCP-CA region was $227 million, representing an 11% decline from the previous year. This decrease was largely driven

by a significant drop (30%) in Yaizu prices for pole-and-line caught skipjack, despite a 14% increase in catch volume compared to 2023. The value of skipjack catches fell by $18 million (9%) to $182 million, accounting for 80% of the total pole-and-line tuna catch value. Similarly, the value of other key species - yellowfin, bigeye, and albacore, declined by 23%, 14%, and 11%, respectively, compared to 2023, amounting to a combined reduction of approximately $11 million. In terms of their contribution to the total pole-and-line catch value, yellowfin, bigeye, and albacore accounted for 13%, 2%, and 5%, respectively.

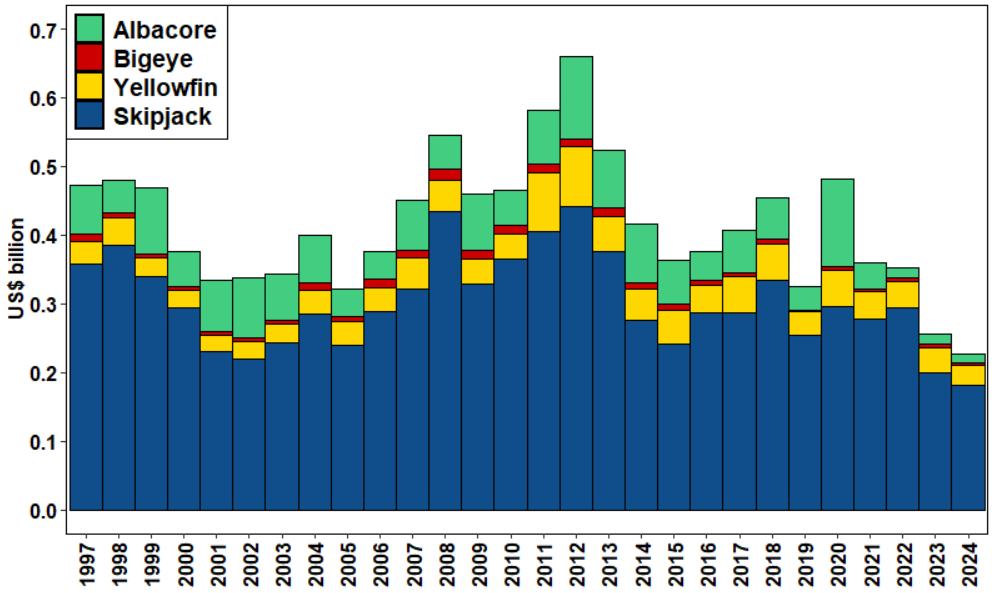

Figure 4.4: Value of the WCPFC-CA pole and line fishery tuna catch by species

5 WCPFC-CA Longline fishery

5.1 Overview

The longline fishery now accounts for only 8–10% of the total WCPFC–CA catch (SPC-OFP, 2025), but rivals the larger purse seine catch in landed value. It provides the longest time series of catch estimates for the WCPFC–CA, with estimates available since the early 1950s. The total number of vessels involved in the fishery has generally fluctuated between 3,000 and 6,000 for the period 1970–2004 (Figure 5.1), although for some distant-water fleets, vessels operating in areas beyond the WCPFC–CA could not be separated out, and more representative vessel numbers for WCPFC–CA have only become available in recent years[6]. Total longline vessel numbers have slowly declined over the past 20 years, but have stabilized over the past 5 years with the provisional estimate of 2,308 vessels in 2024.

[6] Since 2005, more detailed information on fleet/vessel number breakdown has been received through WCPFC reporting requirements and are therefore more representative of WCPFC–CA longline activity.

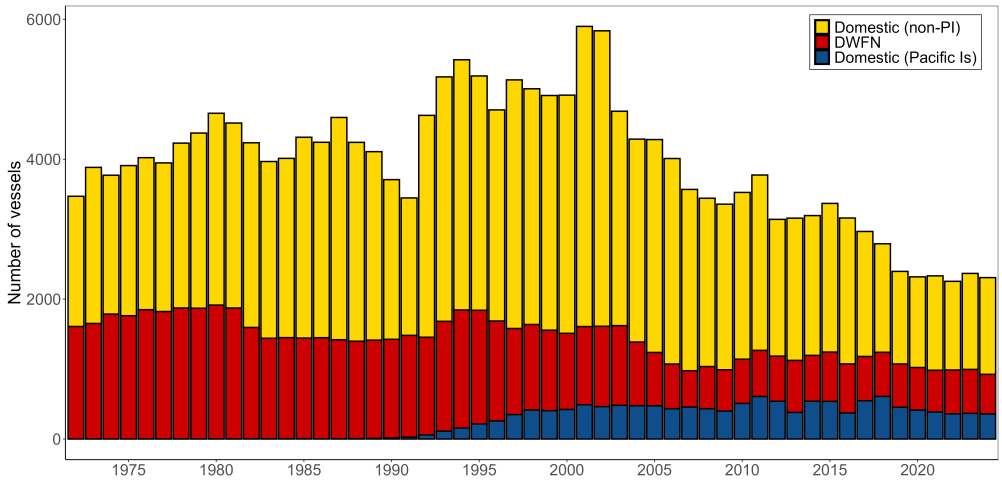

Figure 5.1: Longline vessels operating in the WCPFC–CA (available data does not make the distinction between foreign 'distant-water' and 'offshore')

The fishery involves two main types of operation:

- large (typically >250 GRT) distant-water freezer vessels which undertake long voyages (months) and operate over large areas of the region. These vessels may target either tropical (yellowfin, bigeye tuna) or subtropical (albacore tuna) species. Voluntary reduction in vessel numbers by at least one fleet has occurred in recent years;
- smaller (typically <100 GRT) offshore vessels which are usually domestically-based, undertaking trips of less than one month, with ice or chill capacity, and serving fresh or air-freight sashimi markets, or canneries. There are several foreign offshore fleets based in Pacific Island countries.

The following broad categories of longline fishery, based on type of operation, area fished, and target species, are currently active in the WCPFC–CA:

- South Pacific offshore albacore fishery comprises Pacific Islands domestic 'offshore' vessels, such as those from American Samoa, Cook Islands, Fiji, French Polynesia, Kiribati, New Caledonia, PNG, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu; these fleets mainly operate in subtropical waters, with albacore the main species taken. Tuvalu and Wallis and Futuna, joined this category during 2011, although the latter fleet has not fished recently. Vessel numbers have stabilised in recent years, but they may also vary depending on charter arrangements. More information on this fishery is provided in McKechnie et al. (2025).
- Tropical offshore bigeye/yellowfin-target fishery includes 'offshore' sashimi longliners from Chinese-Taipei, based in Micronesia, Guam, Philippines and Chinese vessels based in Micronesia, and domestic fleets based in Indonesia, Micronesian countries, Philippines, PNG, the Solomon Islands and Vietnam.

- Tropical distant-water bigeye/yellowfin-target fishery comprises 'distant-water' vessels from Japan, Korea, Chinese-Taipei, China and Vanuatu. These vessels primarily operate in the eastern tropical waters of the WCP–CA (and into the EPO), targeting bigeye and yellowfin tuna for the frozen sashimi market.
- South Pacific distant-water albacore fishery comprises 'distant-water' vessels from Chinese-Taipei, China and Vanuatu operating in the south Pacific, generally below 20°S, targeting albacore tuna destined for canneries.
- Domestic fisheries in the sub-tropical and temperate WCP–CA comprise vessels targeting different species within the same fleet depending on market, season and/or area. These fleets include the domestic fisheries of Australia, Japan, New Zealand and Hawaii. For example, the Hawaiian longline fleet has a component that targets swordfish and another that targets bigeye tuna.
- South Pacific distant-water swordfish fishery is a relatively new fishery and comprises 'distant-water' vessels from Spain and Portugal (one vessel started fishing in 2011).
- North Pacific distant-water albacore and swordfish fisheries mainly comprise 'distant-water' vessels from Japan (swordfish and albacore), Chinese-Taipei (albacore only) and Vanuatu (albacore only).

Additionally, small vessels in Indonesia, Philippines and Vietnam use the handline gear, usually fishing around the numerous arrays of anchored FADs in home waters and generally fishing at night, some using intense lights to attract prey for the tuna (these types of vessels are not included in Figure 5.1). The commercial handline fleets target large yellowfin tuna which comprise the majority of their overall catch (> 90%). The WCPFC-CA large-fish (yellowfin target) handline fisheries in these south-east Asian countries took approximately 84,000 mt in 2024 (see Section 6.1).

The WCPFC–CA longline tuna catch steadily increased from the early years of the fishery (i.e., the early 1950s) to 1980 (230,625 mt), but declined to 162,111 mt in 1984 (Figure 5.2). Since then, catches steadily increased over the next 15 years until the late 1990s, when catch levels were again similar to 1980. Annual catches in the longline fishery from 2000 to approximately 2018 were amongst the highest ever. In recent years, catches have generally trended downward; however, the 2024 catches are the highest of the past five years. In addition to changes in catch volume, the composition of the catch in recent years (e.g., ALB–42%; BET–21%; YFT–35% in 2024) differs from the period of the late 1970s and early 1980s, when yellowfin tuna contributed a higher proportion of catch (e.g., ALB–18%; BET–27%; YFT–54% in 1980). The skipjack longline catch in 2024, was a record high at 6,228 mt, contributing almost 3% to the total catch.

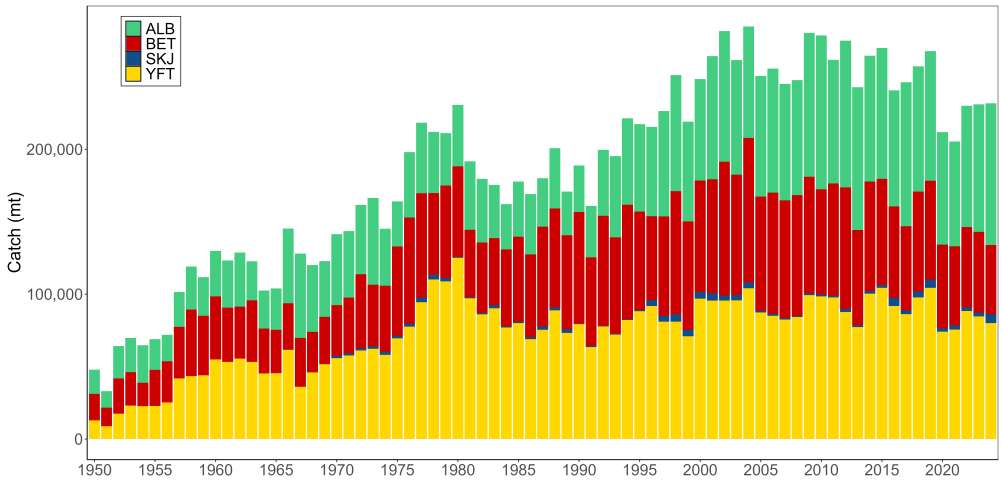

Figure 5.2: Longline catch (mt) of target tunas in the WCPFC–CA

5.2 Provisional estimates of catch, effort, and fleet size (2024)

The provisional WCPFC–CA longline catch (231,704 mt) for 2024 remains lower than the recent ten-year average but the highest catch level of the previous five years. The COVID-19 restrictions played a role in the general reduction of effort in the longline fishery from 2020-2022, with clear declines in effort in both the South Pacific albacore fishery (Figure A4) and in the tropical longline fishery (Figure A5). The prevailing La Niña conditions that characterized much of the past five years may also have contributed to changes in the catch by species throughout the extent of the longline fishery.

The WCPFC–CA albacore longline catch (97,850 mt – 42%) for 2024 exceeded the catch in 2023 (88,106 mt) and was the highest since 2017, but about 8,200 mt lower than the record of 106,141 mt attained in 2010. The provisional bigeye catch (47,653 mt – 21%) for 2024 was lower than the 2023 catch level and is the lowest catch reported since 1983, and well below on the bigeye catch levels experienced in the 2000s (ranging between 76,000-100,000 mt). The yellowfin catch for 2024 (79,947 mt – 35%), was lower than the previous two years but approximately the average level for the past five years, and in fact, catches have been relatively stable since the early 1980s.

A significant change in the WCPFC–CA longline fishery over the past two decades has been the growth of the Pacific Islands domestic albacore fishery, which has risen from taking 33% of the total South Pacific albacore longline catch in 1998 to accounting for around 50-60% of the catch in recent years. The combined national fleets (including chartered vessels) mainly active in the Pacific Islands domestic albacore fishery have numbered more than 500 (mainly small 'offshore') vessels in some years over the past decade with catches at a similar level to the distant-water longline vessels active in the southern WCPFC–CA.

The distant-water fleet dynamics have continued to evolve in recent years, with catches down from

record levels in the mid-2000s initially due to a reduction in vessel numbers, although vessel numbers for some fleets appear to be on the rise again in recent years, but with variation in areas fished and species targeted. The Japanese distant-water and offshore longline fleets have experienced a substantial decline in both bigeye catches (from 20,725 mt in 2004 to 3,327 mt in 2024) and vessel numbers (366 in 2004 to 73 in 2024). The Chinese-Taipei distant-water longline fleet had a peak bigeye tuna catch of 20,992 mt in 2004 but has stabilised at a lower level in recent years, with 9,343 mt taken in 2024 (921 vessels). The Korean distant-water longline fleet experienced some decline in bigeye and yellowfin catches since the period of highest catches 15–20 years ago in line with a reduction in vessel numbers – from 184 vessels active in 2002 reduced to 94 vessels in 2024.

In contrast, the China longline fleet catches of albacore tuna have been amongst the highest ever in recent years, with a range of 16,000–30,000 mt of albacore tuna in the south WCPFC-CA area over the past five years; their 2024 albacore tuna catch was 29,750 mt, the highest catch on record for this fleet.

With domestic fleet sizes continuing to increase as foreign-offshore and distant-water fleets decrease (Figure 5.1), this evolution in fleet dynamics no doubt has some effect on the species composition of the catch. For example, the increase in effort by the Pacific Islands domestic fleets has primarily been in albacore fisheries, although this had been balanced to some extent by the switch to targeting bigeye tuna (from albacore) by certain vessels in the distant-water Chinese-Taipei fleet almost a decade ago. More detail on individual fleet activities during recent years is available in the WCPFC–SC21 National Fisheries Reports.

5.3 Catch per unit effort

Time series of nominal CPUE provide a broad indication of the abundance and availability of target species to the longline gear, and as longline vessels target larger fish, the CPUE time series should be more indicative of adult tuna abundance. However, as is the case with nominal purse seine CPUE, the interpretation of nominal longline CPUE may be confounded by various factors, such as the changes in fishing depth that occurred as longliners progressively switched from primarily yellowfin tuna targeting in the 1960s and early 1970s to bigeye tuna targeting from the late 1970s onwards. Such changes in fishing practices will have changed the effectiveness of longline effort with respect to one species over another, and such changes need to be accounted for if the CPUE time series are to be interpreted as indices of relative abundance.

Nominal CPUE plots are provided in the other papers (see Hare et al., 2025; WCPFC Secretariat and SPC-OFP, 2025), and this paper does not attempt to explain trends in longline CPUE or effective effort, as this is referenced and dealt with more appropriately in specific studies on the subject and CPUE standardisation papers regularly prepared as WCPFC Scientific Committee (SC) papers.

5.4 Distribution of fishing effort and catch

Figure 5.5 shows the distribution of effort by category of fleet for the period 2017–2024. Effort by the large-vessel, distant-water fleets of Japan, China, Korea and Chinese-Taipei account for most effort on the high seas in the eastern WCPFC-CA, noting the reduction in vessel numbers for some fleets over the past two decades. Effort is widespread as sectors of these fleets target bigeye and yellowfin for the frozen sashimi market in central and eastern tropical waters, and albacore for canning in the more temperate waters (see Figure 5.5).

Activity by the foreign-offshore fleets from Japan, China, and Chinese-Taipei is restricted to tropical waters, targeting bigeye and yellowfin for the fresh sashimi market; these fleets tend to have limited overlap with the distant-water fleets. The substantial 'domestic fleet' effort in the west of the WCPFC-CA is primarily by the Indonesian and Chinese-Taipei domestic fleets targeting yellowfin and bigeye in the lower latitudes, and the Japanese offshore and coastal fleets in their home fishery and adjacent high seas.

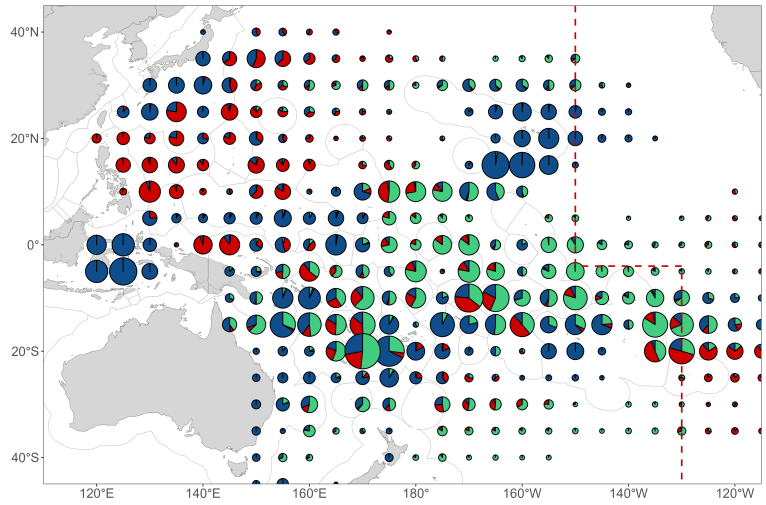

Figure 5.3: Distribution of longline effort (100s of hooks) by fleet, 2017–2024. Distant-water fleets (green), foreign-offshore fleets (red), and domestic fleets (blue) (Note that distant-water effort for Chinese-Taipei and other fleets targeting albacore for the entire North Pacific are poorly covered)

The growth in Pacific Islands domestic fleets targeting albacore tuna in the South Pacific has been noted; the most prominent fleets in this category are the Cook Islands, Samoa, Fiji, French Polynesia, Solomon Islands (when chartering arrangements are active), Tonga and Vanuatu fleets (Figure 5.4). More information on this fishery is provided in McKechnie et al. (2025).

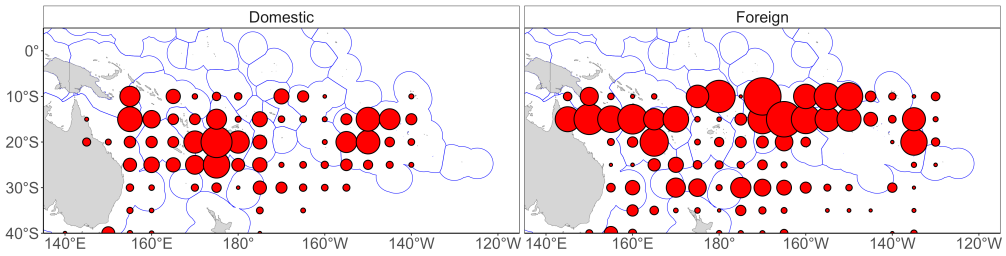

Figure 5.4: Distribution of effort for South Pacific albacore-target domestic (left) and foreign (right) longline fleets in 2024

Figure 5.5 shows quarterly species composition by area for the period 2015–2023 and 2024. The majority of the yellowfin catch is taken in tropical areas, especially in the western parts of the region, with smaller amounts in seasonal subtropical fisheries. The majority of the bigeye catch is also taken from tropical areas, but in contrast to yellowfin, mainly in the eastern parts of the WCPFC–CA, adjacent to the traditional EPO bigeye fishing grounds. The albacore catch is mainly taken in subtropical and temperate waters in both hemispheres. In the North Pacific, albacore are primarily taken in the 1st and 4th quarters. In the South Pacific, albacore are taken year round, although in 2024, they tended to be more prevalent in the catch during the 2nd and 3rd quarters. Species composition also varies from year to year in line with changes in environmental conditions, particularly in waters where there is some overlap in species targeting, for example, in the latitudinal band from 0°–20°S.

Similar to 2023, there were relatively large catches of the three main target species in the northern Cook Islands and adjacent high seas area (0-10°S, 160°-170°W; Figure 5.5 – right) in the second quarter, especially when compared to the 2015-2023 quarterly averages (Figure 5.5 – left). In the 4th quarter of 2024, similar to the patterns observed in 2023 (Vidal et al., 2024b), there is a notable reduction in the proportion of bigeye catches in the South Pacific extending from the Solomon Islands to French Polynesia, relative to the average catch distribution since 2015. There is also a notable decline in longline catches around Indonesia, Philippines, and Vietnam as in this region many fishers have transitioned to the handline fishery generally targets large yellowfin but in a less labour intensive and more fuel efficient manner, as compared to longlining.

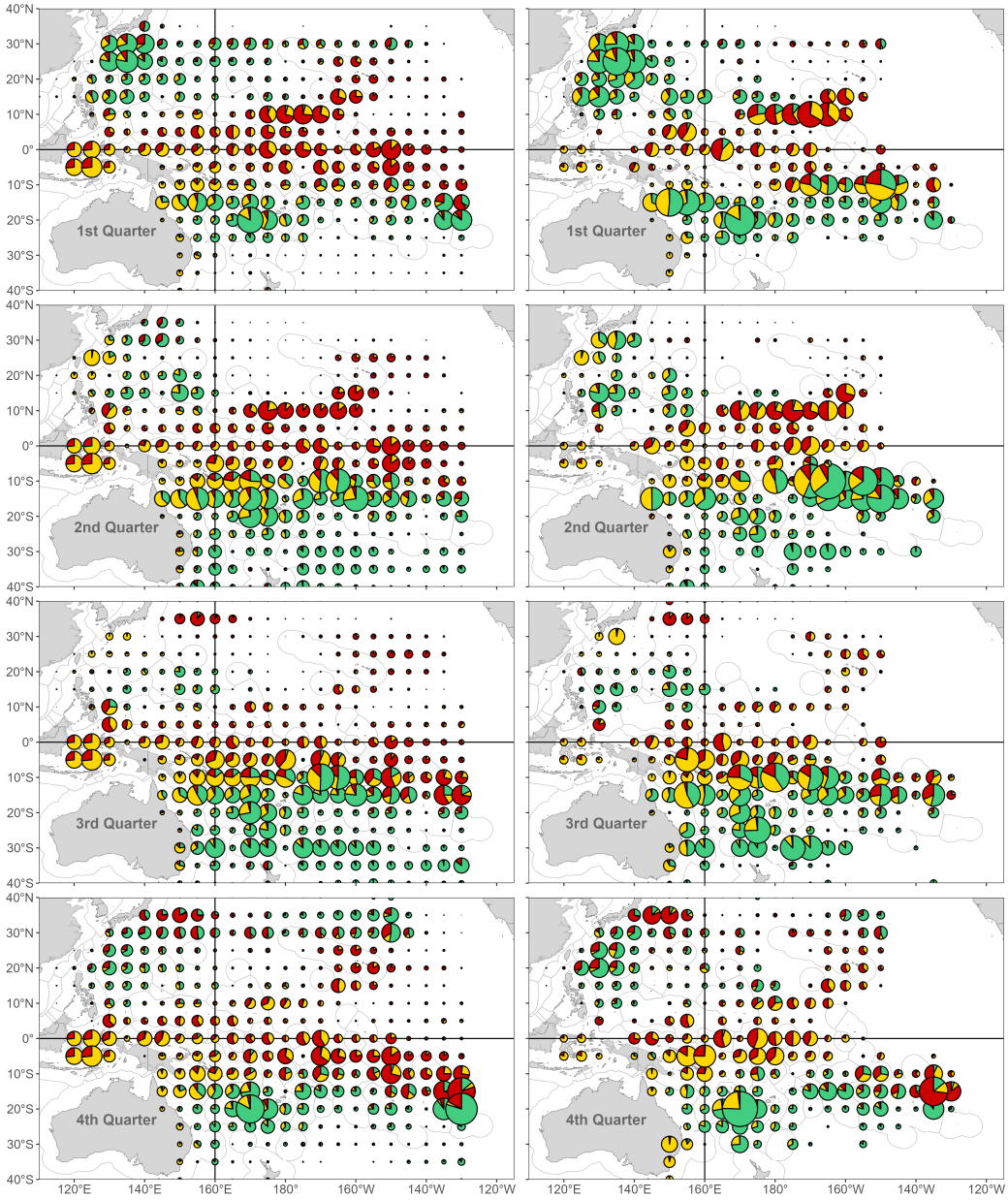

Figure 5.5: Quarterly distribution of longline tuna catch by species, 2015-2023 (left) and 2024 (right) (yellow - yellowfin; red – bigeye; green – albacore) (Note that catches from some distant-water fleets targeting albacore in the North Pacific may not be fully covered; excludes the Vietnam HL/LL fishery)

5.5 Prices and catch value

In this section, we present trends in price data for selected longline fisheries, focusing on yellowfin, bigeye, albacore, swordfish, and striped marlin. These species are marketed in various forms and across different markets.

Yellowfin

In 2024, yellowfin tuna prices in Japanese yen declined across all major markets compared to the previous year, with the exception of fresh product from selected ports in Japan. Notably, prices for longline-caught yellowfin from Oceania fell by 10%, dropping from ¥1,196/kg in 2023 to ¥1,075/kg in 2024. Similarly, prices from Yaizu for longline-caught yellowfin declined by 7% to ¥665/kg, while frozen yellowfin from selected Japanese ports decreased by 6% to ¥743/kg. In contrast, the price for fresh yellowfin from selected Japanese ports rose by 11%, reaching ¥1,141/kg.

In 2024, prices for fresh yellowfin imports into the U.S rose to $10.58/kg compared to the previous year. In U.S. dollar terms, yellowfin prices declined across all major markets, except for fresh product from selected ports in Japan. Notably, U.S. dollar prices for yellowfin from Oceania, Yaizu, and frozen product from selected Japanese ports fell more sharply than their corresponding yen-denominated values, largely due to the appreciation of the U.S. dollar against the Japanese yen.

In 2024, the U.S. dollar price for longline-caught yellowfin from Oceania declined from $8.51/kg in 2023 to $7.10/kg. Similarly, prices from Yaizu and for frozen product at selected Japanese ports fell by 13% and 12%, to $4.39/kg and $4.91/kg, respectively. In contrast, fresh yellowfin prices at selected ports saw a modest increase of 3%, rising from $7.33/kg in 2023 to $7.54/kg in 2024.

Fresh yellowfin imports into both Japan and the U.S. experienced sharp declines in 2020, largely due to supply chain disruptions caused by the COVID-19 pandemic. Imports fell by 75% in Japan and 67% in the U.S. In 2021, Japan's fresh imports declined further by 39%, while U.S. imports began a gradual recovery. This recovery continued in 2022, with U.S. import volumes increasing, while Japan's imports rose by 37% compared to 2021. However, Japan's total imports dropped significantly again in 2023 by 66% to approximately 117,000 metric tonnes. In 2024, both countries saw substantial year-on-year increases, with Japan's imports rising by 185% and the U.S. by 68%. Despite this rebound, Japan's import volume in 2024 remained well below the levels recorded in 2020, even after the sharp decline experienced that year.

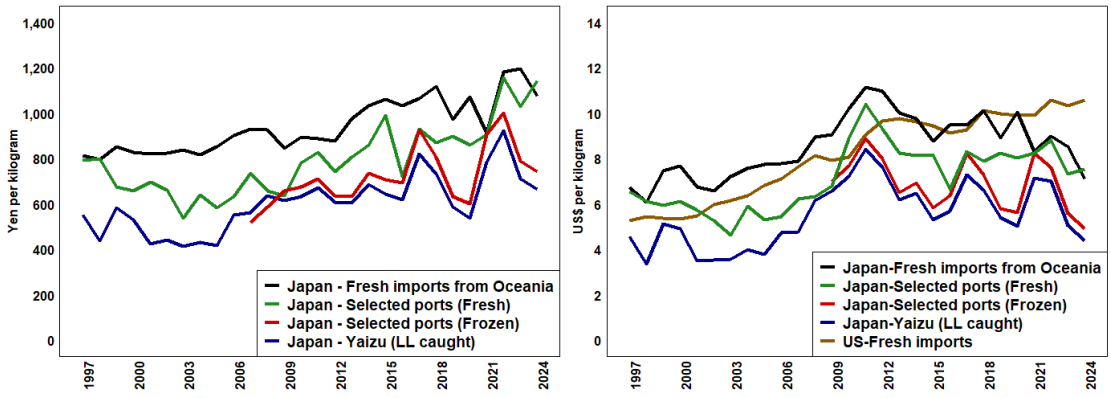

Figure 5.6: Japan and US yellowfin in yen (LHS) and US dollars (RHS) (Japan fresh imports from Oceania are c.i.f prices, Yaizu and Japan selected port are ex-vessel prices and US imports are f.a.s prices. Frozen at selected ports excludes purse seine caught landings)

As of May 2025, Japan recorded a further sharp decline in fresh yellowfin imports - down 82% compared to the same period in 2024, marking the lowest volume for this period since 1997. Similarly, U.S. fresh import volumes fell by 42% over the same period, largely due to elevated inventory levels carried over from late 2024 and the implementation of new tariff policies by the U.S. administration in early 2025.

Bigeye

In 2024, bigeye tuna prices in Japanese yen declined across all major markets. In Japan, average prices for bigeye from Oceania fell by 10% to ¥1,785/kg. Prices at selected ports also declined, with fresh bigeye dropping by 5% to ¥1,640/kg and frozen bigeye decreasing by 4% to ¥963/kg. In contrast, U.S. prices for fresh bigeye imports continued their upward trajectory, reaching a record high of $12.03/kg in 2022 before easing slightly by 4% to $11.52/kg in 2023. In 2024, the upward trend resumed, with a marginal increase of less than 1%, bringing the average to $11.57/kg.

Import volumes of bigeye tuna into Japan and the U.S. have followed divergent trends. In the U.S., volumes rebounded strongly from the COVID-19-related low in 2020, more than doubling in both 2022 and 2023. In contrast, Japan's fresh bigeye imports continued to decline, falling by 32% in 2022 and a further 20% in 2023. However, a modest recovery was observed in 2024, with Japan's imports increasing by 5%, while U.S. imports continued to rise, albeit marginally, by 3%.

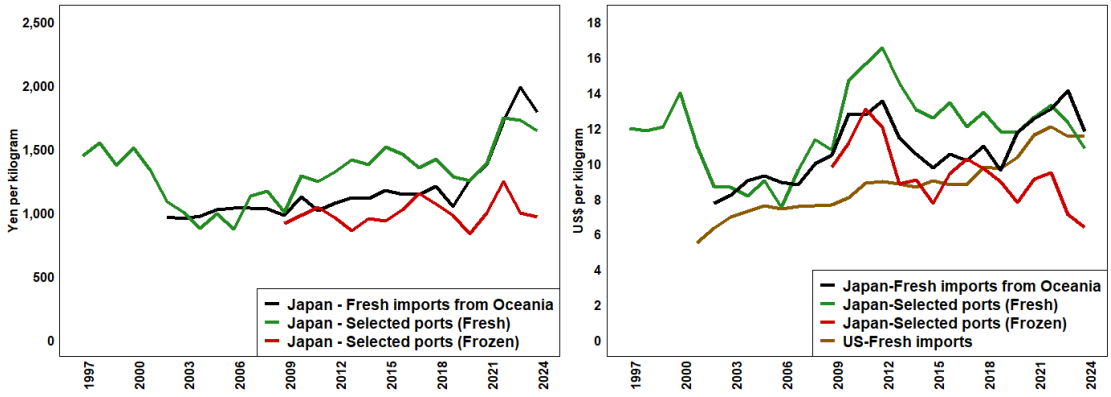

Figure 5.7: Japan and US bigeye prices in yen (LHS) and US dollars (RHS) (Japan fresh imports from Oceania are c.i.f prices, Japan selected ports are ex-vessel prices and US imports are f.a.s prices. Frozen at selected ports excludes purse seine caught landings)

Albacore

In 2024, U.S. fresh tuna prices rose by 8%, reaching a record high of $6.10/kg, the first-time prices surpassed the $6 mark. In contrast, Thai frozen import prices declined by 17%, falling from $3.19/kg in 2023 to $2.64/kg in 2024. Similarly, fresh prices at selected ports in Japan decreased by 11%, dropping from $3.24/kg in 2023 to $2.90/kg in 2024.

In 2020, Thai import volumes rose by 20%. However, this was followed by a sharp decline of 33% in 2021, with volumes falling from approximately 63,000 metric tonnes to around 42,000 metric tonnes. The downward trend continued in 2022, with a further 19% drop to about 34,000 metric tonnes. A modest recovery began in 2023, with a slight 3% increase to 35,000 metric tonnes, followed by a further 5% rise in 2024, bringing volumes to approximately 37,000 metric tonnes. This upward momentum continued into 2025, with import volumes increasing by 35% in the year to May, reaching around 16,000 metric tonnes compared to the same period in 2023.

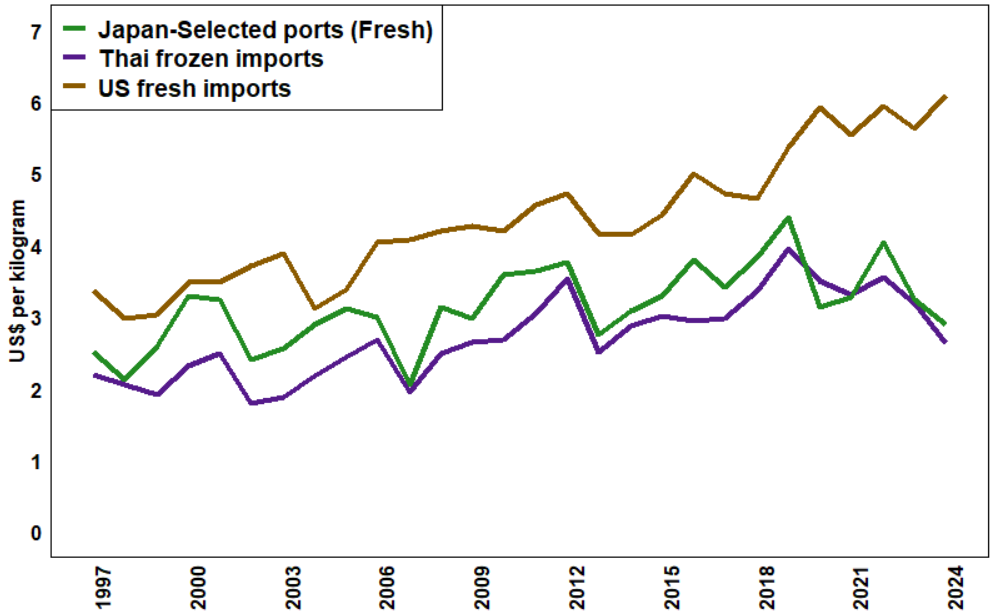

Figure 5.8: Albacore prices in US dollars (Thai frozen imports are c&f prices, Japan selected ports are ex-vessel prices and US imports are f.a.s prices.)

Swordfish and striped marlin

In 2024, prices for both fresh striped marlin and fresh swordfish at selected Japanese ports declined, falling by 16% to ¥696/kg and by 2% to ¥1,219/kg, respectively, compared to the previous year. In contrast, fresh swordfish prices in the U.S. rose by 8%, averaging $8.73/kg- the fourth-highest level recorded to date.

In U.S. dollar terms, prices for fresh striped marlin at selected Japanese ports declined sharply by 22% in 2024, reaching $4.60/kg. Similarly, fresh swordfish prices in Japan fell by 9% to $8.06/kg. Notably, these declines were steeper than their corresponding yen-denominated values, largely due to the appreciation of the U.S. dollar against the Japanese yen.

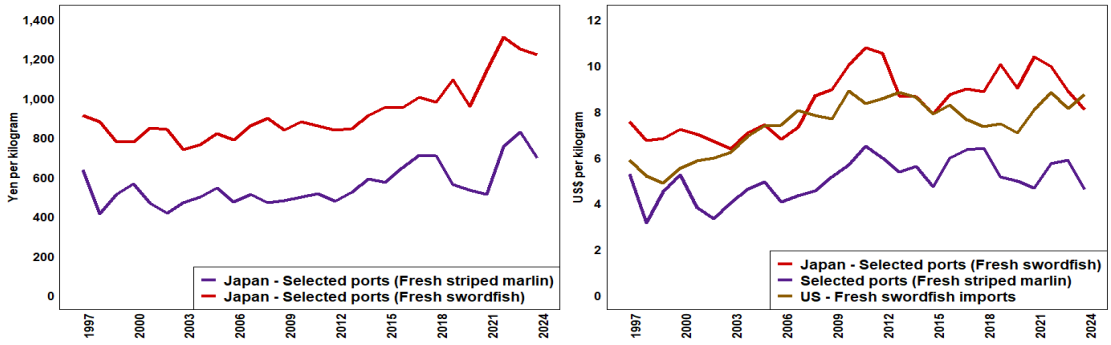

Figure 5.9: Japan and US swordfish and striped marlin prices in yen (LHS) and US dollars (RHS) (Japan selected ports are ex-vessel prices and US imports are f.a.s prices.)

5.5.1 Catch value

In 2024, the estimated value of the total catch from the WCPFC longline fishery was $1.10 billion, accounting for approximately 20% of the total WCPO tuna catch value of $5.6 billion. This represents a substantial 20% decrease from the previous year, equivalent to a decline of around $270 million, largely driven by falling prices for longline-caught tuna.

In 2024, the value of catches for all major target species declined, with the exception of non-target skipjack, which increased by 43% to $7 million. In contrast, the value of yellowfin, bigeye, and albacore catches fell significantly. Yellowfin declined by $128 million (down 23%), bigeye also by $128 million (down 24%), and albacore by $15 million (down 5%). These reductions were primarily driven by a 13% decrease in Yaizu longline-caught yellowfin prices, an 11% drop in frozen bigeye prices at selected Japanese ports, and a 17% decline in albacore Thai import prices.

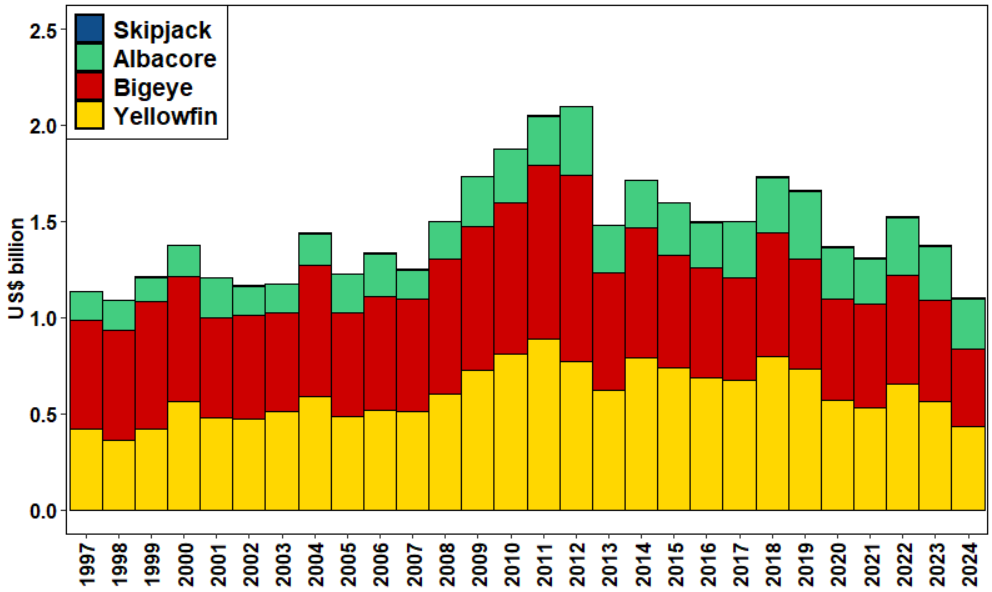

Figure 5.10: Value of the WCPFC-CA longline fishery tuna catch by species

5.5.2 Economic conditions

The analysis of economic conditions within the longline fishery covers two distinct regions: the southern longline fishery, located south of 10°S in the WCPFC Convention Area (WCPFC-CA), and the tropical longline fishery, which includes the area between 10°N and 10°S in the WCPFC-CA, excluding the waters of Indonesia, the Philippines, and Vietnam.

It is important to note a significant caveat regarding the longline fisheries in 2020 and 2021. The impact of the COVID-19 pandemic on the cost structure may have been underestimated in the economic conditions index. This is because the index's fishing cost does not account for changes beyond fuel costs, such as shipping, air freight, and imported equipment and gear, which were all affected by the pandemic. Therefore, when interpreting the index figures for 2020 and 2021 (as shown in the shaded graphs of Figures 5.12 and 5.14), caution is advised.

Southern Longline

Since 2010, the southern longline fishery index has consistently remained below the long-term average. Although fish prices peaked in 2011 and 2012, economic conditions during the period from 2011 to 2014 were particularly challenging due to a combination of low catch rates and high fuel prices. A notable turnaround occurred between 2014 and 2017, driven by improved catch rates and declining fuel prices, while fish prices remained close to their long-term average, there was a substantial improvement in economic conditions, exceeding the 20-year average during 2015 to 2017.

The index declined in subsequent years due to falling catch rates, despite high fish prices in 2018,

particularly in 2019 and lower fuel prices in 2019. Economic conditions worsened further in 2020 and 2021, with a steep decline in catch rates driving the index to its lowest level since 2013, in part due to COVID-19 pandemic mitigation measures that disrupted fishing operations and supply chains. In 2022, however, the index rebounded significantly, nearing its 20-year average, primarily due to improved catch rates, even as fuel costs rose amid the Russia - Ukraine conflict. This upward trend continued into 2023, with the index reaching its long-term average, supported by stronger catch rates and easing fuel prices. In 2024, however, despite continued improvements in catch rates and declining fuel costs, the index dropped below the 20-year average mainly due to a sharp fall in fish prices.

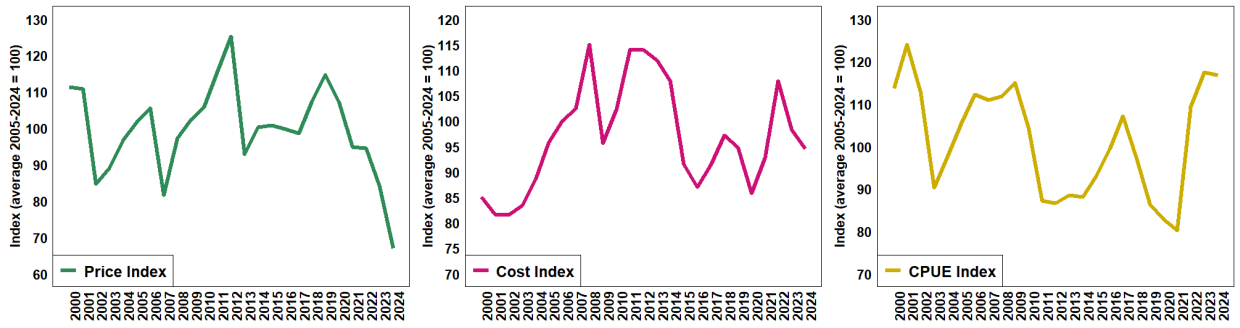

Figure 5.11: Southern longline fishery economic conditions component indexes

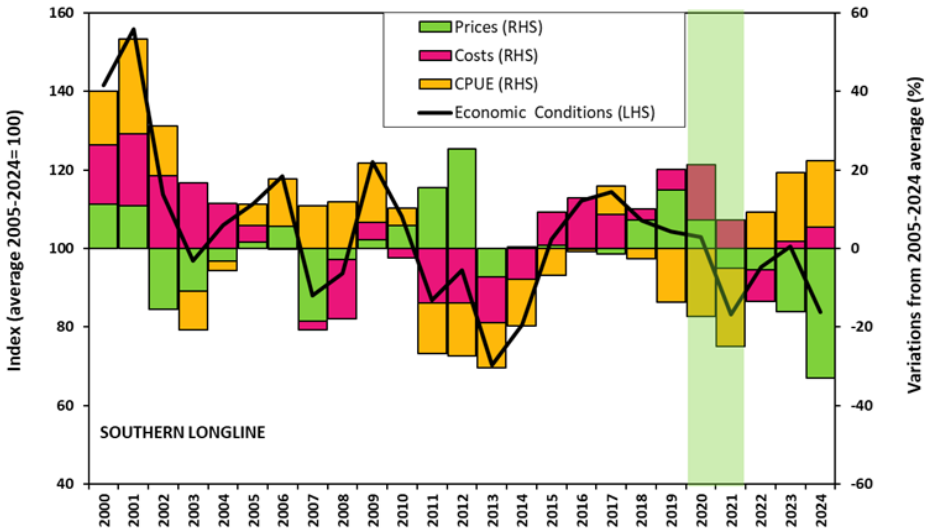

Figure 5.12: Southern longline economic conditions index (LHS) and variance of component indices against average (2001-2020) conditions (RHS)

Tropical longline

Following a downturn in 2017 and 2018, during which the economic index fell below the 20-year long-term average driven largely by rising fuel prices and declining catch rates, conditions stabilized between 2019 and 2020. Despite continued challenges in 2020, including falling fish prices and reduced catch rates, the index remained near the long-term average. This stability was primarily supported by a significant decline in fuel prices, influenced by the global economic slowdown resulting from the COVID-19 pandemic.

In 2021 and 2022, the economic index remained below the 20-year average, reflecting ongoing challenges-particularly the impact of rising fuel prices. The decline in 2022 underscored the severity of these pressures. However, in 2023, the index showed improvement, approaching the long-term average, supported by higher catch rates and easing fuel costs. Despite further gains in catch rates and continued declines in fuel prices, the index fell sharply in 2024 to its lowest level since 2013, primarily driven by a significant drop in fish prices.

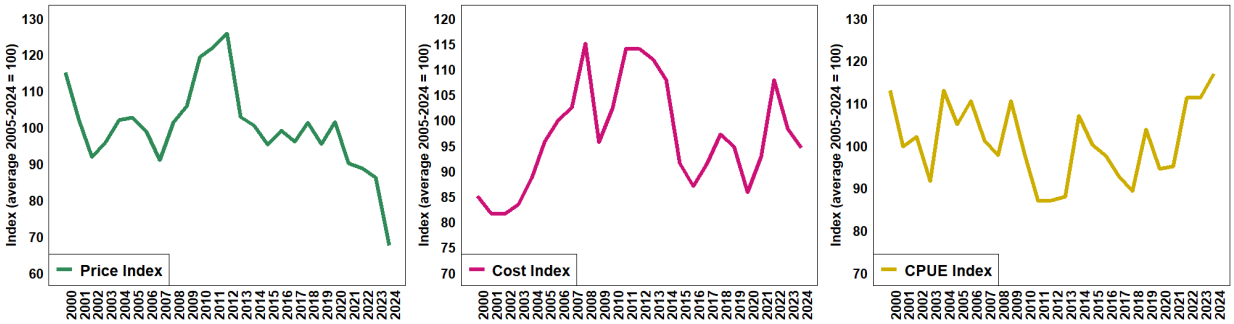

Figure 5.13: Tropical longline fishery economic conditions component indexes

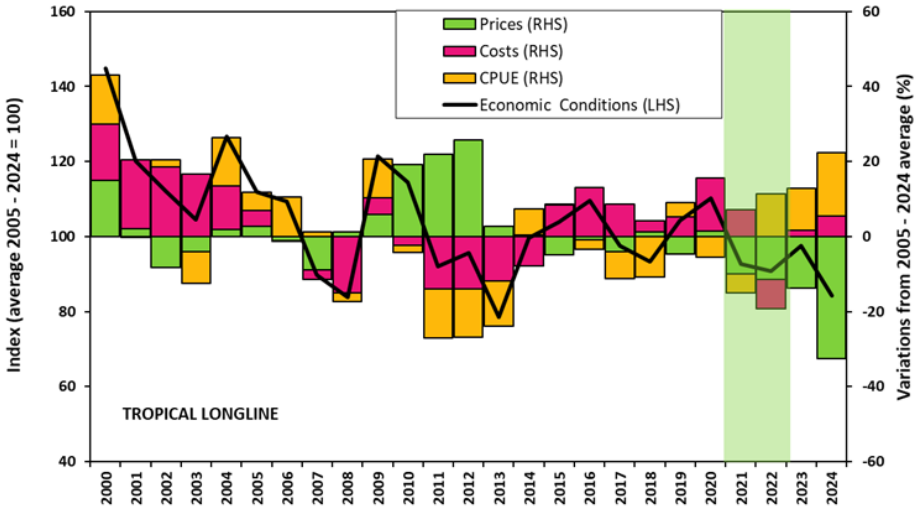

Figure 5.14: Tropical longline economic conditions index (LHS) and variance of component indices against average (2001-2020) conditions (RHS).

5.6 South Pacific Troll fishery

5.7 Overview

The South Pacific troll fishery is based in the coastal waters of New Zealand, and along the Sub-tropical Convergence Zone (STCZ, east of New Zealand waters located near 40°S). The fleets of New Zealand and the United States have historically accounted for the great majority of the catch that consists almost exclusively of albacore tuna.

The fishery expanded following the development of the STCZ fishery after 1986, with the highest catch attained in 1989 (8,370 mt). Over the past decade, catches have declined to range from 1,000-5,000 mt. The level of effort expended by the troll fleets each year can be driven by the price conditions for the product, and by expectations concerning likely fishing success.

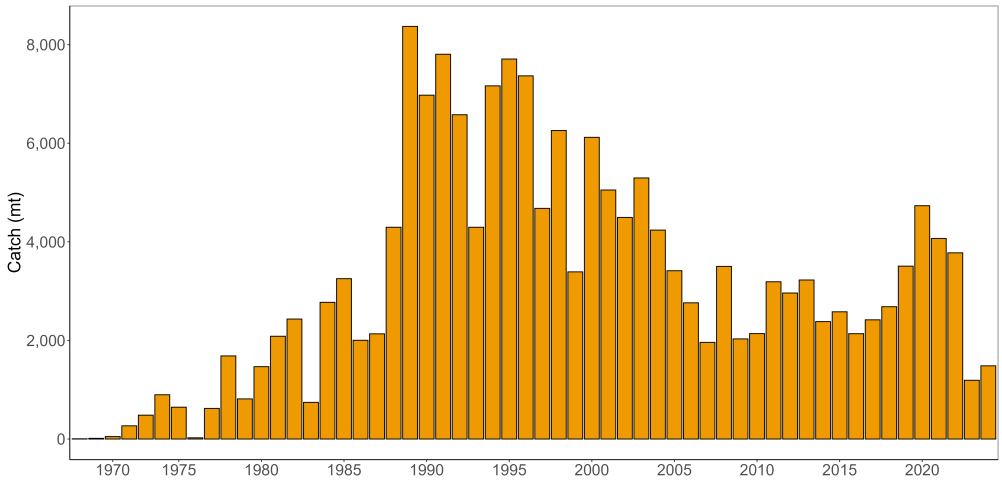

Figure 5.15: Troll catch (mt) of albacore in the south Pacific Ocean

5.8 Provisional estimates of catch, effort, and fleet size (2024)

The 2024 South Pacific troll albacore catch (1,485 mt) was the fourth lowest catch level since 1980 (744 mt were reported in 1983), largely owing to a contraction in NZ's troll fleet operating in the region. The New Zealand troll fleet (82 vessels catching 1,321 mt in 2024) and the United States troll fleet (4 vessels catching 164 mt in 2024) accounted for all of the 2024 albacore troll catch, although minor contributions also come from the Canadian, the Cook Islands and French Polynesian fleets when their fleets are active in this fishery.

Effort by the South Pacific albacore troll fleets is concentrated off the coast of New Zealand and across the Sub-Tropical Convergence Zone (STCZ) (see Figure 5.16).

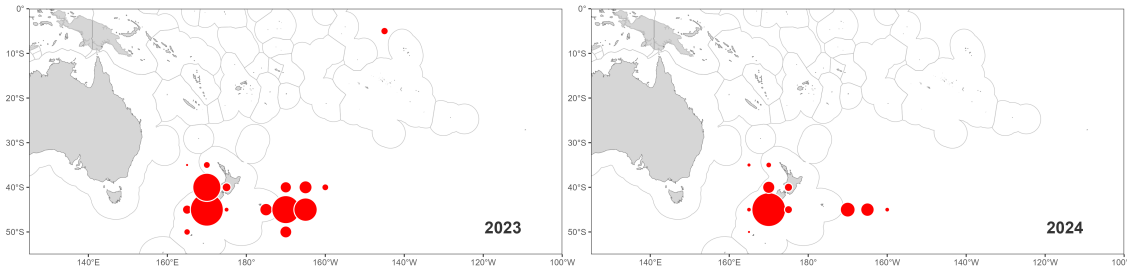

Figure 5.16: Distribution of South Pacific troll effort (days) during 2023 (left) and 2024 (right)

6 Other fisheries

There are a number of other, mainly small-scale, fisheries in the WCPFC–CA that target the key tuna species, including handline gear that targets large yellowfin tuna, small-scale troll/hook-and-line fisheries, small-scale gillnet and a range of other artisanal gears. The following sections attempt

to provide some information on some of these 'other' fisheries.

A description of most of these fisheries is provided in Scientific Committee papers from 2021 – MOMAF and SPC-OFP (2021a,b); NRFDI, et al. (2021); SPC-OFP (2021).

6.1 Large-fish Handline fishery

Large-fish handline fisheries exist in the Philippines, Indonesia, Vietnam, and Hawaii, where the target is essentially large yellowfin tuna (and also bigeye tuna in the case of Hawaii). In the Philippines and Indonesia, this fishery can be comprised of both small craft and larger vessels (>24m or >20 GRT). The larger vessels can have several small associated one-person boats (called pakura in the Philippines) used to fish in the vicinity of the larger vessel. The vessels that target large yellowfin tuna with the handline gear are also referred to as 'pump boats' in the Philippines. The general characteristics that distinguish the vessels targeting small-fish with the 'hook-and-line' gear to those targeting large yellowfin tuna in the Philippines and Indonesia is that the latter fishery is conducted at night, at a depth typically greater than 50 metres with larger hooks. However, this distinction is not always clear, for example, there are instances when small craft can target both large yellowfin at night and small tunas in the day within one trip. Large yellowfin tuna dominates the catch from this gear type in the Philippines and Indonesia (typically $\geq$ 95% of the total catch) and the catches are landed locally where it is processed and available for export or the high-end local markets.

Over the past two decades, annual catch estimates from the large-fish handline fishery have been in the range of 20,000–57,000 mt (Figure 6.1), although the estimates prior to 2013 are acknowledged to exclude the catches from the Indonesian fishery. Estimates for Indonesia were compiled for the period 2013–2016, but were again lacking from 2017 onward, and only represent carried over values for this fishery since this time. The 2024 (84,223 mt) catch was nearly twice that of the 2023 catch (45,881 mt). This large increase is largely influenced by a combination of factors including Vietnam reporting catches from their handline fishery, whereas in the past these were reported as longline, increased fishing capacity in the Philippines due to government subsidized vessels, and generally good fishing conditions in the western region of the WCPFC. It should be noted, that the 2024 Indonesia annual catch estimates have been carried over from 2023 at this point; how those values will influence the total catch estimate for handline gear remains uncertain[7].

[7] Indonesia's annual data audit an catch estimates workshop is scheduled for 27 July 2025; revised catch estimates may be available prior SC21.

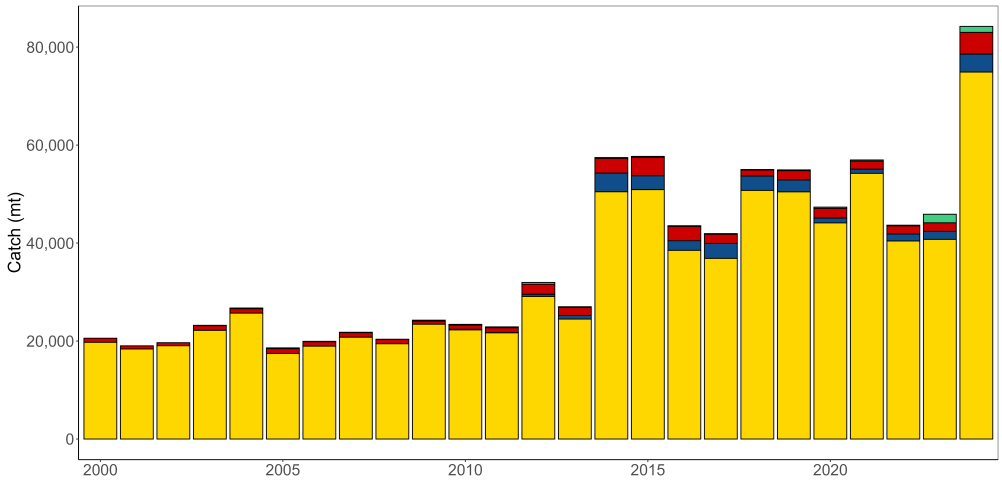

Figure 6.1: WCPFC–CA large-fish handline catch (mt) by species (albacore - green; bigeye - red; skipjack - blue; yellowfin - yellow)

6.2 Small-scale troll and hook-and-line fishery

The small-scale troll and hook-and-line fishery comprises small craft that, due to their size and concerns on safety, conduct trips that do not usually exceed one day and are restricted to coastal waters, rarely venturing beyond territorial seas and/or archipelagic waters (where relevant). The method of fishing is varied and includes trolling, and surface fishing in the vicinity of FADs with one or multiple hooks per line. Small skipjack and yellowfin tuna are the main species taken in this fishery and most coastal states in the tropical and sub-tropical WCPFC-CA have vessels in this fishery, with the highest catches reported from the Indonesia and the Philippines domestic fisheries, followed by Kiribati, Japan, French Polynesia and smaller amounts from several Pacific Island countries (catches from some countries, while only minor, have yet to be compiled and provided to the WCPFC). The catches from this fishery are typically for subsistence or sold at local markets.

Over the past two decades annual catch estimates from the small-scale troll and hook-and-line fishery have been in the range of 170,000–300,000 mt (Figure 6.2), although the trends in some years may be a result of the lack of resources to compile or confirm estimates, rather than changes in the fishery. The increasing trend over the past decade are likely related to improvements in estimates in some fisheries (noting the provisional 2024 estimate (316,537 mt) is the second highest of the time series, but comparable to the past few years). The species composition tends to fluctuate with some years having a high proportion of small yellowfin tuna (e.g., in recent years, the catch of small yellowfin tuna was estimated to have been at least 50% of the total tuna catch for this fishery). Over the past five years, the proportion of small bigeye tuna has increased, relative to historical catches, while the proportion of skipjack has decreased. The change in species composition may also be influenced by the increased reporting of artisanal tuna catches by Pacific Island countries

in recent years.

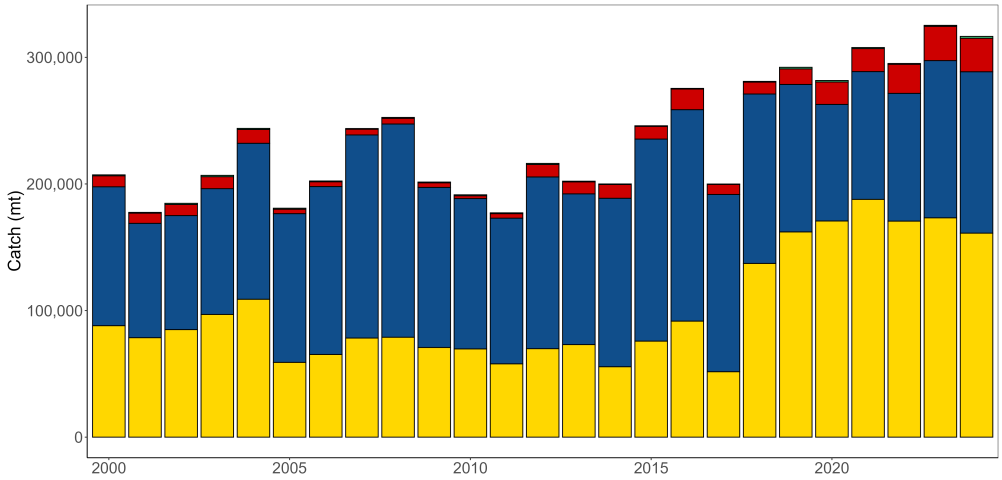

Figure 6.2: WCPFC–CA troll/hook-and-line catch (mt) by species (bigeye - red; skipjack - blue; yellowfin - yellow)

6.3 Small-scale gillnet fishery

The main small-scale gillnet fisheries operate in coastal waters of Vietnam and Indonesia, with smaller catches from this gear in Japan and in the archipelagic waters of the Philippines. This fishery targets skipjack tuna but also take small amounts of other pelagic species.

The available annual catch estimates (Figure 6.3) are only representative of Vietnam, Philippines and Japan fisheries at this stage; the total tuna catch from these drift gillnet fisheries has ranged from 10,000 mt to 48,000 mt over the past decade. Indonesia first separated out the gillnet catch by species from their 'other/unclassified gear' tuna catch estimates in 2013 and these have yet to be included in this time series; the Indonesia small-scale gillnet catch has ranged from 5,000–40,000 mt over this period. The 2024 catch of 13,672 mt is higher than both 2023 and 2022, however it remains one of the lowest values of the past decade, large due to a contraction in Vietnam's gillnet fishery.

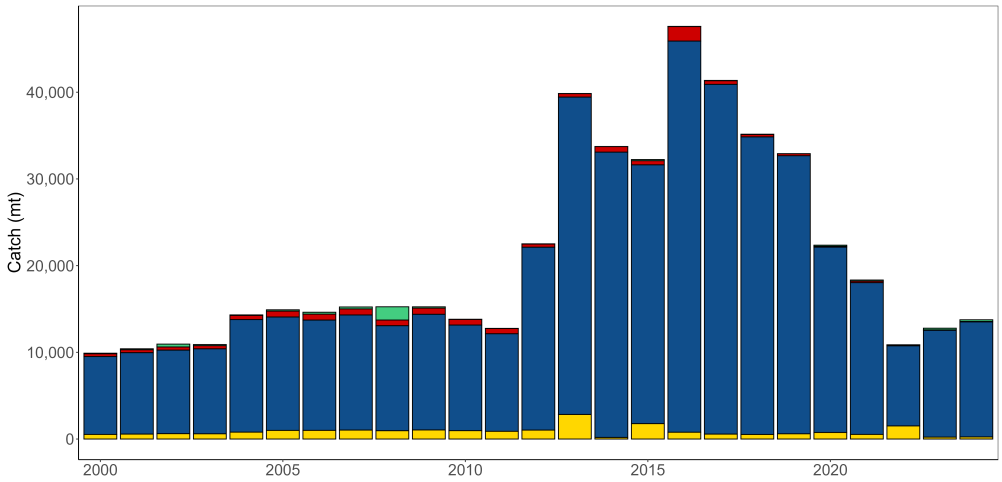

Figure 6.3: WCP–CA small-scale gillnet catch (mt) by species (albacore - green; bigeye - red; skipjack - blue; yellowfin - yellow)

7 Summary of catch by species

7.1 Skipjack

Total skipjack catches in the WCPFC–CA have increased steadily since 1960, more than doubling during the 1980s, and continuing to increase in subsequent years. Annual catches have consistently exceeded 1.5 million mt over the last decade, and 2024 produced a records catch at just over 2.1 million mt (Figure 7.1). Pole-and-line fleets, primarily Japanese, initially dominated the fishery, with the catch peaking at 380,000 mt in 1984. The relative importance of the pole-and-line fishery, however, has declined over the years primarily due to economic constraints. The skipjack catch increased during the 1980s due to growth in the international purse seine fleet, combined with increased catches by domestic fleets from Philippines and Indonesia (which have made up around 10% of the total skipjack catch in WCPFC–CA).

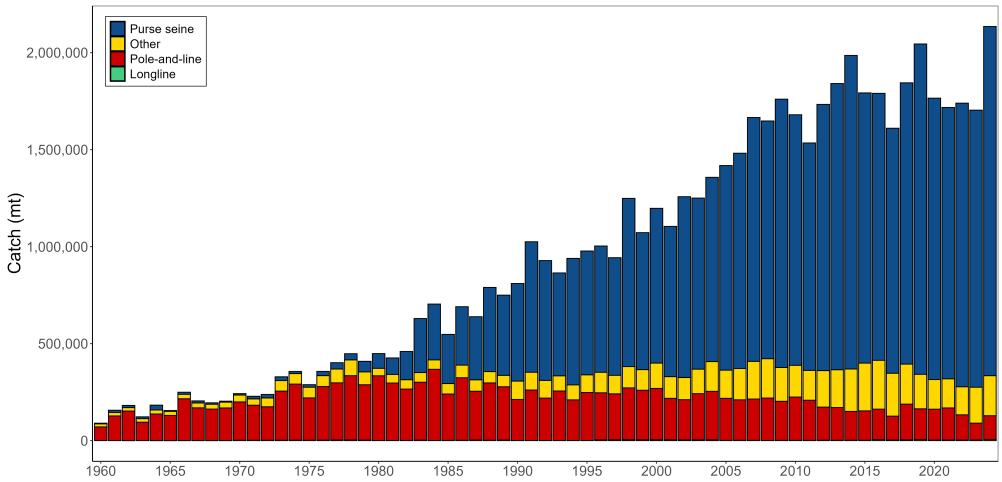

Figure 7.1: WCPFC–CA skipjack catch (mt) by gear

The 2024 WCPFC–CA skipjack catch of 2,107,763 mt was a record catch, and around 63,000 mt higher than the previous record in 2019 (2,044,779 mt). Catch in the purse seine fishery for 2024 (1,780,549 mt – 87%) was the main contributor to the record catch, noting that the trend in purse seine skipjack catch typically drives the trends in overall skipjack catch, and often total tuna catch for the WCPFC-CA. The pole-and-line catch for 2024 (122,007 mt – 6%) was amongst the lowest catches since 1963, with reductions in both the Japanese and the Indonesian catches (noting 2024 estimates for this fishery are provisional). The various 'artisanal' gears in the domestic fisheries including Indonesia, Philippines and Japan took 184,975 mt in 2024 (9% of the total catch) which represents an increase from recent 2020-2022 catch levels when catches ranged from 12,000-13,000 mt. The longline fishery also produced a record skipjack catch of 6,228 mt, which is relatively minor for total skipjack catches (<1% of the total catch), but notable nonetheless.

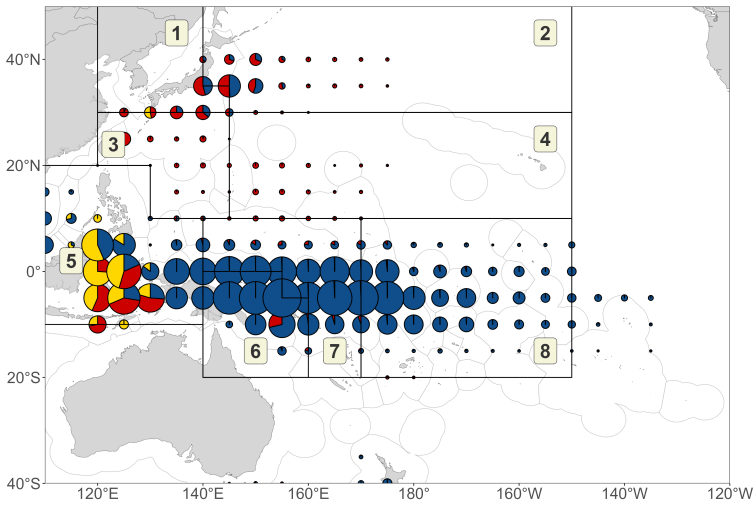

Figure 7.2: Distribution of skipjack tuna catch by gear, 1990–2024 (pole-and-line - red; purse seine - blue; other fisheries - yellow). The eight-region spatial stratification used in stock assessment is shown.

The majority of the skipjack catch is taken in equatorial areas, and most of the remainder is taken in the seasonal domestic (home-water) fishery of Japan, with seasonal catches in the NZ fishery (Figure 7.2). The domestic fisheries in Indonesia (purse seine, pole-and-line and unclassified gears) and the Philippines (e.g., ring-net and purse seine) account for the majority of the skipjack catch in the western equatorial portion of the WCP–CA. As mentioned in Section 3, the spatial distribution of skipjack catch by purse seine vessels in the central and eastern equatorial areas is influenced by the prevailing ENSO conditions.

The Philippines and Indonesian domestic fisheries (archipelagic waters) generally account for most of the skipjack catch in the 20–40 cm size range (Figure 7.3), although associated purse seine catch also contribute to this range (e.g., in 2020 and to a lesser degree 2022). Most of the WCPFC–CA skipjack catch (by weight) is in the range 40–70 cm (corresponding to 1–2+ year-old fish – Figure 7.4). Medium-large (60–70 cm) skipjack typically make up the greater proportion of the catch from unassociated, free swimming school sets. In 2023, a substantial portion of the free-school catch was made up of fish in the 70-80 cm range, which had not been observed for several years, whereas in 2024, most of the free-school catch ranged between 50-70 cm. The overall purse seine skipjack size distribution in 2024 from associated sets (light blue) shows a broad distribution across size classes from about 25 to 65 cm, but representing a much smaller portion of the overal catch as compared to 2022 and 2023. The skipjack size distributions in the Philippine/Indonesia archipelagic fisheries have been relatively constant for a number of years (Figure 7.3 – yellow).

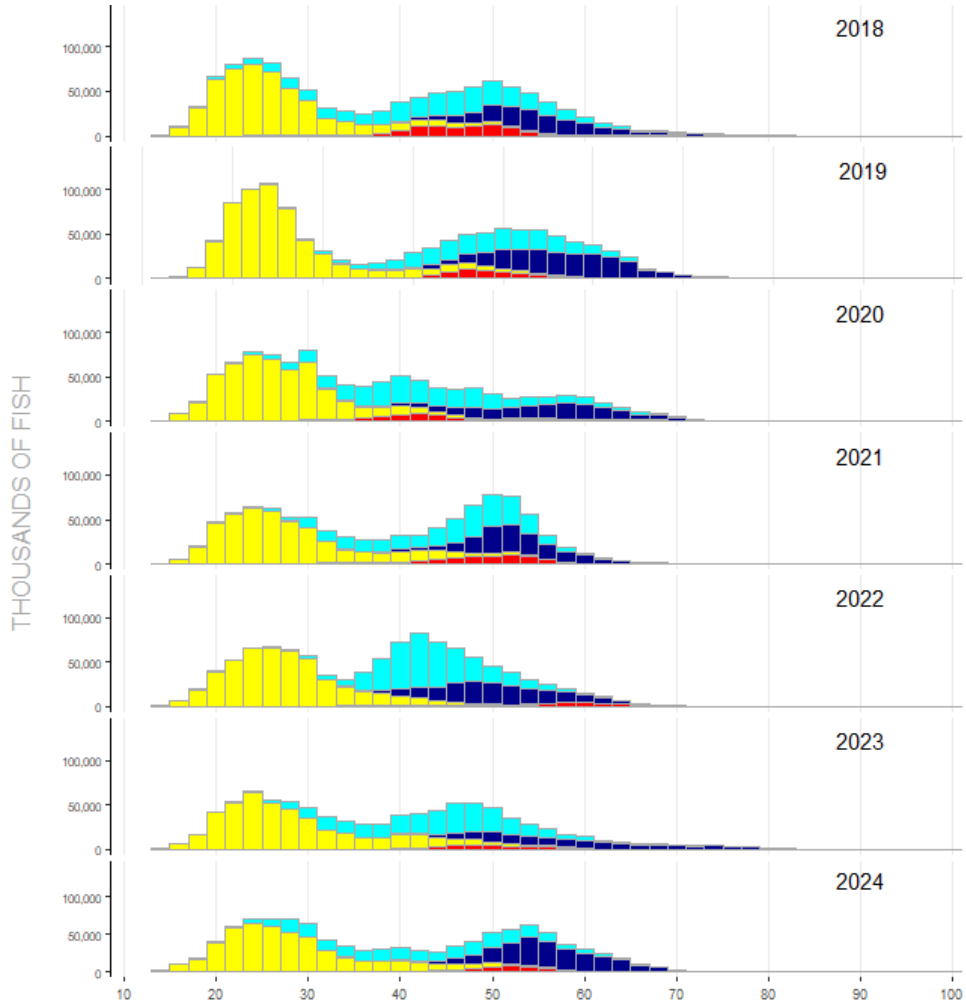

Figure 7.3: Annual catches (no. of fish) of skipjack tuna in the WCPO by size (2 cm intervals) and gear type, 2018–2024 (red – pole-and-line; yellow – Philippine-Indonesia archipelagic fisheries; light blue – purse seine associated; dark blue – purse seine unassociated)

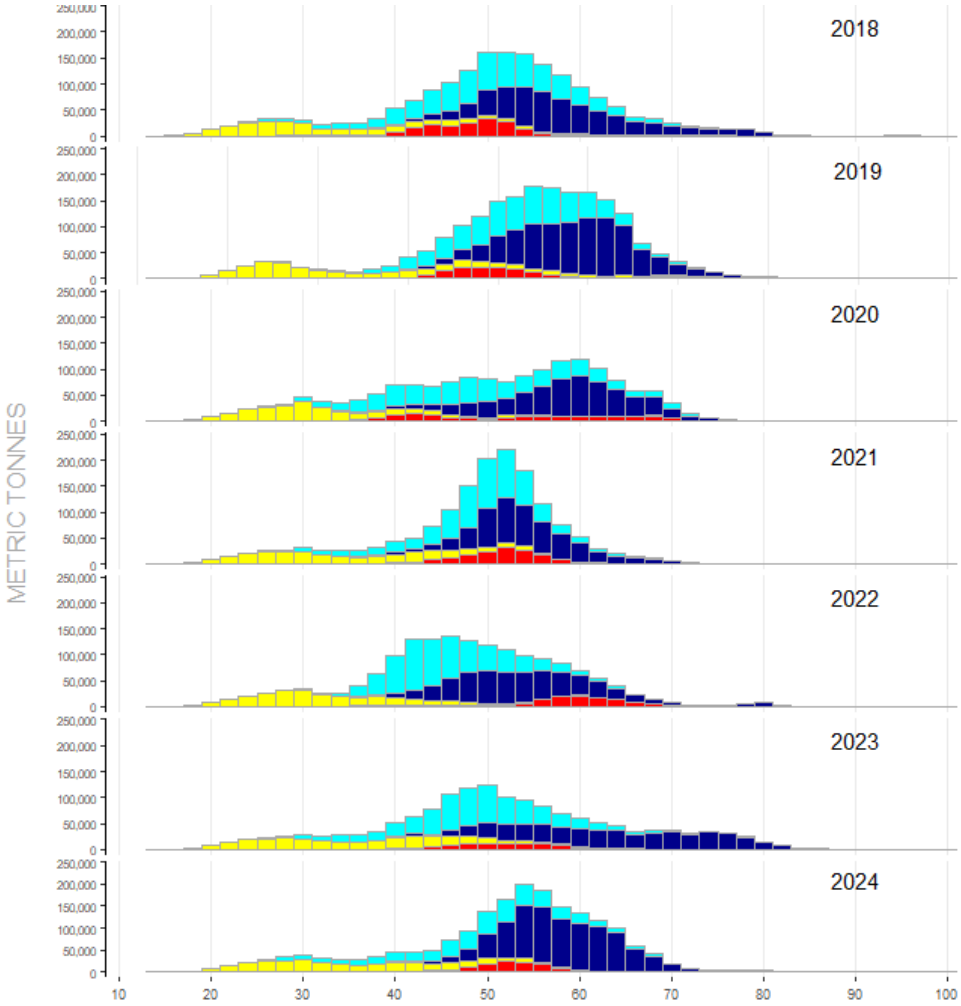

Figure 7.4: Annual catches (mt) of skipjack tuna in the WCPO by size (2 cm intervals) and gear type, 2018–2024 (red – pole-and-line; yellow – Philippine-Indonesia archipelagic fisheries; light blue – purse seine associated; dark blue – purse seine unassociated)

7.2 Yellowfin

The total yellowfin tuna catch in the WCPFC–CA has slowly increased over time but since 1998, jumped to a new level with annual catches regularly exceeding 500,000 mt (Figure 7.5), mainly due to increased catches in the purse seine fishery. The 2024 yellowfin catch (677,754 mt) was about 42,000 mt below the 2023 catch level and slightly below the recent 10-year average (∼695,000 mt). The relatively high yellowfin tuna catches since 2018 are related to some extent to high catch levels from the 'other' category (primarily small-scale fisheries in Indonesia – provisional 2024 estimate for 'other' is 250,420 mt – 37% of the total catch).

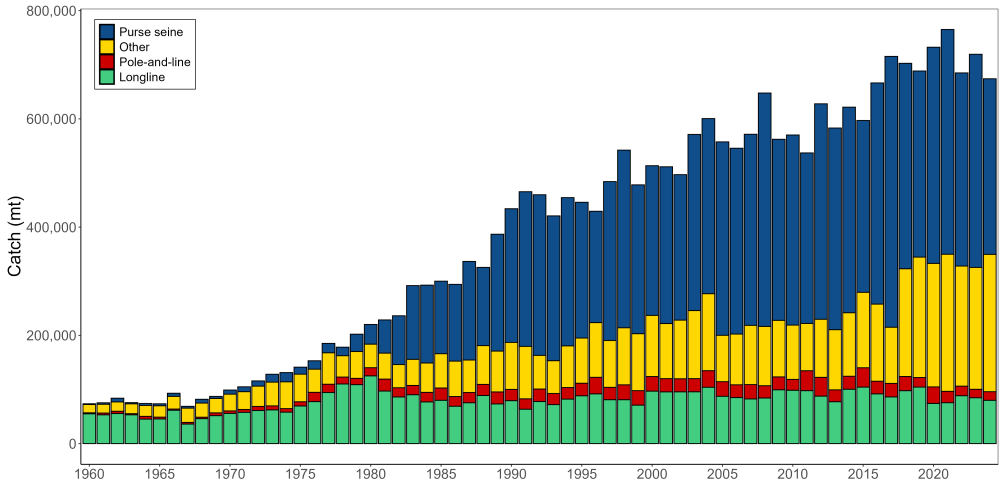

Figure 7.5: WCPFC–CA yellowfin catch (mt) by gear

The WCPFC–CA longline catch for 2024 (79,974 mt–12%) was a slight decrease compared to 2023, and among the lowest yellowfin catches over the past two decades. Since the late 1990s, the purse seine catch of yellowfin tuna (331,367 mt in 2025 – 49%) has accounted for about 3-5 times the longline yellowfin tuna catch.

The pole-and-line fisheries took only 15,994 mt during 2024 (∼2% of the total yellowfin catch), which was similar to the 2023 catch level, but amongst the lowest since the 1970s. Catches in the 'other' category are largely composed of yellowfin taken by various assorted gears (e.g., troll, ring-net, bagnet, gillnet, large-fish handline, small-fish hook-and-line and seine net) in the domestic fisheries of the Philippines and eastern Indonesia. Figure 7.6 shows the distribution of yellowfin catch by gear type for the period 1990–2024. As with skipjack, the great majority of the catch is taken in equatorial areas by large purse seine vessels, and a variety of gear types in the Indonesian and Philippine fisheries.

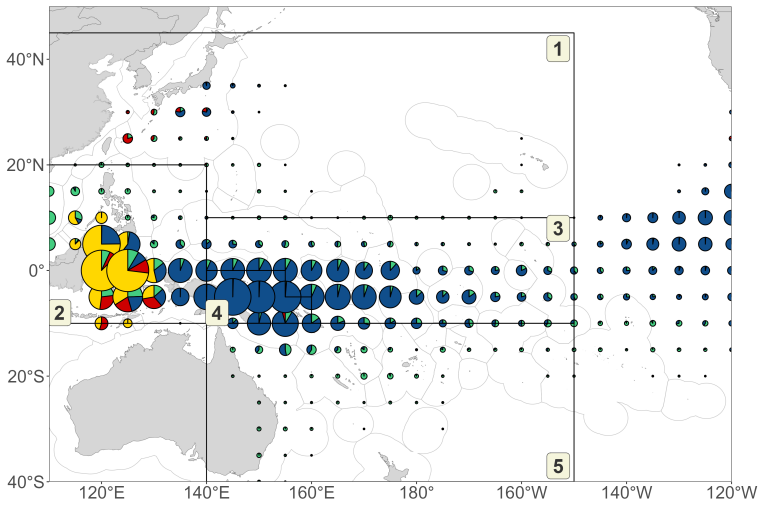

Figure 7.6: Distribution of yellowfin tuna catch by gear, 1990–2024 (longline - green; pole-and-line - red; purse seine - blue; other fisheries - yellow). The five-region spatial stratification used in stock assessment is shown.

The domestic surface fisheries of the Philippines and Indonesia (archipelagic waters) take large numbers of small yellowfin in the 20–50 cm range (Figure 7.7), and their deep-water handline fisheries take smaller quantities of large yellowfin tuna (> 110 cm). In the purse seine fishery, smaller yellowfin are caught in log and FAD sets than in unassociated sets. A major portion of the purse seine catch is typically adult (> 100 cm) yellowfin tuna, to the extent that the purse seine catch (by weight) of adult yellowfin tuna is usually higher than the longline catch. Most of the catch of large yellowfin tuna in the size range 120–150 cm from the purse seine unassociated sets is typically taken in the eastern tropical WCPFC-CA. The proportion of fish >130cm from unassociated sets during 2024 decreased from 2023, likely due to the westward concentration of fishing effort, showing a broader distribution of size classes in the catch (down to 50 cm; Figure 7.8). The bimodal distribution (in catch weight) from the Philippine and Indonesia archipelagic fisheries highlights the different fishing modes and the importance of these fisheries for yellowfin removals. Section 3.6 also provides some insights into the distribution of purse seine yellowfin catch by area and size. The submission of Indonesia's 2024 size data was delayed, and therefore, the 2024 size distributions are expected to be updated with additional data in the coming month.

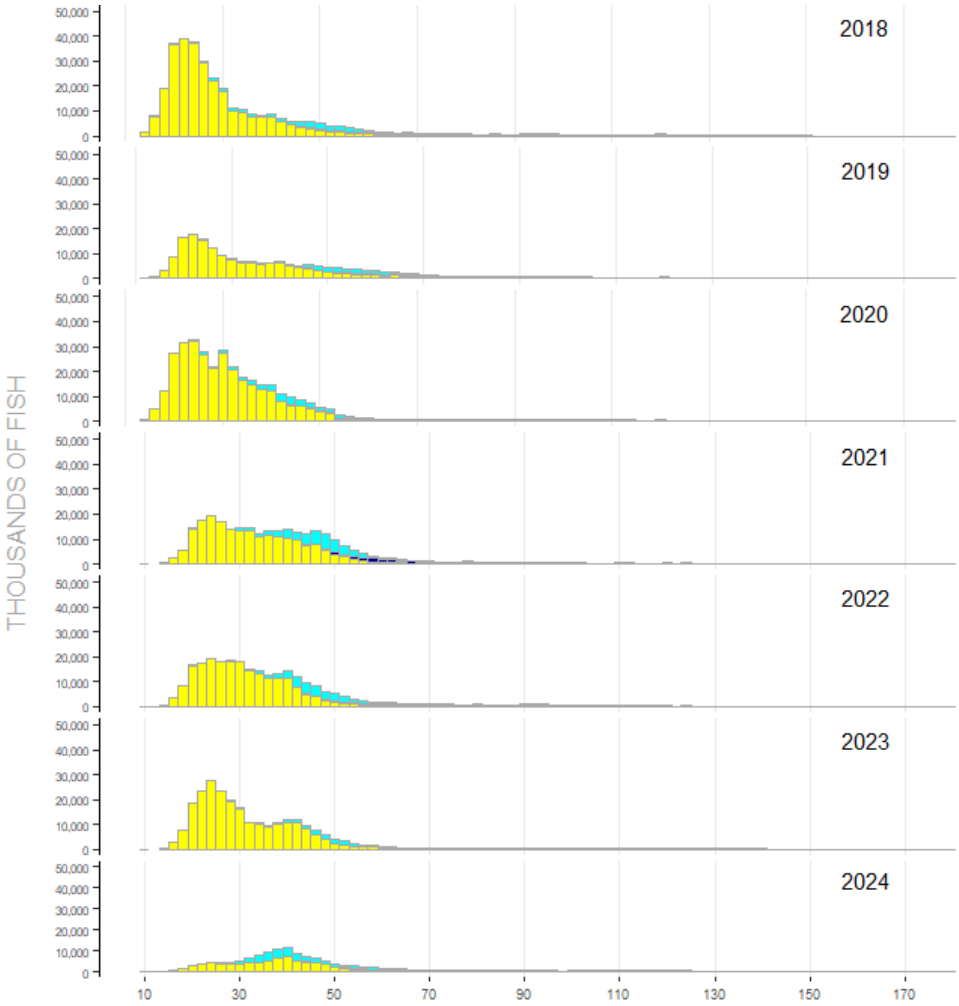

Figure 7.7: Annual catches (no. of fish) of yellowfin tuna in the WCPO by size (2 cm intervals) and gear type, 2018–2024 (green – longline; yellow – Philippine-Indonesia archipelagic fisheries; light blue – purse seine associated; dark blue – purse seine unassociated)

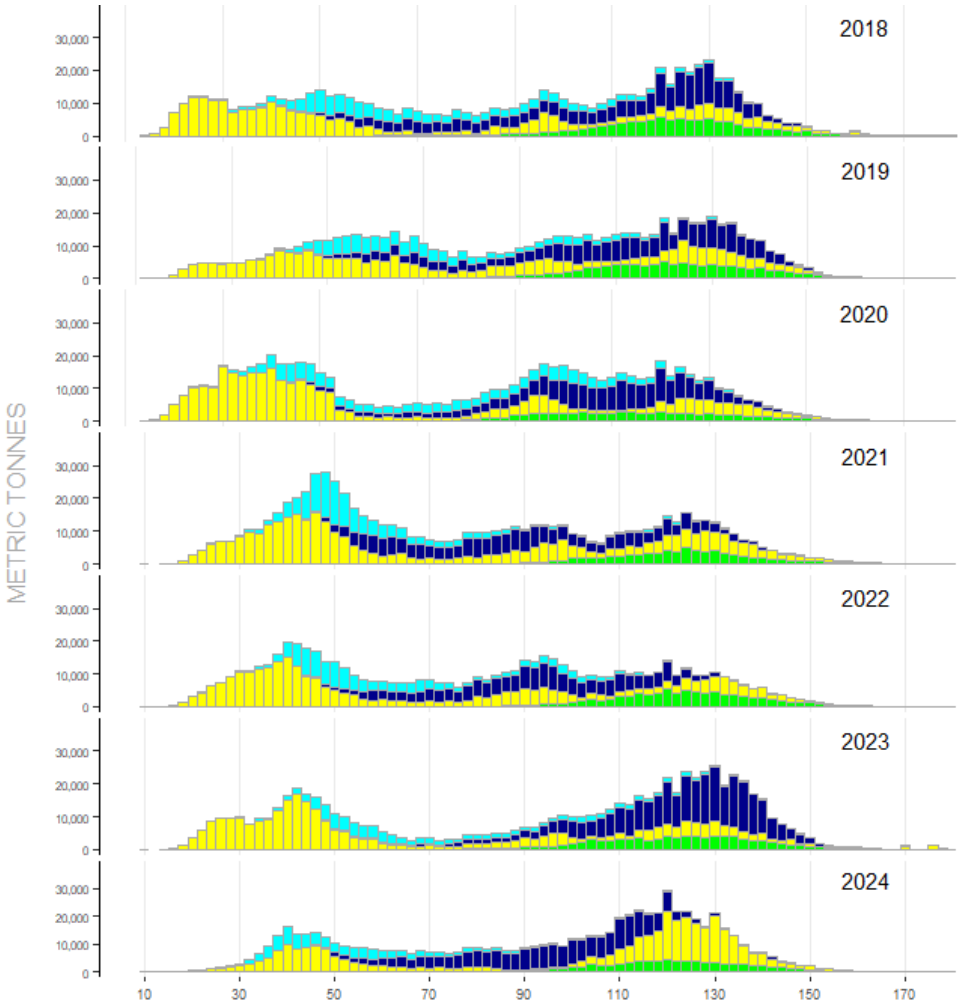

Figure 7.8: Annual catches (mt) of yellowfin tuna in the WCPO by size (2 cm intervals) and gear type, 2018–2024 (green – longline; yellow – Philippine-Indonesia archipelagic fisheries; light blue – purse seine associated; dark blue – purse seine unassociated)

7.3 Bigeye

The provisional WCPFC-CA bigeye catch (119,023 mt) for 2024 was one of the lowest catches in recent history (since 1996). The provisional WCPFC-CA longline bigeye catch (47,653 mt) was about 8,000 mt lower than the 2023 catch. The reduction in longline catches of bigeye in recent years were initially attributed, in part, to the COVID-19 pandemic, but a rebound following the peak impacts of the pandemic has not yet been observed. The provisional WCPFC–CA purse seine bigeye catch for 2024 was estimated to be 33,787 mt, which was the lowest values since 1989 and approximately 8,000 mt lower than the 2023 catch level (Figure 7.9). The WCPFC-CA purse seine bigeye catch has exceeded the longline catch for most of the past ten years; however the 2024 purse seine catches were about 14,000 mt below the longline catch. The purse seine and longline fisheries have accounted for an average of 85% of the total WCPFC-CA bigeye catch from about 2010 to 2020, a percentage that has decreased in recent years (68% in 2024) due to the bigeye catches

reported from 'other' gears in the Indonesia/Philippine/Vietnam regions of the western WCPO (Figure 7.10).

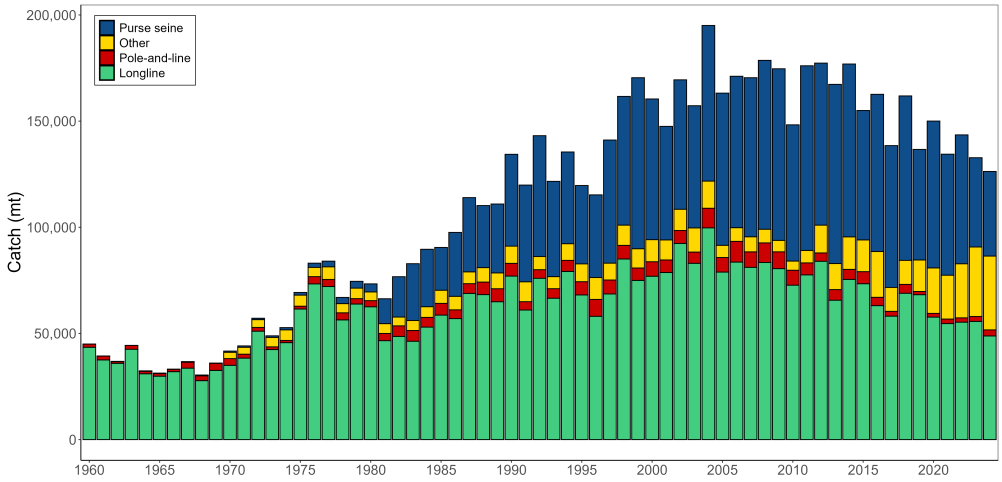

Figure 7.9: WCPFC–CA bigeye catch (mt) by gear

The WCPFC–CA pole-and-line fishery has generally accounted for between 1,000–5,000 mt (1-4%) of bigeye catch annually over the past decade (2,864 mt in 2024). The 'other' category, representing various gears (including troll) in the Philippine, Indonesia[8], Vietnam and Japanese domestic fisheries has generally fluctuated between an estimated 11,000–26,000 mt (7–15% of the total WCPFC–CA bigeye catch) over the past decade; however, in 2024 these catches climbed to 34,610 mt (29% of the bigeye catch) representing the highest catch of the time series for the second year in a row.

Figure 7.10 shows the spatial distribution of bigeye catch in the Pacific for the period 1990–2024. The majority of the WCPFC–CA catch is taken in equatorial areas, both by purse seine and longline, but with some longline catch in sub-tropical areas (e.g., east of Japan and off the east coast of Australia). In the equatorial areas, much of the longline catch is taken in the central Pacific, adjoining the important traditional bigeye longline area in the eastern Pacific.

[8] Bigeye tuna estimates in the Indonesian troll fishery were provided for the first time for 2013 but have subsequently (since 2017) been included in the 'other' category.

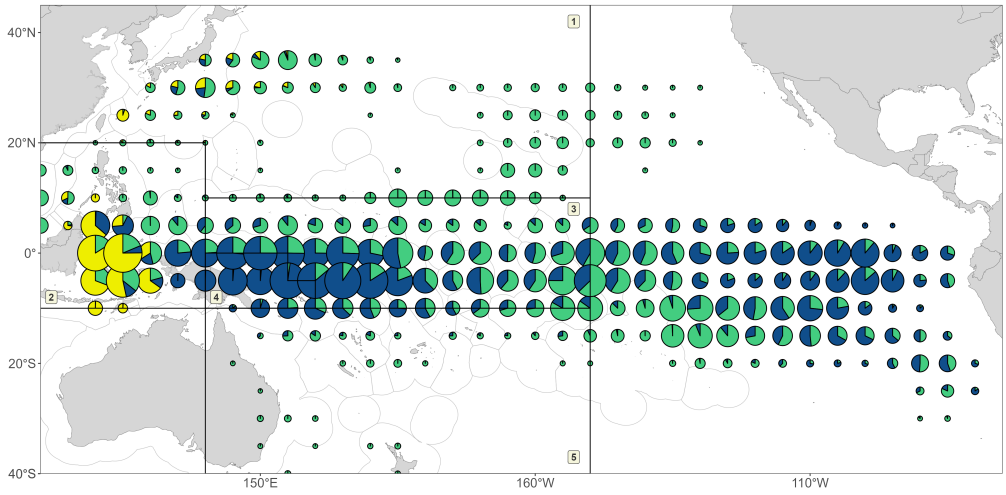

Figure 7.10: Distribution of bigeye tuna catch, 1990-2024. The five-region spatial stratification used in stock assessment for the WCPFC–CA is shown (longline - green; purse seine - blue; other fisheries - yellow).

As with skipjack and yellowfin tuna, the domestic surface fisheries of the Philippines and Indonesia (archipelagic waters) take relatively large numbers of small bigeye in the range 20–60 cm (Figure 7.11). The longline fishery clearly accounts for most of the catch (by weight) of large bigeye in the WCPFC–CA (Figure 7.12). This contrasts with large yellowfin tuna, which (in addition to longline gear) are also taken in significant amounts from unassociated (free-swimming) schools in the purse seine fishery and in the Philippines handline fishery. Large bigeye tuna are very rarely taken in the WCPO purse seine fishery and only a relatively small amount come from the handline fishery in the Philippines. Bigeye tuna sampled in the longline fishery are predominantly adult fish with a mean size of ∼130 cm FL (range 80-170+ cm FL). Associated sets account for nearly all the bigeye catch in the WCPFC–CA purse seine fishery with considerable variation in the sizes from year to year, but the majority of associated-set bigeye tuna are generally in the range of 45–75 cm.

The 2024 bigeye size classes are dominated by small fish 35-70 cm from associated purse seine sets, with a broader distribution of smaller sizes from the Indonesia/Philippine archipelagic fisheries (Figure 7.11). A complete submission of size data from Indonesia has not been received at this time, therefore, these data are expected to be bolstered with a tranche of smaller length frequencies, as seen in previous years.

The plots for 2024 potentially show two distinct modes (i) one around 50-55 cm for both the purse seine associated fishery and the Philippines/Indonesia domestic fisheries, and (ii) a mode around 130 cm from the longline and Philippines/Indonesia domestic fisheries targeting larger individuals. Size data from the free-school purse seine fishery were few in number from 2024 and spread across a broad size range.

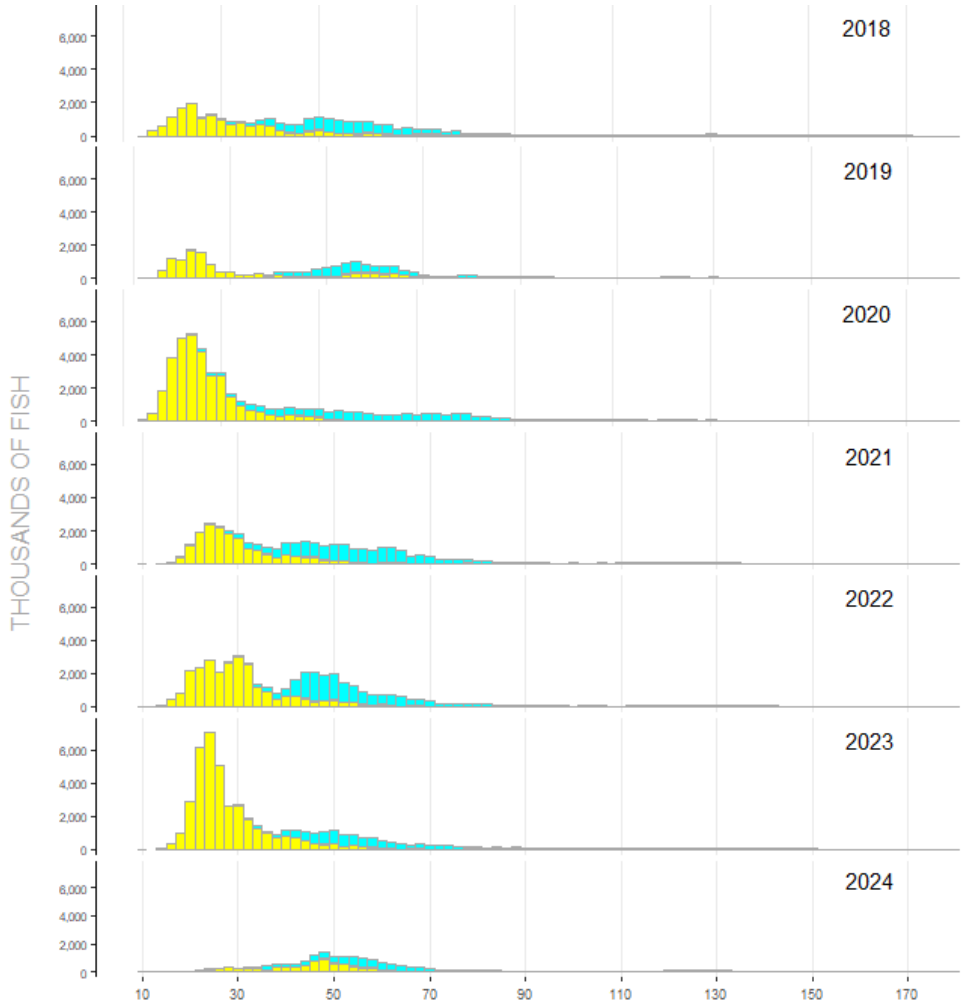

Figure 7.11: Annual catches (no. of fish) of bigeye tuna in the WCPO by size (2 cm intervals) and gear type, 2018–2024 (green – longline; yellow – Philippine-Indonesia archipelagic fisheries; light blue – purse seine associated; dark blue – purse seine unassociated)

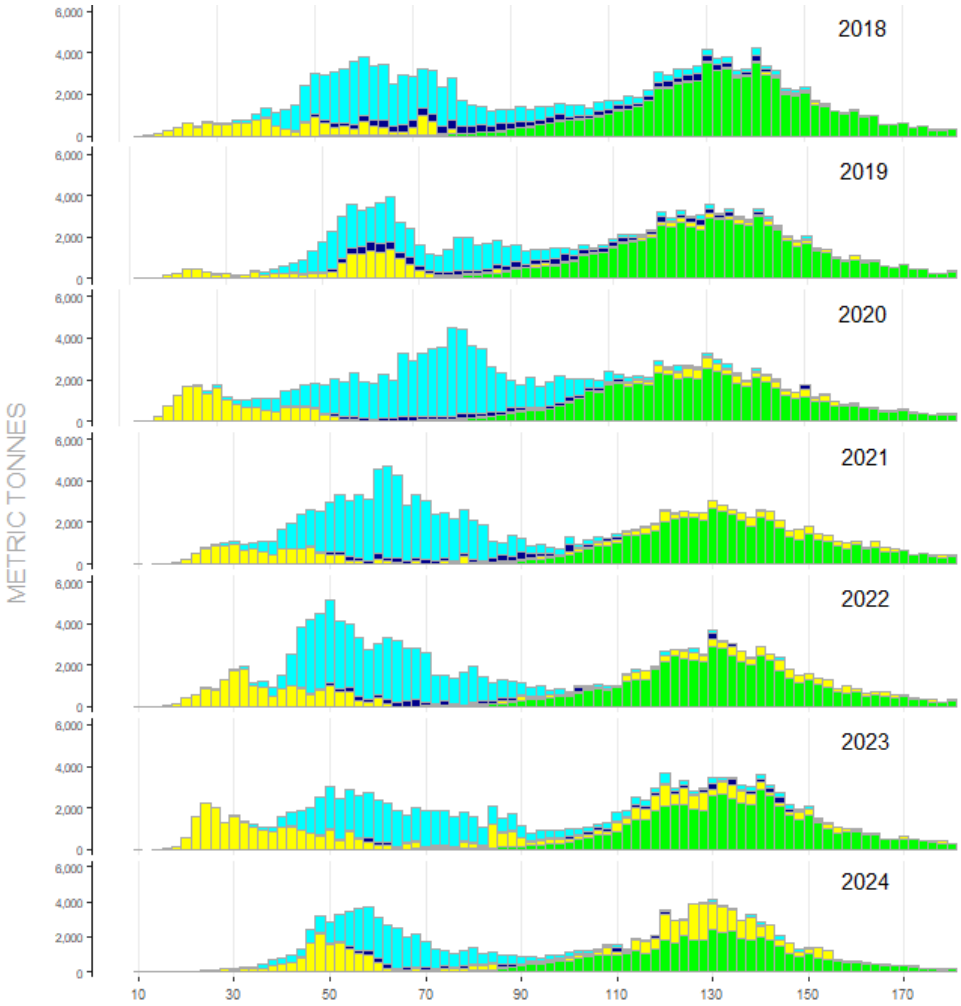

Figure 7.12: Annual catches (mt) of bigeye tuna in the WCPO by size (2 cm intervals) and gear type, 2018–2024 (green – longline; yellow – Philippine-Indonesia archipelagic fisheries; light blue – purse seine associated; dark blue – purse seine unassociated)

7.4 Albacore

Prior to 2001, South Pacific albacore catches were generally in the range 25,000–50,000 mt, with a significant peak in 1989 (49,076 mt) when driftnet fishing was in existence. Since 2001, catches have greatly exceeded this range. The provisional South Pacific albacore catch in 2024 (74,350 mt) does not yet account for the catches from the Eastern Pacific Ocean, and therefore these catches will likely increase once all data have been consolidated. South Pacific albacore catches have trended downward in recent years (since approximately 2012; acknowledging that overall catch levels are notably higher than the historical period), but with high inter-annual variability, as catch levels in 2017 and 2022 were some of the highest catch records of the time series (94,499 and 89,054 mt, respectively).

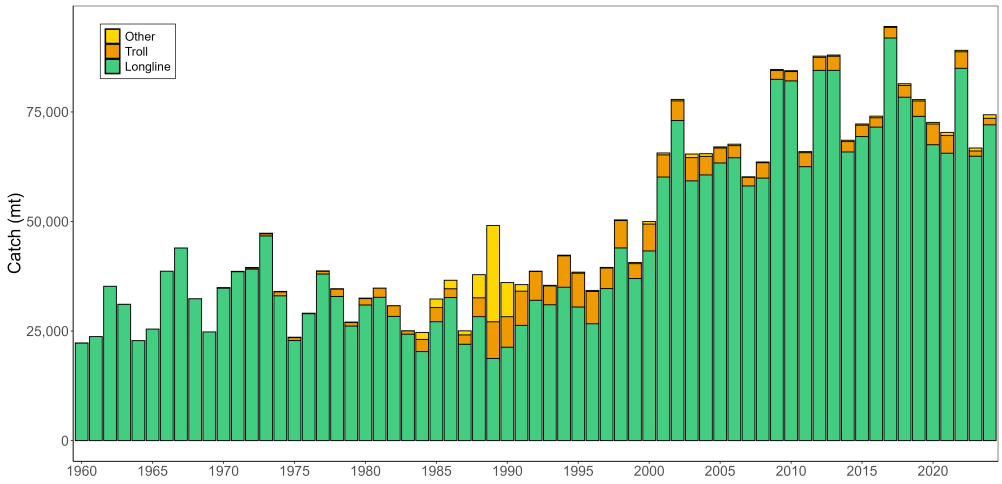

Figure 7.13: South Pacific albacore catch (mt) by gear ('Other' is primarily represented by catches from the driftnet fishery)

In the post-driftnet era, longline has accounted for most of the South Pacific albacore catch (> 75% in the 1990s, but > 90% in recent years). The annual South Pacific albacore troll catch (with a season spanning November–April) dropped from a range between 4,000–8,000 mt during the 1990s, to a range of 1,000–5,000 mt (Figure 5.15) with 2024 catches (1,485 mt) slightly higher than 2023, but still representing one of the lowest catches since 1980. The provisional WCPFC–CA albacore catch for 2024 (119,867 mt) was a modest increase over 2023 (∼10,000 mt) and around 28,000 mt lower than the record (148,051 mt in 2002). The WCPFC–CA albacore catch (which includes catches from fisheries in the North Pacific Ocean west of 150°W) typically contributes around 80%–90% of the Pacific catch of albacore (provisional Pacific Ocean albacore tuna catch for 2024 is 116,022 mt).

The longline catch of albacore is distributed over a large area of the south Pacific (Figure 7.14) but concentrated in the west. The Chinese-Taipei distant-water longline fleet catch is taken in all regions, while the Pacific Island domestic longline fleets catches are restricted to the latitudes 10°–25°S. Troll catches are distributed in New Zealand's coastal waters, mainly off the South Island, and along the Sub-tropical Convergence Zone (STCZ). Less than 20% of the overall South Pacific albacore catch is usually taken east of 150°W.

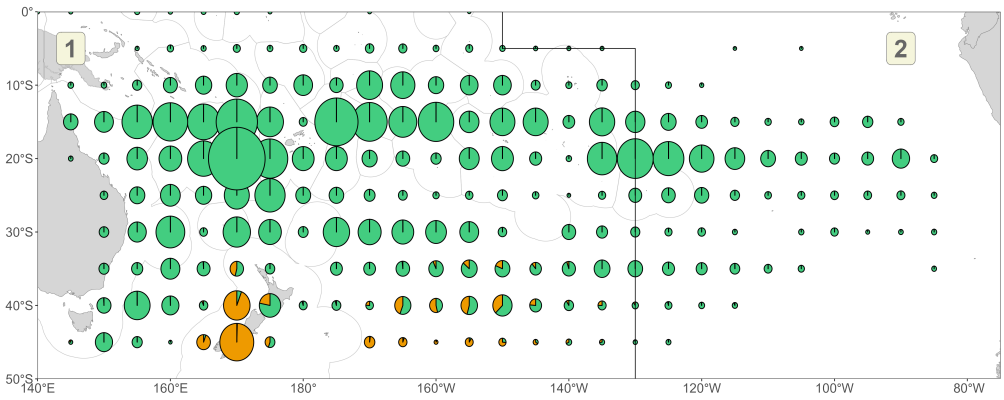

Figure 7.14: Distribution of South Pacific albacore tuna catch, 1988–2024. The four-region spatial stratification used in stock assessment is shown (longline - green; troll - orange).

The longline fishery takes adult albacore in the narrow size range of 90–105 cm and the troll fishery take juvenile fish in the range of 45–80cm (Figures 7.15 and 7.16). Juvenile albacore also appear in the longline catch from time-to-time (e.g., fish in the range 60–70 cm sampled from the longline catch). The size distribution in the South Pacific albacore catch for recent years shows a clear mode in each year of small albacore from the troll fishery, around 60 cm (in 2024; similar to 2022) and 45 cm in 2023. Similarly for longline, a single mode of larger fish (95-105 cm modes) is common, and has been relatively stable in recent years.

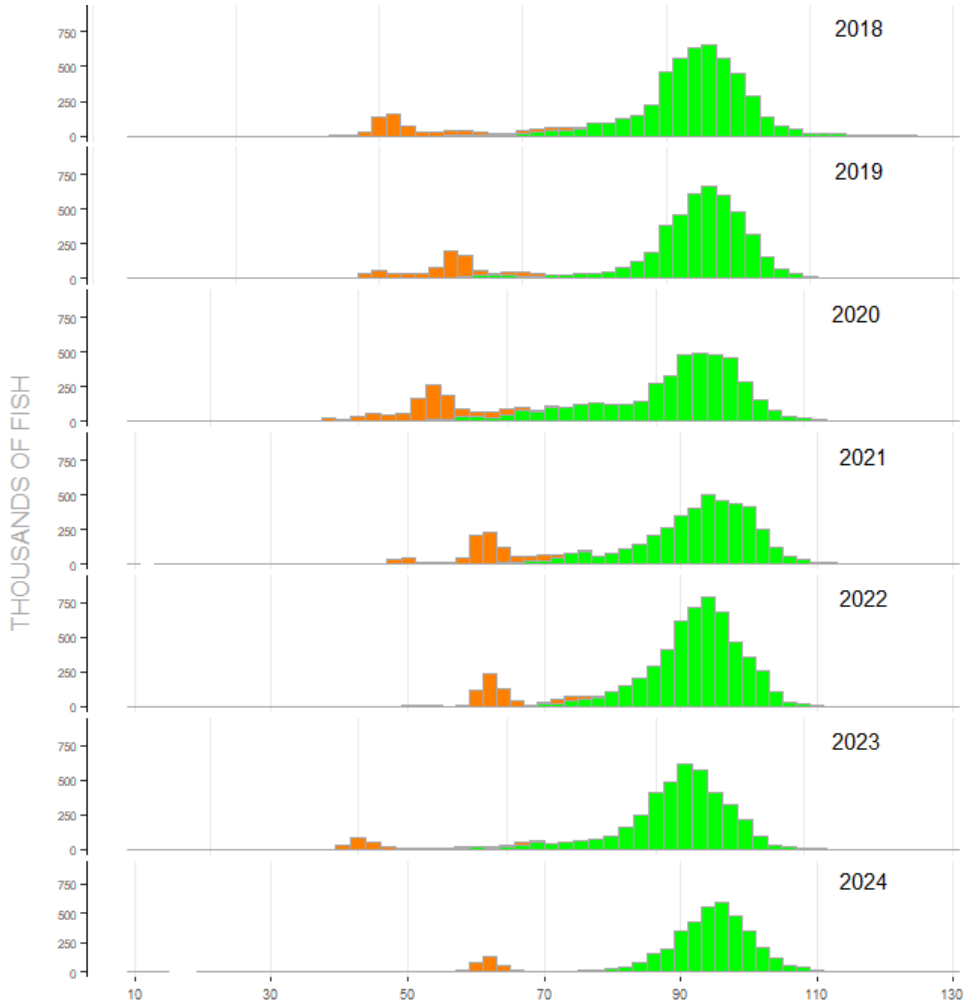

Figure 7.15: Annual catches (no. of fish) of albacore tuna in the South Pacific Ocean by size (2 cm intervals) and gear type, 2018–2024 (green – longline; orange – troll)

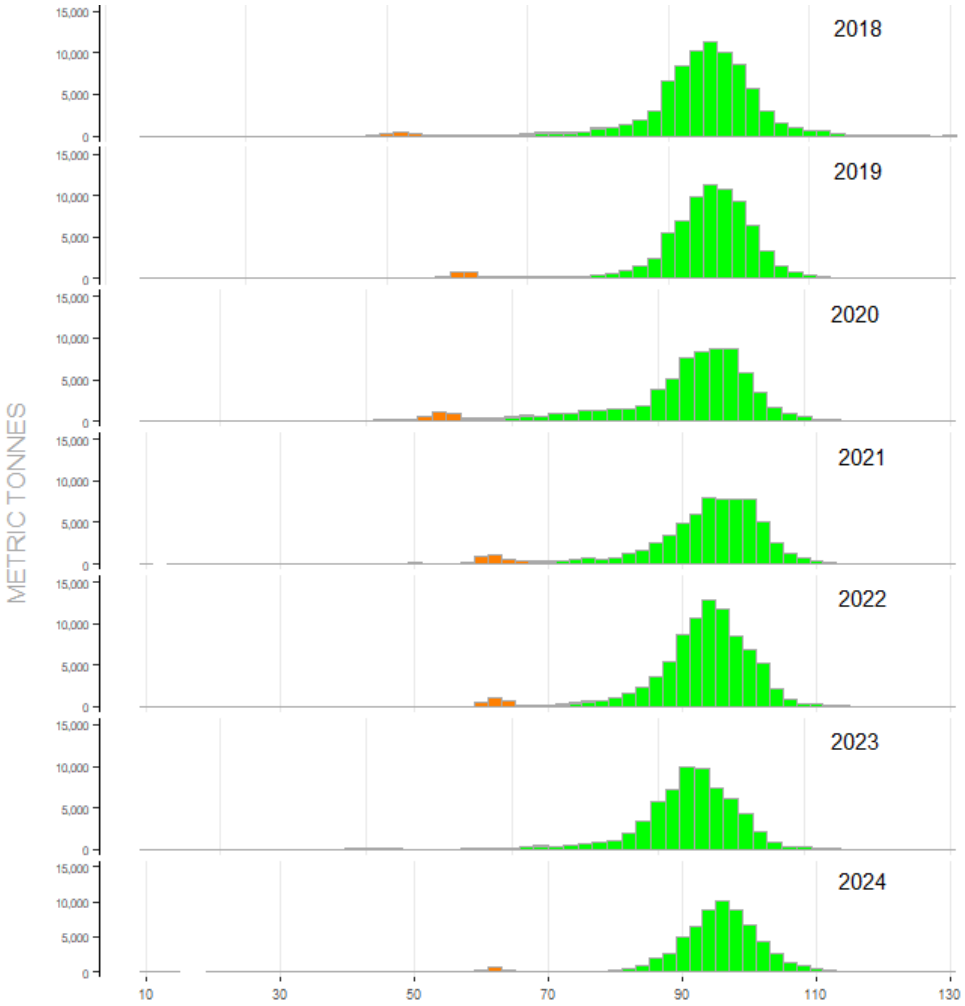

Figure 7.16: Annual catches (mt) of albacore tuna in the South Pacific Ocean by size (2 cm intervals) and gear type, 2018–2024 (green – longline; orange – troll)

7.5 South Pacific swordfish

The distant-water and offshore Asian fleets (Japan, Chinese Taipei, and Korea) accounted for most of the South Pacific swordfish catch from 1972 to the mid-1990s (Figure 7.17), with catches slowly increasing from 2,500 mt to about 5,000 mt. The development of target (domestic) fisheries in Australia and New Zealand accounted for most of the increase in total catch to around 10,000 mt in early 2000s, with burgeoning Pacific Island domestic fleets also contributing. The EU-Spanish longline fleet targeting swordfish entered the fishery in 2004 and resulted in total swordfish catches increasing significantly to a new level of around 15,000 mt, and then to more than 20,000 mt over the period 2011-2018, with contributions from the EU-Portuguese fleet and distant-water and offshore Asian fleet catches (Figure 7.18). The provisional 2024 catch estimate for the South Pacific swordfish (17,572 mt; largely landed by the EU-Spanish fleet) was slightly higher than the 2023 catch level but a significant reduction from the peak in 2016 and 2015 (noting that 2024 estimates

for some fleets are provisional at this time).

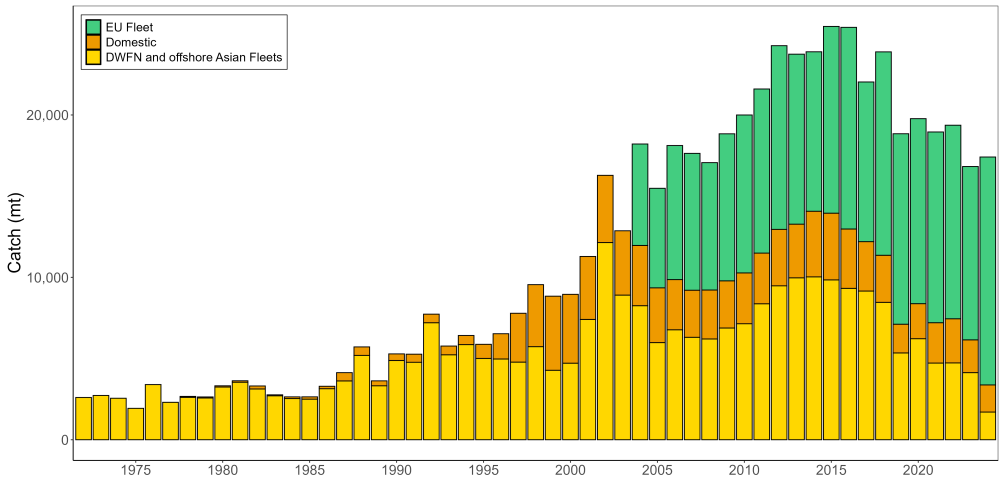

Figure 7.17: South Pacific longline swordfish catch (mt) by fleet

The catch of swordfish for the WCPFC-CA south of the equator (Figure 7.18) in 2024 was 4,489 mt, a decline by about 1,800 mt from 2023 and considerably lower than the peak years of 2012-2014, with a notable decrease in the DWFN and Asian fleet catches compared to a decade prior.

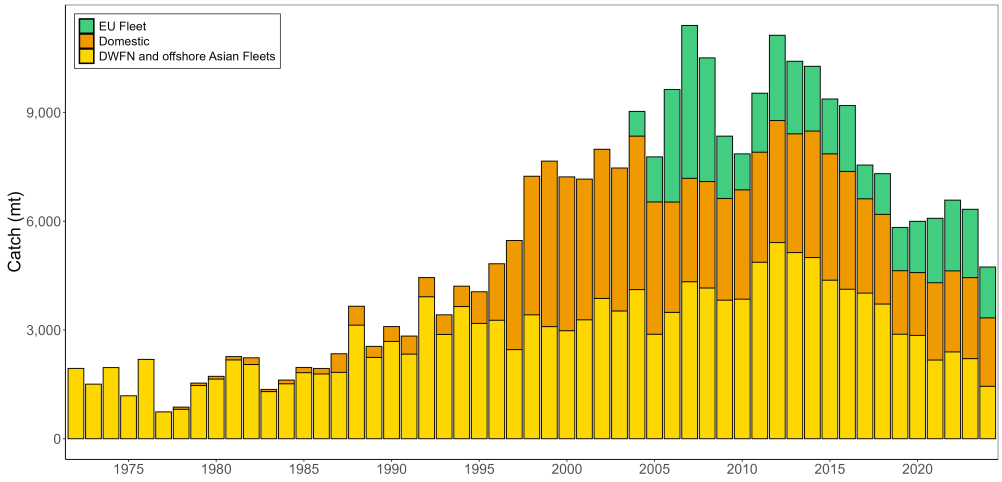

Figure 7.18: WCPFC–CA (south of equator) longline swordfish catch (mt) by fleet

The longline catch of swordfish is distributed over a large area of the South Pacific (Figure 7.19). There are four main areas of catches (i) the far eastern Pacific Ocean off Chile and Peru, where most of the EU-Spanish fleet catch comes from but also some of the distant-water and offshore Asian catches; (ii) the south central Pacific Ocean region south of the Cook Islands and French Polynesia, predominantly covered by the EU-Spanish fleet; (iii) the coastal waters of New Zealand, Australia and adjacent Pacific Island countries (domestic fleets); and (iv) the equatorial Pacific

Ocean between 130–160°W, covered by the distant-water and offshore Asian fleets.

The swordfish caught throughout the South Pacific Ocean are generally in the range of 110–250 cm, with a mean around 180 cm (lower jaw-fork length). In previous years, there has been evidence of inter-annual variation in the size of swordfish taken by fleet and variation in the size of fish by fleet, for example, the EU-Spanish fleet generally catch larger swordfish than the distant-water and offshore Asian fleets, which could be related to area fished. There have been no size data collected for the EU-Spanish longline fleet for the past few years.

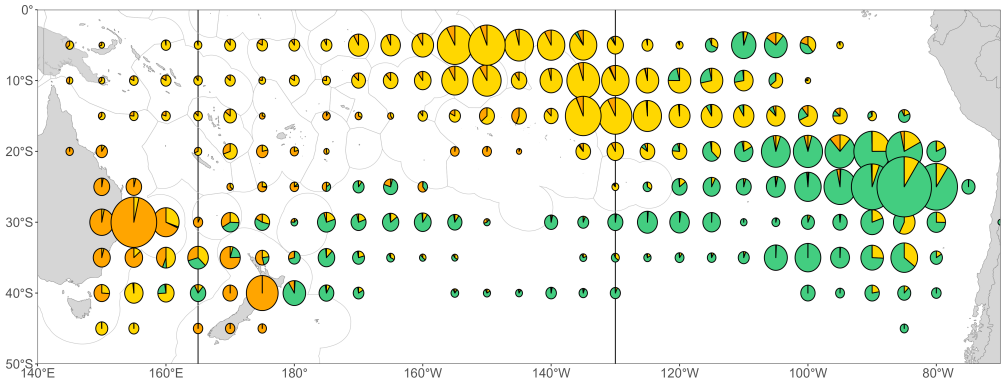

Figure 7.19: Distribution of South Pacific longline swordfish catch, 1995–2024 (DWFN and offshore Asian fleets - yellow; Spanish fleet - green; others - orange)

7.6 Other billfish

7.6.1 Blue Marlin

Blue marlin are mainly taken by the longline gear in the tropical WCPFC-CA with relatively small amounts also taken by purse seine, troll, handline and a range of other small-scale gears (e.g., gillnet). WCPFC-CA catches of blue marlin have ranged from around 7,000–25,000 mt since the 1970s although there remains some uncertainty around some of the estimates by fleet and gear. The provisional WCPFC-CA blue marlin catch (13,066 mt) which was approximately 2,000 mt higher than the 2023 and 2022 catch levels (Figure 7.20). Figure 7.21 shows the distribution of longline-caught blue marlin highlighting that they are more prevalent in the western tropical waters of the WCPFC–CA (complete aggregate data stratified by area are not available for the other gears at this stage).

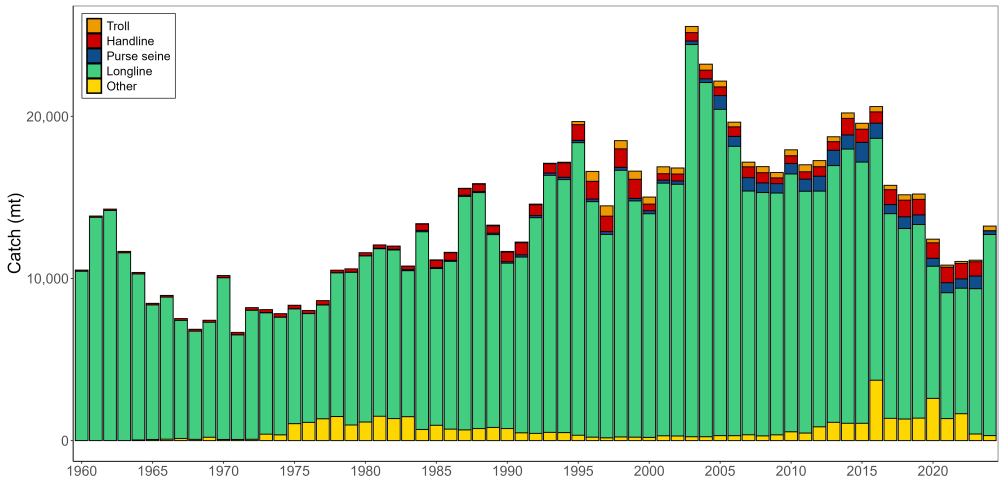

Figure 7.20: WCPFC–CA blue marlin catch (mt) by gear

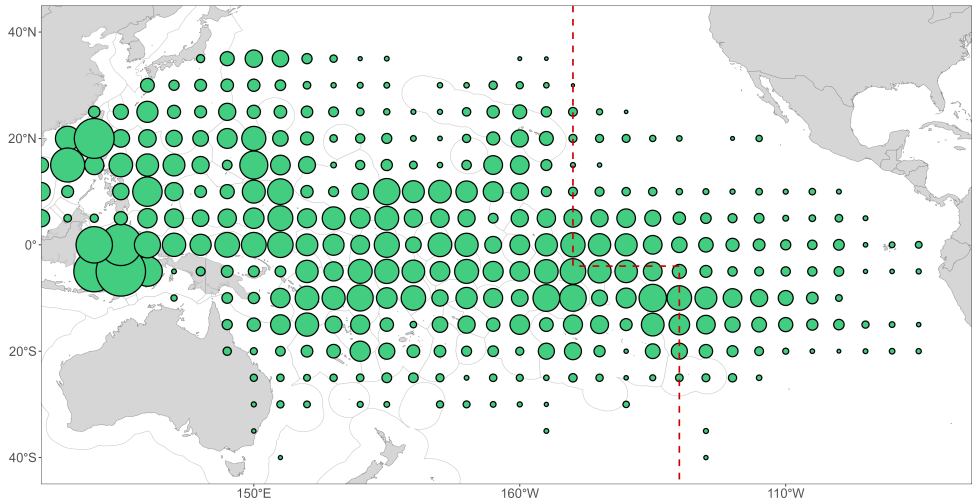

Figure 7.21: Distribution of longline blue marlin catch in the Pacific Ocean, 1990–2024.

7.6.2 Black Marlin

Black marlin have historically been taken by longline gear in the tropical WCPFC-CA but catches are also taken by purse seine, handline and a range of other small-scale gears (e.g., gillnet). WCPFC-CA catches of black marlin have ranged from around 1,300– 3,800 mt since the early 1970s (when catches were at their highest), although there remains some uncertainty around some of the estimates by fleet and gear. The recent large increases in catches have come from several south-east Asian fisheries (including handline and domestic purse seine) and further review is ongoing, although these increases may reflect more reliable estimates from these fisheries. The provisional WCPFC-CA black marlin catch (10,115 mt) for 2024 was the largest on record and more than three times greater than the long-term average (Figure 7.22). Figure 7.23 shows the distribution of longline-caught black marlin highlighting that their distribution does not extend to the eastern

areas as much as blue marlin and they are clearly more prevalent in the western tropical waters of the WCP–CA, and to a lesser extent in the waters of PNG, Solomon Islands, New Caledonia and north-east Australia. Complete aggregate data stratified by area are not available for the other gears at this stage, but black marlin catches by Indonesia and Philippines handline and Vietnam gillnet overlap the main areas of the longline catch for this species.

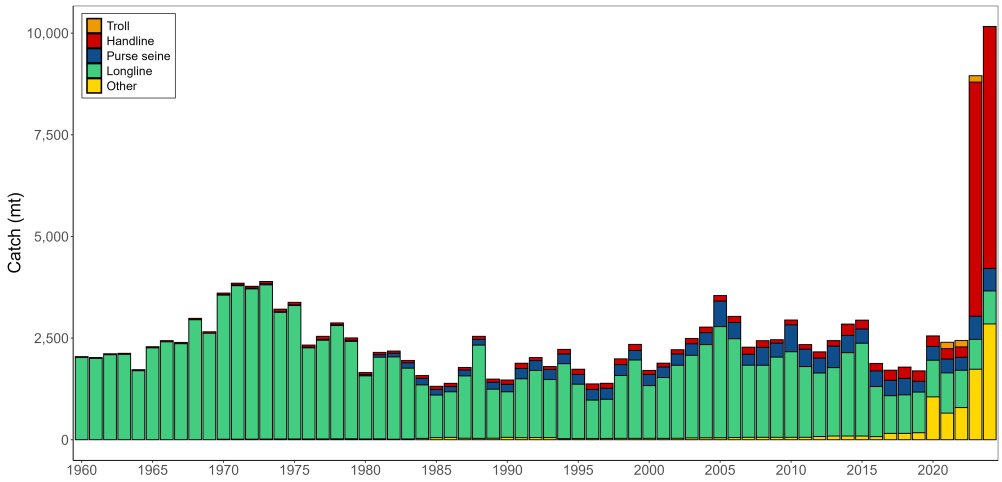

Figure 7.22: WCPFC–CA black marlin catch (mt) by gear

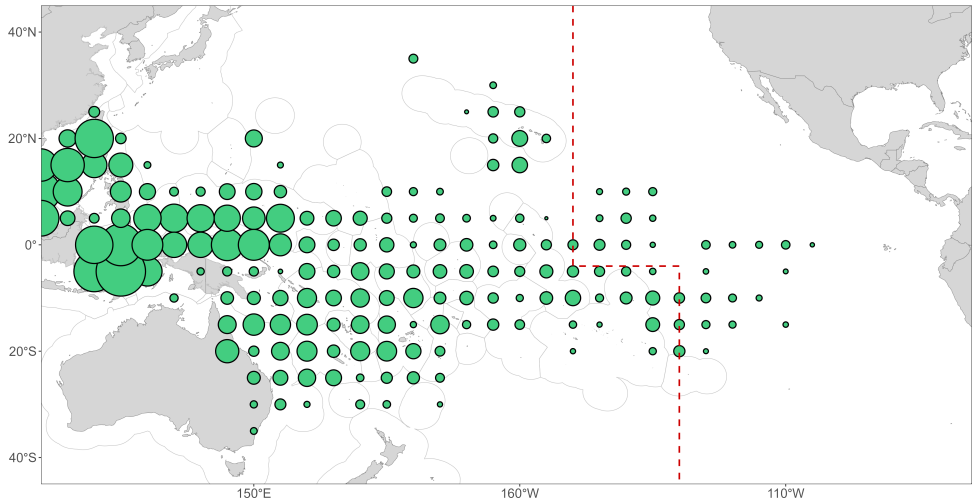

Figure 7.23: Distribution of longline black marlin catch in the Pacific Ocean, 1990–2024.

7.6.3 Striped Marlin

Striped marlin are mainly taken by the longline gear in the subtropical areas of the WCPFC-CA with minor catches by other gears, principally several gillnet fisheries. WCPFC-CA annual catches of striped marlin often exceeded 8,000 mt prior to 1990, with the gillnet fishery catch comprising a significant proportion of this catch during the 1970s. Since 2000, catches have been generally

below 6,000 mt., although there remains some uncertainty around the availability and quality of estimates for some fleets and gears. Species identification is also acknowledged to be an issue in some fisheries. The provisional WCPFC-CA striped marlin catch (4,263 mt) for 2024 is a slight increase from 2023; however, although recent catches have been some of the lowest of the time series, they have also been relatively stable since the mid to late-2000s (Figure 7.24).

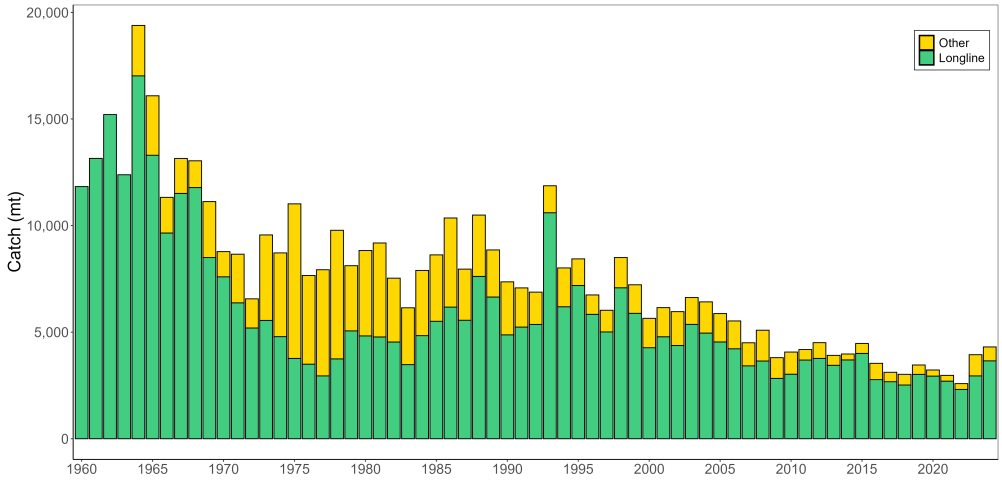

Figure 7.24: WCPFC–CA striped marlin catch (mt) by gear

Figure 7.25 shows the distribution of longline-caught striped marlin, with catches concentrated in the waters off the east coast of Japan, the Coral and Tasman Seas between eastern Australia, New Caledonia and New Zealand, and in the eastern areas, in and around Hawaii and French Polynesia. Complete aggregate data stratified by area are not available for the other gears at this stage.

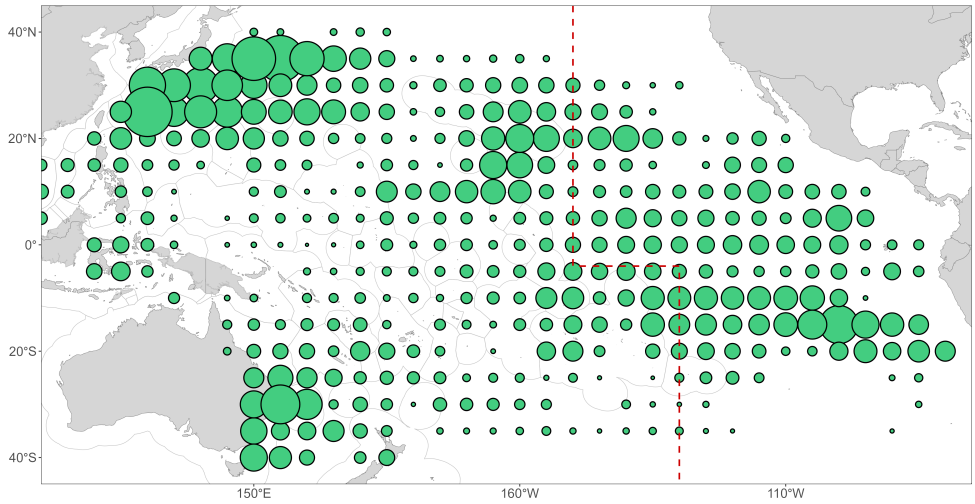

Figure 7.25: Distribution of longline striped marlin catch in the Pacific Ocean, 1990–2024.

7.6.4 North Pacific Swordfish

Swordfish are mainly taken by the longline gear in the north Pacific Ocean with minor catches by other gears, including gillnet fisheries. Annual catches of North Pacific swordfish have generally exceeded 10,000 mt since 1972 (Figure 7.26). Between the mid-2000s to the late-2010s several reported catches were amongst the highest recorded (after the record catch in 1993), although there remains some uncertainty around the availability and quality of estimates for some fleets and gears, and these estimates have yet to be reconciled with estimates from the ISC and the IATTC. The provisional North Pacific swordfish catch (8,275 mt) for 2024 suggests a continuation of the recent period of relatively low catches, compared to those from the decades prior (Figure 7.26). As with the catches of other species, the decline in the North Pacific swordfish catch from 2021 and through to 2023 may be related to the general decline in the longline catch in the areas where swordfish are usually taken due to the impacts of COVID-19.

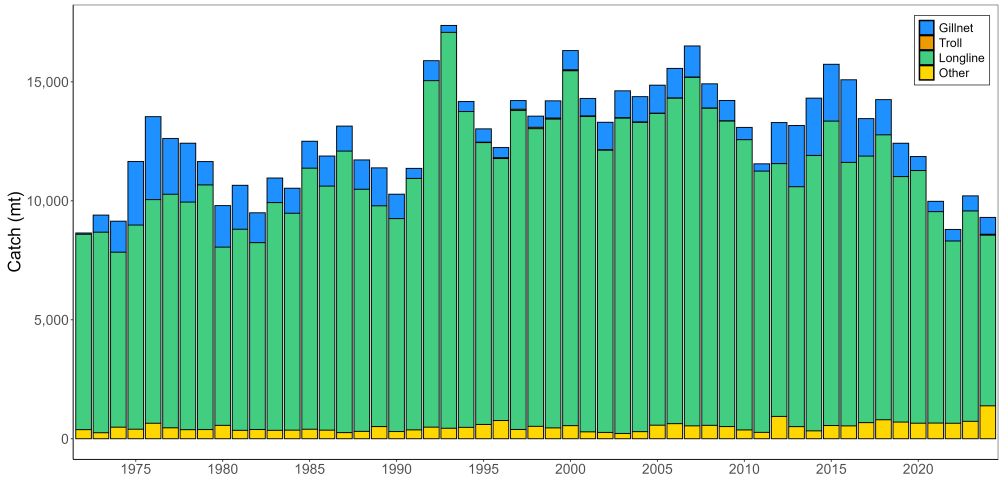

Figure 7.26: North Pacific swordfish catch (mt) by gear

Figure 7.27 shows the distribution of longline-caught swordfish in the Pacific Ocean, with catches concentrated across the Pacific Ocean, north of 20°N, including the waters off the east coast of Japan, and adjacent to the Hawaii EEZ. Swordfish catches in the north Pacific Ocean are also prevalent in Indonesia and in the waters bounded by China, Chinese Taipei, Philippines and Vietnam. Complete aggregate data stratified by area are not available for the other gears at this stage.

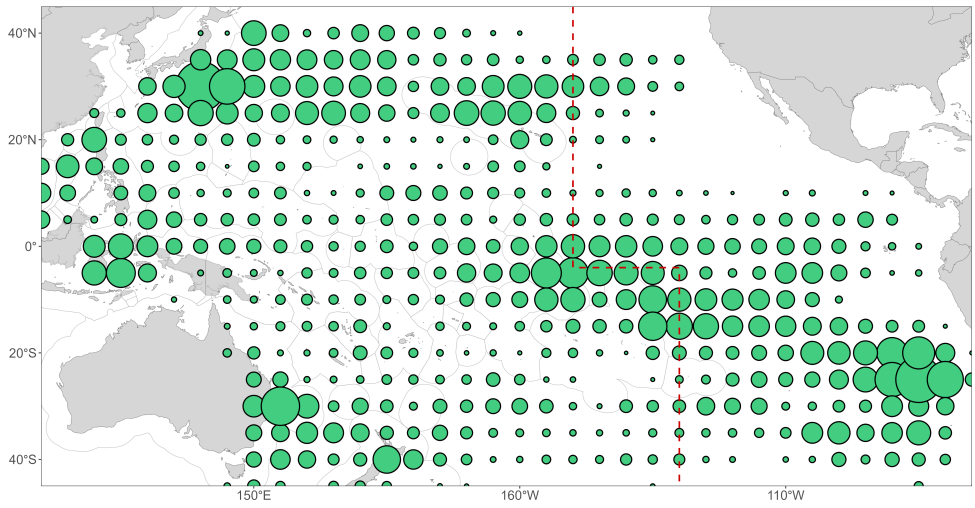

Figure 7.27: Distribution of longline swordfish catch in the Pacific Ocean, 1990–2024.

7.7 North Pacific albacore

Albacore tuna are mainly taken by the longline, pole-and-line and troll gears in the north Pacific Ocean, with minor catches by purse seine; albacore tuna was also the target of the driftnet fishery in the 1980s. Annual catches of North Pacific albacore have fluctuated since the 1950s, with peak periods in the 1970s and then again in the late 1990s into the early 2000s (Figure 7.28). In recent years, catches have been lower, due to declines in the pole-and-line and longline catches. There remains some uncertainty around the availability and quality of estimates for some fleets and gears, and these estimates have yet to be reconciled with estimates from the ISC and the IATTC. The North Pacific albacore catch for 2024 (provisional 42,714 mt) has continued to decline, and at this stage is the second lowest since the beginning of the time series in 1950 (Figure 7.28).

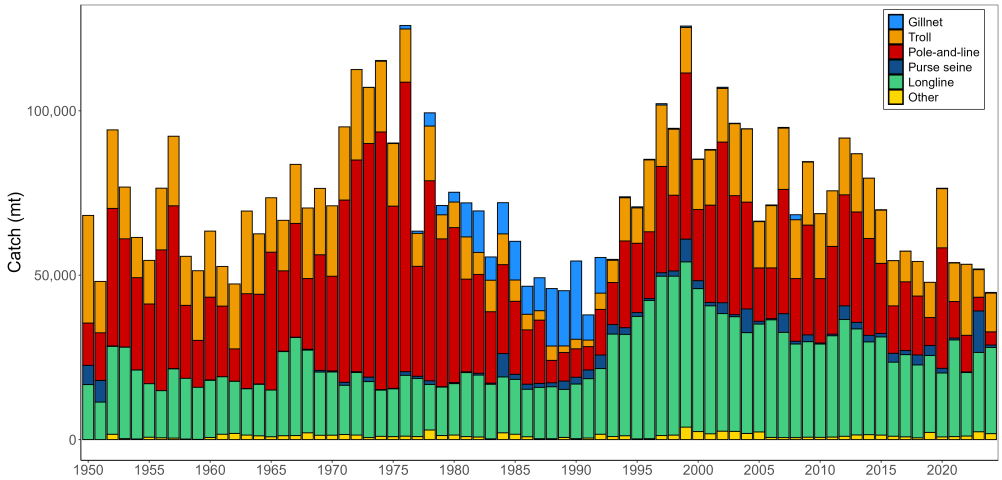

Figure 7.28: North Pacific albacore catch (mt) by gear

7.8 North Pacific bluefin

Bluefin tuna are mainly taken by purse seine gear in the North Pacific Ocean with minor catches from the longline, troll and by other small-scale gears in Japan waters; there have also been significant historic catches from the troll and pole-andline gears. Annual catches of North Pacific bluefin tuna have fluctuated since the 1970s, with peak periods in the early 1980s and for certain years in the mid-late 1990s and into the first decade of 2000s (Figure 7.29). Catches declined over the period 2012–2015 but have increased in recent years. There remains some uncertainty around the availability and quality of estimates for some fleets and gears, and these estimates have yet to be reconciled with estimates from the ISC and the IATTC. The provisional North Pacific bluefin tuna catch (14,011 mt) for 2024 was comparable to the catches over the past two years (Figure 7.29).

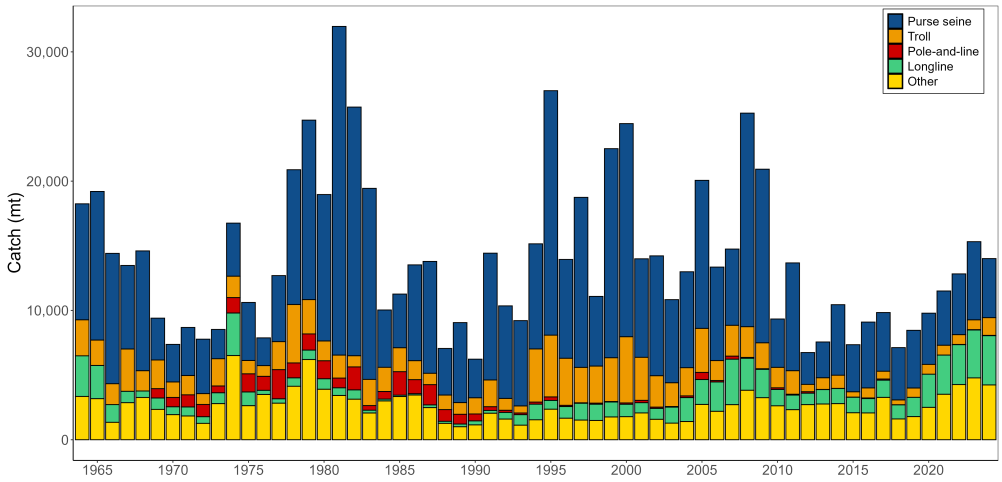

Figure 7.29: North Pacific bluefin catch (mt) by gear

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Appendix - Additional information

All Fisheries

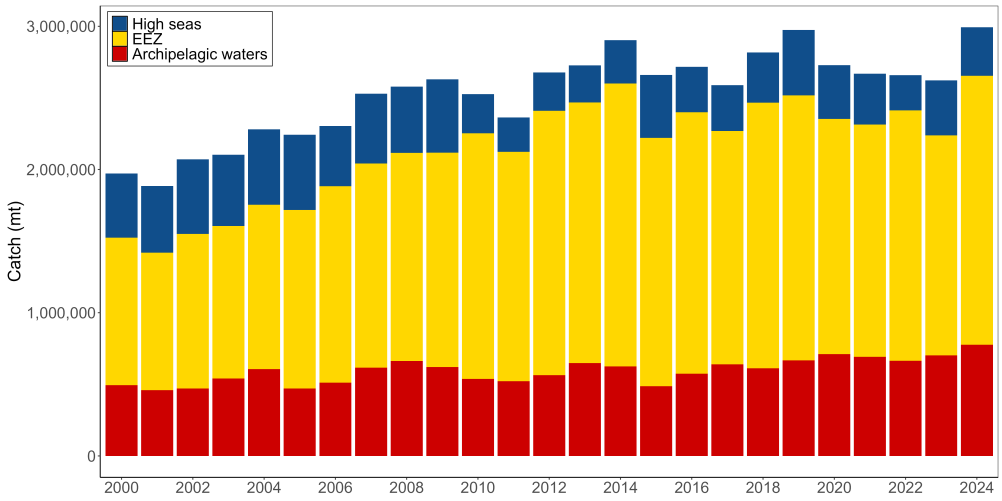

Figure A1: Catch estimates (mt) of the tropical tuna species (albacore, bigeye, skipjack and yellowfin) in the WCPFC–CA, by archipelagic waters (AWs), national waters (EEZs, excluded AWs) and the high seas for all gear types combined

Purse seine fisheries

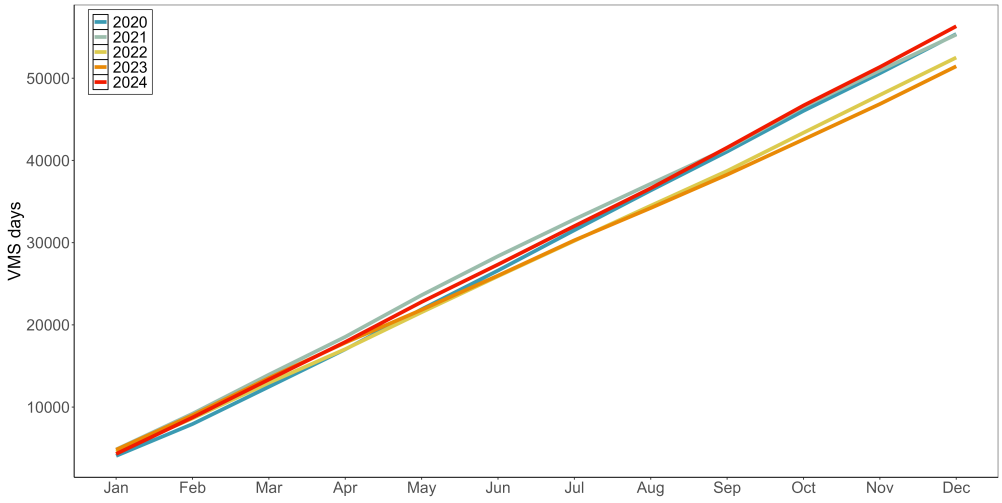

Figure A2: Cumulative tropical purse seine effort by month, 2020-2024, as measured by VMS (excludes days in port and an estimation of days in transit)

Longline fisheries

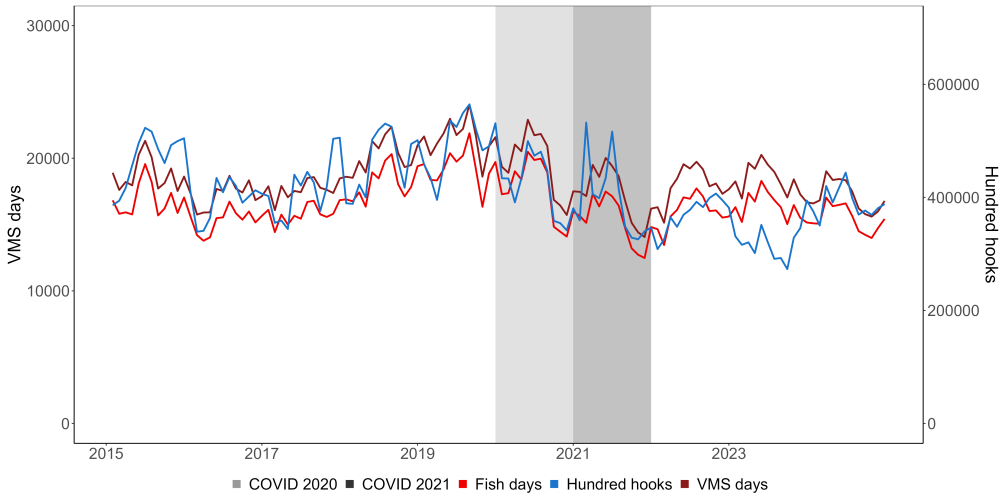

Figure A3: Monthly WCPFC longline fishery effort (VMS fishing days and 100s of hooks, 2020-2024 (WCPFC-CA; longline fishery effort only considers VMS and logbook effort data for the main domestic, domestic-based foreign and distant-water fleets where VMS data with high coverage are available consistently over recent years)

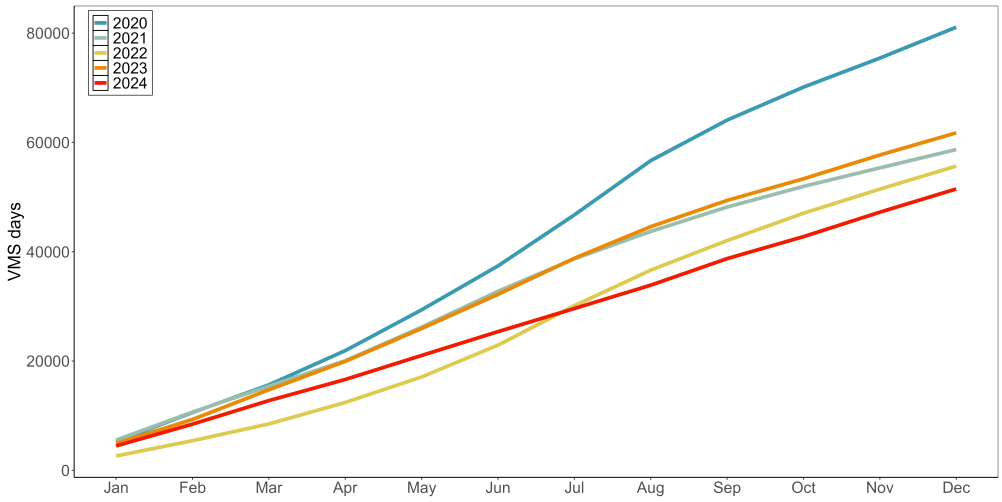

Figure A4: Cumulative South Pacific albacore longline fishery effort by month, 2020-2024, as measured by VMS (WCPFC-CA south of 10°S; VMS estimated fishing days; only includes VMS data for the main domestic, domestic-based foreign and distant-water fleets where VMS data have been provided with high coverage consistently over recent years)

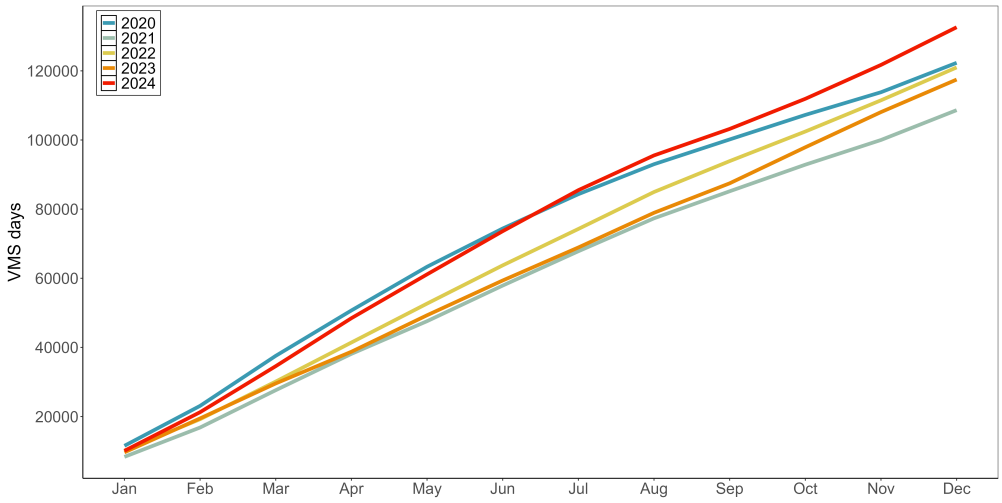

Figure A5: Cumulative Tropical longline fishery effort by month, 2020-2024, as measured by VMS (WCPFC-CA 20°N–10°S, 130°E–150°W; VMS estimated fishing days; only includes VMS data for the main domestic, domestic-based foreign and distant-water fleets where VMS data have been provided with high coverage consistently over recent years)