COMMISSION
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1-5 December 2025
Manila, Philippines (Hybrid)

2024 Overview of Stock Status and Fisheries Update in WCPO

WCPFC22-2025-07
26 November 2025

Submitted by
SPC-OFP

Stock status and fisheries update

Oceanic Fisheries Programme
Pacific Community (SPC)

WCPFC
22nd Regular Session
Manila, Philippines

1-5 December, 2025

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Presented by Paul Hamer

Background

- Recent information on the fisheries: catch and effort
- Status of stocks of 'key' tuna species **assessed by SPC** – skipjack, yellowfin, bigeye and South Pacific albacore
- Summary slides for billfish and key shark stock status

Sources

The Western and Central Pacific Tuna Fishery: 2024 Overview and Status of Stocks (TFAR no. 25).

Will be submitted as 'draft' version to WCPFC22 very soon – see information papers

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

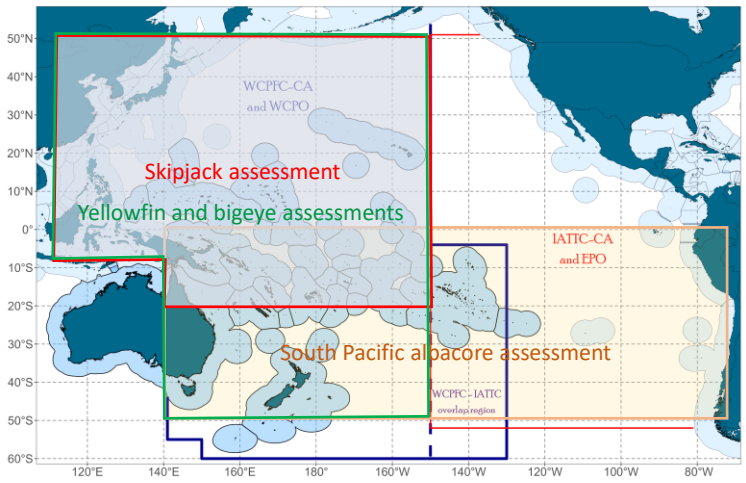
https://meetings.wcpfc.int/node/26697

This presentation will provide:

- A summary of the recent updated fisheries catch and effort data for the key target tuna species in the WCPFC-CA. The summaries are for data held by SPC and updated as of November 26, 2025.
- The status of stocks of the key target tuna based on the most recent assessments accepted by the Science Committee (SC) for management advice.
- A brief summary of stock status for sharks and billfish assessed by SPC.

This presentation is based largely on the Tuna Fisheries Assessment Report (TFAR) No. 25 which includes much of the content that is in this presentation, plus more. A draft version of TFAR will be available for WCPFC22. Other relevant papers are: "Overview of Tuna Fisheries in the Western and Central Pacific Ocean, Including Economic Conditions – 2024" WCPFC-SC21-2025/GN-WP-01 (https://meetings.wcpfc.int/node/26697). This paper was also provided to SC21 and TCC21. Differences between this earlier SC paper and the figures/tables presented in this presentation and the TFAR are expected due to the more recent data updates.

WCPFC-CA and tuna stock assessment regions



This map shows the geographic scope of the Western and Central Pacific Fisheries Commission Convention Area – demarcated by the blue boundary, including the region of overlap with the Inter-American Tropical Tuna commission. The stock assessment regions for each of the key tuna assessments are overlaid.

Catch and effort summaries

Total WCPFC-CA catch by gear

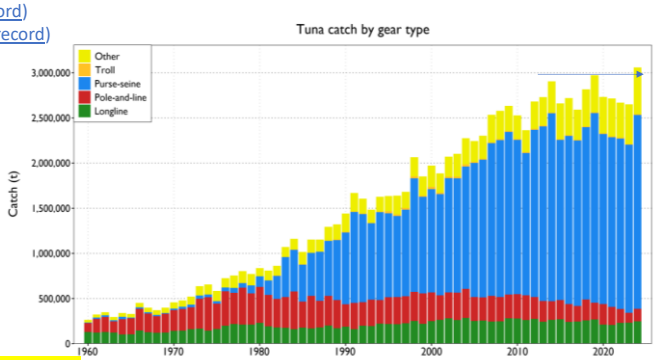
Key facts

Record total catch in 2024: 3.059 million mt (record, 15% increase on 2023)

- **Purse seine:** 70% (of total), 2.146 million mt (record)
- **Other gears (Indo/Phil/Viet)**: 17%, 518,840 mt (record)
- **Longline:** 8%, 247,350 mt
- **Pole and line:** 5%, 139,405 mt
- **Troll:** < 1%, 7,272 mt
- **All show increases from 2023**

Trends since 2010

- **Purse seine:** stable with periodic (5/6 – year) spikes
- **Pole and line:** decreasing trend
- **Longline:** stable
- **Other gears:** increasing catches



2024 provisional total catch value of approx. $5.6 billion USD,
6% drop from 2023, $3.6 billion from purse seine

This figure provides a summary of the total catches by gear type since 1960 across the four target tuna (skipjack, yellowfin, bigeye and albacore) in the WCPFC-CA.

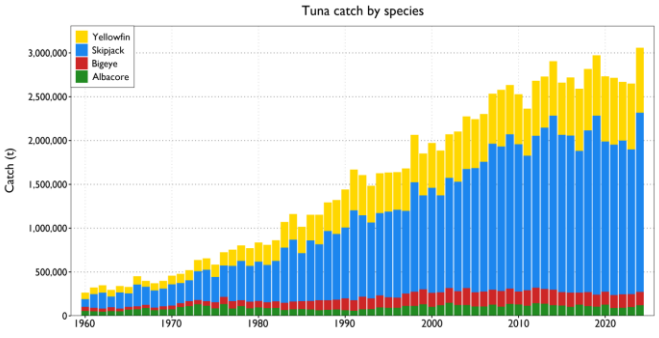
Provisional catches from 2024 are 15% higher than 2023 and represent a record catch level, surpassing the previous highest catch level in 2019.

The purse seine (PS) fishery remains the dominant gear accounting for 70% of the total catch, followed by the combined 'Other' category which includes various gear types and the handline fisheries from Vietnam, Philippines and Indonesia, and accounted for a record percentage of the catch in 2024 at 17%. The catch by 'others' increased by approximately 18% from 2023.

Total WCPFC-CA catch by species

Key facts

- **Skipjack:** 67% of total, 2.046 million mt,
  - **2024 was a record catch, 24% increase on 2023**
  - 84% PS, 10% other, 5% PL
- **Yellowfin:** 24% of total, 741,473 mt
  - 2024 1.5% lower than 2023
  - 51% PS, 35% other, 12% LL, Pole-line 2%
- **Bigeye:** 5% of total, 151,611 mt
  - 2024 3% higher than 2023
  - 36% LL, 29% other, 33% PS
- **Albacore:** 4% of total, 120,201 mt
  (~74,259 mt WCPFC-CA south Pacific)
  - 2024 19% higher than 2023
  - >90% LL



56% of the provisional global tuna catch in 2024 (5.498 million mt), 85% of Pacific Ocean tuna catches.
Sustained catches of 2.5 – 3 million mt for 15 years

This figure provides a summary of the catches since 1960 according to the four target tuna (skipjack, yellowfin, bigeye and albacore) in the WCPFC-CA.

Skipjack remains the dominant species, accounting for 67% of the total catch, followed by yellowfin 24%, bigeye 5% and albacore 4%, with approximately 62% the WCPFC-CA albacore caught south of the equator (south Pacific albacore stock).

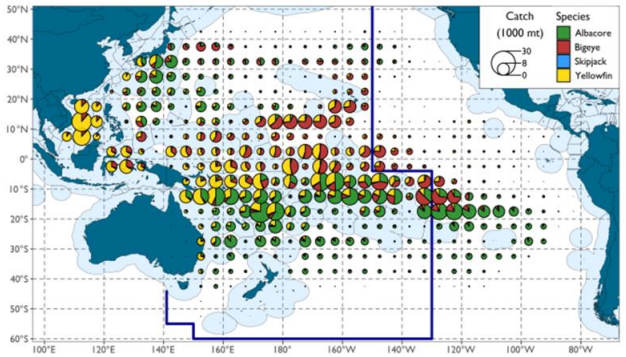
The percentage of catch for each species taken by each gear category is highlighted in blue.

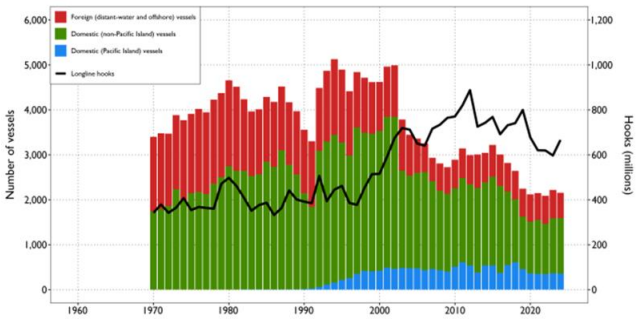
Longline

Key Facts

2024

- 2,158 vessels
- 666 million hooks (12% inc. on 2023)
- Vessel numbers and proportions by fleet types stable since 2019





This slide shows the spatial distribution of catch by species by longline for the 2020-2024 period (top right) and the time series of effort in terms of vessel numbers (by fleet groupings) and total hooks deployed per year.

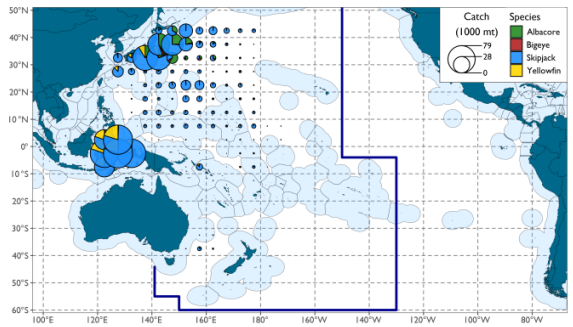
The last few years have seen relative stability in the longline fishery effort, at around 2000 vessels and 600-660 million hooks per year.

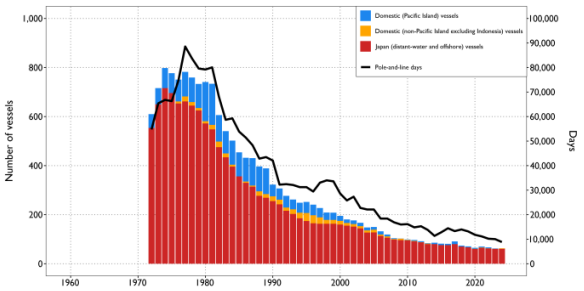
Pole and line

Key Facts

2024

- 8,845 days (12% decrease on 2023)
- 63 vessels
- Some Indonesian vessels, but most now Japanese vessels, targeting skipjack and albacore.





This slide shows the spatial distribution of catch by species by pole and line for the 2020-2024 period (top right) and the time series of effort in terms of vessel numbers (by fleet groupings) per year and pole and line vessel days.

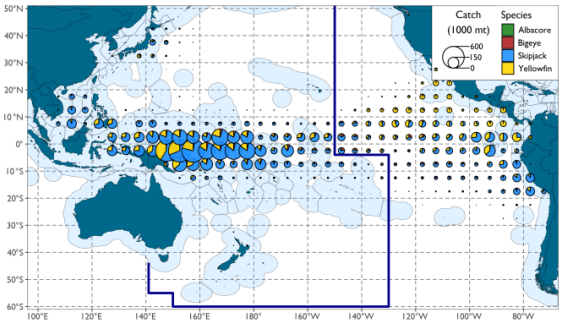
The pole and line catches are now primarily taken off Japan and Indonesia, but most of the vessels in the pole and line fleet are now Japanese.

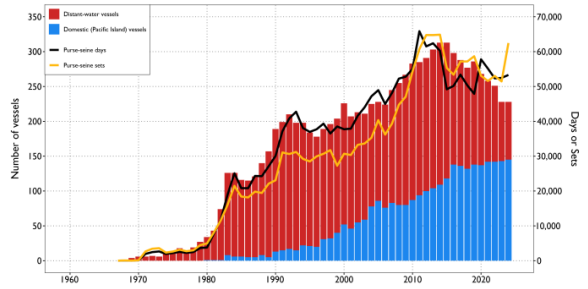
Purse seine

Key Facts

2024

- 53,313 days
- 62,476 sets (21% increase on 2023)
- 247 vessels
- Stable – vessels and days over last 5-years
- Increase purse seine sets in 2024 – due to 'unassociated' sets (next slide)



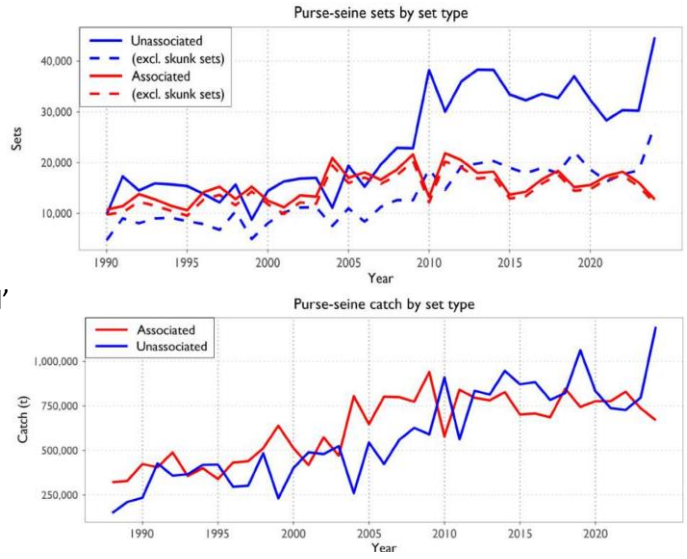


This slide shows the spatial distribution of catch by species by purse seine for the 2020-2024 period (top right) and the time series of effort in terms of vessel numbers (by fleet groupings), days and sets (combined by set type) (bottom right).

The last few years have seen relative stability in the purse seine fishery effort in terms of vessels and days (i.e. around 52,000 vessel days/year and 250 vessels in WCPFC-CA), but there was a large increase in number of sets in 2024, which was driven by an increased number of unassociated (free school) sets (see next slide).

Purse seine

Notable increase in effort and catch by 'unassociated' sets in 2024



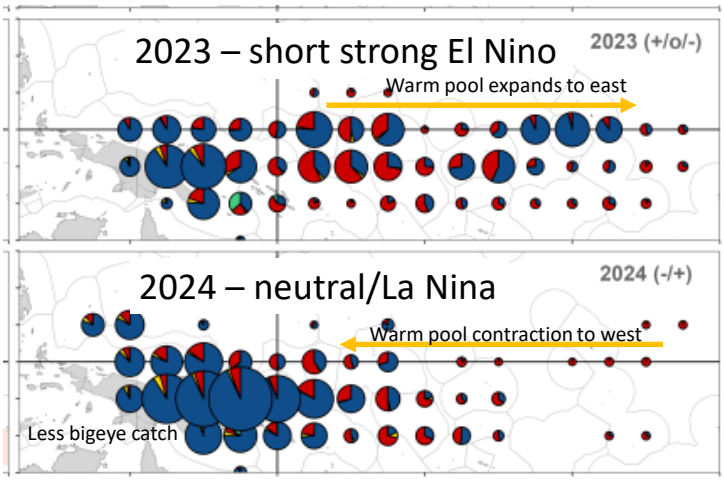
These plots show the increase in both the total unassociated and non-skunk unassociated sets in 2024 (top plot) and the resultant increase in total tuna catches by unassociated sets, with a slight decline in the catch by associated sets in 2024 compared to 2023 (bottom plot).

Purse seine effort - sets

- Shift of purse seine effort to west in 2024 under neutral/La Nina
- Greater % free school sets in 2024

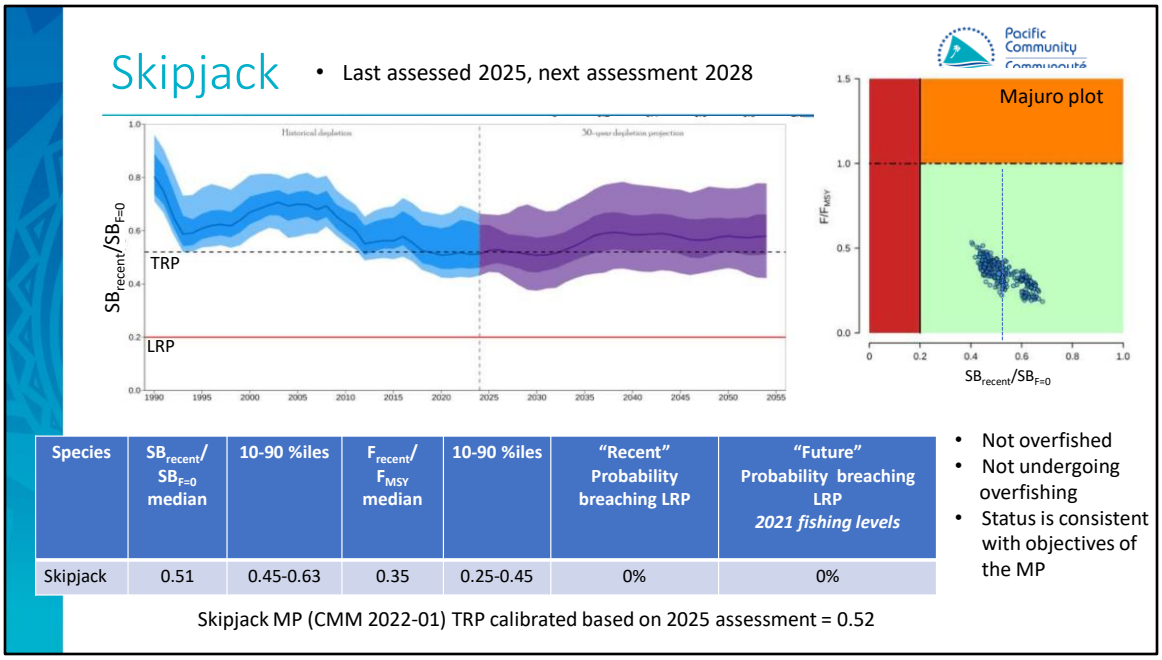
FADs

Free school (unassociated)



This slide shows the distribution of purse seine effort in sets (size of the pies) and set types (red – FAD sets, blue – free school sets) for 2023 (top) and 2024 (bottom). Effort was spread further to the east in 2023 when there was a short but relatively strong El Nino, but contracted to the west in 2024 when conditions returned to more ENSO neutral/tending to La Nina conditions. The concentration of purse seine effort in the waters off PNG and Solomon Islands was accompanied by a greater proportion of free school sets that are generally more successful in that region.

Tuna stock status



Species	$SB_{recent}/SB_{F=0}$ median	10-90 %iles	F_{recent}/F_{MSY} median	10-90 %iles	"Recent" Probability breaching LRP	"Future" Probability breaching LRP *2021 fishing levels*
Skipjack	0.51	0.45-0.63	0.35	0.25-0.45	0%	0%

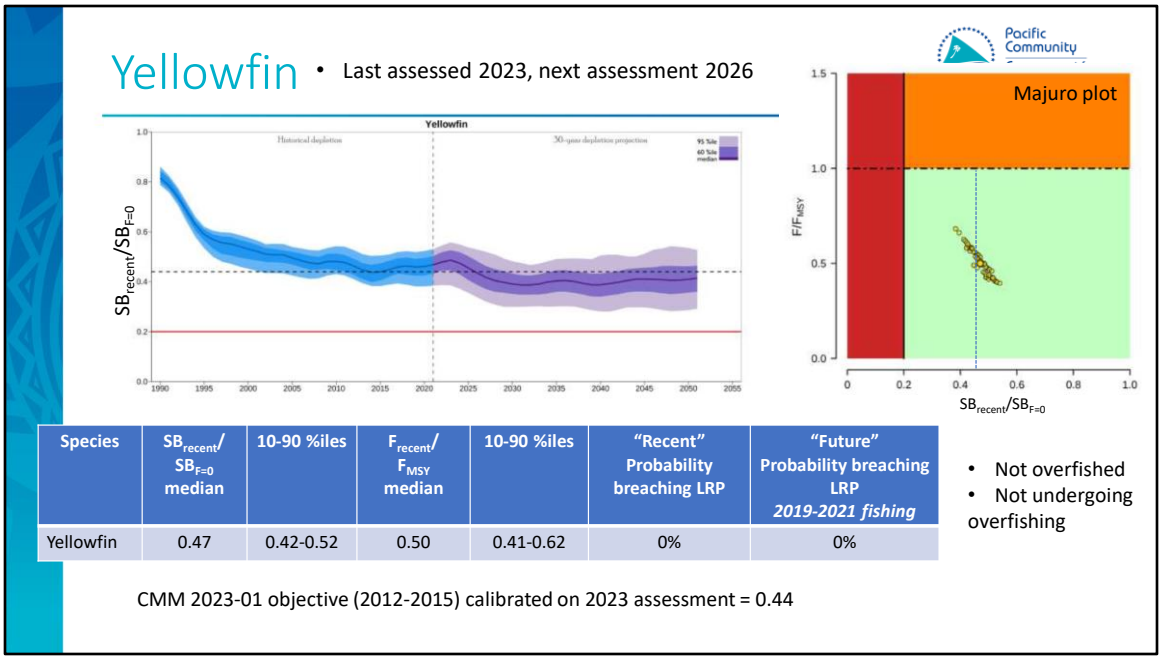
- Not overfished
- Not undergoing overfishing
- Status is consistent with objectives of the MP

Skipjack MP (CMM 2022-01) TRP calibrated based on 2025 assessment = 0.52

This figure summarises the recent stock status (bottom table) and the historic (blue ribbon, truncated from 1990-2024) and projected (purple ribbon, 30 years) stock trajectory for skipjack in the WCPO from the 271 models in the uncertainty ensemble of the 2024 assessment (last year of data 2024). Median value illustrated by the dark line. The projections include stochastic recruitment, and fishing levels fixed at 2024 catch/effort levels from 2025 onwards. The depletion stock trajectory (top figure) is calculated as $SB_{recent}/SB_{F=0}$. The Majuro plot at right shows the terminal $SB_{recent}/SB_{F=0}$ for each model in the uncertainty ensemble (excludes the estimation uncertainty). Vertical dotted line is the recalibrated depletion TRP (0.52) based on the 2025 assessment.

- The recent median stock depletion $SB_{recent}/SB_{F=0}$ = 0.51, is close to the recalibrated TRP (0.52) as defined by the skipjack MP.
- Median F_{recent} is well below F_{MSY}
- There is zero probability of breaching the limit reference point (LRP) for the recent stock status and the projected stock status under recent fishing levels.

- **Stock is not overfished or undergoing overfishing.**



Species	$SB_{recent}/SB_{F=0}$ median	10-90 %iles	F_{recent}/F_{MSY} median	10-90 %iles	"Recent" Probability breaching LRP	"Future" Probability breaching LRP *2019-2021 fishing*
Yellowfin	0.47	0.42-0.52	0.50	0.41-0.62	0%	0%

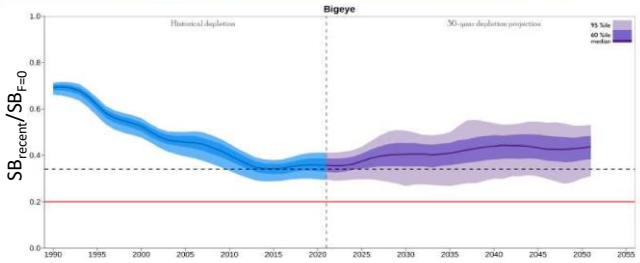
This figure summarises the recent stock status (bottom table) and the historic (blue ribbon, truncated from 1990-2021) and projected (purple ribbon) stock trajectory for yellowfin in the WCPO from the 54 models in the uncertainty grid of the 2023 assessment (last year of data 2021). Median value illustrated by the dark line. The projections over thirty year include stochastic recruitment, and fishing levels fixed at 2023 catch/effort levels from 2024 onwards, observed levels applied for 2022, 2023. The depletion stock trajectory (top figure) is calculated as $SB_{recent}/SB_{F=0}$. The Majuro plot at right shows the terminal $SB_{recent}/SB_{F=0}$ for each model in the uncertainty ensemble (excludes the estimation uncertainty). Vertical dotted line is the 2012-2015 depletion levels (0.44).

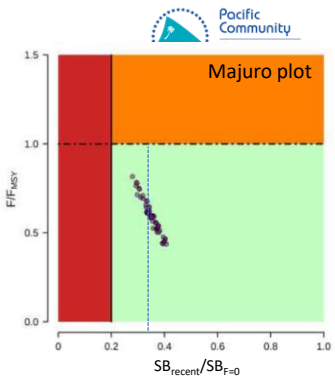
- The recent median stock depletion $SB_{recent}/SB_{F=0}$ = 0.47, is close to the CMM 2023-01 objective of average 2012-2015 depletion levels (0.44).
- Median F_{recent} is below F_{MSY}
- There is zero probability of breaching the limit reference point (LRP) for the recent stock status and the projected stock status under recent fishing levels.

- **Stock is not overfished or undergoing overfishing.**

Bigeye

- Last assessed 2023, next assessment 2026





Species	$SB_{recent}/SB_{F=0}$ median	10-90 %iles	F_{recent}/F_{MSY} median	10-90 %iles	"Recent" Probability breaching LRP	"Future" Probability breaching LRP *2019-2021 fishing*
Bigeye	0.35	0.30-0.40	0.59	0.46-0.74	0%	0%

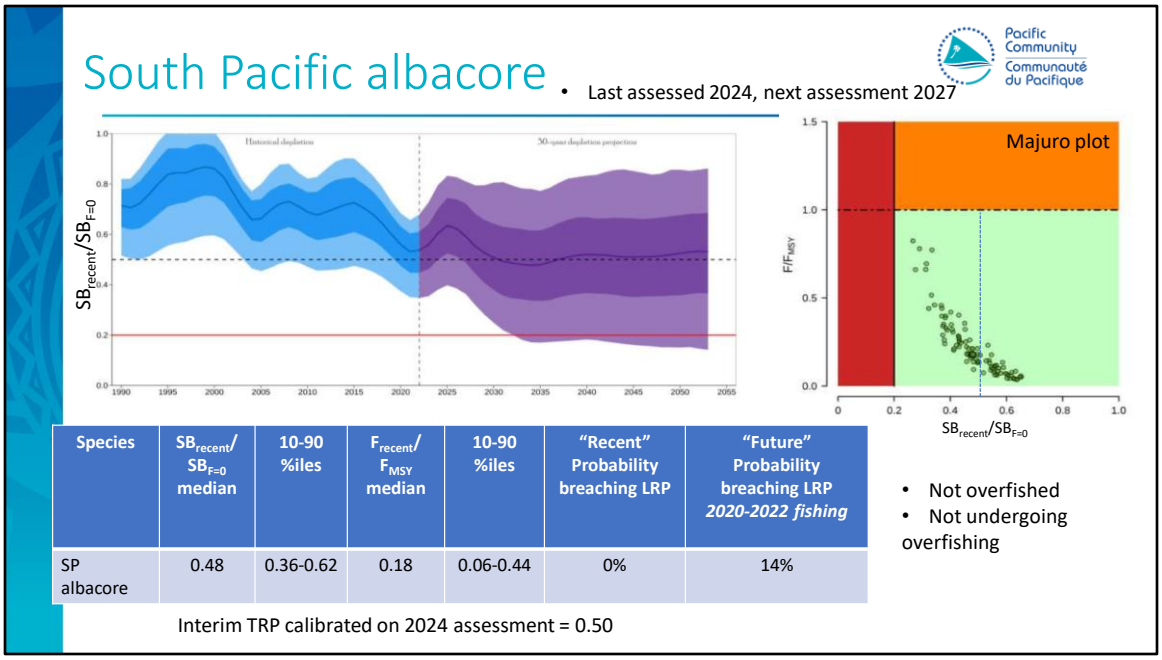
- Not overfished
- Not undergoing overfishing

CMM 2023-01 objective (2012-2015) calibrated on 2023 assessment = 0.34

This figure summarises the recent stock status (bottom table) and the historic (blue ribbon, truncated from 1990-2021) and projected (purple ribbon) stock trajectory for bigeye in the WCPO from the 54 models in the uncertainty grid of the 2023 assessment (last year of data 2021). Median value illustrated by the dark line. The projections over thirty year include stochastic recruitment, and fishing levels fixed at 2023 catch/effort levels from 2024 onwards, observed levels applied for 2022, 2023. The depletion stock trajectory (top figure) is calculated as $SB_{recent}/SB_{F=0}$. (The projections assumes the historic 'lower' long-term recruitment scenario). The Majuro plot at right shows the terminal $SB_{recent}/SB_{F=0}$ for each model in the uncertainty ensemble (excludes the estimation uncertainty). Vertical dotted line is the 2012-2015 depletion levels (0.34).

- The recent median stock depletion $SB_{recent}/SB_{F=0}$ = 0.35, is close to the CMM 2023-01 objective of average 2012-2015 depletion levels (0.34).
- Median F_{recent} is below F_{MSY}
- There is zero probability of breaching the limit reference point (LRP) for the recent stock status and the projected stock status under recent fishing levels.

- **Stock is not overfished or undergoing overfishing.**



Species	$SB_{recent}/SB_{F=0}$ median	10-90 %iles	F_{recent}/F_{MSY} median	10-90 %iles	"Recent" Probability breaching LRP	"Future" Probability breaching LRP *2020-2022 fishing*
SP albacore	0.48	0.36-0.62	0.18	0.06-0.44	0%	14%

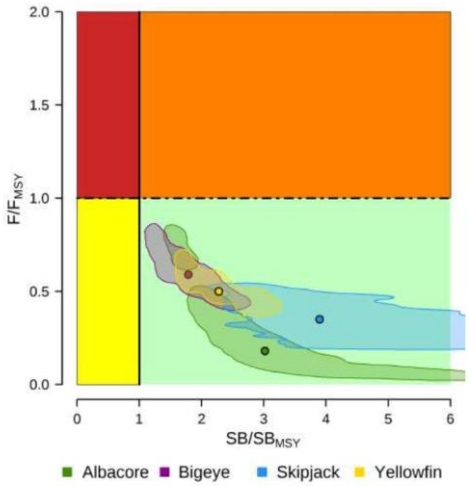
This figure summarises the recent stock status (bottom table) and the historic (blue ribbon, truncated from 1990-2022) and projected (purple ribbon) stock trajectory for south Pacific albacore (entire south Pacific stock including EPO/IATTC region) from the 100 model ensemble from the 2024 assessment (last year of data 2022). Median value illustrated by the dark line. The projections over thirty years include stochastic recruitment, and fishing levels fixed at 2023 catch/effort levels. The depletion stock trajectory (top figure) is calculated as $SB_{recent}/SB_{F=0}$. The Majuro plot at right shows the terminal $SB_{recent}/SB_{F=0}$ for each model in the uncertainty ensemble (excludes the estimation uncertainty). Vertical dotted line is the interimTRP.

- The recent median stock depletion $SB_{recent}/SB_{F=0}$ = 0.48, is close to the interim TRP calibrated to be 0.50 based on the 2024 assessment.
- Median F_{recent} is below F_{MSY}
- There is zero probability of breaching the limit reference point (LRP) for the recent stock status and the projected stock status under recent fishing levels.

- **Stock is not overfished or undergoing overfishing.**

- **WCPFC area – current stock status is similar to overall.**

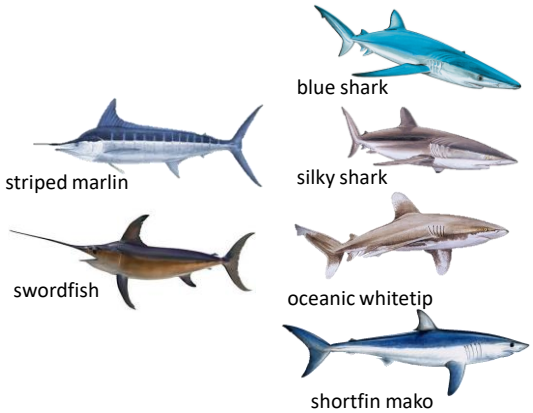
Kobe plot - MSY

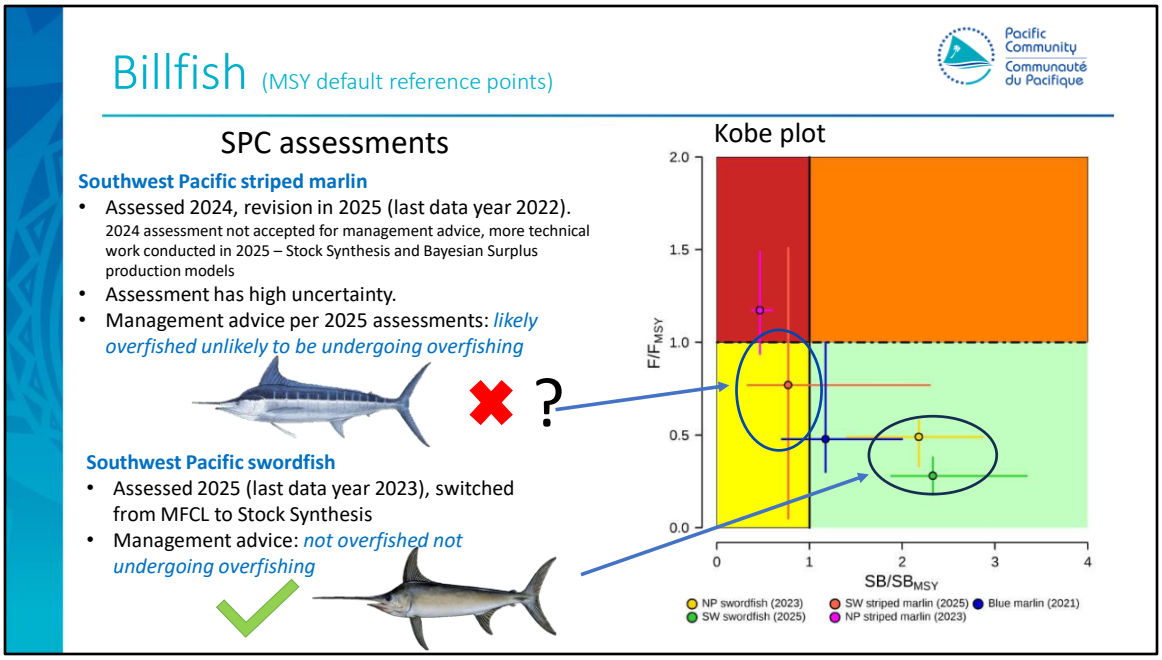


This figure shows the stock status summaries using a Kobe plot. The ellipses or irregular kernels indicate the ranges of uncertainty for each assessment of stock status. The points indicate the median estimates from the uncertainty grids or ensemble of models used for management advice in each assessment.

- Bigeye continues to have the most depleted stock status and highest relative fishing mortality.

Billfish and sharks stock status





Billfish stock status is presented on Kobe plots – as there are no adopted spawning biomass depletion reference points for billfish by WCPFC. This plots include the SW Pacific (assessed by SPC) and NP billfish (assessed by the ISC) stocks assessed, median (points) and uncertainty ranges (whiskers) are the 95%iles.

The Kobe plots has a yellow quadrant indicating overfished but overfishing not occurring according to MSY reference points.

Sharks (MSY default reference points)

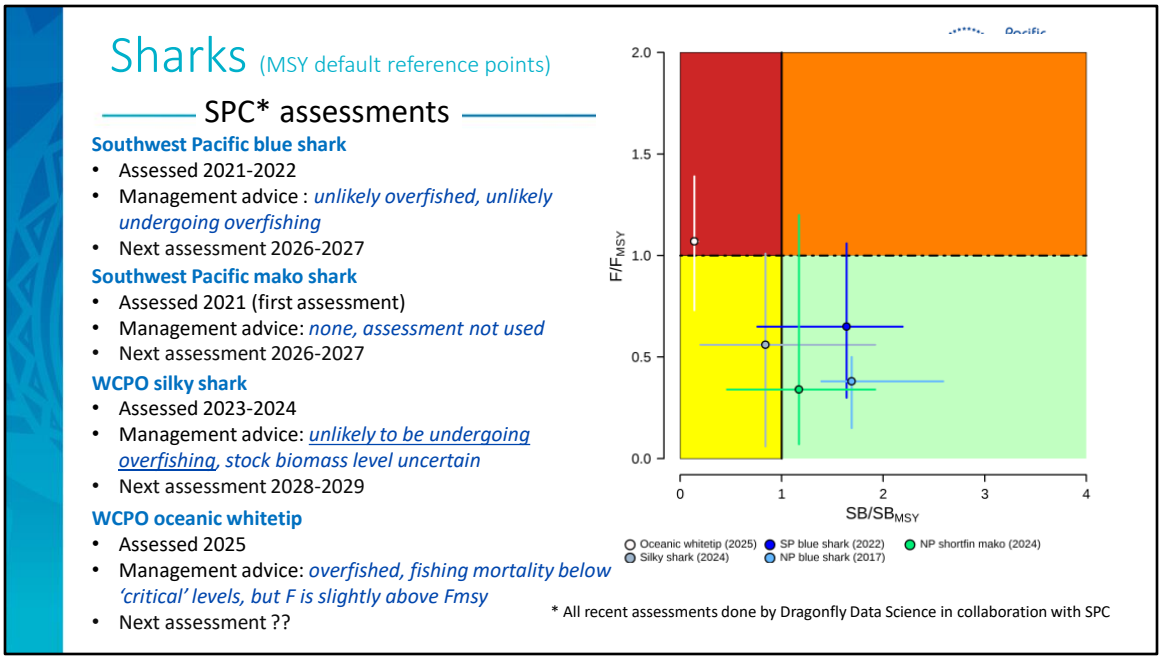
Oceanic whitetip assessment for the Western and Central Pacific conducted in 2025

- Third assessment of WCPO oceanic whitetip
- Multi-model analysis: Stock Synthesis (SS3) and dynamic surplus production models, due to conflict between CPUE and size data
- Both approaches indicate that the stock **remains in a severely depleted state** but is showing signs of recovery. SS3 model ensemble used for management advice.
- High confidence that recent fishing mortality (F) is below levels that would preclude stock rebuilding.
- The ensemble of models indicates that recent fishing mortality rates are below both Flim and Fcrash (i.e. the fishing mortality that would lead to extinction in the long-term), and the probability of exceeding these limits was near zero. F/Fmsy is slightly above 1.
- Recent biomass was estimated to have shown a subtle increase from a low-point in 2013–14 near 4% of unfinished biomass, to 6% of unfished biomass in recent years (2022–23). Median SB/SBmsy estimated at about 0.14.
- No adopted specific reference points for non-target shark species

"Critically Endangered" on IUCN Red List

Overfished status remains

The western and central Pacific oceanic whitetip shark stock was assessed in 2025, it was last assessed in 2019. The assessment used multiple approaches. Both suggest the stock remains severely depleted, but under the WCPFC non-retention policy and other migration measures implemented since the mid/late 2010s, fishing mortality has been reduced and should now be low enough to allow recovery. The assessment has tentative signs of a recovering trend.



This figure summarise the stock status of key sharks based on most recent assessments. Sharks are typically assessed every 5-6 years. They are now assessed across a 2 year period, the first year is focussed on data inputs and second year on the assessment. SPC has responsibility for the assessment of 4 shark stocks and has recently been contracting shark assessments to Dragonfly Data Science. There is no Majuro plot for sharks as there are no WCPFC agreed limit or target refence points for depletion ($SB/SB_{F=0}$), so stock status is assessed in relation F_{MSY} and SB_{MSY}. The points indicate the median estimates and bars the 95%iles.

- **Southwest Pacific blue shark**: last assessed 2021-2022: **unlikely overfished, unlikely undergoing overfishing.**
- **Southwest Pacific mako shark**: last assessed 2021 (first assessment attempt): assessment unsuccessful, **stock status is uncertain**.
- **WCPO silky shark**: last assessed 2024: **unlikely being overfished, but stock biomass is uncertain.** The conclusion that this stock is now unlikely to be undergoing overfishing is an improvement from the previous assessment that concluded that the stock was likely being overfished. The biomass trend is now increasing, suggesting the stock is recovering, but biomass level is very uncertain.
- **WCPO whitetip shark**: last assessed 2025: **overfished, but fishing mortality now below Flim and Fcrash**.
- **Stock status remains the worst for oceanic whitetip and then silky shark.**

Summary

- 2024 record total tuna catch, record skipjack catch
- Minor changes in yellowfin and bigeye catches, albacore higher than 2023
- Purse seine activity contracted to the west, more sets due to more free school sets in 2024 compared to 2023, slightly lower purse seine bigeye catch
- Recent effort stability
- New assessments for skipjack, SW Pacific swordfish, SW Pacific striped marlin (following 2024), and oceanic whitetip shark
- Tuna stock status: in the green and close to TRPs for all four target species
- SW Pacific striped marlin – still overfished (biomass has high uncertainty), unlikely undergoing overfishing), SW Swordfish – not overfished, not undergoing overfishing
- Oceanic whitetip shark – severely depleted, but reduced fishing mortality, some signs of recovery…

TFAR No. 25
Draft available: see WCPFC22 information papers