



SC18 Summary Report to NC18

(For details, refer to NC18-IP-02 (SC18 Outcomes Document))

SungKwon Soh
WCPFC Secretariat

18th Scientific Committee

The 3rd online meeting, 10 – 18 August 2022

SC Chair and Theme Conveners

Chair	Tuikolongahau Halafihi (Tonga)
Vice-Chair	Vacant
Data and Statistics	Valerie Post (USA)
Stock Assessment	Keith Bigelow (USA) Hidetada Kiyofuji (Japan)
Management Issues	Robert Campbell (Australia) Co-convenor: Vacant
Ecosystem and Bycatch Mitigation	Yonat Swimmer (USA) Co-convenor: Vacant

Nomination is open until the Commission meeting in Dec. 2022

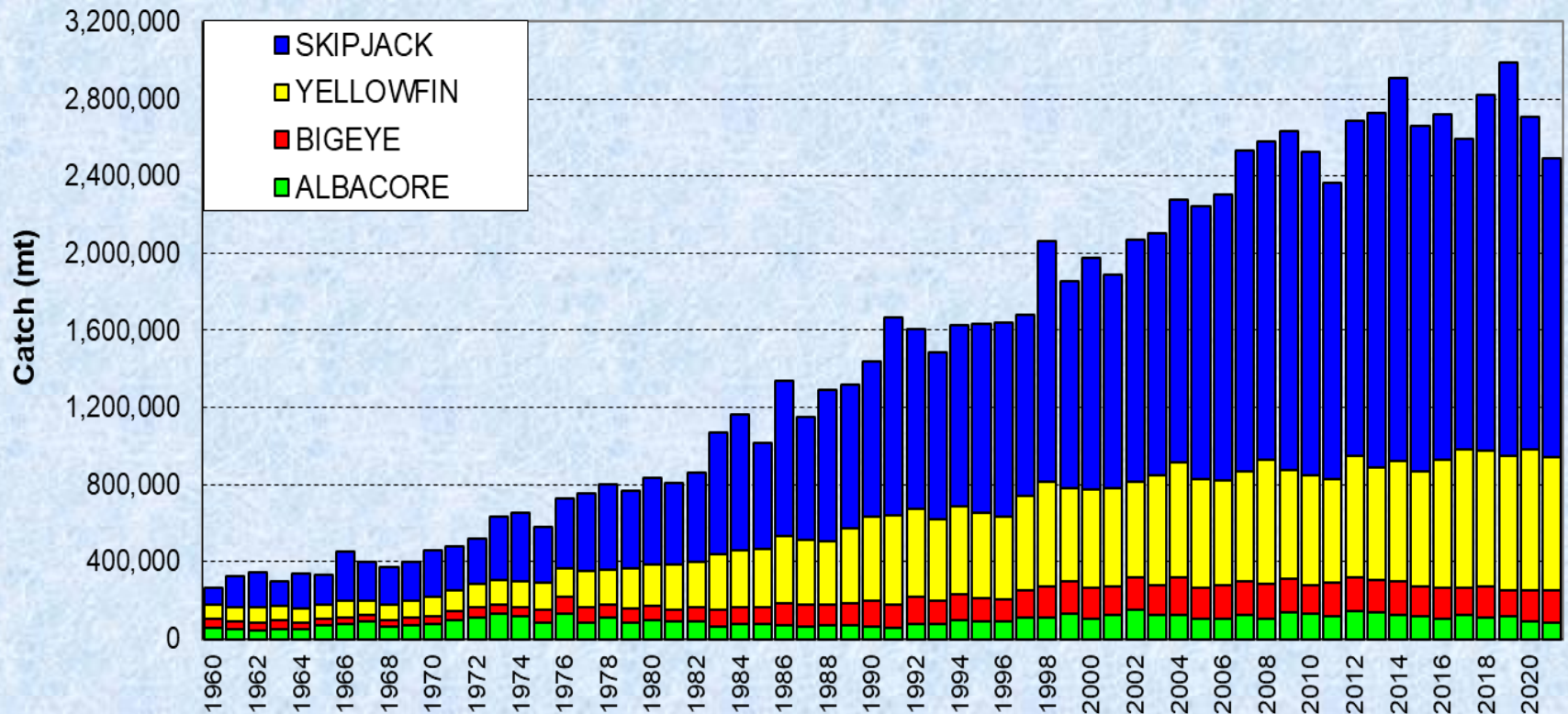
2021 WCPO Tuna Catch

The provisional total CA tuna catch for 2021

- 2,493,571 mt
- 87% of the total Pacific Ocean catch
- 56% of the global tuna catch
- Value of the provisional total WCPO tuna catch: \$4.6 billion

By Species	Catch (mt)	%	By Gear	Catch (mt)	%
Skipjack	1,547,945	62.1	Purse seine	1,740,370	69.8
Yellowfin	695,097	27.9	Pole-and-line	123,528	5.0
Bigeye	169,113	6.8	Longline	191,666	7.7
Albacore	81,416	3.3	SP troll albacore	4,037	0.2
	NP:29,243 SP: 52,173		Others	433,970	17.4

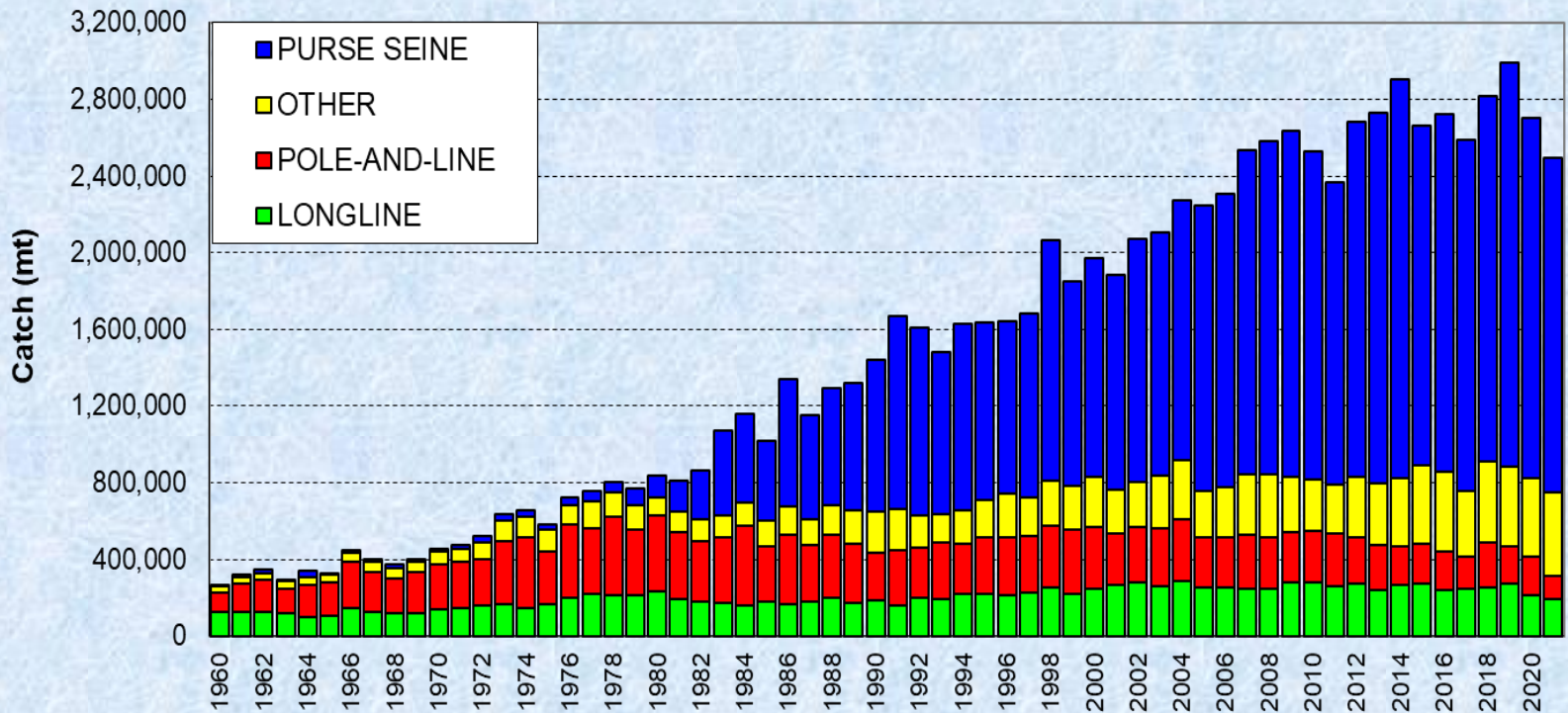
2021 WCPO Tuna Catch by Species



2021 Provisional Total Catch – 2,493,571 mt (highest in 2019: 2,987,934 mt)

- **Skipjack – 1,547,945 mt (63%)**
- **Yellowfin – 695,097 mt (28%)**
- **Bigeeye – 169,113 mt (7%)**
- **SP Albacore – 52,173 mt (2%)**

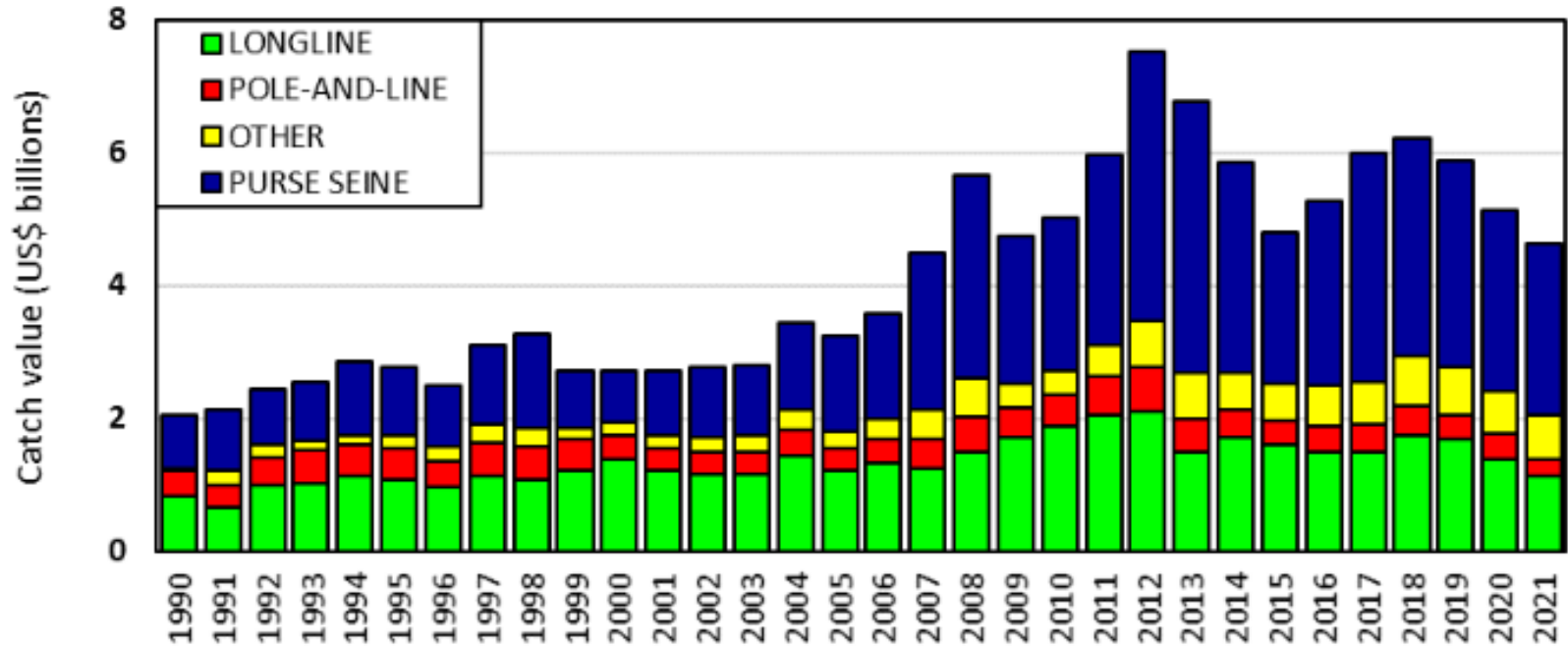
2021 WCPO Tuna Catch by Gear



2021 Provisional Total Catch – 2,493,571 mt

- Purse seine – 1,740,370 mt (70%)
- Longline – 191,666 mt (8%)
- Pole-and-line – 123,528 mt (5%)
- Others (troll gear and a variety of artisanal gears mainly in IDN and PHL) – 438,007 mt (17%)

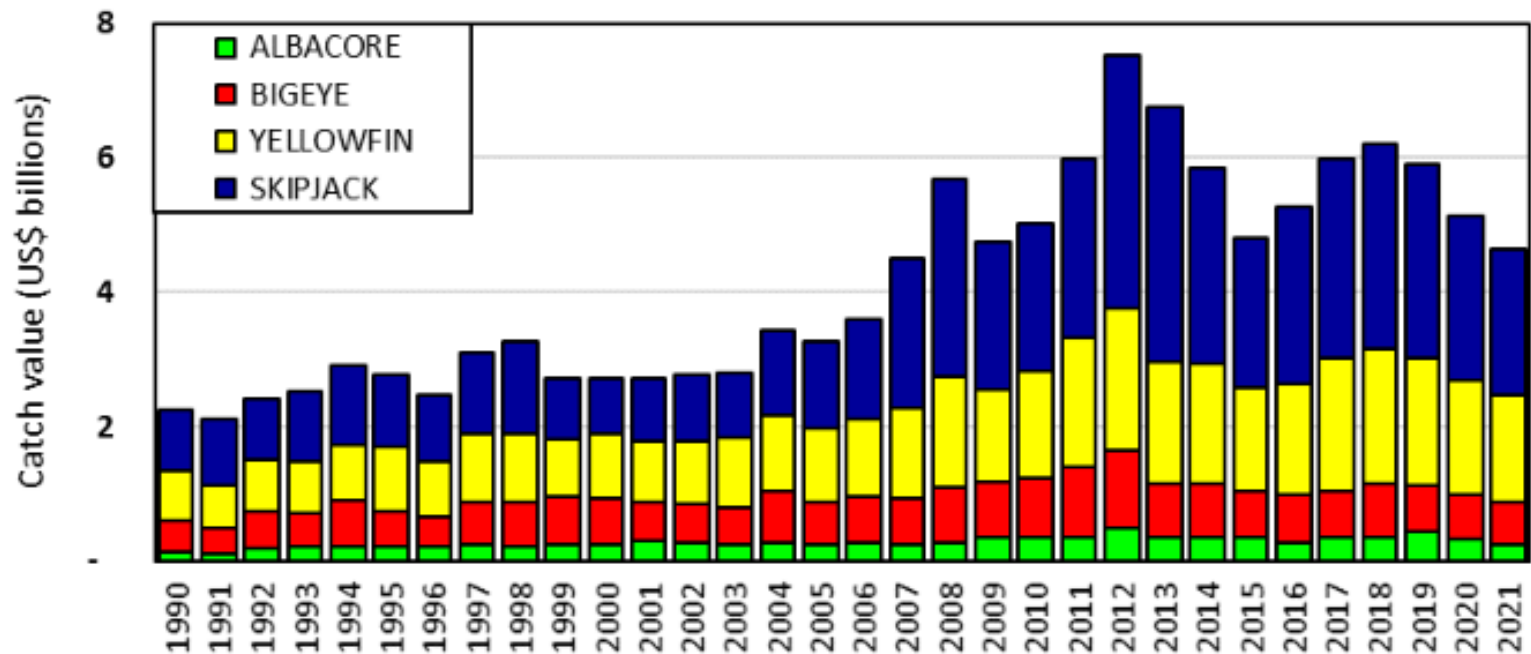
2021 WCPO Tuna Catch Value by Gear



2021 Provisional Total Catch Value: ~ USD 4.6 billion (9% lower than from 2020)

- **Purse seine – USD 2.6 billion (56% of the total value of the tuna catch)**
- **Longline – USD 1.1 billion (25% of the total value of the tuna catch)**
- **Pole-and-line – USD 228 million (5% of the total value of the tuna catch)**
- **Others – USD 691 million (15% of the total value of the tuna catch)**

2021 WCPO Tuna Catch Value by Species



2021 Provisional Total Catch Value: ~ USD 4.6 billion (9% lower than from 2020)

- **Skipjack – USD 2.17 billion (47% of the total catch value)**
- **Yellowfin – USD 1.6 billion (35% of the total catch value)**
- **Bigeye – USD 633 million (14% of the total catch value)**
- **Albacore – USD 231 million (4% of the total catch value)**

STOCK ASSESSMENT SESSION BRIEF

1. Skipjack tuna (*Katsuwonus pelamis*)

- ✓ Median $SB_{\text{recent}}/SB_{F=0} = 0.51$ (recent: 2018-2021; 80th percentile 0.43-0.64), which is close to the interim TRP
- ✓ Median $F_{\text{recent}}/F_{\text{MSY}} = 0.32$ (80th percentile 0.18-0.45)
- ✓ The WCPO skipjack stock is not overfished, nor subject to overfishing.

2. Southwest Pacific blue shark (*Prionace glauca*)

- ✓ Median $SB_{2017-2020}/SB_{F=0} = 0.71$ (90th percentiles 0.37 and 0.82)
- ✓ Median $F_{2017-2020}/F_{\text{MSY}} = 0.65$ (90th percentiles 0.43 and 0.86)
- ✓ The SWP blue shark is unlikely to be overfished and unlikely that overfishing is occurring.

3. Southwest Pacific shortfin mako shark (*Isurus oxyrinchus*)

- ✓ As the assessment models have high estimation uncertainty and sensitive to a range of inputs, SC18 found it was unable to provide stock status and management advice on this stock.
- ✓ SC18 have provided future research recommendations to improve future stock assessment for this species.

STOCK ASSESSMENT SESSION BRIEF

4. Pacific Bluefin Tuna

- ✓ SC18 noted the current SSB is overfished (10.2% of the unfished level) but also noted that the updated stock assessment indicates that the stock is likely recovering as planned or possibly faster.

5. North Pacific blue shark

- ✓ SC18 supports the model ensemble approach taken in the 2022 stock assessment.
- ✓ SC18 noted that the model ensemble did not consider some key uncertainties, in particular natural mortality or stock-recruitment steepness and recommended a more thorough use of the model ensemble approach to better represent uncertainty for future assessments.

6. North Pacific striped marlin

- ✓ SC18 concurred the new modelling and data improvements for the WCNPO striped marlin stock and concluded that this report is a work in progress.
- ✓ SC18 stated it looks forward to the ISC BILLWG workplan to explore the growth curve and complete a benchmark WCNPO striped marlin assessment for approval at ISC23.

MANAGEMENT ISSUES SESSION BRIEF

1. Development of skipjack harvest strategy framework

a) Skipjack tuna TRP

- The target of the 2022 HS work plan is to “Complete review of the TRP”
- SC18 reviewed the deterministic outputs of the projected TRPs as the MFCL stochastic projection functionality was not available.
- SC18 recommended that the update of this work be provided to WFCPF19.

b) Skipjack tuna operating models

- SC18 reviewed a reference set (the most plausible hypotheses) and a robustness set (less likely but still plausible hypotheses).
- SC18 recommended that WCPFC19 adopt the reference set of 96 OMs and provisionally adopt the robustness set OMs in SC18-MI-WP-01, noting that the inclusion of additional uncertainties will be further discussed at SC19.

c) Skipjack tuna management procedure

- SC18 agreed that the framework for evaluating candidate MPs is now fully established and ready for the adoption as scheduled in 2022.
- SC18, however, did not see that its role was to recommend any particular MP but to furnish the Commission with the tools to do so, and noted the use of the **PIMPLE** tool for this purpose. <https://ofp-sam.shinyapps.io/PIMPLE2022/>

MANAGEMENT ISSUES SESSION BRIEF

2. Development of SP albacore harvest strategy framework

a) SP albacore tuna TRP

- SC18 recommended that WCPFC19 consider alternative objectives and TRPs for South Pacific albacore tuna.

b) SP albacore tuna operating models

- SC18 noted the two alternative sets of operating models (one based on the 2018 assessment with a WCPO area only, and the other based on the 2021 assessment, including the EPO).
- SC18 agreed to specify an OM grid for both options so that there is a clear way forward for this work pending the Commission's decision.

c) SP albacore tuna management procedure

- SC18 recommended that both the Science-Management Dialogue¹ and WCPFC19 take note of the progress to date and that further work is required prior to adoption of an MP.

1. Science-Management Dialogue meeting (19, 22 August 2022)

- SMD01 Outcomes Document: <https://meetings.wcpfc.int/node/17084>

ECOSYSTEM AND BYCATCH MITIGATION SESSION BRIEF

1. Ecosystem and climate indicators

SC18 recommended that:

- “Ecosystem and Climate Indicators” be a standing agenda item for EB Theme session;
- Development and testing of “Ecosystem and Climate Indicators” as a project of the Scientific Committee; and
- Available information and updates on the impacts of climate change be included or combined with status of stocks reporting.

2. Shark mitigation measures

- SC18 recommended the Commission consider revising the CMM for Sharks, taking into account the results of Project 101 and previous studies, which considered several options, including the prohibition of branchlines of wire trace and shark lines, in order to reduce fishing mortality on oceanic whitetip shark and silky sharks in the WCPO.

WORK PROGRAM, BUDGET AND ADMINISTRATION

1. 2023 Work Program and Budget

- Key SSP services for 2023 includes bigeye stock assessment, yellowfin stock assessment, skipjack stock assessment updates, etc.
- SC projects for 2023: PTTP, PMSB, and other 10 individual projects were recommended with priority ranks to each.

2. SC officers

- SC Vice-Chair and one Co-convenor for MI and EB Theme session each are vacant.

3. Next meeting

- SC18 noted the vacancies for SC Vice-Chair.
- SC18 recommended that next meeting would be held from 16-24 August 2023, and that Palau would confirm its hosting of SC19 at WCPFC19.

Thank you...