



**SCIENTIFIC COMMITTEE
SEVENTEENTH REGULAR SESSION**

ELECTRONIC MEETING

11 – 19 August 2021

PROGRESS AGAINST THE 2021-2025 SHARK RESEARCH PLAN

WCPFC-SC17-2021/EB-IP-02 (Rev.01)

Secretariat and SPC-OFP¹

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INTRODUCTION

The report of Project 97 (Shark Research Plan 2021-2025) was adopted by SC16 and endorsed by WCPFC17 in December 2020. The final report (SC16-EB-IP-01rev1) is posted on SC16 website.

The 2021-2025 Shark Research Plan (SRP) is the 3rd phase of the WCPFC's SRP that builds on the previous two plans. The 2021 – 2025 SRP is a living document that can evolve based on the information needs and priorities of the WCPFC. The purpose of this document is to review progress against the SRP tasks to facilitate future planning of WCPFC shark research. The updates on the 2021 - 2025 SRP are included in the tables below.

There are no projects scheduled for 2021 that are not being reported on at SC17. In addition, SC17-EB-IP-13 and SC17-EB-IP-14 are being tabled as additional work to the SRP contributed by a CCM that investigate handling practices and post-release survival that contributes to our understanding of the management of sharks in purse seine fisheries.

Table 1. SRP 2021 – 2025 Project List. SA = stock assessment.

| Title | Priority | Start Year | End Year | Progress |
|---|----------|------------|----------|---|
| 1. Stock Assessment and Management | | | | |
| 1) Determine the stock status for WCPFC Key Sharks | | | | |
| a) SW Pacific blue shark assessment | High | 2020 | 2021 | SPC. Scheduled to present at SC17 (P107) SC17-SA-WP-03 SC17-SA-IP-06 SC17-SA-IP-18 |
| b) N Pacific blue shark assessment | High | 2021 | 2022 | ISC. SA scheduled in 2022 (tbc) |
| c) N Pacific shortfin mako shark assessment | High | 2023 | 2024 | ISC. Indicator analysis in 2021; SA scheduled in 2024 |
| d) WCPO silky shark assessment | High | 2022 | 2023 | Last SA in 2018; SA scheduled in 2023 |
| e) Pacific silky shark assessment | Medium | 2022 | 2023 | Last SA in 2018; SA scheduled in 2023 |
| f) Pacific bigeye thresher shark assessment | Medium | 2021 | 2022 | Last SA in 2017; SC17 may consider SA in 2022 |
| g) Pacific whale shark assessment | Medium | 2022 | 2023 | Last SA in 2018 |
| h) SW Pacific mako shark assessment | High | 2021 | 2022 | SA scheduled for 2022 |
| 2) Develop reliable catch histories for WCPFC Key Sharks as far back in time as feasible | | | | |

| | | | | |
|--|--------|---------|---------|---|
| a) Redefining the fleets currently assumed in the BSH stock assessment | Medium | 2021 | 2022 | SC17-SA-IP-18 (covers the SP only)SC17 (Project 107) |
| b) The development of alternative approaches to catch reconstructions based on estimates of the global fin trade | Medium | 2024 | 2025 | N/A |
| 3) Test and improve Medium and Data Poor assessment methods to inform management decisions | | | | |
| a) Test and improve data poor assessment methods | Medium | 2024 | 2025 | N/A |
| b) Include data poor assessment metrics as standard out-puts for data rich assessments | High | Ongoing | Ongoing | Included in SC17-SA-WP-03 |
| 4) Stock management | | | | |
| a) P102 – Population projections for oceanic whitetip shark | High 1 | 2019 | 2021 | USA. Scheduled to present at SC17 SC17-SA-IP-21 |
| 2. Mitigation | | | | |
| 1) Provide advice on mitigation Sharks with non-retention policies and unwanted elasmobranchs | | | | |
| a) Investigate effective mitigation for WCPFC Key Sharks | Medium | 2023 | 2025 | SC17-EB-WP-01 (Project 101) |
| b) Investigate mitigation method trade-offs between mitigation methods for sharks, seabirds and sea turtles | Medium | 2023 | 2025 | N/A |
| 2) Provide advice on safe release methods and assess release survival of WCPFC Key Sharks | | | | |
| a) Estimate silky and oceanic whitetip shark post release survival from WCPO longline fisheries* | High | 2021 | 2023 | Shark post-release mortality: SC15-EB-WP-01; SC15-EB-WP-04; Project 101 to be presented at SC17 |
| b) Estimate whale shark post release survival from WCPO purse seine fisheries* | High | 2021 | 2023 | Proposed at SC16 – not approved |
| 3. Biological data improvements | | | | |
| 1) Increase the understanding of important biological parameters of WCPFC Key Sharks | | | | |
| a) Silky shark and oceanic whitetip shark reproductive biology and longevity* | High | 2023 | 2025 | N/A |
| b) Biology and life history of hammerhead sharks* | High | 2023 | 2025 | N/A |
| c) Resolving blue shark reproductive biology and reproductive schedule* | Medium | 2023 | 2025 | N/A |
| d) Biology of the longfin mako shark* | Medium | 2023 | 2025 | N/A |
| e) Life history of thresher sharks* | Medium | 2023 | 2025 | N/A |
| f) Validated life history, biology and stock structure of the shortfin mako in the south Pacific* | Medium | 2023 | 2025 | N/A |
| g) Age validation and stock structure of the silky shark and oceanic whitetip shark* | Low | 2023 | 2025 | N/A |

| | | | | |
|--|------|---------|---------|----------------------------------|
| h) Stock structure and life history of southern hemisphere porbeagle shark* | Low | 2023 | 2025 | N/A |
| 4. Observer data collection | | | | |
| 1) Improve spatio-temporal observer data for informing scientific needs | | | | |
| a) Training observers in the WCPO to be proficient in species identification | High | Ongoing | Ongoing | SPC. SC17-ST-IP-07 (Project 109) |
| b) Training observers for extraction and storage of vertebrae and shark reproductive material | High | 2021 | Ongoing | SPC. SC17-ST-IP-07 (Project 109) |
| c) Training observers for on-deck reproductive staging of elasmobranchs | High | 2021 | Ongoing | SPC. SC17-ST-IP-07 (Project 109) |
| d) Measuring elasmobranchs on purse seine and longline vessels for length-length and length-weight conversion factor development | High | Ongoing | Ongoing | SPC. SC17-ST-IP-07 (Project 109) |

* Projects on the "long list" from Chin and Simpfendorfer (2019).

Table 2. WCPFC's stock assessment schedule² for 2021-2025 (Update)

| Species | Stock | Last assessment | 2021 | 2022 | 2023 | 2024 | 2025 |
|------------------------|------------|-----------------|--------------------|------|------|------|------|
| Bigeye tuna | WCPO | 2020 | | | X | | |
| | Pacific | 2015 | | X? | | | |
| Skipjack tuna | WCPO | 2019 | | X | | | X |
| Yellowfin tuna | WCPO | 2020 | | | X | | |
| Albacore | S Pacific | 2018 | X | | | X | |
| | N Pacific | 2020 | | | X | | |
| Pacific bluefin | N Pacific | 2020 | | X | | X | |
| Striped marlin | SW Pacific | 2019 | | | | X | |
| | N Pacific | 2019 | | X | | | |
| Swordfish | SW Pacific | 2017 | X | | | | |
| | N Pacific | 2018 | | | X | | |
| Pacific blue marlin | Pacific | | X | | | | |
| Silky Shark | WCPO | 2018 | | | X | | |
| | Pacific | 2018 | | | X | | |
| Oceanic whitetip shark | WCPO | 2019 | | | | X | |
| Blue shark | SW Pacific | 2016 | X | | | | |
| | N Pacific | 2017 | | X | | | |
| Mako | SW Pacific | | | X | | | |
| | N Pacific | 2018 | Indicator analysis | | | X | |
| Bigeye thresher | Pacific | 2017 | | X | | | |
| Porbeagle | S Pacific | 2017 | | | | | |
| Whale Shark | Pacific | 2018 | | | X | | |

² Tuna scheduled for assessment every 3 years, billfish, every 4 years and sharks every 5 years.