

# Recent progress in the development of harvest strategies for WCPFC stocks and fisheries

WCPFC-SC17-2021/MI-WP-03

OCEANIC FISHERIES PROGRAMME, SPC

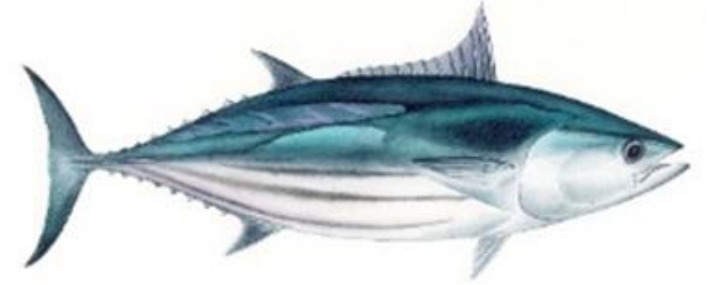
# 2021 PROGRESS

|                                | SKJ                           | SP-ALB                                | BET                | YFT               |
|--------------------------------|-------------------------------|---------------------------------------|--------------------|-------------------|
|                                | Tropical Purse Seine          | Southern Long Line                    | Tropical Long Line |                   |
| Management Objectives          | Noted                         | Noted                                 | Noted              |                   |
| Performance Indicators         | Identified                    | Identified                            | Identified         |                   |
| Reference Points               | LRP<br><b>TRP</b>             | LRP<br>Interim TRP                    | LRP<br><b>TRP</b>  | LRP<br><b>TRP</b> |
| Management Procedures          | Candidate MPs and HCRs tested | Example Empirical MPs and HCRs tested |                    |                   |
| Management Strategy Evaluation | Developed                     | Developed                             |                    |                   |
| Monitoring Strategy            | Developing                    | Developing                            |                    |                   |

# WCPFC HARVEST STRATEGY APPROACH – SC17

- Reduced number of papers submitted to SC17
  - Increased focus in 2021 on workshops and capacity building
  - SKJ evaluation framework is well developed
- **MI-WP-04** Evaluations of candidate management procedures for skipjack tuna in the WCPO.
- **MI-WP-05** Mixed fishery harvest strategy developments.
  
- **MI-IP-01** Retrospective forecasting of CPUE for South Pacific albacore
- **MI-IP-02** Capacity building and stakeholder engagement activities for WCPFC harvest strategies.

# SKIPJACK



## Key outcomes

- All components of the Skipjack MSE model now updated for the 2019 assessment, tested and suitable for progressing formal evaluation studies
- Proposed **monitoring strategy** needs refining including any **CCM specific performance indicators** that cannot be derived directly from the MSE framework.
- Ongoing work to further develop elements of the **robustness set**.
- Presentation of results
- SC17-MI-WP-04
  - Basis of the skipjack Management Procedure is outlined in Appendix A
  - Assumptions regarding the implementation of archipelagic waters detailed in Appendix B
  - Evaluation software and input data repository described in Appendix C

# Skipjack



2020  
achieved

- Updated SKJ MSE model framework
- Re-run trial MP evaluations
- Develop monitoring procedure

2021

- Continue to refine MSE models
- Formal evaluations of candidate MPs

2022

Adopt MP

# SP ALBACORE



## Key outcomes

- SP Albacore MSE model framework operational
- Trial evaluations conducted for empirical HCRs
  - Highly dependent on CPUE
  - SC17-MI-IP-01 Retrospective forecasting of CPUE for South Pacific albacore.
    - In some instances, simulated CPUE can be used to evaluate candidate management procedures.
    - [Model based approaches](#) may perform better.

# South Pacific Albacore



2020  
achieved

- Initial development of evaluation framework
- Developed and tested alternative HCRs
- SPAMPLE (manager support tool)
- Expert review (EU scientist)

2021

- Further refine MSE model, expert review follow-up work
- Data simulation investigations
- Formal evaluations of candidate MPs



Stock  
assessment  
South Pacific  
albacore

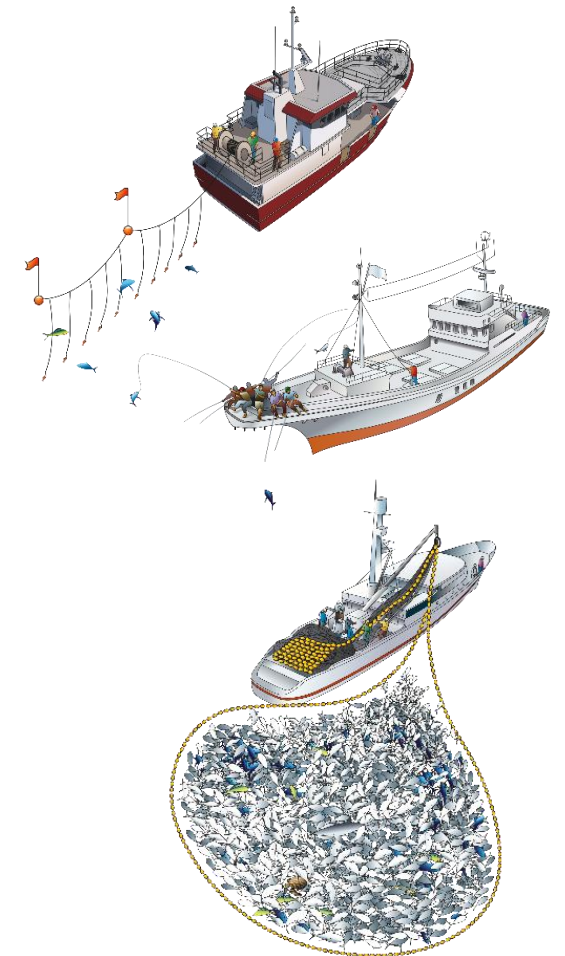
2022

Adopt MP



# MIXED FISHERIES APPROACH

- SCI7-MI-WP-05
- First implementation of a reduced mixed fishery evaluation.
- Explores the impacts on BET and YFT of the SKJ management procedure.
  - Simple assumptions for BET
  - SP-Alb not included
- Outlines the procedure for transferring impacts between fisheries
  - Common unit – relative fishing effort
- Preliminary results promising
- Next steps
  - Fully specify **Operating Models** for BET and YFT
  - Develop **Management Procedures** for BET
  - Develop mixed fishery **Performance Indicators**





# Mixed fishery approach

2020  
achieved

- Further consideration of the mixed fishery harvest strategy approach
- Mapping of WCPO fisheries in relation controlling MPs



Stock assessments  
Yellowfin / Bigeye

2021  
planned

- Build the mixed fishery MSE framework

TRPs for BET and YFT  
(SC to advise on these)

2022  
planned

- Develop trial MPs
- Test the mixed fishery MSE framework on various scenarios/MPs
- Present results to SC, continue this approach or not?

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# HARVEST STRATEGY APPROACH – Next Steps

## Feedback advice and direction from the Scientific Committee

- Adequacy and sources of uncertainty currently considered for skipjack and South Pacific albacore.
- HCR designs for both skipjack and South Pacific albacore.
- Feedback on the presentation of results
- Suggestions for improving communication, engagement and capacity building with regards the technical development of the harvest strategy approach.

## Feedback, advice and direction from the Commission

- Definition of fisheries and fishery controls within the harvest strategy.
- Procedures for identifying, selecting and implementing the ‘best’ management procedure.



Pacific  
Community  
Communauté  
du Pacifique