



**SCIENTIFIC COMMITTEE
EIGHTEENTH REGULAR SESSION**

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Data collection programme to support a management procedure for WCPO skipjack tuna
WCPFC-SC18-2022/MI-IP-14

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SPC¹

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1. INTRODUCTION

Under the harvest strategy approach, the management of stocks and fisheries will be determined by a management procedure (MP). These comprise pre-agreed rules that set future fishing opportunities depending on the status of the stock to try to achieve defined management objectives. An MP comprises three main components: a data collection programme, an estimation method and a harvest control rule. In this paper we outline the data collection programme necessary to support the WCPO skipjack harvest strategy.

2. DATA COLLECTION PROGRAMME

At the broadest level, data requirements for a harvest strategy relate to running the MP and conducting the monitoring strategy (Table 1.). A key consideration for both of these is the availability, coverage and quality of data for conducting stock assessments, either for full stock assessments conducted as part of the monitoring strategy, or for simpler estimates of stock status conducted as part of the MP. In addition to stock assessment input data, further data may be required for the monitoring strategy to calculate performance indicators that are not generated from stock assessments.

For the most part, the submission of data required to run stock assessments for WCPO skipjack (including for the estimation method) are mandatory requirements under WCPFC scientific data provision requirements². Submission of these data is periodically monitored (see for example WCPFC-SC16-2020/ST-WP-01) and also considered through the Technical and Compliance Committee (TCC). Ongoing efforts through the Commission seek to improve both the quality and coverage of these data.

Additional data sources that must also be considered are those from the regional observer programme (for example, species composition and size composition). The coverage of the Pacific Island observer programme in recent years is reported in WCPFC-SC18-2022/ST-IP-02. Representative fishery coverage of this information will be required to ensure these data remain of the quality assumed in the evaluation of the management procedure, and would be taken into consideration under the monitoring strategy.

Other data necessary to run both the full stock assessments and the estimation method include tagging data. Tagging surveys are conducted periodically by SPC with an alternating focus on the tropical tuna species (skipjack, bigeye, and yellowfin). More frequent skipjack-focussed tagging surveys are conducted by Japan. Tag release and recapture information is a particularly important component of the skipjack stock assessment, and it is anticipated that these tagging programmes will continue into the future. The extent and availability of tag data should be reported for both the estimation method and the stock assessment (as is currently the case) and this information taken into consideration under the monitoring strategy.

3. MONITORING THE DATA COLLECTION PROGRAMME

Monitoring of data submission, coverage and quality is already in place for some of the key scientific data requirements and it may be that the only requirement to ensure compatibility with the harvest strategy approach is to make this information available for consideration under the monitoring strategy. Similarly, reports presented for stock assessments should continue to highlight the availability and quality of important data and where issues are encountered this should be brought to the attention of the SC when considering the monitoring strategy.

² “Scientific Data to be provided to the Commission” at <https://www.wcpfc.int/doc/data-01/scientific-data-be-provided-commission>

In the event that important data are not available when running the MP, exceptional circumstances may be declared. In this regard, exceptional circumstances should be considered in terms of the extent to which the estimation model is impaired by the absence of key data. For the 'dry-run' example, presented in WCPFC-SC18/MI-WP-03, 2021 effort data for pole and line fisheries was missing. Sensitivity analyses suggested that the impact of these missing data on the estimation model was low and that their absence did not warrant the declaration of exceptional circumstances.

The SC is invited to:

- Consider the elements of the data collection programme for WCPO skipjack and advise whether any additional data sources should be included;
- Consider the process by which information on data quality and data coverage can be progressively accumulated for presentation to and consideration under the monitoring strategy.

Table 1. Data requirements under the WCPO skipjack harvest strategy and considerations for the monitoring strategy with respect to the collection, provision, coverage, and quality of data necessary to run the MP. Data prioritisation is considered here with specific regard to the monitoring strategy.

Data requirement	Priority	Monitoring Considerations ³⁴
Management Procedure: estimation model		
Annual catch estimates	High	Obligatory under WCPFC scientific data submission standards
Aggregate catch/effort data	High	Obligatory under WCPFC scientific data submission standards
Operational catch/effort data	High	Obligatory under WCPFC scientific data submission standards
Standardised CPUE indices for important index fisheries (e.g. pole and line fisheries)	High	Continuation of ongoing arrangements
Species composition data for purse seine catches	High	Dependent on observer coverage
Size composition data	High	Obligatory under WCPFC scientific data submission standards
Tagging data	High	Dependent on ongoing WCPFC funding
Monitoring Strategy: stock assessment		
As above for management procedure	High	As a minimum, the data listed above will be required to run the stock assessment
Additional data to inform the stock assessment	Low	Additional data where available will be used to improve the stock assessment e.g. growth, maturity, effort creep, population structure and movement
Monitoring Strategy: performance indicators		
Other data as available to calculate performance indicators – this may include:		The frequency and scope of these data may vary depending on data availability and collection procedures. Performance indicators calculated from them may represent only a subset of the fishery.
Economic data	Medium	e.g. voluntarily submitted economic information
Ecosystem data	Medium	e.g. bycatch and discards (mandatory) information
Social information	Medium	e.g. industry/employment, household surveys

³ Currently ongoing funding under project 42 (tagging)

⁴ Current arrangements for data access/provision under MOUs and/or special agreements to be maintained