COMMISSION
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Response to EU's request at the SWG on the skipjack harvest strategy (29/11/2022)

WCPFC19-2022-11C
30th November 2022

SPC

SPC-OFP

At the Small Working Group meeting on the skipjack management procedure proposal (29th November), the EU delegation requested that the SSP provide an indication of the potential change in future fishing levels relative to recent levels that might result from the output of the FFA-proposed management procedure 9 (HCR9). It should be noted that the MP would not actually be run until 2023 using data to 2022. The analysis presented here using data up to and including 2021, therefore provides a demonstration of possible outcomes, noting the actual outcome may differ when the 2022 data are included.

The indicated change in future fishing levels relative to recent levels is comprised of two components:

1. The change from 2021 fishing levels to the 'baseline' fishing levels defined by WCPFC members for each fishing gear group. These are the levels of fishing assumed within the evaluations of harvest strategies where the management procedure output specified a scalar value of 1.
2. The subsequent modification from those baseline levels where the output of the management procedure is different from 1.

The potential changes from 2021 fishing levels that result from those two components are described below.

1. Baseline fishing levels

As noted in WCPFC19-2022-11A, recent Commission meetings and the 1st Science Management Dialogue meeting, the defined baseline fishing levels, which apply in a future 3-year management period if the management procedure output indicates a scalar of 1. Those baseline fishing levels are:

- 2012 purse seine EFFORT levels;
- 2001-2004 average pole and line EFFORT levels;
- 2016-2018 domestic fisheries CATCH in region 5 (outside archipelagic waters).

The use of this baseline assumes greater levels of effort and catch than current data suggests occurred in 2021[1]. The increases in effort or catch that would result are shown in the last column of Table 1 as the multiplier necessary to move from 2021 levels to baseline levels (e.g. the 2012 baseline tropical purse seine effort = 1.12 x levels in 2021).

Table 1. Multipliers for the key fishery groups controlled by the management procedure to achieve baseline levels from the levels estimated in 2021.

Gear group	Catch or effort?	Baseline period	1) Multiplier of 2021 to get to baseline levels (baseline/2021)
Pole and Line	Effort (days)	2001-04 avg	2.59 (+159%)
Tropical purse seine	Effort (days)	2012	1.12 (+12%)
Small scale fisheries (Region 5)	Catch	2016-18 avg	1.12 (+12%)

[1] Data for purse seine has been developed using Table 1 of WCPFC19-2022-IP04 to represent purse seine effort in days. Data for other fisheries references Table 2 of WCPFC19-2022-10, noting this has NOT been updated for the latest information available post SC18.

2. Outputs of the FFA-proposed management procedure 9 (HCR9)

Table 4 of WCPFC19-2022-11B shows the output scalar from a trial run of HCR9 in 2022, using data up to and including 2021. Note that HCR9 (as with all the candidate HCRs) uses a fixed estimation method to define stock status and hence management action. The output scalar from HCR9 was 1.08, implying fishing in the first 3 year management period could be increased by 8% above baseline levels in each of the fisheries controlled by the management procedure.

We stress that this does not represent the scalars that would result from a skipjack MP adopted at WCPFC19, since that would require the MP to be run in 2023 with an additional year of fishery and tagging data, and an extended time series of standardised abundance indices.

The level of fishing within the next 3 year management period defined by the management procedure relative to 2021 estimated fishing levels is calculated by multiplying the HCR9 output scalar of 1.08 with the multiplier needed to raise 2021 fishing levels to baseline levels. The multipliers off 2021 fishing levels are indicated in the final column of Table 2.

Table 2. Multipliers for the key fishery groups to achieve levels specified by the management procedure from fishing levels estimated in 2021.

Gear group	Catch or effort?	Baseline period	1) Multiplier of 2021 to get to baseline levels (baseline/2021)	2) Multiplier of 2021 levels if HCR9 applied (HCR9 output scalar x (baseline/2021))
Pole and Line	Effort (days)	2001-04 avg	2.59 (+159%)	2.8 (+180%)
Tropical purse seine	Effort (days)	2012	1.12 (+12%)	1.21 (+21%)
Small scale fisheries (Region 5)	Catch	2016-18 avg	1.12 (+12%)	1.21 (+21%)

Members should view these values as indicative only. We note that the major change from 2021 levels is driven by the selected fishery baselines, rather than the output of the management procedure.