

Coral Sea Zone Hook Trial TTRAG Scientists Meeting #2

FINAL MEETING RECORD

31 MAY 2023

Chair: Selina Stoute

Date: 31 May 2023

Format: Online 11am – 12pm

ATTENDEES:

Dr Ashley Williams, TTRAG Science Member

Dr Ian Knuckey, TTRAG Science Member

Dr Julian Pepperell, TTRAG Science/Recreational Fisheries Member

Kate Martin, TTRAG AFMA Member

Lachlan Farquhar, TTRAG Executive Officer, AFMA

Meeting objective

At the first meeting of the Coral Sea Zone Hook Trial TTRAG scientific member's (16 May 2023), the Scientific Members (Members) recommended no changes to the trial arrangements, noting that the arrangements for the trial were carefully designed and included safeguards to minimise impacts on marlin (catch based management triggers, together with an annual stakeholder review process). Rather members agreed that AFMA should contact trial vessels and permitted vessels to determine aspirational future fishing operations in the CSZ, along with any operational limitations. It was recommended that AFMA inform industry to set greater than 500 hooks west of 148°E during March to August period, and advise that if the sampling requirements were not met, the trial may be discontinued until such time that industry has the capacity to complete the sampling.

A second meeting of the Members was convened to further explore how (rather than what) an appropriate sampling design may be determined to quantify the impacts of increasing the CSZ hook limit on interactions with marlin species and threatened, endangered or protected species (TEPS) (in particular turtles).

Scientific member advice

1. Power analysis.

Members advised that a power analysis is typically undertaken prior to commencing a scientific trial to inform an appropriate sample design. The members noted that the trial results to date could be used to inform a power analysis however it may be more informative to statistically analyse the trial data and use that analysis to determine if any further sampling is necessary to detect any impacts.

Members advised that to undertake either of the above (a power analysis or statistical analysis of the data collected to date); a small tactical project would need to be resourced.

2. Pre-agreed settings for the desired level of change to be detected and the level of confidence sought around any estimates.

Members advised that an important part of determining a formal sampling design is having pre-agreed settings for the desired level of change to be detected and the level of confidence sought around any estimates. For example, pre-agreeing that the objective of the scientific trial is to detect a certain percentage change in interaction rates compared to the baseline period (e.g. 40% change) with certain level confidence (a typical standard is 80%). Members noted that this level of specificity is not yet agreed but would be needed to guide the design of a future sampling program.

3. Potential to reduce sampling needs.

Members noted that there may be options to reduce sampling by reducing the number of factors in the analysis. For example, by only comparing interaction rates between sets above and below 500 hooks. Such an approach would ignore any potential interaction relationship with increasing hook numbers.

4. Likely sampling requirements.

Based on experience, the patchiness of existing trial data and the wide array of factors that can influence fishing outcomes, Members were of the view that the level of sampling (sets) that would likely be required to detect a reasonable level of change in interaction rates with hook numbers, would far exceed current and historical effort in the CSZ. Meaning there is a high chance that it will not be possible to differentiate between noise in the data and a change in interaction rates with hook numbers in the near future.