

PAEWG-03-08

3rd Meeting of the Protected Areas and Ecosystems Working Group (PAEWG3)

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(online)

Towards a bottom fishing impact assessment
for trawl and longline gears in SIOFA

Relates to agenda item: 4

Working paper Info paper

soFish Consulting

Abstract

A bottom fishing impact assessment method was developed for trawl and longline gears in the SIOFA Area. A relative benthic status method was used, considering both the sensitivity of vulnerable marine ecosystems (VMEs) to the effects of bottom fishing, and their potential for recovery.

Information on fishing effort held by the SIOFA Secretariat was used for the analysis. Due to the spatial aggregation of a large proportion of these data, the assessment was carried out at a 1° resolution for trawl gear and 20' resolution for longline gear. The proportion of each cell within fishable depths, defined as shallower than 2000m depth, was accounted for. Most of the information relating to the footprint of individual hauls was missing (e.g. distance towed or longline length) and assumptions had to be made regarding these.

Preliminary results show that the area fished is expanding over time. Results also show that at the scale of the analysis, 76% of the SIOFA area shallower than 2000m has been impacted by trawl gear, with mean cumulative bottom impact per cell of 3.5% and maximum cumulative bottom impact per cell of 89.3%. Conversely, 38% of the SIOFA area shallower than 2000m has been impacted by longline gear, with mean cumulative bottom impact per cell of 0.6% and maximum cumulative bottom impact per cell of 0.8%. However, these results were highly sensitive to scale: reducing the cell size to 5' on a subset of the trawl effort reduced the fishing footprint by a factor of five whilst keeping the mean and maximum impact values relatively stable. The effect of other assumptions was also tested.

Recommendations *(proposals and working papers only)*

We recommend the following:

- That fine-scale location data be made available prior to updating this analysis.
 - That the bottom impact of trawl and longline gear be recalculated at fine scale with a range of parameters, combining trawl and longline impacts, for a range of VMEs.
 - That the actual population status of a range of VMEs be calculated once spatial distribution maps are available.
 - That all future fishing effort be recorded on a haul-by-haul basis, including start and end positions, distance trawled, trawl width and longline length.
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