



Meeting: Conservation Services Programme Technical Working Group
Date: 30 August 2024
Time: 9:00 am – 12.15 pm
Place: Microsoft Teams Meeting
Chair: Libby Rowley (Data Analyst Seabirds, Marine Bycatch and Threats team)

Attendees: Libby Rowley, Hollie McGovern, Karen Middlemiss, Igor Debski, Graeme Elliott, Kath Walker, Jeremy Feasey, Jody Weir (DOC), Peter Frost (Science Support Service), Sue Maturin (Forest and Bird), Charles Heaphy (Sealord), Rachel Hickcox, Darryl Mackenzie, (Proteus), Chris Gaskin (Northern NZ Seabird Trust), Shaun Lee (STET), Emma Jones, Jason Hamill, Mel Underwood (NIWA), Olivia Hamilton, Charity Puloka, Campbell Murray, David Foster, Heather Benko, William Gibson (FNZ) Rosa Edwards (SNZ), Jack Fenaughty (SRL for Sanford), Kalinka Rexer-Huber (Parker Conservation)

Apologies:

Presentations:

9:05 am	MIT2023-01 Fishhook and bait impact on seabird/turtle bycatch	Proteus
9:50 am	POP2023-02 Aerial survey of southern Buller's on the Solander Islands	Science Support Service
10:45 am	POP2022-08 Gibson's albatross research	DOC
11:30 am	POP2022-10 Antipodes Island seabird research	Parker Conservation

1. MIT2023-01 Fishhook and bait impact on seabird/turtle bycatch

Rachel Hickcox presented on the effects of hook and bait type on commercial longline fisheries bycatch.

Discussion:

CM Did you look at fishery reported data, as most of turtle captures are reported by fishers, and the longline reports list their bait composition. Potentially a large amount of information missing that may support more robust statistics.

RH Primarily used data from COD and PSC, but the main problem was the lack of comparable data between squid vs mackerel baited hooks, as more commonly used squid bait.

CM Missing the majority of turtle captures by only looking at observed captures. Might be useful to include a table or figure in the report that shows from fisher reported data what composition of bait was for those captures.

RH Will look into that before submitting final report.

JF Quite often a decrease in target catch means that more effort is required to maintain the target catch. Important to check whether this is the case when looking at references. Secondly, mixing of baits in demersal fishery while more attractive to target fish, is not necessarily good at staying on the hook. Lastly, were the data limitations on available data or confidentiality in data?

RH Bait and hook type were not recorded prior to 2017, and anything after 2017, all captures were typically caught with squid or circle hooks, so the limitation was comparable data between different hooks.

WG Regarding recommendation of blue dyed bait, this hasn't usually been supported in RFMO and WCPFC discussions and , curious as to why different conclusion was drawn on efficacy of this mitigation measure.

RH There is not enough information regarding dyed bait, which conclusive across turtles and seabirds. As it is currently being used as an option for fishers, we did not want to tell them not to use it as it is not effective. In that case we agree with current recommendations regarding blue dyed bait.

DG Confident there is a dataset on bait and hook type on surface gear dating back to late 80's; it may be in different tables in COD and probably rather confounded. Very hesitant about recommending using fish bait, especially in the South Island where there is not really a turtle issue but there are more seabirds. Among fishers it is common knowledge that fish bait, particularly on demersal gear, will catch more birds. Lastly, suggest you dig a bit deeper into the literature for different turtle species and modes of capture before making hook size recommendations.

RE Nervous that the recommendations are coming out of literature review and comparing international work to NZ fleets, and suggest the recommendations explicitly acknowledge these data gaps, and recommend trialing in NZ prior to saying whether it is appropriate or not. Key point is that these larger circle hooks look good on paper for reducing bycatch, they are often being compared to smaller or large J hooks, at least 50% of our fleets are already using 16/0 hooks. Need to be explicit that even if we were to move to larger hooks, we should not expect same size reductions in bycatch, because we are already halfway there.

2. POP2023-02 Aerial survey of southern Buller's on the Solander Islands

Peter Frost presented the results from the aerial survey of southern Buller's on the Solander Islands.

Discussion:

KRH This aerial survey is a snapshot estimate which won't necessarily address the differences in status of birds e.g. on sabbatical, non-breeders, widowed etc; we should be

relying on longer terms studies to tease out those types of questions.

PF Agree but we do need to think across these studies as well as within. I hypothesize that we may see peaks of non-breeding in years that may coincide with years with high sea surface temperatures in eastern-Pacific.

KRH Agreed, but potentially should distinguish these more one-off type efforts from the banding related studies, so then we can build population models that we can feedback into efforts like this one.

3. POP2022-08 Gibson's albatross research

Graeme Elliott presented the draft report for Gibson's albatross research on Adams Island.

Discussion:

JF Regarding the interaction with Taiwanese fishing vessels, the area those vessels are working in is governed by SPRFMO, and DOC will have representation at the upcoming scientific committee and commission meetings. Suggest that this evidence be brought to the attention of those that manage these fisheries.

OR DOC has already escalated this exact incident, and have some contacts within the Taiwanese fishing industry.

JF Think the information also needs to be made available to members of SPRFMO.

WG Point of clarification that Richard et al 2024 was not the publication that developed the model, it should be Richard 2021, which was an MPI project that turned that into a spatial model.

GE Will clarify that in the report.

WG Would appreciate if the language in the report regarding the model could be softened. Regarding detectability, would expect that female and male detectability would be the same.

GE If nesting then female and male detectability is approximately the same, however if they don't nest then detectability is vastly different. Did not want to be hypercritical of the model, it is a great tool we just could not use it due to the parameterization, but will get back to Yvan on that.

PF Intrigued by the pattern of bird distribution around the Chatham Rise, do you have any ideas what might be happening there?

GE That is reflective of the slope, rather than the shelf, as they don't go in over the continental shelf. Will send the relevant paper.

PF What then is attracting them there i.e. prey or ocean conditions?

KW Attracted to localized upwelling on the slopes. Gibson's forage mostly in Tasman Sea where there is a meeting of currents, and really focus on those upwellings along shelf edges.

GE Global fishing watch often shows vessels in the same place. Gibson's are also

boat followers.

PF Birds and fishers converge to compound the problem of their interaction elsewhere.

4. POP2022-10 Antipodes Island seabird research

Kalinka Rexer-Huber presented the draft report for Antipodes Island seabird research.

Discussion:

PF University of Cape Town study looked at wandering albatross on Marion Island, and used multistate mark-recapture model, and their argument that for biennial breeding birds, you cannot assume that resighting probabilities are equivalent throughout the whole population. A certain proportion of the population has a much lower resighting probability, and if it's not being taken into account, then may need to be thinking more about how to handle differences in resighting probabilities.

KRH All population models are all derived from multistate models where we take into account various parameters that are different for a breeding bird, sabbatical bird, non-breeding bird etc.

JF Have you considered using infrared cameras during periods of clag; are the birds big enough to produce an infrared signature?

KRH Previously explored that possibility when taking drone images of Salvin's albatross, penguins and fur seals on the Bounties, however it would not be possible to get any level of species identification through infrared, so decided not to pursue. Thermal cameras were used in the context of helicopters in Maukahuka feasibility work in the Auckland Islands and were able to detect pigs. The only limitation might be that the drones we are currently using would be too small to carry thermal cameras. Still managed to cover a large area in challenging conditions, so if we start a little earlier this season, there may be less clag.

RS Thermal images were detecting things as small as cats during Maukahuka feasibility work. Things like scrub etc cause detectability to decrease. Would also need to consider the impact of refraction of heat signatures associated with the moisture from clag.

KW Regarding detectability of females, on Antipodes because we did so much satellite tracking and the study area is reasonably small, can really see the females which provided real data as to whether they were there or not.

GE In the graph for Antipodean albatross, some years there are big seesaws in survivorship. Two possible explanations are that the deaths are episodic, or that when the birds aren't seen then the modelling we are using can't attribute their absence either to its death or its failure to be detected.

Any additional comments should be provided to csp@doc.govt.nz by 5pm, 13th September 2024. Close of Meeting @ 12:15 pm