



Meeting: Conservation Services Programme Technical Working Group

Date: Thursday 16 June 2022

Time: 9:30 am – 2:30 pm

Place: Microsoft Teams Meeting

Chair: Katie Clemens-Seely (Manager, Marine Species ph: 027 296 2231, kclemens@doc.govt.nz)

Attendance:

Graeme Taylor, Igor Debski , Samhita Bose, Lyndsey Holland, Karen Middlemiss, Katie Clemens-Seely, Claudia Mischler (DOC), Rosa Edwards (FINZ), Peter Frost (Science Support Service), Dave Goad (Vita Maris), Kalinka Rexer-Huber, Graham Parker (Parker Conservation), Keith Jacob (independent consultant), Nigel Hollands (independent consultant), Gaia Dell' Ariccia (Auckland Council), Graeme Elliott, Kath Walker (Albatross Research), Dan Burgen + someone else on call?, Simon Lamb (WMIL), Mike Bell (Toroa Consulting), Yvan Richard (Dragonfly) William Gibson (FNZ) Brian Kiddie

1. POP2021-04 Flesh footed shearwater monitoring (WMIL)

KRH- Can previous estimates be back-calculated using your 3D surface areas, to get a closer idea of trend over time? You mentioned it is harder to compare current estimate with Barry Baker and Susan Waugh estimates.

- DB- keen to recalculate and work on comparing those in the future.

PF- In the Lady Alice report, didn't see any measure of the surface areas – Mahoe die off

- DB- can look at capturing those in the report.

PF- What impact burrowing may be having in the substrate and water availability for trees. May be leading to changes in the colony features. Could be something to think about?

- DB- It is an interesting thought and unfortunately outside the scope, but it is something to consider.

PF- Is there a large amount of movement within the colonies?

- DB- Not much movement within the colonies.

PF- Do you have evidence of partner change?

- DB- Yes, there is definitely a switch over of partners.

GT- Wondering if the plastic is having an impact on survival and recruitment

- DB- It was definitely a large concern for us as well. It could be a significant risk. The current study design was not developed to draw conclusions about the impacts of plastics, but it would be good to look at this more closely in future studies.

GT- Was it the same on Lady Alice?

- Lady Alice- smaller number than what was shown in Ohinau
 - We didn't dissect any birds on Lady Alice though.
- KM- What are they foraging on?
- Foraging above and below the surface, predominately on squid.

2. POP2019-03 Antipodes Island seabirds (Albatross Research)

[white-chinned petrels]

PF- Those areas (Towards the start of the presentation) covered by ferns seem to be old landslip areas. Might that be correct (or not)?

- GE- Yes I think they are old slips

PF- burrows serving as quick flow areas for water. Could burrows be facilitating landslips?

- GE- Yes they could potentially.

GT- Birds may be abandoning burrows before the landslips due to heavy rain events and flooding.

- Would be an encouraging thought if some of them abandoned their burrows before the slips, but we did find several dead ones.

GT- Also need to be careful to compare occupancy rates. Need to check out the male and female differences.

GP- Question around playbacks and density of burrows?

- Certainly a possibility. Might not be a case of us priming them, they may be priming each other.
- If wanted to develop playback stuff further. Could compare the high and low altitudes for differences in density.

KRH- Very normal for burrowers to have such huge CIs. Doesn't reflect on your efforts.

[northern giant petrel]

GP- High proportion of Northern Giants were biennial breeders on Marianne and South Georgia. Sexually dimorphic so saw very different foraging behaviours. Increase in FUR may have benefited males and not females.

- KW- right about biennial nests. Notice from the map a lot of the colonies are in the NE corner close to the hut. Of interest to us, but not perhaps as useful at a large scale.

GT- Early count by Brian Bell, was that an original count or was there a correction factor? Be worthwhile to look at counts and trends based on actual birds versus correction factors.

- KW- the Cave point colony seems to be gone now. There seem to be lots of little lakes, and we think it is likely they moved rather than were lost.
- KW- Would be great to look at Brian's notebooks to identify number of birds per colony.
- MB- You are welcome to have a look in any of the resources in the notebooks.

3. (Independent Project?) Antipodean albatross, Antipodes Island 2022 field season update (Albatross Research)

Looking at the estimates of mortalities of females, and I wonder if that may impact on egg production.

GE- Certainly possible. We have had two transmitters back, weren't reported by fishers, we reached out to fisheries ; likely a large amount of birds are being killed by longliners. Need to nail down variation in years and could have to do with variations in fisheries interactions.

PF- Also wondering about changes in weather conditions and fishing intensity

ID- Fishing effort only occurs in a small overlap with their range.

WG- Are you working close with Yvan who is working on the risk assessment for AA. I hope we can get some good results from the multi-threat risk assessment that can lead to conservation actions.

- YR- Keen to speak with the team about my work on population modelling and at sea distribution of this species. Will see if I can tie Graeme and Kath's work into it.
- GE- Yvan you are welcome to any data from us.

DG- Digging down into individual tracks from birds. Do some birds have more of an affinity to vessels than others

- GE- Fishing watch is a bit too clunky, but I think there is some good data mining that could be done to look into that.
- ID- part of the work looking into overlap. Comes down to foraging patterns overlapping with fishing effort. Foraging patterns of birds greatly influences the rate of fishing interactions and incidents.
- ID- Just to note that DOC is also collaborating with research groups in Australia and UK on distribution modelling and fine scale fishing vessel overlap – we'll report progress when available.

GT- point around the survival data. Wonder if when food is poor, if birds are more inclined to follow fishing vessels. Have you looked into anything like that?

- Yes we have looked into some of those factors, but it doesn't quite fit, and there always seems to be a bit of a lag period.

KRH- what would better flight heights have been?

- Ant 20m high, we should have about a 22m swath width.
- Have to think about flight speeds. Suspect speeds would be better at 10km/h.

GP- Some of those Vanuatu vessels, are those flag states all from one nation?

- Vanuatu vessels are typically Taiwanese, but there are some Chinese ones as well.

4. (Independent Project) Gibson's and white capped albatross, Auckland Islands 2022 (Parker Conservation)

[white capped albatross]

WG- Point of clarification. Cryptic mortalities are only used for the bycatch estimates, not the risk assessment

PF- Would you not need to calculate correction factors for each year in which you carry out surveys? Not to do so means making the assumption that the correction factors remain more-or-less constant from one period to the next. Do you envision applying these correction factor practices in future years?

- GP- Yes you would ideally do it every year

GT- two types of correction factors. Are you hoping that the cameras you set up will have enough juice to get through the entire season.

- KRH- Yes should be able to get a full years' worth of data. Hoping to extend it to two-year deployments in the future.
- GT- Agree trying to get two full years makes sense due to biennial.

[Gibson's albatross]

DG- The graphs seem a bit noisy, have you tried overlaying the two graphs to see a comparison?

- KRH- We have tried that in the past. Oceanic cycles could also be playing into the jaggedness.

PF- Once again, we see that females have higher mortality than males, emphasising my earlier speculation that perhaps the cost of breeding, and the pressures that females are under to replenish depleted energy/nutrients, which may affect subsequent survival.

PF- Looking at the estimates of survival for breeding and non-breeding females, maybe my speculation is off the mark, unless non-breeding females are non-breeders because they are already under nutritional stress.

- KM- I agree, nutrition likely plays a big role.

ID- Just to note that DOC is also collaborating with research groups in Australia and UK on distribution modelling and fine scale fishing vessel overlap – we'll report progress when available

KW- Thank you for your hard work and ensuring the work went ahead so there wasn't a year gap in the dataset which we know can make things difficult.

5. BCBC2020-11b Bottom longline underwater line setting development (Vita Maris) [Underwater setter]

No questions

[Line depressor]

DG- Nigel, do you want to give a quick update?

- NH- Firstly big thanks to DOC and Dave for the support through the trials. We are testing it against best practice on bottom longliners. Focus on the first couple meters from the surface, and reducing the amount of bait visible. Envisage this moving towards hydraulic. Potential to see if we can go a bit deeper than 1m. Can't do too much more because of issues with line tension etc. but worth looking into.

DG- Would also like to note that it is way easier to protect a small area behind a boat. Tori lines are not 100% effective.

PF- As an alternative to a line depressor, what about sending the line directly through a pipe?

- DG- I haven't tried it. I would suspect it would be more susceptible to bait loss. But I wouldn't rule it out.
- BK- The Southern Cross did try setting through a tube.

RE- While your using different spacing options, how easy would it be to transfer something like this to gear setups different to Brian's?

- DG- Part one of the question is the different gear set ups and we can trial that on the same boat and I am fairly confident with that. The other part of the question is different vessels. For the underwater setter you need a winch and for the line depressor you need a large enough attachment point. There is the potential to transfer it to other boats, but I think there are a few more things to iron out before trying to move it to other vessels.

Close of Meeting @ 2:38