



Meeting: Conservation Services Programme Technical Working Group

Date: 5 June 2013

Time: 9.15 am – 4:00 pm

Place: Terrace Conference Centre, St John's House, 114 The Terrace, Wellington.

Chair: Ian Angus (ph: 04-471-3081; email: iangus@doc.govt.nz): CSP TWG

Attendance: Rob Mattlin (independent), Johanna Pierre, Yvan Richard, Ed Abraham (Dragonfly), David Middleton (SNZ), Richard Wells (DWG), Kath Walker, Graeme Elliott (Albatross Research), Barry Baker (Latitude 42), Karen Baird (Forest & Bird), Janice Molloy (SSST), Igor Debski, Laura Boren, Graeme Taylor (DOC), Martin Cryer, Michelle Beritzhoff (MPI)

Apologies: Susan Waugh (TePapa), Barry Weeber (ECO)

Presentations:

- 1 **POP2012-01. New Zealand sea lions – Auckland Islands population study. Draft aerial survey results.** **Barry Baker (Latitude 42)**

DM - pups recorded on rock, sward?

BB - mainly on beach at time of survey, could still be counted when in the sward.

DM - are ground counts disaggregated between beach/sward etc.

BB - haven't been, but could be. Ground/aerial counts are very similar so not an issue if counted at this time of year.

GT - does light/photographic exposure have a large effect on useability of photos?

BB - no, can easily be fixed up in photoshop

RW - for the purposes of calibration need to consider differences in the way dead pups were counted.

DM - any feel for the covariates that influences how different ground and aerial estimates, e.g. degree of clumping - has this been assessed?

BB - hard to determine, pups seemed more spread out, with a few more in sward. The biggest difference occurred in 2012 on a day that produced more blurred photos, perhaps due to light conditions on that day. In general the precision of these aerial counts is very high.

DM - presume you have ability to geo-reference pups?

BB - hadn't planned to do that - could use features on the beach to aid geo-referencing. Existing photos were not taken with geo-referencing in mind.

DM - if that was done, some statistics could be calculated.

BB – but is probably not worth it with such small error.

DM – could still be useful in future to track spatial distribution of pups.

BB – in future the methodology could be tweaked to enable geo-referencing.

KW – for such a small population obtaining very accurate estimates is actually important.

GE – using the maximum count may be inconsistent – perhaps a mean is more representative?

DM – depends on the error model used – need to understand sources of error.

MC – having a known consistent bias may be more useful in a monitoring tool.

It was agreed that more discussion on this topic was necessary – will be included in research planning meeting.

RW – could use these high quality photos to read brands to allow resights.

ID – would photos also be suitable to quantify the extent of shark scars?

BB – yes.

DM – are dead pups marked separately on photos?

BB – no.

There was discussion that variation in early pup mortality would be an important factor determining how good a measure a one off photographic survey would be of total pup production.

2 POP2012-05. White-capped albatross – Auckland Islands Barry Baker (Latitude population study. Draft aerial count results. 42)

RW – what was the earlier count by Chris Robertson?

BB – approx 80 thousand pairs, though this was a very rough estimate.

KW – earlier aerial work by KW/GE estimated approximately 120 thousand pairs.

DM – same counter used over years? – worth recording.

BB – yes, will include in report

DM – should investigate the possibility of counter drift.

BB – at each new site counted, multiple observers were used, and no problems found, though can do some recounts for the most recent year.

KB – how sure can you be that birds are incubating?

BB – though never certain, birds are recorded in multiple states – the posture of an incubating bird is distinctive, unknown status is recorded. Earlier ground truthing found a high level of accuracy.

KB – the proportions could change over time, so may require more ground truthing.

BB – timing is particularly important.

There was discussion on timing of counts – all counts were complete by about 3pm – still well before dusk.

GE – Chris Robertson made detailed observations on movement of birds during the day – may be worth re-assessing.

BB – report makes mention of work completed by David Thompson as part of earlier work in this series of projects.

GT – in petrels the variation of floats highly influenced by weather, wind etc.

BB – counting in the middle of the day and taking detailed photos to estimate the level of floaters is used to address such possible issues.

EA – ideally colony could be stratified to better estimate total number of floaters.

BB - ideally would like some marked plots to compare levels over time, currently detailed photos are taken randomly.

There was discussion on the difference between Dec and Jan timing. BB noted that at least one year of two counts should be made. There are some international data on decay. Review of this may be a first action to describe the relationship. Either aerial or ground work could be used to investigate this.

EA – timing is just one area of inter-annual variability – long data sets are need to detect real trends

The importance of the 2006-07 count in determining a trend was highlighted. There was disagreement over the extent to which bias due to time of day may influence the 2006 count, as estimated by Francis (2012)¹.

EA – a simple TRIM analysis is not well suited to such a data set with high variability.

DM – agree that simple linear trend is not appropriate.

3 POP2011-09. Northern royal albatross – analysis of population data from Taiaroa Head. Draft results.

**Yvan Richard
(Dragonfly Ltd)**

DM – why was data only from 1989 used?

ID – this was the data collected and held by DOC and made available to the project.

BB – why were immigrants left out?

YR – Some were just prospecting, did not remain resident, and age was important to the model. Could introduce a lot heterogeneity.

DM – could data collection protocols have changed in 2001 to produce the more varied pattern?

YR – no, we are very confident that the data represent an accurate resight record.

GT – better management of the colony would have influenced recruitment.

DM – how were cut-off points chosen for age of first return and first breeding?

YR – informed by strong data.

DM – no estimates of survival prior to 1989 for those banded previously?

¹ Francis, R.I.C.C. 2012: Fisheries Risks to the Population Viability of White-capped Albatross. New Zealand Aquatic Environment and Biodiversity Report No. 104. Ministry for Primary Industries, Wellington

YR – no.

RW – how many Chatham birds have bred at Tairoa?

YR – about 10.

DM – would be useful to know more about the effect of management to know to what extent this may influence estimates of breeding birds to total population size?

DM – as PBR estimates have corrections, correcting input data should be considered carefully.

YR – major correction in PBR calculation was to address bias in estimate of maximum growth rate.

There was discussion on where immigration/emigration may impact on estimates. Further consideration of this will be given in finalisation of the report.

BB – is the group happy that mortality rate in this population is representative for the species in general?

ID – land-based management was unlikely to have much influence on this.

There was some discussion that increasing the breeding success of adults may

4 POP2012-07. Gibson's albatross – population study. Draft results. Kath Walker and Graeme Elliott (Albatross Research)

RW – what proportion of population do census blocks cover?

KW – about 10 %

MC – how much of the larger foraging distribution is due to lower accuracy of geologgers?

GE – hard to determine, but changes like increased foraging in Great Australian Bight likely a real change.

DM – how much variability is between individuals?

GE – could be looked at in more detail.

RW – is reduced reproduction due to reduced egg laying, or survival of chick?

GE – both, as illustrated in Chris Francis modelling project.

RW – how difference in foraging is there between chick rearing and other times?

GE – in chick rearing mainly in core of range, out to mid-Tasman.

EA – mid-Tasman one region of South Pacific most effected by changes in sea surface temperature, with changes in subtropical front etc.

DM – estimates of survival apparent only?

GE – yes, have looked for emigration to surrounding areas, but very low.

DM – is study area modelled as a closed population?

GE – yes, for modelling adults it won't make much difference.

There were some queries on the details of methods used to produce estimates reported.

JM – have you estimated survival by age?

GE – oldest banded birds only just over 20.

KB – have there been band records from bycatch, and from NZ or international?

GE – there have been low numbers of returns from both NZ and international fisheries.

5 MIT2011-02. Scampi trawl – seabird mitigation. Draft results.

**Johanna Pierre
(Dragonfly Ltd)**

DM – in step analysis were interactions looked for where results were counter intuitive?
Spatial gear use patterns may confound findings.

JP – did attempt to, but there was not enough data.

DM – some of the other fisheries characterisation analyses could be considered.

RW – need to keep consideration of net captures and warp strikes separate when discussing risk factors and mitigation actions.

DM – if the net is influencing fish bycatch it must be changing the form at fishing depth.

RW – is probably acting to achieve the net form desired (low and horizontal).

RW – DWG will utilise restrictors on all vessels, can be monitored as part of a VMP.

JM – do skippers consider it is working in regards seabird bycatch?

JP/RW – comments from fishermen indicate this.

DM – any data from the single experimental trip?

JP – very limited.

RW – captures are mainly driven by irregular multiple capture events.

DM – so may be assessed well by full use and comparing to pre-use period, experiment may not be required.

There was discussion on potential applicability to other fisheries. If headline not directly over ground rope it would be more difficult to deploy.

6 MIT2011-04. Inshore bottom longline mitigation – development of Kellian device. Draft results.

Barry Baker (Latitude 42)

DM/MC – is back roller necessary?

BB – yes, to maintain line stability especially when weights pass through.

RW – balance as well as total weight important to handling.

BB – new prototype much better balanced.

RW – needs safety assessment as well.

JM/ID – would longer leader on floats help avoid foul-ups

BB – tested longer leaders up to 3m but still had occasional problems.

Other business

RW – requested further discussion on comparison of NZSL ground and aerial survey methods

ID – this will best be taken forward in a meeting to discuss methods for next season's sea lion work, which we hope to schedule in July

Report tabled (no presentation):

POP2012-01. New Zealand sea lions – Auckland Islands population study. Ground count results.

Simon Childerhouse
(BPM)

IA requested any further written feedback on any of the presentations or reports by 5 pm 19 June 2013.

Meeting closed.