Department of Conservation
Te Papa Atawbai

Meeting: **Conservation Services Programme Technical Working Group**

Date: 13 November 2012
Time: 9.00 am – 3:15 pm
Place: Level 4 Conference Room, Conservation House, 18-32 Manners St, Wellington.
Chair: Mike Davies (ph: 04-471-3081; email: iangus@doc.govt.nz)
Attendees: Mike Davies, Louise Chilvers, Kris Ramm, Igor Debski, Hilary Aikman (DOC), Barry Baker (Latitude 42), Finlay Thompson, Richard Mansfield (Dragonfly), Simon Childerhouse (BPM), Jim Roberts, David Thompson, Ian Doonan, Charlie Edwards (NIWA), Susan Waugh, Sarah Jamieson (TePapa), David Middleton (Seafood New Zealand), Karen Baird (Forest and Bird), Rohan Currey, Jeremy Helsen, Vicky Reeve, Ben Sharp, Laura Mitchell (MPI), Richard Wells (DWG), Milena Palka (WWF), Barry Weeber (ECO), Rob Mattlin (MWR), Oliver Wilson (Independent Marine Consultant), Laws Lawson (Te Ohu Kaimoana), Martin Cawthorn (C&A),
Apologies: Katrina Subedar (Forest & Bird)

1 POP2012-01 New Zealand sea lions – Auckland Islands population study. Proposed ground survey methodology for 2012/13 field season. — Simon Childerhouse (Blue Planet Marine)

DM – Enderby count timed as per previous years?
SC – yes, aerial work is aligned to match previous ground counts.
DM – field season also significantly shorter?
SC – yes.
IDebski clarified that the 3-5 week period was as per Proteus report as appended to the Draft CSP Annual Plan 2012/13.
RM – how will Figure of 8 be reached?
SC – by vessel charter, en route to Enderby.
DM noted that consistency with previous work is vital, particularly in the detail of the work, and the recording protocols for resighting should be documented in detail.
IDebski noted that it is intended that LC will participate on helicopter trip to provide advice on maximising comparability.
DM requested that protocols are in place to achieve random sampling.
SC – could use aerial photos to describe the spread of cap deployment
DM – do you aim to mark every third pup?
SC – yes, will describe in written methods.
RC noted heavy logistical reliance on accessing sites at front end of trip.
SC – yes, but there is a spare day for accessing Figure of 8.
IDebski clarified that to achieve cost-effectiveness in logistics (i.e. minimise vessel charters) this was necessary.

2 POP2012-01 New Zealand sea lions – Auckland Islands population study. Proposed aerial survey methodology for 2012/13 field season — **Barry Baker (Latitude 42)**

DM – will you count other age classes other than pups?
BB – no, it is possible, but out of scope of project as commissioned.
DM – do you record branded animals?
BB – could be possible if animal is correctly positioned, but would add time to analysis.
IDoonan – do you use stereo cameras?
BB – no, but use two photographers to allow for camera malfunction.
RC – could the temporal occurrence of pup piles be investigated by data collected by ground crews?
SC/MC/LC – no particular historic data collected and available.
DM – if possible SC could record daily index of clumpiness and compare to weather records.
SC – pup piles would be better described by aerial methods.
KB – time of day could be a factor.
BB – time of day controlled to the extent possible to occur over the warmest part of day.
MC – Topo photos taken by Gibson using fixed wing photo may be available to look at historical abundance.
SC as for advice on whether dead pups should be left for the aerial survey at Enderby?
BB – no, following previous protocol is more important.
ID clarified that we want to know the limitations of each method, so aerial results that recreate those obtained in the absence of ground work would be important in allowing future decision making on the methods deployed.
SC/LC concluded that dead pups should be left in place to allow this.
HA suggested dead pups could be marked rather than removed.
LC explained how difficult for researcher it is to mark dead pups, and how disturbing this would be for the sea lions in the harem
SC asked the group for comments regarding the addition of an extra day on Dundas prior to M-R to allow for more tagging to be achieved.
BB noted it should not interfere with aerial survey.
ID – would tagging interfere with M-R experiment? As tagging on previous trips was not prior to M-R.
LC/SC – no, very unlikely to influence behaviour.
SC concluded he will do first day of tagging if aerial surveys are completed as scheduled.
DM noted that Auckland Island sites won't be checked as part of ground survey.
BB – yes, can incorporate a brief survey of adjacent coastline into aerial work.

3 POP2011-02 Flesh-footed shearwater – population study. Draft report for 2011/12 field season and update on methodology for 2012/13. — **Susan Waugh (Te Papa)**

RW – which islands are predator free?
SW – all.
BB – occupancy rates appear very low, indicative of poor season?
SW – visits were mainly later, will be investigated in more detail.
DM – what do you know about changes in occupancy rate with time?
SW – need consistent timing between years, was a late start last season, but this season will be at peak time.
BB – good data available on short-tailed shearwaters, can show years of mass failure.

SW noted she was aware that new research soon to be published on short-tailed, will be informative to this area of work.
DM – queried methods for calculating confidence intervals, e.g. Table 1, negative envelope?
SW – will check, may be related to that reported by others.
DT – what stable isotope analysis is being conducted?
SW noted this work is in addition to DOC commissioned project, to provide wider ecological understanding of the species.
JR – what would be potential influence of La Nina?
SW – could be reduced food supply leading to low breeding success?
RW – any permits for mutton birding on the islands?
SW – not aware of permits at Titi Island, but would need to check.
FT – were findings from Rena necropsies in line with recreational fishing report by Ed Abraham?
SW – Rena work was a Massey project, so couldn't comment on full findings.
KB – could burrow shape be influenced by grey-faced usage?
SW – potentially, would need more detailed investigation.

4 POP2011-01 New Zealand sea lions – Auckland Islands population study. Draft sea lion database. — Finlay Thompson (Dragonfly)

MC – how are re-tagged animals dealt with?
FT – follows linking made in DOC spreadsheet, animal number is based on first tag, is noted if retagged.
BB – will aerial photo data be incorporated?
FT/ID – intention is to incorporate as much relevant data as possible in the future.
DM – and daily counts?
FT – yes, and also M-R, but still tracking down original data from Ian Wilkinson.
LC noted that there are some sightings related to tags not the actual animal.
FT – can flag, and/or remove sea lion identifier from these records.
ID clarified this was a first cut of the database, details will be sorted, comments welcome on wider technical issues.
RC – can include flag for records with issues, so they can be excluded from a data dump.
FT noted that the onus needs to be on user to document methods etc that they use.
SC – is ancillary data available?
FT – yes, in comments, but hard to extract as less standardised.

5 POP2012-05 White-capped albatross – population estimate (Auckland Islands). Proposed methodology. — Barry Baker (Latitude 42)

BW – can you estimate the probability that the data indicates a decline?
BB – ACAP assessment would indicate a decline, but past experience leads to caution in interpretation. Following this project a better assessment should be possible.
BW – have you counted empty nests?
BB – yes, ratio of empty nests typical of a species such as this which is more biennial than annual.
DT noted that nest pedestals can persist through multiple years, and non-breeding birds may be present.
BB noted that previous reports detail the ratio of empty nests, but there hasn't been much directional change over time.
KB – will non-breeders at pedestal influence the estimate of breeding birds?

BB – photographs are detailed enough to show that birds are sitting, and ground truthing was conducted. Not likely to be much of an influence.
SC – what will change in timing likely be, and can this be investigated?
BB – there's a possibility that if photos can be obtained in December, these can be compared to aerial survey in January. Ideally, repeat counts should be made, but would be expensive to commission an additional flight to the islands.
There was some general discussion that highlighted the need to address what the influence the change of timing will have on population estimates.
DT noted that the difference between years seen in earlier series is likely to be more than a difference caused due to Dec-Jan difference.
IDebski requested BB's report be explicit in recommendations around comparability to consider in longer term research planning.
BW –any demographic analysis planned?
BB – out of scope for this project but DT has done some work under a previous CSP project.
DT – limited data collected, which has been modelled by NIWA under contract to MPI.
BS – is the Dec-Jan difference due to underlying biological reasons, or is it just noise?
BB/DT – Jan would be consistently lower due to failures, Dec timing is optimal for maximum estimate.

6 Variation in abundance of NZ sea lion prey species over the Campbell Plateau: evidence from commercial fishery and survey catch and effort data **Jim Roberts (NIWA)**

Note: this is a NIWA project seeking feedback from the TWG

MD/IDebski clarified that this project was a NIWA funded project, but closely related to the research interests of CSP. At the request of NIWA the chair agreed to provide access to the CSP TWG to seek feedback from the group, to aid the future development of the work.
SC – why only a subset of tows used?
JR – to control for variability in shallow or particularly deep trawls.
FT – why not use SQU6T area?
JR – focussing on hoki, could rerun with 6T.
BW – why using squares rather than depth contours?
JR noted the data was already subsetted to 100-300m depth
BW – how much data is not being used?
JR – most observer data being used.
RW – need to be careful on what is driving assessment in relation to area/depth/sea lion foraging.
RC noted that an increase in tow duration in recent years at 6T could be truncating recent data.
JR – agree, but at least partially offset by using tow length as explanatory variable.
SC – catch in BAR could be related to variation in SQU catch.
JR – all tows with SQU target included, but yes, could be some change in fishing behaviour.
DM noted the GAM is actually of catch, not CPUE.
JR – yes.
BW – is increase in SQU CPUE related to increased tow length?
JR – tow length was an explanatory variable.
BW – could change in BAR catch be related to fishing effort in relation to TACC being reached in recent years?
JR – this analysis uses observer data only.
BB – is there a difference in fishing methods between Auckland and Snares?
RW – same fleet, same gear used in both areas, but Snare targeting is more cosmopolitan.
DM – how does within year temporal variation relate to sea lion information?

JR – sea lion data concentrated in lactating period, Chris Lalas has found potential change in foraging strategy during the year.
SC – what about change in observer coverage over time?
JR – has been tabulated, but quite consistent since mid-nineties.
RW/BW expressed concern regarding the reliability of reporting going back to 80s.
RW – SBW info from Campbell Plateau should be highly relevant.

- hard to obtain information from territorial waters, may have been some drop camera work etc.

DM noted that there is a DOC database on marine reserve monitoring.
BW – what about habitat quality, or using trawl footprint, as on the face of it, there is increased stock levels of several species over the period of decline but a decrease in sea lions.
RC – what is the mechanism?
BW – habitat related to prey, and prey quality, would be mainly related to non-QMS species.
BS – is the main missing information a seasonal diet study?
JR – yes, but also change over time – there are some scat samples going back over time that could be analysed.
SC – Chris Lalas has been collecting some winter samples.
JR/LC – yes, but biased to males
LC noted that fatty acid analysis by Laureline Meynier is more indicative of year round diet.

7 MIT2012-03 Review of mitigation techniques in setnet fisheries. Proposed methodology. — Simon Childerhouse (Blue Planet Marine)

KB noted that Birdlife is completing a gill net mitigation review.
KB – will temporal/spatial closures be considered?
SC – will consider against scope of project, but can do.
BS – what range of measures are there other than pingers?
SC – a range of gear setting variables and operational fishing factors have been cited.
RC highlighted the usefulness of characterising fisheries where techniques are used.
RC – does setnet include ring-net?
SC – will keep scope as broad as possible, particularly as overseas fisheries may vary from NZ fisheries.

8 MIT2012-01, -02, -04. Seabird mitigation projects. Update on proposed methodology. — Johanna Pierre (Dragonfly)

MD deferred this presentation to the next TWG meeting on 27 November 2012.

MD notified the group that an updated Terms of Reference was in preparation and is scheduled to be discussed at the next meeting.

MD thanked participants for their input. Presentations will be made available via the CSP website, and further written comments will be accepted up to 9:00 am 30 November 2012.