



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

**Date:** 28 May 2012

**Time:** 9.00 am – 4:15 pm

**Place:** Level 4 Conference Room, Conservation House, 18-32 Manners St, Wellington.

**Chair:** Russell Harding (ph: 04-471-3204; email: rharding@doc.govt.nz)

**Attendees:** Russell Harding, Ian Angus, Louise Chilvers, Kris Ramm, Igor Debski, Hilary Aikman (DOC), Barry Baker (Latitude 42), Finlay Thompson (Dragonfly), Johanna Pierre (JPEC), Mike Bell (WMIL), Ursula Ellenberg (Eudytes Ecoconsulting), Greg Lydon, Tom Clark, David Middleton (SeaFIC), Paul Breen (Breen Consulting for SeaFIC and NZRLIC), Karen Baird (Forest and Bird), Rohan Currey, Jeremy Helsen, Vicky Reeve, Ben Sharp (MPI), Mike Legge (Yellow-eyed Penguin Trust), Richard Wells (DWG), Milena Polka (WWF), Bruce Roberston (Otago University), Jim Roberts (NIWA), Barry Weeber (ECO)

**Apologies:** Dave McFarlane (Yellow-eyed Penguin Trust), Katrina Subedar (Forest & Bird), Rebecca Bird (WWF)

RH introduced IA as future chair of group.

IA provided a short update on organisational changes at DOC and described the intention to seek a collaborative process to develop the strategic direction of CSP. Further details will be provided after 1 July 2012.

DMid queried how comments made in relation to the proposed methodology for sea lion counts as part of POP2011-01 were dealt with.

RH/ID will follow up.

**1 POP2011-01. New Zealand sea lions – Auckland Islands Louise Chilvers (DOC) population study. 2011/12 field season report.**

DM noted that daily counts from SB not included

LC will include in final report

DM were recapture counts as part of pup production estimates completed on the same day as marking?

LC no, next day for both SB and Dundas

MP were recapture counts made on multiple days

LC no

DM were recapture counts at Dundas done at multiple times following marking?

LC no

KB was there any evidence that it would be important?

BW noted SB and Dundas are very different sites so tests at one site would not necessarily apply to the other

There was some discussion on influence of mixing in M-R experiments

RW were any 1, 2 or 3 year olds resighted

LC yes

- RW will they be in database?  
 LC yes  
 PB In reference to table 1 and 2 standard errors: SeaFIC previously pointed out that s.e. of live pups does not carry over to total as dead pups will have uncertainty, so misleading, and should be clarified in report  
 PB no details of database maintenance  
 ID noted this was contracted to Dragonfly and will be discussed in the later presentation  
 PB noted that in relation to some of the discussion items in relation to last year's report consensus was not reached, and according to RH statement in previous minutes this should be explicitly stated, but this was not the case in the updated report  
 ID noted that in fact the updated report includes Appendix 4 which provides a summary of how each significant area of feedback was, and was therefore explicitly clear on where consensus was not reached  
 PB noted concern that the CSP TWG process was not equivalent to AEWG where lack of consensus is explicitly noted in the plenary document

**2 Aerial survey of New Zealand sea lions at the Auckland Islands. Report on trial of aerial methodology for estimating pup production. A joint DOC/MPI/DWG project.** Barry Baker (Latitude 42)

RH intro on background

- MP were dead pups counts?  
 BB tried to count, but could not tell life status from photos, some would have been counted, but not at SB as they were removed daily by ground team  
 PB suggested it would be better to compare aerial counts to live component of ground M-R  
 BB yes, probably for SB  
 BW were aerial count timings consistent?  
 BB yes, generally, all between 0900-1500  
 BW does light condition and time of day effect results  
 BB yes, no pictures in low cloud or rain, so generally consistent  
 VR was there a trigger for looking at more detailed images?  
 BB trigger was post-hoc, to investigate differences, use of 500mm was specifically for puppy piles as this was an issue identified in earlier discussions  
 DM could compare number of puppy piles between days  
 BB did do that – results presented in report  
 BW you could use a grid and choose random samples to investigate difference  
 BB no need for sub-sampling in a small colony of this size  
 KB was weather particularly different on 14<sup>th</sup>?  
 BB/LC not extreme, was strong wind – differences in puppy piles usually related to more extreme weather (rain, very cold etc)  
 PB SB 11 Jan count, higher than ground count, can aerial count anything that is not a pup?  
 BB yes, but unlikely at that site as pictures very clear, higher than ground counts, as you get a better angle

- PB most interestingly two counts are higher than live M-R count, are they indicative that M-R resulted in under-estimate?, if so this may indicate M-R error estimates may need to be bigger.
- KB can it be done with no people on ground to save money (particularly with respect to if there was high pup mortality), and can stereotopic photos be made of puppy piles
- BB hadn't thought of using stereotopic techniques, but it was only an issue on one day
- BB noted that aerial methods collect different types of data to ground counts e.g. no resights, but promising for pup production estimate
- LC Dundas aerial count shows dead pups not an issue, but if there was high pup mortality early bodies may have been scavenged
- BB noted that no count will be perfect and are only estimates
- KB has use of drones by ground crews been considered?
- LC weather likely to be an issue
- BB noted that having time on the ground at the islands during the aerial survey aided getting photos in the best conditions
- DM requested three considerations for the final report:
1. Report how many dead animals were picked up at SB to have accurate comparison
  2. Illustrate difference in spacing, preferably by measuring, or by grid (BB – grid would be relative to helicopter height etc so is difficult – in future could put out geomarkers on ground, or use beach features), at least specify number of piles that caused issue
  3. Provide better description of aerial extent of census – just sand area? (BB – will show, covered all of Dundas and more than just beach at SB) – include a map for SB showing extent of photos

**3 POP2011-01. New Zealand sea lions – Auckland Islands population study. Sea lion database update – draft schema. Finlay Thompson (Dragonfly)**

- BW is the extent of data included wider than Auckland Islands?
- FT yes, includes pups tagged at Campbell, and wider ranging resightings  
There was some discussion on confidence level attached to resightings – perhaps there could be more than current two levels
- DM does it include Otago tagged animals
- ID noted that currently the database contains core DOC data, and that other parties were involved in Otago, but the database is being designed so that it can easily accommodate additional data if desired  
There was discussion on whether tags should be key identifying feature, and where to record the number of tags
- KB will each animal have a separate identifier?
- FT tag table already has a unique id (as does sea lion table)
- PB what data grooming is applied?
- FT there is a separate table that records changes to allow track back to original spreadsheet
- PB but there has already been some grooming
- FT/LC yes, at data entry, as described in field report

- PB do original notebooks exist?  
 LC yes  
 PB suggested DOC should chase up Ian Wilkinson for original raw data related to earlier pup production estimates  
 GL in future will excel spreadsheets be continued to be used?  
 ID/FT it is envisaged that a workable data entry tool will be developed for entry straight into the database  
 DM requested that individual counters should be recorded  
 RC yes, at least need a unique identifier for each person  
 BB noted that names should be recorded somewhere as well  
 FT noted that the database could record extra details like weather conditions etc  
 DW when will this be finished?  
 FT aiming for July, definitely in time for next field season

**4 MIT2011-04 Inshore bottom longline – novel methods to reduce availability of hooks to seabirds. Project update. Barry Baker (Latitude 42)**

- There was some initial discussion on the definition of inshore BLL. BB highlighted that the device tested, the Kellian device, had good potential for application outside of NZ inshore BLL fisheries, the focus of this project.
- GL would fishermen require different weighting regimes? – noting that fishermen may not wish to change gear  
 BB may require different types of weights, but design would maximise the utility of the device to various fishing operations  
 GL noted it would be best if it could handle different types of gear  
 BB yes, are looking to design it so that it can handle different types of gear  
 GL what would be an indicator of success  
 BB 10,000 hooks with no foul ups is an initial target – focus of the project is on the mechanism now, not on seabird bycatch, confident a working device will reduce bycatch  
 FT what is the target price of device?  
 BB approx \$1500  
 KB are there any interested skippers for trials?  
 BB plans are not advanced, but some leads  
 GL queried the principles behind the mitigation - reduce visual clues, or reduced hook availability?  
 There was some discussion that it would both cause hooks to immediately sink below surface, and by doing so remove visual clues etc

**5 MIT2011-05. Protected species bycatch newsletter. Johanna Pierre (JPEC) Project evaluation report.**

- BW/BB.suggested a different name may be best option to overcome confusion with other web sites  
 TC could reduce costs by combining with other outputs e.g. seafood magazine  
 MP suggested further evaluation after changes to collect more detailed information

- BB noted it would be a shame if not continued, as such communication was an essential component of bycatch mitigation
- KB agreed, and noted that the newsletter should build on suggestions from the evaluation
- PB noted 31 is a low response rate, large population not engaging with evaluation, can you target those?
- JP had thought of calling, but time consuming, in future could send out information, then follow up with phone calls
- BB noted that normally you expect a 10% response, and phone interviews can change the type of feedback you get
- ML noted that questions that require written response often puts people off
- KB suggested in future there should be follow up on non-readers as to why they don't read it
- MP suggested offering an incentive e.g. draw for prize, to increase return rate

**6 INT2010-02. Identification of seabirds captured in New Zealand fisheries. Six monthly report for 1 July 2011 – 31 Dec 2011. Mike Bell (WMIL)**

- BB queried whether warp strike birds were recovered from the sea?
- KR no, either caught on sprags or trawl door, recovered on deck
- KB is there a photo protocol?
- KR yes, also training provided, and continued effort to educate existing observers
- KB are observers assessed on photo quality?, noting they should be
- KR currently photos are not specifically included in assessment, but could be
- UE noted the high male ratio – is this unusual?
- MB ratios are often skewed, hard to comment on this sample alone
- KB noted that Japanese photo protocols worked well
- KR will consider these for application in NZ
- BW suggested it would be useful to include fishery targets in the report to better identify fisheries involved

**7 POP2011-08. Yellow-eyed penguin – review of population information. Draft results. Ursula Ellenberg (Eudyptes Ecoconsulting)**

- PB why should Auckland/Campbell Island population be considered separate?
- UE because of genetic studies, detailed in report
- GL noted there was no setnet effort around the sub-Antarctic islands
- There was some discussion on targets of setnet effort in Stewart Island area
- BW noted that recent closures in relation to Hector's dolphin would overlap yellow-eyed penguin distribution – would be worth considering in report
- UE agreed these closures help, but penguins foraging up to 50km to sea
- KB noted that this project again brings up EM as a tool for monitoring inshore fisheries
- GL noted that we know it works, but there are privacy issues etc
- KB noted that if systems only film fishing, this shouldn't be an issue

- There was some discussion on technical pros and cons of EM for setnet, particularly in relation to previous trials in New Zealand.
- PB suggested that instead of an observer programme you could you collect interaction data through interviews with fishermen
- UE noted that experience has shown difficulties
- PB noted that the rock lobster fishery is managed on self-reporting
- BB suggested that the rock lobster fishing sector may be more responsible, related to incentives
- BW noted that incentives for reporting fish catch are different to those from reporting bycatch
- KB noted that as the main mitigation is fishery closure there is actually a negative incentive for reporting
- There was some discussion of possible other mitigation methods used for other types of bycatch in other parts of the world, e.g. illumination, coloured mesh etc
- KB what is the annual decline in Otago population?
- UE hard to measure due to inter-annual variation

**8 MCSPOP2010-02. Investigation of poorly known protected species: census of Chatham Island and Pitt Island shags 2011.** **Igor Debski (DOC)**  
**Mike Bell (WMIL)**

- GL has any work by researchers on other islands in the Chatham group been considered?
- ID where possible, such as on the Fourty Fours. However on some islands, due to the cave nesting of the birds, opportunistic sightings by other researchers has not been possible, or are not comprehensive
- BB what's causing the decline?
- ID this is difficult to assess due to the lack of demographic and foraging information for the species
- BB is there any intentional take of shags?
- MB not in the past 10 to 15 years
- BW what are the terrestrial based threats and can these help account for declines?
- ID terrestrial threats are mixed between the islands and the level of threat on each island does not seem to correlate to the population trends, with least decline on Chatham Island (most threats) and highest decline on protected pest-free islands
- KB have black backed gulls been considered?
- MB trends in populations don't seem to be linked
- UE do you have any theories regarding differences in the onset of breeding?
- ID sea conditions and weather events can cause differences in nesting timing, or potential differences in diet on the lagoon, but no information to support such hypotheses
- UE is there any indication of terrestrial based disturbance at nesting?
- MB historically this has been the case, but now fenced or otherwise protected sites are showing the same level of decline as those still prone to potential stock disturbance
- KB has the timing of fishing been considered?
- MB poor reporting of captures makes this difficult to assess
- BW can an increase in the fur seal population be considered to be relevant?

MB suspects that it is unlikely to be relevant as there were much higher historic populations which the shag populations must have persisted through

**9 INT 2011-02 Protected species interactions with commercial pot and trap fishing methods in New Zealand. Results on shag-potting interactions at the Chatham Islands.** **Mike Bell (WMIL)**

UE what caused the change in fishing gear?  
 MB changes were targeted to increase fishing efficiency as lobsters became harder to catch noting snifters last longer than hanging bait  
 KB why would snifters mitigate shag captures?  
 MB one fisher reported that hanging baits attracted little fish that may attract shags  
 KB why frozen bait?  
 MB potentially may be less attractive to little fish  
 KB are crayfish caught at night when shags not foraging?  
 MB not sure  
 BW is there blue-cod potting as well?  
 MB yes, quite a different pot design with narrow funnel, no fishermen reported catching shags in cod pots, though not specifically investigated  
 BW any setnet fishing in the area  
 KR very low effort reported  
 BS suggested that some potential population decline causes could be eliminated by a risk assessment estimating the required number of bird removals, and could also apply this on a spatial basis  
 BW noted that we have to assume the interview data are accurate, and are likely to be an underestimate  
 MB noted that all fishermen reported pot design has solved issue  
 BB considered data gathering robust as MB well connected with community  
 There was some discussion that demographics as well as foraging data are needed to further our understanding of the decline  
 BW noted there were only three censuses, and that 1997/98 may have been particularly high, especially considering movement between colonies etc  
 MB due to comprehensive nature of the census birds would have to be not breeding rather than moving as new colonies were searched for  
 KB suggested EM monitoring could be used to confirm that the new pot design is indeed resulting in no bycatch

**10 POP2011-07. Pied shag – population review and estimation. Initial results.** **Mike Bell (WMIL)**

KB why a potential decline in the north, not in central New Zealand  
 MB too early to hypothesise  
 BS how far out from colonies would birds forage  
 MB there is considerable along coast movements as there are records of birds in areas of coast with no breeding sites  
 BS how far from the colony would breeding birds forage?

- MB hard to say, but banding data suggest 23km may be a best guess  
KB noted that recreational fishing impacts in Auckland area could be high – any info from OSNZ beach patrol  
MB not well documented, human disturbance may be a factor as well  
KB suggested recommending to OSNZ to record fishing deaths more comprehensively  
BB suggested that spatial data would be better collected by targeted tracking studies, rather than general banding  
There was some discussion on pros and cons of general banding  
KB did you consider the recreational bycatch report by Abraham et al?  
MB yes, it does include data on shag bycatch
- RH requested any further comments on background papers or presentations be provided in writing by COP Friday 8 June 2012  
KB acknowledged the work of RH in chairing the group over the previous two years  
RH closed meeting