Department of Conservation
Te Papa Atawbai

MINISTRY OF FISHERIES
Te Tautiaki i nga tini a Tangaroa

Meeting: **Conservation Services Programme Technical Working Group**
National Plan of Action – Seabirds Technical Working Group

Date: 21 October 2011
Time: 9.30 am – 2:00 pm
Place: Department of Conservation, 18-32 Manners Street, Wellington
Chair: Russell Harding (ph: 04-471-3204; email: rharding@doc.govt.nz)

Present: Russell Harding (DOC), Greg Lydon (SeaFIC), Paul Breen (Breen Consulting for SeaFIC), Jeremy Helson (MFish), Rohan Curry (MFish), Karen Baird (Forest & Bird NZ and Birdlife), David Goad (Vita Maris), Ed Abraham (Dragonfly), Darryl MacKenzie (Proteus), Richard Wells (DWG), Elizabeth Bell (WMIL), Igor Debski (DOC).

Apologies: Louise Chilvers (DOC), David Thompson (NIWA), David Middleton (SeaFIC), Mike Legge (University of Otago)

The presentation and background report for each project are available for download from http://www.doc.govt.nz/cspmeetings

RH opened the session and underlined the purpose of the meeting was to provide technical review of the projects presented.

Reports tabled:

INT2010-01 Seabird identification: Quarterly report to 30 June 2011	Elizabeth Bell (WMIL)
POP2005-02 A population and distributional study of white-capped albatross (Auckland Islands). Draft final report	David Thompson (NIWA)
POP2011-01 Auckland Islands sea lion. Draft methodology.	Louise Chilvers (DOC)

- PB, GL – requested presentation of methodology for POP2011-01 sea lions at Auckland Islands
- ID – will investigate a one off presentation, possibly in association with an AEWG
- PB – enquired whether the POP2010-01 sea lion report by Louise Chilvers presented at the previous CSP TWG was finalised
- RH, ID – aiming for completion in next two weeks, with full response to stakeholder comments

POP2009-01 Black petrels: At-sea distribution

Part 1 – Environmental variables. Presentation by Elizabeth Bell (WMIL)

- RW enquired whether the Eastern foraging areas were on the Louisville ridge, noting the presence of previous IUU drift net fishing
- EB – would confirm after inspecting topographic overlay
- DG – what is main diet?
- EB – mostly squid, then fish
- KB – are they night feeders
- EB – mostly, supported by activity data
- PB – which squid species
- EB –details would be available in Mike Imber's previous work
- DM asked whether year to year variation in foraging distributions was real or an artefact of sampling different birds?
- PB asked if there were differences in habitat preference between sexes
- EB – only marginal
- PB requested full details of significance tests be highlighted in the report and test statistics be clearly tabulated, particularly if any of the conclusions from the study rely of statistical findings
- KB – is any more tracking planned?
- EB – further data from 2009/10 is being analysed. Further work is reliant on funding.
- KB noted that high risks have been identified and noted the need for these to be fed into fisheries management, e.g. through temporal/spatial management actions
- RW noted the need for a group to make management recommendations following technical review of such work
- KB considered it was the role of this technical group to make recommendations to fisheries management when significant information is found

Part 2 – Fisheries overlap. Presentation by Ed Abraham (Dragonfly)

- Following discussion of issues around chosen scales of overlap analysis, RC suggested more detailed contours of foraging distribution could be used
- EA – yes, ideally entire kernel density would be used
- PB – is the interaction measure at a national scale?
- EA – yes
- PB – what temporal scale?
- EA – period of breeding cycle, e.g. incubation being 15 Nov – 31 Jan
- KB – can risk periods be corroborated by observer records
- EA – yes, though observer coverage has been targeting on certain periods/areas
- PB asked for clarification of risk units
- EA – hooks/tows per km^2 of petrel distribution
- RW, DG – noted that bluenose and ling could be targeted on the same trip by some BLL vessels
- GL also noted bigeye, swordfish and bluefin were targeted by the same SLL vessels

POP2010-01 Obj 3 Estimation of demographic parameters for New Zealand sea lions breeding on the Auckland Islands. Presentation by Darryl MacKenzie

- RW asked if there was an issue with worn tags being hard to read
- DM understood this to be very uncommon, but would need to clarify with field staff

Clarification post-meeting from Louise Chilvers: Since 1999/2000 only Dalton coffin tags have been applied, with very few readability issues in general. Any unreadable tags will obviously not be reflected in the data set provided and will form part of the tag loss explicitly accounted for in the current study.

- PB asked why branded animals didn't have a resight probability close to 1
- DM – daily resight probability is reported
- RW requested the age structure of the marked population be tabulated to aide interpretation of variation in earlier years of the study
- DM – will include in final report
- PB noted that feedback from Dave Gilbert during review of previous modelling work under project POP2007-01 suggested that assuming a binomial distribution was a problem, and if Figure 9 of the draft report was presented as a diagnostic, it indeed did not show good model fit
- DM – a zero inflated binomial was implemented in direct response to Dave Gilbert's previous comments, and the model fit was well within reasonable bounds
- PB – were any distributions other than binomial trialled?
- DM – no
- RC enquired what distribution would be most appropriate
- PB was not in a position to recommend one (as he is not a statistician)
- DM – could use a different binomial for each individual, but that was beyond the scope of the current project
- PB noted that the 4-14 year age category was very broad
- DM reported that in earlier modelling as part of POP2007-01 used more categories but concluded the current structure was most robust
- RC enquired whether reverse-time M-R methods could be used
- DM noted that sampling was not random, but there may now be enough data to use such methods
- RW requested more plain English summary description of the main findings
- DM – will add to an executive summary
- RW – can performance of cohorts be tracked, i.e. those impacted by disease events?
- RC agreed that understanding the effects of previous disease events and flow on effects to breeding success would make a useful project to help understand underlying drivers on the population
- ID requested that DM include some recommendations as to how this could be best investigated in any future work
- PB stated that any further work should consider using an integrated model
- ID requested that any recommendations should explicitly consider using such models
- KB – how many females never breed or breed very rarely?
- DM – can be calculated from estimates in report

- PB noted that non-breeders include some immature animals, thus under-estimating reproductive rates
- DM noted that use of the spline method helped better define the relationship over age

MIT2010-01 Development of mitigation strategies: Inshore fisheries. Presentation by David Goad (Vita Maris)

- GL – where does information on hook size come from
- DG – skippers
- GL suggested some vessels use a mix of gear
- DG – use was quite consistent in his experience
- KB – are hooks stainless steel
- DG – yes
- KB – is frozen bait used?
- DG – often semi-thawed on auto-liners
- RM noted that the key factor limiting the height of the backline leaving the vessel was based on the ergonomics of manual bait setting – finding novel approaches to this could be highly beneficial
- DG noted that few vessels were purpose built, so options were limited
- KB enquired as to tori line use and day setting
- DG – from skipper interviews tori lines or night setting are generally used, but this information is better quantified by observer data
- GL noted some bluenose longlining was mid-water
- DG – various set ups were described, with differing float usage, but some part of the line is always on the bottom
- RW – what speed do they set bluenose lines?
- DG – 3-4 knots
- GL requested some clarifications to tables and figures in the report
- KB enquired whether mandatory tori line specifications were adequate
- There was some general discussion on the various influences of weights, floats and setting speed in relation to the danger zone a tori line would need to cover, and the required length would vary by vessel and by line set-up
- GL asked if bycaught birds were swallowing hooks or becoming foul hooked?
- EB – both have been documented
- There was some general discussion on the line tension and use of rope extension on floats as factors requiring further quantification in relation to sink rates
- GL noted the importance of feedback of results to fishers
- GL – what is the cost of the current "Kellian device" (towed under water line setting device)
- DG – could probably manufacture a one-off for about $3k
- GL – how long does it take to deploy
- DG – a few minutes if it goes OK. However, getting deployment right is tricky and would require crew training