Department of Conservation
Te Papa Atawhai

Meeting: **Conservation Services Programme Technical Working Group**
Date: 25 November 2014
Time: 9:00 am – 12:30 pm
Place: Room G0.1, Conservation House, 18-32 Manners St, Wellington.
Chair: Ian Angus (ph: 04-471-3081; email: iangus@doc.govt.nz)

Attendance: Igor Debski, Paul Crozier, Ian Angus, Katie Clemens-Seely, Kris Ramm (DOC), Nathan Walker, Christopher Dick, Rich Ford, Vikki Reeve, Tiffany Bock (MPI), Richard Wells (DeepWater Group / Fisheries Inshore New Zealand), Johanna Pierre (Dragonfly), Barry Weeber (ECO), Owen Anderson, Malcolm Clark, Di Tracey, Marie Julie Roux (NIWA)

Apologies:

CSP TWG presentations:

1	**INT2013-05 Assessment of cryptic seabird mortality due to trawl warps and longlines**	**Johanna Pierre (Dragonfly)**

RW – unobserved and unobservable are very different and should be considered separately
BW noted that the risk assessment uses a "F" factor of 1, which may not be appropriate for considering level of risk between species
JP – yes, can note this in the report, but won't affect relative contribution of cryptic mortality to risk
RW – Southern Buller's albatross shouldn't be a high priority as most captures are net captures
JP – it may be a result of the way that the trawl fleet is characterised in the risk assessment, will provide more commentary in the report
RW – need to be careful around language of whether factors affect cryptic mortality differently from bycatch
JP – will review
RW – there is no evidence on scavenging in trawl nets
JP – included in report as it was suggested as feasible from experts consulted
RW – did you conduct further investigation of possible similarity of small Hawaiian fisheries to NZ?
JP – there is potential to obtain additional information from Hawaiian observer programme or similar
RW – recommend this be followed up
RW – did you assist species variation from fisheries where data was gathered?
JP – most captures were North Pacific albatross, so not a large overlap with NZ species
NW – was there a difference in the rate of hooking propensity between species?
JP – there is some information, but would also need to consider inter-specific interactions etc

RW – net capture multiplier based on workshop convened by MPI
JP – will refer to this
RW – some intuitive knowledge of seabird behaviour was considered in defining species groups – e.g. burrowing petrels crash-land into trees etc on returning to the colony, compared to albatross which don't
There was discussion on the difficulties and peculiarities of definitions around captures and deck strikes, and the treatment of these in the risk assessment (including the assumption of live released birds captures as mortalities). The report should provide adequate definitions for all readers to understand these.
CD – inshore warp strikes forms are currently being deployed in inshore trawl
BW – did you assess how feasible it would be too collect enough data as indicated in the power analysis
JP – no, but can easily compare to observer coverage level achieved in recent years
BW – have infrared cameras been trialled to assess warp strikes at night?
ID – previous trials of day time EM concluded those camera systems were not suitable for detailed warp strike observations, so substantial improvements in technology would be needed
CD – introducing any new codes to observer forms would require robust definitions and protocol descriptions
CD noted the potential to collect information from research trawls
RW – may be the opportunity to mine further existing information, rather than collect new data, for example examination of necropsy information related to how long birds have been in fishing gear
JP – also observer diaries may contain additional information
RW – for a species such as Buller's albatross, could assess whether the multipliers used are realistic as part of a level 3 modelling project
BW – report should provide more clarity on multipliers and assumptions used in the power analysis

2. POP2013-05 Development of coral distribution modelling — Owen Anderson (NIWA)

OA – the majority of presence records were at locations with supersaturated aragonite and calcite levels.
OA – previous modelling work undertaken by Baird et al. (2013) which recommended reorganisation of coral taxa and incorporate new environmental data layers. This work is updating that work.
OA – the reason for choosing the Chatham Rise for the risk assessment was due to the high level of data in that area.
OA – the variables that were shown to have the most influence were dynamic topography (a proxy for ocean currents and therefore nutrient supply) and bottom temperature.
OA – the overlap with the 20 year coral footprint was greatest for *Goniocorella dumosa*.
RW – do you have a feel for why distribution patterns differed strongly between taxa?
RF – does our confidence change with the less presence data we have?
OA – if you have your presence records well enough distributed across your study area and the distribution predictors you can have some confidence in the modelling.
OA – Primnoids have both calcite and aragonite in their skeletons and as such both those layers are incorporated into the models for those species.
OA – bamboo corals (Keratoisis and Lepidisis) were combined due to difficulties between distinguishing taxonomically and their taxonomy is currently under review.
BW – the areas in white on the map shown are super saturated as there is no horizon in those areas as it is too shallow.

RW – what is your definition of seamount?
MC – anything that sticks up above 100m from the surrounding topography.
OA – data included both verified and unverified observer data (verified data being those samples that were brought back to land and identified by a taxonomic expert i.e. Di Tracey)
OA – BRT can use absence data as well as presence data.
RF – in terms of absence data, could DITAS data be used?
OA – yes, we are using some DITAS data on the Louisville Trench.
MC – essentially we are trying to move towards a more quantitative estimate of abundance over presence/absence.
MC – it is important to remember that the spatial scale of the environmental data in relation to the presence/absence data is critical.
RF – the up weight of the presence records is giving the presence records the same weight as the absence records.
OA – it is not common to undertake such weighting, I did a fair bit of playing around with the weighting. It was requested that additional explanation be added surrounding the decision as to the weighting used.
OA – excluded depth completely from the model in an effort to focus directly at the aragonite and calcite saturation horizon data layers.
OA – the model performance was measured using AUC values and nearly all indicated a 'good' level of model performance.
RF – how would the small sample size affect AUC?
OA – AUC is the only performance measure that was used. We need to be aware of how much presence data was incorporated into each grouping.
RF – You need to ensure that the sample size is clearly portrayed within the report.

MC – certainly you wouldn't have much confidence in a model that had utilised only 27 records as opposed to 6700 for example. This needs to be portrayed within the report.
OA – it would be good to have more refined data on bottom type and sediment layers incorporated into the model in future.
OA – black corals had high predictability with the calcite horizon.
OA – there is a new 250m resolution layer that has just been completed by folks at NIWA that can be used in future models.
BW – when can the sediment data can be incorporated into the model?
DT – this sediment layer can be incorporated shortly.

3	**POP2013-05 Pilot ecological risk assessment for protected corals**	**Malcolm Clark (NIWA)**

MC – ERAEF level 2 analyses was utilised for this study, using 'susceptibility' and 'productivity'
MC – looking at 200-1500m depth range on the Chatham Rise focused solely on the ORH fishery.
MC – we focused on 15 species or groupings that would give an informative feel of what to expect.
MC – there was some overlap in the encounterability criteria.
MC – An example of scoring was given to the group.
MC – there was a clear ranking of risk profiles of the coral species or groups that were ranked.
MC – most of the reef building scleractinian corals were at medium risk and the cup coral and hydrocorals were at low risk due to their height and quicker growth rate.

MC – the real gaps were the ages and growth data for some species. What are the reproductive dynamics of many of these species? There is still a lot of work to undertake in that space. For example, can we move into a more spatially explicit risk assessment approach with benthic risk assessment?
MC – biology was found to be driving much of the assessment.
DT – it should be noted that sea pens were not incorporated into these assessment and they are important habitat forming species.
RF – we will undertake a stock take in the February workshop on benthic modelling in order to look at what is practical and realistic in terms of benthic risk assessment in future.

Close of meeting