Comments regarding proposed research for POP2016-07 (New Zealand Sea Lion: Auckland Islands pup count) as outlined in DRAFT - Conservation Services Programme Annual Plan 2016/17

Jim Roberts (NIWA), April 2016

The plan outlines the research approach for conducting the NZ sea lion pup count at the Auckland Islands. Additional non-CSP funds will be allocated to conduct additional research in accordance with science requirements identified by the TMP, but these are not described in the draft plan. It is noted that the field season will be shorter.

The pup count (POP2016-17)

This project will conduct a pup count at the Auckland Islands over a shorter field season. I recommend keeping the pup count methodology consistent with previous years. The start date of the field season will influence the number of dead pups counted and hence the total count. It would be good to get some clarification as to the proposed start date.

Non-CSP research

I am not sure when the opportunity will come to comment on field research in addition to the pup count, so I will do this now even if it is not covered funded by CSP.

Resighting effort

No mention is made of resighting effort, but I hope that this will be continued in the coming field season. It is vital for disentangling the demographic causes of changing pup count. Again, it is preferred that a similar methodology is followed to recent field seasons, so that there is a similar annual probability of seeing a breeder/non-breeder if present at the rookery. This should be a major consideration for the design of a curtailed field season.

Biometric data

There is also no mention of pup/adult measurements. Regardless of recommendations stemming from the TMP I suggest that pup mass and standard length are collected at the date of flipper tagging as per recent field seasons. Where lactating females are sedated for any study it would be really useful to collect mass length information, collect, blood, tissue, whisker samples, log samples taken and make the data & log available to prospective researchers.

Disease observations

Clearly there are still major uncertainties, which will be picked up by other commenters. Principal among these is mortality after the field season has ended. We are still only diagnosing a small fraction of the estimated first year of pup mortality (~60% of all pups born in recent years) and this was a shortcoming of the TMP risk assessment. The curtailed field season will not help in this respect and I wonder if there might be an opportunity to collect some observations later in the nursing/weaning period, ie during a short winter visit?

Scats & regurgitates

I suggest that these are collected as per previous seasons with a focus on collecting a large volume of samples at Dundas. This is the largest population and we have not sampled here since the 1990s despite putative rookery differences in foraging distribution from satellite telemetry of lactating females. I strongly recommend picking up samples at Dundas and increasing the sample size where possible given probable changes in prey abundance around the Auckland Islands in recent years. We also stopped picking up regurgitates a few years back and I think it would be advantageous to resume this. We also have a poor grasp of seasonal diet, ie what to sea lions eat late in the season when the pups are much bigger? Another informative activity for a potential winter trip.

Logging of field data

My understanding is that the TMP will recommend the collation of historical field data going back to the 1970s (including biometric/biological field data). There are current efforts to consolidate these data in to one place. I think this work should consult with the current field biologists, so that a protocol for submitting and storing new field data (including biometrics) can be optimised. Where possible these additional observations should be linkable to the demographic dataset, i.e. linked to mark ID or sealion ID (in database maintained by Dragonfly).