

**False Killer Whale Take Reduction Team
Non-Longline Fisheries Work Group Teleconference
December 8, 2014
Summary**

Participants

TRT members: Robin Baird, Paul Dalzell (and alternate Asuka Ishizaki), Michael Jasny, Alton Miyasaka

Facilitators: Bennett Brooks, Scott McCreary

NMFS support staff: Bryan Dieter, Nancy Young

Invited experts: Phil Fernandez, Craig Severance

TRT members Hannah Bernard, David Laist, and Kristy Long were unable to attend the call.

Background materials

Robin Baird submitted to Nancy a FEAT data analysis idea in response to the request from the previous Work Group call. Nancy distributed Robin's analysis idea to call participants for their consideration ahead of the December 8 call. It is also included as an appendix to this summary.

Summary of key ideas and discussion

After Nancy reviewed the outcomes of the previous Work Group call, call participants discussed research analysis ideas. Three main ideas emerged, as described below.

1. *Idea:* Robin proposed to use FEAT's numeric output table of pounds caught per State statistical grid cell, corrected for the size of the grid cell (to account for the large variation in area among statistical grid cells) and normalized as the number of standard deviations above or below the mean catch (similar to the metric applied in the study Baird et al. 2012). The analysis would be run for each gear type and on as fine a temporal scale as possible, though data might need to be aggregated to properly address data confidentiality protocols.

The approach attempts to aggregate and present data in a way that may be more directly related to the potential for false killer whale interactions. In the near-term, the results of this analysis could be compared to the false killer whale habitat use patterns shown in Baird et al. (2012). The results of the analysis could potentially pinpoint possible future monitoring efforts by identifying which fisheries to focus on for observer coverage or video monitoring.

Implementation considerations: If certain hurdles are cleared (e.g., confirming dedicated availability of PIFSC staffing, approval of the use of the FEAT system and the data for this particular application), elapsed time would be 2-3 weeks to conduct the analysis and produce the table. Robin suggested that in the event that Bryan could provide the output tables by mid-March, Cascadia would then likely be able to

conduct the spatial analysis and prepare a summary of results in time for the TRT meeting (which is likely to be held late April).

2. *Idea:* Some Work Group members suggested that the analysis in #1 above be conducted using additional measures of fishing effort (other than pounds of catch, e.g., number of line, hooks, boats, days, hours). The results could help the TRT understand which factors might be most relevant to the whales' distribution and interaction risk.

Implementation considerations: Effort data are not currently in the database used for FEAT, so this would require a new data request from PIFSC and its data managers. Fulfillment of the request would depend on PIFSC staff's current workload; additional time would then need to be budgeted for modifying FEAT's script (e.g., to accommodate the additional variables) and to conduct the analysis.

Some Work Group members suggested using the upcoming TRT meeting as leverage to have PIFSC prioritize the data request. Nancy and Bryan will convey to internal PIFSC contacts that the data and analyses would be a constructive input to support the TRT's work at the spring TRT meeting. Alton cautioned Work Group members about being selective in making data requests before we really know what we want. (It was noted that the additional task could also become a longer-term effort if PIFSC support is unavailable in the next few months.)

3. *Idea:* Paul Dalzell suggested investigating whether MHI insular false killer whales' demographic patterns or trends could be used to determine whether non-longline fisheries are impacting the population.

Implementation considerations: Robin noted that an analysis might be possible, but there are competing priorities for limited research resources. Additional discussion/feedback is needed to determine the viability of addressing Paul's request.

Next steps

- Bryan and Nancy will pursue gaining appropriate approvals to conduct the requested FEAT analysis (#1), with the goal of providing a data output table to Robin no later than mid-March (and earlier if possible). Bryan will follow up with Robin regarding specific aspects of his data request and analysis (e.g., appropriate temporal aggregation and gear type aggregations).
- Bryan and Nancy will pursue a request to PIFSC for fisheries effort data (#2).
- Robin will consider whether a study similar to what Paul Dalzell suggested (#3) would be possible.
- No follow-on Work Group call is scheduled at this time; future communication and collaboration on this topic in the near-term will depend on the status of any analyses and whether updates (via email) or discussion (via teleconference) would be more appropriate.

Reference

Baird, R.W., M.B. Hanson, G.S. Schorr, D.L. Webster, D.J. McSweeney, A.M. Gorgone, S.D. Mahaffy, D.M. Holzer, E.M. Oleson, and R.D. Andrews. 2012. Range and primary habitats of Hawaiian insular false killer whales: informing determination of critical habitat. *Endangered Species Research* 18: 47-61.

Appendix – Background Material Provided to the Work Group

Suggestions for FEAT analyses submitted by Work Group members:

Robin Baird:

I would like to be able to get numeric output (i.e., the output table) from a FEAT analysis, to be able to look at catch data in relation to gear type, area, and time. No information would be needed on license holder zip code or point of origin since the analysis would be focused on potential for overlap between gear and false killer whales. Cascadia has a GIS person that can do the analyses and we have funding to cover that person's time for some basic analyses, which I would be happy to present back to the TRT or to the workgroup. For example, looking at fish catch by area corrected for the size of the area, represented by how much catches in those areas fall above or below the mean catch (e.g., presenting catches as number of standard deviations above/below the mean the way we did our *Pseudorca* critical habitat analysis) – assuming false killer whales are depredating catch, that kind of representation should be a better indicator of the potential for interactions than doing it purely by weight for each grid cell, given the varying sizes of the grid cells. Ideally we'd get data in as fine a scale as possible (e.g., pounds catch by grid area by gear type each year), since that would allow for assessment of obvious trends over time and allow for some preliminary comparisons with years when we have tag data. Doing it by year would also help determine whether some of the "heavy" catch cells are what is going on in recent years versus potentially biased by some large spike in catch in early years (since the dataset Bryan presented starts in 1996). I realize there may be restrictions due to confidentiality for infrequently used gear types, so aggregating some years or some less frequently used gear types might be necessary and would not be a problem. Some of the gear types could be excluded given they should have close to a zero chance of overlap/interaction with false killer whales (e.g., liftnet-opelu, net –misc, spearfishing/dive/squidding). Some breakdown of catch species/gear type for the "other" category in Bryan's presentation would also be good to determine whether some of those could/should be excluded.