

Seabird Monitoring Subgroup Conference Call 12-5-14

Attendees: Don Lane, Kim Rivera, Jennifer Mondragon, Adam Batty, Shannon Fitzgerald, Nathan Lagerwey, Chris Rilling

The Seabird Monitoring Subgroup held its first conference call on Dec. 5, 2014. The subgroup was established during the latest EM Workgroup meeting Nov 18-19 in Seattle to identify issues that need to be resolved from a seabird monitoring perspective and to provide recommendations to the EM workgroup. The subgroup discussed two broad approaches for how video cameras could be used to monitor seabird bycatch - 1) compliance monitoring, and 2) bycatch monitoring with the goal of species or group identification for catch accounting purposes. The discussion focused on issues that would need to be addressed for either option.

Compliance Monitoring

The objective of compliance monitoring would be to determine whether the appropriate mitigation measures are deployed (i.e. streamer lines). The group agreed that the presence/absence of mitigation measures would be easier to determine than performance standards such as the height of the streamer lines above water.

The following issues were identified and discussed. These issues would need to be addressed to determine the feasibility of deploying EM for seabird bycatch compliance monitoring.

1) How many cameras are needed? The group discussed whether the video collected from existing deck cameras in 2014 could be used to determine whether streamer lines were deployed. The group agreed that it might be useful to review 2014 data to see if this can be determined. If not, could some alternative configuration of the existing deck cameras be used, or are additional cameras required? If additional cameras are needed, how many would be needed? Determine the feasibility of deploying a third camera.

Recommendation (short term) - review 2014 data to determine whether existing camera configurations are adequate for compliance monitoring purposes. If not, consider deploying a third camera on cooperative research vessels in 2015.

2) What is the trigger for turning cameras on? Several options for triggering cameras when streamer lines are deployed were considered.

- a) pressure sensor attached to buoy
- b) speed of vessel
- c) manual start
- d) RFID tag on buoy
- e) turn cameras on for duration of the trip

Streamer lines are deployed manually rather than with hydraulics, and thus there is no automatic trigger mechanism such as a hydraulic pressure switch that can be used to turn the video on when lines are deployed. Don Lane commented that the speed of the vessel may not be a good indicator of whether a set is being made because the vessel often slows to setting speed when searching for fish. The manual start may also not be a preferred option because it requires action on the part of the crew. Turning cameras on when the vessel leaves port could be done automatically using GPS geofencing and it was pointed out that low resolution and low frame rates would cut down on disk storage space required. The downside is the amount of video that would need to be recorded and the time required to review the video. The best options appear to be the automated triggers - either pressure sensor or RFID tags but neither has been tested.

Recommendation (short term) - consider testing one or more of the most promising triggers for turning cameras on.

3) How long will video review take? Determining the time required to review data will be important for estimating costs. Are there any differences in day vs. night?

Recommendation (short term) - if feasible per number 1 above, use video collected in 2014 to determine time required to review video for seabird mitigation measure compliance purposes.

Monitoring for Catch Accounting

For this option, EM may be able to identify seabirds to species groups and the priority seabird group of interest would be albatrosses. Adam mentioned that video reviewers in Canada were able to determine albatross groups, although this has not been fully corroborated with specimen collections. In the U.S. there are no regulations requiring fishermen on unobserved vessels to retain seabirds (ESA listed or otherwise). Challenges and/or issues that would need to be addressed include:

1) Would additional cameras be required and if so how many?

Adam commented that existing cameras could be used to identify seabirds to species groups if specimens are held under the deck camera. Suggestions for verifying to species and/or species groups would include catch handling technique of laying the bird on top of a bill guide and displaying the specimen for the camera.

2) Would fishermen be able to identify species such as albatross and how would the identification be verified?

In order to verify species and/or species groups a bag and tag program may be needed.

3) Would a bag and tag program be feasible?

Currently the US Fish and Wildlife Service issues a permit to NMFS AFSC to collect non-ESA listed seabird species and fisheries observers are listed as sub-permittees on the NMFS permit in order to authorize the collection of specimens. The group did not have time to discuss long term recommendations, but clearly monitoring seabird bycatch for a species identification purpose would require substantially more planning, equipment, and protocols and procedures for fishermen to collect specimens and bring them onshore for identification. It is likely that new or modified special purpose salvage permits from U.S. Fish & Wildlife Service would be necessary.