

Electronic Monitoring Workgroup - Minutes

May 15-16, 2014

Heritage Room, Clarion Suites Hotel, Anchorage, AK

Workgroup: Dan Hull (chair)

Appointed: Bernie Burkholder (F/V Northern Endurance), Morgan Dyas (Saltwater, Inc.), Dan Falvey (ALFA), Stacy Buckelew (Saltwater, Inc. - alternate), Brian Lynch (PVOA), Howard McElderry (Archipelago Marine Research), Don Lane (NPFA - alternate), David Polushkin (KBFA), Jeff Stephan (UFMA)

Agency: Dave Colpo (PSMFC), Diana Evans (NPFMC), Heather Gilroy (IPHC), Nathan Lagerwey (NOAA OLE), Martin Loefflad (NMFS FMA), Tom Meyer (NOAA GC), Jennifer Mondragon (NMFS AKR), Megan Peterson (ADFG), Brent Pristas (NOAA OLE), Farron Wallace (NMFS FMA)

Others attending included: Sam Cotten, Jason Dean, Elizabeth Figus, Paul Grundholdt, Kathy Hansen, Bill Tweit

The Chair opened the meeting with introductions and a recapitulation of the workgroup's formation and purpose.

2014-2015 Cooperative Research Plan: Overview and Study Designs

Martin Loefflad presented an overview of the cooperative research plan, including draft tables synthesizing each of the four cooperative research tracks, from earlier ad hoc meetings. He and Farron Wallace explained the study design for Tracks 2 and 3, Howard McElderry presented the study design for Track 1, and Jennifer Mondragon led the discussion for Track 4. Through the course of the two-day meeting, **the Workgroup revised and agreed upon the overview of overall goals and objectives for the Cooperative Research Program, and the delineation of the four research tracks and how they will fit together.** The Cooperative Research Plan overview is included as **Attachment 1**. Once they are revised, the study designs will be appended to the overview to complete the research plan. Based on the feedback at this meeting, the lead authors will meet with their responsible partners to revise the study designs in June.

The Workgroup discussed at length the best way to estimate weights in the research tracks that are restricted to counting fish (i.e., Tracks 1 and 2, which do not also measure the length of the fish). Track 1 will include a conceptual evaluation of the different methods available to estimate weight from piece counts, and the group discussed whether additional data should be collected to validate any of these methods. For example, the group discussed adding a component to measure lengths (using a stereo camera or lengthboard) in Track 2. In order to ensure that the operational comparison between Tracks 1 and 2 remains consistent, however, the group suggested that it would be better to add an element to Track 3 to estimate weight using the counts as well as the length of fish, even though this would not provide data on making that estimation with the standard EM camera, and it may be difficult to accommodate halibut boats in Track 3. While the estimation of weight is a very important issue, the first priority is to get accurate counts and species identification, and improving the method for estimating weight may be an iterative process.

Some of the specific feedback for the various tracks is captured briefly below:

Track 1:

- develop track 1 so that outcomes can apply to any type of EM technology (standard or stereo cameras) – operational costs, operational support needs, categorizing groundfish and bycatch species in terms of identifiability, evaluating how to assess discard condition of halibut with EM, mechanisms for estimating weight indirectly from fish counts

- consider how to assess the changing ability of cameras to identify species when environmental conditions change (e.g., lens is wet, sun is setting, etc.)
- Fieldwork has already started. NMFS has recently sent out a letter offering release from observer coverage for volunteer vessels, while they are participating in the study.

Tracks 2 and 3:

- need to specify onboard handling, particularly with respect to deck sorting or large incidental catch species, in order to be able to compare tracks to each other
- Chute technology under Track 3 will need additional testing on trips without a technician onboard, to test how operable the equipment is on a variety of vessels and operational conditions
- assess the compatibility and utility of the chute camera in track 3 on smaller vessels, especially in the halibut fishery
- estimate weights using both lengths and counts in Track 3, using methods conceptually developed under Track 1
- to inform data review costs, suggest using two reviewers to look at the EM data, to assess both fish by fish and hook by hook, as hook by hook EM review is not likely to be the methodology used in an operational program
- including AFSC memo on catch reporting standards for GOA hook and line fisheries among appendices, and clarify that the appendices do not presuppose any particular research outcome
- Fieldwork will be supported by vessels that are compensated. The RFP(s) for Tracks 2 and 3 will be out in June, with a 30-day response period. May be two separate RFPs, as the bid price for each track will likely be different. Looking for some fixed gear vessels that can fish with EM in the fall of 2014, with most of work likely to occur in Spring 2015.

Track 4:

- for EM, need to collect effort and set location data, can be an open question whether works best through paper or electronic logbook
- one component is to collect data through an elogbook to validate the sensor information, to see whether it is possible to accurately model when a vessel is or is not fishing based on reading the sensors
- a key issue for a successful logbook program is training people; study design should address
- it was noted that logbooks in Track 4 (as an integrated tool with EM cameras designed for catch estimation) are not the same as “EM Lite”, a standalone monitoring system that has been talked about previously as a way to better expand observer (or EM) data to unobserved vessels.

There was a discussion about the available funding for the Cooperative Research Plan. Some money has already been allocated; there are also two other national NOAA funding pools that may provide money to contribute towards these projects (2014 VMS money that has been reallocated to EM, and potentially dedicated EM funding in the 2015 budget). To access a share of these funding pools, Alaska will be competing with other regions. One advantage of adopting a comprehensive, defensible EM Research Plan that integrates research and provides a clear path to implementation, is to strengthen Alaska’s application for EM funding. **The Workgroup recommends that the Council request to see budgets for the four research tracks**, however, so that if complete funding for the research plan does not come through, there will be a basis for prioritizing among the different elements of the research tracks.

Preliminary timeline and discussion of decision points

The Workgroup reviewed a preliminary draft Gantt chart prepared by Martin Loefflad, listing milestones associated with each of the research tracks, and with the Council amendment and regulatory process (Attachment 2). The timeline is designed around a cooperative research program that lasts from now through June 2015, intersecting with the analytical and rulemaking process that, under a best case scenario, would

have EM implementation occurring at the beginning of 2017. The Workgroup identified that based on the experience of other EM programs elsewhere, implementation will likely require a phased-in approach, as it depends equally on the availability of field support services and training, as it does on good technology and data processing. As a result, **the Workgroup recommends that the Council support continued fieldwork on deploying EM after June 2015, while the analytical and regulatory process is underway, to sustain capacity and continue to resolve implementation issues.** In order to better reflect this longer-term perspective, the Workgroup suggests renaming the program as the Cooperative Research and Implementation Program. Fieldwork after June 2015 might focus on gathering representative data across fisheries and under various operational conditions, noting that the program is currently reliant on voluntary vessels that may or may not be providing representative data, as well as testing costs or other assumptions resulting from the first year's research.

During the course of the two-day meeting, several key EM decision points were discussed, which the Council will need to consider in the amendment process for selecting an EM option for implementation. These include, but are not limited to:

- operational costs to industry,
- post-processing costs to the agency,
- timeliness of data,
- applicability of the technology to different vessel sizes,
- degree to which the technology requires an alteration in fishing operations,
- best method for weight estimation.

At a future meeting, the Workgroup will try to lay out all the key decision points and how they might be packaged into analytical alternatives.

The Workgroup noted several additional items that could be included on the timeline, relative to workproducts from the research tracks. These include a target date for output from some of the desktop modeling components of Track 1 with respect to species identification, and methods for estimating weight from fish counts, as well as a timeline for discussing options for subsampling. More detail also needs to be added with respect to developing implementation aspects. The Workgroup offered to work on refining the timeline at a future meeting.

Consistent data and review protocols for research projects

The Workgroup discussed draft protocols that have been identified at earlier ad hoc meetings, and began to add more detail. The group agreed that it is important to ensure that data collected among all the research projects is consistent, so that each of the tracks can contribute the necessary information to evaluate how EM should be implemented moving forward. **Attachment 3 provides the current draft of the data protocols document, with the Workgroup's input.** Research partners will meet in June to continue work on research plans and data protocols as necessary.

The group also identified that consistent data review protocols need to be considered and specified for the research projects. Dave Colpo will coordinate work on these issues prior to the next meeting, with the agency staff and other interested workgroup members, to define what PSMFC should be counting, and what else they should be looking for. A subset of these protocols relate specifically to the particular issues relating to halibut, on which he will seek the advice of the IPHC. Dave Colpo noted initially that for the first review, PSMFC would be evaluating 100% of all hauls, as a baseline to better discuss subsampling. It was suggested, however, that if the trip had known problems, then it might not be worth spending the time to analyze that data, although the trip would still be part of the study report. It will be beneficial to set a threshold of conditions that need to be met in order for the data to be analyzed.

With respect to subsampling, the group identified this as an issue for further discussion. Subsampling could occur by overall percent of fishing time, by percent of fishing effort (e.g. skates), or by fishing events (hauls). It was noted that it will be important to compare those types of subsampling methods, because they are likely to affect cost estimates of the EM program.

Independently funded EM projects

The Workgroup is interested in helping other EM projects in Alaska which are not within the umbrella of the Cooperative Research Plan to come up with data that will lead towards EM implementation. The group discussed how they might help with identifying a framework that other projects might find useful to do their work more effectively. **The Workgroup is interested in helping other projects to be as effective as possible, and had the following suggestions:**

- In developing the data protocols document, the Workgroup could consider how these protocols would apply to pot gear, including the necessary logbook fields.
- The Workgroup recommends that the Council identify the key management objective(s) for the pot and trawl fisheries, as has been done for the small boat hook and line fishery. For example, is the Council primary interested in at-sea discard estimates, and if so, for all, or for key species?
- The Workgroup also recommends that the Council ask the AFSC to draft catch reporting standards for the pot and trawl fisheries, similar to the standards described for the GOA hook-and-line fishery in the AFSC's February 13, 2014 memorandum.

The Workgroup also encourages all vessels that are currently participating in pilot programs, or considering participation, to volunteer officially with the agency by May 30th, 2014. It is not clear, however, whether vessels that participate in the independently funded programs will qualify for the temporary release from observer coverage if they are not operating directly in projects that are under the cooperative research plan, and providing data or results that meet specific cooperative research needs. Some Workgroup members suggested that the Council and NMFS could develop an oversight or screening process as a way to integrate the independent projects and allow releases from observer coverage.

Scheduling

The Workgroup discussed meeting by teleconference over the summer, to review data protocols and revisions to the study designs that will be refined by Track leads and agency staff. Depending on the Council's decisions on tasking and scheduling, the Workgroup might plan its next in-person meeting to begin to articulate key decision points for an amendment analysis.