

EXCERPT

DRAFT REPORT
of the
SCIENTIFIC AND STATISTICAL COMMITTEE
to the
NORTH PACIFIC FISHERY MANAGEMENT COUNCIL
October 5th – 7th, 2015

The SSC met from October 5th through 7th at the Hilton Hotel, Anchorage, AK.

Members present were:

Farron Wallace, Chair
NOAA Fisheries—AFSC

Robert Clark, Vice Chair
Alaska Department of Fish and Game

Chris Anderson
University of Washington

Jennifer Burns
University of Alaska Anchorage

Lew Coggins
U.S. Fish and Wildlife Service

Sherri Dressel
Alaska Department of Fish and Game

Kari Fenske
Washington Dept. of Fish and Wildlife

Brad Harris
Alaska Pacific University

Anne Hollowed
NOAA Fisheries—AFSC

George Hunt
University of Washington

Gordon Kruse
University of Alaska Fairbanks

Steve Martell
Intl. Pacific Halibut Commission

Franz Mueter
University of Alaska Fairbanks

Lew Queirolo
NOAA Fisheries—Alaska Region

Kate Reedy
Idaho State University Pocatello

Matt Reimer
University of Alaska Anchorage

Alison Whitman
Oregon Dept. of Fish and Wildlife

Members absent were:

Seth Macinko
University of Rhode Island

Terry Quinn
University of Alaska Fairbanks

C-5 EM Workgroup

Diana Evans (NPFMC) presented the draft Electronic Monitoring (EM) Pre-Implementation Plan as developed by the EM workgroup (EMWG) and Farron Wallace (NMFS-AFSC) presented the EM Implementation Cost Analysis. The SSC was tasked with reviewing the two documents and providing comments. There was no public testimony.

The overarching goal of the project plan is to evaluate the efficacy of EM, in combination with other tools for an accounting of retained and discarded catch. If successful, EM accounting methods could ultimately be fully integrated into the catch accounting system. The plan describes a proposed pre-implementation project to deploy EM systems on a fleet of up to 60 longline vessels in the 40 to 57.5' range to evaluate the logistics and practical aspects of EM deployment, use, data capture, and data analysis. These vessels are those where it would be difficult to deploy human observers on board due to lack of bunk space or life raft capacity. EM will be deployed at a sample rate of 30% of the fleet over four time periods in 2016. EM data capture will focus on discard estimation and seabird interactions, although these data will not be used in actual discard estimation in 2016. The cost analysis was a simulation of expected costs of implementing EM per the pre-implementation plan.

The SSC greatly appreciates the work of the EMWG in developing this project plan and enlisting 56 vessels so far that are willing to have an EM system deployed during the fishing season. EM shows promise as a tool for data collection, especially on vessels where deployment of human observers is problematic, and we laud the work of the EMWG to begin the process of evaluation of this method of data capture.

The SSC had the following observations and comments on the plan and cost analysis:

- There is a general lack of performance metrics in the pre-implementation plan. It will be important to develop metrics to evaluate success or failure of vessel and trip selection procedures, deployment of EM gear, operation and reliability of EM gear, video data quantity and quality, and veracity of counts derived from analysis of video data.
- The current sampling design holds selection probabilities constant for all participants. This results in a single vessel in certain seasonal cells. The SSC advises that this design be revisited once final numbers of vessel in the program is known and performance metrics are identified to ensure that the experiences of a single vessel, or analysis of a single vessel's data, at the beginning or end of the season do not drive—or prevent reaching—conclusions about the program.
- As pre-implementation proceeds, it will be important to consider and analyze how EM-derived video data can be integrated into the catch accounting system. Figure 3 in the plan document provides an excellent roadmap for these considerations. The SSC encourages the EMWG to utilize simulation approaches like that used in the development of the Annual Deployment Plan (ADP) to provide answers to the decision points on the roadmap in Figure 3. Data collected during the 2016 EM pre-implementation program will likely be useful to inform simulation work to evaluate the estimation decision points articulated in the plan. For example, stratification and sampling rates for EM deployment could be considered with the simulation approach used in the development of the ADP. Similarly, development and assessment of performance metrics for EM could be accomplished via this same simulation approach.
- The SSC also notes the importance of the EMWG continuing to consider how the loss of necessary biological information accrued from human observers will be replaced from sources such as EM collected data (e.g., stereo cameras to collect fish length) or information collected in other portions of the overall observer program.
- The cost report estimates cost for deployment of EM in 2016 and shows how EM implementation costs are projected to vary. Data on actual costs, including vessel costs like foregone fishing due to inoperable EM systems, should be part of the data collected from this project. The SSC suggests the EMWG look to other EM programs to get a sense of how these costs change with experience.
- Ultimately the EM program will need to be evaluated with respect to the tradeoffs of sampling design and sampling allocation, cost of implementation and analysis, and the utility of data derived against those of the current observer program.