

Fifteen years of acoustic data from vessels of opportunity in the North Pacific

Steven J. Barbeaux, Taina Honkalehto, Martin Dorn, and Paul von Szalay

Abstract

The wide-spread availability of high quality, commercially available, echosounders in the 1990's opened the door for use of commercial fishing vessels as acoustic data collection platforms. In the North Pacific the use of acoustic vessels of opportunity (AVO) has been developing over four broad themes. The first application is collection of AVO data from commercial fishing vessels during normal operations resulting in a 15-year time-series and a diverse array of publications. A second application is in conducting directed acoustic surveys in areas and/or times outside the range of standard agency surveys. This effort has been aimed at either supplementing existing surveys or evaluating co-management systems in areas and times of interest to the fishing fleet. The last two applications use acoustic data collected from fishing vessels contracted for periodic surveys. One effort has been to develop groundfish abundance indices from these data for application in stock assessments. Another application has been to use these data to evaluate bottom conditions and classify large swaths of habitat where directed acoustic surveys would be prohibitively expensive. This paper will review AVO data collection efforts in the North Pacific considering both the success and failures in their development and application in fisheries management. Efforts in the North Pacific demonstrate that AVO data collections can contribute positively to fisheries science if the benefits and limitations of using these platforms is carefully weighed and their application is conducted in consideration of both practical issues, such as fisher time constraints, and data quality limitations on commercial platforms.

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Contact author: Steven Barbeaux, Alaska Fisheries Science Center, NOAA, 7600 Sand Point Way NE, Seattle, WA USA 98115. E-Mail: Steve.Barbeaux@NOAA.gov Phone: 1+ (206) 526-4211