Abstract

Underwater noise from anthropogenic sources has been increasing dramatically for the past few decades and little is known about its effects on fishes. The objective of this study is to describe the occurrence and characteristics of fish sounds in the SGaan Kinghlas-Bowie Seamount Marine Protected Area (SK-B MPA, British Columbia, Canada) and to correlate them with the corresponding anthropogenic soundscape. Here we present preliminary results of the detection of fish sounds at SK-B MPA between July 2011 and July 2013. An automatic detector was used on nearly 40,000 acoustic samples (4,754.5 hours in total) to search for fish sounds. About 1.2% of the data were highlighted as containing fish-like signals. Manual verification of these detections revealed that 95.5% were false positives and the remaining sounds were of unknown origin. Eighty detections were highly stereotyped and are suspected to be produced by fish, but no identification has been confirmed yet. Systematic manual inspection of sub-sampled acoustic data is yet to be performed to determine if the detector missed any fish sounds. Future deployments should select areas based on the presence of known fish habitat occurrence, and install autonomous recorders optimized to reduce equipment self-noise and flow noise biases.