

The various trials at different locations with all the SURs clearly showed, that the detection probability is affected by: the distance between the receiver and the transmitter, the water depth, and the bottom substrate. The statistical analysis and the generalized mixed model supported all these observations. This model also revealed that there is a significant variation in detection probability between each SUR unit, which could not be related to any natural parameter tested in these trials. These results indicate that the cause of variability lies within each SUR device. Therefore, any study that depends on data from passive acoustic receivers should take this natural variability into account when analysing its data. Also, prior to deployment of SUR arrays, each unit should be thoroughly tested in field like conditions. This study was a preliminary test of the detection variability. The matter of SUR variability should be further analysed in other experiments incorporating more natural parameters such as current, turbidity, surface roughness, etc.