

## **REVIEW OF THE REQUIREMENTS AND CURRENT AVAILABILITIES OF LONG TERM AMBIENT NOISE MEASUREMENT TECHNOLOGIES**

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The measurement of underwater ambient noise is of increasing interest as the ocean science community respond to the concern regarding environmental impact, and the requirements of legislation. For example, the EU Marine Strategy Framework Directive requires that the 'Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment.' Monitoring of underwater noise is part of the strategy of many of the member states, but the technology to undertake such monitoring is not yet fully mature. This paper presents an overview of the technical challenges faced when measuring ambient noise over the long-term. A review is presented of the requirements with regard to frequency bandwidth, dynamic range, data processing and storage, power consumption, communications with shore-base, and sampling (both temporal and spatial). Examples of the technical possibilities from currently available recording instrumentation are presented and some suggestions for the analysis of the data are provided.