

Marine Mammal Scientific Support Research Programme MMSS/001/11

MR 8.2

Sound Exposure Explorer Tool Manual

Summary

The purpose of the Sound Exposure Explorer (SEE) is to provide a simple interactive utility which can be used to explore simple sound exposure scenarios, especially those involving cumulative exposures to moving animals. Using the tool, the cumulative exposure of animals can be calculated and plotted for different exposure scenarios; the “starting ranges” at which acoustic doses received over the course of an exposure scenario will exceed particular predetermined thresholds are also calculated. The *intention is **not** to replace more sophisticated products* which may incorporate complicated models of propagation loss and animal movements but to provide a straightforward, readily-understood and easy-to-use tool which can be used to make a first broad assessment of a sound exposure scenario and can provide a benchmark against which the conclusions from more complicated modelling exercises can be compared.

In its current form the utility focuses on the calculation of cumulative exposure for an animal which moves through a sound field created by one or more sound sources.

The conceptual framework of the SEE generally follows that laid out by Southall et al 2007 and many of the thresholds and parameters they propose are available as pre-set values or defaults within the utility.

SEE is open source; thus any developer can check or enhance the underlying Java source code. Our intention in planning and designing the SEE has been to provide a basic functionality within an architecture that will allow for future development and expansion as required.