

Investigating the impact of anthropogenic underwater noise on benthic communities

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The increase of anthropogenic underwater noise (AUN) has altered the marine acoustic environment significantly. AUN can harm a variety of taxa by impairing an individual's physiology directly, as well as interfere with fitness relevant behaviours such as communication, orientation, predator avoidance and foraging, all potentially leading to increased mortality and decreased reproduction. Benthic and planktonic invertebrates play a key role as a dynamic link between lower and higher trophic levels in the world's oceans. For benthic systems, we anticipate that low-frequency noise will affect the behaviour and species interactions of ecosystem engineers, which in turn will result in a modification of the bioturbation potential of benthic communities, and thus affect biogeochemical cycles.

Here, we introduce the aim of the JPI Oceans project 'ORCHESTRA' (ecOsystem Responses to Constant offshore Sound specTRA) and present our planned experiment involving the ecosystem engineer *Lanice conchilega* and the prevailing meiofauna.

Keywords

Underwater Noise; Experimental Marine Biology; Benthic Communities