

## Mussel study determines risk posed by rare earth metals to marine environments

Dossier de<br /> la rÃ©daction de H2o  
October 2019

Rare earth elements (REEs) are used increasingly often in innovative technologies, causing these elements to enter the natural environment. They can be sourced via deep-sea mining, raising concerns about marine exposure to mining processes and waste products. This study examined how two REEs, lanthanum and yttrium, affected and stressed marine ecosystems, using young marine mussels (*Mytilus galloprovincialis*) as indicators of water quality. The researchers determine a parameter known as the 'predicted no effect concentration' (PNEC) for La and Y - the maximum environmental level of each of the two elements at which no effect is seen on the most sensitive organisms and which is, therefore, deemed safe for the environment.

Science for Environment Policy issue 532 - EC