

Integration of Underwater Noise Measurements into EMODnet Physics

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Underwater noise has been significantly raising in the past decades due to an increment of human-related activities in the oceans such as shipping, industrial activities, seismic explorations, etc. These activities may have adverse effects on fish and mammals, such as communications masking and modifying predator–prey interactions.

In order to assess and limit the impact of these, the European Commission approved the Marine Strategy Framework Directive (MSFD) which aims to achieve a good environmental status in European waters. Within this directive different environmental challenges are addressed, including the long-term monitoring of underwater noise throughout European waters.

EMODnet Physics, one of the European Marine Observation and Data network thematic portals, which is currently providing easy access to data and products of: wave height and period; temperature and salinity of the water column; wind speed and direction; horizontal velocity of the water column; light attenuation; sea ice coverage and sea level trends. EMODnet Physics is continuously increasing the number and type of platforms in the system by unlocking and providing high quality data from a growing network. EMODnet Physics has recently started working on water noise with the aim of making available more operational data (in terms of parameters and format that are close to MSFD I.11 requirements), offer a single European entry point to impulsive noise registries (MSFD I.11.1) and work on (regional) sound maps are three key identified activities for Physics. Furthermore the very first operational under water noise data (i.e. Sound Pressure Level – SPL), and HELCOM and OSPAR impulsive sounds registry were connected and are now available on the portal. Exploiting the LIDO (Listen to Deep Ocean) knowledge and the BIAS project (<https://biasproject.wordpress.com/>) experience EMODnet Physics will develop and make available monthly sound maps.

In this presentation, we give an overview of how EMODnet Physics is organized, with a particular focus on this new data flow and its perspectives.