Measuring the impact of human-generated noise pollution on sea mammals in the Mediterranean

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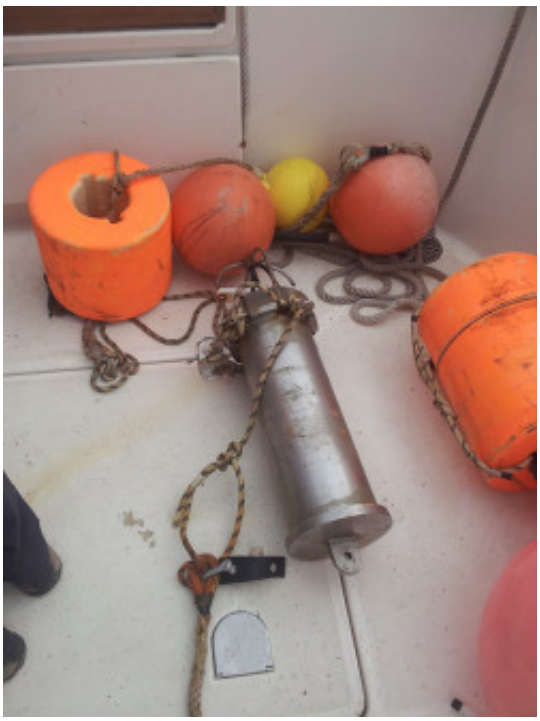

SAMARUC marine recording device. Credit: Universitat Politècnica de València

Researchers at the Universitat Politècnica de València (UPV), Valencia's Oceanogràfic and the University of Alcalá (UAH) are carrying out a study to analyse the possible influence of anthropogenic or human-generated disturbances on cetacean mammals in the Mediterranean Sea.

Led by the UAH, the study focuses on three areas within the Levantine-Balearic marine region: Cabrera Island, Cape San Antonio and the Columbretes Isles.

Specifically, the researchers are looking at the presence of cetaceans in relation to submarine sound pollution caused by fishing. Another of the project's goals is to control these and other activities in the protected marine areas being studied.

They will use two new SAMARUC units to carry out the acoustic monitoring, designed by researchers at the UPV's Institute of Telecommunications and Multimedia Applications (iTEAM) and the Oceanogràfic. This device will detect, record and classify the calls of the different marine species in the area. Located at different depths, they will record the sounds made by the resident cetaceans and fishing activity.

Compared to the first SAMARUC unit built in 2013, this second version is much more precise, easier to use by biologists and has a longer battery life. It can also incorporate different types of sensors, which increases its feature base and therefore the potential of this measuring device.

"Unlike other devices that act as mere sound recorders, SAMARUC incorporates sound processing algorithms and is able to provide indexed audio files for the different acoustic events detected. The system can be programmed to detect and classify the sounds recorded, distinguishing between dolphins, fin whales or human-generated noise from vessels, port installations, etc." says Ramón Miralles, iTEAM researcher.

Cape San Antonio and Columbretes Isles

With measurements already taken for Cabrera Island, the team will be submerging a SAMARUC unit this August in the area round Cape San

Antonio. The second unit will be installed on the seafloor near the Columbretes Isles in September.

"Through this project we hope to shed light on biodiversity in these Mediterranean regions. It will help us to detect the movements of cetaceans in this area and establish migratory patterns, as well as isolate the main sources and levels of sound pollution, with a view to establishing possible thresholds for their mitigation," concludes Juan Junoy, of UAH.

Provided by Asociacion RUVID

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