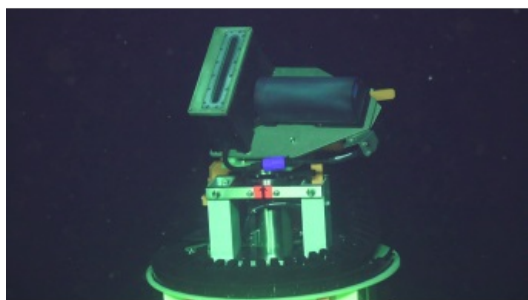


Methane Emission Seafloor Project Benefits from Multibeam Echosounder



With the increasing concern about global warming, there is a strong focus on methane emissions from the seafloor. Indeed, today large quantities of methane – a potent greenhouse gas – are trapped within the seafloor in the form of so-called gas hydrates, solid ice-like deposits which are only stable at particular conditions of high pressure and low temperature. Since only a small volume of methane currently bubbles up into the ocean, the quantity reaching the atmosphere is not threatening, despite its greenhouse effect. However, there is a concern that, as the temperature of oceans rises, the seafloor methane hydrate deposits will dissociate. This would result in a greater volume of methane released in the ocean, and potentially reaching the atmosphere, and therefore pose a high risk for humanity. A [multibeam echosounder](#) is now being used in a project to monitor the

natural release of methane off the coast of Oregon, USA.

Scholars at the MARUM Center for Marine Environmental Sciences, University of Bremen, Germany, and the University of Washington in Seattle, WA, USA, are working on a project called M³, funded by the German Ministry of Education and Research (BMBF) that consists of monitoring the natural release of methane at the Southern Hydrate Ridge (SHR) off the coast of Oregon State.

Multibeam Echosounder

This real-time monitoring is performed by a [multibeam echosounder \(MBES\)](#). Until recently it was inconceivable to envision long-term monitoring due to the high power consumption of the MBES. Once more, R2Sonic is breaking barriers: the [MBES Sonic 2022](#) offers high performance while ensuring low power consumption, making the M³ project possible. The objective is to conduct this project over more than two years in order to gather as much data as possible to help scientists determine if there is a relationship between ocean warming and the volume of methane released in the ocean.

The Sonic 2022 is mounted on a tripod that lies on the seafloor, and is connected to the Regional Cabled Array of the Ocean Observatory Initiative (OOI), an underwater cabled observatory funded by the National Science Foundation (NSF), which provides power supply and two-way communication to the instrument. The Sonic 2022 rotates 360° to survey the ocean for methane emissions in all directions.

The project was initiated in 2017 and the MBES was recently deployed in June 2018. For more information about the M³ project [see here](#).

<https://www.hydro-international.com/content/news/methane-emission-seafloor-project-benefits-from-multibeam-echosounder>
