RESIBAD

MINIMISING UNDERSEA NOISE POLLUTION ASSOCIATED WITH HUMAN ACTIVITY TO PROTECT THE ENVIRONMENT

Undersea demining operations, seismic surveys and civil engineering work, particularly pile driving or drilling to install wind turbines at sea, generate noise pollution which is liable to disturb marine fauna, such as marine mammals, fish and certain crustaceans.

The RESIBAD project was aimed at developing expertise and operational tools for validating bubble curtains and other devices for reducing undersea noise generated by explosions and maritime works.

Research carried out during the project into impact/bubble interaction led to a better understanding of the physical phenomena involved in minimising undersea shock waves. The results were then applied to a model and were validated in tests performed at different scales (reinforced test tank, test basin and at sea), to be able to create the following:

-A tool for evaluating the effectiveness of the bubble curtain (or other noise-reduction system)

-A tool for predicting the implementation of a noise-reduction solution

-A test bench for certifying the solution and, lastly, a database of test results.

International regulation currently under consideration is aimed at defining the thresholds which would be imposed on companies carrying out work at sea, obliging them to implement measures to reduce their undersea noise emissions. At Germany\'s instigation, this regulation will be rolled out at a European level (via the Marine Strategy Framework Directive).

Spin-offs and future developments

- 3 jobs created (1 fixed-term contract (CDD) with ENSTA Bretagne, 1 job safeguarded at In Vivo and 1 research post created under a Consolidated Employment Contract (CEC) at Altran)
- Presentation at 2 international trade fairs: Thétis and Sea Tech Week in 2014; paper given at a symposium of the international MABS event (Military Aspects of Blast and Shock) in Cranfield (UK) in 2014.

The project partners also worked with the Lycée aquacole in Bréhoulou, the Tinduff marine hatchery and, lastly, the BOREA

Partners

Companies

Setec in vivo, La Forêt-Fouesnant [Project Developer]
Ailes Marines, Saint-Brieuc
Altran France – Région Ouest

Research center

ENSTA Bretagne, Brest

Funder

Financé sans aides publiques

Labelisation

19/03/2010

Overall budget

661 K€

mixed research unit at the University of Caen to produce a study of the physical impact of undersea noise on the auditory organs (ciliated cells) of scallop larvae and adults.

Several contracts are also in the pipeline for Altran and Vivo to collaborate on MRE impact studies.

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