

## **SCIENTIFIC MONITORING OF THE IMPACT OF OFFSHORE WINDFARMS ON THE MARINE ENVIRONMENT**

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In 2004 the Belgian government assigned a zone for wind energy in the Belgian part of the North Sea. Since then two companies, C-Power and Belwind, were granted a permit to build and exploit a wind farm on the Thorntonbank and the Bligh Bank, respectively. A third company, Eldepasco, started this year with the environmental permit procedure. The permit includes a monitoring program to assess the impact of the project on the marine environment. The program studies physical, biological and economical-social aspects of the marine environment. MUMM coordinates the monitoring and cooperates with different institutions that have expertise in a specific ecological domain: INBO (birds), ILVO (soft-sediment epibenthos and fish), the Marine Biology Section of UGent (soft-sediment macrobenthos), Renard Centre of Marine Geology of UGent (underwater noise) and MUMM (sea mammals, hard substrate biofouling and fish, radar detection of seabirds, underwater noise and hydrodynamics). For each of these ecosystem features, except for those related to hard substrates, the baseline situation of the Thorntonbank, alongside two reference sites, was described in 2005. In 2008, the same was done for the Bligh Bank and the ecological impact assessment of the C-power project phase 1 (first six turbines) started. Furthermore, preliminary work for a landscape study and a study of flying birds with a specially designed radar system was executed.