

## Assessing the environmental impact of offshore wind farms in the Belgian part of the North Sea

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By 2020, renewable energy sources should account for 13% of the Belgian electricity consumption. Offshore wind farms are expected to contribute about one-tenth of this demand. In May 2004, the Belgian government designated a zone for the construction and exploitation of installations for the production of energy from water, currents or wind. Every proposed project has to acquire a number of federal permits, including the environmental permit. The environmental permit procedure includes an environmental impact assessment (EIA) by the MUMM. The EIA pertains to both direct environmental impacts (such as on biodiversity, fauna, sediments and hydrodynamics) as well as more indirect environmental impacts (such as oil-spill risks and green house gas emissions), and sociological impacts (such as on seascape or effects on other maritime activities). The EIA is based on an environmental impact study (EIS) submitted by the applicant, on the currently available scientific knowledge and on the results of existing monitoring programmes. Since 2004, three offshore wind farm projects, totalling ~880 MegaWatt installed capacity, have been granted environmental permits, with a fourth project currently in the licensing procedure. Every environmental permit comes with a number (site- and project-specific) conditions aimed at mitigating or minimizing the environmental impact of the activities. When certain unavoidable environmental impacts are foreseen during the EIA, a coordinated long-term monitoring programme is drafted to determine the extent of these impacts.