

AN INTEGRATED IMPACT ASSESSMENT OF TRAMMEL NET AND BEAM TRAWL FISHERIES – PROJECT WAKO

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Belgian fisheries are dominated by beam trawls as fishing gear. Beam trawl fisheries have been much debated over their economic and ecological perspectives. Trammel net fishery might be a viable alternative, especially for the Belgian Part of the North Sea. It is a passive fishing method, implying less dependency on fuel and a higher economic potential. However, its environmental impact has not only limitedly been quantified, nor has it been evaluated in direct comparison with other fisheries. Up till today, it remains difficult to conclude in an objective way which type of fishing method is most sustainable for the marine ecosystem. Three research institutes (ILVO, INBO, RBINS/MUMM) and the University of Ghent have therefore initiated a multi-disciplinary research project concerning the environmental impact of trammel net and beam trawl fisheries in the Belgian Part of the North Sea. In a step-by-step process, the ecosystem effects of both fishing methods are being studied on the level of five structural ecosystem components: endofaunal and epifaunal invertebrates, fish, seabirds and marine mammals.

A first step in the process focused on the compilation of information, existing in literature and an investigation of the best practice for combining existing databases and studies in order to compare the effects of both fisheries. These efforts have resulted in the identification of numerous knowledge gaps (WAKO-I, 2006-2008). A second initiative has consequently been set up, WAKO-II, to fill out these gaps. The main objectives to be dealt with are:

- the quantification of the mortality or interaction of five ecosystem components (endofauna, epifauna, fish, seabirds and marine mammals), with beam trawl and trammel net fishery;
- a sensitivity assessment through which key species, sensitive to beam trawl and/or trammel net fishery, will be selected;
- a spatial and/or temporal distribution pattern of the selected, sensitive key species;
- the development of sensitivity maps for beam trawl and trammel net fisheries, based on the spatio-temporal distribution of key species and a comparison with the current fishing effort in the Belgian Part of the North Sea.

The integration of sensitivity maps and the best available information on fishing effort will enable us to spatially map the impact of the two most important Belgian fisheries. This could provide a baseline for the development of policies, leading to an appropriate environmental management and a coastal fisheries management for sustainable beam trawl and trammel net fisheries.

More information will become available throughout the project on www.ilvo.vlaanderen.be/wako.