

MAFCONS: MANAGING FISHERIES TO CONSERVE GROUND FISH AND BENTHIC INVERTEBRATE SPECIES DIVERSITY

Goffin Annelies, Steven Degraer and Magda Vincx

Section Marine Biology, Department of Biology, University of Ghent

Krijgslaan 281 S8, B-9000 Ghent, Belgium

E-mail: annelies.goffin@UGent.be

MAFCONS is an EC funded project that combines six partners with research activities in the North Sea. It is an applied ecology research project that wants to provide fisheries managers with a mathematical 'tool' to adopt a proactive ecosystem management approach. The relationship between fishing, as a disturbance, and the response of the benthic and fish communities, as the change in species diversity, needs to be clearly defined. For it the ecological 'Huston's Dynamic Equilibrium Model' will be tested. This model relates diversity simultaneous to productivity and disturbance. It expresses that a change in diversity caused by a change in disturbance is dependent on the level of productivity. The Huston model and the relevant variables were discussed and evaluated in different workshops. The main objective of this project is to provide a mathematical tool based on the Huston model, that allows to predict the consequences of fisheries management policies on species diversity. Data for diversity and productivity assessment within different ICES rectangles are collected by each partner. The first campaign of the Belgian and Dutch partners coincided with the yearly IBTS survey, executed by the Tridens. At 29 stations Van Veen grab and 2m beam trawl samples were taken. Since October the processing of data started and first benthic species diversity and productivity results are obtained. A second five week campaign is planned for August-September. The first testing of the model starts in February 2005.

Partners:

- University of Wales Swansea (UK): Project co-ordinator
- Fisheries Research Services, Marine Laboratory (UK): Scientific co-ordinator
- Netherlands Institute for Fisheries Research (NI)
- Institute of Marine Research (N)
- Ghent University Marine Biology Section (B)
- Forschungsinstitut Senckenberg Abt. Fur Meeresforschung (D)