

EVALUATION OF A HEALTH MANAGEMENT SYSTEM FOR THE OFFSHORE CULTIVATION OF BLUE MUSSELS (*Mytilus edulis*)

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Offshore production offers a new perspective for shellfish and fish cultivation in the German Bight (North Sea). Due to restrictions of the number of licenses, environmental protection and stakeholder conflicts no expansion of this food production sector within intertidal and subtidal areas of the coastal sea is allowed. The development of offshore wind farms offers a unique opportunity to co-use large marine areas with submerged culture systems for various candidates. These culture systems will, however, certainly cause higher investments costs. Therefore, site criteria of a culture plot should be well known to calculate economic risks.

Hence, a management system covering all relevant parameters concerning the health of the cultivated mussels *Mytilus edulis* (macro- and microparasites, bacteria, viruses and toxic algae) was installed. Combined with modern biodiagnostic tools to analyse the overall health status of cultivated mussels, the potentials of different offshore areas of the North Sea can be described.

Optimal water conditions and a good health status of the candidates will result in better growth rates and higher yields of a high quality product for human consumption. Thus, higher investment costs for offshore culture systems might be compensated.

All methods and parameters applied in the project already concern new EU guidelines for a sanitary survey for all mussel cultivation sites effective from the year 2009 on. To evaluate the significance and comparability of the deployed parameters, the area of investigation was extended along the Atlantic coast from northern Denmark to southern Portugal. Site-Selection-Criteria for these sites are in evaluation. Further the closely related blue mussel *Mytilus galloprovincialis* was included in the analysis to test the effectiveness of all parameters in different species.

