

**Proposed dissertation theme for the Doctoral degree Studies (2018-2022) in
Ecology and Environmental Science at Klaipėda University**

Title	Mussel cultivation in low-saline Baltic coastal waters
Brief description of the topic	The Baltic Sea is already heavily exploited and subject to multiple anthropogenic pressures. On the other hand, the European Blue Growth strategy for further developing and intensifying the utilization of coastal and marine waters. The cultivation of mussels can potentially help to overcome this contradiction. It allows a sustainable food and feed production without adding additional pressure and pollution. Mussel cultivation removes nutrients and increases water transparency. It has the potential to become an environmental friendly measure to reduce eutrophication of Baltic coastal waters. Because of low salinity, mussels cultivated in southern and south-eastern Baltic waters are too small to be suitable for human consumption. However, mussel meal can serve as protein source for agriculture and fish aquaculture. Because of increasing demand and prices, feed mussel cultivation may become a profitable business in the Baltic in future. Major tasks are to a) carry out growth and cultivation experiments, b) assess the ecological interactions, effects on biota and the sediment and c) analyse the availability, behavior and spatial transport of mussel larvae as well as their natural settling.
Requirements for a candidate	The candidate needs the capability to work in an inter-disciplinary research environment, needs very good English language skills and the readiness to work in different countries. The candidate needs to have experience in aquaculture related field experiments.
Research experience in the institution	The supervisor, G. Schernewski, is author of 100+ publications on coastal and marine issues. He is coordinator of the BONUS-project BaltCoast and had coordination tasks in international projects like CHARM, OURCOAST, SPICOSA, AMBER, SUSTAIN or GENESIS. He is involved in several projects on marine and coastal policy development and implementation. Further, he serves as international expert for e.g. EU, EEA, UNEP, UNESCO and HELCOM and is member of the national expert groups. His working groups in Lithuania and Germany are dealing with the topic already for several years.
Existing research infrastructure and support	The research is a cooperation between Klaipėda University and the Leibniz-Institute for Baltic Sea Research, Germany. The research infrastructure, a mussel test farm and connections to commercial mussel farms in the western Baltic are available.
Potential supervisor [contact person for the topic]	Prof. Dr. habil. Gerald Schernewski (gerald.schernewski@io-warnemuende.de) www.io-warnemuende.de/bio-ag-coastal-marine-management.html