



GÖTEBORGS UNIVERSITET

Would you like to contribute to the development of a sustainable aquaculture industry in Scandinavia?

Masters student project available within "NORD-OSTRON", at the Department of Marine Ecology (Tjärnö), University of Gothenburg, Sweden

Project title: *Biophysical characteristics, coordination of production cycles and grow-out technology for *Ostrea Edulis* (flat oyster) cultivation*

Project background: The Department of Marine Ecology at Tjärnö is managing "Nord-Ostron", a three year project within the EU Interreg programme (IVA Kattegat-Skagerrak). The project involves collaboration between Swedish, Norwegian and Danish universities, organizations and enterprises in the marine sector. The aim of the project is to develop trans-national models and tools among participating partners to support marine innovation and business development in the Skagerrak region. The project will develop and implement technologies for farming of the native oyster (*Ostrea edulis*). Nord-Ostron started 1st June 2009, and is ongoing until June 2012. The main goals of the "Nord-Ostron" project are to:

- a) promote collaboration within the three participating countries in order to promote shellfish aquaculture industry development;
- b) advance innovation within the aquaculture sector, including development of new technologies for oyster farming;
- c) develop communications and strategic plans with relevant actors regarding strategies and technologies for further shellfish industry growth.

Three specific needs have been identified in order to develop the oyster aquaculture industry (1) optimize hatchery production of juvenile oysters ("spat"); (2) identify and test techniques for grow-out of mature oysters in coastal waters, and (3) assess potential markets and develop supply chain management in order to maximize the benefits of production.

Project description: This master's student project focuses on (2) the "on-growth" or "grow-out" stage of aquaculture production. After approximately two months of nursery rearing under controlled conditions, juvenile oysters or "spat" are sold to growers and are moved from a hatchery conditions to open coastal waters where they can be cultivated using various techniques such as nets, cages, bags, or trays. The oysters are held in an ongrowth system until they are a harvestable size, which takes approximately 2-3 years in temperate waters. In this project, a student will build on existing experiments being conducted at Tjarno to assess optimal growout conditions, technologies and locations. Specifically, the student will

- analyze existing biophysical information for wild populations of *Ostrea edulis* in Western Sweden (and collate information from research studies elsewhere) in order to discern optimal conditions, technologies and locations for grow-out of flat oysters in W. Sweden;
- investigate and analyze *Ostrea edulis* grow-out techniques in other countries where aquaculture operations have been successful under biophysical conditions similar to those in western Sweden, and using this data, aid in developing parameters for pilot grow-out projects.

Qualifications: We are looking for applicants who possess a bachelor's degree in biology, natural resources management or marine ecology.

Additional information: The project can provide some support for travel abroad and collaboration with other university partners, including the Danish Shellfish Center and University of Life Sciences in Ås, Norway. If you are interested, please contact the project leader Susanne Lindegarth, susanne.lindegarth@marecol.gu.se, tel. +(46) 526-68678, or +(46) 76 1145757.