

Photo-analysis of marine sediment-cores assessing the presence and cover of micro-algae

Internship duration: 4-6 months

Starting date: anywhere between March and May 2023.

In the Dutch North Sea, 320 box core and sediment samples were taken from 4 areas where sand has been extracted for coastal supplementation. These cores are being used to assess the variation in ecology between the area of extraction and an adjacent reference area, in addition to assessing the recovery of the ecosystem over time. The cores will be analysed for their benthic fauna and sediment types, in addition to the presence and cover of micro algae on the surface. Micro algae presence and abundance is being assessed with the use of high quality photographs taken with a colour reference. Micro algal ecology is hypothesized to be correlated with the presence and abundance of benthic fauna, and together these measures can be used to indicate the level of disturbance at a site.

The goal of this student project is to assess the algal cover at each sample site, and to determine what effect sand extraction has on the development and recovery of micro algae. The results of this project will be combined with the benthic fauna analyses and the sediment characteristics to provide a full assessment of the impacts of disturbance caused by sand extraction.

The task(s) of the student will be to:

- 1) Analyse pictures using a computer program, assessing the presence and cover of microalgae.
- 2) (help) Interpret data (what do differences mean, how do differences in algal-cover influence benthic fauna and vice-versa)

The candidate should

- Have an affinity for biology and be prepared to undertake image analysis
- Be analytically minded, determined, and creative in their ability to problem solve and interpret data

Depending on the duration of the analysis, the project can be adjusted or extended with a literature study and/or short field study.

About Eurofins Aquasense

Eurofins Aquasense is a market-leading research lab in aquatic (both marine and fresh-water) ecology located in Amsterdam and Yerseke. With a team of passionate colleagues, we analyse samples and data, and give (policy) advice on ecology, soil- and water-quality. We have undertaken a wide range of projects including assessing the effects on the environment of sand-extraction and –supplementation.

Are you interested, or do you want to know more? Don't hesitate to contact LiesLeewis@eurofins.com or LisavanSon@eurofins.com .