

VACANCY PhD Sustainable Marine Ecosystem Services

<https://www.ugent.be/nl/vacatures/oap/oap-vacature-toevoegen>

Job title: PhD student

Department: Green chemistry and technology

Occupancy rate: 100%

Type contract: limited duration

Closing date: 31/07/2020

Diploma: master bioscience engineering or similar

Job description

We welcome applications for a full-time PhD position within the Research Group Sustainable Systems Engineering (STEN) of the Department of Green Chemistry and Technology, Faculty of Bioscience Engineering, UGent. The PhD student will be appointed in a fellowship position on the project "Sustainable Marine Ecosystem Services (SUMES)".

A short summary of the SUMES project:

A major challenge today is the sustainable management and use of the marine environment, especially as human activities increase and diversify. It is becoming valuable for companies to understand and measure the environmental impact associated with their operational activities (construction of wind turbines, aquaculture, innovative coastal protection systems, etc.) that provide ecosystem services to society, so that they can adapt their design, technologies, etc. towards a more sustainable business, giving them a competitive advantage. However, no comprehensive sustainability assessment methodology is currently available to measure and quantify both the positive and negative impacts of human activities at sea.

The Blue Cluster SUMES project (<https://www.blauwecluster.be/project/sumes>) therefore aims to develop a comprehensive model to assess the impact of human-induced changes on the marine ecosystem and beyond. The model investigates the structure (e.g. biodiversity) and function (e.g. food chains, biogeochemistry) of the marine ecosystem, its capacity to provide goods and services (e.g. carbon sequestration) and the impact of activities on the aforementioned aspects. The model integrates methods and indicators for ecosystem services, risk assessment and life cycle analysis, which will be aggregated at the level of 'endpoints' or 'protected areas', and therefore serves as a decision support model. The model will be based on case studies in the North Sea in collaboration with Flemish companies.

Your tasks will mainly focus on the selection and quantification of life cycle indicators and the link (aggregation) with indicators from risk analysis and ecosystem services, and this for certain case studies, selected in consultation with the companies in the user board group (e.g. DEME, Colruyt, Flemish Fish Auction). Close collaboration with the University of Antwerp (ecosystem expertise), VLIZ (marine data and know-how), and research group Ghentoxlab, UGent (risk analysis experts) is required.

<https://www.marineatugent.be/sumes-project-about-start-developing-impact-assessment-tool-sustainable-ecosystem-services>

Job Profile

Candidates are expected to have an engineering background and/or affinity with sustainability analysis methods such as life cycle analysis. For this project we are looking for someone who is critical, analytical and has a sense of initiative. Affinity with the marine environment is a plus.

Other profile requirements:

- You hold a master's degree in bioscience engineering, or equivalent.
- You are interested in scientific research in order to obtain a doctoral degree.
- You have good writing and presentation skills.
- You have a very good oral and written knowledge of academic Dutch and English.
- Plus point: You have experience in carrying out quantitative and/or qualitative research and in collecting data independently.

How to apply

Please send an email, no later than **July 31st 2020**, to:

- Prof. Dr. ir. Jo Dewulf (Jo.Dewulf@Ugent.be) AND
- Dr. ir. Sue Ellen Taelman (SueEllen.Taelman@ugent.be)

The subject of the mail should contain the following title: 'Application SUMES'.

The following documents must be attached: letter of motivation, CV, a copy of the highest degree and a summary of the results of the studies.

Students graduating in September 2020 are welcome to apply.

Selection procedure:

- Examination of attachments (CV, motivation letter)
- Selection interviews

Planned starting date doctoral position: October 1st, 2020.

You will be recruited on the basis of competencies. Qualities of people are decisive, regardless of gender, religion, ethnic origin, age, sexual orientation or any disability.

For more information about the content of this position and the SUMES project, please contact us:

Dr. ir. Sue Ellen Taelman - Tel. +32 (0)9 264 58 71 - SueEllen.Taelman@ugent.be