

PhD Collegium for integrated coastal ecosystem and climate change research

Our oceans are at the heart of the global climate and biodiversity problem. These problems are intertwined and cannot be viewed through separate lenses. Coastal ecosystems are rich in biodiversity, productive and dynamic in terms of ocean-atmospheric carbon fluxes and have been proposed as part of the ocean-based solutions to combat climate change. Nevertheless, we lack a comprehensive understanding of how coastal biodiversity contributes to carbon sequestration and atmospheric feedbacks across coastal habitats in time and space.

The University of Helsinki is strengthening its efforts to conduct ground-breaking new science that links the biodiversity of coastal habitats in time and space to carbon cycling, sequestration and greenhouse gas (GHG) emissions. As part of a new collaborative cross-institutional effort we are recruiting 6 new PhD-students, funded by the [Nottbeck](#) and Onni Talas Foundations, in the following fields (email addresses of key contacts):

1. Macrophyte ecology (biodiversity, carbon capture) (camilla.gustafsson@helsinki.fi)
2. Benthic ecology (biodiversity, carbon cycling) (alf.norkko@helsinki.fi)
3. Pelagic ecology (biodiversity, carbon cycling) (aleksandra.lewandowska@helsinki.fi)
4. Sediment biogeochemistry (carbon cycling, carbon inventories) (tom.jilbert@helsinki.fi)
5. Pelagic biogeochemistry and GHG emissions (christoph.humborg@su.se)
6. Air-sea interactions and atmospheric measurements of (a) GHG using Eddy Covariance techniques (ivan.mammarella@helsinki.fi) or (b) VOC's and aerosols; CarbonSink+ (ekaterina.ezhova@helsinki.fi, markku.kulmala@helsinki.fi)

PhD students will pursue their own individual projects, but within a larger interdisciplinary context. The PhD students will have the benefit of working together in a larger collaborative group, with joint sampling campaigns and experimental work at [Tvärminne Zoological Station](#) and be supported and co-supervised by a team of experienced, senior scientists representing different science disciplines. Successful applicants will be enrolled at the Faculty of Biological and Environmental Sciences or at the Faculty of Science, University of Helsinki. Detailed research plans will be drafted in collaboration with the supervisors and other consortium members.

Key supervisors and supervisory teams include:

Camilla Gustafsson, Alf Norkko, Anna Villnäs, Joanna Norkko, Aleksandra Lewandowska, Eero Asmala, Tom Jilbert ([Marine Ecosystem Research Group](#); MERG), Christoph Humborg (MERG & Baltic Sea Centre, [Stockholm University](#)) & Ivan Mammarella, Anne Ojala, Ekaterina Ezhova & Markku Kulmala at the [Institute for Atmospheric and Earth System Research](#) (INAR).

The PhD collegium will be coordinated by professors Alf Norkko & Christoph Humborg, and the focal location for field studies is Tvärminne Zoological Station. The collegium of students will also benefit from being part of a strategic partnership ([Baltic Bridge](#)) between the University of Helsinki and the Baltic Sea Centre at Stockholm University (SU) that provides a larger collaborative framework and includes ecosystem modelling support from the Baltic Nest Institute at SU. By combining our expertise, we will significantly advance the interdisciplinary science that is crucial for safeguarding our future coastal ecosystems.

Ideal candidates are highly motivated, innovative and show enthusiasm for scientific work and can work both independently and in close collaboration with fellow peers within a larger research team.

The candidates should have a MSc degree or equivalent in a scientific discipline relevant to the field (e.g. marine biology, ecology, biogeochemistry, chemistry, physics) and are expected to have excellent communication skills and be fluent in English. Previous experience in field and lab work and data analysis are desired qualities, but qualifications for the different positions will differ. For further details on topic-specific requirements, please email the key contact.

Successful applicants will receive a 4-year scholarship funded by the Walter and Andrée de Nottbeck Foundation and the Onni Talas Foundation. The personal grant amounts to 1950 €/month (tax-exempt grant) including a compulsory pension insurance fee that the student has to pay (<https://www.mela.fi/en/grant-and-scholarship-recipient>).

The doctoral education at the University of Helsinki is carried out in specific doctoral schools. In addition to research work, the [doctoral degree](#) includes studies that are specific to the PhD student's discipline or research field, training in obtaining transferable skills and career orientation and guidance. More information on PhD studies at the University of Helsinki can be found here: <https://www.helsinki.fi/en/research/doctoral-education>

The application should include:

- motivation letter with a summary of the applicant's scientific background and interests
- CV (max. 2 pages)
- two reference letters

Please email the application in one pdf-file to the respective contact person (see below) with cc to Camilla Gustafsson. The deadline for applications is March 30, 2021 (or until positions are filled) and the proposed start date for the research is as early as possible, depending on the availability of appropriate candidates.

For more information on the specific PhD-positions, please contact:

- Camilla.gustafsson@helsinki.fi (macrophyte ecology)
- Alf.norkko@helsinki.fi (benthic ecology)
- Aleksandra.lewandowska@helsinki.fi (pelagic ecology)
- Tom.jilbert@helsinki.fi (sediment biogeochemistry)
- Christoph.humborg@su.se (pelagic biogeochemistry and GHG emissions)
- Ivan.mammarella@helsinki.fi (air-sea interactions and atmospheric measurements of GHG)
- ekaterina.ezhova@helsinki.fi, markku.kulmala@helsinki.fi (VOC's and aerosols; CarbonSink+)

