



Umeå University

## PhD position in ecology/physical geography with focus on Arctic terrestrial ecosystems

Institutionen för ekologi, miljö och geovetenskap

Apply

before

**2022-04-25**

- Temporary position longer than 6 months
  - 100%
  - Umeå

**The Department of Ecology and Environmental Science (EMG) at Umeå University, Sweden, invites applicants for PhD position in ecology or physical geography, with a focus on Arctic terrestrial ecosystems. The position is expected to start 1st of July, 2022 or according to agreement. Application deadline is 25th of April, 2022.**

### **Project description**

Our planet is getting warmer, the Arctic is getting greener, shrubs and trees are growing better and moving up-slope. We can observe these vegetation changes on the ground and in satellite imagery, but we still need a better understanding of the dynamic nature of these changes. You can bring some light into this!

The position runs over four years and is based at Umeå University. At the Department of Ecology and Environmental Science we provide an active research environment on Arctic and boreal vegetation research with an extended group of 4 PIs and over 10 PhD students and Postdocs. The modeling activity will be in collaboration with the Integrated Science Lab (IceLab) at Umeå University. The supervisors will be Dr. Matthias Siewert and Professor Johan Olofsson.

This PhD position offers you the opportunity to research vegetation trends in the Arctic. We will investigate how the Arctic is getting greener, what factors may cause stability, what factors may cause rapid change or even alternative stable states. We will map vegetation using remote sensing data from UAVs (drones) and satellites, and do fieldwork in the Swedish mountains for ground-truthing of vegetation plots and soil samples. Furthermore, we want to investigate and develop conceptual, GIS and numerical models that can confirm and predict the patterns we see over time in the remote sensing imagery.

## **Qualifications**

To be admitted for studies at third-cycle level the applicant is required to have completed a second-cycle degree, or completed course requirements of at least 240 credits, of which at least 60 credits are at second-cycle level, have an equivalent education from abroad (for example a Master's degree), or have equivalent qualifications.

To fulfil the specific entry requirements to be admitted for studies at third-cycle level within the subjects of ecology the applicant is required to have completed courses within a first-cycle subject relevant to ecology or physical geography comprising at least 120 credits. At least one course at second-cycle level in a subject that is central to the doctoral student's planned specialization shall have been completed, as well an independent piece of work (degree project) with relevant specialization of at least 15 credits.

The recruitment procedure for the position is in accordance with the Higher Education Ordinance (Högskoleförordningen Chapter 5 and 7). The requirements should be met at the time of acceptance to doctoral studies.

We are looking for a person with interest in remote sensing and GIS analysis of arctic terrestrial ecosystems. The successful applicant should further have good ability to write and speak in English, creativity, power of initiative, independence, good interpersonal skills and ability to collaborate. Knowledge of terrestrial ecosystem dynamics (e.g. treeline, shrubification), good knowledge of methods used in GIS or remote sensing of natural ecosystems, alternative stable state theory, studies of vegetation changes and time series, experience with field work, and experience with computational analyses and modeling are all merits.

The evaluation will be based on the application, referee judgments and interviews.

## **Terms of employment**

The employment is expected to result in a doctoral degree and the main assignment for the doctoral student is thus to be part of the research education, which includes participation in the described research project but also relevant course-work. Teaching and other departmental work (up to a maximum of 20%) can be included. The employment is limited to four years at full time or up to five years if teaching and other departmental work is performed. The salary is fixed according to the established salary level for doctoral students.

## **How to apply**

You apply through our recruitment system on April 25, 2022 at the latest. The application, written in English or Swedish, should include:

1. A short letter (max. 1.5 pages) description of why you are interested in and suitable for the position.
2. A short description (max. 500 words) how you would develop the research project.
3. Curriculum vitae (CV)
4. Certified copies of degrees and certificates from higher education
5. List of completed university courses and the grades
6. Copy of degree thesis and possibly other scientific publications
7. Names and contact information of 2-3 reference persons

The documents should be in MS Word or PDF-format.

**Contact**

If you have questions regarding the position, please contact Matthias Siewert, [matthias.siewert@umu.se](mailto:matthias.siewert@umu.se).

**The Department of Ecology and Environmental Science (EMG)** is both a research and teaching department situated within the Umeå University campus. The department has approximately 120 staff members, of which 24 are PhD students. For more information, visit <https://www.umu.se/en/department-of-ecology-and-environmental-science/about-the-department/>.

**Admission**

2022-07-01 or according to agreement

**Contact**

Matthias Siewert

090-7867278

**Registration number**

AN 2.2.1-578-22

**Salary**

Monthly salary

**Union representative**

SACO

090-7865365

ST

090-7865431

SEKO

090-7865296

**Apply**

before

**2022-04-25**