



**Postdoctoral Fellow in  
Arctic plant-soil interactions  
at the [Department of Environmental Science](#).**

**Ref. No. SU FV-1154-22**

**Closing date: 15 May 2022**

The Department of Environmental Science is one of the biggest departments at the Faculty of Science. The department consists of four units with more than 170 researchers, teachers, doctoral students and technical/administrative staff from over 30 countries. Research and teaching focuses on chemical contaminants, atmospheric science, biogeochemistry and (eco)toxicology. As an employee at the Department of Environmental Science you will be part of a dynamic environment with research in leading research areas and with a strong international profile.

Research in the Biogeochemistry Unit focuses on the biogeochemical cycles of carbon, nitrogen and metals in soils, fresh water bodies, and the ocean. The unit has a strong and long-standing research focus on the impact of global warming on Arctic environments with the overarching goal to improve the systems understanding and future projections of biogeochemical cycles in this system.

The Biogeochemistry Unit is now seeking a postdoctoral fellow to complement our team, focusing on the impact of plant-soil interactions on Arctic carbon cycling.

**Project description**

Climate warming is rapidly changing Arctic environments. Consequences include permafrost thaw, increased microbial degradation of soil organic matter to CO<sub>2</sub> and other greenhouse gases, but also widespread stimulation of plant primary production and CO<sub>2</sub> uptake, deeper plant rooting and shifts in vegetation distribution. In addition, plants can accelerate decomposition of soil organic matter decomposition near their roots to CO<sub>2</sub> ("rhizosphere priming effect"), and this effect might substantially enhance Arctic CO<sub>2</sub> emissions (Keuper & Wild et al. 2020 *Nature Geoscience*).

The advertised position will be associated with the new ERC Starting Grant project PRIMETIME that aims to quantify total plant impacts on CO<sub>2</sub> emissions from a warming Arctic, using a combination of experimental and modeling approaches.

**Main responsibilities**

The postdoctoral fellow will be responsible for developing and executing experiments targeting plant-soil carbon allocation and plant impacts on soil organic matter stabilization and destabilization. The work will include sampling and experimental campaigns at Arctic field sites, and laboratory experiments with living plants in Stockholm, and apply a range of isotopic tools (<sup>13</sup>C-labeling, <sup>14</sup>C-dating). For more specific information on the planned research, please contact Ass. Prof. Dr. Birgit Wild (birgit.wild@aces.su.se).

**Qualification requirements**

Postdoctoral positions are appointed primarily for purposes of research. Applicants are expected to hold a Swedish doctoral degree or an equivalent degree from another country.

**Assessment criteria**

The degree must have been completed at latest before the formal employment decision is made, but not necessarily by the deadline for applications. Please indicate in your application when you expect to finish your doctoral degree in this case. The degree must have been completed no more than three years before the closing date. An older degree may be acceptable under special circumstances (contact Dr. Birgit Wild for more information). Special reasons refer to sick leave, parental leave, elected positions in trade unions, service in the total defense, or other similar circumstances as well as clinical attachment or service/assignments relevant to the subject area.

In the appointment process, special attention will be given to research skills. Special emphasis is put on the applicant's knowledge and skills within the subject area, ability to express themselves verbally and in writing, analytical aptitude, creativity in scientific thinking, initiative and independence, and a capacity



for working together with others. Previous experience working in the Arctic, with soils and plants, with field experiments, with laboratory plant experiments, with isotopic tools to address biogeochemical questions, and with connecting observational data and modeling are all beneficial. The evaluation will be based on the quality and ambition of previous work, scientific publications, references, a cover letter motivating the candidate's interest, and interviews.

We are seeking a highly motivated person with a strong interest in how fine-scale, plant-soil-microbial interactions control large-scale greenhouse gas fluxes. The work will integrate components of plant science, soil science, and microbiology, field, laboratory, statistical and possibly modelling work, and we are looking for a candidate with the motivation to connect these components. A background in e.g. Environmental Sciences, Biology, or Geosciences would be highly suitable. Collaborative skills and proficiency in English are required.

#### **Terms of employment**

The position involves full-time employment for a minimum of two years and a maximum of three years, with the possibility of extension under special circumstances. We aim for a start date around fall 2022. Stockholm University strives to be a workplace free from discrimination and with equal opportunities for all.

#### **Contact**

Further information about the position can be obtained from Ass. Prof. Dr. Birgit Wild, [birgit.wild@aces.su.se](mailto:birgit.wild@aces.su.se).

#### **Union representatives**

Ingrid Lander (Saco-S), telephone: +46 708 16 26 64, [saco@saco.su.se](mailto:saco@saco.su.se), Alejandra Pizarro Carrasco (Fackförbundet ST/Lärarförbundet), telephone: +46 8 16 34 89, [alejandra@st.su.se](mailto:alejandra@st.su.se), and [seko@seko.su.se](mailto:seko@seko.su.se) (SEKO).

#### **Application**

Apply for the position at Stockholm University's recruitment system. It is the responsibility of the applicant to ensure that the application is complete in accordance with the instructions in the job advertisement, and that it is submitted before the deadline.

Please include the following information with your application

- Your contact details and personal data
- Your highest degree
- Your language skills
- Contact details for 2–3 references

and, in addition, please include the following documents

- Cover letter
- CV – degrees and other completed courses, work experience and a list of publications
- Research proposal (no more than 3 pages) describing:
  - why you are interested in the field/project described in the advertisement
  - why and how you wish to complete the project
  - what makes you suitable for the project in question
- Copy of PhD diploma
- Letters of recommendation (no more than 3 files)
- Publications in support of your application (no more than 3 files).

The instructions for applicants are available at: [How to apply for a position](#).

#### **You are welcome to apply!**

URL to the recruitment system and application for this position:

<https://www.su.se/english/about-the-university/work-at-su/available-jobs?rmpage=job&rmjob=17590&rmlang=UK>