



# PhD position on biodiversity in life-cycle assessments

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## Department of Energy and Technology

At the Department of Energy and Technology, research and education are conducted focusing on how agriculture can contribute to a sustainable society. We have extensive expertise in technology and systems for sustainable production of food and bioenergy, including optimal nutrition circuits and logistics systems. Within the field of methodology we have extensive competence in System Analysis including Environmental Systems Analysis and LCA, as well as Biometrics (statistics and mathematics with applications in biological systems) and Automation.

## Assessment of biodiversity in LCA

### Description:

We are looking for a person to work on developing ways to measure the impacts on biodiversity from food production. Environmental product footprinting of food based on e.g. life cycle assessment is widely used in decision making, but the environmental aspects included are often limited to the climate impact. This is too narrow a perspective and risks steering in the wrong direction - more aspects need to be included. As agriculture is a main driver of biodiversity loss, neglecting to include biodiversity as an impact category for food is especially problematic.

Available methods to include impacts on biodiversity in LCA are less advanced than those used to assess the climate impact and more research in this area is urgently needed. In this project, we will establish biodiversity characterisation factors for Sweden that consider species richness, functional diversity, landscape effects and different reference situations, and test these in case studies comparing organic and conventional crop production, and extensive and intensive beef production. Large Swedish biodiversity datasets available from environmental monitoring systems, peer-reviewed studies and yet unpublished data will be consolidated and used for this purpose. The project thus aims at making biodiversity data useful in current decision making at policy, business and consumer level, and at advancing methods for doing so, hence contributing to generalisable scientific advances in the field. This interdisciplinary project will be carried out by leading LCA experts and ecologists, working closely with a large stakeholder group.

## Qualifications:

We are looking for a highly motivated candidate with a master's degree in ecology, biology, agronomy, technology, sustainable food systems, sustainable development or similar. Experience of working with different types of data analysis e.g. statistical analyzes, life cycle assessment, modelling or programming are an advantage as well as knowledge of agriculture and advanced knowledge in ecology and biodiversity. A great interest in sustainability assessments in general is also an advantage. You need to have very good knowledge in formulating yourself in writing in English and preferably Swedish, but the latter is not a requirement. Great emphasis is placed on personal qualities, such as the ability to work independently, flexibility, the ability to prioritize and meet deadlines, curiosity and willingness to learn, as well as a good analytical and problem-solving ability

## Place of work:

Uppsala.

## Forms for funding or employment:

Employment (4 years).

## Starting date:

According to agreement.

## Application:

Click the "Apply" button to submit your application. The deadline is 2022-04-20

To qualify for third-cycle (Doctoral) courses and study programmes, you must have a second-cycle (Master's) qualification. Alternatively, you must have conducted a minimum of four years of full-time study, of which a minimum of one year at second-cycle level.

Applicants will be selected based on their written application and CV, degree project, copies of their degree certificate and transcript of records from previous first and second-cycle studies at a university or higher education institution, two personal references, and knowledge of English. More information about the English language requirements can be found here: [www.slu.se/en/education/programmes-courses/doctoral-studies/new-doctoral-students/english-language-requirements/](http://www.slu.se/en/education/programmes-courses/doctoral-studies/new-doctoral-students/english-language-requirements/)

Please note that applicants invited to interview must submit attested copies of their degree certificate, a transcript of records from previous first and second-cycle studies at a university or higher education institution. Applicants who are not Swedish citizens need to submit an attested copy of their passport's information page containing their photograph and personal details.

Read about the PhD education at SLU at [www.slu.se/en/education/programmes-courses/doctoral-studies/](http://www.slu.se/en/education/programmes-courses/doctoral-studies/)

Academic union representatives:

<https://internt.slu.se/en/my-employment/employee-associations/kontaktpersoner-vid-rekrytering/>

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SLU has just over 3,000 employees, 5,000 students and a turnover of SEK 3 billion. The university has invested heavily in a modern, attractive environment on its campuses.

[www.slu.se](http://www.slu.se)

### **Contact person**

Elin Rööf  
Senior Lecturer  
elin.roos@slu.se

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