

PhD Program in Plant Sciences: Green Labs – Sustainability issues in the context of Research

Module Coordinator:

Célia Baroux, Department of Plant and Microbial Biology, University of Zürich

Duration: 12–36 (max) months during the PhD study, at least 30 working hours

Credit Points: 1-2 ECTS (30-60 working hours)

Concept and objectives of the module

The University of Zürich wants to be Carbon Neutral by 2030 in research, education and public relations (<https://www.sustainability.uzh.ch/en.html>) and is developing measures to achieve this goal. In the meantime, every member of UZH can help to accelerate the process by identifying resource waste in daily work and developing sustainable strategies against it. As scientists we should address in our daily working business; how we can optimize our lab practice and lab environment to make research CO₂ neutral in a near future!

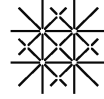
Recently, the group *Green Labs UZH* has emerged, supported by the sustainability office UZH. *Green Labs UZH* federates ideas and scientists who wants to improve the ecological impact of research. The Green Lab Module aims to integrate PhD students of Plant Sciences to the Green Labs UZH community. In this module, doctoral students will be further trained on sustainable research, in the form of development or implementation of scalable projects. This can be the development of a concept, the creation of a survey, the analysis of available data to study the impact of a particular practice, the provision of concrete recommendations, or the implementation of a new practice in the laboratory validated by the mentors in charge.

Learning Objectives

- Awareness of sustainability issues in research
- Understanding the interrelations between system levels: research needs, research product availability, working culture, ecological footprint (Systems thinking) and getting skills in practical problem solving
- Ability to find and use reliable data and documentations (Information competency)
- Communication and networking tools for future civic engagement (transferable skills)

Prior knowledge/reading: Get familiar with content at:

- www.sustainability.uzh.ch
- Posts at twitter.com/greenlab_zh
- www.labconscious.com/online-tools-for-green-labs



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Module Structure

- (1) Contact the Module coordinator. Indicate if you already have a project idea.
- (2) Get assigned to a supervisor - The modul coordinator seeks for the best suited supervisor at the host institution, the UZH Sustainability office, MNF Sustainability Committee or Green Labs Zürich working group.
- (3) Contact the PSC PhD coordination office for final approval
- (4) Project Type I: Analysis of the environmental impact of a specific research practice followed by a plan of concrete measures to improve it. The study can be a survey of a current practice but must be quantified (environmental and financial cost per capita or research unit) and supported by identifiable sources. The plan of concrete measures should include a description, their cost and time necessary for implementation
- (5) Project Type II: Implementation of a previously planned Green Lab project. In this case, the project consists in implementing the concrete measures proposed in a Green Lab project Type I and approved, eventually financially supported, by the host institution.

Individual Program and Assessment:

To complete the module and gain their credit point(s), students will be required to :

- Establish a Green Lab project plan: objective, approach, potential outcomes, timeline.
- Get approval from your supervisor and the *Green Lab UZH* group (contact #greenlab_zh on Twitter, join slack channel Green Labs Zürich)
- Carry-out the project with deadline by end of PhD and regular interim feedback meetings from the *Green Lab UZH group* and supervisor. Details of the timeline and target will be jointly decided by the student and supervisor. At least two interim meetings and more on demand should take place.
- Participate actively to the meetings of the Institute`s sustainability and *Green Lab UZH* groups
- Submit a 2-3 pages project report containing: background information; project objectives; approach; results; relevance and impact (both ecological and financial) for the host department and/or the university; perspectives.
- Dissemination of Project results: The report will be published on the UZH Sustainability Project Database and on the Green Lab Zürich Twitter account #greenlab_zh

Infobox

Greenlab Zurich collaborates with the university`s sustainability teams to spread awareness about more sustainable laboratory practices. They promote ecological, economic, and social sustainability in laboratories by organizing seminars, workshops and social media presence. The MNF Greenlabs Group works on sustainable laboratory practices, in terms of waste and energy consumption, conducts workshops and offers funding strategies by their Make-More-Sustainable Grant Program (MIMS, mnf.uzh.ch/de/fakultaet/policies/nachhaltigkeit.html).