



Job Advertisement Agroscope

Title

Postdoc "Ecohydrological modelling"

Introduction

An increase in extreme events such as droughts and heavy rainfall potentially aggravate conflicts between agricultural water use and other human and ecological demands for water resources. Increasing the natural water retention capacity can help to defuse these conflicts and at the same time strengthen climate mitigation, biodiversity and food security. A variety of measures may be taken to increase both water and nutrient retention in agricultural systems. However, there are still large gaps in knowledge about the effectiveness of such measures depending on local biogeoclimatic conditions. Especially with regard to future climatic changes, it is uncertain to what extent they can contribute to what extent they can contribute to make production systems more resilient to increasing drought stress. The need to fill in these gaps is the starting point of the H2020 project OPTAIN (OPTimal strategies to retAIN and re-use water and nutrients in small agricultural catchments across different soil-climatic regions in Europe, www.optain.eu).

Embedded in the framework of OPTAIN, we offer a Postdoc position that aims at gaining insights into the possibilities to increase the resilience of Swiss production systems to future climate extremes through adaptations in soil and crop management.

Tasks

- Literature review on field-scale water retention measures
- Processing of field experimental data for calibration/validation
- Calibration and validation of the ecohydrological model SWAP, simulation experiments
- Presentation of project results at national and international conferences
- Participation in European project meetings, project reporting and scientific publications

Requirements

- PhD in environmental sciences, engineering, or applied mathematics
- Very good knowledge of soil water hydrology and plant growth processes
- Experience in environmental modelling and model development
- Experience in processing and statistically analysing diverse sources of environmental data
- Excellent programming skills (R, Python, Fortran, C)
- Demonstrated ability to write publications in scientific journals
- High level of self-motivation, good communication and organisational skills are essential
- Knowledge of two official Swiss languages and English is required

Information about Agroscope

Agroscope is the Swiss federal centre of excellence for research in the agriculture and food sector. Its researchers carry out their work at a number of sites in Switzerland. Headquartered in Bern-Liebefeld, Agroscope is attached to the Swiss Federal Department of Economic Affairs, Education and Research EAER.

The research group "Climate and Agriculture", situated in Reckenholz near Zurich, carries out research on climate impacts and adaptation possibilities, as well as on greenhouse gases and mitigation options in agriculture.

We offer a competent and interdisciplinary working environment, allowing a high level of flexibility and good social benefits.

Place of work

8046 Zürich-Affoltern ZH

Pay grade

According to standards of the Swiss National Science Foundation

Level of employment

80 – 100 %



Contact

If this position interests you and you fulfil the profile of requirements, we look forward to receiving your online application (motivation letter, CV, diplomas) including contact information of 2-3 referees here: human.resources@agroscope.admin.ch, ref. nr. : 46243.

Additional information can be obtained from Dr. Annelie Holzkämper, team leader «Climate Risks and Adaptations», annelie.holzkaemper@agroscope.admin.ch, Tel. +41 58 468 75 16 (please do not send applications to this email address).

Application deadline: 23.07.2021. Start: October 1, 2021 or by arrangement. The contract duration is for one year with the possibility to extend by six months or more.