Master Thesis

Monitoring Biodiversity in rice fields in Switzerland

Background

In Switzerland and generally in the temperate climate zones north of the Alps, little is known about rice cultivation on temporary wet areas. In initial tests conducted by Agroscope (2017 to 2019), it was shown that paddy-rice can be harvested in the Swiss midlands (yield of paddy rice: 3-8 t ha-1) and that the rice parcel simultaneously provided a habitat for various target species (Jacot et al., 2018). Thus, tree frogs, natterjack toads, azure damselflies and snipes can be found in the fields. Following the successful pilot trials, systematic sampling will now be carried out on 10 rice fields in 2020. Recordings for amphibians, birds, bats, dragonflies, ground beetles and plants are planned. The recording methods of different groups will be compared, 1) classical field methods and 2) automatic acoustic recordings and determination.

Research question

Are paddy rice fields in Switzerland supporting agricultural biodiversity (amphibians, birds, bats, dragonflies, ground beetles)?

Scientific fields

agro-ecology, biodiversity conservation, ecosystem functioning, acoustic monitoring

Methods

- Field work (recording the groups of your interest)
- Data analysis using R
- Writing thesis

Time: Starting date: Spring 2020 or beyond

Duration: flexible, ideally 6 -12 months

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