
2 Postdoc positions in Invasion Biology

Background: The recently developed protocols EICAT and SEICAT allow classification of alien taxa according to the magnitude of their environmental and socio-economic impacts. EICAT has been recently adopted by the IUCN as a global standard for impacts of alien taxa (<https://www.iucn.org/theme/species/our-work/invasive-species/eicat>). However, although they allow adding a confidence score to each assessment, the consideration of this uncertainty in the final classification is currently inadequate. This leads to inconsistencies in impact assessments among assessors and might bias classifications for prioritizing alien species for management. Moreover, S/EICAT only consider detrimental impacts, but some alien species also have beneficial impacts which are currently ignored.

Project 1: Uncertainty in environmental and socio-economic impact assessments of alien taxa. Develop solutions for the treatment of uncertainty. The tasks of the postdoc will include: (1) Development of a publicly available database of alien species impacts that can be used for future assessments of all alien taxa; this database should be made available online and preferentially be hosted by a prominent international organization (e.g. IUCN). (2) S/EICAT assessments of European alien beetles as a model group, with the implementation of approaches for the treatment of uncertainty, and the analysis of these assessments to identify factors explaining context dependence in impact magnitudes.

Project 2: Evaluating the positive and negative impacts of invasive species on biodiversity and ecosystem services. Adaptation of impact assessment protocols (S/EICAT) to consider not only detrimental but also the beneficial impacts of alien species on biodiversity and ecosystem services. Test the adaptation of S/EICAT on selected alien species across a wide range of taxa and habitats. This task will also compare the outputs of protocols applied at multiple scales (continental vs. local); and use different sources of information (literature review vs. empirical field data).

Work environment. The University of Fribourg is a medium-sized Swiss university and provides a stimulating interdisciplinary work environment with a strong international orientation. Quality of life is very high in Fribourg, not the least due to its picturesque medieval town parts and proximity to the Alps. The Bacher lab (<https://www3.unifr.ch/bio/en/groups/bacher>) has an international reputation for high profile research on alien species, is globally well connected and was instrumental in the development of the S/EICAT protocols.

Education. The ideal candidate holds an excellent PhD degree in ecology or related discipline. Previous experience with invasion science and database management is advantageous. S/he should have a deep interest in interdisciplinary collaboration. The scientific working language is English. Knowledge of spoken French or German would be advantageous to live in Fribourg, a bilingual town, but is not mandatory.

Position. Entrance starting at earliest March 2019. The positions are initially limited to one year, but can be extended to 3 years. The positions are partly funded by the Swiss National Science Foundation and partly by the University of Fribourg. Gross salary depends on previous experience, but will be around CHF 70'000 per year.

Application. A letter of motivation, CV, and contact information for two reference persons should be sent as a single attached pdf file to sven.bacher@unifr.ch by 10. December 2018.

Key Words. Alien species, impact assessments, beneficial and detrimental impacts, uncertainty, S/EICAT
