

“Prediction of ecosystem services and functional diversity in grassland ecosystems by hyperspectral readings”



Intensified practices in grasslands increase the forage provision as ecosystem service while biodiversity and other ecosystem functions may be negatively affected. Remote sensing technologies, such as hyperspectral readings in combination with machine learning or deep learning models, enable sensing and prediction forage provision, plant traits or vegetation classification in a non-destructive way.

These methods are used in the **SeBAS** project (www.zfl.uni-bonn.de/research/projects/sebas) to improve the **mechanistic understanding of the effects of land use on the relationship between biodiversity – ecosystem functions – and ecosystem services**. The SeBAS project is part of the Biodiversity Exploratories, a research project with permanent grassland and forest observation areas in southwest, central and northeast Germany.

We offer an **Internship in Remote Sensing of Grassland Ecosystems**
within the SeBAS Project at the Biodiversity Exploratory areas

The internship consists of a 3-week fieldtrip together with the SEBAS research team to collect hyperspectral readings. After the data collection, you will process the data and set up models with machine learning or deep learning methods in R.

There is also the possibility to use the data for a **Bachelor's or Master's thesis**.

The fieldtrip will take place from September 6th – 24th, 2021.

**Would you like to use remote sensing technologies in grassland ecology research?
Are you interested in using artificial and machine learning methods?**

Then contact Florian Männer (florian.maenner@uni-bonn.de) until August 6th, 2021.