



Dürre Effekte im Bayerischen Grünland

Studiengang : B.Sc. / M.Sc. Geoökologie,
M.Sc. Biodiversität & Ökologie.

Ziele: 2018 und 2019 waren extrem trockene Jahre. Da Grünland sehr feuchtebedürftig ist untersuchen wir hier die Effekte der Dürre mit Hilfe der Fernerkundung und vor Ort.

Sprache: deutsch / englisch.

Beginn : Sommer 2020.

Ort: Nordbayern.

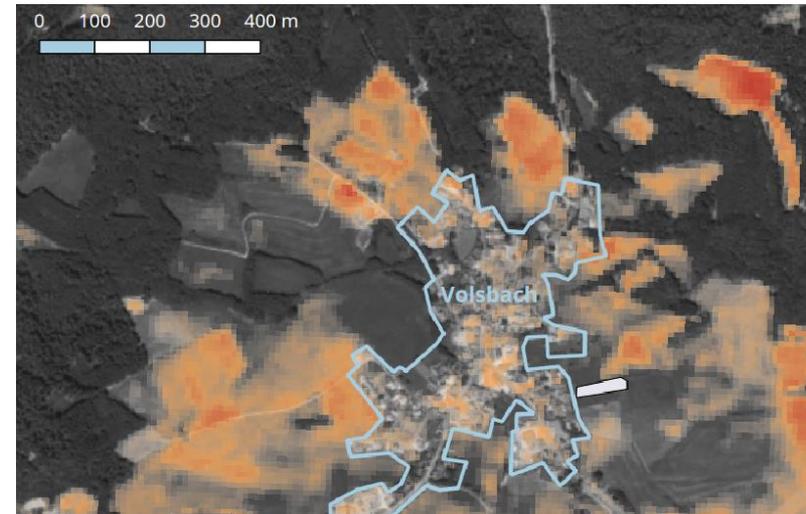
Methodik:

Field Work Data Mining

Remote Sensing Time Series

Modelling **Botanik**

Experimental Zoologie



Erforderliche Kenntnisse :

Pflanzenbestimmung

Fernerkundung (M.Sc.)

R (M.Sc.)

Betreuer:

Beierkuhnlein, Weiser



Drought effects on Bavarian Grasslands

Study programs: B.Sc. / M.Sc. Geoökologie,
M.Sc. Biodiversität & Ökologie, M.Sc. GCE

Aims: 2018 and 2019 were extremely dry years.
Grassland is very sensitive to drought. We will
compare based on Remote Sensing grasslands that
were differently affected by drought.

Language: deutsch / englisch.

Start: Summer 2020.

Location: Bavaria.

Methods:

Field Work

Data Mining

Remote Sensing

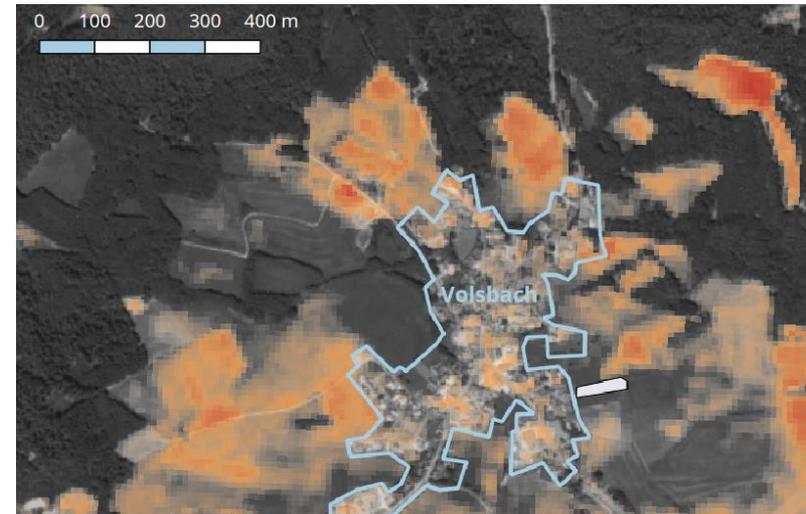
Time Series

Modelling

Botany

Experimental

Zoology



Skills needed:

Species knowledge

Remote Sensing (M.Sc.)

R (M.Sc.)

Supervisors:

Beierkuhnlein, Weiser



Wechselwirkung zwischen Biodiversität und Klimawandel

Studiengänge: B.Sc. / M.Sc. Geoökologie,
M.Sc. Biodiversität & Ökologie.

Ziele: In dem seit 1996 laufenden Experiment wird der Zusammenhang zwischen Artenvielfalt / Produktivität / Klimawandel untersucht. Dazu wird auf 64 Plots die Biomasse der Arten ermittelt.

Sprache: deutsch / englisch.

Beginn: April/Mai 2020.

Ort: Lindenhof, Bayreuth.

Methodik:

Feldarbeit

Remote Sensing

Modellierung

Experiment

Data Mining

Zeitreihen

Botanik

Zoologie



Vorkenntnisse:

Artkenntnisse

Pflanzenbestimmung

R für M.Sc.

Partner: LBV

Betreuer: Beierkuhnlein, Stahlmann



Long-term trends in Biodiversity – Climate interactions

Study programs: B.Sc. / M.Sc. Geoökologie,
M.Sc. Biodiversität & Ökologie, M.Sc. GCE

Aims: In this experiment that is running since 1996 interactions between biodiversity / climate change / and productivity will be disentangled.



Language: German / English.

Start: April/May 2020.

Location: Lindenhof, Bayreuth.

Methods:

Field Work

Remote Sensing

Modelling

Experimental

Data Mining

Time Series

Botany

Zoology

Skills needed:

Species knowledge

Plant determination

R (for M.Sc.)

Partners: LBV

Supervisors:

Beierkuhnlein, Stahlmann



Funktionelle Eigenschaften gefährdeter Arten

Studiengänge: B.Sc. / M.Sc. Geoökologie,
M.Sc. Biodiversität & Ökologie.

Ziele: Bedrohte Arten sind nicht zufällig verteilt
sondern besitzen oft ähnliche Eigenschaften. Diese
werden für zurückgehende Arten ermittelt.

Sprache: deutsch / englisch.

Beginn: jederzeit

Ort: Deutschland.

Methods:

Field Work

Remote Sensing

Modelling

Experimental

Data Mining

Time Series

Botanik

Zoology



Vorkenntnisse:

Artkenntnisse

R für Masterarbeiten

Partner: BfN

Betreuer:

Beierkuhnlein, Hoffmann



Functional traits of threatened plant species

Study programs: B.Sc. / M.Sc. Geoökologie,
M.Sc. Biodiversität & Ökologie, M.Sc. GCE

Aims: Threatened species are not stochastically distributed and are expected to exhibit characteristic traits.

Language: deutsch / englisch.

Start: anytime

Location: Germany

Methods:

Field Work

Remote Sensing

Modelling

Experimental

Data Mining

Time Series

Botany

Zoology



Skills needed:

Species knowledge

R (for M.Sc.)

Partners: BfN

Supervisors:

Beierkuhnlein, Stahlmann



Quellen als Indikationssysteme für den Klimawandel

Studiengang : B.Sc. / M.Sc. Geoökologie,
M.Sc. Biodiversität & Ökologie, M.Sc. GCE

Ziele: Quell-Ökosysteme sind eng an die Bedingungen ihrer Einzugsgebiete gebunden. Deshalb wird erwartet, dass hier auch deutliche Auswirkungen des Klimawandels festzustellen sind.

Sprache: deutsch / englisch.

Beginn : Sommer 2020.

Ort: Frankenwald / Fichtelgebirge

Methodik:

| | |
|----------------|--------------------------|
| Feldarbeit | Data Mining |
| Remote Sensing | Zeitreihenanalyse |
| Modelling | Botanik |
| Experimental | Zoology |



Erforderliche Kenntnisse :

Botanische Artkenntnisse
Kryptogamenkenntnisse (M.Sc.)
R (M.Sc.)

Partner: Aquaklif

Betreuer: Beierkuhnlein, Smith



Springs as indicator ecosystems for climate change

Study programs: B.Sc. / M.Sc. Geoökologie,
M.Sc. Biodiversität & Ökologie, M.Sc. GCE

Aims: Spring ecosystems are highly adapted to specific temperatures and water quality. Changes in their catchments are expected to be reflected in their development.

Language: deutsch / englisch.

Start: Summer 2020 / 2021

Location: Frankenwald / Fichtelgebirge.

Methods:

Field Work

Remote Sensing

Modelling

Experimental

Data Mining

Time Series

Botany

Zoology



Skills needed:

Plant Species knowledge

Kryptogams (M.Sc.)

R (M.Sc.)

Partners: Aquaklif Consortium

Supervisors:

Beierkuhnlein, Smith



Biodiversity and Vector-Borne Diseases

Study programs: M.Sc. Geoökologie,
M.Sc. Biodiversität & Ökologie, M.Sc. GCE

Aims: Invasive vectors and emerging diseases are increasingly appearing in Europe. Climate change drivers have been identified. The role of biodiversity to regulate these threats is not addressed, yet.

Language: English.

Start: anytime

Location: Europe

Methods:

Field Work

Remote Sensing

Modelling

Experimental

Data Mining

Time Series

Botany

Zoology

Skills needed:

Remote Sensing

R

Partners: DiMoc (BiodivERsA)

Supervisors:

Thomas, Beierkuhnlein





Global Biomes – Towards a Unifying Concept

Study programs: M.Sc. Geoökologie,
M.Sc. Biodiversität & Ökologie, M.Sc. GCE

Aims: Biome concepts are important references for global studies. However, there is not one single approach that is generally accepted. Here, we analyse the climatic conditions within biomes.

Language: English.

Start: anytime

Location: Global

Methods:

Field Work

Remote Sensing

Modelling

Experimental

Data Mining

Time Series

Botany

Zoology

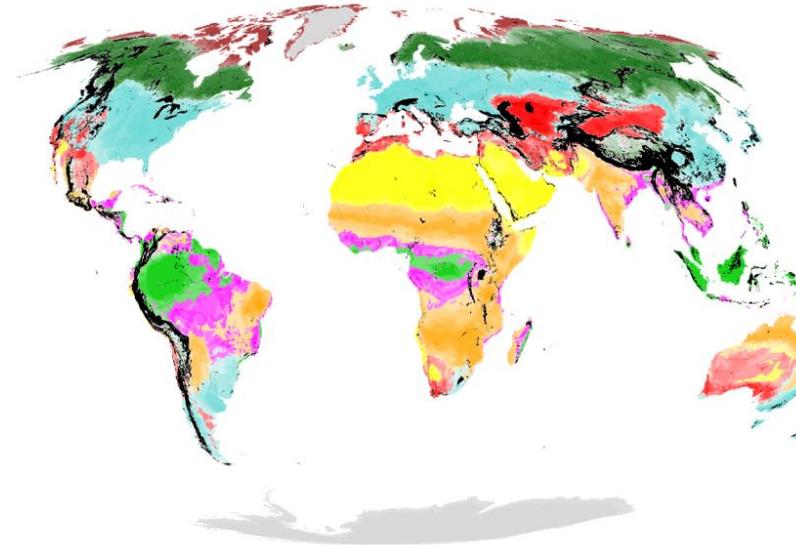
Skills needed:

GIS

R

Supervisors:

Beierkuhnlein, Fischer





Drought effects on Bavarian Forests

Study programs: M.Sc. Geoökologie,
M.Sc. Biodiversität & Ökologie, M.Sc. GCE

Aims: 2018 and 2019 were extremely dry years.
Forests show strong responses and are partly declining.
We analyse the spatial patterns of these responses
(forest edges, slope, bedrock) with Sentinel 2 data.

Language: English.

Start: anytime

Location: Bavaria.

Methods:

Field Work

Remote Sensing

Modelling

Experimental

Data Mining

Time Series

Botany

Zoology

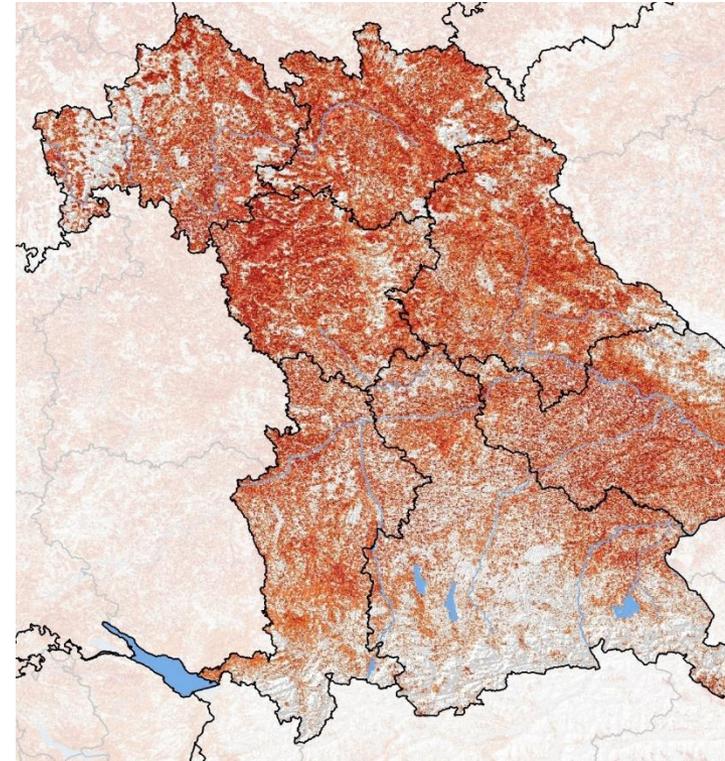
Skills needed:

Remote Sensing

R

Supervisors:

Beierkuhnlein, Weiser





Research Needs, Gaps, Challenges in European Mountains

Study programs: M.Sc. GCE, M.Sc. Geoökologie,
M.Sc. Environmental Geography

Aims: European mountains are very diverse in
landscapes, biodiversity and ecosystem
functioning. Research priorities need to be
identified based on a thorough literature review.

Language: English.

Start: anytime

Location: Europe

Methods:

Field Work

Remote Sensing

Modelling

Experimental

Data Mining

Time Series

Botany

Zoology



Skills needed:

Familiar with WoS

Partners: MRI, GMBA, CREAM, CNR

Supervisors: Beierkuhnlein,
Claramunt-Lopez (Barcelona)