





# Global Change Ecology

Graduate Program (M.Sc.) within the Elite Network of Bavaria

UNIVERSITY OF BAYREUTH  
UNIVERSITY OF AUGSBURG



“Studying Global Change Ecology allowed me to meet great, highly motivated people from very different backgrounds - both within and outside the study program!”

Antonia O., Global Change Ecology Alumna

## Potential Occupations

- Global Change Research (Universities, Research Centers)
- National Administration (Federal Agencies, Landesämter)
- Political Consulting (Environmental Policy)
- Business Consulting (Risk Assessment, Due Diligence)
- Environmental/ Sustainability Departments of Companies (e.g. Food, Energy, Finance)
- International Non- Governmental Organizations
- Scientific Management and Coordination

## Internships

Students complete internships in the fields of research (e.g. DLR, MPI, UFZ), economics (e.g. Swiss RE), international organisations as well as governmental (e.g. BfN, UBA) and non-governmental organisations (e.g. IPBES, CITES, GIZ, WWF, IUCN). Internships at high ranking institutions are a core component of the GCE curriculum.



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## Modules & Courses

Course modules are subdivided into **A**, **B**, **C** and **M**. Modules **A** and **B** focus on environmental change and ecological change. The **C** module group addresses the interdisciplinary nature of global change, dealing with the integration of natural and social sciences. **M** courses aim at teaching practical skills and methods relevant for other courses. **I** and **S** modules represent the unique opportunity to credit internships and science schools as a part of the program. An additional module Research Skills **R** prepares students for the master thesis. The language of instruction is English.

**A**  
Environment

In this module group, students will have the opportunity to learn about global change. The focal point is placed on the physical and chemical aspects of aquatic and terrestrial ecosystems, the dynamics of climate change, recent and historical developments, land use change as a determining factor for biotic and material changes as well as biogeochemical cycles .

**B**  
Ecology

Block B deals with issues of ecological change; in the associated modules, the ecological effects of global change will be addressed. Featured topics include the response of organisms and ecosystems, land use change and human impacts, as well as the impacts on species distribution within the framework of global change and changing environmental conditions.

**C**  
Society

Global environmental changes have been directly caused by anthropogenic influences. Simultaneously, society also has to bear the consequences of climate change and ecosystem changes. The module block C deals with the global interplay between societal and ecological changes, including mechanisms of global economy, policy and governance related to climate, ecosystem services, land cover and land use change, and health.

**M**  
Methods

Methods courses are offered in order to deepen knowledge of methodological approaches in various fields, whereby the personal interests of students can be strengthened. The methods courses offered adhere to those applied in current global change research, including statistical modeling, time series analysis, remote sensing, spatial analysis tools, international environmental law as well as key soft skills and more.

**I**  
Internships

The study of global change ecology is not only covered in course modules, but also includes the opportunity to gain practical experience via internships. Internships are possible within four main areas including economy, research, administration (national or international) and international organizations (including consortia).

**S**  
Schools

Science schools aim at integrating students in current developments in the rapidly changing scientific field of global change research. Intensive external and internal courses allow for students to make direct contact with not only other lecturers and real-world practitioners but peers of other study programs, universities and countries.

