UNIVERSITÄT BAYREUTH

Study Guide to the Specialisation

Global Policies, Economies, Civil Society and the Environment

(MSc Global Change Ecology)

April 2026

Scientific and societal challenge

Climate change, biodiversity loss, and the deterioration of ecosystem services on a global scale have negative effects. These problems triggered responses across politics, the economy and civil society. The challenge from a societal perspective is to develop sustainable solutions to the global problems that affect a multitude of actors across sectors, hierarchical levels, and world regions. The scientific challenge is to unravel the societal processes that create environmental problems, as well as those through which society attempts to mitigate them.

Learning objectives

The objective of this specialisation is that you learn about the economic, political and societal theories and concepts related to global environmental and ecological change. Essential is an interdisciplinary approach to grasp the complexity of socio-ecological systems. This allows you to critically analyse and to evaluate solutions to environmental problems.

Required knowledge

- Basic knowledge in economics, political and social sciences
- Foundation in inter- and transdisciplinary concepts

Competences

- Critically reflecting on the role of globally interconnected economies and consumers in creating global problems and pushing the planet towards its environmental boundaries
- Understanding of sector-specific and cross-sectoral policies to solve global change problems related to land use, climate and biodiversity
- Understanding the One Health concept and identifying synergies and trade-offs in the simultaneous promotion of environmental, animal and human health

Content of specialisation (theories & concepts)

In this specialisation, we offer modules that reflect on global change phenomena through economic, geographical, political as well as socio-ecological theories and concepts. The modules collectively explore how global economic, social, and political dynamics shape environmental change, highlighting differences and interdependencies between the Global North and South. They examine governance frameworks and economic instruments for addressing biodiversity loss, climate change, and land-use challenges, emphasising how policies interact across sectors. A strong focus is placed on the interconnectedness of biodiversity, climate, and human and animal health through the One Health framework. Finally, the curriculum expands to human–nature interactions through sport ecology, showing how outdoor activities both affect and depend on healthy ecosystems.

Area Module	ECTS	final grade	Teaching by...
T&C Theories & Concepts			
C Global Policies, Economies, Civil Society and the Environment (Societal Change)			
Globalization of Economies and the Environment	5	yes	Ecological Services, UBT; VWL VI: Empirical Economics, UBT
Socio-Economic and Political Dimensions of Global Change	5	yes	Social and Population Geography, UBT
Biodiversity Policies, Governance and Economics	5	yes	Teaching Assignments (Paulsch, Förster)
Climate Policies and Economics	5	yes	Teaching Assignments (Streck, Meya)
Land Use Policies, Markets and Ecosystems	5	yes	Ecological Services, UBT
Biodiversity, Climate Change and Health	5	yes	Biogeography and Sport Ecology, UBT; Planetary and Public Health, UBT
Sport Ecology	5	yes	Biogeography and Sport Ecology, UBT

Related method courses

The method block, labelled 'analysis of environmental solutions in policies, economies and civil society', is closely related to this specialisation. It offers insights into and critical reflection on solutions in sustainable finance, environmentally friendly products, international environmental law, and global environmental policies. Agent-Based Modelling ABM is taught in the module Land Use Policies, Markets and Ecosystems. The methodology of social sciences allows you to reflect on processes of problem creation and problem-solving in societal systems. To complement this, you learn how methods from statistics, remote sensing and modelling can be used to simulate and monitor the ecological and environmental impacts of human decision-making.

M Methods		
Analysis of Environmental Solutions in Policies, Economies and the Civil Society		
Sustainable Finance and Corporate Nature Reporting	3	Teaching Assignments (Wildner)
Life Cycle Assessment of Products	2	Teaching Assignments (Kreidenweis)
International Environmental and Sustainable Development Law	5	African Legal Studies, UBT
Global Environmental Negotiations: Observing, Engaging, and Reflecting	2	Biogeography and Sport Ecology, UBT
Methodology of Social Sciences	3	Social and Population Geography, UBT

Related science schools and field camps / excursions

Students of Global Change Ecology have the unique opportunity to attend the intergovernmental negotiations of UNFCCC COP and IPBES plenary.

Participating chairs at UBT

From Geosciences UBT the chairs Ecological Services, Biogeography and Sport Ecology and Social and Population Geography are participating. The Chair of Empirical Economics from the faculty of Law and Economics is complementing the teaching.

Participating external lecturers

External experts in policy, economics, and the governance of biodiversity and climate change teach in this specialisation.

Link to other specialisations

The specialisations in *Global Climate Change and Ecosystems*, as well as *Biodiversity and Ecosystem Functions*, represent the environmental and ecological pillar of global change ecology. Together with this societal pillar, we offer a truly interdisciplinary program.

Career opportunities

Many companies, NGOs, and international governmental organisations offer jobs to find solutions to problems related to climate change, biodiversity, ecosystem services and human health.

Contact persons and further information

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GCE Webpage: https://www.bayceer.uni-bayreuth.de/gce
GCE Blog: https://globalchangeecology.com
Instagram: https://www.instagram.com/gcebayreuth