

Opportunities for master theses in regional bioeconomy research

Connected to a research project on the interaction between climate change and bioeconomy activities, the Vienna University of Economics & Business (WU) offers the opportunity for 2-3 students to carry out research for master theses.

Context

In the context of climate change and the continued high dependency on fossil fuel dependency, the European Union (EU) has launched a bioeconomy strategy aiming at fostering the transition to renewable, biobased materials, energy and technologies in economic value chains. Hence, an increasing number of member states and regions are in the process of designing and implementing bioeconomy strategies, generally in line with regional ecological, agricultural, industrial and/or logistic conditions. At the same time, floods, storms, heat waves and droughts in the EU have increased in frequency and intensity as a result of climate change. Thus, as a bioeconomy transition implies a more direct dependency of society on ecosystem provisioning services, socio-economic vulnerabilities may increase with a bioeconomy transition subject to climate change. Interdisciplinary approaches are needed to get to know and assess climate related risks and vulnerabilities of a bioeconomy transition in society.

Research questions

The proposed research aims at gathering insights on climate related vulnerabilities of both food and non-food biobased supply chains in society. Within this problem context, students are free to specify their research question(s). Examples are: What are resource vulnerabilities in the (development of the) regional bioeconomy? What are trade vulnerabilities in the regional bioeconomy? What are potential climate vulnerabilities in biobased supply chains distinguishing farmers, manufacturing activities and end-users? How are cities connected to the rural hinterland in the regional bioeconomy?

Method

The (quantitative) method involves the construction and analysis of a regional supply-, use- and input-output table with detailed accounts of commodity flows associated with (food and non-food) bioeconomy activities. The region is a selected province ('Bundesland') of Austria. The construction of sub-national input-output tables is data-intensive and based on existing statistical databases and a quantitative survey to reveal trade flows (and other potential issues) among bioeconomy stakeholders at the regional level.

Supervision

The student will have a supervisor from his or her university, as well as from the Vienna University of Economics and Business (WU). The thesis can be written in German or English, but German skills are welcome, in order to allow full exploitation of local and regional data.

Time period

September 1, 2020 - March 31, 2021

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