



Who We Are

At the end of 2017, the junior research group TRAFOBIT will consist of a multidisciplinary team of five researchers with different experiences and backgrounds. It is based at the Leibniz Institute for Agricultural Development in Transition Economies (IAMO). IAMO is a public research institute that pursues basic and applied research in the field of agricultural economics and related fields. It is a member of the Leibniz Association, a German network of non-university research institutes. The group is funded by the German Federal Ministry of Education and Research (BMBF) under the call "Bioökonomie als Gesellschaftlicher Wandel" for the period 2017-2021.

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The Role and Functions of Bioclusters in the Transition to a Bioeconomy



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Research Approach

The different research themes will be explored by a cross-case comparison of bioclusters in Germany and across other European countries. These bioclusters are in different stages of their development and are integrated within different types of regional innovation systems. Our aim is to work transdisciplinary by actively engaging with biocluster coordinators and members.

Motivation and Background

TRAFOBIT is a junior research group that investigates the role of so-called 'bioclusters' in which businesses, research institutes, universities and government agencies work together towards a bioeconomy in which our current fossil based sources of carbon are substituted with renewable ones. This is a daunting task that requires profound changes in many existing economic and technological structures. Such a transformation will require more than just incremental innovations that only optimise existing value chains. Instead radical system innovations are called for that fundamentally redesign or even replace existing infrastructures in favour of more sustainable alternatives.

Aim and Research Questions

The junior research group explores innovation processes that occur inside bioclusters, their internal dynamics and the interaction of bioclusters with their socio-economic environment at the local, regional, national and international level. The research group is organised around four themes:

1. Societal discourse coalitions on the bioeconomy

What are the implications of different societal opinions and images connected to the different concepts of sustainable development and innovations coming out of bioclusters?

2. Partnering and collaboration for innovation

How are innovation processes governed between different partners within a biocluster (and beyond)?

3. The embedding of bioclusters in their regional context and international value chains

What are the interactions between multiple scales and levels in biocluster development?

4. Development pathways of bioclusters

How do different regional innovation systems lead to different pathways of cluster development and potential transition pathways?

Methods and Expected Results

The research group works in an interdisciplinary way by combining theoretical insights and research tools from sociology, innovation science, ecological economics and mathematics. These different methods and tools can be used to investigate the scientific aspects of biocluster developments but at the same time they can also provide relevant insights for innovators engaged in bioclusters. Some examples of our analysis tools and methods are:

Discourse analysis

Provides an overview of the shared language between different actors connected to biocluster development. It outlines viewpoints and underlying values of proponents and opponents of different political coalitions, especially related to the issue of sustainable development. These insights can support the public relations activities of bioeconomy actors.

Analysis of regional innovation systems

Gives a systemic assessment of strengths and weaknesses of the institutional, economic and infrastructural environment of a biocluster. It provides an overview of bottlenecks to bioeconomy actors that may be used for joint initiatives or the adjustment of innovation activities.

Analysis of innovation processes

Reflexive monitoring of collaborative innovation processes (past and present) through analysis of learning histories, dynamic agenda setting and collective timelines. It supports learning among pioneering actors engaged in innovation on successes and failures of collaborative projects in bioclusters.

Social network analysis

Studies the relationships of bioeconomy actors inside and outside the cluster: an their knowledge networks, financial and influence networks. It identifies relational gaps in these networks; helps to strengthen existing coalitions by building bridges to stakeholders with different resources or information.