

# Bio-Ecopoly



## Political processes of bioeconomy between economy and ecology

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Joint research project of:



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## Political processes of bioeconomy between economy and ecology

Research project  
on the handling of conflicting goals  
within the bioeconomy

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## Bioeconomy

Bioeconomy is a programmatic concept of recent German and international innovation policy. It comprises techniques, procedures and products that, especially in industrial and energy production, substitute fossil resources with renewable raw materials.

The consideration of the entire value chain, including the cultivation of raw materials, their processing, the refinement of bio-based products as well as the resource efficient use of biogenic residues and waste materials, is at the core of the concept of bioeconomy. Bioeconomy policy promotes or regulates the development, establishment and use of such techniques, procedures and products.

## Objectives and Conflicts

The key objective of bioeconomy policy is to permanently ensure the supply of required raw materials for economy and society. Further aims are strengthening Germany and the EU as centers of technological innovation, ensuring global food security as well as protecting the climate and biodiversity.

However, this sometimes conflicting nature of these goals might also spur political struggles. With the application and use of bioeconomic procedures and products, both positive and negative effects on the environment can be expected. Decisions on which tradeoffs between economic and ecological impacts are acceptable should therefore be made on the basis of appropriate societal negotiation processes.

## Status Quo

Policies for the initiation, promotion or regulation of bioeconomic techniques, procedures and products in Germany are negotiated and adopted in democratic political processes and possibly resolved. These processes take place in a political multilevel system on different territorial levels and in the interaction between them.



The majority of existing research about the bioeconomy addresses questions of technological innovation, challenges of practical implementation or questions about regulatory structures ("governance"). Furthermore, critical points of bioeconomy politics are illuminated, like questions of legitimacy and justice, problematic social and ecological effects or underlying power relations and governance structures that are perpetuated through bioeconomy.

In many cases the specific political processes of the bioeconomy remain neglected. Until now, there is a lack of empirically sound and theory-based studies about political processes that initiate, promote or regulate bioeconomic techniques, procedures and products.

## Research Objectives

The research investigates subareas of bioeconomy which lead to conflicts of goals between environmental protection and economic development. It centers on questions of political design when dealing with conflicting goals: on measures of bioeconomy policy in the field of tension between economy and ecology.

Various dissemination activities help to anchor the research findings permanently in science and practice. Annual transdisciplinary status workshops accompany the project and ensure the transfer of knowledge between project and bioeconomy practice.



## Research Questions

The project aims to answer the following questions:

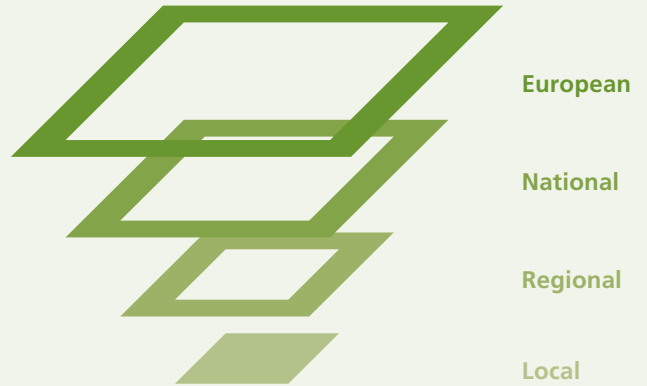
1. Which are the typical framework conditions of political processes of the bioeconomy and what is their impact on the processes and the political results?
2. What is the role of environmental effects in political processes of the bioeconomy, what types of conflicts do emerge and how are they resolved?
3. What are the starting points for resolving or defusing such conflicts in the sense of an active design of the transformation towards a bioeconomy?



## Research Design

The project tries to answer these questions in the context of three thematic fields of bioeconomy, which are crucial for a bio-based transformation of economy and society. The assessment includes both the material and energetic use of biomass. In the three thematic fields bioplastics, biofuel and bioenergy (power and heat), qualitative case studies will be carried out on the local, regional, national and European level. Cases are defined as political measures (policies) or packages of measures.

The aim of the project is to cover bioeconomy issues on various levels of decision-making that are both environmentally relevant and controversial and to select cases that are as typical as possible for the respective thematic fields and levels of decision-making. In addition to the analysis of individual cases, a cross-case-analysis will be conducted within and across the thematic fields, as interlinkages between the cases frequently occur in the sense of coupled and/or cascaded utilization. The consideration of further elements of the value chain like sustainable production of biomass or relevance for waste management will be integrated depending on the specific characteristics of the respective cases.



**Bioplastics**  
FernUniversität  
in Hagen



**Biofuels**  
FernUniversität  
in Hagen



**Bioenergy  
(Power and Heat)**  
OVGU  
Magdeburg

## Political Process Inherent Dynamics Approach (PIDA)

The project analyses political processes of the bioeconomy using the Political Process Inherent Dynamics Approach (PIDA). PIDA serves as an analytical framework that draws the attention to actors, institutions, problem structures and political instruments as independent variables in explaining the development of a specific policy. From a PIDA perspective, political processes are understood as processes shaped by inherent dynamics, in which these factors and their interplay are decisive for policy outcomes.