



Bioeconomy: Shaping a sustainable future together

1st Working Paper of the III German Bioeconomy Council

Abstract

Through this working paper, we present our working methods and the current status quo of our work and provide an outlook over the next steps. Across all sectors and interest groups, we are laying the foundation for a transparent working method for the development of consensual recommendations for the implementation of the National Bioeconomy Strategy and invite active participation in the content- and topic-related embodiment of the bioeconomy.

Progressing climate change, the limited availability of natural resources on planet Earth and, at the same time, growing demand for energy, food and everyday products disclose that a transformation geared towards sustainability is needed if we want to successfully shape the energy, mobility, agricultural and resource transformation, create incentives and positive resonance for new lifestyles and, simultaneously, achieve prosperity and a high quality of life on a global scale. Together with digitalisation, this will bring about a profound change in society, economic systems and the manufacturing industry and can only succeed if new technologies in combination with social innovations enable effective climate protection and the overcoming of other ecological challenges.

With the bioeconomy, Germany holds an important key that is needed to successfully shape this transformation and thus contribute significantly to achieving the UN's sustainable development goals and the goals listed in the Paris agreement. As defined by the German government, bioeconomy encompasses the production, development and use of biological resources, processes and systems to provide products, processes and services in all economic sectors within the framework of a sustainable economic system.¹

Questions about technology(s) and innovation as well as openness to them, ethics, data protection and security, markets, financing, ecology, economy, social issues and broad participation must be taken into account, as must the cooperation and coordination of different sectors and academic disciplines. The concrete relevance of a sustainable bioeconomy on a broad scale must be proven and the testing/implementation

¹ Federal Government, 2020

of new technical and social innovations and business models must be enabled. In addition, it is important to conduct a broad public debate on the objectives, but also on possible conflicts of objectives of the bioeconomy.

As an independent advisory body to the Federal Government, we, the members of the German Bioeconomy Council, support the Federal Government in accomplishing this task.

We...

- develop knowledge-based contributions to the implementation and development of the National Bioeconomy Strategy in exchange with and with the involvement of different groups in society.
- identify and evaluate developments, political fields of action, measures and framework conditions.
- make proposals as to which objectives, fields of action and funding topics as well as which impact assessment issues should be addressed as a priority.
- make recommendations on the implementation of research results.

The National Bioeconomy Strategy is the basis of our work. Thereby, we also take into account that regional circumstances, such as access to and availability of resources, but above all different interests of involved actors lead to different **understandings and definitions**. We take these into account in our work with the aim of identifying commonalities and pointing out potential solutions, but also naming conflicts.

The statutory targets in the areas of climate protection, biodiversity, sustainability and circular economy serve as **landmarks for** our work. We see significant contributions to the implementation of these guidelines in the following fields of action, among others:

a) Sustainable land and land use: The diverse demands on land and land areas, e.g. for climate protection, food security and the preservation of biological diversity, often compete with each other. In addition to the rapid reduction of further land sealing, the social transformation of eating styles (e.g. reduction of the consumption of animal products) and the prevention of land degradation, a diversification of land use with the achievement of multiple goals - where possible - must be realised on one and the same area.

b) Measures and innovations to reduce greenhouse gases (GHG): In addition to incentives to change consumption behaviour and, in particular, eating styles, social innovations, political steering elements such as CO₂ pricing and technological innovations play a significant role in reducing GHG and establishing sustainable products.²

c) Stable conditions for BE-innovations: Entrepreneurs can only invest, produce, provide services or create jobs within stable framework conditions that do not only include questions of taxation, but must also address sufficient scope for reinvestment and entrepreneurial risk protection as well as fair market access.³ Small and medium-sized enterprises play a central role in anchoring innovation in the broad economy.⁴

d) Resource shift: A key goal of the bioeconomy is a „resource shift“, whereby the aim is to replace fossil resources with biobased resources and residues. However, this transformation process does not only include biomass in the sense of the above-mentioned definition, but also substances that are extracted from biomass or gases from the atmosphere, such as CO₂, if they are used in further processing.

Based on this, first topics were identified, which we will address during the course of our Council period due to their importance and leverage effect for the implementation of the bioeconomy strategy. In the course of our mandate, further topics will be added to this collection.

² Environmental technologies - European Environment Agency (europa.eu)

³ Entrepreneurs4future, 2021

⁴ EFI, 2008

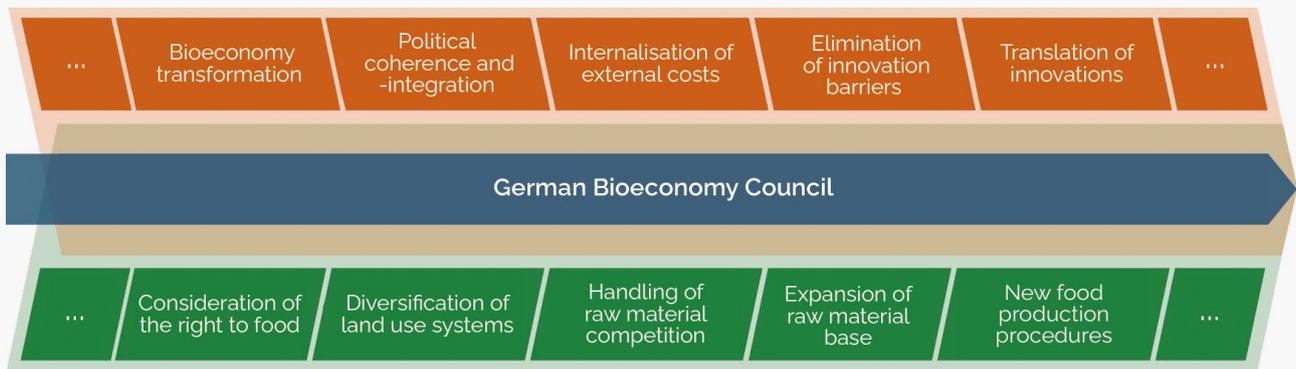


Figure 1: Illustration of the topics identified by the German Bioeconomy Council with significance and leverage for the implementation of the National Bioeconomy Strategy

In order to **develop our recommendations for** the implementation of the National Bioeconomy Strategy, we draw on the findings and results of other national and international institutions/bodies as required. Furthermore, we will examine to what extent our actions can make valuable contributions to the implementation of other overarching political strategies, such as technological sovereignty or the strategy for resource efficiency.

We see **dialogue and participation** as two central themes in our work to successfully shape the economic and social transformation towards a sustainable bioeconomy. With the participation of civil society, industry and politics, we will address possible conflicts of objectives that may arise in the implementation of the sustainable development goals (SDGs) linked to the bioeconomy and develop proposals for solutions. Furthermore, we will develop recommendations for the participatory process, which, in addition to an evaluation of existing experiences with dialogue and participation processes, will take into account findings on regional initiatives to promote dialogue the bioeconomy.

In order to specifically involve further experts with a multiplier effect in the development of concrete recommendations for action, we will **establish project-oriented work units and organize topic-specific expert discussions or workshops**. The **Bioeconomy Forum, which** we organise annually, is our central dialogue format.

Imprint

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