

Sustainable Bioeconomy? Discourses, communication and participation

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Summary

According to its promoters, the guiding principle of bioeconomy concepts is to encourage changes towards a more sustainable life in Germany and Europe. For more than ten years, they have been tested in a wide variety of areas, such as energy production and the production of goods. Due to the significant changes associated with the realization of bioeconomic processes and procedures, it is necessary to consider the different groups affected by these changes, their voices, positions and practices as well as their discursive constellations in this area. The discourse about the bioeconomy concepts has largely been driven by political, scientific and business elites in the past. These actors were involved in the development and implementation of the concept. Hardly any citizens or actors from civil society were involved, neither on international, national nor regional level.

Against this background and for the first time, the volume "Sustainable Bioeconomy? Discourses, Communication and Participation" brings together a wide range of perspectives and contributions from the growing field of transformative research concerned with the role of communication and participation in the field of sustainable bioeconomy. In this volume, primarily German and exemplary European contributions address questions concerning the actors and their constellations ("Who"), the linguistic means ("How") and the tools/methods (media and formats) with which the concepts of bioeconomy communicate or are communicated, while examining the associated paths and measures in Germany and Europe.

Following a general introduction, the first part of the volume conceptually deals with the different understandings of communication and participation² in bioeconomic discourses, their constellations of actors and rhetorical figures. In the second part, the contributions empirically and theoretically deal with participation formats that involve actors from science, politics, business, civil society and citizenry in the discourses. The book concludes with a third part on practical impulses of participation and communication in the context of bioeconomic issues.

¹ The editors' biographical and contact information is listed at the end of the document.

² Based on the field of sustainability communication, we roughly distinguish three types of communication in bioeconomy: mono-directional (communication from); bi-directional (communication about); and normative (communication for), which influence the understanding and realization of participation.

Background

A climate-neutral society is dependent on sustainable production and consumption patterns (Lecina 2020). To this end, as in other industrialized nations, Germany is pushing bio-based economic activities³ (e.g. BMBF & BMEL 2020; Böcher et al. 2020). This form of economy is supposed to be sustainable and thus guided by the principle of a circular economy, in which resources are used and recycled, efficiently and across sectors within their entire value chain (see Peltomaa 2018; Staffas et al. 2013). This political program is linked to the goal of mitigating the consequences of anthropogenic climate change and at the same time reducing the dependence on finite fossil resources. Since 2009, the visions of a sustainable bioeconomy in Germany and Europe have been tested in implementation concepts and concrete measures (OECD 2009; European Commission 2018; BMBF 2010; BMBF & BMEL 2020). Their continuous further development is seen as a contribution to climate policy and as a core element of the green economy (Fatheuer 2018: 4). Neither proponents nor critics of the concepts question the need for change towards a more sustainable economic system and society. However, there is disagreement on the specific form it should take, which measures are needed and who should be involved in which way. The actors' differing positions are expressed in the public discourse⁴. In Germany, for example, experts with a technical-economic understanding of the bioeconomy predominate (e.g. Venghaus and Dieken 2020; see Liobikiene et al. 2019: 957 according to Böcher et al. 2020).⁵ Other groups of actors, e.g. from civil society, criticize this understanding and question the associated economic practices and technological power relations (see Böcher et al. 2020, e.g. Gerhardt 2020; Wan-nemacher 2020; Zivilgesellschaftliches Aktionsforum 2019). There is also criticism coming from the political arena, for example with regard to the lack of knowledge about possible risks of certain technologies (e.g. SPD 2011). There are also critical reflections in the scientific community (e.g. Lettow 2006; 2012; Hackfort 2015; Backhouse et al. 2018; see Kiresiewa et al. 2019; Lienert 2011) about the lack of participation of citizens who work on recommendations to politics and science but are hardly noticed (e.g. KWI 2018 or Bioeconomy Council 2013).

In general, communication from, about and for bio-based economic forms has not yet been systematically researched and mapped. Singular research results, e.g. from the field of **consumer research**, indicate that there is often no precise or even an insufficient understanding of the term bio-based economy, which leads to the term being classified as green and sustainable (Sijtsema et al. 2016; Lynch et al. 2017). The main reason for this is that the concept itself misses societal grounding and embeddedness. Therefore, communication often lacks ideas, metaphors, and meanings oriented towards the real world that reflect its complexity. Moreover, communication is

³ Following the European concept of the "knowledge-based bioeconomy" (OECD 2009) and the "Sustainable Bioeconomy" (European Commission 2018) based on it, the political-economic concept of the "knowledge-based" and currently the "sustainable bioeconomy" was developed within the framework of the national research strategy Bioeconomy 2030 and the national policy strategy Bioeconomy (BMBF 2017; BMEL 2014; BMBF and BMEL 2020).

⁴ Discourses can be analyzed at different places and times, according to the rules by which they are conducted and the practices by which they are stabilized. The analysis also refers to the contents and actors that become 'real' through discourses with the help of symbols (see Brand 2014: 189).

⁵ Although the participation of other experts, such as from the humanities and social sciences, who can contribute relevant knowledge in this area has grown in comparison to when the first bio-economy concepts were introduced (see BMBF 2017; EU 2018), it is small in relation to the funding provided in the life sciences and is only at the beginning of its research due to its late inclusion (approx. since 2014).

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often one-sided and abridged notions exist about what bio-based economy should be and actually is.⁶ Initial findings of **political communication research** point to similar results. For example, Hempel et al. conclude that citizens in Germany have so far hardly noticed the concept of the bioeconomy and the associated developments (Hempel et al. 2019; or on the involvement of citizens, see Mustalahti 2018). It is therefore unclear which kind of bioeconomy would be accepted by broad sections of the population on which basis and whether and how citizens would want to participate in its design so that it would be accepted. Here, spaces of reflection and a determination of the respective potentials for a resource-conserving economy that is independent of fossil fuels are needed. Also, there is a need for an assessment of the conflicting goals and tensions and an evaluation of the technologies with regard to their intended and unintended socio-ecological consequences. In short, a democratic public will-formation and decision-making process⁷ on the alternatives on the continuum of the outlined models, their scenarios and measures is necessary. Which procedures and formats are suitable for this? The results so far show that the existing way of communication is not sufficient and that other as well as new images, narratives and ultimately practices are needed that are more closely oriented towards the real world. In the sense of a transformative and reflexive understanding of science, it is therefore important not only to elaborate and depict these discursive relationships, but also to develop and reflect on formats and procedures that enable the participation of heterogeneous social groups.

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Against this background, we invite interested authors to submit an abstract of a maximum of 200 words by 5 January 2021 via e-mail to julia.reinermann@kwi-nrw.de and nicole.devries@kwi-nrw.de.

Contributions in German or English are welcome that theoretically and empirically deal with the discourses in Germany or in other European countries, the actors involved, their positions and narrative figures and/or deal with methods and procedures of participation. Interested parties who wish to submit a contribution can consider the following questions to specify their ideas:

- Which different understandings of bioeconomy concepts exist and how do they relate to each other?
- Which actors and arguments are hegemonic or are hardly noticed in the public discourse about bioeconomic issues?
- How do the various actors assess the tradeoffs and conflicting goals related to the concepts and to what extent does this influence the acceptability of the transformation processes?
- How and to whom are bioeconomic issues communicated, which methods and formats

⁶ In this context, insights into arguments, images and metaphors as well as the rhetorical figures such as narratives that are presented and negotiated (e.g.: Dürenbeck 2018) and to what extent conflicts and alternative futures (may) arise from this are of high relevance. Narratives can be defined as "phenomena embedded in discourses" (Urhammer & Røpke, 2013: 64), even though a particular narrative cannot be assigned to a particular discourse alone and can be interpreted differently by different actors (Hermwille 2016).

⁷ In the area of food democracy, for example, this can be stated as follows: „*Food democracy can be defined as the possibility for all social groups to participate in, negotiate and struggle over how societies organize agricultural production, thereby ensuring that food systems fulfil the needs of people and sustain (re)productive nature into the future*“ (Friedrich et al. 2019: 166).

are used, and what are the challenges?

- How can participation formats be continued on a permanent basis, results be synthesized and linked to political processes?
- What are promising practices to empower marginalized voices and groups?
- Which methods and procedures are suitable to enable different actors to contribute their knowledge and positions to the design of a sustainable bioeconomy?

Biographical information on the editors

Julia Lena Reinermann works at the Institute for Advanced Study in the Humanities Essen (KWI) in projects on conflict, acceptance and participation in the context of bioeconomy and transformation research. As a communication scientist she is particularly interested in the role of (implicit) knowledge in the field of sustainability and technology development.

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