

Special Issue on Promises of growth and sustainability in the bioeconomy

In current debates about the future of modern societies, one concept is increasingly marshalled as providing an answer to multiple challenges: the bioeconomy. The dominant narrative makes the claim that shifting to a bioeconomy based on the flow of renewable energies and biological resources societies can achieve both: 'green' economic growth and a rapid phase-out of fossil fuels and resources, thus building a sustainable future.

Bio-based economies rely on renewable materials only available within biophysical limits and dependent on cyclical regenerative processes that cannot be expanded and accelerated at will. It is thus disputable whether economic growth and the accumulation of ever-increasing amounts of energy and goods can continue in an economy based on renewable resources. Political actors and strategies often claim that the bioeconomy will bring far-reaching changes towards sustainability at all levels and in all sectors of society and individual lifestyles. At the same time, the concrete actions of key players in politics, science and industry seem to assume that the bioeconomy will allow them to continue with business as usual and avoid a turn away from the growth paradigm and techno-optimistic solutionism.

The aim of this special issue is to shed light on the nexus of sustainability, technology and growth within the bioeconomy from multidisciplinary, critical and constructive perspectives. We invite empirical and/or conceptual contributions addressing but not limited to the following questions:

- Can growth-based economies really be made sustainable by just basing them on biogenic instead of fossil materials and resources?
- Do the bioeconomy and the innovations of modern biotechnology enable a decoupling of environmental throughput from GDP?
- Would the transformation of modern societies towards post-fossil, bio-based economic activities need to involve an overcoming of unlimited economic growth?
- What would political processes and bioeconomy implementation strategies have to look like in order to transform the economy in a democratic and participatory way?

We welcome contributions from different academic fields, including sociology, political ecology and economy, human and critical geography, social ecology, history, philosophy, economics, natural sciences and engineering. Contributions may be based on theoretical analyses, empirical investigations, comparative or in-depth studies. Case studies are welcome as part of the demonstration of how new proposed methods can be applied. Note that case studies on their own are unlikely to be suitable for publication in this journal, unless they are quite substantive and wide-ranging rather than narrowly defined and applicable in limited areas or conditions.

The deadline for submissions is June 30, 2021. All accepted papers will be published as soon as they are accepted.

All manuscripts should be submitted at <https://www.editorialmanager.com/spc/> Please select 'SI: Bioeconomy' as the article type during the submission process. For more information about the journal and guidelines for authors please see <https://www.journals.elsevier.com/sustainable-production-and-consumption>.

For any queries related to the special issue, please contact Catherine Cliffe at ccliffe@icheme.org.

Special issue editors

Sandra Venghaus, Forschungszentrum Jülich, Germany

Martin Fritz, Dennis Eversberg and Lilian Pungas, University of Jena, Germany