

Short abstract for a contribution to the workshop “*The Normative Dimension of Transformations towards a Sustainable Bioeconomy – Expanding the Economic Perspective*”, September 13-14, 2019 in Stuttgart

Sustainability assessment of farming systems – Chances and obstacles of an intermediate evaluation level

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The critical debate about possible implementation pathways and limits of the bioeconomy has shown that the future shaping of agricultural production will have a decisive influence on whether the bio-based economy can make a contribution to sustainable development or not (Meyer & Priefer 2018, Priefer et al. 2017). In light of structural changes towards larger and more specialized farms, it is controversially discussed which farm sizes and forms of land management and production best meet the objectives of sustainable agriculture. Various approaches to assess sustainability in agriculture have been developed by private initiatives and public authorities at the national, European and international level. They focus either on the individual farm level or the entire agricultural sector. However, aggregation levels between farm and agricultural sector have hardly been addressed so far.

The concept of farming systems builds the basis for an intermediate evaluation level that defines a group of farm systems with similar characteristics (e.g., resource bases, farm size, production patterns, marketing strategies). Depending on the understanding of sustainability and the applied criteria, certain farming systems appear more sustainable than others. Since the existing evaluation approaches are shaped by different interests and sustainability objectives, criteria and system boundaries of comparative studies are quite heterogeneous. Until now, a comparison is only partially possible for the organic and conventional farming system. There exist a number of studies, which highlight specific aspects such as yield level, ecological effects or economic results.

Based on the results of the project "Sustainability assessment of agricultural systems"¹ for the German Bundestag, the contribution will critically reflect the state and perspectives, strengths and weaknesses of sustainability assessment approaches for farming systems. The presentation will focus on the comparison of organic and conventional agriculture as an illustrative example.

Literature

Meyer, R.; Priefer, C. (2018): Bioökonomie in Baden-Württemberg. Systemanalytische Betrachtungen zu den Zielen, Visionen, Wirkungszusammenhängen und Umsetzungsschritten bezogen auf die drei Nutzungspfade Biogas, Lignozellulose und Mikroalgen. Endbericht Projektergebnisse.

Priefer, C.; Jörissen, J.; Frör, O. (2017): Pathways to shape the bioeconomy. Resources, 6(1), 10

¹ See project description under: <http://www.tab-beim-bundestag.de/de/untersuchungen/u30400.html>