

Bioeconomy Strategies in Comparison

Commonalities, Contradictions and Blind Spots

Abstract

This Working Paper undertakes a comparative analysis of the bioeconomy strategies of the EU, OECD, US and Malaysia as well as official papers of the National Scientific Council of Argentina, the Ministry of Science of Brazil and the agriculture and energy strategies of Indonesia. The key questions of interest relate to the definition, problems and goals of the bioeconomy. A comparative view suggests divergent understandings of this concept. While bioeconomy and biotechnology are used almost synonymously in the OECD and US strategies, Germany and the EU define the bioeconomy as a biomass-based economy. All other definitions can be situated between these two groups.

All strategies share the common feature of justifying the bioeconomy by referring to crisis-scenarios and global challenges, with climate change and population growth at the forefront. The argument is usually connected to food security, energy and water supply, and the finite nature of fossil resources. These problems are generally cited to justify the necessity for a transition towards the bioeconomy. Additionally, all papers share an optimistic position with regards to the use of biotechnological innovations to overcome socio-ecological crises. The advancement of bioenergy is an essential part of all bioeconomy strategies, although different levels of emphasis apply. Public support for the biotechnological optimization of plants and microorganisms as sources of energy is regarded as key, as well as the expansion of biorefineries and the development of next-generation biofuels.

To conclude, this working paper discusses contradictions in the bioeconomy strategies such as the limited participation and consideration of civil society actors as well as the omission of organic farming, while outlining possibilities for further research.

Keywords: bioeconomy, bioenergy, biotechnology, climate change, social transformation, socio-ecological transformation, technology and innovation, North-South relations, participation, knowledge-based economy

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