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Sustainability of Advanced Biofuel -- 12: Overview of Policies for Increasing Advanced Biofuel Utilization in Major Producing Countries -- 13: Policy and Regulatory Frameworks for Sustainable Production of Advanced Biofuels -- 14: Prospects and Challenges in Implementing Circular Economy Practices for Advanced Biofuels -- 15: Potential routes of bioenergy production and their circular bioeconomy -- 16: Methodological Proposal for The Evaluation of The Sustainability of Solid Biofuels.

Sommario/riassunto

This book offers a holistic analysis of the role of advanced biofuels within the context of the circular economy. It provides a multidisciplinary perspective on cutting-edge developments in biofuel technology, including their sustainability impact, techno-economic and socio-economic considerations. This edited collection merges insights from environmental science, economics, and sustainability studies to provide a comprehensive understanding of the current landscape of advanced biofuels. Each chapter explores the complex interplay of the circular economy with biotechnological advancement, analysing diverse aspects including biofuel production, impact on local communities, their role in sustainable development and job creation, role in long-term economic growth and tackling climate challenges. The book also offers practical guidance on assessing socio-economic impacts and navigating the regulatory landscape. This is a valuable resource for researchers in the bioeconomy, circular economy, agricultural and environmental economics, as well as policymakers looking to make informed decisions and contribute to sustainable practices. Rahil Akhtar Usmani holds a PhD in Agricultural Economics and Business Management from Aligarh Muslim University. Currently, he serves as an Assistant Professor at Integral University in India. His research expertise lies in energy security and renewable energy, with a focus on biofuels. His current research has been focused on potential mapping for advanced biofuels specifically from marginal lands and energy crops. Mudasir A. Dar is an Associate Professor at Jiangsu University, China. His research interests encompass biofuels, environmental biotechnology, bioremediation, systems biology; and modelling insects for biotechnological applications. As a principal investigator, he has received several grants including a Foreign Outstanding Young Scientist Grant in China. He has more than 46 peer-reviewed published papers and serves on the editorial board of BMC Microbiology (Springer Nature), Engineering Microbiology (Elsevier), Frontiers in Energy Research (Frontiers), and Research in Ecology. Akram Ahmad Khan is Professor and Dean of the Faculty of Agricultural Sciences at Aligarh Muslim University (AMU). He has written several books and over 30 research papers in reputable national and international journals, focusing on issues related to the environment and sustainable development. In addition to his academic roles, Professor Khan served as the principal investigator in a government-funded research project gauging Public Attitude towards Agricultural Biotechnology (India). His research areas of focus include development economics, agricultural biotechnology, food security, agricultural trade, and livestock development.
