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| Nota di contenuto | Life cycle assessment, circular economy, and sustainable development: a review of achievements and progress in Africa -- Integrated environmental and economic assessment for the replacement of the flooring system in a public educational building -- Life cycle assessment of olive oil in the southern region of Brazil -- Assessment of environmental impacts in the optimized design of steel-concrete footbridges -- The role of venture businesses and startups in life-cycle assessment and circular economy: mEU and China case study -- The circular economy's impact on sustainable development: a case study of China -- Energy optimization in supply chains: paving the way for a circular economy -- An assessment of the nexus between the Ricardian thoughts of comparative advantage and bio-based economy in |

developing economies -- Life cycle analysis of bioethanol production from microalgae in a biorefinery approach -- Circular economy framework as a tool for the construction of prospective scenarios for the energy management of a higher education institution -- Life cycle assessment of microalgae biomass production in photobioelectrochemical system -- Valorization of potato and banana waste in bioethanol production: a life cycle assessment perspective -- Systematic literature review on the evolution and trends of studies on the life cycle of electric vehicle batteries -- Edge certification in public schools in Brazil: a case study -- Life cycle analyses, circular economy and sustainable development goals: bibliometric analysis -- Harmonising progress: life cycle analyses and circular economy in achieving sustainable development goals (SDGS) -- Life cycle assessment (LCA) and circular economy (CE) indicators for sugarcane biorefinery sustainability sugarcane biorefinery sustainability -- Challenges and barriers to the adoption of circular economy principles in Nigeria -- A methodological approach to integrate circularity, ecosystem services and the SDGS under the life cycle assessment framework -- Integrating life cycle analyses and circular economy: a pathway towards sustainable development in Bangladesh" -- Integrating life cycle analyses and circular economy principles in energy sustainability: policy perspectives and future direction -- Circular economy in Brazil: the nexus of public policy, extended governance, and social innovation.

Sommario/riassunto

This book offers a comprehensive review of life cycle assessment (LCA), circular economy (CE), and sustainable development, exploring their achievements and progress across the world. The book also emphasizes the significant contribution of LCA and CE to achieving the Sustainable Development Goals (SDGs), demonstrating how these frameworks can drive progress toward global sustainability targets. The main topics covered include the environmental and economic assessment of building materials, the life cycle of agricultural and bio-based products, the role of venture businesses in promoting CE, and the impact of CE on sustainable development. Additionally, the book discusses energy optimization in supply chains, the nexus between comparative advantage and the bio-based economy, and the use of CE frameworks in energy management for educational institutions. Key chapters highlight the valorization of waste materials for bioethanol production, the evolution of LCA studies on electric vehicle batteries, and the implementation of EDGE certification in Brazilian public schools. The book also explores the integration of LCA and CE in architectural education, the challenges and barriers to CE adoption in Nigeria, and the role of public policy in advancing CE in Brazil. These topics are critically important as they address the pressing need for sustainable practices in various industries. The integration of LCA and CE principles is crucial for minimizing environmental impacts, optimizing resource use, and fostering innovation in sustainable development. The book aims to solve the problem of how to effectively incorporate these principles into practice, providing methodological approaches, case studies, and policy perspectives that illustrate successful implementations and identify areas for improvement. The target audience for this book includes researchers, policymakers, industry professionals, and students interested in sustainability, environmental science, and circular economy practices. By offering in-depth analysis and practical insights, this book serves as a valuable resource for anyone seeking to understand and apply LCA and CE principles to achieve sustainable development goals.
