Record Nr. UNINA9910437778503321 Sustainability of biofuel production from oil palm biomass / / edited by **Titolo** Keat Teong Lee, Cynthia Ofori-Boeteng Pubbl/distr/stampa New York, : Springer, 2013 **ISBN** 981-4451-70-3 Edizione [1st ed. 2013.] 1 online resource (xx, 323 pages): illustrations (some color) Descrizione fisica Green Energy and Technology, , 1865-3529 Collana Altri autori (Persone) LeeKeat Teong Ofori-BoatengCynthia Disciplina 333.79 Soggetti Biomass energy Oil palm Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali "ISSN: 1865-3529." Nota di bibliografia Includes bibliographic references and index. Nota di contenuto Part 1: Biofuels and Sustainable Development -- Introduction to Sustainability of Biofuels Towards Sustainable Development --Biofuels: Production Technologies, Global Profile and Market Potentials -- Part 2: Biofuels Production from Oil Palm Biomass and Sustainable Development -- Oil Palm Biomass as Feedstock for Biofuel Production -- Production of Palm Biofuels Towards Sustainable Development --Part 3: Sustainability Assessment of Biofuel Production from Oil Palm Biomass -- Environmental Sustainability Assessment of Biofuels Production From Oil Palm Biomass -- Economic Sustainability Assessment of Biofuels Production from Oil Palm Biomass --Thermodynamic Sustainability Assessment of Biofuels Production from Oil Palm Biomass -- Social and Policy Issues Affecting the Sustainability of Palm Biofuels Production. Sommario/riassunto This book evaluates and discusses the main sustainability challenges encountered in the production of biofuel and bio-products from oil

palm biomass. It starts off with the emphasis on oil palm production, oil palm products recovery and oil palm wastes utilization. The simultaneous production of these bio-products for sustainable

development is discussed. This is followed by the key factors defining the sustainability of biofuel and bio-product production from oil palm biomass. The environmental issues including ecological, life cycle assessment and environmental impact assessment of oil palm plantation, milling and refining for the production of biofuels and bioproducts are presented. Socio-economic and thermodynamic analysis of the production processes are also evaluated using various sustainability assessment tools such as exergy. Lastly, methods of improving biofuel production systems for sustainable development are highlighted.