Record Nr. UNINA9910874664803321 Autore Kurniawan Tonni Agustiono Titolo Algae as a Natural Solution for Challenges in Water-Food-Energy Nexus : Toward Carbon Neutrality / / edited by Tonni Agustiono Kurniawan, Abdelkader Anouzla Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 9789819723713 9789819723706 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (919 pages) Collana Environmental Science and Engineering, , 1863-5539 Altri autori (Persone) AnouzlaAbdelkader Disciplina 577.14 Soggetti Environmental chemistry Environmental engineering Biotechnology Bioremediation **Environmental Chemistry** Environmental Engineering/Biotechnology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Section 1: Towards a sustainable algal management -- Section 2. Algal management in wastewater treatment -- Section 3. Microalgae for biodiesel production -- Section 4. Microalgae and cyanobacteria for food applications -- Section 5. Algal roles in climate change mitigation. Sommario/riassunto This book provides an overview of challenges and opportunities for algal management to mitigate climate change. This book offers new perspectives on how to control water pollution due to algae, while converting it to biosorbent and biodiesel that could be sold in market. The work also explores how to improve the performance of algae for

such purposes. By identifying existing knowledge gap, this work uncovers new research directions for further development of algal management to address global environmental pollution. • Extensive literature survey (2001-2023) in algal management based on empirical approach in the body of knowledge • A comprehensive overview with critical analysis of algal management, for water treatment, biodiesel production, and food production, while dealing with climate change •

Providing insights about challenges, research direction, outlook, and perspectives of algal management in Industry 4.0 era This book has an advantage that each chapter will be written by experts around the world working in their respective fields. As a result, this volume presents a balanced picture across the whole spectrum of algae. Furthermore, the authors are from both the developing and developed countries thus giving a worldwide perspective of looming climatic problems.